

“The impact of financial development and corruption on foreign direct investment in developing countries”

AUTHORS	Diana Lestari  Dadang Lesmana  Yanzil Azizil Yударuddin Rizky Yударuddin 
ARTICLE INFO	Diana Lestari, Dadang Lesmana, Yanzil Azizil Yударuddin and Rizky Yударuddin (2022). The impact of financial development and corruption on foreign direct investment in developing countries. <i>Investment Management and Financial Innovations</i> , 19(2), 211-220. doi: 10.21511/imfi.19(2).2022.18
DOI	http://dx.doi.org/10.21511/imfi.19(2).2022.18
RELEASED ON	Tuesday, 07 June 2022
RECEIVED ON	Tuesday, 10 May 2022
ACCEPTED ON	Sunday, 05 June 2022
LICENSE	 This work is licensed under a Creative Commons Attribution 4.0 International License
JOURNAL	"Investment Management and Financial Innovations"
ISSN PRINT	1810-4967
ISSN ONLINE	1812-9358
PUBLISHER	LLC “Consulting Publishing Company “Business Perspectives”
FOUNDER	LLC “Consulting Publishing Company “Business Perspectives”



NUMBER OF REFERENCES

49



NUMBER OF FIGURES

0



NUMBER OF TABLES

4

© The author(s) 2022. This publication is an open access article.



BUSINESS PERSPECTIVES



LLC "CPC "Business Perspectives"
Hryhorii Skovoroda lane, 10,
Sumy, 40022, Ukraine
www.businessperspectives.org

Received on: 10th of May, 2022

Accepted on: 5th of June, 2022

Published on: 7th of June, 2022

© Diana Lestari, Dadang Lesmana,
Yanzil Azizil Yudaruddin, Rizky
Yudaruddin, 2022

Diana Lestari, Lecturer, Economics
and Business Faculty, Department of
Economics, Mulawarman University,
Indonesia.

Dadang Lesmana, Researcher, Research
and Development Agency East Kutai,
Indonesia.

Yanzil Azizil Yudaruddin, Lecturer,
Faculty of Economics and Business,
Department of Accounting, Balikpapan
University, Indonesia.

Rizky Yudaruddin, Lecturer, Faculty of
Economics and Business, Department
of Management, Mulawarman
University, Indonesia. (Corresponding
author)



This is an Open Access article,
distributed under the terms of the
[Creative Commons Attribution 4.0
International license](https://creativecommons.org/licenses/by/4.0/), which permits
unrestricted re-use, distribution, and
reproduction in any medium, provided
the original work is properly cited.

Conflict of interest statement:

Author(s) reported no conflict of interest

Diana Lestari (Indonesia), Dadang Lesmana (Indonesia),
Yanzil Azizil Yudaruddin (Indonesia), Rizky Yudaruddin (Indonesia)

THE IMPACT OF FINANCIAL DEVELOPMENT AND CORRUPTION ON FOREIGN DIRECT INVESTMENT IN DEVELOPING COUNTRIES

Abstract

Foreign direct investment (FDI) inflows into developing countries play an important role in the dynamics of economic growth. Meanwhile, financial development (FDV) and corruption have been considered a determinant of FDI. Therefore, this study aims to assess the effect of FDV and corruption on FDI in developing countries. In addition, this study explores the combined impact of FDV and corruption on FDI. Furthermore, the data for 108 developing countries were collected from the World Development Indicators (WDI) of the World Bank from 1993 to 2017. The results showed that FDV has a positive and significant effect on FDI, while corruption does not have a statistically significant impact. This demonstrates that FDV has contributed to the growth of foreign investment and the important sources of financing for developing countries. However, the interaction between FDV and corruption has a negative effect on FDI. This implies that FDV followed by an increase in corruption tends to reduce FDI inflows. These results encourage policymakers to address issues regarding the joint impact of FDV and corruption on FDI in developing countries.

Keywords

corruption, capital, financial development, financial institutions, foreign direct investment

JEL Classification

D73, E22, F23, G20, O16

INTRODUCTION

Since the 1980s, foreign direct investment (FDI) has expanded dramatically in developing countries (UNCTAD, 2020). In the last 50 years, FDI is widely acknowledged as a growth-enhancing factor in economic literature and policy. It is also used to combat inequalities, poverty, and hunger, as well as to improve human development and infrastructure. In addition to affecting economic growth and the general welfare of the host country, it has a direct impact on production, exports, imports, prices, income, and employment. According to the World Bank Report (2012), these financial institution systems are effective and play a crucial role in economic expansion. Because financial development (FDV) contributes to growth, countries with well-developed institutions tend to perform better over time. Therefore, it is necessary to understand the causal relationship between FDV and FDI.

The gap between developed and developing countries in terms of investment has existed for decades. Developing countries face investment challenges, whether domestic or foreign. Indeed, FDI brings not only money and equipment but also technical expertise and encourages local entrepreneurs to collaborate with foreign firms. FDI contributes to the modernization and strengthening of both the public and private sectors. FDI is essential for accelerating economic growth in

both developing and underdeveloped nations. Nonetheless, foreign direct investment fluctuates in its development. Moreover, the state of quality institutions, such as the prevalence of corruption in some developing nations, has made foreign investors hesitant to invest.

