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The correlation between state capture, grand corruption, petty corruption, and investment in Indonesia

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Abstract: This study aims to find the correlations between various types of corruption, namely state capture, grand corruption, and petty corruption, with foreign direct investment and domestic investment in Indonesia. Using ordinary least squares method, this study analyzes data on corruption court decisions that occurred in 509 regencies from 2015 to 2019. The results reveal that, whilst domestic investment shows clear and significant correlation only with grand corruption, the foreign direct investment has definite and significant correlations with both grand and petty corruption. In addition, grand corruption has a stronger correlation with investment, especially with the foreign direct investment, in comparison to petty corruption. The state capture corruption, on the other hand, shows no significant correlation to either foreign direct investment or domestic investment. These results highlight that the high level of investment in Indonesia is accompanied by an increase in the number of corruptions, especially large-scale corruption such as grand corruption.
Keywords: Domestic Investment, Foreign Direct Investment, Grand Corruption, Petty Corruption, State Capture.

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Introduction

The relationship between corruption and investment is often a matter of debate. There are two contradictory hypotheses: corruption as 'sand the wheels', where high-transaction costs reduced productivity (Alfada, 2019; Mauro, 1995; Wei, 2000), and the second is 'grease the wheels', when it can actually expedite transactions and speed up bureaucracy (Huntington, 2006; Leff, 1964; Méon & Weill, 2010). However, there are not many studies that explain how the different types of corruption relate to these two hypotheses. The two types of corruption, petty and grand corruption, (Heineman & Heimann, 2006; Salbu, 2000) are both ex-post types of corruption. Whilst petty corruption is committed by low rank officials, the grand corruption is a large-scale type of corruption (Ouzounov, 2003; Rose-Ackerman, 2010). In addition, there is also the ex-ante type of corruption, namely the state capture; this type of corruption is done by influencing the "rule of the game" (Hellman et al., 2000). Studies conducted so far have not taken into account these different types of corruption in assessing the relationship between corruption and investment (Huntington, 2006; Kato & Sato, 2015; Leff, 1964; Rock & Bonnett, 2004) Furthermore, the previous studies also did not consider the different sources of invest-ment, whether originating from abroad (FDI) or domestic (Campos et al., 1999; Mauro, 1995; Wei, 2000).

Therefore, in this study we try to seek further research by exploring the relationship between corruption and investment with regards to the different types of corruption and investment. The main question underlying this study is the extent to which the relationship between different types of corruption and different types of investment differs. The study uses the case of Indonesia, a country with a high level of corruption and also a high level of investment. As shown in Table 1 below, several countries in East Asia (including Indonesia) have a low average Corruption

Perception Index (CPI), but with % investment to GDP ratio of >30%, which is above average even for developed countries' standards. Therefore, we use the case of Indonesia to evaluate the relationship between corruption and investment, given that corruption, as some have argued, occurs in almost all districts or cities, involving various levels of public officials and in various government institutions (Pabalik et al., 2020).

Previous studies with the Indonesian case showed that high levels of corruption had a negative impact on the economy (Alfada, 2019). However, this study only uses data on corruption decisions from the KPK (or Corruption Eradication Commission, one of the law enforcement agencies in Indonesia), which does not represent the number of corruption incidents in Indonesia. It only examines the high level of corruption without paying attention to the existence of various types of corruption, such as state capture, grand and petty corruption. Campos et al. (1999), who tries to look further into the relationship between corruption and investment in 69 countries (including Indonesia), explains that it is not only the high level of corruption, but also the nature of corruption that is important to study. Countries with higher predictability of corruption, such as Indonesia, have less negative impact on investment. This study argues that it is not only the level and nature of corruption, but that different types of corruption also have different relationships with investment.

Table 1. The level of corruption and investment in several countries in the world

Country	CPI Value	% Investment to GDP
	2016 – 2018	2016 – 2018
China	40.0	44.33
Indonesia	37.3	34.02
Myanmar	29.0	36.01
India	40.3	30.91
Singapore	84.3	27.74
New Zealand	88.7	23.32

Source: Transparency International, The World Bank, 2019.

The originality of this research is as a result of other related studies failing to examine the relationship between different types of corruption and investment. By using the ordinary least squares (OLS) method, this study analyzes the relationship between the types of corruption and investment in 3,694 cases of decisions on corruption crimes with final and binding decisions, and/or decisions at the highest level that occurred in districts or cities from the Supreme Court. In the period of 2015 to 2019, out of 3,694 corruption cases, 2,473 cases were petty corruption, 1,166 cases were grand corruption, and 55 cases were state capture. These numbers were obtained by classifying data on corruption cases from the Supreme Court into petty corruption, grand corruption, and state capture corruption. We classify petty corruption as a type of corruption involving low-level officials or low corruption values, while grand corruption is a type of corruption involving high-level officials or large corruption values (Ouzounov, 2003; Rose-Ackerman, 2010). As for state capture, we define it as corruption that is carried out by changing existing regulation (Bhorat et al., 2017; Hellman et al., 2000).

