



Hacettepe University Graduate School of Social Sciences

Department of Economics

**BILATERAL FOREIGN DIRECT INVESTMENT FLOWS:
THE ROLE OF INSTITUTIONAL AND FINANCIAL DISTANCE**

Pelin TAMKOÇ TÜRKOĞLU

Master's Thesis

Ankara, 2026

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KABUL VE ONAY

Pelin TAMKOÇ TÜRKOĞLU tarafından hazırlanan “İki Yönlü Doğrudan Yabancı Yatırım Akımları: Kurumsal ve Finansal Uzaklığın Rolü” başlıklı bu çalışma, 13/07/2026 tarihinde yapılan savunma sınavı sonucunda başarılı bulunarak jürimiz tarafından Yüksek Lisans Tezi olarak kabul edilmiştir.

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[İmza]

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ABSTRACT

TAMKOÇ TÜRKOĞLU, Pelin. *Bilateral Foreign Direct Investment Flow: Role of Institutional and Financial Distance*, Master's Thesis, Ankara, 2026.

This thesis empirically examines the impact of financial and institutional distance on bilateral foreign direct investment (FDI) flows between countries between 2000 and 2020. To this end, 15 upper-middle-income countries, 12 lower-middle-income countries, and 37 OECD countries are analyzed within a gravity model framework using OLS, Fixed Effects (FE), and Poisson Pseudo Maximum Likelihood (PPML) methods. This thesis comprehensively explores the effect of financial and institutional similarities on FDI by employing multidimensional financial distance indicators such as banking system depth, stock market capitalization, financial development, financial institutions, financial markets, and financial inclusion for countries at different stages of development.

Empirical findings suggest that the impact of financial distance on FDI is both multidimensional and heterogeneous across country groups. For the full sample of middle-income countries, the results indicate that not all dimensions of financial distance similarly affect FDI. While banking-sector distance does not significantly affect FDI, stock market capitalization distance has a weak positive effect on FDI. However, overall financial development, financial institutions, and financial market distances consistently harm FDI. The upper-middle-income country results largely mirror the full sample. Contrarily, lower-middle-income countries have a different pattern, where financial distance often acts as an investment opportunity rather than a barrier. In these countries, banking-sector gaps play a more significant role. For OECD countries, there is strong evidence supporting the similarity hypothesis. In the OECD, almost all financial distance indicators are negatively related to FDI. In the context of institutional distance, the results present an imprecise pattern across country groups.

Keywords

Foreign Direct Investment, Financial Distance, Institutional Distance, Financial Inclusion, Lower-Upper Middle Income Countries, Gravity Model

ÖZET

TAMKOÇ TÜRKOĞLU, Pelin. *İki Yönlü Doğrudan Yabancı Yatırım Akımları: Kurumsal ve Finansal Uzaklığın Rolü*, Yüksek Lisans, Ankara, 2026.

Bu tez, 2000–2020 döneminde ülkeler arasındaki ikili doğrudan yabancı yatırım (DYY) akımları üzerinde finansal ve kurumsal mesafenin etkisini ampirik olarak incelemektedir. Bu amaçla, 15 üst-orta gelirli ülke, 12 alt-orta gelirli ülke ve 37 OECD ülkesi, çekim modeli çerçevesinde En Küçük Kareler (OLS), Sabit Etkiler (FE) ve Poisson Sözde Maksimum Olabilirlik (PPML) yöntemleri kullanılarak analiz edilmiştir. Çalışmada, farklı gelişmişlik düzeylerindeki ülkelerde finansal ve kurumsal benzerliklerin DYY üzerindeki etkisi; bankacılık sistemi derinliği, borsa piyasa değeri, finansal gelişmişlik, finansal kurumlar, finansal piyasalar ve finansal kapsayıcılık gibi çok boyutlu finansal mesafe göstergeleri kullanılarak kapsamlı bir şekilde ele alınmaktadır.

Ampirik bulgular, finansal mesafenin DYY üzerindeki etkisinin hem çok boyutlu hem de ülke grupları arasında heterojen olduğunu göstermektedir. Orta gelirli ülkelerin tamamı için elde edilen sonuçlar, finansal mesafenin tüm boyutlarının DYY'yi aynı şekilde etkilemediğini göstermektedir. Bankacılık sektörü mesafesinin DYY üzerinde istatistiksel olarak anlamlı bir etkisi bulunmazken, borsa piyasa değeri mesafesinin DYY üzerinde zayıf düzeyde pozitif bir etkisi bulunmaktadır. Ancak, finansal gelişme, finansal kurumlar ve finansal piyasalara ilişkin mesafelerin DYY üzerinde tutarlı biçimde olumsuz etki yarattığı tespit edilmiştir. Üst-orta gelirli ülkelere ilişkin bulgular, büyük ölçüde orta gelirli ülkelerin genel sonuçlarıyla örtüşmektedir.