The financial system of a country has been recognized as a critical aspect in achieving sustainable economic growth, which is mostly determined by the rules, social norms, as well as law and order. For instance, when a country is strict with corruption, then it is expected to have a sound financial system. This is because the rules and norms are reflected in the formulation of various financial policies and regulations. This study will help policymakers and academics to model future institutional quality and financial sector development.

Corruption levels in the host economy have been identified as a significant FDI location factor. Despite recent studies, other literature suggested that developing countries need to be wary of overvaluing the benefits of FDI. FDI flows have a higher share of total inflows in riskier countries, where corruption is a risk to be considered. Developing nations need to focus on the mechanisms of improving institutional quality enforcement rather than trying to attract more FDI. Also, corruption harms growth directly and indirectly through investment. Most studies found that corruption had an adverse effect on growth and development, specifically FDI (Voyer & Beamish, 2004; Habib & Zurawicki, 2002; Han, 2006; Zhao et al., 2003; Canare, 2017; Amarandei, 2013). Therefore, countries should prioritize enhancing the investment condition and market functioning. They are expected to be rewarded with improved overall investment efficiency and more capital inflows.

1. LITERATURE REVIEW AND HYPOTHESES

Numerous researchers around the world are conducting fascinating research on the impact of FDI on FDI particularly in developing nations. Financial developments can encourage sustainable economic progress in a country (Paun et al., 2019; De Gregorio & Guidotti, 1995; Jedidia et al., 2014; Zhang & Zhou, 2021). In addition, the quality of a country's institutions is believed to play a role in attracting and discouraging foreign investment and financial stability (Nguyen et al., 2018; Buchanan et al., 2012; Yudaruddin, 2022). State FDI continues to experience significant growth, but if it is not supported by quality institutions (such as a low level of corruption), foreign investors are unlikely to invest in that country.

Several theoretical frameworks serve as the foundation for investment determinants. International capital flows are a topic introduced in David Ricardo's early writings (1817). Ricardo (1817) asserted that countries with lower manufacturing costs are more willing to host international transactions. Furthermore, a reasonable investor will invest in a country when the rate of return surpasses the venture's expenses. These theories as-

sume risk aversion and focus on capital's marginal production. When neutrality is breached, however, the risk becomes a substantial consideration in FDI decision-making. According to Demsetz (1967), Williamson (1975), Jensen and Meckling (1976), and Akerlof (1970), investors prefer to do business with countries that protect property rights and maintain a low transaction cost environment. Dunning (1993) stated that cross-border FDI flows are explained by the location factor (L), the ownership advantage (O), and the internalization of transaction costs (I). Therefore, comparing other countries, location and ownership advantages no longer properly explain why some nations attract more foreign direct investment (FDI).

FDI entails improved information about capital allocation and potential investments, oversight of firms and trading, corporate governance, management, risk diversification, and savings mobilization, as well as goods and services exchange facilitation (Levine, 2005). Furthermore, mobilization of savings, market organization, and centrality are all used to influence investment decisions and technological innovation. The financial system's legal infrastructure, markets, and institutions are all interconnected (Hawkins, 2006). The role of the financial sector in technological inno-

vation and capital accumulation explains its economic effects. Therefore, the relationship between FDV and investment is critical when evaluating an economy's long-term growth prospects.

Regarding the relationship between financial development and foreign direct investment, studies have produced contradictory findings. Furthermore, the link between FDV and FDI is favorable. Benhabib and Spiegel (2000) found that the variables affecting FDV that impact total factor output growth are distinct from those influencing investment. From 1970 to 1995, Ndikumana (2000) examined the impact of financial growth on total domestic private investment in 30 Sub-Saharan African countries. The outcomes discovered the value of FDV in terms of investment. Also, Fowowe (2011) found support for the accelerator theory in a survey of 14 Sub-Saharan African countries. It was confirmed that output growth and FDV have a positive effect on private investment. According to Ahmed (2006), financial liberalization policies benefit investment in Botswana. Moreover, Desbordes and Wei (2017) found that FDV in both the destination and source nations had a significant positive effect on expansion, greenfield, and M&A FDI by raising access to external financing, thereby promoting industrial activity.

The link between FDV and FDI is negative. Alem and Townsend (2014) found that investment was adversely affected by FDV depending on banks. The results found that increasing financial development may reduce foreign direct investment by promoting offshore outsourcing rather than domestic integration. Furthermore, it was found that US corporations prefer arm's length technology transfers to less developed countries over FDI. According to Ju and Wei (2010), FDV could have a negative indirect competitive effect on a country by making it less attractive to MNEs (multinational enterprises). This is particularly true for FDI aimed at the domestic market, as increased FDV entry by (local and foreign) enterprises may result in an increase in the price of local inputs and a decline in sales volume.