This study found that foreign direct investment is more vulnerable to various types of corruption when compared to domestic investment. Both petty and grand corruption have a clear correlation with the increase in foreign direct investment, and the correlation between foreign direct investment and grand corruption is greater than that of petty corruption; while domestic investment only has a significant correlation with grand corruption. This finding shows that high investment in Indonesia is accompanied by increasing corruption, especially for the grand corruption type, which involves high-level officials and/or large values. The limitation of this research is that the method used does not show the impact of various types of corruption on investment, but only shows the correlation between the two. The clear relationship between various types of corruption and investment does not prove the "grease for the wheels" hypothesis, but rather it reveals a predatory social infrastructure situation – a situation where investment, as a productive activity, becomes vulnerable to destructive behavior, such as corruption. Investment is supposed to be a productive activity which encourages the accumulation of expertise and

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production technology; yet without a strong social infrastructure, this activity actually encourages predatory behavior. Thus, high investment in Indonesia has a positive correlation with high levels of corruption (Hall & Jones, 1999).

This paper is structured as follows: the first part explains the background of the study; the second part discusses the theoretical basis (related to various types of corruption and their relationship to investment) and describes the data used, that is,the characteristics of the types of corruption and the classification of types of corruption carried out, as well as the methods used in empirical testing; the third section shows the results and discussion; then the fourth section provides a conclusion.

Methods

In relation to investment, there are two different theories. The theory of "grease for the wheels" states that corruption is positively related to investment, while "sand for the wheels" theory claims the opposite. Leff (1964) and Huntington (2006), explain that corruption has a positive impact on investment, because it can facilitate transactions and simplify bureaucracy. Investment decision making is related to risk and uncertainty, bribing the officials can give more confidence by reducing uncertainties. McIntyre (2003) argues that in Indonesia, the autocratic government model is able to maintain corruption at a level that is still acceptable to the market, so that even though corruption is high, it is still accompanied by high investment. Recent literature shows the opposite view. “Sand for the wheels” explains that the negative impact of corruption occurs because corruption results in high production costs, thereby reducing the productivity of the company; the higher the level of corruption in a country, the less foreign direct investment that enters the country (Mauro, 1995; Wei, 2000). But, what about the East Asia Paradox? How come there are several countries in East Asia that are still capable of maintaining a high level of investment, despite the high level of corruption? To answer this Wei (2000) explains that it is because these countries have the advantage of large market size and low labor costs. But, as long as these two factors are addressed in the model, corruption continues to have a negative impact on investment.

Following Hall and Jones (1999), we see corruption as predatory behavior. In the theory of production, Hall and Jones (1999) explains that productive activities are determined by social infrastructure, namely institutions and government policies that can provide incentives for individuals or companies in the economy. In countries with strong social infrastructure, productive activities like investment will encourage the accumulation of expertise and technology, but in countries with weak social infrastructure, investment will encourage predatory behavior like rent seeking, corruption, and other crimes. This framework does not show that corruption has a positive impact on investment, but rather, it shows a sheer correlation between the two. So then, what is the relationship between the various types of corruption and investment?

There are two types of corruption. The first type is petty corruption, which involves lower-level civil servants who have access to public services, and the other type is grand corruption, which involves high-level officials who have authority and discretion over government policies (Heineman & Heimann, 2006). This definition differentiates corruption only based on the perpetrators, namely public officials, either at high levels or lower levels. Yet, distinguishing the types of corruption should not only be based on the perpetrators, but can also be done through the number of bribes and/or losses incurred as a result of acts of corruption. Hence, Rose-Ackerman (2010) explains that grand corruption is corruption related to large sums of public funds. Similarly, Ouzounov (2003) separates petty and grand corruption based on the value of bribes; where grand corruption is a bribe with a value of millions of US dollars, while petty corruption is in the form of gifts, such as entertainment or small amounts of money. Although, there is no definite number to categorize corruption as small (petty) or large (grand), Salbu (2000) divides bribes with a maximum value of USD 1000 as petty corruption, while those above USD 1000 as grand corruption.