Buna karşılık, alt-orta gelirli ülkelerde farklı bir yapı gözlenmektedir. Bu ülkelerde finansal mesafe çoğu zaman bir engelden ziyade yatırım fırsatı olarak ortaya çıkmaktadır. Ayrıca, bu ülkelerde bankacılık sektörüne ilişkin farklılıklar daha belirleyici bir rol oynamaktadır. OECD ülkelerine ilişkin bulgular ise benzerlik hipotezini güçlü biçimde desteklemektedir. OECD ülkelerinde finansal mesafenin neredeyse tüm göstergeleri DYY ile negatif yönde ilişkilidir. Kurumsal mesafe açısından ise sonuçlar, ülke grupları arasında net ve tutarlı bir örüntü ortaya koymamaktadır.

Anahtar Sözcükler

Doğrudan Yabancı Yatırımlar, Finansal Mesafe, Finansal Kapsayıcılık, Üst-Alt Orta Gelirli Ülkeler, Çekim Modeli.

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ABBREVIATIONS

GDP	Gross Domestic Product
FDI	Foreign Direct Investment
FE	Fixed Effects
IMF	International Monetary Fund
MNCs	Multinational Corporations
OECD	Organisation for Economic Co-operation and Development
OLS	Ordinary Least Squares
PPML	Poisson Pseudo-Maximum Likelihood
UNCTAD	United Nations Conference on Trade and Development
USD	American Dollar
WGI	World Governance Indicator

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INTRODUCTION

Foreign direct investment (FDI) has become one of the main drivers of globalization, international capital mobility, and economic development over the past three decades. In addition to capital accumulation, FDI contributes to new job opportunities, improvement in living standards, knowledge transfer, technology transfer, and productivity growth (Pegkas, 2015). Despite its long-term upward trend, global FDI flows have substantial volatility, reflecting major global shocks such as the 2008 global financial crisis, the COVID-19 pandemic, rising geopolitical tensions, and tighter global financial conditions. As illustrated in Chart 1.1, FDI has increased rapidly since 1990, due to the effects of globalization.

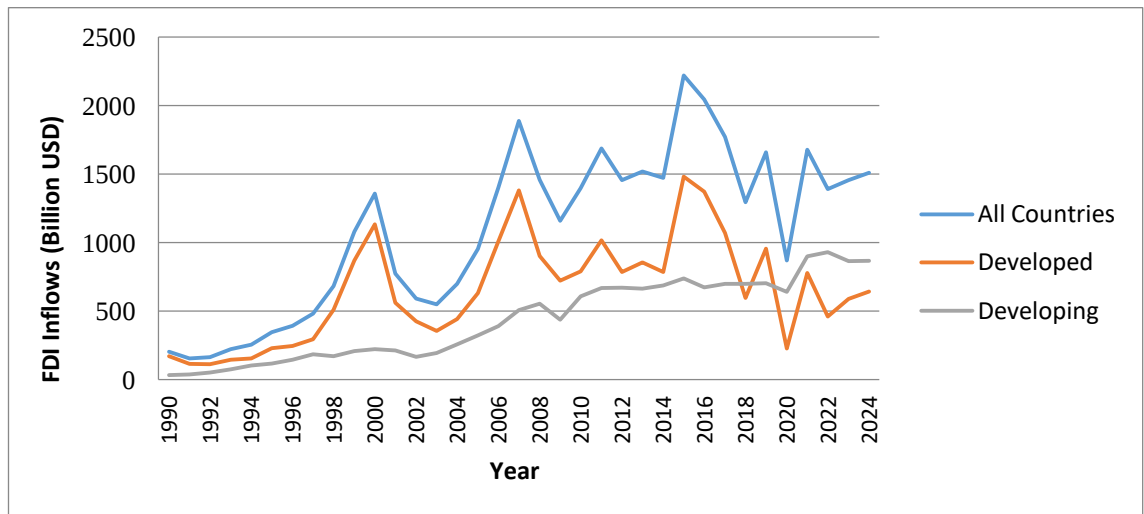


Chart 1.1 Global FDI Inflows by Country Groups (1990–2024)

However, this growth has not been smooth and this FDI reached a peak of approximately US\$ 1.8 trillion before the 2008 financial crisis and experienced a sharp decline in its aftermath. Although a gradual increase was observed in the following years, the COVID-19 pandemic caused another significant decline in FDI flows. After COVID-19, FDI flows continued to increase slowly. According to a recent report published by UNCTAD (2025), total FDI flows have surpassed US\$1.5 trillion in 2024. However, some factors such as heightened geopolitical tensions and rising interest rates

continue to harm these FDI flows within the global economy. Although global FDI inflows exceeded US\$1.5 trillion in 2024, the distribution of these flows remains highly uneven across countries and regions.