The influence of corruption varies by country, and the occurrences have both positive and negative consequences. According to Egger and Winner (2006), corruption is a significant disincentive to FDI inflow in affluent countries, but not in under-

developed or developing ones. However, specifically in developing nations, Voyer and Beamish (2004) discovered a negative link between corruption and FDI. Habib and Zurawicki (2002) examined the sources of FDI in seven industrialized countries. The recipient country's corruption level was examined, and the results showed that both have a negative effect on FDI. Han (2006) also stated that in nations with a high corruption level, the relationship between FDI and corruption is inverse. Meanwhile, the influence on FDI is negligible in countries where corruption is low. Zhao et al. (2003) discovered a negative link between corruption and FDI during a seven-year period using data from 40 nations. Jain et al. (2017) showed that it has a huge impact on a country's financial markets by reducing foreign portfolio investment. The consequences on foreign portfolio investment are non-linear, with the greatest detrimental effects occurring at moderate corruption levels. Canare (2017) used panel data from Asia and Pacific nations and found that corruption reduces FDI inflows. Similarly, Karim et al. (2018) showed that corruption is an important indicator in the entry of foreign investment in Southeast Asia. Focusing on Eastern and Central European countries, Amarandei (2013) discovered a negative association between FDI and corruption. Meanwhile, Busse and Hefeker (2008) and Gastanaga et al. (1989) found no significant association using panel data from 83 developing nations.

There are empirical studies demonstrating the interaction between financial progress and corruption. This assumption means that positive or negative changes either enhance or degrade FDV to an equal degree. Dreher and Gassebner (2013) documented that corruption enables inefficient institutions to skirt complex legislation and promote economic activity. This may stimulate investment from the private sector and serve as a buffer against ineffective initiatives, hence encouraging economic growth in nations with a shaky legal system (Cooray & Schneider, 2018). Ali et al. (2020) hypothesized a non-linear connection between corruption, the financial system, and total economic activity.

FDV has been linked to FDI inflows. The level of FDI is influenced by the banking sector's reserve requirement, lending availability, and interest

rates (Ang, 2009; Soumaré et al., 2011; Donaubauer et al., 2020). Similarly, studies showed that fighting corruption is critical to attracting FDI (Voyer & Beamish, 2004; Habib & Zurawicki, 2002; Han, 2006; Zhao et al., 2003; Amarandei, 2013; Canare, 2017; Kurul, 2017). FDI is influenced by both FDV and the level of corruption in an economy. Also, the eclectic paradigm theory's geographical advantage stated that for foreign investors to select a country, the financial system needs to be sound, and have a low corruption level. Even when the financial system is sound, widespread corruption will limit FDI. For a country to attract FDI, its financial system needs to be vibrant and corruption-free. Therefore, corruption may act as a moderator in the relationship between FDV and FDI.

This study's objective is to look into the combined effects of FDV and corruption on FDI in developing countries.

Based on the literature review, the following hypotheses are proposed:

H1: FDV has a positive effect on FDI.

H2: Corruption has a negative effect on FDI.

H3: Interaction between FDV and corruption has a negative effect on FDI.

2. METHOD

This study constructed an unbalanced panel data set for 108 developing countries from 1993 to 2017. Following Mallampally and Sauvant, (1999) and UNCTAD (2020), developing countries have become countries that offer a variety of attractive assets for foreign investment. Furthermore, the time interval and country count were determined solely based on data availability. The World Development Indicators (WDI), which are available on the World Bank website, were used to collect data for all the variables. This is in reference to the Heritage Foundation's economic freedom index.

According to Ndikumana (2000), Fowowe (2011), Busse and Hefeker (2008), Voyer and Beamish (2004), Canare (2017), and Desbordes and Wei (2017), the foreign direct investment (FDI) is the

dependent variable in this study. This variable is measured by FDI and net inflows (BoP, current US\$). Meanwhile, the independent variables are Financial Development (FDV) and Corruption (COR). FDV is measured by Credit to the private sector on the domestic market (percent of GDP) and COR is measured by the control of corruption index, which assesses public perceptions of how much governmental authority is used for private gain. The control variables also include inflation (CPI), GDP per capita, trade (TRD), population (POP), and economic freedom (ECF).

The first is inflation (CPI). The domestic inflation condition of a country is very influential on the response of foreign direct investors. When inflation is very high, there will be an increase in prices, which can reduce the interest of foreign investors.

The second is GDP per capita, which has a positive relationship with FDI. This is because GDP is a measure of a country's market size or capability. An increased income (GDP per capita) indicates a large market size that can potentially support the sale of products, which is one of the objectives of foreign investment. This implies the higher the income level, the more promising it is as a recipient of foreign investment. The third is trade (TRD). An open economy is one in which a country engages in economic activity or relations with others. These countries engage in the export-import of goods and services, as well as borrowing and lending on the global capital markets. Also, trade liberalization forces every country to compete for foreign investment by advancing their economies. The fourth is population (POP). A large population is a global draw, specifically in developing countries. This will attract foreign investment into a country with a large workforce and a market share. Finally, economic freedom (ECF). There is a link between investment and corruption, where they are linked to create a sense of security and comfort, as well as a favorable condition. However, investment as a key driver of economic growth can be hampered by rising levels of corruption. This will reduce foreign investment by lowering investor confidence in the country's security.

