

## DETERMINANTS OF FOREIGN DIRECT INVESTMENT IN ORGANIZATION OF THE ISLAMIC COOPERATION COUNTRIES: DOES FINANCIAL DEVELOPMENT MATTER?

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### ABSTRAK

*Sebuah studi tentang faktor-faktor yang mempengaruhi investasi asing langsung (FDI) dimulai oleh negara-negara Organisasi Kerja Islam, yang sebagian besar adalah negara berkembang, karena pentingnya arus modal bagi negara-negara ini. Penelitian ini menggunakan kerangka kualitas kelembagaan, kebijakan ekonomi hijau, dan peran pembangunan keuangan untuk menguji elemen-elemen yang berdampak pada investasi asing langsung (FDI). Temuan penelitian ini menunjukkan bahwa perbaikan kelembagaan dan kebijakan ekonomi hijau mendorong investasi asing. Sejumlah langkah kelembagaan, termasuk efektivitas pemerintah, supremasi hukum, stabilitas politik, dan kualitas peraturan, mempunyai dampak yang cukup baik, sementara akuntabilitas pemilu dan pemberantasan korupsi mempunyai dampak negatif dan kecil. Selain itu, penanaman modal asing sangat dipengaruhi oleh faktor ekonomi hijau seperti sumber daya alam, sumber daya manusia, dan peraturan lingkungan hidup. Hasil-hasil ini juga menunjukkan bahwa pertumbuhan sektor keuangan dapat meningkatkan dampak kualitas kelembagaan dan ekonomi hijau terhadap daya tarik investasi asing. Hasil penelitian ini mengungkapkan bahwa investor mengevaluasi integritas kelembagaan, ekonomi hijau, dan pembangunan keuangan ketika mengambil keputusan investasi.*

*Kata kunci: investasi asing langsung, kualitas institusi, ekonomi hijau, pembangunan keuangan.*

### ABSTRACT

A study on the factors influencing Foreign Direct Investment (FDI) was started by the Islamic Cooperation countries, the majority of which are developing nations, due to the significance of capital flows for these nations. The present study employs an institutional quality framework, green economic policies, and the function of financial development to evaluate the components that effect Foreign Direct Investment (FDI). The results of this research demonstrate that institutional changes and green economic policies stimulate foreign investment. Several institutional metrics, including government performance, the rule of law, political stability, and regulatory quality, have highly positive outcomes, while electoral accountability and preventing corruption have negative and minor consequences. Furthermore, elements of the green economy including human capital, natural resources, and environmental laws have a big impact on foreign investment. These results also suggest that the growth of the financial sector can boost the impact of institutional quality and the green economy on the attraction of foreign investment. The conclusions of this study demonstrate that investors examine institutional integrity, the green economy, and financial development when making investment decisions.

Key words: foreign direct investment, institutional quality, green economy, financial development.

## INTRODUCTION

In recent decades, there has been a growing interest among economists and policy-makers in comprehending the factors that impact Foreign Direct Investment (FDI). The fact exists for developing nations that rely on FDI inflows as a source of development funding; job creation, economic integration, and infrastructural upgrades all result from FDI entry. Chaudhury et al., (2020); Muhammad and Khan (2019); and Sultanuzzaman et al., (2018) added that FDI contributes to economic growth. The number of nations where the inflow of Foreign Direct Investment has resulted in economic growth is evidence of this. Examples of nations that have effectively managed Foreign Direct Investment money include the United States, South Asia, and Srilanka.

According to Campagnolo et al., (2018), the investment collected aims to improve living standards by fulfilling future needs in the country. A country must not rely solely on domestic investment, as the existing capital will likely be insufficient for comprehensive development. Therefore, it is necessary for a country to create a climate that can stimulate investors from abroad to invest their capital. However, investment flows to developing countries in 2022 and beyond are predicted to experience challenges. OIC countries are no exception, mostly lower-middle-income countries (Chaudhry et al., 2022; Kim et al., 2018). The importance of developing literature on FDI inflows in OIC countries as a means of accelerating economic recovery from various global threats and crises has led several researchers, such as Sajilan et al., (2019); Chandra and Handoyo (2020), to explore the factors influencing FDI in these countries. They believe that strong FDI inflows are crucial for achieving sustained economic development. On the other hand, if the value of FDI weakens due to a crisis, it can hamper growth (Ihsan, 2021). Aziz and Mishra (2016) attribute low FDI inflows to muslim countries during the global crisis to several factors, including: 1) Ineffective social initiatives resulting from a

lack of an inclusive growth plan; 2) Inadequate institutions and widespread corruption hindering the equitable distribution of financial gains; 3) An alliance between the ruling class and economic elites (rent-seekers) sparking the Arab Spring; and 4) The absence of strong institutions in Arab economies.

Considering the previously stated, this study aims to significantly advance the process of drawing Foreign Direct Investment (FDI) inflows by focusing on two key factors: institutional quality and green economy policies. Institutional efficacy is a significant factor in FDI inflows because a composite of variables can explain a country's conditions and stability. (ii) A green economy is an investment preference that presently emphasizes a company's social and environmental concerns inside a nation because integrating non-financial aspects, such as moral considerations and environmental and social issues, has emerged as a key trend in investing decisions (Chai et al., 2021; Miraz and Soo, 2024). This interesting research combines three important issues in attracting FDI inflows. The first issue is based on the OLI paradigm theory, where Foreign Direct Investment (FDI) benefits from institutional quality. The second issue departs from current investor preferences that focus on green economic development, which has a positive role for FDI. The third issue explains how FDI driven by financial development catalyzes improved institutional quality and faster green growth. Previous studies on the relationship between institutional quality and FDI have been conducted by several different researchers, as mentioned in the previous paragraph.

However, the relationship between green economy variables and FDI and constructing a model involving financial development variables as moderating variables is new to this study, as it has yet to be studied. Some reasons behind the financial development variable as a moderating variable include 1) research results that show the moderating effect of financial deepening

variables on Foreign Direct Investment (Yiadam et al., 2023; Nguyen and Lee, 2021; Islam et al., 2020). 2) research results mention the effect of financial development variables as predictor variables on Foreign Direct Investment (Pham et al., 2022; Safdar et al., 2021).