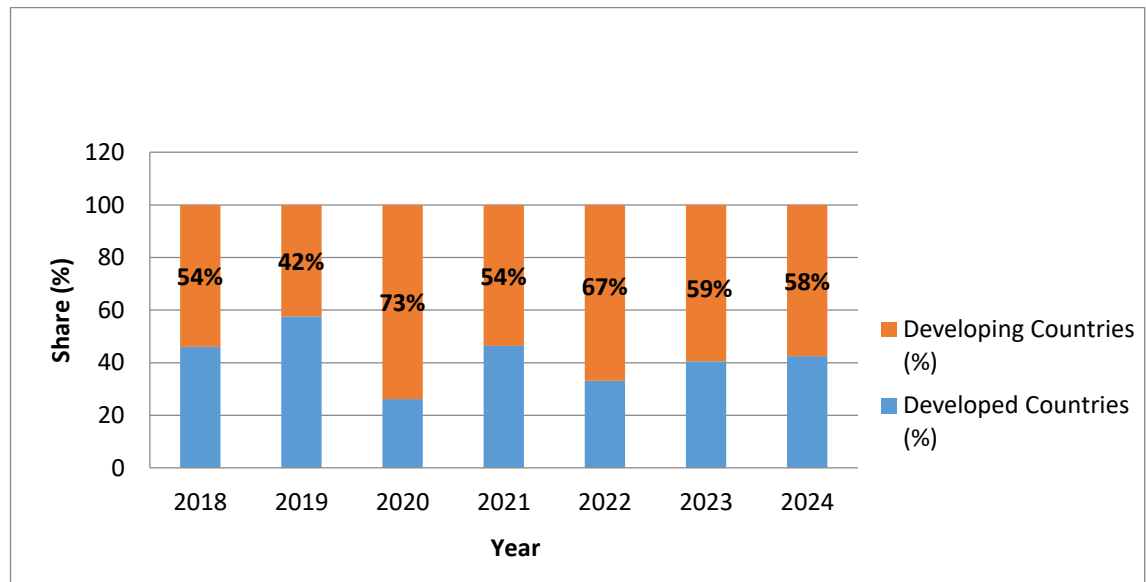


Chart 1.2 Share of Global FDI Inflows by Country Group (2018–2024)

Chart 1.2 shows the distribution of global foreign direct investment (FDI) inflows between developed and developing countries during the 2018–2024 period. There are important fluctuations in the distribution of FDI inflows across the developed and developing countries. Although developing countries attracted approximately 54% of FDI inflows, developed countries received 46% of FDI inflows in 2018. Conversely, the shares of developed countries increased to approximately 58% in 2019. In particular, the share of developed countries fell significantly in 2020, while the share of developing countries increased substantially. While FDI is continuing to rise quickly in developing countries, FDI flows in developed countries are more modest during the 2020–2024. As illustrated in Chart 1.2, developing countries have maintained their dominant position in FDI inflows throughout the 2022–2024 period. All these increases of FDI flows demonstrate that the determinants of bilateral foreign direct investment flows have become more important than ever. Today, countries compete to attract international investment not only through market size or low labor costs but also through the quality of their institutional structures and the level of sophistication of their financial systems.

In this scope, the distribution of these investments across countries is highly uneven all over the world. Developed economies account for the majority of global outward foreign direct investment since they have sophisticated financial systems, deeper capital markets, superior technological infrastructure, and sounder institutional frameworks. The reasons for making cross-border investment decisions differ significantly between countries. Efficiency-seeking and strategic asset-seeking FDI are common in developed economies. These economies aim to enhance productivity and acquire advanced technologies. However, developing economies use FDI to find resources. Lower production costs and the availability of natural resources are typically their driving forces (Shah & Kiramat, 2025). Nevertheless, developing countries do not constitute a homogeneous group. There are significant differences among them in terms of economic structure, institutional quality, financial development, and ultimately, investment attractiveness.

While developing countries continue to attract a significant share of global FDI flows, these investments are concentrated in upper-middle-income economies. Upper-middle-income economies in Asia received slightly less than half of all worldwide FDI inflows in 2024 (47%) (Ramanayake, 2025). In particular, China has substantially increased its foreign investments over the past two decades. In contrast, countries in the lower-middle-income group play a more limited role in international investment activities due to underdeveloped financial systems, institutional shortcomings, infrastructure deficiencies, and high political risks.

Within this framework, Chart 1.3 illustrates the FDI outflows of countries across different income groups from 1990 to 2024. OECD countries have the largest share of FDI among country groups. Secondly, countries in the upper-middle-income group have significantly increased their investment, as they have become more integrated into production networks since 2010. Finally, the share of lower-middle-income countries in global investment remains quite low. This can largely be explained by various structural limitations such as underdeveloped financial systems, weak institutional capacity, infrastructure deficiencies, and higher political and macroeconomic risks.