Regressions were conducted in two stages according to the econometric methodology. Furthermore, FDV, corruption, and a collection of control variables were concurrently considered, as in Eq (1):

$$\begin{aligned}
 FDI_{i,t} = & \alpha_{i,t} + \beta_1 FDI_{i,t-1} + \beta_2 FDV_{i,t} + \\
 & + \beta_3 COR_{i,t} + \beta_4 CPI_{i,t} + \beta_5 GDP_{i,t} + \quad (1) \\
 & + \beta_6 TRD_{i,t} + \beta_7 POP_{i,t} + \beta_8 ECF_{i,t} + \varepsilon_{i,t},
 \end{aligned}$$

where $FDI_{i,t}$ – Foreign direct investment in the country i at time t , $FDV_{i,t}$ – Financial Development in the country i at time t , $COR_{i,t}$ – The level of Corruption in the country i at time t , $CPI_{i,t}$ – Inflation in the country i at time t , $GDP_{i,t}$ – GDP per capita in the country i at time t , $TRD_{i,t}$ – Trade in the country i at time t , $POP_{i,t}$ – Population in the country i at time t , $ECF_{i,t}$ – Economic freedom index in the country i at time t , $\alpha_{i,t}$ – Constanta in the country i at time t , $\varepsilon_{i,t}$ – Error term in the country i at time t .

The second stage included Eq. (1) by incorporating the interaction between FDI and corruption, as demonstrated in Eq (2):

$$\begin{aligned}
 FDI_{i,t} = & \alpha_{i,t} + \beta_1 FDI_{i,t-1} + \beta_2 FDV_{i,t} + \\
 & + \beta_3 COR_{i,t} + \beta_2 FDV \cdot COR_{i,t} + \beta_4 CPI_{i,t} + \quad (2) \\
 & + \beta_5 GDP_{i,t} + \beta_6 TRD_{i,t} + \beta_7 POP_{i,t} + \\
 & + \beta_8 ECF_{i,t} + \varepsilon_{i,t},
 \end{aligned}$$

The effect of FDV and corruption on FDI is determined using the one-step system generalized method of moments (GMM) estimator. The panel data are composed of cross-sectional and time series dimensions; hence, they offer numerous advantages. For example, the data have a greater degree of freedom and less collinearity, are more informative, as well as provide powerful and reli-

able inferences (Hsiao, 2003). However, they have several issues, including heteroscedasticity, autocorrelation, and endogeneity. To estimate the data, several methods are available in literature, including ordinary least (OLS), generalized least (GLS), and two-stage least squares. When heteroscedasticity and endogeneity are present, the OLS method fails to produce unbiased and efficient estimates. This issue can be alleviated by utilizing the GMM. Therefore, this study employs the Hansen (1982) GMM method due to its superiority. According to Blundell and Bond (1998), the GMM estimator overcomes bias in finite samples and the difference estimator's asymptotic imprecision. This study also applied Windmeijer's (2005) finite sample correction and discussed orthogonal instrument transformations. When the AR(2) and Hansen-J tests were statistically insignificant, the one-step system GMM estimation was valid.

3. RESULTS

Table 1 shows the descriptive statistics for the sample used in this study. Furthermore, the average FDI in the sample is 18.38 with a standard deviation of 2.68. According to the UNCTAD (2017), FDI in developing economies has remained relatively stable over the last decade, at \$653 billion, which is a 2% increase over the previous year. Asian and Latin American flows increased slightly, but African remained unchanged. However, Asia reclaimed its position as the world's largest recipient of FDI, ahead of Europe and North America. In transition economies, FDI fell by 17% to \$55

Table 1. Descriptive statistics

Variables	Symbol	Definition and measure	Obs.	Mean	Std. Dev
Foreign direct investment	FDI	Log natura Foreign direct investment, net inflows (BoP, current US\$)	3118	19.3817	2.684751
Financial Development	FDV	Domestic credit to private sector (% of GDP)	3101	37.2456	33.87689
Corruption	COR	The level of corruption measures public perceptions of the extent to which governmental power is used for private benefit	2608	-0.22719	0.861199
Inflation	CPI	Consumer price index	3169	375.266	16267.87
GDP per capita	GDP	GDP per capita is calculated by dividing the gross domestic product by the midyear population.	3280	7290.08	11351.97
Trade	TRD	Trade as a percentage of GDP is defined as the sum of goods and services exports and imports measured as a percentage of GDP.	2915	84.0220	53.30909
Population	POP	Log natura population	3586	15.1915	2.383324
Economic freedom	ECF	Economic freedom index	2490	57.5349	10.99843

Table 2. Correlation matrix

Variables	FDV	COR	CPI	GDP	TRD	POP	ECF
FDV	1.0000						
COR	0.4934	1.0000					
CPI	0.1127	-0.0027	1.0000				
GDP	0.3741	0.5996	0.0399	1.0000			
TRD	0.5017	0.4968	0.0376	0.4611	1.0000		
POP	0.0413	-0.2695	-0.0069	-0.2041	-0.3337	1.0000	
ECF	0.5177	0.6998	-0.0270	0.5370	0.4816	-0.1649	1.0000

billion, primarily due to a decline in the Russian Federation and a lackluster inflow across the majority of the Commonwealth of Independent States.

