

## **Analysis of Unemployment and Poverty in Crimes against FDI in Indonesia**

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**Abstract:** Criminal aspects are one of the strongest considerations for the foreign investors to place their investments. This study aims to analyze unemployment and poverty in crime against Foreign Direct Investment (FDI) in Indonesia. This study used data from 31 provinces in Indonesia. The data consist of FDI that measured by foreign investment; CRIME that measured by number of crime (total crime), time of occurrence of a crime (crime clock), and the number of people at risk of crime (crime rate); UNEMPLOYMENT that measured by Job seekers and preparing a business; and POVERTY that measured by the population who have an average per capita expenditure per month below the poverty line. The analytical method that used in this research is multiple regression analysis with pooled data. This study found that there is only 10% the influence of unemployment and poverty toward crime. The influence of crime on FDI is 41%. This study has concluded that unemployment and poverty rates are not directly related to FDI but are linked by crime. It does not mean that there is no influence but will be one of the considerations of the country of the owner of the fund (home country) in placing the funds in the destination country (host country).

**Keywords:** Foreign Direct Investment, Unemployment, Poverty, Crime.

### **I. Introduction**

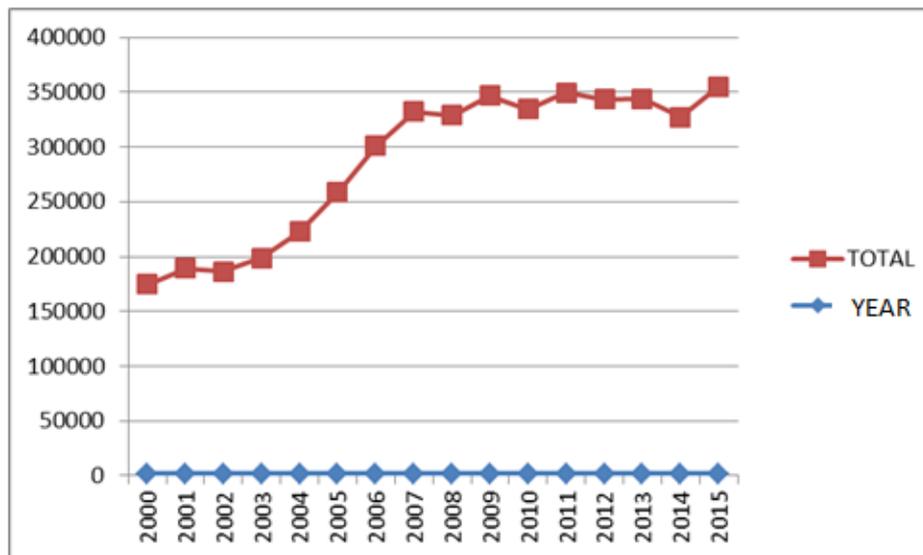
For developing countries like Indonesia, foreign direct investment (FDI) is very important for economic growth. The use of FDI, among others, is for the development of productive capacities, infrastructure, and technological improvements that may not be funded domestically. According to Jhingan (2004), foreign investment is needed to build economic acceleration. This is because foreign capital can help in the industrialization process to create wider opportunities. Foreign capital is provided not only through financial assistance but can be in the form of technological assistance. There are three factors that can be used to increase the economic growth. First is foreign capital that can be used as a tool to accelerate investment and economic growth. Second is FDI that has a role in a country's economic growth. Third is the structure of production and trade in the country.. These three things must be supported by the role of the government that uses the foreign capital for the purpose of building infrastructure. In a study conducted by Wahiba (2014), foreign investment affected economic growth in Tunisia, namely the open market, technology and communication commercialization, and M2 money supply.

The high efficiency of crime in the host country and also on the loss of productivity and increased security costs tend to reduce FDI flows. Decreasing investment in a country will make the economy sluggish. On the other hand, the increasing investment will create opportunities for job seekers. In the developing countries, unemployment increase because of the lack of available jobs. This is what triggers crime in the community. The tendency of criminal acts is carried out by people who do not have jobs than those who have jobs. According to Sukirno (2004), there is a close link between the problem of crime and the problem of unemployment, namely the higher the unemployment, the higher the criminal case. Therefore, the efforts to overcome unemployment indirectly lead to crime reduction. According to Lochner (2007), the amount of free time available can provide an opportunity to commit a crime. According to Wong in Hardianto (2009), if the population cannot get a job, it will have an impact on increasing the unemployment rate. In his research, it was concluded that the unemployment rate has a significant impact on the level of crime in a region. According to Czabanski (2009), if crime increases, then GDP will decrease. On the contrary, if GDP falls then economic growth falls and absorption of labor decreases which results in increased crime rates. The indicator that commonly used to measure crime is a number of crimes (total crime), number of people at risk of being affected crime (crime rate), and the lapse of the occurrence of a crime (crime clock). Researches that examine

or investigate the factors that drive high rates of crime are research conducted by Lochner (2007). Lochner (2007) stated that there is a negative relationship between education level and crime rate. Higher education will affect someone to get a legal job. Higher education also tends to affect criminal acts because of the small benefits, so that wage increases can affect the number of criminal acts that exist. The analysis conducted by Ehrlich (1996), shows that education is a matter that is needed to prevent crime, because with high education one will take into account the risk of committing a crime. For this reason, education will be able to reduce the number of crime. Karipova et al. (2016) makes conclusions in his research that unemployment has a positive effect on property crime including crime. Strain theory argues that feelings of frustration will affect people who are not successful when dealing with successful people around them. The greater the gap, the greater the frustration, that will increase the temptation to commit the crime.