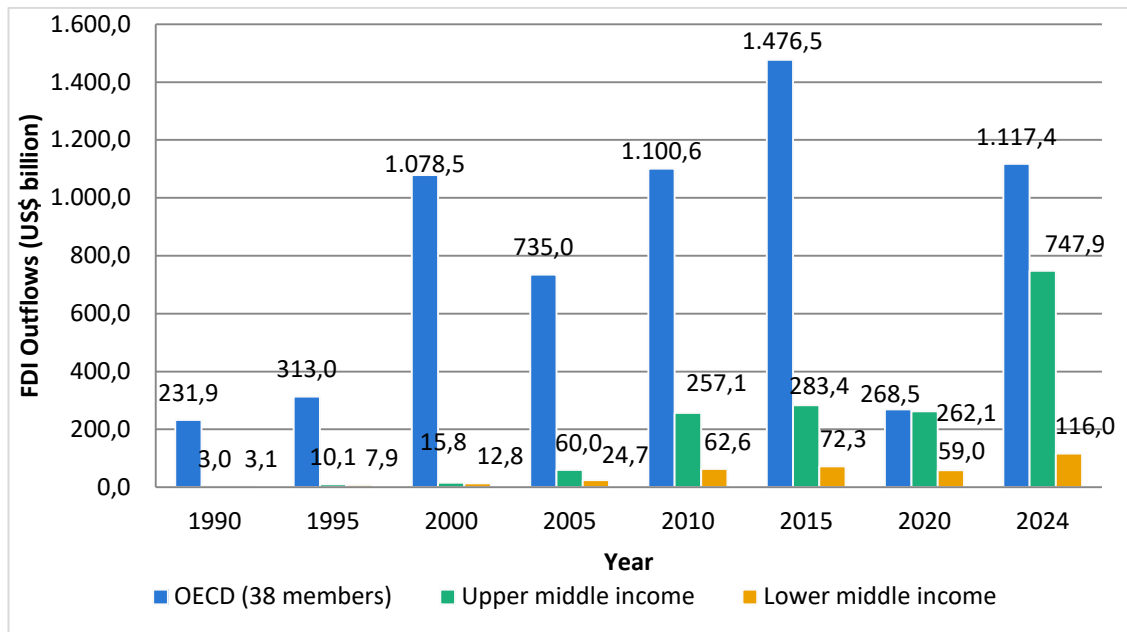


Chart 1.3 Comparison of FDI Outflows by Country Group, 1990–2024

Among these factors, the level of financial development plays a particularly critical role in shaping a country's ability to attract foreign capital. In developing countries, financial development is crucial for increasing capital market efficiency, strengthening credit mechanisms, and boosting financial intermediation activities (Azman-Saini et al., 2010). However, the effect of FDI on financial development differs from country to country. On the other hand, less developed financial systems may hinder foreign investment because of high transaction costs and more uncertainty. As a result, country differences in financial systems can either foster or impede FDI flows between countries. The academic literature has shifted from the impact of financial development on FDI to the implications of financial distance between countries. Financial distance has recently emerged as a significant determinant of bilateral FDI because similar financial systems decrease information asymmetries, funding constraints, and transaction costs. According to Dellis (2024), developed countries invest in other countries with similar, harmonized institutional structures and financial systems. However, there is some evidence that developed countries prefer to invest in underdeveloped financial markets.

For example, Makino et al. (2002) indicate that firms investing in less developed countries can gain a competitive advantage by offering better technology and

managerial skills. Similarly, Bi et al. (2020) point out that economic remoteness enables firms to access various knowledge networks and discover new market dynamics.

In this context, the previous literature shows that countries need to possess different characteristics to attract FDI. Among these characteristics, the differences in financial and institutional structures of countries have recently drawn our attention. However, countries are far from homogeneous. There exists a substantial heterogeneity across income groups in terms of financial development, institutional quality, and investment capacity. Ignoring these differences may lead to incomplete conclusions in analyzing the determinants of bilateral FDI flows. Therefore, this thesis explicitly pays attention to country heterogeneity by examining upper-middle-income, lower-middle-income, and OECD countries separately.

This thesis aims to examine the effects of financial and institutional distances on bilateral FDI flows. To provide a comprehensive understanding we explicitly take into account cross-country heterogeneity by examining different country groups separately, including OECD countries, upper-middle-income countries, and lower-middle-income countries.

Our study uses a broad panel dataset covering 37 OECD countries, 15 upper-middle-income countries, and 12 lower-middle-income countries over the period 2000–2020. To ensure the accuracy and robustness of the empirical findings, three estimation methods—Ordinary Least Squares (OLS), Fixed Effects (FE), and Poisson Pseudo-Maximum Likelihood (PPML)—are employed within a gravity model framework.

In addition, this thesis has a broader financial distance framework in examining the effects of financial distance on bilateral FDI flows. It provides a multidimensional analysis of financial distance by employing different dimensions of financial systems through five financial distance indicators and two alternative financial inclusion distance measures. This approach enables a more comprehensive evaluation of how financial disparities shape bilateral FDI flows across country groups.

This thesis provides three significant contributions to the literature. Firstly, it extends the bilateral FDI literature by adopting a multidimensional perspective to measuring

financial distance rather than relying on a single proxy for financial development. Notably, financial distance is examined across various dimensions. These are banking sector depth, capital market size, overall financial development, financial institutions, financial markets, and financial inclusion. Adding financial inclusion into the analysis provides a more comprehensive interpretation of how financial disparities across countries influence bilateral FDI flows. In particular, this thesis broadens the literature by considering not only the size and development level of financial systems, but also disparities in access to financial services.

Secondly, this study contributes to the empirical literature by focusing on middle-income countries. Although middle-income countries have substantially increased their share of global FDI flows in recent years, the relationship between financial distance and FDI has been addressed in only a limited number of studies concerning middle-income countries. In this regard, our study expands the existing literature regarding the role of financial disparities in investment decisions within developing economies. Moreover, it enhances our understanding of how financial frictions matter in developing countries.