## THEORETICAL REVIEW

### Institutional Quality on FDI

Many theoretical papers have tried to explain how to attract Foreign Direct Investment (FDI) in recent years. There are various factors that international investors consider when making investment decisions, including Dunning's eclectic paradigm theory approach. Dunning created the eclectic paradigm hypothesis, the OLI (ownership, location, internalization) model, as a standard for multinational companies to Foreign Direct Investment (FDI) to the host country. Many empirical studies have developed the OLI model by making institutional quality part of the component (location) that can attract FDI inflows.

Inefficient institutions result in reduced profitability, inadequate knowledge, and increased transaction costs. Nonetheless, nations possessing dependable and high-quality institutions will impact economic activity by reducing expenses associated with transactions, manufacturing, and output. Thus, high institutional quality is believed to boost profitability and productivity while also influencing the decline in operating expenses.

Most studies use the World Bank's Worldwide Governance Indicators approach as a proxy for institutional quality. In the Worldwide Governance Indicators, various studies empirically found that institutional factors significantly positively impact FDI inflows (Ullah and Khan, 2017). An earlier study by Bitar et al., (2019) found that political instability reduces FDI inflows, while another study by Bano et al., (2019) found no relationship between FDI inflows and political unrest. Recent research has examined the impact of institutional and political factors on FDI flows from develop-

ing countries (Paul and Benito, 2018). They found that significant factors influencing FDI in developing countries include institutional quality, which is determined by the effective rule of law, political stability, regulatory quality, and control of corruption. Bailey (2018) explain that institutional distance is a factor that encourages foreign investors from poor countries to invest in countries with better institutions, which can be considered a positive thing because most developing countries acquire new technologies, patents, IPRs, trademarks, and products. Foreign investors believe that the unique advantages of their investments will be protected under more supportive institutional arrangements.

Moreover, they find that investments made by developing countries into countries with weaker institutions will reduce FDI inflows. According to the concept of psychological distance, used by Ajide and Raheem (2016), more foreign investors tend to invest in markets where they feel psychologically familiar. As a result, they conclude that smaller institutional differences between countries encourage FDI while larger institutional distances discourage it. In an empirical study, Dellis (2024) found that institutional distance has a detrimental impact on FDI flows into the banking sector. This is due to increasing perceived uncertainty and costs associated with investing in foreign markets. Based on the explanation outlined above, the hypothesis developed in this research is:

H<sub>1</sub>: Institutional quality has a positive effect on FDI

### Green Economy and FDI

According to Qadri et al., (2023), the role of the green economy on Foreign Direct Investment (FDI) can be analyzed using the ecological modern theory that emerged in the discourse of sustainable development as a result of criticism of natural resource extraction that causes environmental degradation. Ecological modernization theory integrates economic considerations into modernization in ecology. It argues that technical and procedural innovations can over-

come the ecological crisis. Modernization should be a tool to rise above environmental degradation. Environmental damage is not an obstacle but a new opportunity for growth; this theory argues that ecological modernization will encourage innovation in production and distribution techniques (Brown et al., 2014). This view of ecological modernization aligns with Schumpeter's view that environmental degradation will be "the basic impetus that keeps the engine of capitalism running". The ecological modernization paradigm holds that environmental issues can be caused by environmental laws resulting from technological advancements.

The latest provides a theoretical basis for studying how to promote green economic practices such as green growth (Lorek and Spangenberg, 2014). The theoretical framework identifies technical improvements to environmental regulations as the main vehicle towards a green economy. The United Nations Environmental Program (UNEP) supports using state policies and actions through environmental regulations to indicate green economy measurement (Ryszawska, 2017). Government regulation to support environmental innovation is a key mechanism for most policymakers to engage in green growth strategies (Brown et al., 2014). Their argument on ecological modernization theory. Development studies and empirical literature explain that the quality of environmental regulations can provide tangible benefits to a country's economy through the inflow of foreign direct investment.

Contractor et al., (2020) argue that environmental regulations in host countries can influence the location decisions of foreign companies to invest. Looking at environmental services as an additional factor of production, Pearson was one of the first theoretical models to introduce the influence of the environment on FDI decisions. It demonstrated that developing nations with low levels of industrial activity would have lower demand for environmental services and, consequently, lower prices

(Brown et al., 2014). In line with this, research conducted by Kim and Rhee found that strict environmental regulations can significantly attract FDI inflows in 120 developing countries in the world. Furthermore, the International Agency of the European Environmental Agency (EEA) proposes a regional structure where the measurement of the green economy uses welfare and social aspects in the form of human capital (Cheba et al., 2022). This opinion is supported by several empirical studies that explain that human capital has a close relationship with the natural environment in many case studies (Jahanger et al., 2022). For example, human capital supports the adoption of green technologies through research and development, promotes green awareness in society on ways to preserve the natural environment, and motivates the transformation of the economic system as industrial growth accelerates. Even economic theory considers human capital as one of the main factors influencing FDI inflows. Economic theory also considers human capital as one of the main factors influencing FDI inflows. This relationship has been identified by several authors, including Abdouli and Omri (2021) and Musibau et al., (2019). While there are many empirical studies on the variables affecting FDI inflows to developing countries in general, few have specifically focused on human capital.

Dorozynska and Dorozynski (2015) explain that a country must invest in education and human capital to foster a favourable environment for investment. The results show that achieving a certain level of education is a condition for a country to attract and retain foreign direct investment, as well as maximize the indirect effects related to human resources resulting from the presence of businesses with foreign capital.

