



**ANALYZING THE RELATIONSHIP BETWEEN TAX  
HOLIDAY AND FOREIGN DIRECT INVESTMENT IN  
INDONESIA**

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## **ABSTRACT**

This study is designed empirically to investigate the impact of tax holiday on foreign direct investment (FDI) in the case of Indonesia for the period from 1981 to 2010. Ordinary Least Square regression technique is applied by employing foreign direct investment inflow as dependent variable, along with tax holiday as independent variable and gross domestic product growth, gross fixed capital formation, inflation, openness, tax rate as controlled variables. In addition, this study also attempts to analyze historical tax holiday regulation and its effect on foreign direct investment trend during period 1958 to 2010. Considerations and background of tax holiday regulations along with their implementation are thoroughly analyzed to have a comprehensive understanding of their effectiveness and efficiency in attracting FDI.

The empirical estimation on four variables has shown significant impact on FDI inflow. Those variables are gross fixed capital formation, inflation, openness and tax rate. Tax holiday as the main focused independent variable is proven to be not significant in attracting FDI inflow. The reason for this finding is that tax holiday will never be able to offset inadequate infrastructure, economic and political instability, and poor government policies.

With regard to tax holiday regulation analysis, this study found inconsistency in the first implementation of tax holiday under Soekarno regime which resulted in skeptical among investors. Moreover, uncertainty in extending tax holiday facility were prevalent under Suharto Regime as a result of no clear criteria in selecting

which investors are eligible to receive tax holiday. Discretionary policy approach applied by Suharto Regime in selecting tax holiday recipient led both government officials and investors into corruption, cronyism, and nepotism practice.

Keyword: Foreign Direct Investment, Tax Holiday, Tax Rate, Indonesia

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# CHAPTER 1 INTRODUCTION

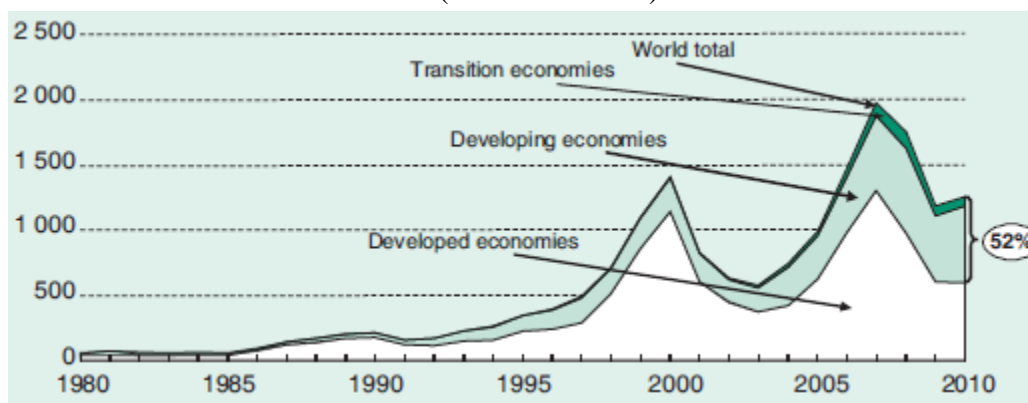
## 1.1. Background

In the post crisis era, the Indonesia's annual economic growth has been relatively low compared to that of neighboring countries. One reason behind this is the low level of investment rate from both domestic and external sources. For developing countries like Indonesia, investment is the first step in which economic development activities begin. Fluctuation in investment will influence countries' economic growth. Therefore, in order to maintain economic growth, countries are endeavoring to establish a healthy investing climate for stimulating investment from both domestic and international sources.

UNCTAD (2012) pointed out in its report that out of many investment sources, domestic investments are still representing the majority of total investment in developing countries. Foreign direct investment (FDI) can only complement this role. However, FDI could play a distinct and influential role in promoting growth and sustainable development, boosting countries' competitiveness, generating employment, and reducing social and income disparities. Moreover, FDI is considered to be more resilient toward crisis, since investors commonly have a long-term perspective when investing in a country and it has the nature of risk sharing between recipient countries and investor. Therefore, FDI provides a stronger stimulus to economic growth than other types of capital flows. Additional argument is that FDI is not just a mere capital flows, but also offers access to new technologies and managerial skills.

Since 1980, FDI inflow in the world has rapidly increased, especially to developing countries. It reached culmination point around the year 2007 where global FDI inflows attained USD 2.3 billion. After experiencing a declining during the period of 2001-2003, FDI inflows began to show an upward trend in 2005 -2007. Unfortunately, after then, it showed a declining trend until 2009. In 2010, global FDI inflow reached an estimated \$1,244 billion (figure 1.1) – a little increase from 2009’s level of \$1,185 billion. However, there was an uneven pattern between regions and also between subregions. FDI inflows to developed countries and transitional economies contracted further in 2010. In contrast, those to developing economies recovered strongly, and together with transitional economies – for the first time – surpassed the 50 per cent mark of global FDI flows (UNCTAD, 2012).

Figure 1.1: FDI inflows, global and by the group of economies, 1980–2010  
(Billion of dollars)



Sources: [www.unctad.org/fdistatistics](http://www.unctad.org/fdistatistics)

FDI has played a crucial role in business internationalization. Massive changes have taken place both in terms of size, scope, and methods of FDI in the last decade. These changes occur because of developments in technology, relaxing restrictions on foreign investment barriers in many countries, as well as deregulation

and privatization of many industries. Development of information technology systems, as well as, more affordable cost in global communication allows foreign investment to be managed easier.

Based on the data provided by the World Development Indicators (WDI), it is known that the FDI inflow into Indonesia after the crisis in 1998 was still lower than before the crisis. Even in subsequent years after the crises, the amount of net FDI flows during period 1998-2001 and 2003 recorded a negative rate, which means that there was a capital flight.

**Table 1-1: FDI Inflow to Indonesia, 1994 - 2010**

<b>Year</b>	<b>Value (US \$)</b>
1994	\$ 2,109,000,000.00
1995	\$ 4,346,000,000.00
1996	\$ 6,194,000,000.00
1997	\$ 4,677,000,000.00
1998	\$ (240,800,000.00)
1999	\$ (1,865,620,963.49)
2000	\$ (4,550,355,285.71)
2001	\$ (2,977,391,857.14)
2002	\$ 145,085,548.72
2003	\$ (596,923,827.79)
2004	\$ 1,896,082,770.00
2005	\$ 8,336,257,207.64
2006	\$ 4,914,201,435.40
2007	\$ 6,928,480,000.00
2008	\$ 9,318,453,649.83
2009	\$ 4,877,369,178.44
2010	\$ 13,370,580,771.01

Source : WDI

In the New Order era under Suharto administration, investment in the form of FDI is an essential driving factor in achieving high economic growth and

maintaining sustainable development. Moreover, the presence of FDI in Indonesia, particularly in the manufacturing industry becomes a source of technological development, export growth and labor absorption. Manufacturing or processing industry is the only economic sector that has generated the greatest added value and the largest contributor to the GDP of Indonesia. This evidence can be seen from the structure of Indonesia's GDP in 2004 - 2011 as presented in Table 1.2.

**Table 1-2 GDP Structure, 2004 - 2011**

Sector	2004	2005	2006	2007	2008	2009	2010*	2011**
1. Agriculture, Marine, Forestry	14.3	13.1	13.0	13.7	14.5	15.3	15.3	14.7
2. Mining and Energy	8.9	11.1	11.0	11.2	10.9	10.6	11.2	11.9
3. Industry	28.1	27.4	27.5	27.1	27.8	26.4	24.8	24.3
4. Electricity, Gas, Water	1.0	1.0	0.9	0.9	0.8	0.8	0.8	0.7
5. Construction	6.6	7.0	7.5	7.7	8.5	9.9	10.3	10.2
6. Trade, Hotel, Restaurant	16.1	15.6	15.0	14.9	14.0	13.3	13.7	13.8
7. Transportation and Communication	6.2	6.5	6.9	6.7	6.3	6.3	6.6	6.6
8. Finance, Real Estate	8.5	8.3	8.1	7.7	7.4	7.2	7.2	7.2
9. Services	10.3	10.0	10.1	10.1	9.7	10.2	10.2	10.5

\*. Estimation

\*\*.. Rough Estimation

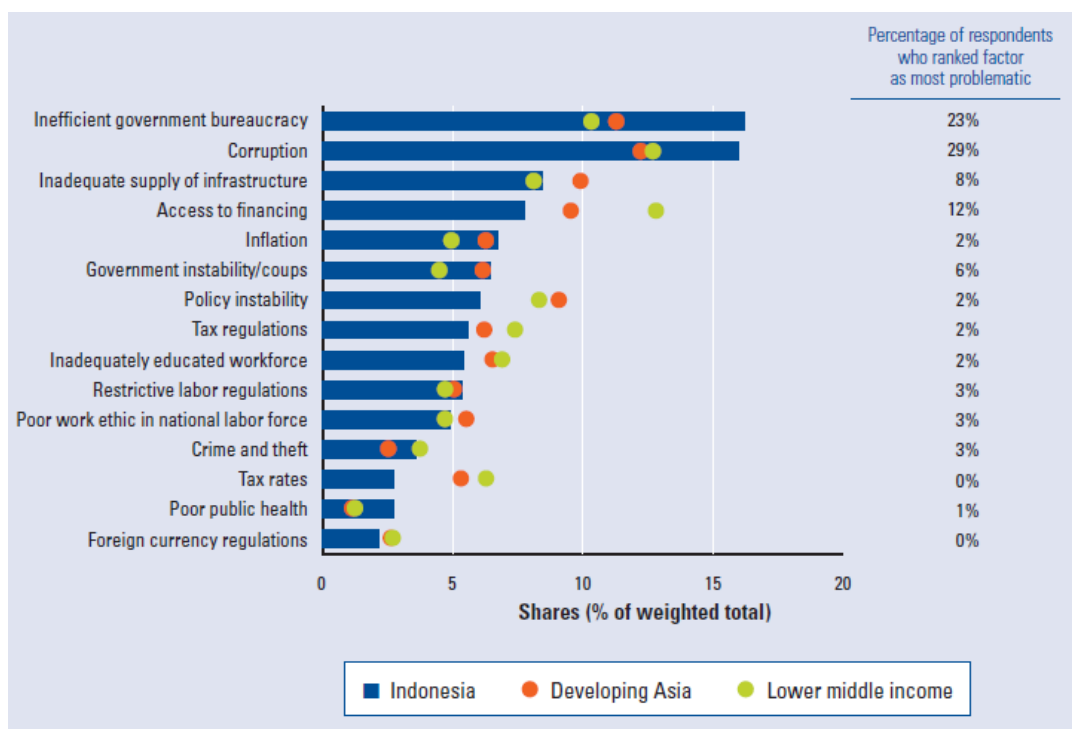
Source: [http://www.bps.go.id/tab\\_sub/view.php?tabel=1&daftar=1&id\\_subyek=11&notab=5](http://www.bps.go.id/tab_sub/view.php?tabel=1&daftar=1&id_subyek=11&notab=5)

Analyzing Table 1.2, we can infer that industry sector should have been able to act as push or pull factor for developing output and growth of other economic sectors. For having the ability as pull and push factor, industry sector should be well designed in optimal function, well developed and highly competitive. Unfortunately, the competitiveness of Indonesian industries has deteriorated after the economic crisis in 1998 due to aggravation of the investment climate in Indonesia.

According to Thierry Geiger (2011) in his book as a part of the results of an annual survey on countries' competitiveness conducted by the World Economic

Forum (WEF), the eight most problematic elements for doing business in Indonesia are inefficient government bureaucracy, corruption, inadequate supply of infrastructure, financial access, inflation, government instability, political instability and tax regulation. The complete problematic factors mentioned above are provided in figure 1.2. Moreover, Bank Indonesia (2011) suggested that in supporting national economic development, increasing investment level particularly foreign investment is inevitable. Therefore, enhancement in conducive investment environment should be established by infrastructure's revitalization and regulation's improvement. Among the improvements in regulation are implementation of national single window and improvement in tax regulations especially related to tax incentives.

**Figure 1. 2: The Most Problematic Factors For Doing Business in Indonesia (2010)**



Source: The Indonesia Competitiveness Report 2011 WEF

Exercising tax incentives in enticing foreign direct investment is not a new method. According to Morisset & Pirnia (1999), when other factors such as infrastructure, cost of production, economic and political stability are more or less equal, tax regulation may have a significant effect on investors' choices. This effect varies, however, depending on the tax instrument used, the characteristics of the multinational company, and the relationship between the tax systems of the home and recipient countries.

Moreover, in a more competitive world, exercising tax incentives to attract FDI has become a global phenomenon. Some countries in Asia and Africa rely on tax holidays and import duty exemptions to entice FDI while those in Western Europe prefer to apply accelerated depreciation (UNCTAD, 1995). This competition will encourage developing countries to enact tax regulations that tend to be more beneficial for FDI company than achieving their tax revenue target. However, there should be a balance that might lead developing country to win both tax revenue target and FDI inflow. This research addresses the question of ANALYZING THE RELATIONSHIP BETWEEN TAX HOLIDAY AND FOREIGN DIRECT INVESTMENT IN INDONESIA by combining both quantitative method using ordinary least square method and qualitative method by providing a descriptive history of Indonesian tax holiday regulation in relation to FDI inflow.

## **1.2. Research Problem**

Investments particularly FDI is perceived to be potentially significant to promote economic growth. In addition, the presence of foreign capital can be a source of technological development, export growth and employment. Therefore,

developing countries like Indonesia and ASEAN countries are very enthusiastic and eager to attract FDI. One of factors influencing FDI that is still controversial is tax holiday, a form of tax incentive facilities. Accordingly, there is a need to have more empirical evidences about the relationship between tax holiday and FDI. Better understanding on the issue will allow us to design better policies in attracting FDI. Based on this standing point, this study tries to answer those two important research questions:

1. What is the relationship between tax holiday provision and foreign direct investment inflow?
2. What are the implications of the relationship between tax holiday and foreign direct investment inflow?

### **1.3. Research Objective**

The available literature on the FDI can be categorized into four types. First is macroeconomics studies regarding the determinants of FDI. Second, macroeconomic analysis on the effects of FDI and other capital inflows toward some key elements of macroeconomic development. Third, studies regarding long lists of incentives and disincentives offered by host countries to establish favorable investment climate. Finally, microeconomic studies regarding the influence of FDI on effectiveness and productive efficiency of domestic companies compared to the multinational companies. This present study falls on the third category of study regarding long lists of incentives and disincentives offered by host countries to establish favorable investment climate.



This empirically examines the relationship between the tax holiday provision as one of FDI incentives and FDI inflow in Indonesia. The objectives of this research are to:

1. Analyze the relationships between tax holiday and foreign direct investment in Indonesia.
2. Analyze the existing tax holiday regulation and its effect on foreign direct investment as well as explore the explanation for the existing relationship among them.
3. Acquire empirical evidence regarding the transmission mechanisms through which tax holiday influences foreign direct investment.

The benefits of this research include:

1. Providing a contribution to the Indonesian Government in formulating appropriate tax incentive facilities for attracting FDI.
2. Contributing to the body of knowledge in the area of tax policies of public finance in general.

#### **1.4. Research Scope**

Out of many determinant factors of FDI, I focused on tax holiday as an incentive determinant factor in alluring FDI inflow. To have a robust empirical result in performing the quantitative method using Ordinary Least Square method, I also include some other determinant factors as control variables, such as gross domestic product growth (GDP Growth) as a proxy for market size, gross fixed capital formation (GFCF) as a proxy for infrastructure, trade openness as a proxy for

government policy, inflation as a proxy for economic stability, and tax rate. Those data were retrieved from World Development Indicators 2012.