Finally, by conducting a comparative analysis of lower-middle-income, upper-middle-income, and OECD countries, the study demonstrates that the impact of financial distance on FDI varies according to a country's level of economic and financial development. Thus, it offers new empirical findings to the literature regarding the heterogeneous relationship between financial distance and FDI.

The thesis consists of four chapters. The first chapter examines the evolution of financial systems and FDI. The second chapter includes a literature review on FDI and its relationship with financial distance and institutional distance. The third chapter focuses on data and methodology, the empirical model, variables, and estimation strategy. The fourth chapter evaluates the results of all country groups. Moreover, we analyse OECD countries separately, and we compare all countries in this model. Finally, the conclusion chapter summarizes the empirical results of the study and derives policy implications.

CHAPTER 1

FINANCIAL SYSTEM AND FOREIGN DIRECT INVESTMENT

1.1. EVOLUTION OF FINANCIAL SYSTEMS

The evolution of financial systems has played a key role in structuring economic development and the investment environment. Over time, there has been a gradual transition from heavily regulated, bank-dominated structures to more liberalized, diversified, and inclusive financial systems. However, this transition process has not been the same for countries. The speed and depth of financial development have differed significantly. This situation has resulted in large financial distance between countries.

Many countries have experienced financial repression in the early stages of development. The main characteristics are controls on interest rates, credit controls, low domestic savings, high reserve requirements, a closer relationship between government and banks, and controls on cross-border capital movements (Reinhart et al., 2011). In a financially repressed country, the public sector has a major role that dominates the financial markets and institutions, and this leads to a nonmarketable system. Two pioneering studies, McKinnon (1973) and Shaw (1973), state that these regulations hamper the mobilization of savings, the financing mechanism of investment projects, and, ultimately, the efficiency of capital allocation. Therefore, the outcomes are restricted growth and retard development.

Beginning in the 1980s, many countries gradually shifted toward financial liberalization. The early transition to financial liberalization came from developed countries, and then developing countries slowly followed this international pattern. With the triggering effects of the free-market transition and trade liberalization, countries began to view financial liberalization as a means to integrate into world markets. Liberalization policies are characterized by deregulation of interest rates, reduction of credit controls, banking sector reforms, and increased openness to

international capital flows. These reforms are aimed at enhancing financial intermediation and market efficiency. Therefore, they broaden access to financial resources at the lowest costs. However, we have observed a considerable variation across countries in terms of the speed and success of financial liberalization. Today, disparities and heterogeneity among countries demonstrate that financial distance can be a critical factor for investors.

Levine (1997), in his influential paper, explains the functions of the financial system in the growth and development process. Financial systems contribute to economic activity and development by facilitating the trading, hedging, diversification, and pooling of risk. This is a key function that enables firms to manage uncertainty. Also, by reducing risk exposure, well-functioning financial systems allow long-term investment decisions and promote income stability. Financial systems have an intermediating role in improving the allocation of resources. This creates a channel for efficient allocation of capital, encouraging investment productivity and growth. The monitoring function of financial systems plays an essential role in reducing asymmetric information problems. This increases efficiency in the use of resources. Financial systems further generate mechanisms to mobilize savings and pool loanable funds. Through this process, financial systems transform savings into productive investments, increasing capital accumulation and supporting economic growth.

The liberalization attempts strengthened these functions by increasing market efficiency, deepening financial markets, and increasing access to financial resources. As financial systems improved, firms started to face lower borrowing costs and greater access to external financing. As argued by Levine (2005), these improvements even contribute to higher investment efficiency, technological innovation, and productivity growth.

The transformation of financial systems, along with financial liberalization, has also changed the institutional structures. Conventionally, financial systems are generally classified as bank-based or market-based. In Levine (2002), two views have emerged: (i) the bank-based view that underlines the positive role of banks in acquiring information and improving capital allocation, managing liquidity risk, mobilizing capital, benefiting from economies of scale, ameliorating moral hazard via effective

monitoring, forming long-run relationships with firms to overcome asymmetric information problems, and thereby boosting economic growth. (ii) market-based view that considers the growth-enhancing function of markets, which fosters the research motive of firms, leading to trading in big and liquid markets, ease of takeovers, and enhanced corporate governance. Also, markets can lead to increasing competition, help to diffuse information signals, and effectively transmit this information to investors. Thus, this view stresses the promoting role of well-developed markets on growth and the investment environment. In bank-based systems, transactions are heavily dependent on relationship-based lending and bank financing. In contrast, market-based systems operate through equity and bond markets characterized by deeper capital markets, higher liquidity, and broader access to external financing. According to Levine (2002), both bank-based and market-based systems can promote economic growth. Also, they note that the effectiveness may vary depending on institutional and economic conditions. In line with the different pace and success of financial liberalization across countries, there is a significant variation in terms of financial structure, especially in banking and market depth. In sum, over time, countries have developed along different financial paths, and this significantly affects their economic activities.