Based on data from the Central Statistics Agency (BPS) for the period 2010-2015, the number of criminal acts in Indonesia fluctuated. As presented in the following table;

Criminal Table 2010-2015



Data source [www.bps.go.id](http://www.bps.go.id)

## II. Literature Review

### 2.1 Crime

Economics views criminal as something causing an inefficient allocation of resources and distorting prices, so the amount must be suppressed. Therefore, economics uses owned framework in optimizing the allocation of resources to reduce crime rates to the lowest level. There is an assumption of rationality in the criminal economy, namely the perpetrators of the crime do their actions based on calculations cost-benefit and respond to incentives. Therefore a crime which can be analyzed through an economic approach is property crime. Property crime is a crime intended to acquire property victim's object. Generally, it is done in secret, no use violence, and is based on rational calculations (UN, 2010). According to Becker (1968), the rationality approach is basically used in terms of making a decision. With the rationality approach, it is expected to be able to predict precisely the consequences of the choice or decision so that it can take into account the principle of the cost of benefits and consider several interrelated problems.

### 2.2 Unemployment

According to the Central Statistics Agency (BPS) in employment indicators, unemployment is a population that does not work but is looking for a job or preparing a new business or resident not looking for work because they have been accepted to work but have not yet begun work. Therefore, unemployment is generally someone who is already classified in the workforce that is active in searching for work at a certain wage level but cannot get the job he wants.

### 2.3 Poverty

Poverty according to Suparlan (2004: 315) poverty as a low standard of living, namely the existence of a level of deficiency in a number or a group of people compared to a low standard of living directly affects its level of health, moral life and self-esteem that are classified as poor. According to Ritonga (2003: 1) provides a definition that poverty is a condition of life that is deprived of a person or household that is unable to meet the minimum or appropriate needs for his life. The minimum basic needs referred to are those related to food, clothing, housing needs and social needs needed by residents or households to fulfill their living needs properly.

### 2.4 Direct Foreign Investment (FDI)

According to Rugman (1985), that foreign direct investment (FDI) is influenced by environmental variables and internal internalization. There are three types of environmental variables of the focus. The three variables are economic, non-economic, and government. Economic variables are usually in the form of labor and capital, technology and the availability of natural resources and management skills. Non-economic variables include the political, social and cultural variables of each country having their own characteristics.

### 2.5 Unemployment and Criminal Relations

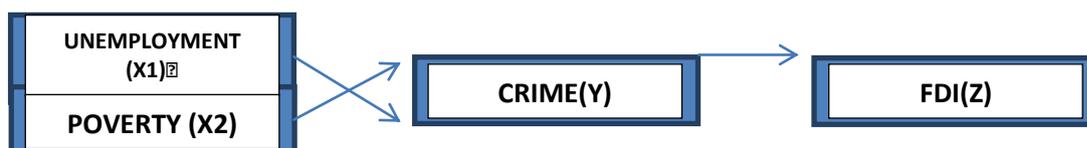
According to Hagan (1993), the cause of crime is caused by rising unemployment. Tauchen and Witte (1994) found that young people who work on wages or go to school are less likely to commit a crime. Melick (2003) also argues that historically there are two main general thoughts about the relationship between unemployment and crime. One of the basic ideas is an individual in order to maintain a certain standard of living, so as long as he becomes unemployed it will be more likely to commit a crime. Raphael (1998) found a significant positive effect of unemployment on criminal percentage. Research conducted by Fougere (2009) found two findings. First, the dimensions of crime and unemployment are positively related. Second, an increase in youth unemployment caused an increase in crime.

### 2.6 Poverty and Criminal Relations

Crime has a close connection with poverty. The high rate of poverty is a major cause of rampant crime in Indonesia. With all the limitations, some people are willing to justify various ways to fulfill their needs, even with criminal acts. The impact of poverty varies greatly due to different conditions and causes that lead to different consequences. According to Goodhand (2001), chronic poverty can also be an important factor in maintaining war because violent crime and predation are the only viable livelihood strategies for the chronic poor. Iyer (2014) found the results of the identification of the causal effects of poverty on crime.

Most people agree that crime or perception of crime has a negative impact on economic development. There is no doubt that crime or perception of crime has a detrimental effect on the environment, but only one factor in environmental degradation. According to the IMF Working Paper (2015) has used the structural VAR panel approach to study the dynamic relationship between crime and economic activity, including FDI flows and international migration flows at the Mexican state level from 1993-2012. It was found that this relationship was very interrelated and also potentially very diverse among different Mexican states. According to Daniele (2008), FDI inflows are influenced by different variables. The results show that the level of extortion and the number of people who are denounced as "criminal associations" are significantly and negatively correlated with incoming FDI. Based on the literature review above, the conceptual framework of this study can be shown below.