Regarding the time frame of this research, in qualitative analysis of tax holiday regulations, I picked out regulation from a very early government gazette enacted in 1958 to the current one in 2010. However, in performing the quantitative estimation I only included data from period 1981 – 2010 considering the data availability.

One of the limitations of this study is cost analysis of tax holiday regulation in attracting FDI inflow due to the difficulty in both data source and complicated calculation. However, the idea of cost analysis of tax holiday can be a subject of further research after knowing the relationship and impact of tax holiday on FDI inflow.

### **1.5. Organization of the Study**

This study is organized into five chapters:

Chapter 1: provides the background of study, research problem and objective of study, and the research approach.

Chapter 2: presents the literature review. It describes the definition of foreign direct investments, several FDI theories and determinant factors of FDI. Regarding tax incentives, any type of tax incentives will be explained here together with its definition and argument.

Chapter 3: presents the research methodology. Data collection, model specification, data processing and model evaluation will be presented in this chapter.

Chapter 4: discusses the finding. Empirical quantitative results based on Ordinary Least Square is presented and analyzed. In addition, historical analysis of tax holiday regulation and its effect on FDI inflow is investigated.

Chapter 5: concludes the study and presents the policy implications.

## **CHAPTER 2 LITERATURE REVIEW**

In this chapter, several theoretical frameworks of Foreign Direct Investment (FDI) will be discussed along with its determinant factors. In addition, special FDI's determinant factor, which is the main focus of this, i.e. tax holiday will be elucidated.

### **2.1. Foreign Direct Investment Definition**

Capital inflows from abroad can be divided into three categories, namely foreign debt, portfolio investment and foreign direct investment (FDI). In general, FDI is a form of direct capital investment engaged in various fields. Excluded from FDI inflows are investment in the form of portfolio, shares on the stock, bonds and other securities. Compared to debt, FDI is often regarded as a more profitable and more secure in financing the country's development. The main reason for that opinion lays in FDI scheme where business failure risk is borne by foreign investors, while for debt financing, the country concerned (in any condition) should bear the risk and oblige to pay the debt principal plus interest. Moreover, FDI is associated with direct ownership, control of plant, equipment and infrastructure which help to finance the creation of capacity growth in an economy, while the short-term foreign debt is more frequently used to finance consumption.

Before we proceed further to the body of literature review, it is worth to discuss several conceptual issues related to FDI definition. Out of all plethora sources of FDI, an agreement has been reached regarding the main objective of FDI which is to obtain and manage an asset in foreign (host) country. According to

OECD (2008), foreign direct investment (FDI) can be categorized as an investment in destined country (in this case host country) conducted by resident enterprise in the origin country (in this case investing country) which objective is to hold lasting interest. Another world wide definition of FDI is offered by World Bank. World Bank (2012) defined FDI as investment inflow to a country (host country) other than investor's country (home country) to obtain longterm interest or management control over companies operating in a host country. The investment inflow could be in the form of equity capital, long term or short term capital or reinvested earnings.

Furthermore, according to OECD (2008), the longterm interest represents the presence of a lasting relationship marked by a significant degree of influence on the management of the direct investee company held by the direct investor. However, Fry (1993) believed that direct investor's influence over an investee company does not necessarily attain 100% ownership since it can be carried out regardless 100% ownership in equity financing. The reason for this is that financing entire or part of companies' establishment can be done by borrowing from host countries financial institutional. Even though there is no compromise agreement about what degree of influence is, most economists agree that a minimum of 10 percent managerial ownership allows foreign investor to exercise significant influence over the key policies in managerial decision.

Some researchers may argue that minimum 10 percent share requirement is not necessary because, in some cases, some investor's ownerships of 10 percent voting power may not have any significant effect on management's decision while other investors who own less than 10 percent have an effective voice in the

management. However, it is a unanimous agreement that any qualified ownership below 10 percent is not considered as having significant influence over management's decision.

All in all, regardless the level of investors' ownership, researchers agreed that the main difference between FDI and other portfolio investment is the existence of significant influence over investee's management. This condition should be interpreted in the sense that no investors are willing to allocate fund, unless they have majority control over Investee Company.

## **2.2. Foreign Direct Investment Theory**

The fast growing and reliability of FDI compared to other capital instruments has brought interest to the development theory of FDI. Some FDI theories tried to explain why companies participate in FDI, what are the considerations of selecting one destined country over the others, and why they prefer a specific entry mode to host countries. From the host country point of views, other FDI theories explained why one country succeed in attracting FDI while others remain stagnant in FDI growth, what incentives are more preferable to investors in establishing attractive investing environment.

According to Moosa (2002), theories of FDI can be classified into four types: (1) Theories assuming perfect market; (2) theories assuming imperfect market; (3) other theories; (4) theories based on other variables. The following section will discuss in detail each of theory.

### **2.2.1. Theories Assuming Perfect Market**

There are three hypotheses under this theory: (1) the differential rate of return; (2) the diversification of hypothesis; (3) the output and market size hypothesis.

#### **The Differential Rate of Return**

The gist of differential rate of return hypothesis is that capital flows from the country with a lower rate of return to the country with a higher rate of return and eventually leads to equality of the real rate of return. In this hypothesis, business risk is assumed to be neutral regardless investing location, making real rate of return as an isolated variable in investment decision. Business risk neutrality means that an investor considers foreign market as perfect substitution of the domestic market.

As this hypothesis represents one of the first efforts in elaborating FDI theory, many researchers have tested this hypothesis by examining the relationship between FDI inflow and rate of return in several countries. Unfortunately, most of them failed to provide supporting evidence relevant to this hypothesis (Agarwal, 1980).

Yang (1999) in his research on FDI in China between rich coastal area and poor inland area attempted to adjust the role of rate of return by inputting human capital variable. The result suggested that majority FDI in china flows to rich coastal area even though poor inland area offers a higher rate of return. Perhaps, human capital adjusted the differential rate of return effect between rich coastal area and poor inland area.

According to Moosa (2002), the failure in supporting this hypothesis, arose from inconsistency of this hypothesis. This is because in this hypothesis, capital only flows in one direction, which is from a lower rate of return country to a higher rate of return country. This hypothesis fundamentally failed in explaining why countries experience inflow and outflow of FDI simultaneously even if they have a higher rate of return than others.

Moreover, Moosa (2002) stated that, the validity of this hypothesis was questioned even on theoretical ground. First, there could be other reasons than the rate of return to explain why companies invest abroad. Maximizing sales to reach market penetration, logical and operational reason for benefitting resource endowment in host countries, or circumventing trade barrier are other reasons for this capital inflow. More importantly is the diversification of risk by minimizing risk per rate of return if companies expand its operation abroad. These flaws will be patched up by next hypothesis.

### **Portfolio Hypothesis**

In Portfolio Hypothesis, investors do not only consider rate of return, but also incorporate risk of business in investment decision. This hypothesis postulates investment as a positive function on rate of return and a negative function on risk of business. When risk of business is included, then investment diversification becomes relevant. Rather than selecting countries exclusively on higher rate of return, capital mobility now also flows by desire to minimize risk by diversification.



One method for testing this hypothesis is by examining the relationship of business risk and rate of return on investment flow to a group of countries. The result was summarized by Agarwal (1980). He concluded that empirical evidence in favor of this theory seems to be weak. For example, Steven (1969) in his work on aggregate direct investment to Latin America countries could not obtain any empirical evidence in supporting this theory. Moosa (2002) concluded that some problems might be encountered when testing this hypothesis such as: (1) risk and return are calculated from reported profit which are absurd to be equal to actual profit for several reasons, including accounting methods and transfer pricing; (2) risk variable cannot be accurately measured by calculating standard deviation of historical data.

However, this hypothesis is preferable to differential rate of return hypothesis for some reasons. First, it considers business risks which constitute vital element in business decision. Second, it proposes logical reason on the existence of cross investment intra countries.

### **Output and Market Size Hypotheses**

Output and market size hypotheses are considered as identical. Output hypothesis is attributable to micro level and assume a positive relationship between companies' FDI and its output or sales in the host country. On the other hand, market size hypothesis is perceived to be reliable at a macro level. In this hypothesis, FDI is considered as a function of market size in the host country, and commonly proxied by GDP or GNP. Agarwal (1980) pointed out that the rationale behind these hypotheses is supported by the domestic experience that firms will

increase their investment following up their increasing sales, as well as domestic investment in a country which rises with its increasing market size or GDP.

The relationship between FDI and output or market size is derived from neoclassical domestic investment theories, in which the foremost one is the Jogerson's Model in 1963. However, in market size hypothesis, there is a lack of theoretical background for using GDP as a proxy for countries' market size even though many empirical studies already utilized it. Most of them concerned with the association between FDI and host country's market size statistically than with the theoretical basis of why this association exist.

Among those researchers attempting to test this hypothesis are Moore (1993), Bajo-Rivero (1994), Wang and Swain (1995), and Mhlanga, et al (2009). All of them implemented real GDP for representing country's market size as determinant variable on FDI inflow and unanimously agreed its significance as FDI determinant. Other researchers employed different proxies for market size such as GDP Growth and GDP per capita. Lage-Hidalgo & Love (2000) implemented GDP per capita as a proxy for market size in explaining FDI inflow from USA to Mexico. By using a simple model, Lage-Hidalgo & Love (2000) found a significant relationship between FDI inflow as dependent variable and market size (proxied by GDP per capita) as independent variable. They also concluded that cost factor between two countries is significant, and their model was able to explain two-third of FDI inflow from USA into Mexico for period 1967-1994. Moreover, Mohamed & Sidiropoulos (2010) concluded that market size and institutional variables are both significant with a positive sign as expected. GDP growth as an indicator of market

prospects has a positive contribution on FDI inflow in Middle East and North Africa Countries.

Regardless many supported evidence on this hypothesis, Agarwal (1980) alerted us to be caution when interpreting the significance of this relationship for some reasons. First, the size and growth of host countries' market are very likely influence FDI inflow in producing goods or services to satisfy domestic market, but not FDI intended to produce for export. In this case, FDI inflow falls into import-substitution category rather than export-oriented. Unfortunately, most studies, failed to distinguish FDI volume between these two categories. Second, even though there is significant relationship between FDI and GDP, it says nothing about the direction of causality. Third, in output hypothesis, investment should be defined as expenditure exclusively on plant and equipment, but many statistics calculation did not separate between expenditure on plant and equipment and other type of expenditure such as inventory or financial assets.

### **2.2.2. Theories Assuming Imperfect Market**

Several hypotheses fall under this theory such as the industrial organization hypothesis, the internalization hypothesis, the location hypothesis, the eclectic theory, the product life cycle hypothesis and the oligopolistic reaction hypothesis. All of these hypotheses will be discussed consecutively.

#### **The Industrial Organization Hypothesis**

According to this hypothesis, when a multinational company establishes a subsidiary outside its home country, it will encounter many disadvantages when

competing with domestic company. These disadvantages derive from various differences in culture, language, the legal system, and many intercountry differences. For example, foreign companies more often have to pay higher wages for the same quality workers since working with them is associated with high risk and uncertainty. It happens to language differences as well, as foreign companies should bear extra cost to overcome the language barrier.

Therefore, in order to deal with these disadvantages, foreign companies must possess some advantages. These comparative advantages should be innate advantages that can be easily transferred to foreign subsidiaries and large enough to surpass these disadvantages. (Lall & Streeten, 1977) provided a comprehensive advantages of foreign company as presented in table 2.1.

**Table 2-1 Innate Advantages of Foreign Company**

Advantage	Description
Capital	Larger or cheaper cost of capital than local or smaller foreign competitors
Management	Superior management in the form of greater efficiency of operation or greater entrepreneurial ability to take risk or to identify profitable ventures
Technology	Superior technology in the form of ability to translate scientific knowledge into commercial use. This involves the functions of discovering new processes and products, product differentiation and various support activities
Access to raw materials	Privilege access to raw material arising from the control of final markets, transportation of the product, processing, or the production of the material itself

Economies of scale	The financial and expertise to set up and operate facilities that enjoy these economies
Bargaining and political power	The ability to extract concessions and favorable terms from the host government

Source: (Lall & Streeten, 1977)

Its difficulties to sell or lease these innate advantages abroad possibly become the reason why FDI arise. These advantages also explain why a multinational company succeeds in a foreign market.

Despite its sound theoretical underlying, this hypothesis failed to explain why multinational companies do not utilize these advantages by producing in home country and then exporting abroad as FDI alternative. Moreover, even though they already opt for FDI than export, this hypothesis cannot support logical explanation of why they choose country A rather than country B. Answers for these questions are provided in the following section.

### **The Internalization Hypothesis**

According to this theory, FDI emanates from company's action to substitute market transaction with internal transaction. This theory explains why companies prefer FDI than exporting or importing from abroad or licensing. For example if there is a problem in production process regarding short supply in raw material, a company may decide to establish a subsidiary company abroad in producing that raw material to ensure that raw material is available. Similar problems might arise from imperfection and failure of market for other intermediary goods or services such as labor, knowledge, marketing, and resource endowment.

Moosa (2002) mentioned several advantages of internalization such as avoiding of time lags, bargaining and buyer uncertainty. In association to the time lag, bargaining and uncertainty, companies replace some of market function for intermediary goods or services with internal process such as intra-company transaction. For that reason, researchers claimed that internalization theory represents the main body of FDI theory, and considered others as a subset of this theory.

### **The Location Hypothesis**

Some of production factors such as labor and natural resources endowment are immobile. Therefore, this condition directs investors to search for locational advantage in minimizing production cost. Locational advantage will eventually encourage FDI inflow. One form of location-related advantage in factor production cost is low wages locational advantage. In this case, difference in wages rate between host country and home country is regarded as a significant determinant factor of FDI inflow. That is why countries with lower level of wages attract labor-intensive FDI from countries with higher level of wages. In this case, the relation between FDI inflow and wages is negative which means the lower the wages, the more FDI flows into host countries. Textile and footwear industries are the most common example of this phenomenon.

Empirical studies supporting the hypothesis that low labor cost attracts FDI are mixed. Most of the studies apply econometrics analysis with panel data or time series when testing this hypothesis. Vijayakumar, et al (2010) conducted empirical analysis test for FDI determinants in BRICS Countries during period 1975 to 2007.

The result showed a negative relationship between FDI and labor cost. The explanation for this negative relationship could be a lower wages in the host country compared to home country means decreasing cost of production, which rationally should encourage production in such a host country and consequently FDI.

### **The Eclectic Theory.**

Dunning (1987) proposed a theoretical framework to examine the flow of investments from a foreign country to a host country and institute it as eclectic theory. Till today, this theory is still relevant. According to Dunning (1987), there are three main aspects causing the flow of capital from a foreign country to host country. First, there must be ownership advantage of the investor company. This advantage is very specific in each company and required as compensation to offset disadvantage a company might encounter during investment in the host country. Ownership advantage can take the form of a monopoly on a particular product or brand, a more efficient production processes, management skills and greater knowledge about the market or marketing techniques. Out of those advantages, there are also internal factors in the home country which stimulate companies to expand their operation abroad such as high wage rates, increasingly expensive energy, limited resources, and tight regulation on environment. Second, the host country must have a location advantage to be able to attract foreign investors to invest their capital. This advantage will be an enticement for potential investors to exploit the existing potential advantages for the sake of business. Location advantage can be enormous domestic potentials, high growth, low inflation, cheap labor, abundant natural resources, availability of infrastructure, attractive incentives, and lax

regulation on environmental control. If the first condition is fulfilled, but the second condition is not satisfied, investors, (in this term a multinational company), will choose to export to host country as a way to exploit ownership advantage. Third, although the first and second conditions are met, there must be a stimulus in internalizing factor that encourages firms or foreign investors to invest directly in the form of FDI and not the other way such as licensing, franchising or investment portfolio. Those three factors are a representation of the previous three hypotheses consist of the industrial organization hypotheses, the internalization hypothesis and the location hypotheses. Those three hypotheses are integrated into eclectic theory.