Transparency International (2016) states that the legal definition of grand corruption is a public official or another person who deprives the fundamental rights of certain social groups or

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the majority of the population of a country or causes the state or one of its people to lose more than 100 times the minimum annual subsistence income of its people as a result of bribery, embezzlement, or other criminal acts of corruption. This understanding is in accordance with the definition contained in article 25 of the United Nations Convention Against Corruption (UNCAC), Financial Action Task Force (FATF), and in Indonesia it is stated in Law Number 19 of 2019 and Law Number 30 of 2002, concerning the Corruption Eradication Commission article 11, explains that the authority of the Corruption Eradication Commission is to carry out law enforcement for corruption crimes that (a) involve State Administrators; and/or (b) concerning state losses of at least Rp. 1 billion. The State Administrators in question are officials as regulated in Article 2 of Law Number 28 of 1999.

Apart from petty corruption and grand corruption, there are other types of corruption, namely state capture corruption and institutionalized corruption. If petty corruption is ex-post, which is the type of corruption that occurs after the policy, state capture and institutionalized corruption are ex-ante, which is carried out before the policy or even by making corrupt policies. Hellman et al. (2000) defined state capture corruption as the ability of business actors to influence the formation of the "rule of the game" through the provision of bribes to public officials. Fazekas and Tóth (2016), through empirical studies in Hungary, broadened the understanding of state capture as not only for business actors who "capture" the state, but also vice versa; or both at the same time. Basically, state capture is the existence of clandestine networks where public and private actors collude around state organs, function as “social contracts”, and operate without account-ability (Bhorat et al., 2017). Institutionalized corruption is also an ex-ante corruption. How-ever, it is a form of “legal corruption”, a systematic and strategic influence which is legal that undermines the institution’s effectiveness by weakening its ability to achieve its purpose (Lessig, 2013). Unlike state capture or other traditional corruption, institutionalized corruption does not involve bribery to public officials. Institutionalized corruption will not be discussed further in the study, considering the characteristics of this type of corruption are carried out without violating the law, therefore it is difficult to observe further.

Campos et al. (1999) argues that studying the relationship between corruption and investment cannot be done only by knowing the level of corruption in a country, but should also consider the characteristics of corruption in that country. By studying the characteristics, namely the predictability of corruption, it is concluded that corruption with a high predictability level has a smaller negative impact than corruption with a low predictability level. We argue that this type of corruption also has its own characteristics that have different relationships with investment. C Grand corruption and state capture are large-scale corruptions. Meanwhile, petty corruption only involves low-level officials and losses or bribes in relatively small amounts. Indonesia is a country with high natural resource potential, large market size, and relatively low labor costs. It is interesting to see further how the relationship between various types of corruption (state capture, grand and petty corruption) and investment in Indonesia, a country with a high level of corruption but with a high level of investment.

Data Sources and Characteristics

Most studies on corruption use data from the Business International (BI) survey, the World Development Report survey by the World Bank, the International Country Risk Group (ICRG), and the Corruption Perception Index (CPI) issued by Transparency International (Barassi & Zhou, 2012; Campos et al., 1999; Mauro, 1995; Wei, 2000). The corruption data is only available at the country level and does not provide information on the distribution of corruption in certain countries at the regional level. Emirzal et al. (2022) uses different references based on previous studies, which are more precise in measuring corruption at the regional level.

Kato and Sato (2015) criticize the use of this data because it relies on participants' perceptions based on past experience. In conducting research on the impact of corruption on the manufactur-ing sector in India, they used the number of corruption cases registered with the Indian Ministry of Home Affairs as the source of data in determining corruption. The corruption variable in this study uses the approach taken by Kato and Sato (2015) that is using data on corruption decisions registered with the Supreme Court. Although, there is a phenomenon of dark numbers, the

2615-7977 (ISSN Online) | 2477-118X (ISSN Print)

difficulty to assess actual prevalence and extent of corruption (Huberts et al., 2016), we think this data can represent the distribution of corruption that occurs in regencies/cities in Indonesia.

Table 2. Data and Sources

Variable	Data	Source	Level	Period
Investment	Foreign Direct Investment (FDI) Value	Investment Coordinating Board	regency/city	2015-2019
	Domestic Investment Value (DI)	Investment Coordinating Board	regency/city	2015-2019
Corruption	Corruption verdict	Supreme Court	regency/city	2015-2020
Grand corruption	Corruption verdict (classified according to Table 4)	Supreme Court	regency/city	2015-2020
Petty corruption	Corruption verdict (classified according to Table 4)	Supreme Court	regency/city	2015-2020
State capture	Corruption verdict (classified according to Table 4)	Supreme Court	regency/city	2015-2020
Market size	PDRB growth	Central Bureau of Statistics	regency/city	2015-2019
Criminal rate	Proportion of population victims of crime in 12 months	Central Bureau of Statistics	Province	2015-2019
Education	years of schooling	Central Bureau of Statistics	regency/city	2015-2019