Conceptual Framework



With the concept above, 2 equations will be used, namely;

$$Y = \beta_0 + \beta_1x_1 + \beta_2x_2 + \varepsilon \dots (1)$$

$$Z = \beta_0 + \beta_1y + \varepsilon \dots (2)$$

Based on the conceptual framework above, the research hypothesis is:  
H1: Unemployment and Poverty have a significant effect on Crime  
H2: Crime has a significant effect on FDI

### III. Methodology

In this study, the type of data used is secondary data. The data was collected from the website [www.bps.go.id](http://www.bps.go.id) and [www.bkpm.go.id](http://www.bkpm.go.id). The population and sample used are data from 31 provinces in Indonesia with the period of 2010 to 2015. There are 2 variables used, namely the independent variable and the dependent variable. The dependent variable in equation 1 above is criminality, whereas in equation 2 the dependent variable is FDI. The independent variables in equation 1, namely unemployment and poverty, in equation 2 the independent variable is a crime. The analytical method used in this research is multiple regression analysis using the data panel analysis method (pooled data). The following is the operationalization of the variables.

Variable	Indicator
FDI	foreign investment
CRIME	number of crime (total crime), time of occurrence of a crime (crime clock), and the number of people at risk of crime (crime rate)
UNEMPLOYMENT	Job seekers, preparing a business
POVERTY	the population who have an average per capita expenditure per month below the poverty line

### IV. Analysis and Discussion

The results of this study are the first, for  $x_1$  and  $x_2$  to  $y$  can only explain by 10% and the remaining 90% are other factors that influence  $y$ . For the second equation, the variable  $y$  to  $z$  can explain by 41% and 59% is influenced by other factors outside the model. The effect of unemployment on crime shows that unemployment has a significant positive effect on crime. The meaning of this positive influence is that there is an indication of the relationship between the level of unemployment and crime rates. If unemployment increases, it will affect the increase in crime rates. Conversely, crime rates will increase if unemployment rises. This is in line with research conducted by Hagan (1993), Tauchen *et al.* (1994), Raphael (1998), Melick (2003), and Faugere (2009).

The level of poverty against crime shows that poverty has a positive and insignificant effect on crime. This means that there is a relationship between the level of poverty and the level of crime but is very small. This finding is in line with research conducted by Goodhand (2001) and Iyer (2014). For the level of crime against FDI obtained positive and significant results. This shows that there is a strong relationship between crime and FDI. But this is not in line with the existing theory, namely the rationality theory. The rationality theory reveals that if the crime rate rises it will be followed by a decrease in FDI, and vice versa if the crime rate decreases, it will be followed by an increase in FDI. This research is not in line with previous research which resulted in a significant negative relationship. Research conducted by (Blanco & Sawyer, 2015) found that the level of crime does not affect primary sector FDI.

Below are tables of data processing results in 31 provinces in Indonesia in 2010-2015, unemployment rate ( $x_1$ ) and poverty level ( $x_2$ ) against crime rate ( $Y$ ).

**Model Summary<sup>a</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.321*	.103	.093	3.02397	.103	10.496	2	183	.000	1.947

a. Predictors: (Constant), POVERTY, UNEMPLOYMENT  
b. Dependent Variable: CRIME

**ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	191.966	2	95.983	10.496	.000*
	Residual	1673.428	183	9.144		
	Total	1865.394	185			

a. Predictors: (Constant), POVERTY, UNEMPLOYMENT  
b. Dependent Variable: CRIME

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	.299	.763		.391	.696					
	UNEMPLOYMENT	.435	.095	.321	4.565	.000	.316	.320	.320	.992	1.009
	POVERTY	.040	.049	.057	.805	.422	.027	.059	.056	.992	1.009

a. Dependent Variable: CRIME

Table of data processing results in 31 provinces in Indonesia in 2010-2015, crime rate (Y) against FDI (Z).

**Model Summary<sup>a</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.642*	.412	.409	4.16463	.412	129.130	1	184	.000	1.751

a. Predictors: (Constant), CRIME  
b. Dependent Variable: FDI

**ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2239.648	1	2239.648	129.130	.000*
	Residual	3191.316	184	17.344		
	Total	5430.964	185			

a. Predictors: (Constant), CRIME  
b. Dependent Variable: FDI

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	-.311	.436		-.714	.476					
	CRIME	1.096	.096	.642	11.364	.000	.642	.642	.642	1.000	1.000

a. Dependent Variable: FDI

## V. Conclusion

At the end of this study, it can be concluded that unemployment and poverty rates are not directly related to FDI but are linked by crime variable. This does not mean there is no influence but will be one of the considerations of the country of the owner of the fund (home country) in placing the funds in the destination country (host country). Criminal aspects are one of the strongest considerations to become a destination country for FDI placement. This is reasonable because every investor wants a security and control in conducting business processes carried out in the destination country. Indonesia is one of the destination countries that are trusted to receive FDI, therefore social, economic, defense and security aspects need to be considered by the parties.

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