### **The Product Life Cycle Hypothesis**

Vernon (1966) developed this hypothesis when explaining US multinational companies' growth after World War II. In this hypothesis, product life cycle, which consists of initiation, exponential growth, slowdown, and declining, is used as an explanation of FDI inflow specially in manufacturing companies serving high elasticity goods with advanced technology.

According to this hypothesis, FDI development follows the pattern of product cycle model. During the first step, a product is manufactured domestically and consumed domestically, the rest of it will be exported. In the second stage, the product might be produced abroad by branches of multinational companies. At this stage, most of demand for domestic consumption have begun to be imported. Finally in the third stage, the product is manufactured in foreign countries via FDI or licensing, while its own country has to import the necessary products.



This hypothesis was then refined by Vernon (1977). In his new hypothesis, innovation emerges as a new factor. It is driven by the need to respond to more fierce competition and larger profit opportunities. In this refined hypothesis, new product is developed and manufactured domestically since it is designed for local needs and produced better efficiency in coordination between research and development (R&D) division, production division and marketing division. Having established this product cycle domestically, company may begin to export its product for international demand. If the opportunity cost of production abroad rises, company may start devising appropriate location to invest their resources.

### **The Oligopolistic Reactions Hypothesis**

In oligopolistic reaction hypothesis, company by one another take action and reaction over others' activities as an attempt to maintain their existence in market shares. Kreinin, et al. (1999) stated that securing company's existence in market share is the most salient motivation for FDI. One example in this hypothesis is a movement by one company to establish subsidiary abroad will be perceived by its rival as a threat on their market shares. Therefore, this action invites a counter action to slacken its effect and returned back to the status quo equilibrium.

Knickerbocker (1973) stated that oligopolistic reaction increases as level of concentration rises and decrease along with product diversity. In his research on manufacturing FDI over 187 US Multinational companies, he discovered that oligopolistic companies are willing to respond for any advantage that they might obtain from FDI and stabilize their position once a competitive equilibrium

achieved. He also found that FDI profitability is highly and positively correlated with industrial concentration and negatively correlated with product diversity.

### **2.2.3. Other Theories of Foreign Direct Investment**

There are four hypotheses will be presented in this section. Those are the internal financing hypothesis, the currency area hypothesis, the hypothesis of diversification, and finally Kojima hypothesis.

#### **The Internal Financing Hypothesis**

This hypothesis postulated exploitation of profit earned by subsidiary company abroad to finance the expansion of FDI where it is located. When investing abroad, multinational companies allocated a portion of their resources for initial investment. Next expansion of this investment will be financed by reinvesting profit earned from its operation in the host country. This implies that a relationship could exist between internal income and investment expenditure. This relationship is quite rational since internal financing offers lower cost than external financing.

Hartman (1984) on the basis of taxation system in home country persuaded that because repatriation of profit from host country to home country is considered as tax liability, home country's income tax must have an impact on FDI. The implication of this study is that in order to generate maximum profit after tax, a company must finance its foreign investment expansion by utilizing foreign exchange earned in host country as great as possible.

### **The Currency Areas Hypothesis and the Effect of the Exchange Rate**

This hypothesis postulated that a company within a country sustained with a strong currency inclines to invest abroad. On the other hand, a company within a weak currency country has fewer tendencies to invest abroad. According to this hypothesis a country with a strong currency acts as sources of FDI or home countries whereas a country with a weak currency will be the recipient countries or host countries.

We can test this hypothesis empirically by examining the relationship between FDI inflow and currency value. Validity of this hypothesis should prove that overvaluation of a currency is associated with FDI outflows, and undervaluation of the currency must have a connection with FDI inflows. Cleeve (2008) conducted a cross-sectional analysis on determinants of FDI in Sub-Saharan Africa including exchange rate in his independent variable model. The result is, together with other macroeconomic factors, exchange rate contributes around 30% of variation in FDI Inflow within Sub-Saharan Africa countries. Moreover, Froot & Stein (1991) explained the rationale behind this hypothesis. A depreciation of domestic currency decreases the domestic asset price in terms of other foreign currency and attracts foreign investors to invest their capital. At the same time, foreign assets become more expensive for domestic investors and impede them from investing abroad. This condition explains increasing in US' FDI inflow during the depreciation of US Dollar around 1985.

Regardless the rational theoretical background underlying this hypothesis, it does not mean that it is flawless. According to Lizondo (1991), this hypothesis

cannot explain why FDI exist in economies with similar currency, and why FDI tend to concentrate in certain industries. Moreover, Dunning (1973) suggested that this hypothesis give support to the industrial organization hypothesis since country risk affect the relationship of the investor and its competitor.

### **The Hypothesis of Diversification with Barriers to International Capital Flows**

There are two requirements that should be fulfilled when a company would like to carry out international diversification. First, the barriers or cost exist for direct investment flow should be smaller than those associated with portfolio flows. Second, investors should acknowledge that multinational companies provide diversification opportunities. Agmon & Lessard (1977) tested this hypothesis by examining the relationship between company's stock prices and international operation. The result showed that stock prices of the company with relatively large international operational scale are more closely associated to the rest-of-the world market factor and less to the domestic market factors than stock prices of companies that are domestically operating.

### **The Kojima Hypothesis**

According to Kojima (1975), FDI provides means for transferring capital, managerial skill and technology from home country to host country. This idea represents a “macroeconomic approach“ or “factor endowment approach” in explaining FDI flow. Kojima's hypothesis lays on the idea of complementarities between trade and FDI. It emphasizes the need for comparing the costs between two of them. In this hypothesis, FDI is classified into two categories. First, FDI as a trade-oriented which means there will be an excess demand for export and excess

demand for import in trade terminology. This category would promote trade and benefit industrial restructuring process in both countries. The second is FDI as an anti-trade-oriented as the opposite of the first category. This will generate an adverse effect on trade, and harm the industrial restructuring process in both countries.

#### **2.2.4. Theories Based on Other Factors**

Two factors will be discussed in this sub chapter. Those are political risk and country risk, and tax policy.

##### **Political Risk and Country Risk**

Political risk is a form of unexpected change in legal and fiscal condition in the recipient country which will change the economic result of an investment in an extreme way. Let say, for example, the sudden decision to impose a restriction on capital or profit repatriation from host country to home country will jeopardize the cash flow of investing companies.

Sometimes country risk concept is applied instead of political risk. The example of country risk is economic factors which may pose economic risk due to adverse sign in economic indicators (such as high inflation rate and depreciated currency). It should be noted that negative economic indicators can affect cash flow adversely and finally discourage FDI.

##### **Tax Policies**

Domestics and foreign tax policies affect the incentive to engage in FDI. According to Moosa (2002), there are three approaches in which tax policies affect multinational companies decision making. First, tax on income earned from abroad

operational will affect net return of foreign investment. Second, tax on income obtained in home country impacts the domestic net of return and eventually will affect fund allocation for foreign investment. Third, tax treatment affects the magnitude of cost of capital for both foreign investment and domestic investment.

Numerous studies have been carried out to analyze the relationship between international taxation and FDI. However, many of them found difficulties in identifying the effects of taxes on the FDI. Moosa (2002) explained the reasons of these difficulties. First, cross-sectional variation in countries' tax rate and tax system may be correlated with a number of observable and unobservable factors that differ from one country to another. Second, time series variation in tax rate may not be adequate to identify tax effect, since tax rate is rarely change. Third, possibly, tax policy has no effect on FDI.

## **2.3. Tax Incentives in Attracting FDI**

### **2.3.1. Tax Influence on FDI**

Levying taxes on the transaction or business activity is one of the considerations to promote economic efficiency. Tax neutrality requires that the tax provisions do not discriminate treatment for any activity or other economic decisions. Tax is one crucial factor for investors in determining the decision to invest in a country. Theoretically, taxes affect investment decisions because tax assessment influences the amount of investors' benefits and costs. However, econometric studies, which try to find the relationship between tax and FDI, ended up with inconclusive decision since there are many variables giving influence on

FDI inflow. Easson (2004) explained the importance of taxation in investment decision into four broad generalization:

**1. Taxes play little role in the initial decision to invest abroad**

Countries with high income tax rate would induce companies to invest abroad more than countries with lower income tax rate. The logical explanation for this in terms of cost of production is that high level of taxes contributes in raising labor cost and might be a stimulus for company to dislocate its production to countries with lower cost. However, many economists refuted this explanation by claiming that taxation plays a little in constructing the production cost. Therefore, they understate its role as the last thing to be considered.

**2. Taxes may play a more important role in location decision**

Tax provisions and tax rates factor in selecting host countries will only become consideration after the decision to invest abroad has been made. However, the main considerations for investor in selecting the location are market size and political stability. When all main considerations are relatively equal, then taxes may play important role in investing decision.

**3. Taxes are more important for some types of investment than for others**

Export oriented FDI is relatively more sensitive to cost factor since international market is inherent with its high level of competitiveness. Therefore, difference in tax rate will significantly influence investment decision. On the other hand, domestic market oriented FDI is less sensitive to tax rate difference as long as other domestic competitors bear the same tax provision.

#### **4. Taxes are growing in its importance on FDI**

Majority studies conducted before 1990s revealed that taxation played a minor role in any FDI decision. However, most recent studies suggested the increasingly importance of taxation in investment decision. It seemed that the location of destination countries selected by companies is sensitive to taxation and becoming more so over time for several explanation. First, as other FDI barriers have been eliminated, taxation as the remaining obstacle deserves for more consideration. Second, as process of production in multinational companies is getting globalized, it will become an international production which involves other worldwide companies. This will increase export and import as channeling means in the process of production. In this case, import and export correspond sensitively toward tax difference.

#### **2.3.2. Tax Incentives Definition and Its Categories**

According to (Easson, 2004), tax incentives can be defined as follow:

*“In statutory terms, a tax incentive can be defined as a special tax provision granted to qualified investment projects (however determined) that represents a statutory favorable deviation from a corresponding provision applicable to investment projects in general (i.e. projects that receive no special tax provision). An implication of this definition is that any tax provision that is applicable to all investment projects does not constitute a tax incentive....”*

As it has been defined above, according to statutory regulation, tax incentive is a tax facility granted to specific investors that meet certain criteria as stipulated in tax law. Those who are eligible will benefit more than those who do not receive tax incentives.



According to UNCTAD (2000) there are ten categories of tax incentives commonly used by both developed countries and developing countries. Those ten categories of tax incentives are:

### **1. Reduced corporate income tax rate**

A corporate income tax rate can be set lowered by governments as an exception on common statutory income tax rate to induce FDI into some regions or specific sectors. Indonesia, Hong Kong, Ireland, and Cambodia are some countries apply this incentive. This incentive is commonly targeted toward foreign investors who meet specific criteria or to attract additional foreign investment. Malaysia imported this incentive in the mid-1980s to overcome decreasing FDI inflow.

### **2. Loss carry forwards**

Loss carry forwards incentive permits company to reduce its future tax burdens by subtracting future profit with current loss. The idea of this incentive is to support investors whose projects are suffered from enormous loss during the first period of its production. Governments usually combine this incentive with accelerated depreciation and lowered tax rate.

### **3. Tax holidays**

Tax holiday is a well-known tax incentive specified for newly established companies. Under this incentive, new investors will be exempted from any form of income tax during a specified period (commonly three to five years). In addition of income tax exemption, governments usually combine it with duty and excise, and good and service tax exemption. It is considered as a simple incentive with low compliance burden in which cumbersome tax calculation over the tax holiday period

can be abandoned. This benefit brings tax holiday into a lucrative incentive not only for investors, but also for government.

#### **4. Investment allowances**

Investment allowances are considered as a stimulus in investment expansion. Some portion of investment will be deducted against income tax base in accordance to its eligibility. Under this incentive, company will be able to accelerate writing-off their qualifying capital investment cost.

#### **5. Investment tax credits**

In some countries, investment tax credits will be regarded as a proportion of qualified investment which will be deducted in tax liability. It is only valid in the year of investment even though some countries may consider for extending the claim period. A modification of investment tax credit allows unused credit to be carried forward in the limited future years to reduce future income tax liability.

#### **6. Reduced taxes on dividends and interest paid abroad**

It is common to levy tax on repatriated profit or dividends. As dividend tax rate increase, investors will be less attracted to expand their investment. Therefore, this tax can be discounted to maintain investor's attraction. Usually this incentive is combined with tax holiday incentives by exempting all kind of income taxes including tax on repatriated income.

#### **7. Preferential treatment of long-term capital gains**

The intention of this incentive is to stimulate investor to preserve investment and if possible to expand it for a longer period. Special treatment will be granted in

the form of reduced income tax rate for a longer period of investment. Other treatments could be given by reducing good and service tax particularly on capital good expenditure.

## **8. Deductions for qualifying expenses**

Some countries prefer to aim specific industry field or specific area in their country (specially less developed area) in attracting FDI. These intentions are usually equipped with deduction for qualifying expenses toward income tax calculation. For example, country whose aim for technological industry development will promote R&D project by allowing companies to double deduction of R&D expenses.

## **9. Zero or reduced tariffs**

In order to promote investment particularly in imported capital equipment including its spare part, government can reduced tariff of imported capital goods. This incentive will reduce the cost of investment borne by investors. Therefore, it will encourage investors to replace its obsolete machine or upgrade the outdated plants. Tariff policy can also be used to protect domestic companies from fierce import competitions by increasing import tariff on finished goods. However, following agreement under the WTO and considering the negative effect of tariff war among countries, any governments should think carefully before executing this action.

## **10. Employment-based deductions**

In many countries with abundant labor force, unemployment rate is an inherent condition which is troublesome. Government may formulate tax incentive

to motivate investors for hiring more employees in their productions. Therefore, labor intensive industry is preferable than fully automatic machine industry. To encourage investors, governments may accommodate them with tax credits and incentives in accordance to employee number.

The overall categories of tax incentives can be summarize as follow:

**Table 2-2: The Main Categories Of Tax Incentives**

No	Category	Specifications
1	Profit/income-based	Reduction of the standard corporate income tax rate; tax holidays, loss carry forward or carry back to be written off against profits earned later (or earlier)
2	Capital investment-based	Accelerated depreciation; investment and reinvestment allowance
3	Labour-based	Reduction in social security contributions; deductions from taxable earnings based on the number of employees or on other labor-related expenditure
4	Sales -based	Income-tax reductions based on total sales
5	Value added-based	Income tax reductions or credits based on the net local content of outputs, granting income-tax credits based on net value earned
6	Based on other particular expenses	Income-tax deduction based on, for example, expenditures relating to marketing and promotional activities
7	Import-based	Exemption from import duties on capital goods, equipment or raw materials, parts and inputs related to the production process
8	Export-based	a) Output-related (e.g. exemptions from export duties; preferential tax treatment for income from exports; income tax reduction for special foreign exchange-earning activities or from manufacturing exports; tax credits on domestic sales in return for export performance) b) Input-related (e.g. duty drawbacks; tax credits for duties paid on imported materials or

		supplies; income-tax credits on net local content of exports; deductions of overseas expenditures and capital allowance for export industries)
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Source: (UNCTAD, 2000)

### **2.3.3. Policy Arguments for Implementing Tax Incentives in Attracting FDI**

Numerous arguments have been brought forward for using tax incentives in attracting FDI. OECD Tax Policy Studies (2001) stated several crucial arguments for using tax incentives which can be classified as follows: first, international competitiveness, second, “market failure” considerations, third, regional development and income distribution, and fourth, macroeconomic considerations. These arguments for tax incentives must consider other fiscal objectives, host country needs and circumstances. Detail explanations related to those arguments according to OECD Tax Policy Studies (2001) are described below:

#### **1. International competitiveness**

Tax incentives designed to encourage FDI, including general host country tax relief measures, those targeted at investment in R&D, and those tied to exports, are often recommended as a means to enhance the “international competitiveness” of a country, by improving its ability to attract internationally mobile capital. This view assumes that multinational companies take tax incentives into account when making location decisions and that tax incentives operate at the margin to swing investment decisions in favor of the host country.