Table 2 shows the existence of the multicollinearity problem as well as the correlation matrix for independent variables. Correlations between independent variables are not concerning. Previous research has found that multicollinearity arises when the correlation between variables is larger than 0.80. (Field, 2009). The correlation matrix was discovered to be insignificantly associated with the explanatory factors, showing that multicollinearity is not an issue.

Tables 3 and 4 show the estimated model fitness. The model demonstrates that the FDI lagged regress is statistically significant, indicating that the dynamic GMM model utilized is a competent estimator and the findings may be relied on to make conclusions. This indicates that the instruments employed are reliable, and no hypotheses are rejected. There was also no serial association between the variables according to the AR2 autocor-

relation study. Overall, the findings of this study employing dynamic panel data models are reliable.

Table 3 shows the relationship results between FDV, corruption, and the explanatory variables. In terms of significant independent variables, it was shown that FDV is positively and significantly related to FDI inflows in developing countries. The coefficient on FDV is 0.0047. Meanwhile, after the statistical test, z -table = 1.96 and z -count = 2.12, thus z -count > z -table ($2.21 > 1.96$) and has a significant level lower than 0.05, which is 0.034. This implies that FDV is the primary determinant of FDI in these regions. According to the findings, a 1% increase in FDV has a 0.0047% effect on FDI flow into developing countries. The first hypothesis predicted a positive association between FDV and foreign direct investment. Therefore, the findings in Table 3 support hypothesis H1 and endorse that FDV can improve FDI. Nonetheless, the results in Table 3 show a positive and no significant coefficient of corruption. The coefficient on corruption is positive ($\beta = 0.0961$) and not significant (significant level greater than 0.05 or 0.01).

Table 3. Financial development, corruption, and foreign direct investment

Explanatory Variables	Dependent Variable: Foreign direct investment (FDI)			
	Coef.	Robust Std. Error	z	p> z
FDI (-1)	0.2639***	0.0873	3.02	0.003
FDV	0.0047**	0.0022	2.12	0.034
COR	0.0961	0.1287	0.75	0.455
CPI	0.0017	0.0017	0.98	0.326
GDP	0.00004***	0.00001	4.05	0.000
TRD	0.0052**	0.0022	2.42	0.015
POP	0.6683***	0.0836	7.99	0.000
ECF	0.0313***	0.0091	3.42	0.001
Constant	1.2734	0.9153	1.39	0.164
AR (2)		0.328		
Hansen test		0.669		
Observation		1595		

Notes: *, **, and *** – significance at 10%, 5%, and 1%, respectively.

Table 4. The interaction effect between financial development and corruption on foreign direct investment

Explanatory Variables	Dependent Variable: Foreign direct investment (FDI)			
	Coef.	Robust Std. Error	z	p> z
FDI (-1)	0.27009***	0.08617	3.13	0.002
FDV	0.00388*	0.00231	1.68	0.093
COR	0.31465*	0.18637	1.69	0.091
FDV*COR	-0.00489**	0.00198	-2.46	0.014
CPI	0.00155	0.00166	0.93	0.351
GDP	0.00005***	0.00001	3.84	0.000
TRD	0.00700***	0.00233	3.01	0.003
POP	0.68529***	0.08472	8.09	0.000
ECF	0.03202***	0.00896	3.58	0.000
Constant	0.78850	0.90667	0.87	0.384
AR (2)		0.333		
Hansen test		0.688		
Observation		1595		

Notes: *, **, and *** – significance at 10%, 5%, and 1%, respectively.

This implies that Corruption has no effect on FDI inflows to developing nations, hence, it does not support H2.

Concerning the joint impact between FDV and corruption on FDI in Table 4, the result showed the interaction variable negatively and significantly influences FDI inflows in developing nations. The coefficient interaction between FDV and corruption is -0.00489. Meanwhile, after the statistical test, z -table = 1.96 and z -count = 2.46, thus z -count > z -table ($2.46 > 1.96$) and has a significant level lower than 0.05, which is 0.014. This implies that FDV followed by an increase in corruption tend to reduce FDI inflows. The H3 hypothesis predicted that interaction between financial development and corruption have a negative effect on foreign direct investment, hence supporting H3.

In terms of control variables, GDP per capita, trade (TRD), population (POP), and economic freedom (ECF) are found to have a coefficient significant and positive effect on FDI. This is in accordance with Ndikumana (2000), Fowowe (2011), Busse and Hefeker (2008), Voyer and Beamish (2004), Canare (2017), and Desbordes and Wei (2017).

4. DISCUSSION

The results of the relationships between FDV, corruption, and the explanatory variables are displayed in Table 3. FDV is favorably and strongly

connected to FDI inflows in developing countries, as measured by significant independent factors. This suggests that the FDV is the key factor in determining FDI in these locations. Moreover, FDI must have a positive effect on a nation's economic growth for its financial sector to be developed. In this way, the financial system increases a country's ability to absorb FDI. The more developed the domestic financial system, the greater its capacity to mobilize savings and to monitor investment and screen projects, which will assist to a greater rate of economic expansion. This is in line with Desbordes and Wei (2017), who showed that FDV from both source and destination countries promotes FDI by improving direct external financing access and indirectly promoting economic growth. As a result, the core of a nation's growth plan must be a well-functioning, effectively regulated financial sector with solid domestic underpinnings. This will optimize the financial development's net profit for both domestic and foreign investors. Therefore, this result is consistent with Desbordes and Wei (2017), Ndikumana (2000), Benhabib and Spiegel (2000), as well as Fowowe (2011).