The dependent variables in this study are FDI and DI. The value of FDI and DI is summed for the period 2015 until 2019, to show investment goals in the long term. The control variables used are market size, education, and crime rate. Market size uses data on Gross Regional Domestic Product (GRDP) per regencies/city (Mauro, 1995; Wei, 2000). The market size data used is the average GRDP growth per district/city. We follow Hornberger et al. (2011) and Petrović-Ranđelović et al. (2017) by using GRDP growth to determine the potential market size, rather than using GRDP per capita, which is closely related to the motivation of investors to invest. Education uses data on the years of schooling per regencies/city, as a proxy for a trained workforce (Wei, 2000). Crime rate is the proportion of the population who are victims of crime in the period of 2015 until 2019, which was then averaged. Crime rate is used as an additional control variable, which indicates the level of crime at the regional level (Zakharov, 2019). Corruption is the main variable. We use data from the Supreme Court's decision, namely the 2015 to 2020 corruption decisions, which has final and binding decisions and/or the highest-level decision (District/High Court/Supreme Court). We analyzed each copy of the corruption decision to obtain the occurrence time of a corruption crime according to the research period (2015 to 2019).

Simulation of grouping types of corruption

We examined the facts on the trials as recorded in the corruption verdict. This is done to obtain data regarding the perpetrators of corruption, the loss values, bribes, extortion, time of corruption occur, and the modus operandi. The aim is to classify the corruption cases according to the characteristics of state capture, petty corruption, and grand corruption as can be seen in Table 3. The data is also compiled based on the literature review that has been discussed previously. The grouping of actors (high or low level) refers to Law Number 28 of 1999 concerning State Administration that is free from corruption, collusion, and nepotism. As for the nominal loss, bribery and extortion of equal to or more than 1 billion rupiah, it is in relation to Law Number 19 of 2019 as well as Law Number 30 of 2002.

Although state capture corruption occurs at the state level, there is state capture-like corruption in regencies/cities that also meet the state capture characteristics, as seen in Table 4. In this study, corruption in regencies/cities that meet state capture-like characteristics is a state capture corruption without the characteristics of clandestine networks, a condition where public and private actors collude around state organs and functions as social contracts to be able to operate without accountability (Bhorat et al., 2017). The Iceberg phenomenon, an analogy that only small amount of problem is apparent, especially in corruption makes it difficult to observe

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the overall scale of the crime that occurred (Gottschalk & Gunnesdal, 2017), hence the criteria for clandestine networks are also difficult to identify. The Table 4 is an example of a grouping simulation carried out.

Table 3. Characteristic types of corruption

Characteristics	Petty/administrative corruption	Grand corruption	State capture
Level of officials involved	Low	low - high	high
State losses/number of bribes/extortion	low - medium (< Rp 1 billion)	Medium - high (≥ Rp 1 billion)	Medium - high (≥ Rp 1 billion)
Change "the rule of the game"	No	No	Yes
Clandestine networks	No	No	Yes (network involving > 3 people)

Sources: compiled from several literatures, 2021

Table 4. Example 1: Simulation of grouping types of corruption

Court Decision	Characteristics	Petty corruption	Grand corruption	State Capture
Defendant: Zn Position: civil servant (PNS) Amount of bribe/loss: Rp 2,270,000 Object: bribe new student admission	Level of officials involved	Low	Low or High Level	High Level
	State-losses/bribes/ extortion	Low-Medium (< Rp 1 billion)	Medium-High (≥ Rp 1 billion)	Medium-High (≥ Rp 1 billion)
	Change "the rule of the game"	No	No	Yes
Clandestine networks		NA	NA	NA

The simulation in Table 4 shows that the perpetrator of corruption is a low-medium level official, with the amounts of bribes/losses of Rp 2,270,000, or less than 1 billion rupiah. Thus, it is a type of petty corruption. This case is not state capture corruption because it is transactional, meaning it does not require regulatory changes. The regulations remain the same, but there are civil servants who break the rules because they accept bribes.

Table 5. Example 2: Simulation of grouping types of corruption

Decision	Characteristics	Petty corruption	Grand corruption	State Capture
Defendant: NHY Position: Regent Amount of bribe/loss: Rp 16,182,020,000 Object: Changing the regulation of districts spatial plan	Level of officials involved	Low	Low or High Level	High Level
	State-losses/bribes/ extortion	Low-Medium (< Rp 1 billion)	Medium-High (≥ Rp 1 billion)	Medium-High (≥ Rp 1 billion)
	Change "the rule of the game"	No	No	Yes
Clandestine networks		NA	NA	NA

In Table 5, the perpetrator of corruption is a high-ranking official, in the category of State Administrators according to Law No. 28/1999, and with a bribe value of more than 1 billion rupiah. The "change" in the "rule of the game" is the bribe given in relation to the preparation of the Detailed Spatial Plan, a type of regulation in district government. Thus, it is a type of state capture.