## **2. Correcting for “market failure”**

Theory posits correcting market failure as tax incentives argument arises from the belief of private market failed in generating appropriate level of investment. Therefore, government should interfere by introducing tax incentives. One example of market failures is positive externalities in terms of company's research and development. Companies, who conduct R&D experiment, usually ignore its positive externalities over other companies. Tax incentives can play a positive role by encouraging companies to maintain their interest on R&D project.

This theory can also arise on account of other factors as well, including asymmetric information. Potential foreign direct investors may have incomplete information on investment opportunities in a given host country, for a variety of reasons. This may result in less investment in the host country than if full information were available. In such cases, incentives might be called to promote FDI beyond the level that would otherwise occur.

## **3. Regional development (income distribution)**

Tax incentives may be targeted at investment in regions where unemployment is a serious problem. For example, on account of remoteness from major urban centers, tending to drive up factor costs, or labor immobility or wage rigidities that prevent the labor market from clearing. Operating from a remote area means significantly higher transportation costs in accessing production materials, and in delivering end-products to markets, placing that location at a competitive disadvantage relative to other possible sites. Certain areas may also suffer from a lack of natural resources, tending to put them at a further cost disadvantage.

Moreover, firms may find it difficult to encourage skilled labor to relocate and work in remote areas that do not offer the services and conveniences available in other centers. Workers may demand higher wages to compensate for this, which again implies higher costs for prospective investors.

In such cases, tax incentives may be provided to compensate investors for these additional business costs. Where the incentives are successful in attracting new investment, and/or in forestalling the out migration of foreign capital, they may contribute to an improved income distribution in the country. There may also exist a policy desire to address regional income distribution concerns through subsidizing employment through investment initiatives, rather than through direct income supplement programs.

#### **4. Macro-economic considerations**

Tax incentives (typically broad-based incentives) have also been advocated to address a range of macro-economic problems, such as cyclical (or structural) unemployment, balance of payments deficits, and high inflation. Such incentives would not be specifically targeted on FDI, but on investment in general regardless investors's residence. When tax incentives are used to provide countercyclical stimulation (by encouraging investment and thus aggregate demand in the economy), they are often introduced as temporary measures (for example, introduced with a three-year expiry "sunset" clause). Temporary incentives offer the prospect of increased investment in the short-term while permanent incentives play in longer term. When such measures are used, they are typically announced and then immediately executed for better result.

## **CHAPTER 3 RESEARCH METHODOLOGY**

This study is conducted by utilizing ordinary least square regression on time series data to observe the relationship between FDI inflow and taxation particularly tax holiday and tax rate variable in Indonesia during period 1981 – 2010. Secondary data including foreign direct investment inflow, gross domestic product growth, gross fixed capital formation, openness, inflation, tax holiday, and tax rate are collected to be used in the empirical estimation. Further analysis of the relationship will be conducted in the form of descriptive analysis, mainly describing the history of relationship between FDI inflow and taxation and explaining the reasons behind that relationship. In short, this chapter discusses the data collection, model specification, and data processing.

### **3.1. Data Collection**

Secondary quantitative data and qualitative data will be utilized in this study. Quantitative data are data in which the containing information can be expressed numerically and often analyzed mathematically by implementing statistical or econometric techniques. On the other hand, qualitative data often refer to data deal with description, where the data can be observed, but hardly possible to be measured in rational scale number. Regarding quantitative data, this study deals primarily with secondary data in the sense that data set can be easily collected and analyzed. (Panneerselvam, 2006) stated that secondary data collection provides easiness in term of cost, time and effort when obtaining the data. Secondary data are data which were already created for the purpose of first-time use by the creator and future use for others.



In this study, quantitative data encompass foreign direct investment inflow, gross domestic growth, gross fixed capital formation, inflation, openness, tax rate, and tax holiday. Assunção, et al. (2011) categorized those indicators above into several groups. Indicators such as GDP growth represent market size and macroeconomics indicator; gross fixed capital formation can be grouped as infrastructure; inflation represents economic stability of host country; openness represents the government policy level related to international trade, and finally, tax rate and tax holiday represent governmental approach and economic incentives. Detailed explanation about those data will be examined closely below.

### **Foreign Direct Investment Inflow as Dependent Variable**

Dependent variable in this study is FDI inflow. Referring to the (World Bank, 2012), FDI data in this study refer to FDI net inflows (new investment inflows less disinvestment) in the reporting economy from foreign investors where the data are measured in current U.S. dollars. Application of FDI inflow in this study is important for comparison to other studies since most of studies about FDI utilized this variable as independent variable.

### **Gross Domestic Product Growth**

One out of several key factors as FDI determinant is host country's market growth rate. It can be measured by the GDP growth rate. Investors, especially foreign investors, will be more captivated in countries with larger market size, as indicated by GDP growth rate which reflects the level of potential demand. Definition of GDP growth as World Bank (2012) clarified is the annual percentage growth rate of GDP at market prices based on constant local currency where the

aggregates are based on constant 2000 U.S. dollars. The terminology of GDP itself is defined as the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources.

Various studies indicate that GDP growth is an important sign to indicate market attractiveness. Moreover, various studies have shown that transaction costs would be lower in countries with high levels of growth (Caves, 1971; Zhao and Zhu, 2000). The proposed research hypotheses related to this variable is GDP Growth has positive effect on FDI inflow.

### **Gross Fixed Capital Formation (GFCF)**

Gross fixed capital formation includes land improvements (fences, ditches, drains, and so on); plant, machinery, and equipment purchases; and the construction of roads, railways, and the like, including schools, offices, hospitals, private residential dwellings, and commercial and industrial buildings. According to the 1993 SNA, net acquisitions of valuables are also considered as capital formation. GFCF data presented in this study are measured in constant 2000 U.S. dollars.

In this study GFCF is employed as a proxy of infrastructure. This selection is based on the notion that other measurements of infrastructure such as roads, telephones and ports, only reflect the existing infrastructure and not the potential infrastructure as it is included in GFCF. Therefore, the GFCF is considered to represent both existing and potential infrastructure.

A good infrastructure is a required condition for any country in attracting foreign investment. Lack of good infrastructure impedes access for companies in managing their production resources. As a result, when conducting investment decision analysis, foreign investors always include infrastructure in their formulation of where to locate the investment. Accordingly, we hypothesize that GFCF has a positive effect on FDI.

### **Inflation**

As it is defined in world development indicator WDI 2012, World Bank (2012), the calculation of inflation is measured by the consumer price index which indicates the annual percentage change of the average consumer cost in acquiring a basket of goods and services over the interval time. World Bank utilized the Laspeyres formula when generating this variable.

Inflation is a common variable which many researchers use as a proxy of economic and financial stability. In this context, high or volatile inflation rate signifies an explicit evidence of country's instability and presents a barricade for FDI inflow. Schneider and Frey (1985), Mohamed and Sidiropoulos (2010) and Asiedu (2006) in their empirical analysis proved empirically that inflation influences negatively to FDI inflow. On the other hand, other researchers such as Vijayakumar (2010) and Mhlanga (2010) ended up their empirical analysis with conclusions that inflation does not have any impact on FDI. This study hypothesizes that inflation has a negative impact on FDI inflow.

## **Openness**

Trade openness refers to a degree of which countries or economies permit or have international trade with others. Trade activities include import and export, inter countries investment, borrowing and lending, and repatriation of funds abroad. Open economies mean greater market opportunities. However, at the same time they also face greater competition from businesses based in other countries. From the perspective of financial development, trade openness means the ability of an economy to obtain funds from other economies, and willingness to invest its surplus fund to other countries.

Trade openness is considered to be a significant FDI determinant in many literatures. Many of FDI take form as a substitution or complementary of export and import in an economy. Therefore, in this case, trade openness is expected to have a positive and significant effect on FDI. The formulation of trade openness used in this study is a percentage of  $(\text{Export} + \text{Import}) / \text{GDP}$ .

## **Tax Rate**

There are many types of tax rate in which researchers are interested in determining the relationship between tax rate and FDI. Among those well known tax rates are statutory tax rate which is the rate stipulated under taxation law, average effective tax rate, marginal effective tax rate, and real effective tax rate. Average effective tax rate represents how taxation affects profit after income tax imposition. It is calculated as a percentage of income tax over accounting profit. Marginal effective tax rate measures the extent to which tax rates result in the addition of the pre-tax profit from an investment project. Marginal effective tax rate measured to

which extent income tax will contribute to additional earning before tax in an investing project. The calculation of marginal tax rate is by dividing the percentage of increasing or decreasing one unit of tax rate by percentage of increasing or decreasing in earning before tax.

In this study, statutory income tax rate based on income tax act in Indonesia will be utilized. Out of several layers of income tax rate, the highest tax rate imposed on income will be used in this study. There are several reasons for selecting statutory income tax rate than the others. First, statutory tax rate is the easiest way to measure tax burden level compared to other methods. Second, statutory tax rate plays an important role in country selection by multinational companies because companies are more likely to choose a country with low tax rates. As such, this study hypothesizes that tax rate has a negative impact on FDI.

### **Tax Holiday**

Tax holiday has been implemented by many developing countries and transition economies in attracting FDI inflow. This incentive is intended toward new established firm rather than currently existing companies. New companies are exempted from the burden of income tax over a specified period of time and usually this period can be extended for a subsequent period at a lower tax rate.

This study exploits tax holiday as a dummy variable, representing the presence or absence of tax holiday over the period of 1981 to 2010. Taxation and investment regulation correspond to tax holiday will be analyzed to determined the year in which it is present. There are several regulations related to tax holiday over

period 1967 to 2010. First, Indonesia Law number 1 of 1967 concerning Foreign Investment and Indonesia Law number 11 of 1970 concerning Amendment and Supplement to law number 1 of 1967. In these regulations, the basic idea of tax incentives in Indonesia was originated under Suharto era. Indonesia began its tax incentive in 1967 when Law number 1 of 1967 was enacted. Second, Law number 7 of 1983 concerning Income Tax which is clearly stipulating the abolishment of tax incentives including tax holiday starting from 1984. This law put Indonesia as the first country in South East Asian which eliminated tax incentives while other countries were actively promoting it. Third, Indonesian Law number 10 of 1994 concerning Amendment of Law number 7 of 1983 concerning Income Tax. This law administered an opportunity of tax holiday granted to new investors. In correspond to tax holiday, Indonesia government promulgated Government Regulation number 45 of 1996 which regulate tax holiday given to specific new foreign firm for a period of maximum 10 years. Fourth, Government Regulation number 148 of 2000 concerning income tax facility for specific investors. This regulation nullified tax holiday regulation as regulated in Government regulation number 45 of 1996. The new tax incentives such as accelerated depreciation, and lowering tax rate were stipulated in this regulation, but those incentives are different from tax holiday. To be clearly understood, the summary of tax holiday regulation history in Indonesia will be presented as follows:

**Table 3-1: Tax Holiday History in Indonesia**

Period	Regulation	Explanation	Presence of Tax Holiday
1967 - 1983	1. Law No. 1 of 1967 2. Law No. 11 of 1970	First provision of Tax Holiday	Yes
1984 - 1996	Law No. 7 of 1983	Abrogation of Tax Holiday Provision	No
1996 – 2000	1. Law No. 10 of 1994 2. Government Regulation number 45 of 1996	Amendment of Law No. 7 of 1983. Re-enactment of Tax Holiday	Yes
2000 – 2011	Government Regulation No. 148 of 2000	Nullification of Gov. Reg. No. 45 of 1996	No

Source : Summary of Indonesian Tax Holiday Regulation.

The summary of all variables exercised in this study can be presented as follows:

**Table 3-2: Data and Sources**

Variable	Explanation	Unit	Source
<b>Dependent Variable:</b>			
FDI Inflow	Net foreign investment to Indonesia	US \$	World Development Indicator
<b>Independent Variable:</b>			
GDP Growth	GDP Growth as percentage increase or decrease of Indonesian GDP.	%	World Development Indicator
GFCF	Gross Fixed Capital Formation in Indonesia.	US \$	World Development Indicator
Inflation	Inflation as measured by Consumer Price Index	%	World Development Indicator
Openness	The level of trade openness in host country. (Export + Import) / GDP	%	World Development Indicator
Tax Rate	Highest Statutory tax rate according to Indonesia Income Tax Law	%	Indonesian Regulation
Tax Holiday	The presence or absence of Tax Holiday (TH) Provision represented by: 1 for presence of TH 0 for absence of TH	Dummy Variable	Indonesian Regulation

### 3.2. Model Specification

Following to previous empirical researches Mengitsu (2009) and Vijayakumar (2010), this model employs several independent variables comprise of Gross Domestic Product Growth (GDP Growth), Gross Fixed Capital Formation (GFCF), Inflation (INF), Trade Openness (Openness), Tax Rate (Tax Rate), and Tax Holiday (TH) while Foreign Direct Investment Inflow (FDI Inflow) is treated as dependent variable.

Since this study emphasizes the relationship between dependent variable (FDI inflow) and independent variable taxation (tax rate and tax holiday), other independent variables will be treated as control variables. Therefore, model specification of this study can be formulated as follow:

$$FDI = f ( GDP Growth, GFCF, Inflation, Openness, Tax Rate, Tax Holiday$$

$$FDI = \beta_0 + \beta_1 GDP Growth + \beta_2 GFCF + \beta_3 Inflation + \beta_4 Openness + \beta_5 TaxRate + \beta_6 TaxHoliday (Dummy) + e$$

Where :

FDI : Net Foreign Direct Investment Inflow

GDP Growth : Gross Domestic Product Growth

GFCF : Gross Fixed Capital Formation

Inflation : Inflation based on Consumer Price Index

Openness : Trade Openness on (Export + Import) / GDP

Tax Rate : Highest Statutory Tax Rate according to Income Tax Law

Tax Holiday : Dummy of the presence or absence of Tax Holiday Facility.



### **3.3. Data Processing**

Gujarati (2005) explained that regression analysis is a study concerning the relationship of dependent variable with one or more independent variables in estimating or predicting the population means or average of dependent variable from the fixed values of independent variables. In this study, the regression model is exercised in the form of linear regression.

Regression type in which this study employs is a time series regression analysis by implementing Ordinary Least Square (OLS) method. OLS regression analysis constitutes an approach in predicting or forecasting the dependent variable based on one or more independent variable in such a manner that the error term or residual between predicted variable and real variable is minimized as small as possible. In this study, since the limelight of this study is taxation, the objective of OLS regression is to forecast the relationship between FDI inflow and taxation, by keeping other independent variables as control variables. Time series data covering 1981 to 2010 will be processed for regression analysis by utilizing econometrics software Stata version 12.0. The reason of using OLS in this study can be described as follows:

1. It is extensively used by many econometricians because of its intuitively appealing and relatively less complicated in terms of mathematics calculation than other methods.
2. OLS offers the most reliable way under comfortable calculation in predicting the relationship between dependent variable and independent variable which is the main objective of this study.