In addition to the liberalization of financial systems and their structural design, it is important to examine their dynamic nature. The concept of financial deepening is the outcome of this process. Financial deepening is the growth of financial institutions, markets and financial services relative to the size of the economy. It is generally associated with higher levels of private sector credit, larger market capitalization, and wider access to financial instruments. In short, it is the improvement of all elements of the financial system. A deeper financial system improves the efficiency of investment through lower borrowing costs. As argued by Beck et al. (2000), countries with higher levels of financial development generally offer more favorable financing conditions for firms and investors. However, financial deepening across countries is highly uneven. This leads to substantial differences in financial development levels across countries.

Although the terms "financial deepening" and "financial development" are often used interchangeably in the literature, they refer to distinct but closely related concepts. Financial deepening is generally understood as growth in the size of the financial sector

relative to the overall economy, and it is simply a quantitative concept. It is widely measured by private sector credit to GDP, money supply, or stock market capitalization. In this sense, financial deepening is mainly related to the growth in financial resources and market size. By contrast, financial development is a broader concept. Not only is the depth of the financial system considered. But also, their efficiency and accessibility become important. Recalling Levine (1997, 2005), a well-developed financial system is one that efficiently mobilizes savings, allocates resources, reduces transaction costs, and facilitates risk management. More recently, the IMF's financial development framework builds a financial development concept on three dimensions: depth, access, and efficiency, including both financial institutions and financial markets (Sviryzdenka, 2016). Therefore, financial development is both a quantitative and qualitative concept.

A related but more specific concept is financial inclusion. As Sarma (2008) defined it in broader terms, financial inclusion is the ease of access, availability, and usage of the formal financial system by all agents of the economy. This definition focuses on the extent to which individuals and firms can access and use financial services. Another definition is from Dev (2006), who states that financial inclusion is the delivery of financial services at an affordable cost to the vast sections of the disadvantaged and low-income groups. The greater the financial inclusion, the broader the access to financial services. Financial inclusion has a role in facilitating investment and strengthening economic participation (Sarma and Pais, 2011). The limited financial access may constrain financing opportunities and create barriers or friction to investment (Allen et al., 2012).

Since financial inclusion levels differ substantially across countries, they become another source of financial heterogeneity across countries. Financial inclusion is commonly measured through bank branch density, ATM availability, number of borrowers, and account ownership (Demirgüç-Kunt et al., 2015). Therefore, our distinction becomes clear when specifying financial inclusion. While financial deepening reflects financial size and financial development captures overall system performance, financial inclusion emphasizes accessibility to financial services. This distinction is particularly relevant for this thesis, as financial distance is examined through multiple dimensions.

Overall, the evolution of financial systems has created considerable differences across countries in terms of financial development and financial inclusion. These disparities are the basis of financial distance, which may significantly affect bilateral investment decisions by altering financing conditions, uncertainty, and investment costs. The empirical focus of this thesis is the effects of these financial disparities on bilateral FDI flows.

1.2. EVOLUTION OF FDI

Since 1980, financial liberalization and increased international capital mobility have led to rapid FDI growth due to globalization. Particularly, financial liberalization policies in both developed and developing countries have contributed to international capital movements by decreasing the restrictions on capital movements. This allows countries to integrate into the global financial markets.

Eichengreen (2008) notes that financial liberalization has altered the volume and direction of capital flows. Therefore, it has deepened economic integration between countries and facilitated international capital movements. As financial markets have become more open and interconnected, cross-border investment decisions have started to transform progressively.

Firms don't depend solely on traditional macroeconomic determinants such as market size and production costs when evaluating investment decisions. Now, they have given importance to the depth, stability, and accessibility of the host country's financial systems when making investments. Carr et al. (2001) state that the well-developed and efficient financial markets in the host economy directly influence the entry and expansion decisions of multinational firms, because financial intermediation reduces the transaction costs associated with cross-border capital allocation.

As a consequence, the structure of financial systems and their differences are becoming increasingly important determinants of firms' location choices, because access to credit, capital market liquidity, and the institutional quality of the financial sector influence financing costs and the viability of cross-border investment.

According to Feldstein (1999), the expansion of international capital flows has resulted in a more effective allocation of resources and greater integration of the world economy. This process has helped to increase FDI and foreign capital flows. In addition, the liberalization of financial systems at different speeds and levels has also caused significant differences in financial structures between countries. Moreover, the expansion of globalization has led to a considerable increase in the economic role of multinational corporations (MNCs).

Markusen (1995) has linked the emergence of multinational corporations to international trade theories which explain why knowledge and technology-intensive firms operate globally.

Helpman et al. (2004) state that more efficient and competitive firms are more likely to prefer FDI rather than exporting. They suggest that firm heterogeneity plays a significant role in explaining the emergence of MNCs.

As MNCs have extended their activities beyond their national borders due to technological developments, lower transportation costs, and decreased trade barriers, they have increased their international investments to gain access to new markets, reduce production costs, acquire strategic assets, and achieve a competitive advantage. Most multinational companies started their operations in developing countries in the 1990s and became central institutions in these countries (Madu et al., 2020). According to Ferdausy and Rahman (2009), the low labor costs and benefits from government grants from developing countries attracted multinational companies.