Table 6 shows the average corruption in 509 regencies/cities during the period 2015 to 2019. There are 7,257 corruption cases. The highest number of corruption cases occurred in one regency/city is 51 cases. On average, the highest number of corruption perpetrators were level 2 and below (low rank officials), with 0.947 corruption cases per regency/city; the highest number of cases in one regency/city is 46 corruption cases. The average corruption cases involving state administrators in the executive function (high ranking official) are 0.224 cases; for the legislative

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function (legislative high rank official) there is 0.136 cases per regency/city. For corruption with state losses and/or bribes for more than 1 billion rupiah, there is an average of 2,236 cases per regency/city; the highest number in one regency/city is 12 cases.

Table 6. Descriptive statistics

	(509 regencies/cities, 3,694 decisions)			
	Mean	Std. Dev.	Min.	Max.
Corruption	7.257	7.991	0	51
Executive High Rank Official	.224	.746	0	6
Legislative High Rank Official	.136	.820	0	14
Low Rank Official	.947	5.728	0	46
State Losses/Bribery >Rp1 billion	2.236	4.052	0	12
Petty Corruption	4.859	5.648	0	49
Grand Corruption	1.291	4.097	0	34
State Capture	.108	.476	0	4

Based on the type of corruption, on average most corruption cases occurred within the period of 2015 to 2019 is petty corruption with 4.589 cases per regency/city, followed by grand corruption with 1.291 cases per regency/city, and state capture with 0.108 cases per regency/city. The highest number of corruption that occurred in one regency/city is petty corruption with 49 cases, then grand corruption with 34 cases, and state capture with 4 cases.

Empirical model

The study used cross section data with the Ordinary Least Squares (OLS) method. To see how the overall relationship between corruption and investment occurs, we use two dependent variables, namely foreign direct investment (FDI) and domestic investment (DI) with the following model:

$$Ln(DI)_i = \beta 0 + \beta 1\ AllCorr_i + \beta 2\ kontrol_i + \varepsilon_i \quad (1)$$

$$Ln(FDI)_i = \beta 0 + \beta 1\ AllCorr_i + \beta 2\ kontrol_i + \varepsilon_i \quad (2)$$

Once the overall relationship of corruption with FDI and DI becomes identified, a regression of various types of corruption is carried out. The classification model follows the types of corruption that we have previously discussed (state capture, grand corruption, petty corruption). Then, the relationship with FDI and DI can be analyzed using the model as follows:

$$Ln(FDI)_i = \beta 0 + \beta 1\ GrandCorr_i + \beta 2\ PettyCorr_i + \beta 3\ StateCap_i + \beta 3\ kontrol_i + \varepsilon_i \quad (3)$$

$$Ln(DI)_i = \beta 0 + \beta 1\ GrandCorr_i + \beta 2\ PettyCorr_i + \beta 3\ StateCap_i + \beta 3\ kontrol_i + \varepsilon_i \quad (4)$$

Ln (FDI) and *Ln (DI)* are the natural logarithms of the amount of FDI and DI; *AllCorr* is the number of corruption decisions (without distinguishing the type of corruption); *PettyCorr* is the number of petty corruption decisions; *GrandCorr* is the number of grand corruption decisions; *control* is for control variable, that is the average GRDP growth, the average length of school (education), the proportion of the population as the crime victims (crime rate) within the period 2015 until 2019; *i* is regency/city in Indonesia; and *ε* is for error.

Results and Discussion

Relationship between Corruption with FDI and DI

Before classifying the various types of corruption and examining their relationship to investment, it is necessary to analyze the overall relationship of corruption to investment. Investments are classified as Foreign Direct Investments (FDI) and Domestic Investments (DI), and the values are accumulated for the period of 2015 to 2019.

In Table 7 we use the ordinary least squares method to see the relationship between corruption and FDI. Model (1) estimates the relationship between the two without using control variables.

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The results show that corruption and FDI are positively correlated with a significance level of 1% and coefficient of 0.0779. In model (2) and model (3) with the inclusion of market size and crime rate variables, corruption still has a significant positive relationship with FDI.