3. Adequate data sufficiency needed in this method is of moderate size compared to sophisticated data requirement in other methods, which is hardly possible, to be retrieved.

### **3.4. Model Evaluation**

After a multiple linear regression model is determined, the next step is to evaluate the model. Evaluation of the model is intended to decide whether the estimations of model parameters are theoretically meaningful and statistically significant. There are three criteria used to evaluate the model. Each of the criteria will be discussed as below:

#### **3.4.1. Statistics Criterion**

This criterion is determined by the statistical theory, including the value of the coefficient of determination ( $R^2$ ) and t test of all the equations are used. When all models meet the predefined statistical criterion, it can be preceded to the next step.

#### **3.4.2. Econometrics Criteria**

These criteria are testing of econometric based on OLS assumptions. Several criteria include normality test, omitted variable test, multicollinearity test, autocorrelation test and heteroscedasticity test.

##### **Normality test**

One of the assumptions in classical linear regression model is that the residual has to be normally distributed. According to Agresti & Finlay (2007), although normality is not required in order to obtain unbiased estimates of the

regression coefficients, for valid hypothesis testing, the normality assumption assures that the p-values for the t-tests and F-test will be valid.

This paper uses the Shapiro Wilk test of normality in order to find out whether the residual is normally distributed or not. If the *p value* is statistically not significant, we do not reject the normality assumption. Therefore the residual of the estimated regression is normally distributed.

### **Omitted Variable Test**

A model specification error can occur when one or more relevant variables are omitted from the model or one or more irrelevant variables are included in the model. If relevant variables are omitted from the model, the common variance they share with included variables may be wrongly attributed to those variables, and the error term is inflated. On the other hand, if irrelevant variables are included in the model, the common variance they share with included variables may be wrongly attributed to them. Model specification errors can substantially affect the estimate of regression coefficients.

There are many methods to detect specification errors. The linktest command performs a model specification link test for single-equation models. The linktest is based on the idea that if a regression is properly specified, one should not be able to find any additional independent variables that are significant except by chance. The linktest creates two new variables, the variable of prediction, *\_hat*, and the variable of squared prediction, *\_hatsq*. The model is then re-fit by using these two variables as predictors. The *\_hat* should be significant since it is the predicted value. On the

other hand, *\_hatsq* should not, because if our model is specified correctly, the squared predictions should not have much explanatory power. That is we would not expect *\_hatsq* to be a significant predictor if our model is specified correctly. So we will be looking at the p-value for *\_hatsq*.

The *ovtest* command performs another test of regression model specification. The *ovtest* command indicates that there are omitted variables. It performs a regression specification error test (RESET) for omitted variables. The idea behind *ovtest* is very similar to *linktest*. It also creates new variables based on the predictors and refits the model by using those new variables to see if any of them would be significant.

### **Multicollinearity Test**

The next assumption of classical linear regression model is the absence of multicollinearity among independent variables in the model. According to Gujarati (2005), multicollinearity means the existence of a perfect or exact linear relationship among some or all independent variables of a regression model that can be formulated as follow:  $\lambda_1 X_1 + \lambda_2 X_2 + \dots + \lambda_k X_k = 0$  . Where  $\lambda_1, \lambda_2, \dots, \lambda_k$ , are constant and not zero simultaneously.

The reason why multicollinearity (in this term related to perfect linear relationship) should not exist among independent variables is that the regression coefficients of independent variables will be indeterminate , and their standard error will be infinite. However, if multicollinearity is not perfect, calculated regression

coefficient even though determinate will possess large standard error which means coefficient cannot be estimated with great precision.

Gujarati (2005) stated that in case of near or high multicollinearity, researchers might encounter several consequences:

1. Although Best Linear Unbiased Estimation (BLUE), the OLS estimators have large variances and covariances, making precise estimation difficult.
2. Because of consequence 1, the confidence intervals tend to be much wider, leading to the acceptance of the “zero null hypothesis” (i.e., the true population coefficient is zero) more readily.
3. Also because of consequence 1, the  $t$  ratio of one or more coefficients tends to be statistically insignificant.
4. Although the  $t$  ratio of one or more coefficients is statistically insignificant,  $R^2$ , the overall measure of goodness of fit, can be very high.
5. The OLS estimators and their standard errors can be sensitive to small changes in the data.

Having scrutinized the nature and consequences of multicollinearity toward multiple regression models, many econometricists formulated ways and rules to detect multicollinearity. One of which methods that will be put into practice in this study is

variance inflation factors (VIF) which is defined as 
$$\text{VIF} = \frac{1}{(1 - r_{23}^2)}$$

. VIF shows how the variance of an estimator is *inflated* by the presence of multicollinearity.

According to Gujarati (2005), the rule of thumb in VIF is if the VIF of a variable

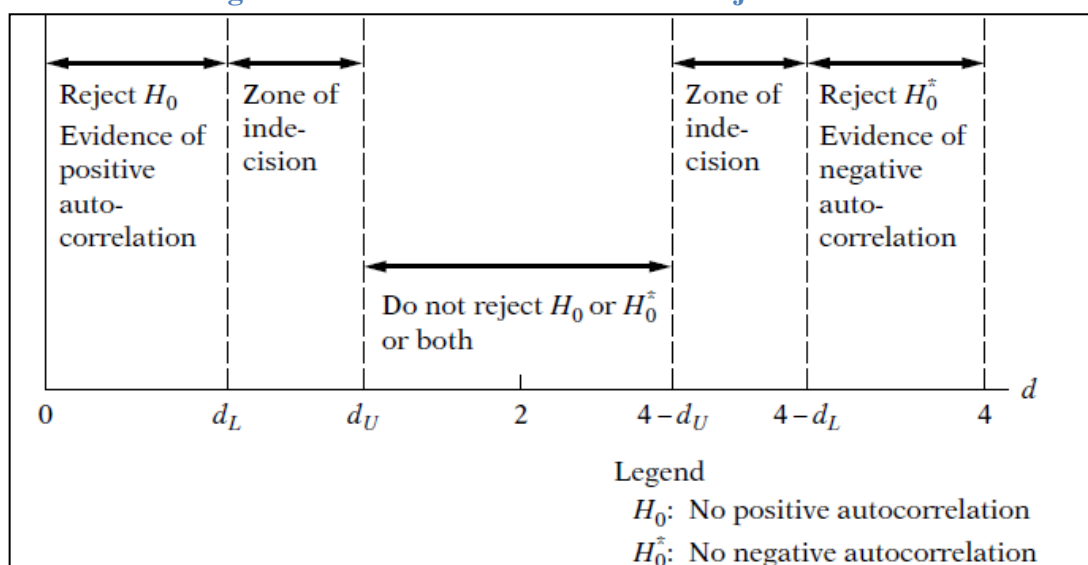
exceeds 10, which will happen if coefficient correlation exceeds 0.90, that variable is said to be highly collinear.

### Autocorrelation Test

In time series data analysis, serial correlation commonly threatens the independency of the model. The consequence of serial correlation is that the variance of the parameter is no longer the smallest, so it will make standard error become large and the estimation is not BLUE anymore.

This paper utilizes Durbin Watson (DB) to detect autocorrelation problem. The autocorrelation does not exist if the DB is around 2; otherwise there is an autocorrelation problem.

**Figure 3.1 Durbin Watson Statistics Rejection Area**



Source: Gujarati, D. Basic Econometrics

### **Heteroscedasticity Test**

The last fundamental assumption of the classical linear regression model is that the variance of each error term at any chosen value of independent variables are constant or equal.

The consequence of heteroscedasticity is that the variance of parameter is not a minimum, and it leads to inefficiency, and the estimated regression is not BLUE anymore. This study utilizes Bruce Pagan heteroscedasticity test to detect the existence of heteroscedasticity.

#### **3.4.3. Economics Criterion**

Economics criterion is determined by economic theories. If the sign of estimated parameter values is not in line with economic criterion, then the estimated parameter values could be rejected unless there are compelling reasons suggesting that they can be applied in certain economic conditions. To justify that the estimates are different from those described by economic theory, any assumption underlying those justifications should be clearly stated.

## CHAPTER 4 FINDINGS

This chapter, discusses the estimation results of Ordinary Least Square regression analysis which represents the relationship between dependent variable (FDI Inflow) and Independent Variables (GDP Growth, Gross Capital Fixed Formation, Inflation, Openness, Tax Rate, and Tax Holiday) using time series data for year 1981 - 2010. Further descriptive analysis related to historical tax holiday regulation will be presented subsequently.

### 4.1. Descriptive Analysis

Before we proceed further to deep analysis of time series OLS, it is better to describe the nature of the variables we use in this regression. Descriptive statistics of dependent and independent variables in the model can be summarized as presented in table 4-1.

**Table 4-1: Summary of FDI Inflow, Tax Rate, Tax Holiday and other Control Variable (1981 – 2010)**

Variable	Observation	Mean	Median	Std. Dev.	Min	Max
FDI INFLOW	30	2.21E+09	8.87e+08	3.79E+09	-4.55E+09	1.34E+10
GDP GROWTH	30	5.350373	5.989109	4.067567	-13.12672	9.084714
GFCF	30	3.38E+10	3.35e+10	1.52E+10	1.34E+10	6.57E+10
INFLATION	30	10.44503	8.896994	9.63666	3.720024	58.38709
OPENNES	30	54.67367	52.95636	10.77232	39.97386	96.1862
Tax Rate	30	33.03333	30	4.759624	28	45
Tax Holiday	30	0.2333333	0	0.4301831	0	1

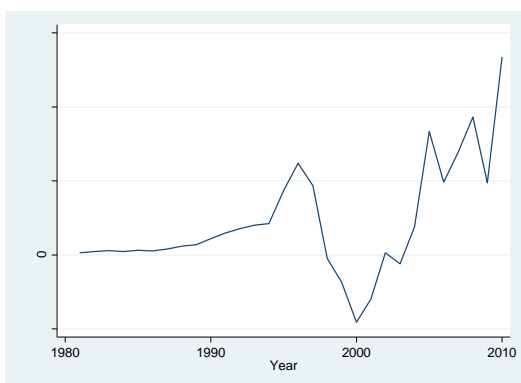
This study covers 30 observations from 1981 to 2010. One dependent variable (FDI Growth) and six independent variables (GDP Growth, GFCF, Inflation, Openness, Tax Rate, and Tax Holiday) are summarized in the above table. Out of seven variables, only FDI inflow has a standard deviation higher than its



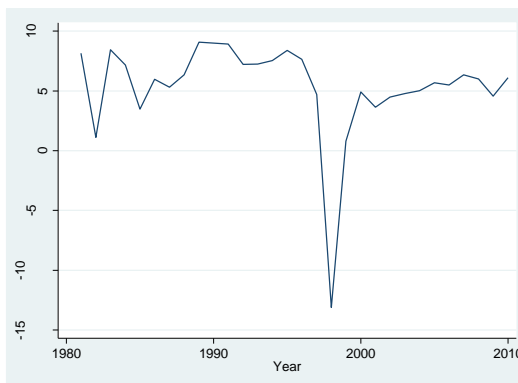
average. This condition shows the data are not equally spread. However, it is still permissible to incorporate the data into model OLS regression analysis. Moreover, the summary of the data shows that all variables have positive average even though some of them have negative value as shown in the minimal value of FDI inflow and GDP Growth.

To be more precise about the trend of each variable in time series, figure 4.1, 4.2, 4.3, and 4.4 illustrate the series of variable FDI inflow, GDP Growth, GFCF, and Inflation consecutively.

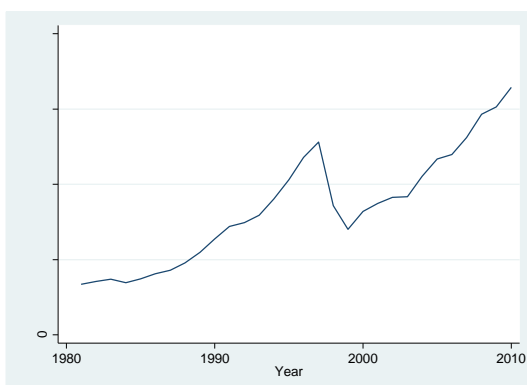
**Figure 4.1 FDI Inflow**



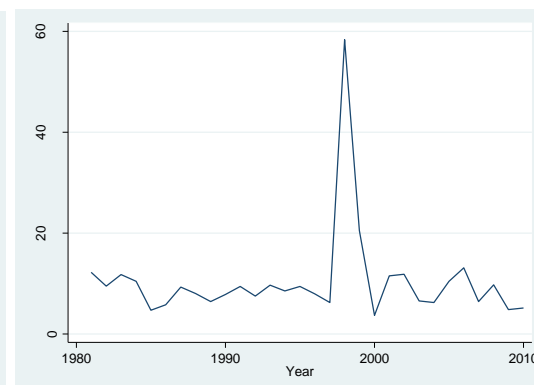
**Figure 4.2: GDP Growth**



**Figure 4.3: Gross Fixed Capital Formation**



**Figure 4.4 Inflation Rate**



All figures above show a shocked trend of sharp plunge of FDI inflow, GDP Growth, and GFCF and a skyrocketing of inflation rate during 1997-2000. The shock in these trends comes out of economic instability as a result of 1997 economic crisis severely hit Southeast Asian countries and political instability due to the overthrow of Suharto regime in 1998. After 2000, FDI inflow and GFCF show a positive trend while GDP Growth and Inflation tend to be stable at around 6% and 10% respectively.

## **4.2. OLS Basic Assumption Test**

### **4.2.1. Multicollinearity**

The first basic assumption test which will be undertaken here is multicollinearity test. Multicollinearity means that independent variables should not correlate one another. If correlation exists between independent variable, then we are in the state of multicollinearity problem. In this case, the regression model will end up with an incorrect or erroneous result and therefore, invalid conclusion will be prevailed.

The simplest multicollinearity test is conducted by testing the correlation coefficient between the independent variables. As a rule (rule of thumb), if the correlation coefficient is above 0.85, we should suspect of multicollinearity problems among independent variables. Another moderate method, which is commonly used, is by using variance-inflating factor or VIF test. VIF value above 10 will be considered as multicollinearity problem and the problem will be solved by dropping the independent variable from the model.

Correlation value between independent variables can be shown as below:

**Table 4-2: Correlation Value Among Independent Variable**

	GDP GROWTH	GFCF	INFLATION	OPENNES	Tax Rate	Tax Holiday
GDP GROWTH	1					
GFCF	-0.0345	1				
INFLATION	-0.8433	-0.064	1			
OPENNES	-0.727	0.2163	0.7637	1		
Tax Rate	0.1889	-0.7622	-0.0539	-0.3124	1	
Tax Holiday	-0.3891	-0.1772	0.4448	0.3073	0.4003	1

Table 4.2 shows that the maximal absolute correlation value among independent variables is 0.8433 which exists between Inflation and GDP Growth variable. Since the maximal absolute correlation value is below the rule of thumb (in this study, it is assumed to be 0.85), we may conclude that we do not have multicollinearity.

Another method, which we will apply further, is VIF approach. The value of VIF approach as STATA version 12.0 calculated is as follow:

**Table 4-3: VIF Value Among Independent Variable**

Variable	VIF	1/VIF
INF_CPI	4.83	0.206965
GDPGROWTH	4.01	0.249651
TaxRate	3.99	0.250669
OPENNES	3.09	0.323143
GFCFCONS2000	2.89	0.345821
TaxHoliday	1.95	0.512337
Mean VIF	3.46	

Since all the values of VIF are below the 10, we can conclude that we do not have multicollinearity problem in the model.