Furthermore, the green economy indicators used are sourced from the Global Green Growth Institute (GGGI), namely the environmental dimension through natural resources. Natural resources are a basic component that is directly related to green

economy policies. The green economy is an effort to increase economic growth by using natural resources wisely, protecting the environment, and being strong against natural disasters, which can minimize pollution and environmental damage (Mondal and Palit, 2022). Natural resources are listed as one of the most alluring criteria for foreign investors in other studies on factors determining FDI inflows. Based on the explanation outlined above, the hypothesis developed in this research is:

H<sub>2</sub>: The green economy has a positive effect on FDI

### **Financial Development Moderates the Influence of Quality Institutions and Green Economy on Foreign Direct Investment**

Financial development can improve the capital allocation efficiency of host countries through the growth and deepening of financial markets; it also moderates the favorable correlation between institutional quality and FDI. To effectively discover investment possibilities, distribute resources fairly, offer strong financial support to businesses with foreign funding, and reduce financing costs and investment risks, financial development should cooperate with a sound institutional system, ultimately strengthening the influence of institutional quality on FDI attractiveness (Ihsan, 2024). Several studies examining the role of financial development on FDI yield mixed results. Ibrahim et al., (2019) state that increased access to external financing and indirect support to overall economic activity resulting from financial growth in home and host countries can jointly encourage FDI. So, in this capacity, the government must improve access to external capital by improving the quality of institutions if the country wants to promote international companies and attract multinational enterprises (MNEs) from abroad. Research by Breen (2020) found that tight credit conditions undoubtedly contributed to the sharp decline in FDI flows during the recent global financial crisis, given the significant sensitivity of FDI to the avai-

lability of external finance that has occurred repeatedly. Therefore, to ensure that the ability of domestic firms to obtain external financing remains the same as local borrowing from FDI increases, institutional quality plays a role in strengthening the financial system in a country.

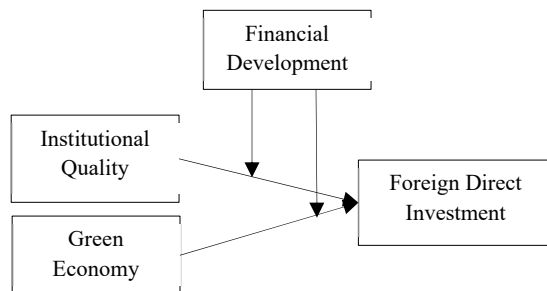
Furthermore, several studies examining the effect of a green economy on FDI provide different indicators and test results. In one of the components of the UNEP version of the green economy, the environmental regulation variable is a basic component widely studied in previous literature. Research conducted by Qadri et al., (2023) examined the impact of environmental regulations on the movement of polluting industrial capital, and the statistical results show that weak environmental regulations in the host country significantly influence FDI inflows from the US for high-polluting industries. However, for less polluting industries, weak environmental regulations have no significant effect on FDI.

In other green economy indicators by the Global Green Growth Institute (GGGI), it is explained that natural resources correlate with FDI with different research results. Asif et al., (2020) said that natural resources could be a blessing for some countries in attracting FDI inflows, but at the same time, it can also be a resource curse. Dinda (2014) found the influence of natural resources on FDI inflows through the autoregressive vector approach by taking a sample in Nigeria. Then Rjoub et al., (2017), in a study that tested the same direction, also identified the determinants of FDI in sub-Saharan African countries. Human capital is another element of the green economy modified in this research model. People can reach their potential as productive members of society thanks to the knowledge, skills, and health they invest in and accumulate during their lives. FDI inflows and human capital have a favorable relationship; according to a study by Dorozynska and Dorozynski (2015), human capital is statistically significant as a factor in determining FDI inflows; it is also one of the

most significant factors, and its significance increases over time. Then Cleeve et al., (2015), in a study that examined the effect of human capital on FDI inflows in Africa, also found similar results, namely, all measures of human capital have a significant effect on FDI. Thus, this study tries to see the effect of the green economy by involving financial development variables as moderating variables. This variable can have a stronger influence in encouraging the effectiveness of green economy implementation. The inclusion of financial development variables is based on the considerations mentioned earlier, which state that the existence of the financial sector can strengthen the productivity of government policies in triggering FDI inflows (Appiah et al., 2023). Based on the explanation outlined above, the hypothesis developed in this research is:

H<sub>3</sub>: Financial development positively moderates the influence of institutional quality and the green economy on FDI

Figure 1 shows the research framework.



**Figure 1**

**Research Framework Concept**

Source: *Processed Author*

**RESEARCH METHOD**

This study examines the impact of factors affecting FDI in 32 OIC countries. The SESRIC database is the source for the sample list of well-known OIC member countries. Secondary data in the form of annual frequencies from 2012 to 2022 are used in this study. The following explanatory variables are used in this study: Net inflow of Foreign Direct Investment as a percentage of GDP is the dependent variable. The independent variables refer to the OLI paradigm model

developed by Dunning (Aziz and Mishra, 2016). First, institutional quality consists of indicators based on the World Bank's world governance indicators, voice and accountability, political stability and absence of violence, government effectiveness, regulatory quality, rule of law, and control of corruption. Furthermore, the development of green economy indicators in OIC countries comes from international organizations, namely UNEP, GGGI, and OECD. Using Joseph Huber's modern ecological theory approach, the green economy variable uses three main indicators, namely state policy (environmental regulations), the welfare dimension (human capital), and the environmental dimension (natural resources).

Furthermore, moderating variables whose existence changes the direction of the relationship between the independent and dependent variables. The moderating variable in this study is the financial development index. According to the International Monetary Fund (IMF), the Financial Development Index measures how developed, accessible, and effective a country's financial institutions and financial markets are. This index combines the Financial Market Index and the Financial Institutions Index. Finally, this study uses two control variables: population, and market size. Data on population and market size were obtained from the World Bank database. Given that the data in this study is a combination of time series, namely observation years (2010-2020) and cross-sectional, namely 32 OIC countries, the most appropriate analytical tool used is panel data regression. This study uses a dynamic panel model with the Generalized Method of Moments (GMM) method to measure its parameters.

The dynamic panel development model, GMM, eliminates variable bias, unobserved panel heterogeneity and measurement error while controlling the lagged endogeneity of the dependent variable in the dynamic panel model (Kiviet, 2020; Ullah et al., 2018). GMM estimation is an approach used to show each independent variable's direct and indirect

impact and moderating variable on the dependent variable. The model is modified into a dynamic function, as described below:

Where FDI is constant for year t. The subscripts i and t represent the number of countries and periods the study covers.