Regarding corruption variable, Table 3 reveals a positive but insignificant coefficient of corruption. This indicates that corruption has no effect on FDI inflows to developing countries, and hence does not support Hypothesis 2. This result is consistent with Busse and Hefeker (2008) and Gastanaga et al. (1989), who found no significant relationship between corruption and FDI. Another possible

explanation is that investors continue to invest in countries with high levels of corruption because there is more open information. Under these conditions, information asymmetry in countries with high corruption is lower than in those with moderate levels (Jain et al., 2017). Indeed, foreign investors anticipate that developing countries will have low levels of corruption in order to provide a sense of security. This is because corruption can increase business costs and reduce profitability

Furthermore, the interaction variable negatively and significantly affects FDI inflows in developing countries, according to the results of the joint impact of FDV and corruption on FDI in Table 4. This means that FDV, followed by an increase

in corruption, reduces FDI inflows. Hypothesis H3 projected that the interplay of financial development and corruption would have a detrimental impact on foreign direct investment, thereby supporting H3. There is also a relationship between corruption and investment, where corruption and FDI are related to good investment conditions. As one of the drivers of economic growth, investment can be disrupted by increasing levels of corruption. This will reduce foreign investment due to a decrease in investor confidence in the security of a country. This result corroborates those of previous literature (Voyer & Beamish, 2004; Habib & Zurawicki, 2002; Han, 2006; Zhao et al., 2003; Amarandei, 2013; Canare, 2017; Kurul, 2017).

CONCLUSION

This paper examines the fundamental characteristics of FDV, corruption, and their interaction in emerging nations. It examines all 108 economies that have been chosen based on the availability of data. The data were collected from WDI, and panel data analysis was conducted from 1993 to 2017. Also, the effect of FDV and corruption on FDI was determined using the one-step system generalized method of moments (GMM) estimator.

The results showed financial development improves foreign direct investment. Furthermore, corruption has no substantial impact on FDI in developing countries. This study also explores the interactive term of FDV and corruption, and the results show that two variables, namely FDV and corruption, contribute to the increase in FDI, where financial development without the control of corrupt activities will only result in the outflow of foreign investment from developing countries.

These findings have a number of policy implications. Firstly, because the overall results showed FDV increases FDI, it is recommended that measures to improve the financial system's quality should be implemented. The regulators in developing countries should also work to strengthen the banking sector and financial markets through the adoption of market-friendly regulations. Secondly, the government should bolster the role of anti-corruption agencies in the fight against corruption, thereby enabling FDV to exert influence over FDI.

AUTHOR CONTRIBUTIONS

Conceptualization: Diana Lestari.

Data curation: Dadang Lesmana, Yanzil Azizil Yudaruddin, Rizky Yudaruddin.

Formal analysis: Diana Lestari.

Funding acquisition: Diana Lestari.

Investigation: Diana Lestari, Dadang Lesmana, Rizky Yudaruddin.

Methodology: Diana Lestari, Rizky Yudaruddin.

Project administration: Diana Lestari, Dadang Lesmana.

Resources: Dadang Lesmana, Yanzil Azizil Yudaruddin.

Software: Rizky Yudaruddin, Yanzil Azizil Yudaruddin.

Supervision: Diana Lestari, Rizky Yudaruddin.

Validation: Diana Lestari.

Visualization: Dadang Lesmana, Yanzil Azizil Yudaruddin.

Writing – original draft: Diana Lestari, Yanzil Azizil Yudaruddin.

Writing – review & editing: Diana Lestari.

ACKNOWLEDGMENT

The authors would like to express their gratitude to three anonymous reviewers and seminar participants at Mulawarman University for their insightful comments.