#### 4.2.2. Omitted Variable Test

This study carries out two tests in examining the omitted variable. The first one is Omitted Variable Test (OVTEST), and the other is Linktest. Both of them are available in STATA 12.0. The idea behind OVTEST is that this test will analyze the model by checking if the model has omitted any important variable or included any unnecessary variable. The null hypothesis in OVTEST is that the model has no omitted variable. Therefore, we should not reject the null hypothesis if the model is built correctly.

**Figure 4. 5. : OVTEST Calculation**

```
. ovtest  
  
Ramsey RESET test using powers of the fitted values of FDIINFLOW  
Ho: model has no omitted variables  
      F(3, 20) =      0.11  
      Prob > F =      0.9535
```

According to the above calculation, we find that  $\text{Prob} > F = 0.9535$  which is highly insignificant even for 10% level of significance. Therefore, we cannot reject the null hypothesis and concluded that the model has been correctly specified. This model already included important variables and omitted unnecessary variable.

Another omitted variable test performed in this study is Linktest. The way we take conclusion in this test is by carefully observing the `_hatsq` value. If the `_hatsq` value is not significant, we may conclude that the model has been correctly specified.

**Figure 4.6: Linktest Calculation**

. linktest						
Source	SS	df	MS			
Model	3.3987e+20	2	1.6993e+20	Number of obs =	30	
Residual	7.7091e+19	27	2.8552e+18	F( 2, 27) =	59.52	
				Prob > F =	0.0000	
				R-squared =	0.8151	
				Adj R-squared =	0.8014	
Total	4.1696e+20	29	1.4378e+19	Root MSE =	1.7e+09	
FDIINFLOW	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
_hat	.9677175	.1730797	5.59	0.000	.6125872	1.322848
_hatsq	4.67e-12	2.13e-11	0.22	0.828	-3.89e-11	4.83e-11
_cons	-4416808	3.70e+08	-0.01	0.991	-7.63e+08	7.54e+08

In the linktest above, the variable `_hatsq` is not significant. The `_hatsq Prob > [t]` value is 82.8% which is higher than 10% significant level. Therefore, this confirms that we have no specification error in the model. No model modification is needed here.

#### 4.2.3. Normality Test

Normality test is performed to determine whether the data in the study is normally distributed or not. This study applied Shapiro Wilk test to detect normality problem in the model. Null hypothesis in Shapiro-Wilk test is that the data have been normally distributed. If we select 5% level of significance, then we may reject the null hypothesis if `prob > z` for Shapiro-Wilk test is below 5%; otherwise we have no option but to accept null hypothesis and conclude that the residual data are normally distributed.

**Figure 4.7: Shapiro Wilk Test on Normality Problem**

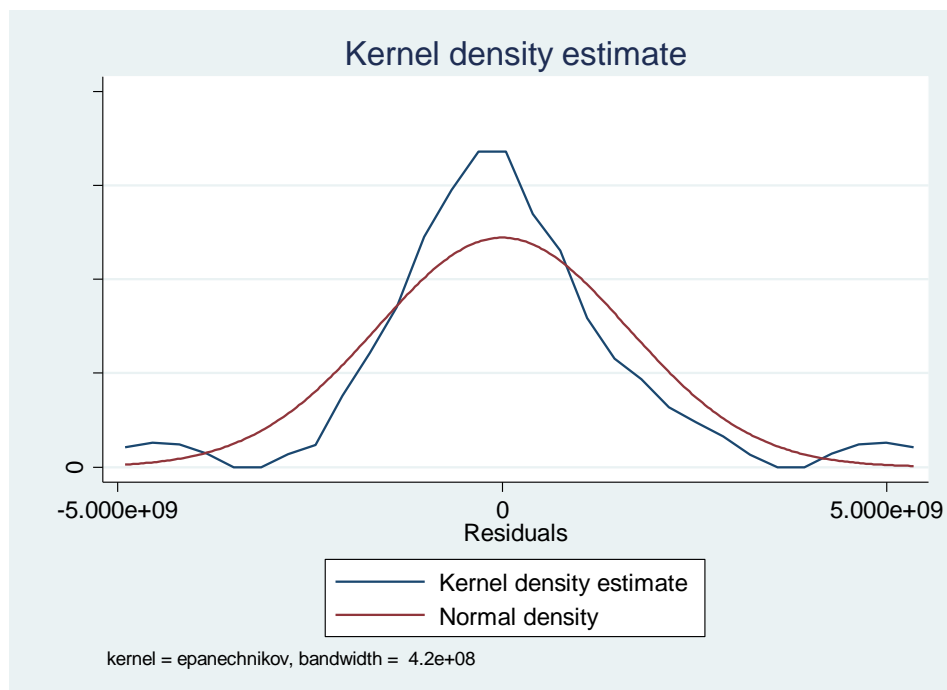
```
. swilk r
```

Shapiro-Wilk W test for normal data					
Variable	Obs	W	V	z	Prob>z
r	30	0.93358	2.111	1.545	0.06116

Shapiro-Wilk test calculated in STATA version 12.0 yield value prob > z is 6.116% which is higher than 5% level of significant. Therefore, we can safely conclude that the residual of this model is normally distributed.

Graphical method performed by STATA version 12.0 also shows the normality of model residual. By using Kdensity command, we can generate the normality graph of residual value. The figure below show that kernel density estimation resembles the normal density curve.

**Figure 4.8: Kernel Normality Graph**



#### 4.2.4. Autocorrelation Test

Autocorrelation test is conducted by applying Durbin-Watson Test (d statistics). According to Gujarati (2005), the area in which we do not reject null hypothesis and decide that we do not have autocorrelation problem in the model is if the Durbin Watson value is located between 2 and 4-du. As the figure 4.9 shows, Durbin Watson statistics value is 2.164005 which is clearly located between 2 and 4-du. Therefore, we may consider that the model is clear from autocorrelation problem.

**Figure 4.9: Durbin Watson Statistics**

```
. dwstat  
  
Durbin-Watson d-statistic( 7, 30) = 2.164005
```

#### 4.2.5. Heteroscedasticity Test

Heteroscedasticity test aims at testing whether the regression model has constant residual variance for each observation. If the residual variance of each observation is different, we conclude that there is a heteroscedasticity. This study carries out Breusch-Pagan test for heteroscedasticity. The null hypothesis of this test is homoscedasticity or constant variance. With the level of significant 5%, the Breusch-Pagan Prob > Chi2 should be more than 5% for us to conclude that we have no heteroscedasticity problem.

**Figure 4.10: Breusch-Pagan heteroscedasticity Test**

```
. estat hettest

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
Ho: Constant variance
Variables: fitted values of FDIINFLOW

chi2(1)      =      9.25
Prob > chi2  =      0.0024
```

According to STATA 12.0 result as shown in figure 4.10, Breusch-Pagan Prob > Chi2 is 0.24%. Therefore, we cannot reject null hypothesis and acknowledge that we have heteroscedasticity problem in the model.

To resolve heteroscedasticity problem, this study conducted OLS regression under robust standard errors.

### **4.3. Relationship Between FDI Inflow and Taxation**

After we fulfill all of Ordinary Least Square basic assumptions, now we are ready to exercise regression analysis. Our model is clear from multicollinearity problem, normality problem, autocorrelation problem and the model is correctly specified. However, we have heteroscedasticity problem here. To solve this problem, we will conduct OLS regression under robust standard errors. STATA 12.0 gives the result of OLS regression using robust standard errors as follows:



**Figure 4.11: Regression Estimation Using Robust Standard Error**

```
. regress FDIINFLOW GDPGROWTH GFCFCONS2000 INF_CPI OPENNES TaxRate TaxHoliday, vce(robust)
```

Linear regression

Number of obs = 30  
F( 6, 23) = 19.02  
Prob > F = 0.0000  
R-squared = 0.8148  
Root MSE = 1.8e+09

FDIINFLOW	Coef.	Robust Std. Err.	t	P> t	[95% Conf. Interval]	
GDPGROWTH	1.64e+08	1.68e+08	0.98	0.337	-1.82e+08	5.11e+08
GFCFCONS2000	.3047151	.048074	6.34	0.000	.2052665	.4041638
INF_CPI	2.18e+08	4.47e+07	4.88	0.000	1.26e+08	3.11e+08
OPENNES	3.38e+08	9.24e+07	3.66	0.001	1.47e+08	5.29e+08
TaxRate	-2.07e+08	6.95e+07	-2.97	0.007	-3.50e+08	-6.29e+07
TaxHoliday	-6.98e+08	7.46e+08	-0.94	0.359	-2.24e+09	8.45e+08
_cons	-1.10e+10	5.38e+09	-2.04	0.053	-2.21e+10	1.66e+08

Figure 4.11 exposes regression estimation of FDI inflow on Tax Holiday and other control variables. The model is good enough because the  $R^2$  value is 81.48%. Since we have no multicollinearity problem, high value of  $R^2$  indicated that the independent variables (GDP Growth, GFCF, Inflation, Openness, Tax Rate and Tax Holiday) succeed to explain the FDI inflow trends.

#### 4.4. Statistical Test for OLS Model

This section discusses several statistical tests covering t-test from previous OLS regression.

T-test is conducted by comparing the value of t statistics of each independent variable with the value of t table. By using STATA 12.0, we can easily know the result of t-test by comparing Probability of t value with level of significance. In this study, we are using 5 percent  $\alpha$  or 95% confidence level. If the probability of t value < 5 percent, then we may conclude that the independent variable is significant

toward dependent variable. To be more precise explanation of t-test for each independent variable will be presented below:

### **GDP Growth**

Probability value of t statistics is 0.337 which is higher than level of significant 5 percent. Therefore, we may conclude that GDP Growth has no significant relationship with FDI inflow. The result is quite surprising since we expect significant relationship with positive value of GDP Growth. However, since the main focus in this study is not GDP Growth and we only consider GDP Growth as control variable, we will not go further explaining this relationship.

### **Gross Fixed Capital Formation (GFCF)**

Independent variable GFCF has a significant relationship with FDI Inflow. We can prove it by comparing probability value of t statistics for GFCF with our level of significance. The probability value of t statistics for GFCF is 0.000 which is extremely small compare to 5 percent level of significance. This significant relationship is in line with our hypothesis. Moreover, GFCF has a positive sign which is quite reasonable. Therefore, we may conclude that GFCF has a positive significant relationship with FDI inflow. The more infrastructures will end up with the higher FDI inflow.

### **Inflation**

Inflation has a positive sign and significant relationship with FDI Inflow. The probability value of t statistics for inflation is 0.000 which is remarkably small compared to 5 percent level of significant. However, the positive sign of inflation

over FDI Inflow is quite suspicious. We will not spend much time explaining this phenomenon because the reason of inputting inflation in this model is only for control variable.

### **Opennes**

Opennes has a positive sign and significant relationship with FDI Inflow. The probability value of t statistics for opennes is 0.000 which is lower than to 5 percent level of significance. The positive sign here is probably due to the open market policy from Indonesian government which encourages international trade in the form of export and import.

### **Tax Rate**

Tax rate shows a negative signal and indicates a significant relationship with FDI Inflow. The probability value of t statistics for tax rate is 0.007, which is lower than 5 percent level of significance. The negative sign here is quite acceptable since lower tax rate means higher profit after tax for investors.

### **Tax Holiday**

Our main focus here is tax holiday which has probability value of t statistics 0.359. This value is much higher than 5 percent level of significance. Therefore, we may conclude that tax holiday has insignificant relationship with FDI inflow. This finding is in line with many researchers conclusion. For example, Root & Ahmed (1978), and Cleeve (2008) in their empirical research regarding determinant of FDI inflow proved that tax incentives is not significant as FDI determinant. Further

descriptive explanation regarding tax holiday will be presented in the subsequent section.

#### **4.4. Foreign Direct Investment and Tax Incentives History in Indonesia**

In this section, historical analysis of tax incentive and its relationship with FDI inflow is investigated. For the sake of convenience in constructing analysis, the analyzed period is divided into two sub-periods, namely old-order era and new-order era.

##### **4.4.1. Old Order Era (Soekarno Regime)**

In the early years of Indonesian independence around 1940s, the political leaders of Indonesia, including economic policy makers, were anticapitalism because of traumatic experiences during Dutch colonialism for 350 years. This era was marked by the takeover of the Dutch companies, and restrictions on dominant Chinese economic activities.

After that, in 1957 Sukarno formally proposed what is called as “guided democracy”, a typical democracy which many people perceived as nearly close to dictatorship regime. In this time, investment climate became less friendly to private investment, both domestic and foreign. However, in 1950s by foreign loans, including from Japan and the United States, some state-owned companies were established, including fertilizer plants, cement, paper, chemicals, spinning and shipbuilding.

In 1958, the regime realized that as a new baby born country, Indonesia needed capital investment both domestic and capital. Therefore, a conducive

investment climate should be maintained. Indonesian government for the first time enacted Law number 78 of 1958 concerning Foreign Direct Investment. Even though there is no tax incentives provision in this law, Indonesian government guaranteed for the existence of foreign company without any expropriation on their asset at least for 20 years. This assurance became crucial especially after several takeovers of foreign companies for the sake of nationalization.

There were only measly foreign investment inflows coming to Indonesia during 1950s. Among them was PT. Astra International as it is now well known as Astra Group Company. Aware of this lack of attractiveness, Indonesian government for the first time introduced incentives for foreign investment in Law Number 26 of 1964 regarding investment incentives grant. In this law for the first time Indonesia had tax incentive in the form of tax holiday.

Even though Soekarno regime under the old order era struggled to attract foreign investment by promulgating pro investment regulation, the reality were the other way around. No expropriation guarantee as it was promised in 1958 had no meaning anymore. Some industry regardless domestic or international were expropriated on the name of nationalization. Tin Industry in Bangka Island, 246 Dutch Companies, British properties valued around US\$400 million were all nationalized. Finally, the worst decision was taken on April 24 1965 when Sukarno ordered to nationalize all foreign-owned companies. Legislative members in the house representative supported the idea of nationalization by adopting Law Number 16 of 1965 concerning The Revocation of Law Number 78 of 1958 regarding Foreign Direct Investment in August 1965. Under this regulation, no more FDI

inflow was permitted, and no more incentives in any form would be granted. Indonesia then plunged into the darkest era in FDI regulation.

It is hardly possible to present the amount of FDI inflow during old order era due to data availability. However, we may conclude that FDI inflow was absolutely measly since the new baby born Indonesia was not only facing inconsistency in foreign investment regulation, but the most crucial things were no infrastructure, political instability, and relatively low market size.

#### **4.4.2. New Order Era (Suharto Regime)**

There are three critical points related to tax incentives regulation development during Suharto Regime. The first one is the resurrection of foreign investment regulation in the beginning of this regime which was signed by the encouragement of FDI inflow featured by incentives including tax holiday in attracting it. Second is the end of tax holiday provision around 1984 as a result of self-reliant internal financing due to oil price drops. Finally, the last one is the revival of tax holiday provision around 1996. All of these step stones will be discussed below.

##### **4.4.2.1. The First Resurrection of FDI Regulation 1967**

Well, et al. (2001) described a complete series of tax incentives development in New Order Era under Suharto Regime from 1967 to 2000. He started to explain the second experiment of tax incentives in Indonesia when it took place in the beginning of Suharto regime. It was in 1967 when Government of Indonesia

introduced tax incentives policy along with the enactment of Law No 1 of 1967 on Foreign Direct Investment.