Table 7. Corruption and FDI

Dependent Variable:	OLS reg coefficient			
FDI Values (Ln)	(1)	(2)	(3)	(4)
Corruption	0.0779***	0.0780***	0.0792***	0.0777***
(Amount)	(0.0147)	(0.0147)	(0.0147)	(0.0144)
Market Size		0.0130	0.0103	0.00411
(% Ln PDRB Growth)		(0.0931)	(0.0944)	(0.0967)
Education			0.124	0.118
(Years)			(0.100)	(0.0976)
Crime rate				-9.697**
(% violence/population)				(4.060)
Constant	9.302***	9.232***	8.241***	8.896***
	(0.195)	(0.514)	(0.873)	(0.875)
Observations	444	444	433	433
R-squared	0.043	0.043	0.050	0.069
Standard errors in parentheses				
*** p<0.01, ** p<0.05, * p<0.1				

In Models (2) to (4), using the control variables of market size, education, and crime rate, the results remain consistent. In model (4), using all control variables, the correlation of corruption to FDI is positive at 0.0777 with a significance level of 1%. The crime rate is negatively correlated with FDI of 9,697 with a significance level of 1%.

Table 8. Corruption and DI

Dependent Variable: DI Values (Ln)	OLS reg coefficient			
	(1)	(2)	(3)	(4)
Corruption	0.0559***	0.0555***	0.0557***	0.0548***
(Amount)	(0.0160)	(0.0161)	(0.0160)	(0.0147)
Market Size		-0.0242	-0.0362	0.0241
(% Ln PDRB Growth)		(0.0558)	(0.0549)	(0.0481)
Education			0.198**	0.217***
(Years)			(0.0821)	(0.0799)
Crime rate				-20.45***
(% violence/population)				(3.108)
Constant	12.22***	12.35***	10.80***	11.89***
	(0.181)	(0.359)	(0.731)	(0.741)
Observations	439	438	428	428
R-squared	0.031	0.031	0.042	0.128
Standard errors in parentheses				
*** p<0.01, ** p<0.05, * p<0.1				

The same results were also found from the estimation results of the relationship between corruption and DI. In model (1) without using control variables, corruption is positively correlated with a coefficient value of 0.0559. By using all control variables in models (2) to (4), the correlation between corruption and DI is consistently positive.

In model (4) the coefficient value is 0.0548 with a significance level of 1%. Additional incidents of corruption in a regency/city are positively correlated with an increase in DI by 5.48%. Education has a positive and significant correlation with DI in models (3) and (4), while the crime rate has a negative and significant correlation of -20.45 in model (4). This condition shows that corruption has a positive correlation with investment; but in comparison, a stronger correlation occurs between corruption and FDI, rather than to DI.

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Grand Corruption, Petty Corruption, State Capture and the Relationship with FDI and DI

In contrast to petty corruption, grand corruption is corruption involving high officials (Heineman & Heimann, 2006) and/or financial loss/bribery in large amounts (Rose-Ackerman, 2010). This study uses the term "high-level officials", referring to Law Number 28 of 1999 concerning the Implementation of a Clean and Free State of Corruption, Collusion, and Nepotism. For nominal loss and bribery, we refer to Law Number 19 of 2019 and Law Number 30 of 2002. State capture corruption is grand corruption carried out by changing the "rule of the game" where public officials commit corruption by changing policies both formally and informally (Bhorat et al., 2017; Godinho et al., 2018; Hellman et al., 2000).

The regression results in Table 9 show the relationship between various types of corruption (grand corruption, petty corruption, and state capture) with FDI. For the grand corruption there is a positive and significant correlation with FDI and is consistent in all models, whether using control variables as in model (1), or without control variables as in models (2) to (4). Similarly, for the petty corruption there is also a positive and significant correlation with FDI on all models (1) to (4).

Table 9. Grand corruption, petty corruption, state capture and FDI

Dependent Variable: FDI Values (Ln)	OLS reg coefficient			
	(1)	(2)	(3)	(4)
Grand corruption	0.116***	0.117***	0.111***	0.108***
(Amount)	(0.0263)	(0.0261)	(0.0260)	(0.0261)
Petty corruption	0.0509**	0.501**	0.0497**	0.0495**
(Amount)	(0.0224)	(0.0227)	(0.0223)	(0.0219)
State capture	0.123	0.126	0.488	0.472
(Amount)	(0.345)	(0.347)	(0.334)	(0.335)
Market size		0.0254	0.0261	0.0556
(% Ln PDRB Growth)		(0.0918)	(0.0923)	(0.0944)
Education			0.115	0.109
(Year)			(0.101)	(0.0978)
Crime rate				-9.524**
(% violence/population)				(4.042)
Constant	9.341***	9.205***	8.260***	8.902***
	(0.198)	(0.505)	(0.871)	(0.871)
Observations	444	444	433	433
R-squared	0.047	0.047	0.058	0.075

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

The correlation difference between petty and grand corruption is quite significant, namely 0.0585. The coefficient value for grand corruption is 0.108 with a significance level of 1%, while the coefficient value for petty corruption is 0.0495 with a significance level of 5%. However, state capture corruption does not appear to have a significant relationship with investment in models (1) to (4).