REFERENCES

1. Ahmed, A. D. (2006). The Impact of Financial Liberalization Policies: The Case of Botswana. *Journal of African Development*, 8(1), 13-38. <https://doi.org/10.5325/jafrideve.8.1.0013>
2. Akerlof, G. A. (1970). The market for 'lemons': quality, uncertainty and the market mechanisms. *The Quarterly Journal of Economics*, 84(3), 488-500. <https://doi.org/10.2307/1879431>
3. Alem, M., & Townsend, R. M. (2014). An Evaluation of Financial Institutions: Impact on Consumption and Investment using Panel Data and the Theory of Risk-Bearing. *Journal of Econometrics*, 183(1), 91-103. <https://doi.org/10.1016/j.jeconom.2014.06.011>
4. Ali, M.S.B., Fhima, F. & Nouira, R. (2020). How does corruption undermine banking stability? A threshold nonlinear framework. *Journal of Behavioral and Experimental Finance*, 27, 100365. <https://doi.org/10.1016/j.jbef.2020.100365>
5. Amarandei, C. M. (2013). Corruption and foreign direct investment: Evidence from Central and Eastern European states. *Center for European Studies Working Papers*, 5(3), 311-322. https://ceswp.uaic.ro/articles/CESWP2013_V3_AMA.pdf
6. Ang, J. B. (2009). Foreign direct investment and its impact on the Thai economy: the role of financial development. *Journal of Economics and Finance*, 33(3), 316-323. <https://doi.org/10.1007/s12197-008-9042-6>
7. Antras, P., Desai, M. A., & Foley, C. F. (2009). Multinational firms, FDI flows, and imperfect capital markets. *The Quarterly Journal of Economics*, 124(3), 1171-1219. <https://doi.org/10.1162/qjec.2009.124.3.1171>
8. Benhabib, J. M.M. & Spiegel (2000). The Role of Financial Development in Growth and Investment. *Journal of Economic Growth*, 5(4), 341-360. <https://doi.org/10.1023/A:1026599402490>
9. Blundell, R., & Bond, S. (1998). Initial conditions and moment restrictions in dynamic panel data models. *Journal of Econometrics*, 87(1), 115-143. [https://doi.org/10.1016/S0304-4076\(98\)00009-8](https://doi.org/10.1016/S0304-4076(98)00009-8)
10. Buchanan, B. G., Le, Q. V., & Rishi, M. (2012). Foreign direct investment and institutional quality: Some empirical evidence. *International Review of Financial Analysis*, 21, 81-89. <https://doi.org/10.1016/j.irfa.2011.10.001>
11. Busse, M., & Hefeker, C. (2008). Political risk, institutions and foreign direct investment. *European Journal of Political Economy*, 23(2), 397-415. <https://doi.org/10.1016/j.ejpoleco.2006.02.003>
12. Canare, T. (2017). The effect of corruption on foreign direct investment inflows: Evidence from a panel of Asia-Pacific countries. *The Changing Face of Corruption in the Asia Pacific*, 35-55. <https://doi.org/10.1016/B978-0-08-101109-6.00003-4>
13. Cooray, A. & Schneider, F. (2018). Does corruption throw sand into or grease the wheels of financial sector development? *Public Choice*, 177(Nos 1/2), 111-133. <https://doi.org/10.1007/s11127-018-0592-7>
14. De Gregorio, J., & Guidotti, P. E., (1995). Financial development and economic growth. *World Development*, 23(3), 433-448. [https://doi.org/10.1016/0305-750X\(94\)00132-1](https://doi.org/10.1016/0305-750X(94)00132-1)
15. Demsetz, H. (1967). Toward a theory of property rights. *American Economic Review*, 62, 347-359. <https://www.jstor.org/stable/1821637>
16. Desbordes, R. & Wei, S. (2017). The effects of financial development on foreign direct investment. *Journal of Development Economics*, 127, 153-168. <https://doi.org/10.1016/j.jdeveco.2017.02.008>
17. Donaubauer, J., Neumayer, E., & Nunnenkamp, P. (2020). Financial market development in host and source countries and its effects on bilateral FDI. *The World Economy*, 43(3), 534-556. <https://doi.org/10.1111/twec.12884>
18. Dreher, A. & Gassebner, M. (2013). Greasing the wheels? The impact of regulations and corruption on firm entry. *Public Choice*, 155(Nos 3/4), 413-432. <https://doi.org/10.1007/s11127-011-9871-2>
19. Dunning, J.H. (1993). *Multinational Enterprises and the Global Economy*. Addison-Wesley, Harlow.
20. Egger, P., & Winner, H. (2006). How corruption influences foreign direct investment: A panel data study. *Economic Development and Cultural Change*, 54(2), 459-486. <https://doi.org/10.1086/497010>
21. Field, A. (2009). *Discovering statistics using SPSS* (3rd ed.). Sage Publishers, London.