There are several considerations as a background of this law as stated in the consideration part of Law Number 1 of 1967:

1. Indonesian economic development requires transformation of potential economic resources into real economic strength through investment, utilization of technology, expansion of knowledge, improvement of skills, and increases in organizational and managerial ability;
2. The efforts to overcome economic decline and further develop Indonesian economic potential should be based on the capabilities and capacities of the Indonesian people themselves;
3. Nevertheless the principle of relying on our own capability and capacity should not lead to reluctance to make use of foreign capital technology and skill, so long as these are truly devoted to serving the economic interests of people without causing dependence on foreign countries;
4. Foreign capital should be utilized to maximize advantage in order to accelerate the economic development of Indonesia, as well as utilized it in other fields and sectors, where Indonesian capital for the time being is not yet being employed;
5. The need to devise clear regulations in order to fill the needed capital for national development, as well as to avoid uncertainty on the part of foreign investors.

All in all, the idea behind this law is to restore and stimulate FDI inflow after the abyss of foreign investment both quantitatively and qualitatively.

Featuring in this foreign direct investment law were concession on taxes and other levies as incentives to attract FDI. The advocates of tax incentives pinpointed that tax incentives were necessary for captivating investors to the country, since the entrance door for foreign investment had been closed in the beginning of 1960s under President Sukarno. With extremely high corporate income tax (around 60 percent under 1925 Tax Law), tax incentives were inevitably important to make up investment climate. This trigger resulted in the second enactment of tax incentives provision under new foreign direct investment law. Tax incentives provisions, as regulated in article 15 Law Number 1 of 1967, stipulated that foreign investors were exempted from corporate income tax imposition and dividend taxes on companies' profit for a period of five years. When the exempted period was over, foreign investors were deserved for a relief in corporate income tax rate up to 50 percent for maximum 5 years period.

In article 15 Law No 1 of 1967, it was stipulated that foreign capital enterprises are granted the following concessions on taxes and other levies:

**Foreign Investors are exempted from:**

1. Company tax on profits for a period of not more than five years starting from the moment the enterprise commences production;
2. Dividend tax paid to shareholder as a result of companies' profits distribution as long as these profits are earned during a period not exceeding five years from the moment the enterprise commences production;
3. Company tax on profits which are reinvested in the enterprise in Indonesia, for a specified period not exceeding five years from the time of reinvestment.



4. Import duties at the time of entry into Indonesian of fixed assets such as machinery, tools or instruments needed for the operation of said enterprise.
5. Capital stamp duties on the issuance of capital originating from foreign investment.

If we observe those tax incentives above, especially exemption number one to three, we can say that Indonesia already offered tax holidays for new foreign investors which were similar to tax holidays offered by other countries. Moreover, tax holiday provisions regulated here is more detailed and well structured than previous one in Law Number 26 of 1964. In this new tax holiday regulation, it is regulated what type of taxes being exempted, for how long it is exempted, and the starting period in which tax holiday is applied.

In addition to these exemptions, Suharto Regime also offered relief which can be considered as tax incentives.

**Foreign Investors are Granted with Relief:**

1. In the levy of company tax through a proportional rate of not more than 50 percent for a period not exceeding five years after tax holiday as mentioned above is over.
2. By being able to carry forward losses suffered during the tax holiday period, against profits subject to tax generated in the further period.
3. By allowing accelerated depreciation of fixed assets.

As we examined clearly, those exemption and relief are applicable solely for foreign investors. No tax holiday or tax incentives were given to domestic investors.

However, in 1968 Indonesia government enacted Law Number 6 of 1968 concerning Domestic Investment which regulate tax holiday and tax incentives provision for domestic investment. The reasons behind this according to Well, et al. (2001) are fairness and preventing round-trip capital. What fairness means in the opinion of government is that if foreign investors are granted with numerous incentives, then economically, ethically, and politically domestic investors also deserve the same right for these incentives. Preventing round-trip capital is the reason for minimizing the cycle of capital which means domestic capital will be exported and then reimported back as if it is new foreign investor to get incentives facilities.

Several incentives prevailed for domestic investors as it is regulated in Chapter VI Law Number 6 of 1968 regarding Domestic Investment are:

1. Exempted from corporate income tax on the profit generated by domestic investors for a period of minimal two years and can be extended to maximum 5 years.
2. Exempted from property tax for capital invested in certain areas by domestic investors.
3. Exempted from capital stamp duties for deposit and fund invested by domestic investors for a period of five years.
4. A portion of the profit reinvested in certain area is excluded from the calculation of the taxable profit for the fiscal year concerned.
5. Relief in import duties due to the import of the capital goods.

After promulgation of this Law, encouragements in capital investment for both domestic and foreign capital were more or less equal.

In 1970, for the first time, the original foreign investment law was amended by Law Number 11 of 1970 concerning Amendment and Supplement to Law Number 1 Of 1967 Concerning Foreign Investment. This amendment developed detail criteria for awarding incentives for investors so that they would be more predictable to investors. In this law, it was regulated that tax holiday will be granted by Ministry of Finance on behalf government rather than automatically as seen in previous law.

Several conditions regarding to tax holiday were amended and the entirety of provisions regarding tax holiday as stated in article one of Law Number 11 of 1970 are as follows:

1. The Minister of Finance is authorized to grant new entities, which invest their capital in fields of production which obtain priority from the government, a tax holiday for a period of two years starting from the time production is commenced.
2. Additional tax holiday for one year will be granted if the investment significantly increases foreign exchange;
3. Additional tax holiday for one year will be granted if investment is made outside Java Island;
4. Additional tax holiday for one year will be granted if investment requires large amounts of capital, due to the need to develop infrastructure and/or because the project faces greater than ordinary risk;

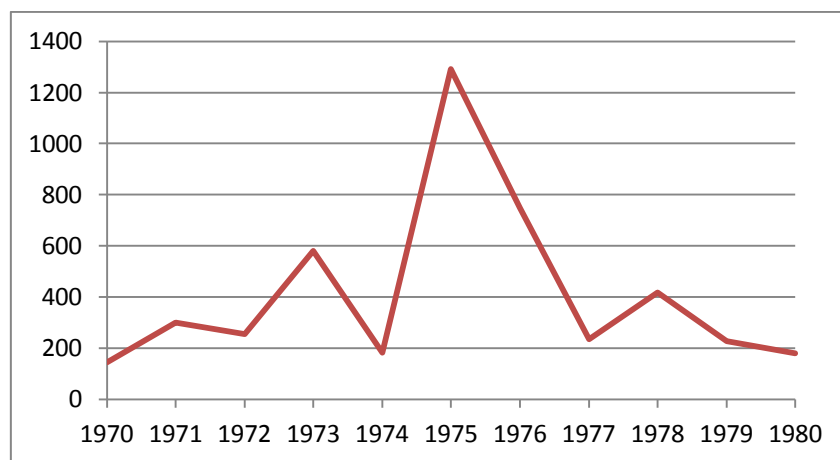
5. Additional tax holiday for one year will be granted in cases which are given special priority by the Government.

Totally six years of tax holiday will be given on the investment starting from the commercial production started.

The reason for specifying detailed criteria in awarding tax holiday actually reflects the belief about what kind of investments were desired by the government. Size of the company, field in which the company operates, location where the capital is invested, and ability to generate foreign exchange will incur additional year of tax holiday. Government preferred larger company because, at that time, only larger companies have the technology that Indonesia needs such as technology in energy resources exploration and mineral processing. Moreover, investment by larger companies will increase government confidence in its ability to attract investment as well as attract other investors to follow.

There are no data regarding foreign direct investment before 1970. Therefore, comparison data between non tax holiday period (1966 and before) and tax holiday period (1967 and after) could not be done. However, we can graph FDI inflow starting from 1970 as it is presented below.

**Figure 4.12: Foreign Direct Investment Inflow (in US\$ Million)**



Source: UNCTAD

Based on the above figure, we can say that Indonesian FDI inflow was fluctuated starting from the lowest amount in 1970 at \$ 145.38 million dollar. The peak of FDI inflow occurred in 1975 at the amount of \$ 1292.06 million dollar. Possibly this skyrocketing amount emerged as a result of focusing in mining investment area. Unfortunately, soon the FDI inflow plunged consecutively in year 1976 and 1977, possibly happen due to the effect of riots around that year and anti Japanese and anti foreign investment demonstration. However, this figure does not show the effect of tax holiday on FDI inflow since the whole of those periods are covered only with tax holiday scheme.

#### **4.4.2.2. The Second Elimination of Tax holiday in 1984**

In the early 1980s, some of the supporting arguments for tax holidays proposed by pro foreign investors group were losing their convincing power. It is because several key investors, to whom these tax incentives were intended to, had established themselves in Indonesia. So that the necessity in tempting more firms as role models were regarded unessential. Moreover, since the corporate tax rate in

Indonesia had been reduced to 45% from around 60% under the 1925 Company Tax Ordinance, and tax treaties for the avoidance of double taxation between countries had reduced dividend taxes for many foreign investors, the argument that tax incentives would be needed to offset the high taxes rate was no longer valid. As a result, when Indonesian government started to arrange tax reformation, the continuity of tax incentives became a hot issue in internal discussions of the Ministry of Finance.

During the internal discussions of the Ministry of Finance, it was decided that the corporate tax rate would be further reduced, to 35 percent, in order to balance with other countries decreasing rate. According to internal research conducted by the tax reform agency under Ministry of Finance's supervision, investor's rates of return would be more or less similar between 45 percent tax rate equipped with tax holiday facility and 35 percent tax rate without tax holiday facility. Thus, eliminating tax holidays would not have much effect for investors. Moreover, the tax reform agency explained that empirical studies in many countries showed that tax holidays play a relatively small role in foreign investors' decision about where to locate their investment.

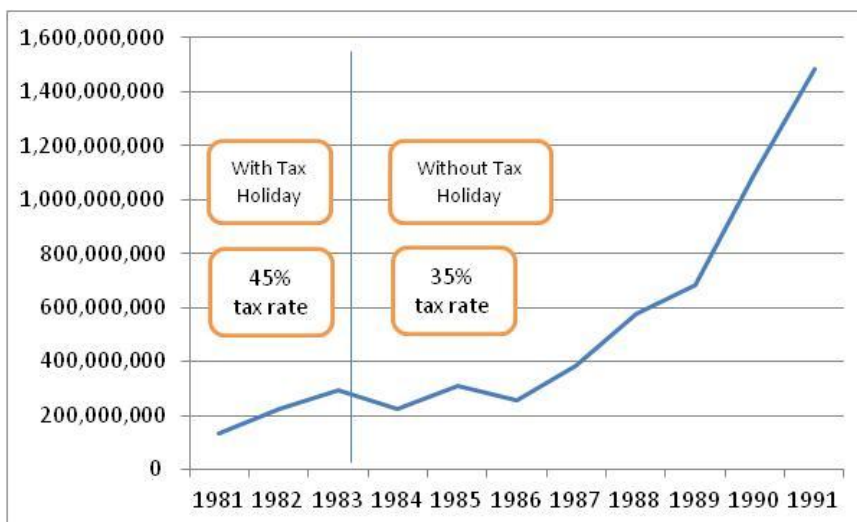
On the other hand, the proponents of tax holiday did not keep silent. Many officials (outside the Ministry of Finance, particularly from Investment Board) argued that FDI inflow in Indonesia would collapse dramatically without tax incentives. Moreover, tax incentives supporters worried the effect of investment climate instability in 1974 when demonstration widespread on foreign economy

especially Japanese “dominance” in FDI. Tax incentive, in their perception, would be worth enough to offset that instability.

Having intense discussion under fierce argument, however, tax incentives policy as provided in the law 11 of 1970 were amended along with the tax law reformations in 1983. One of the considerations driving the change was a fluctuation in world oil prices which is unpredictable. That condition, in fact, threatened the state revenue sustainability. Government began to realize that taxes are an alternative source of revenue which is more reliable than oil and gas revenues. Thus, forming the basic idea of returning the basic function of tax legislation as a source of country’s revenue (*budgetair* function) rather than regulate function in attracting FDI was a brilliant idea. Provisions on tax incentives that would reduce state revenues unequivocally abolished. All of existed tax incentive provisions were repealed by income tax law number 7 of 1983. After the dramatic turnaround in tax incentive regulation around 1983, Indonesia started to be one among very few developing countries which eliminated tax holiday provisions.

Year 1984 became the crucial year for both proponent and opponent tax holiday since this was the first year of eliminated tax holiday. FDI inflow in this year would be “natural evidence” whether eliminating tax holiday was an appropriate decision or destructive choice. FDI inflow during the transitional period can be portrayed as below:

**Figure 4.13: FDI Inflow Period 1981 - 1991**



Source: WDI

The first year without tax holiday as shown in the figure above shows that FDI inflow decreased from \$ 292 million to \$ 222 million. This declining amount according to proponents of tax holiday provision is a real proof that tax holiday abolition is a major mistake. Soon they ask for reconsidering of this new policy before things get worse. The chief of Indonesia Investment Agency (BKPM), A.R. Soehoed said that a large number of investors domestic and foreign were still considering tax holiday as a very important incentive, and he suggested that tax holiday provision should be restored.

However, the value of FDI inflow in the subsequent years showed increasing amount of FDI inflow. As it is shown in figure 4.13, the value of FDI inflow continued to rise after decreasing year in 1984. Subsequent decreasing only happened in year 1986 and then it constantly performed increasing sign. Well, et al. (2001) performed a research comparing FDI inflow in the period with tax holiday and without it by utilizing log number and value of FDI project to know the growth .



The result showed that statistical test of the differences between growth rate in the period with tax holiday and without tax holiday is not significantly different from zero. Even though FDI inflow's growth during tax holiday period was slightly higher than it in the period without tax holiday, the difference is not significant to conclude that tax holiday plays an important role in investment decision.

The explanation of decreasing FDI amount in year 1984 according to Well, et al. (2001) is a result of anticipation for taking the last opportunity of tax holiday in year 1983. There had been actually an upward blip in FDI approval in that year. Since investor already knew that tax holiday provision would be eliminated, some investors accelerated their investment a year ahead from 1984 to 1983. The reason was clear; they wanted to benefit both tax holiday and net lower corporate tax rate. Moreover, according to Well, et al. (2001), Indonesia Investment Agency tried to induce investors to accelerate and granted investment approval a year ahead from 1984 to 1983 so that investors will gain more. The explanation of short fall fluctuation in the beginning of tax holiday elimination seems to give clear evidence that it was just a little shock during the regulation's transition and not a permanent evidence that elimination of tax holiday destructs FDI environment.

A long term explanation can be drawn if we pay attention to the long trend of FDI in the period of 45 percent tax rate (year 1983 and before) and 35 percent tax rate (year 1984 and after) as it was regulated in tax reformation law. Along with the tax reformation, Ministry of Finance dramatically changed the tax collection method by simplifying it and gave more trust to taxpayer in calculating, settling, and reporting their tax compliance. In the long term graph, we can see that FDI growth is

higher in the period after tax reform compared to the period before tax reform. If we carefully observe this graph, we may perceive that tax rate and simplification of tax assessment have a supporting relationship with FDI inflow. This opinion is at least in line with the quantitative result showing that tax rate has a negative significant value with FDI inflow.

#### **4.4.2.3. Second Resurrection of Tax Holiday 1996**

The proponents of tax holiday provision did not keep silent with the revocation of tax holiday provision. The pressure to revive back tax holiday even already started in 1984 when tax holiday was abrogated. Despite the fact that FDI inflow in 1980s decade was not destroyed without any tax incentive as it is proven by the increasing FDI inflow after its elimination, tax holiday supporters led by Indonesian Investment Agency continued proposing re-enactment of tax incentives for alluring investment inflow.