In Table 10, the relationship between various types of corruption with DI is different from that of FDI. The relationship between corruption and DI is only significant for grand corruption, which is positively correlated with a coefficient of 0.0871. Meanwhile, both petty corruption and state capture do not have a significant relationship with DI, whether with or without control variables, as in models (1) and (4).

The relationship between various types of corruption with FDI and DI are different. Although both remain positive, the foreign investors are seen to be more sensitive to the various types of corruption that exist, which is marked by a significant correlation for grand corruption and petty corruption; while for DI, a positive correlation is shown only with the grand corruption. Especially for grand corruption, it clearly has a stronger positive relationship with FDI, namely 0.108, which is more than twice the correlation coefficient of petty corruption with FDI.

2615-7977 (ISSN Online) | 2477-118X (ISSN Print)

State capture corruption does not appear to be significantly related to investment. It is suspected that the state capture corruption could not be observed properly in the research data due to the Iceberg phenomenon (Gottschalk & Gunnesdal, 2017) and the existence of the dark numbers (Huberts et al., 2016); because the copy of the decision data obtained did not provide enough information to identify the type of corruption with state capture characteristics.

Table 10. Grand corruption, petty corruption, state capture and DI

Dependent Variable:	OLS reg coefficient			
DI Values (Ln)	(1)	(2)	(3)	(4)
Grand corruption	0.0102***	0.0101***	0.0949***	0.0871***
(Amount)	(0.0270)	(0.0275)	(0.0279)	(0.0263)
Petty corruption	0.0218	0.0216	0.0256	0.0296
(Amount)	(0.0238)	(0.0240)	(0.0244)	(0.0228)
State capture	0.386	0.384	0.408	0.356
(Amount)	(0.260)	(0.260)	(0.261)	(0.266)
Market size		-0.00898	-0.0212	0.0355
(% Ln PDRB Growth)		(0.0551)	(0.0546)	(0.0481)
Education			0.183**	0.204**
(Year)			(0.0836)	(0.0815)
Crime rate				-20.10***
(% violence/population)				(3.089)
Constant	12.25***	12.30***	10.87***	11.93***
	(0.181)	(0.351)	(0.738)	(0.751)
Observations	439	438	428	428
R-squared	0.043	0.042	0.053	0.135

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

The positive correlation of corruption with both foreign and domestic investments does not mean that corruption has a positive impact on investment and supports the "grease for the wheels" hypothesis, because this study only shows a correlation between the two. The positive relationship of corruption with foreign and domestic investment in Indonesia shows the predatory condition of social infrastructure in Indonesia. As stated by Hall and Jones (1999), social infrastructure in the form of institutions and regulations can provide incentives for productivity, but in countries with weak social infrastructure conditions, productive activities are positively related to predatory behavior, namely rent seeking, corruption, and various other crimes. Sangaraju (2019) stated that one of the obstacles to Public-Private Partnership (PPP) in Indonesia is regulation that causes uncertainty in doing business. Based on the Regulatory Quality Index issued by the World Bank, with a scale of -2.5 (weak) to 2.50 (strong), Indonesia's score in 2020 was 0.08, far below Singapore's score of 2.21, the country with the best regulatory quality in the world. As stated by Wei (1999), studies that explain that corruption has a positive impact on investment and economy do not control the variables carefully. Even in Asia that is corrupt but still has high economic growth, as long as variables such as market share and low wages can be controlled properly, research still shows the negative impact of corruption. There are several channels through which corruption hinders economic development. They include reduced domestic investment, reduced foreign direct investment, overblown government expenditure, distorted composition of government expenditure away from education, health, and the maintenance of infrastructure towards less efficient public projects.

Another finding from the study shows that both petty and grand corruption have a positive correlation with the increase in FDI, where the positive correlation of FDI with grand corruption is greater than that of petty corruption, while domestic investment only has a significant correlation with grand corruption. First, we argue that for investors, grand corruption has a higher predictability than petty corruption. If corruption is despised because it causes uncertainty in doing business (Campos et al., 1999; Mauro, 1995), then grand corruption,

2615-7977 (ISSN Online) | 2477-118X (ISSN Print)

which has a higher level of predictability, is preferred by investors because it provides more certainty when compared to petty corruption.

Similar to Campos et al. (1999), Lambsdorff (2005) explains that corruption with a high predictability level has a smaller negative impact. Moreover, he argues that grand corruption is preferred by investors because investors feel that they become part of the "inner circle" within the parties who can make arrangements.

Secondly, the findings also show that large investments will be accompanied by large-scale corruption, namely grand corruption involving high-level officials with large values. FDI is a type of investment that involves large amounts, complex licensing, and requires authority from high-ranking officials; therefore, grand corruption has a stronger correlation than petty corruption. In FDI, every one unit increase in grand corruption reflects a 10.8% increase in foreign investment, while in domestic investment, every one unit increase in grand corruption reflects an 8.71 percent increase in domestic investment.