- FDI = Foreign Direct Investment;
- PS = Political Stability;
- VA = Voice & Accountability;
- GE = Government Effectiveness;
- RQ = Regulatory Quality;
- RL = Rules of Law;
- CC = Control of Corruption;
- NR = Natural Resources;
- RE = Regulatory Environment;
- HC = Human Capital;
- POP = Population;
- MS = Market Size;
- FI = Financial Development Index
- $\epsilon_{it}$  = Random Variable.

The equation model for GMM analysis with interaction is as follows:

$$FDI_{it} = \beta_1 + \lambda FDI_{it-1} + \beta_2 PS_{it} + \beta_3 VA_{it} + \beta_4 GE_{it} + \beta_5 RQ_{it} + \beta_6 RL_{it} + \beta_7 CC_{it} + \beta_8 NR_{it} + \beta_9 RE_{it} + \beta_{10} HC_{it} + \beta_{11} POP_{it} + \beta_{12} MS_{it} + \beta_{13} FI_{it} + \epsilon_{it} \quad (1)$$

$$FDI_{it} = \beta_1 + \lambda FDI_{it-1} + \beta_2 PS_{it} + \beta_3 VA_{it} + \beta_4 GE_{it} + \beta_5 RQ_{it} + \beta_6 RL_{it} + \beta_7 CC_{it} + \beta_8 NR_{it} + \beta_9 RE_{it} + \beta_{10} HC_{it} + \beta_{11} POP_{it} + \beta_{12} MS_{it} + \beta_{13} FI_{it} + \beta_{14} PS * FI_{it} + \epsilon_{it} \quad (2)$$

$$FDI_{it} = \beta_1 + \lambda FDI_{it-1} + \beta_2 PS_{it} + \beta_3 VA_{it} + \beta_4 GE_{it} + \beta_5 RQ_{it} + \beta_6 RL_{it} + \beta_7 CC_{it} + \beta_8 NR_{it} + \beta_9 RE_{it} + \beta_{10} HC_{it} + \beta_{11} POP_{it} + \beta_{12} MS_{it} + \beta_{13} FI_{it} + \beta_{14} VA * FI_{it} + \epsilon_{it} \quad (3)$$

$$FDI_{it} = \beta_1 + \lambda FDI_{it-1} + \beta_2 PS_{it} + \beta_3 VA_{it} + \beta_4 GE_{it} + \beta_5 RQ_{it} + \beta_6 RL_{it} + \beta_7 CC_{it} + \beta_8 NR_{it} + \beta_9 RE_{it} + \beta_{10} HC_{it} + \beta_{11} POP_{it} + \beta_{12} MS_{it} + \beta_{13} FI_{it} + \beta_{14} GE * FI_{it} + \epsilon_{it} \quad (4)$$

$$FDI_{it} = \beta_1 + \lambda FDI_{it-1} + \beta_2 PS_{it} + \beta_3 VA_{it} + \beta_4 GE_{it} + \beta_5 RQ_{it} + \beta_6 RL_{it} + \beta_7 CC_{it} +$$

$$\beta_8 NR_{it} + \beta_9 RE_{it} + \beta_{10} HC_{it} + \beta_{11} POP_{it} + \beta_{12} MS_{it} + \beta_{13} FI_{it} + \beta_{14} RQ * FI_{it} + \epsilon_{it} \quad (5)$$

$$FDI_{it} = \beta_1 + \lambda FDI_{it-1} + \beta_2 PS_{it} + \beta_3 VA_{it} + \beta_4 GE_{it} + \beta_5 RQ_{it} + \beta_6 RL_{it} + \beta_7 CC_{it} + \beta_8 NR_{it} + \beta_9 RE_{it} + \beta_{10} HC_{it} + \beta_{11} POP_{it} + \beta_{12} MS_{it} + \beta_{13} FI_{it} + \beta_{14} RL * FI_{it} + \epsilon_{it} \quad (6)$$

$$FDI_{it} = \beta_1 + \lambda FDI_{it-1} + \beta_2 PS_{it} + \beta_3 VA_{it} + \beta_4 GE_{it} + \beta_5 RQ_{it} + \beta_6 RL_{it} + \beta_7 CC_{it} + \beta_8 NR_{it} + \beta_9 RE_{it} + \beta_{10} HC_{it} + \beta_{11} POP_{it} + \beta_{12} MS_{it} + \beta_{13} FI_{it} + \beta_{14} CC * FI_{it} + \epsilon_{it} \quad (7)$$

$$FDI_{it} = \beta_1 + \lambda FDI_{it-1} + \beta_2 PS_{it} + \beta_3 VA_{it} + \beta_4 GE_{it} + \beta_5 RQ_{it} + \beta_6 RL_{it} + \beta_7 CC_{it} + \beta_8 NR_{it} + \beta_9 RE_{it} + \beta_{10} HC_{it} + \beta_{11} POP_{it} + \beta_{12} MS_{it} + \beta_{13} FI_{it} + \beta_{14} NR * FI_{it} + \epsilon_{it} \quad (8)$$

$$FDI_{it} = \beta_1 + \lambda FDI_{it-1} + \beta_2 PS_{it} + \beta_3 VA_{it} + \beta_4 GE_{it} + \beta_5 RQ_{it} + \beta_6 RL_{it} + \beta_7 CC_{it} + \beta_8 NR_{it} + \beta_9 RE_{it} + \beta_{10} HC_{it} + \beta_{11} POP_{it} + \beta_{12} MS_{it} + \beta_{13} FI_{it} + \beta_{14} RE * FI_{it} + \epsilon_{it} \quad (9)$$

$$FDI_{it} = \beta_1 + \lambda FDI_{it-1} + \beta_2 PS_{it} + \beta_3 VA_{it} + \beta_4 GE_{it} + \beta_5 RQ_{it} + \beta_6 RL_{it} + \beta_7 CC_{it} + \beta_8 NR_{it} + \beta_9 RE_{it} + \beta_{10} HC_{it} + \beta_{11} POP_{it} + \beta_{12} MS_{it} + \beta_{13} FI_{it} + \beta_{14} HC * FI_{it} + \epsilon_{it} \quad (10)$$

## ANALYSIS AND DISCUSSION

Table 1 shows descriptive statistics are shown. Referring to the descriptive statistical test results above, we can see some characters that appear in each variable. Through 352 observations, data is considered to fulfil the normality requirement because the number of data is > 30 (greater than 30). This study takes 32 OIC countries as research samples, with a period of 11 years, from 2010 to 2020. Table 2 provides some information, including that the average Foreign Direct Investment (FDI) of all OIC countries reached US\$ 3,490,000,009, with the lowest value of US\$ -2,810,000,009, and the highest value of US\$ 29,200,000,010.