There were several proposals documented in formal memoranda from Indonesian Investment Agency asking for tax incentives re-enactment. At least three significant memoranda were written regarding this effort. Well, et al. (2001) stated that the first memorandum was delivered in 1987 by the head of Indonesian Investment Agency, Ginanjar Kartasasmita who proposed the revival of tax incentive as a response to comparative investment incentives in the neighboring countries. Indonesia is lack of investment incentives compared to Southeast Asian countries such as Thailand. The second memorandum in 1993 was offering a detailed proposal of tax holiday types. In the proposal, tax holiday would be extended from two years period into five years period plus 20 percent discount of

tax related to any expenditure for human resources development and advancing technology. Finally, the third memorandum in 1996 was the unconquerable one which finally broke up the ban of tax incentives.

According to Well, et al. (2001), there are several reason behind the pressure from Indonesian Investment Agency in proposing tax incentives. First, struggle for obtaining power and fundamental different functions of Indonesian Investment Agency and Ministry of Finance. The main task of Indonesian Investment Agency is to promote investment and not to collect revenue. If tax holiday might attract FDI inflow, then the agency will benefit from this even though the cost of tax holiday will be borne by Ministry of Finance. Moreover, the abrogation of tax holiday reduced the power of the Investment Agency, since they have lost some function in investment procedures. Therefore, the restoration of tax holiday would have brought authority back to them. Second, tax holiday is an attractive incentive for government as well since the cost is hard to be measured. In fact, tax holiday is not a cash paid incentive, it is a foregone revenue. Thus, although Ministry of Finance often reluctant to grant tax holiday, it is still preferable than subsidy incentives. Third, it is easier to institute tax holiday as incentives rather than maintaining political and economic stability or building infrastructure. Many governments already knew what investment environment will attract FDI. However, they found it is more difficult, need abundant fund and time to establish it, while the shortest way in their mind to offset this drawback is by implementing tax holiday. At least in their mind, they do something while improving investment environment.

In 1996, after accumulation of pressure, the ban of tax holiday was finally broken. Government Regulation Number 45 of 1996 Regarding Income Tax on Corporate Tax Subjects in certain industries field had been enacted. In this law, tax holiday was finally resurrected after more than a decade ban. There are two crucial points in this law. First, the length of tax holiday period is extended into maximum ten years for investment in Java Island and maximum twelve years for outside Java. Next, government did not use terminology “tax holiday”, but the phrase of “all income tax will be borne by the government”. However, the effect of both is of course exactly the same. Second, the criteria of which industry field will be granted tax holiday are not clearly specified. Rather, government established a team named “Research Team for Tax Facility Award in Certain Industry Field”. This team will study what kind of industry field requires support in terms of tax holiday, and recommend to President what companies are eligible for it. In this regulation, tax holiday award was considered as discretionary policy than automatically application as it was regulated in the previous provisions.

One year after Government Regulation No. 45 of 1996 had been issued government finally granted tax holiday for six companies. The government claimed that tax holiday award was issued to reinvigorate Indonesian investment climate, after showing a tendency to decline. However, the implementation of this regulation drew many critics because the criteria of eligible industry field in which deserves for tax holiday are not clearly specified.

There were only six companies granted tax holiday as stipulated by Presidential Decree Number 38 of 1997 dated 1 September 1997. Those companies were:

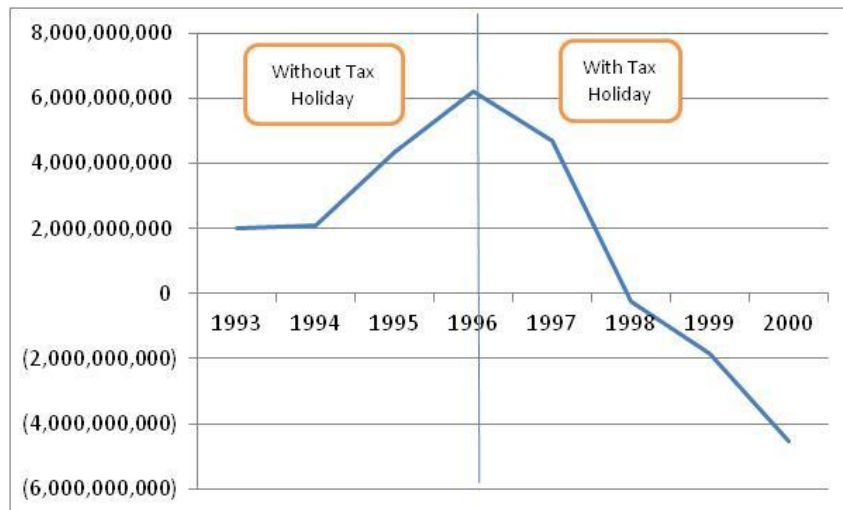
1. Kiani Kertas Corp. This Company was given 10 years of tax holiday. The owner of this company is Bob Hasan. It is an open-secret around public people that he is a close business partner of the current ruling president.
2. Trans-Pacific Petrochemical Indotama Corp. This company received six years of tax holiday. This company is owned by Hashim S. Djojohadikusumo. People recognize him as Suharto's family in law since the little brother of Hashim married Suharto's daughter.
3. Texmaco Perkasa Engineering Corp. This company was awarded eight years of tax holiday. This company is controlled by Marimutu Sinivasan. An Indian-Indonesia businessman who is chummy to Suharto.
4. Polysindo Eka Perkasa Corp. This company was granted five years of tax holiday. This company is a subsidiary company of Texmaco Corp.
5. Smelting Corp, which had been awarded seven years of tax holiday, is a Japanese- U.S. company operating in Papua Province.
6. Seagate Technology Sumatera Corp, which had been granted with nine years of tax holiday, is an American-owned plant manufacturing electronics components in Sumatra Island.

The effect of discretionary policy in giving tax holiday seemed to be a doomed in Indonesian bureaucracy since out of six companies given tax holiday only two companies which were actually eligible. The rest four companies were granted without understandable criteria.

The fact, that tax holiday regulated in Government Regulation Number 45 of 1996 is a discretionary policy without clearly specified the prerequisite requirement for getting it, made investors loss attraction on it. Investors might not consider it as a crucial point in making investing decision since they do not know how to predict the result of their tax holiday request.

For giving the overall relationship of FDI inflow and tax holiday provision as it was regulated in Government Regulation Number 45 of 1996, it is better for us to analyze FDI Inflow before and after this regulation. Figure 4.14 as shown below graphs FDI inflow during the period without tax holiday (1993-1996) and the period with tax holiday (1996-2000). The result seems quite controversial as we can see that FDI inflow without tax holiday exhibited an upward trend, and when tax holiday was reintroduced again, it turned over downward.

**Figure 4.14: FDI Inflow Period 1993 - 2000**



Source: WDI

The explanation of downward FDI inflow trend in year 1997 is quite precise as many other might think. Economic crisis hit Indonesia and neighboring countries

in 1997, which triggered FDI Inflow downward. What happened in 1998 was even worse for Indonesia, not only she was still suffering from the crisis, but also the economic crises spread into many perspective resulted in economic, political and social instability and ended up with the collapse of Suharto Regime. In 1999, instability in many perspectives still prevailed, and Indonesia was on the verge of collapsing into separated countries. Even one province in the eastern part of Indonesia already chose for being an independent country in via referendum held by UN. The overall condition from 1997 to 1999 was unquestionably not a conducive environment for FDI. On the other hand, it had a detrimental effect on FDI as it is shown by negative FDI inward in 1998. With regard to tax holiday provision effect on FDI inflow during period 1997-1999, we can say that tax holiday incentive was not enough and probably will never strong enough to offset multidimensional instability.

#### **4.4.2.4. The Third Elimination of Tax Holiday 2000**

During the last tax holiday enactment in 1996, Indonesia experienced implementation of tax holiday award on the basis of discretionary policy instead of automatically application. This policy, according to Well, et al. (2001), was failed in a country like Indonesia. It has disadvantage which is prospective investors could not forecast what kind of incentives they will receive. Thus, they have to spend extra cost to carry on feasibility studies, preparing information to Investment Agency officers, or even bribing decision makers for getting the desired outcome. As a result, tax holiday is less effective in alluring investors which operated under transparent and predictable rules.

Realizing this problem, in 1999, the new Indonesian president B.J. Habibie transformed tax holiday under discretionary policy into tax holiday under clearly specified industry field list in which tax holiday will be granted. As it was regulated in Presidential Decree Number 7 of 1999 Regarding Criteria in Granting Tax Holiday for Certain Industry Field, as a detailed regulation for Government Regulation Number 45 of 1996, Indonesian government stipulate 22 industry fields eligible for tax holiday. Moreover, it regulated that tax holiday award was now will be under the authority of Ministry of Finance instead of President as regulated before. The effect of this decree was more predictable rule for investors and increasing the number of companies eligible for tax holiday facility which means higher loss in tax revenue.

Even though the Presidential Decree was paved with good intention to give certainty and more predictable regulation for investors, many people consider it was not an appropriate time for giving tax holiday, especially during economic crisis when Indonesia did not have sufficient budget even for subsidizing the poor. Dr. Bachrawi Sanusi in his interview with Tempo Magazine stated his disagreement with the enactment of this decree since it was only favorable for conglomerate and foreign investors rather than poor people. Moreover, tax holiday will only slacken government ability in collecting revenue to cover budget deficit. Pressure also came from International Monetary Fund (IMF), “a super body fund lender” to whom Indonesia relied on in dealing the economic crisis. Under Indonesia’s Letter of Intent (LoI) and Memorandum of Economic and Financial Policies in May 2000,

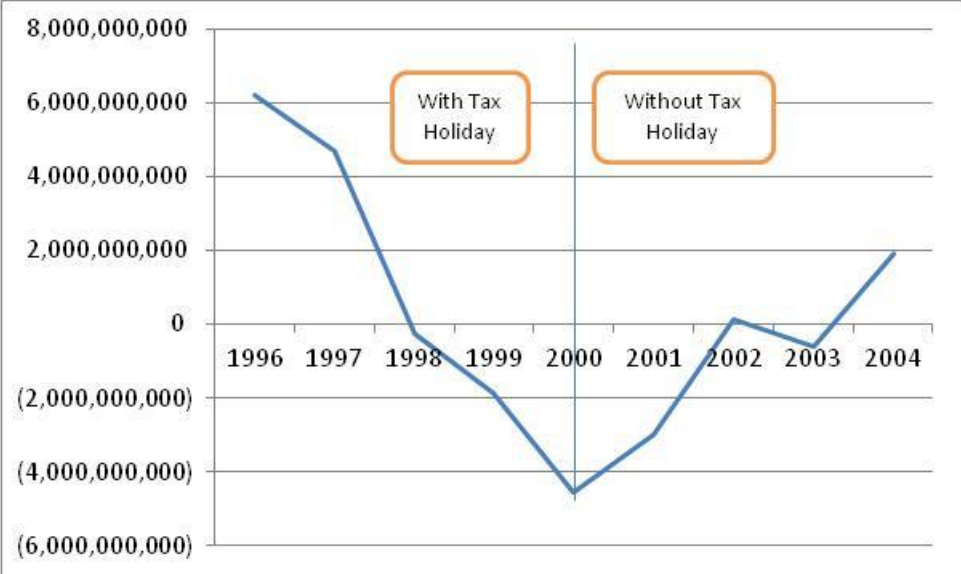


IMF required Indonesian government to execute several policy actions including elimination of tax holiday and replace it with other investment tax allowance.

In year 2000, under the pressure of people and especially IMF suggestion, Indonesian government for the third times eliminated tax holiday provision. As it was stipulated in Government Regulation Number 148 of 2000 concerning Taxation Incentives for Investment in Specified Business and/or Specified Regions, tax holiday was abrogated and replaced by other tax incentives comprise of lowering tax rate, accelerated depreciation, extended loss carry forward, and reduction in dividend tax rate.

If we take a look at FDI inflow graph as shown in figure 4.15., FDI inflow rebound up in year 2000 exactly at the year when tax holiday was abolished. This does not mean tax holiday played a negative role on FDI inflow. The upward trend was probably due to improvement in economic stability, new trustworthy government elected after a series of elections, and promised for a better infrastructure improvement. However, the fact that FDI inflow showed an upward trend despite the abolishment tax holiday provision indicate its measly deterrent effect to offset economic and political instability.

**Figure 4.15: FDI Inflow Period 1996 - 2004**



Source : (World Bank, 2012)

## CHAPTER 5 CONCLUSIONS

This chapter covers two parts: (1) conclusions and (2) recommendations. The conclusions are delivered from the empirical findings in response to research problems and objectives. Based on the conclusions, some policy recommendations regarding tax holiday are presented.

### 5.1. Conclusions

Based on the facts and findings presented in chapter four, this study concludes five salient points, as follows:

1. Based on Ordinary Least Square regression analysis, this study found four out of six independent variables have significant impact on FDI inflow either in negative or positive direction. Gross Fixed Capital Formation, Inflation, and Openness are independent variable with positive significant relationship with FDI inflow. In addition, Tax Rate is an independent variable with negative significant relationship.
2. Tax holiday as the main focus of this study is convincingly proven not significant as FDI inflow determinant. The possible reason is because tax holiday offered in Indonesia will never be able to offset susceptibility in economic, politic, government policy and lack of infrastructure as previously prevailed in Indonesia. Moreover, tax incentives as well as tax holiday specially are not the main consideration for investors in investment decision making. However, if other main FDI determinants are available, tax holiday will be additional point for investors in locating their investment.

3. Historical FDI analysis in year 1964-1965 under Soekarno Regime and year 1966-2000 under Suharto Regime conveyed a clear message that economic stability, political stability, effective government policies and security guarantee including security from expropriation of investors' asset are considered as decisive factors for foreign investors in selecting investment location.
4. Discretionary policy in awarding tax holiday as it was executed under Government Regulation Number 45 of 1996 for period 1996 – 2000 brought uncertainty for investors. They will spend extra effort only for knowing whether they are eligible or not for being granted this incentive. As a result, both investors and policy makers were easily fall into corruptions, cronyism, and nepotism.
5. Tax reformation in 1984 had proven that lowering tax rate and simplification of tax mechanism can attract FDI growth more than giving tax holiday facility. Investors appreciate more on lower tax rate and simple tax procedure than extended time of tax holiday facility. However, reducing the tax rate and simplifying tax procedures need extra effort and precise calculation than giving tax holiday facility.

## **5.2. Recommendations**

Refer to the previously described conclusions, this study offers the following essential recommendations in order to sustain and maintain foreign direct investment inflow as well as sound tax holiday policy.

1. Empirical OLS regression analysis concluded that GFCF as infrastructure proxy is proven to have significant and positive impact on FDI inflow. Therefore,

government should put extra effort in developing a reliable infrastructure. However, considering the budget constraint, government could cooperate with third party in building infrastructure. Public-private partnership scheme could be conducted. In addition, tax incentives including Tax holiday could be granted for an appropriate period.

2. Empirical quantitative analysis concluded that tax rate has a significant and negative impact on FDI inflow. Accordingly, lowering tax rate accompanied by tax procedure simplification will increase FDI inflow. However, lowering tax rate can also mean giving incentives of tax rate discount to all tax payer which in fact will decrease tax revenue. Therefore, it is better for the government to opt for tax rate discount incentive and select the appropriate criteria for granting this incentive.
3. Tax holiday policy should be planned and managed appropriately. The requirement in giving it should be clearly stipulated in law in such a way that investors can easily interpret without incurring dispute. Moreover, government should not repeat the previous mistakes by granting tax holiday based on discretionary basis to seal up any opportunity that could bring toward corruptions, cronyism, and nepotism.
4. Conducting cost analysis before implementing tax holiday policy. Government should assure that the benefit from FDI inflow as a result of implementing tax holiday facility is higher the cost associated with it. This cost benefit analysis needs meticulous calculation and analysis. However, the result will lead to effective and efficient tax holiday regulation.

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