Another important development in the world economy, FDI between countries has grown rapidly since the 1990s. As multinational firms established themselves internationally, FDI flows increased significantly and were more geographically diverse. Market size, geographic distance, trade links, and cost advantages have all been extensively studied as factors influencing bilateral FDI flows. In a more sophisticated discussion, Carr et al. (2001) developed the Knowledge-Capital Model.

This model explains the investment decisions of MNCs within the framework of both horizontal and vertical FDI investment¹.

Their approach demonstrates how differences in economic size and production factor costs between countries shape bilateral investment flows. Blonigen (2005), on the other hand, comprehensively investigates the empirical literature on the determinants of foreign direct investment and emphasizes the importance of factors such as market size, trade costs, institutional structure, and investment environment on investment decisions. While FDI flows are growing, we have witnessed a striking transformation: changes in the origin of FDI. That is,

Many developing countries have evolved from being merely host countries for foreign direct investment to becoming important source countries of FDI. Emerging countries, particularly China, India, and Brazil, have played a significant role in international investments over the past two decades. Mathews (2006) argues that MNCs emerging from developing countries make international investments not only for market research but also to enhance their competitiveness by gaining access to technology, know-how, and strategic assets. This is one of the key approaches explaining the increasing role of developing countries in the global investment system.

Luo and Tung (2007) suggest that firms from emerging economies utilize international investments as a springboard strategy to gain access to technology, know-how, and strategic assets. Similarly, Buckley et al. (2007) examine the determinants of China's outward FDI and the increasing role of developing countries in the global investment system. The study reveals that Chinese firms' overseas investments cannot be explained solely by market seeking; factors such as access to natural resources, acquisition of strategic assets, and technology acquisition also play a significant role in investment decisions. This indicates that developing countries are becoming increasingly active in international investment.

¹ Horizontal FDI occurs when a multinational firm produces comparable commodities in the destination country by replicating its home country's industry chain. (Musabeh, 2018)

Vertical FDI occurs when a multinational company acquires a firm to utilize natural resources in the host country or takes over distribution channels to market its products there. (Markusen, 1995)

The volume and direction of FDI have changed considerably over time, but identifying the determinants of investment decisions remains a fundamental research area in the international economics literature. Traditional approaches are essentially based on the economic size of countries, production costs, and trade relations. Recently, the impact of institutional and financial differences between countries on investment flows has become increasingly important.

While Portes and Rey (2005) emphasize that information costs and financial proximity play a decisive role in cross-border capital movements, Daude and Fratzscher (2008) reveal that investors are significantly influenced by institutional quality, governance structure, and information asymmetries. Accordingly, the concepts of institutional and financial distance have become increasingly used variables in explaining bilateral FDI flows. Therefore, examining the effects of financial and institutional differences between countries on investment decisions constitutes one of the prominent research areas in the foreign direct investment literature today.

CHAPTER 2

FOREIGN DIRECT INVESTMENT AND ITS RELATIONSHIP WITH FINANCIAL AND INSTITUTIONAL DISTANCE

In this section, we aim to review the literature on interrelations among FDI, financial, and institutional distance. We begin by explaining the motivation of firms to engage in FDI, then continue with the finance-FDI nexus and review of studies focusing on the link between financial development and FDI. Finally, we examine the existing literature on financial distance-FDI and institutional distance-FDI linkages, pointing to a research gap.

2.1. WHY DO FIRMS ENGAGE IN FDI?

To determine the role of finance in FDI decisions, it is important to understand why firms engage in FDI. This has long been a central question in international economics. Several theoretical approaches have been developed to explain the motives behind multinational enterprises' choice to invest abroad rather than to serve foreign markets through exports or licensing arrangements.

One of the earliest explanations was developed by Hymer (1960), who challenged the traditional neoclassical view that capital flows only reflect differences in expected returns, more specifically, the interest rates across countries. Hymer (1960) argued that firms engaging in FDI face substantial costs associated with operations in foreign markets. These costs are generally related to operational difficulties of doing business, informational disadvantages, and regulatory barriers. To overcome these obstacles, multinational enterprises must possess firm-specific advantages. For example, advanced technology, managerial skills and capabilities, branding, reputation, or proprietary knowledge may be firm-specific features that encourage investors in foreign markets. As argued by Hymer's (1960) market imperfections approach, FDI occurs when firms exploit these ownership advantages in imperfect international markets.

In addition to this perspective, Buckley and Casson (1976) have proposed that internalization of markets across borders generates MNEs. They emphasize the role of transaction costs in explaining multinational activity. The theory claims that firms prefer to internalize cross-border transactions rather than rely on external market arrangements when maximizing profit in an imperfect-market world. By establishing foreign affiliates instead of licensing their assets to external parties, firms can reduce transaction costs, protect proprietary knowledge, and safeguard themselves against uncertainty arising from several imperfections. In sum, FDI emerges as an efficient organizational activity in response to market failures and imperfections. Given Hymer's (1960) and Buckley and Casson's (1976) perspectives, financial development can be a cost-reducing factor and motivate foreign investors to establish foreign affiliates abroad.