**Table 1**  
**Descriptive of Variables**

	FDI	SP	CC	VA	RQ	RL	GE	NR	HC	RE
Means	3.490000009	-0.572212	-0.312135	-0.600405	-0.312421	-0.356789	-0.394000	12.05000	40120.00	6.288211
Median	1.510000009	-0.521187	-0.555432	-0.510012	-0.311235	-0.461122	-0.331115	8.722355	18322.75	1.898223
Maximum	2.920000010	1.211852	1.342500	0.205578	1.112990	1.000110	1.518969	58.99800	338118.9	25.09911
Minimum	-2.810000009	-2.912154	-1.29000	-1.812232	-2.131190	-1.615572	-1.72100	0.002289	485.2522	0.111293
std. Dev.	5.060000009	0.512880	0.517000	0.157892	0.605588	0.513488	0.610045	12.23358	52200.01	8.250081

Source: Authors' calculations

Table 2 describes two control variables and one moderation variable in this study: population and market size, and financial development. Indonesia had the largest population in 2020 (271 million), while the Maldives (2010) had the smallest (352 thousand). The average OIC population for each country is 43.48 million, with a standard deviation of 65.58 million, which shows the large difference in population size between OIC countries.

The real GDP variable proxied by market size (MS) shows an average value of 1.38 per cent. The largest MS value was 17.58 per cent in Sierra Leone in 2013, while the smallest MS value was -35.88 per cent in Maldives in 2020. The market size in OIC countries is still relatively small and uneven, as evidenced by the distance between the

average value and the maximum value, which is greater than the average and minimum values. Furthermore, the Financial Development Index (FDI) variable proxies the moderating variable data. The International Monetary Fund (IMF) publishes a financial development index used to measure and analyze the development of the financial system as a whole in all countries.

The FD variable data shows extreme values. For example, some countries can achieve a high value of 0.73 per cent (Malaysia, 2020), but others can only achieve an index of 0.03 per cent (Sierra Leone, 2013). The average value of the FD variable of 0.27 per cent indicates that, in general, the governance and quality of financial institutions in various OIC countries are still relatively weak.

**Table 2**  
**Descriptive Moderating Variables and Control Variables**

	POPs	Ms	FD
Means	43481287	1.381390	0.281005
Median	13234811	1.821285	0.226111
Maximum	2.70948881	17.58176	0.731090
Minimum	352688.1	-35.88055	0.039981
std. Dev.	65588588	4.656725	0.198518

Source: processed data

**Table 3**  
**Estimation of Dynamic Panel Data Regression (Directly)**

Indep. Variable	Model 1 (First Difference)	Model 2 (Two-Step GMM)
FDI(t-1)	0.370***	0.221***
Stabilitas Politics	3,175***	-4,950***
Control of Corruption	2,581	-8,860***
Voice & Accountability	-1,821***	-2,430
Regulatory Quality	8,200**	-2,040
Role of Law	3,171***	1,420***
Gov. Effectiveness	3,781***	-2,040
Natural Resources	8,021**	6316.
Human Capital	3008***	4919.0***
Reg. Environment	-2029**	-8,730***
Population	5108	-553,636***
Market Size	-81,321***	-30794639
F. Development	2500	3,560
FDI(t-1) FEM*	0.2390***	0.4198***
FDI(t-1) PLS*	0.2397***	0.9279***

Source: processed data.



As explained in the methodology section, this study's dynamic panel regression model consists of 11 equations divided into 3 (three) analysis groups. The first hypothesis testing is the institutional quality variable. There are six indicators in this first hypothesis, based on the results that can be seen in table 3, described as follows:

H<sub>1a</sub>: Political stability positively affects Foreign Direct Investment (FDI) in member countries of the Organization of Islamic Cooperation (OIC). The results of data processing in equation (1) in table 4 show that the political stability variable (SP) has a significant positive effect on Foreign Direct Investment at  $\alpha = 1\%$  (\*\*\*). The coefficient value of 4.060 indicates that when political stability increases by 1 per cent, it will cause Foreign Direct Investment (FDI) to increase by 4.060 per cent. Based on this description, hypothesis H<sub>1a</sub> is accepted. This finding aligns with and supports the institutional theory on which this study is based. As stated by Yeager, the institutional role of Foreign Direct Investment can be analyzed using transaction cost theory caused by market failure (Yeager, 2018). The lower the transaction costs arising from economic activity (transactions), the more efficient the institutions are, and vice versa. Therefore, various rules (formal and informal) that ensure economic actors make transactions or exchanges are very important. Transaction costs in doing business are part of the accumulation of political policies that investors consider because political risk can have implications for confiscation or destruction of property and production disruption, including restrictions that can hamper the ability of investors to develop business. Investors will not invest and risk their capital in an unstable environment. The conclusion of this study is in line with and supports several previous studies which state that institutional quality as a proxy for political stability has a positive and significant effect on Foreign Direct Investment (FDI) (Bouchoucha and Benammou, 2020; Hayat, 2019; Mahmood et al., 2019). This research

found that, in general, the study of 32 selected OIC member countries showed a positive effect of political stability on Foreign Direct Investment (FDI). There is a critical analysis of political instability in OIC countries regarding encouraging foreign direct investment due to terrorism and war issues. The number of clashes between tribes, even sects, also exacerbates this problem.

H<sub>1b</sub>: The dynamic panel regression results in Table 4 equation (2) show that the corruption control variable (CC) has a positive but insignificant effect on FDI. So, the high level of corruption control will remain the same as the amount of Foreign Direct Investment (FDI) inflows.