Finally, state capture based on regression results, does not show significant correlations with investment, both FDI and domestic investment. State capture is an ex-ante corruption that is carried out by influencing regulation (Hellman et al., 2000). Hence, this would certainly make broad impacts on the affected area. Based on the Supreme Court decision data, we identified 55 corruption cases that happened in some districts/cities with state capture-like characteristics. For example, in the case of bribery for shaping regulation of districts spatial plan and the reclamation of the northern coast of Jakarta, there were two major investments made in regencies/cities in Indonesia that fulfills state capture-like characteristics. Furthermore, Gultom (2021) explained one FDI case in Indonesia used a PPP scheme with an investment value of USD 13 billion, which was then carried out with a collusion involving the ruling family and high-level officials. These examples prove that state capture corruption exists in Indonesia. Nonetheless, the scope of our research in this study is insufficient to properly explain the phenomenon of ex-ante corruption, namely state capture, and its relationship to investment. Therefore, this would be a task for further studies.

Conclusion

This study uses data from Supreme Court decisions to see how the various types of corruption relate to foreign and domestic investment in Indonesia. The empirical strategy is to classify corruption by type (state capture, grand and petty corruption), then estimate the relationship between various types of corruption and investment using the Ordinary Least Squares (OLS) method. **The results show that grand corruption and petty corruption has a positive correlation with FDI, whilst for Domestic Investment, only grand corruption has a significant correlation. Thus, the relationship between investment and corruption is stronger for grand corruption, and this is especially the case for foreign direct investments.**

What can be observed from this study is that the high level of investment in Indonesia is accompanied by an increase in corruption, especially grand corruption, that is corruption involving high officials and/or high value. The high correlation of grand corruption with investment, especially FDI shows that FDI contracts are of high value and lucrative; hence, it is accompanied by large amounts of corruption. This also indicates the weakness of social infrastructure in Indonesia and its ineffectiveness in increasing productive activities.

The limitation of this study is that the method used only shows the relationship between various types of corruption and investment; it does not look further at the impact between the two. This study also does not link corruption with economic inequality or compare the relationship between corruption and investment with a home-host country approach.

As shown in Figure 1, to measure the impact between various types of corruption (X) and investment (Y), we suggest future research to use the right instrumental variable. Instrumental variable (Z) that affects (X), and only affects (Y) through variables of various types of corruption (X). Previous studies that used ethnolinguistic fractionalization (Mauro, 1995) and religion (Lambsdorff, 2005) likely have a direct relationship with investment, therefore it is not appropriate to use it as an instrumental variable. Furthermore, to explore the impact of state capture

2615-7977 (ISSN Online) | 2477-118X (ISSN Print)

on investment, it is better to use a case study with a qualitative approach to overcome the Iceberg phenomenon (Gottschalk & Gunnesdal, 2017).

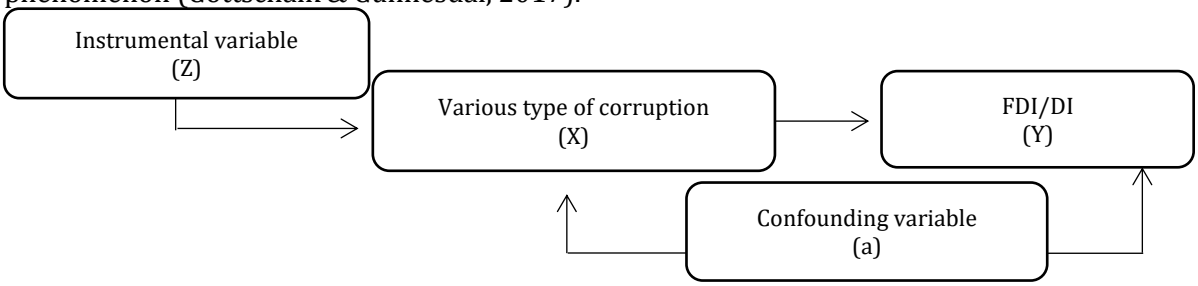

Figure 1. Instrumental variable for various type of corruption

Indonesia is a country with rich natural resources, a large and growing market size, as well as a competitive workforce. Investment opportunities in Indonesia remain high despite the high corruption cases. The strong positive correlation between corruption and investment in Indonesia, especially regarding grand corruption, reveals the need for an appropriate anti-corruption strategy to mitigate this. By implementing the right corruption eradication strategy, especially for grand corruption, it can be possible to generate a good and successful investment climate in Indonesia.

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