22. Fowowe, B. (2011). Financial Sector Reforms and Private Investment in Sub-Saharan African Countries. *Journal of Economic Development*, 36(3), 79-97. <https://doi.org/10.35866/caujed.2011.36.3.004>
23. Gastanaga, V. M., Nugent, J. B., & Pashamova, B. (1989). Host country reforms and FDI inflows: How much difference do they make? *World Development*, 26(7), 1299-1314. [https://doi.org/10.1016/S0305-750X\(98\)00049-7](https://doi.org/10.1016/S0305-750X(98)00049-7)
24. Habib, M., & Zurawicki, L. (2002). Corruption and foreign direct investment. *Journal of International Business Studies*, 33(2), 291-307. <https://doi.org/10.1057/palgrave.jibs.8491017>
25. Han, K. J. (2006). *Corruption and Foreign Direct Investment*. Paper presented at the Annual Meeting of the International Studies Association (47th Annual ISA Convention: The North-South Divide and International Studies), San Diego, California, USA.
26. Hansen, L. R. (1982). Large sample properties of generalized method of moments estimators. *Econometrica*, 50(4), 1029-1054. <https://doi.org/10.2307/1912775>
27. Hawkins, P. (2006). *Financial Access and Financial Stability*. 25 April 2022. http://www.feasibility.co.za/pdf_downloads/2006%20Financial%20access%20and%20financial%20stability_BIS.pdf
28. Hsiao, C. (2003). *Analysis of Panel Data* (2nd ed.). Cambridge: Cambridge University Press.
29. Jain, P. K., Kuvvet, E., & Pagano, M. S. (2017). Corruption's Impact of Foreign Portfolio Investment. *International Business Review* 26, 23-35. <https://doi.org/10.1016/j.ibusrev.2016.05.004>
30. Jedidia, K. B., Boujelbène, T., & Helali, K. (2014). Financial development and economic growth: New evidence from Tunisia. *Journal of Policy Modeling*, 36(5), 883-898. <https://doi.org/10.1016/j.jpolmod.2014.08.002>
31. Jensen, M.C. & Meckling, W.H. (1976). Theory of the firm: managerial behavior, agency costs, and ownership structure. *Journal of Financial Economics*, 3(4), 305-360. [https://doi.org/10.1016/0304-405X\(76\)90026-X](https://doi.org/10.1016/0304-405X(76)90026-X)
32. Ju, J., & Wei, S.J. (2010). Domestic institutions and the bypass effect of financial globalization. *American Economic Journal: Economic Policy*, 2(4), 173-204. <https://doi.org/10.1257/pol.2.4.173>
33. Karim, B. A., Karim, Z. A., & Nasharuddin, M. N., (2018). Corruption and Foreign Direct Investment (FDI) in ASEAN-5: A Panel Evidence. *Economics and Finance in Indonesia*, 64(2), 145-156.
34. Kurul, Z. (2017). Nonlinear relationship between institutional factors and FDI flows: dynamic panel threshold analysis. *International Review of Economics and Finance*, 48, 148-160. <https://doi.org/10.1016/j.iref.2016.12.002>
35. Levine, R. (2005). Finance and Growth: Theory and Evidence, in: P. Aghion, S. Durlauf (Eds), *Handbook of Economic Growth*, 1, 865-934. [https://doi.org/10.1016/S1574-0684\(05\)01012-9](https://doi.org/10.1016/S1574-0684(05)01012-9)
36. Mallampally, P., & Sauvart, K. P. (1999). Foreign Direct Investment in Developing Countries. *Finance & Development; A quarterly magazine of the IMF*, 36(1). <https://www.imf.org/external/pubs/ft/fandd/1999/03/mallampa.htm#:~:text=FDI%20has%20become%20an%20important,activities%20that%20they%20directly%20control>
37. Ndikumana, L. (2000). Financial Determinants of Domestic Investment in Sub-Saharan Africa: Evidence of Panel Data. *World Development*, 28(2), 381-400. [https://doi.org/10.1016/S0305-750X\(99\)00129-1](https://doi.org/10.1016/S0305-750X(99)00129-1)
38. Nguyen, C. P., Schinckus, C., Su, T. D., & Chong, F. (2018). Institutions, inward foreign direct investment, trade openness and credit level in emerging market economies. *Review of Development Finance*, 8(2), 75-88. <https://doi.org/10.1016/j.rdf.2018.11.005>
39. Paun, C.V., Musetescu, R.C., Topan, V.M., & Danuletiu, D.C. (2019). The Impact of Financial Sector Development and Sophistication on Sustainable Economic Growth. *Sustainability*, 11, 1713. <https://doi.org/10.3390/su11061713>
40. Ricardo, D. (1817). *One the Principle of Political Economy and Taxation*. London: John Murray.
41. Soumaré, I., & Tchana, F. T. (2015). Causality between FDI and financial market development: Evidence from emerging markets. *The World Bank Economic Review*, 29(1), 205-216. <https://doi.org/10.1093/wber/lhv015>
42. UNCTAD (2020). *World Investment Report 2020 International Production Beyond the Pandemic*. New York: United Nations. https://unctad.org/system/files/official-document/wir2020_en.pdf
43. Voyer, P. A., & Beamish, P. W. (2004). The effect of corruption on Japanese foreign direct investment. *Journal of Business Ethics*, 50(3), 211-224. <https://doi.org/10.1023/B:BUSI.0000024737.57926.bf>
44. Williamson, O.E. (1975). *Markets and Hierarchies: Analysis and Antitrust Implications*. New York, NY: The Free Press.
45. Windmeijer, F., (2005). A finite sample correction for the variance of linear efficient two-step GMM estimators. *Journal of Econometrics*, 126, 2551. <https://doi.org/10.1016/j.jeconom.2004.02.005>
46. World Bank (2012). *The World Bank Annual Report 2012*. The World Bank. <https://openknowledge.worldbank.org/handle/10986/11844>
47. Yudaruddin, R. (2022). Bank Concentration and Stability in Central Asia: The Effect of Capital Regulation and Financial Freedom. *Journal of Eastern European and Central Asian Research*, 9(2), 206-216. <https://doi.org/10.15549/jeeecar.v9i2.733>
48. Zhang, B., & Zhou, P. (2021). Financial development and economic growth in a micro-founded small open economy model. *The North American Journal of Economics and Finance*, 58, 101544. <https://doi.org/10.1016/j.najef.2021.101544>
49. Zhao, J. H., Kim, S. H., & Du, J. (2003). The impact of corruption and transparency on foreign direct investment: An empirical analysis. *MIR: Management International Review*, 43(1), 41-62. <https://www.jstor.org/stable/40835633>