Thus, the data testing results differ from the formulation of problems and hypotheses. Although theoretically and empirically, there is still some debate; it argues that corruption is beneficial because it gives investors room to maneuver and allows them to bypass established restrictions. According to this research, corruption is a "lubricant" that facilitates more effective and economically efficient ways of investing. Zallé (2019) note that corruption promotes economic growth when institutional quality is poor.

However, the test results of this study were unable to confirm the findings that formed the research hypothesis. Among them is a study by Kariuki (2015), which found that by limiting the benefits offered by the government to its citizens, corruption reduces economic efficiency. Another study failed to confirm the research conducted by Obamuyi and Olayiwola (2019) that corruption threatens economic growth because it can hinder the creation of new inventions and private investment. In particular, corruption also harms Foreign Direct Investment inflows and domestic investment by affecting the effectiveness and outcomes of public investment initiatives and can distort international trade (Kariuki, 2015).

**Table 4**  
**Regression Estimation Results of Dynamic Panel Data**  
**(Institutional Quality Interaction and Financial Development)**

Indep. Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
FDI(t-1)	0.188*	0.3811*	0.130**	0.155**	0.350**	0.151***
SP	2,281*	3.1319***	3,191**	2,511***	2,1121***	3,231***
CC	-1,001	1.9817	8201	5167	1,110	2,518
VA	-1,521**	-8,271**	-1,281*	-1,281**	-1,881	-1,521***
RQ	-8,581	-8,191	-5,500	-1,200	-9773	-7,121*
RL	-3,111*	-2,871*	-1,321*	-5,050**	-2,110**	-1,388***
GE	1,811***	1,451**	2,167***	2,000**	1,441	1,885**
NR	9,811	2,281	5,311*	3,561	1,248	-3,511
HC	3857*	2310*	12355**	1328***	1231	2448**
RE	2531.6*	23.55	121.15*	211.08	5780.18	135.85
POPs	-1319	-0213	-5425	1000.1	5357.8	-1188
Ms	-88.05**	-25.01	-123.50***	-82.115***	-58.255**	-75.283***
FD FD*PS	2515	-300.2	-3003	5412	1155	8313
FD*CCFD*VA	4.1122***					
FD*RQFD*RL		1,311***	-2,915***			
FD*GE				1,222***		
					8.281**	
						3,108
FDI(t-1) FEM*	0.2180***	0.2008***	0.2151***	0.2019***	0.3101***	0.221***
FDI(t-1) PLS*	0.8182***	0.5670***	0.7001***	0.5173***	0.8110***	0.245***

Source: processed data

H<sub>1c</sub>: Table 4 shows the dynamic panel regression results of equation (3), which shows that the Voice and Accountability (VA) variable significantly negatively affects FDI. Increasing the value of voice and government accountability can reduce the amount of FDI inflows. Thus, the test results above do not follow the hypothesis developed in the study.

The results of this test cannot confirm previous findings, including the research of Paul and Jadhav (2020). The study found that voice and accountability affect foreign direct investment. Another study Ismail and Zubair (2018) showed that, in the same reality, FDI flows greatly benefited from voice and accountability. Although the test results could not confirm the hypotheses developed, this study provides the same direction of findings as Raza et al., (2021), who examined the role of governance on FDI inflows. The results showed that among the

six governance indicators worldwide, only the variables of regulatory quality and voice and accountability had no significant effect on FDI in Asia.

Sabir et al., (2019), who examined both developed and developing countries, also found similar results. Voice and accountability variables negatively influence FDI in both developed and less developed countries. In the case of OIC countries, FDI is also adversely affected by voice and accountability, as per the results of a study conducted by Rashid et al., (2016). The results of this investigation show a gap between high or low levels of public participation and government accountability towards foreign direct investment. There are still many OIC member countries that are politically less democratic, and they even tend to be authoritarian and curb the freedom of their people. Women's equality in the public

sphere in muslim countries is still very weak (Gouda and Potrafke, 2016).

H<sub>1d</sub>: Regulatory Quality (RQ) measures the government's capacity to develop and enforce reasonable laws and rules governing licensing, promotion, and private sector development. The dynamic panel regression results in table 4 equation (4) show that the Regulatory Quality (RQ) variable has a significant positive effect on Foreign Direct Investment (FDI).

The effect of regulation on FDI is explained by the fact that more open trade and investment policies have emerged in developing countries as a result of policy reforms aimed at improving FDI conditions and general economic conditions and creating a more favorable atmosphere for FDI inflows.

Dang and Nguyen (2021) refer to these rules as 'Attraction' factors (institutional factors). Most of the previous studies show a positive effect of Regulatory Quality (RQ) on Foreign Direct Investment (FDI). Using Worldwide Governance Indicators (WGI) data, lots of research confirms that regulatory quality is a significantly increasing factor in luring FDI into the United States. Gizaw et al., (2023) also concluded that regulatory developments related to starting a business, protecting investors, and facilitating international trade positively and significantly affect the country's determination of increased FDI inflows.

The results of this test can also confirm the findings of Akame et al., (2016). In this study, FDI inflows and regulatory quality were found to have a substantial positive relationship in CEMAC (The Central African Economic and Monetary Community) countries. The findings indicate that OIC countries are following the trend of developed countries in attracting FDI flows through regulatory liberalization and providing incentives to investors.

H<sub>1e</sub>: The institutional quality variable in the Rule of Law (RL) dimension indicates public trust in regulations and their enforcement. It is assumed that the higher the

public trust in regulations and their enforcement, the higher the index value in the RL dimension. This will lead to a situation where people's economic activities are more stable and continue to increase along with the increase in the RL dimension index.

The results of this study have answered the hypothesis that RL has a significant positive effect on foreign direct investment. The legal regulations of governments in Muslim countries (members of the Organization of Islamic Cooperation (OIC)) are very influential in achieving their FDI inflows. The 2008 amendment of the OIC Charter is a development for the organization. OIC member countries recognize the importance of a number of global concerns voiced by several other international organizations, including the United Nations (UN), the World Bank, and others. The OIC is fully aware that one of the key elements in efforts to promote the welfare of Muslims is good governance in the context of government. Article 2, paragraph 6, explains that all OIC members are required to support and advance the cause of good governance, particularly the rule of law at all levels of state life.

To achieve the OIC's common goal, specifics and details are outlined in the document The OIC-2025: Program of Action. The OIC has 18 action programs, which are policy priorities to achieve the common goals applicable in 2016-2025. Specifically, the OIC also published an Implementation Plan document to elaborate on the various action programs. Some of the work programs and implementation plans align with the institutional quality developed by the World Bank. The firm stance of the members in amending the OIC charter can normatively encourage the implementation of various aspects of the good governance index.

H<sub>1f</sub>: Data testing results are based on the formulation of problems and hypotheses developed. Which government effectiveness variable can show its influence on foreign direct investment? An effective government can improve market efficiency, and by accelerating capital accumulation, allocating

resources to strategic areas, and supporting the adoption and understanding of new technologies, it can help the private sector stimulate economic growth from FDI capital flows. The results of this test also corroborate previous findings, such as those by Alam et al., (2017). Their study found that government effectiveness influences access to Foreign Direct Investment across 81 countries with varying income levels (i.e. high, middle, and low).

Another study that has been confirmed is the study by Ajide and Raheem (2016). The findings of this study also show the same reality, that of the six World Bank Governance Indicators (WGI), three variables, namely voice and accountability, government effectiveness, and the rule of law, have a statistically significant effect on foreign direct investment. The findings of this study indicate that the effectiveness of governance as a measure of government performance has a positive impact on FDI flows in OIC countries. Thus, in addition to economic reforms, OIC countries need to adopt institutional reforms that can improve the quality of their institutions. These conditions can reflect a healthy investment climate and will greatly help attract more FDI.

The second hypothesis in this study is regarding the impact of the Green Economy on Foreign Direct Investment (FDI) in member countries of the Organization of Islamic Cooperation (OIC). The green economy in this study is proxy by three indicators, namely Natural Resources, Human Resources, and Environmental Regulations sourced from UNEP, OECD, and Dual Citizen LLC. The following is a discussion of each of these variables:

H<sub>2a</sub>: The dynamic panel regression results in Table 4 equation (7) show consistent results that the natural resources variable (G) has a significant positive effect on Foreign Direct Investment (FDI) in OIC member countries. This means that an increase in the rental value of natural resources will increase the amount of foreign direct investment. The data testing results are based on the formula-

tion of problems and hypotheses developed in the study. The findings of this study test successfully illustrate the phenomenon that occurs in almost all OIC member countries that have the largest natural resources in the world. The wealth of natural resources owned by OIC countries can be a curse or a blessing, depending on the type of natural resource assets. Natural resources can be a blessing and an acceleration for the green economy transition by greening the agricultural and forestry resource sectors and minimizing the exploitation of the fossil resource sector (oil, gas, and coal) by transforming to renewable energy.

H<sub>2b</sub>: The panel data regression results in Table 4 equation (8) show that the Human Capital (HC) variable has a significant positive effect on Foreign Direct Investment (FDI). This study's results show an overall portrait of the OIC countries in the observation year, which is very likely to be different from each country's conditions.

Human capital is one of the pillars of several Green Economy Indexes (GEI). The pillar in question is knowledge and technology output. Implementing innovation in higher education can automatically influence innovative infrastructure and provide a technical basis for human resources to achieve key strategic indicators of the country's development. Human capital has long been discussed from various perspectives in economics, ecology, management and psychology, as well as at various levels (individual, firm and country levels) (Boon et al., 2018). Previous research conducted by Goldin (2016) and Baharin et al., (2020) stated that human capital is the productive investment humans have in improving knowledge and skills. The definition of human capital in the form of education and training is a very important investment in human capital, especially for host countries that can be used as a productive resource in attracting FDI inflows. In the context of OIC countries, a recent study by Cleeve et al., (2015) confirmed that human capital only positively affects investment and economic growth in high-

income countries but has no significant correlation in low-income countries. Nonetheless, the theoretical literature on FDI generally considers human capital as one of the keys to increasing FDI inflows (Mohanty and Sethi, 2019). Therefore, the results of this study research illustrate the phenomenon that occurs in almost all OIC member countries spread across various regions of the world.

H<sub>2c</sub>: The dynamic panel regression (GMM) results in Table 4 equation (9) show consistent results that the variable regulatory environment (RE) has a significant negative effect on Foreign Direct Investment (FDI) in OIC member countries. Increasing the effectiveness of government regulation as a proxy for reducing CO<sub>2</sub> emissions will increase Foreign Direct Investment (FDI).

Environmental regulation is part of the transition to a green economy, which will be a new source of economic growth. Therefore, green economy policies in a country will be an important consideration for investors to invest. This finding aligns with the basic stakeholder theory, which states that in addition to focusing on shareholders, companies have responsibilities towards stakeholders, including customers, suppliers, government, society and the environment.

According to Qoyum et al., (2022), investors are very focused on a company's environmental and social concerns in a country because companies that are not environmentally and socially responsible may one day face lawsuits and even destroy value for shareholders in the long run. Investors attach great importance to protecting their assets, and most want to contribute to social change by investing in companies with good ESG practices. The integration of non-financial characteristics, such as ethical factors and environmental and social concerns, has become a dominant trend in investment decisions. Furthermore, the outcomes of this examination can validate the findings of Luo et al., (2019) and Sharma (2019), who assert that nations prioritizing environmental and social obligations can significantly enhance

their appeal to international investors. The third hypothesis in this study is that the Financial Development variable moderates the effect of institutional quality on Foreign Direct Investment in member countries of the Organization of Islamic Cooperation (OIC).

The third hypothesis proposed in this study is that "Financial Development (FD) strengthens the effect of institutional quality on Foreign Direct Investment (FDI) in member countries of the Organization of Islamic Cooperation (OIC)." This third hypothesis is discussed in relation to the data processing interpretation results in table 5. The regression equation uses the interaction between the independent institutional quality variables (SP, CC, VA, RQ, RL, GE) and the moderating variable financial development (FD).

H<sub>3</sub>: The MRA test results show that the financial development variable has a different position among the six independent variables, namely, political stability, corruption control, voice and accountability, regulatory quality, rule of law, and government effectiveness. The interaction results of the six institutional quality variables (SP, CC, VA, RQ, RL, GE) with financial development in equations 2-7 almost all show positive coefficient values. The variables SP, CC, RQ, and RL each have a significant prob. value at 1%  $\alpha$ . Only the interaction with VA and GE variables resulted in negative and insignificant coefficient values (equation 4).

Based on the test results in Table 4, Financial Development (FD) has a potential moderating status, which is a variable that can become a moderating variable by affecting the strength of the measure of how the independent and dependent variables are related. High Financial Development (FD) can potentially increase foreign direct investment inflows by improving institutional quality.

**Table 5**  
**Estimates of Dynamic Panel Data Regression**  
**(Interaction of Green Economy and Financial Development)**

Indep. Variable	Model 1	Model 2	Model 3
FDI(t-1)	0.388***	0.1550***	0.2921***
Stabilities' Politics	2,130***	3.30211***	2.8511***
Control of Corruption	1,120	4922	2111
Voice & Accountability	-2,131*	-2,120***	-2,288
Regulatory Quality	-1,891*	-8,288**	-2,330*
Role of Law	-1,281***	-2,121***	-7,231*
Gov. Effectiveness	3,251*	2,881***	3.8118**
Natural Resources	2,901	5,851*	8.1211
Human Capital	-1,281***	1583**	308110
Reg. Environment	2331.12	5233.52***	3232.10
Population	-5188	-63112.5	-5891
Market Size	-121.52**	-81.355***	-111.82***
F. Development FD*NR FD*HC	1219	-2532	5589
FD*RE	6,501***	1522.00**	2.5109**
FDI(t-1) FEM*	0.2588***	0.2105***	0.2155***
FDI(t-1) PLS*	0.1322***	0.7999***	0.8902***

*Source: processed data.*

Furthermore, institutional quality will improve as the country's financial development increases. Some studies also show the positive moderation of the impact of financial development on FDI or foreign direct investment. Adegboye et al., (2020) explain that a society that complies with contracts in financial services will cause transactions (saving and borrowing) in banks to tend to be smoother and more efficient. Thus, good financial conditions increase the confidence of foreign investors who can utilize these banking services and improve the host country's financial development.

Likewise, the findings of Aibai et al., (2019) show a positive effect of the causal relationship between foreign direct investment variables, institutional quality, and financial development in China's Belt and Road region. Recent research by Islam et al., (2020) analyzing the relationship between financial development, FDI, and institutional quality provides policy recommendations to uphold sound financial institutions to make

a country more attractive to global investors. The results also show that financial market development can multiply the benefits of FDI inflows.

The model tests conducted (dynamic panel regression/GMM and moderation regression) lead to the main points as part of the main findings in this study, viz: the existence of financial development in increasing FDI inflows. The test results generally confirm the initial hypothesis that financial development has a favorable and considerable impact on increasing FDI inflows, both in aggregate and partially.

However, in partial analysis, the variables of voice and accountability and government effectiveness cannot be moderated by financial development. Because the coefficient value of each variable has a negative and insignificant impact, institutional quality variables can generally be moderated by financial development in increasing FDI inflows. Institutional quality and financial development are important investment

climate-shaping factors in attracting foreign capital flows, so it can be said that Foreign Direct Investment inflows cannot be separated from the quality of state institutions and the role of regulators in designing regulations that are implemented to realize increased foreign capital flows. FDI).

The last hypothesis proposed in this study is "Financial development strengthens the influence of green economy on Foreign Direct Investment (FDI) in member countries of the Organization of Islamic Cooperation (OIC)." This hypothesis is discussed in relation to the results of data processing interpretation in table 5. The regression equation uses the interaction between the independent variables (NR) and the moderating variable (FD).

H4: The interpretation of the MRA test shows that financial development variables successfully strengthen the effect of the green economy on foreign direct investment. The probability value is the MRA test of the NR, HC and RE variables on FDI with financial development as a moderating variable. FD is significant at  $\alpha$  1% and 5%. Based on the test value, the NR, HC, and RE variables are in potential moderating status, which is a variable that has the potential to become a moderating variable by influencing the strength of the relationship between the independent and dependent variables. This means that with high FD, there is a potential to increase FDI inflows through an increase in NR, HC, and GE. Then NR, HC, and GE will increase along with a country's financial development (FD). Therefore, the last hypothesis stating that financial development strengthens the effect of a green economy on Foreign Direct Investment in Muslim countries is accepted. Previous researchers such as Zhou et al., (2019) and Katircioğlu and Taşpinar (2017) stated that financial development helps accelerate the transition to a green economy by minimizing environmental pollution as follows: (1) Companies must conduct regular business activities and update production technology and equipment to reduce production costs and im-

prove product competitiveness in the market. To effectively achieve this, companies must reduce their financing constraints through a well-developed financial system; (2) the government promotes environmentally friendly projects; environmental degradation can be stopped by using clean energy and changing the general industrial landscape. Financial institutions that consider such policy frameworks play an important role in securing the funding needed to finance these projects by improving infrastructure for energy production and minimizing environmental pollution.

## CONCLUSION AND SUGGESTIONS

This study examines how institutional quality, green economy, and Foreign Direct Investment relate using financial development as a moderating variable in OIC countries. The findings show strong relationships between institutional quality and green economy proxies on FDI inflows. The results show that investors carefully assess institutional quality and green economy conditions before making investment decisions. Several factors, including an unstable political environment, convoluted bureaucracy, widespread corruption, collusion and nepotism, cause the poor quality of institutions in OIC countries. The governments of each country should be concerned when corruption increases foreign investment. The findings of this study should not be misunderstood as an endorsement of corrupt governments. Further research is needed to determine the impact of other variables on foreign investment flows, including innovation and technical readiness, public debt, interest rates, and culture. Research should also expand the sample by using a longer observation period.

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