A more comprehensive explanation was later provided by Dunning (1988) through the Eclectic Paradigm, commonly known as the OLI framework. According to Dunning (1998), firms undertake FDI when three conditions are simultaneously satisfied: ownership advantages (O), location advantages (L), and internalization advantages (I). Ownership advantages refer to firm-specific assets that provide competitive power. Location advantages are the attractiveness of host-country characteristics. Internalization advantages capture the features that firms choose foreign affiliates rather than alternative market-entry types. The OLI framework integrates previous theoretical explanations and remains one of the most influential frameworks for analyzing FDI decisions. In this set-up, among location-specific advantages, the quality of financial institutions and financial markets can play a crucial role in FDI.

Another perspective on why firms engage in FDI is the level of national savings. According to traditional growth models, a developing country needs sufficient savings for investment and foreign currency to purchase the capital goods necessary for development from international markets. If countries face deficiencies in these two areas, foreign aid can bridge this gap by providing foreign savings in order to supplement insufficient domestic savings. Since insufficient domestic savings limit investment and economic growth, countries need external sources of finance. (Agunbiade & Mohammed, 2018). Therefore, FDI can serve as one of these external financing sources.

While these theories provide important perspectives on why firms engage in FDI, they present limited discussion about the effects of financial conditions on FDI. Since FDI generally requires long investment plans and contracts, and the ability to manage costs in foreign markets, the efficiency of financial resources may significantly affect firms' investment decisions.

Consequently, there has been increasing attention to understanding the interaction between financial systems and FDI. This interaction is also covered by a broader theoretical framework: FDI, growth, and development.

2.2. FINANCE AND FDI NEXUS

In the last few decades, the relationship between finance and FDI has become as a important area of research in the literature on economic growth and development. While the effectiveness of the financial system can facilitate the inflow of foreign capital, FDI can also contribute to the deepening of financial markets.

The role of finance in FDI decisions can be explained via several channels. First, FDI projects generally require long-term investment horizons and stability. Therefore, firms give substantial importance to financial resources. Hence, their financial ability to undertake a foreign investment determines the level of FDI. Firms generally face financial constraints that limit their ability to grow internationally. Financial development can reduce barriers and hence increase their ability to invest abroad. Firms operating in countries with stronger financial systems usually face lower financing constraints and obstacles. With developed financial markets, they have easier access to external financing, which expands their operational capacity in foreign markets. Second, financial systems influence transaction costs.

Efficient banking systems and developed capital markets reduce the cost of borrowing, improve access to financial resources, and better diversify risks. The lower the financing costs, the higher the profitability of international investment projects. Therefore, deeper financial markets encourage firms to undertake FDI. In contrast, weaker financial systems may increase the cost of capital and harm the incentives of investors. Third, financial development can avoid information asymmetries between investors and

financial institutions. Information asymmetry is particularly important because it leads to uncertainty, which is a strong barrier to investment decisions. Well-developed financial markets can ease monitoring, risk assessment, and ultimately reduce uncertainty.

In an influential paper, Levine (1997) emphasizes that financial systems contribute to economic development with the help of five main channels. These are facilitating trade, hedging and diversification of risks, allocating resources efficiently, monitoring managers and exercising corporate control, mobilizing savings, and facilitating the exchange of goods and services. These functions foster the volume of investment and increase the attractiveness of countries to foreign investors. Levine (2005) further suggests that financial development stimulates technological innovation and productivity growth, both of which are closely related to FDI.

Given these mechanisms, financial development can be considered an important determinant of FDI. Countries with more developed financial markets are generally better at attracting foreign investors by reducing financing constraints, decreasing uncertainty, and improving the investment and business environment. Accordingly, a growing body of literature has investigated the nexus between financial development and FDI.

2.3. FINANCIAL DEVELOPMENT AND FDI

The growing interest in finance as a driver of FDI has led to a growing body of literature that focuses on the relationship between financial development and FDI. Existing studies generally suggest that both home and host countries' financial development levels play an essential role in shaping foreign investment flows.

An important part of the literature is related to the role of host-country financial development in attracting foreign direct investment. The conventional view is that countries with well-developed financial systems provide a more favorable environment for foreign investors by reducing investment risks and facilitating access to local financial resources.

Hermes and Lensink (2003) provide one of the earliest empirical studies analyzing the link between financial development and FDI. They point out that financial development is an important prerequisite for FDI, and it has a positive impact on economic growth. By investigating different sample countries, they demonstrate that more developed financial systems attract more foreign investors. Therefore, they increase FDI activities significantly. In particular, more financially developed countries are more successful in directing FDI inflows into higher economic growth via technological diffusion and knowledge. They, in contrast, note that less financially developed countries, such as Sub-Saharan Africa, remain weaker in economic growth. Alfaro et al. (2004) examine the relationship among FDI, financial markets, and economic growth. This study utilizes cross-sectional data from 1975 to 1995, using six different financial development indicators, four of which are banking indicators and two are equity market indicators. Banking indicators are employed in 20 OECD countries and 51 non-OECD countries, and the other equity market indicators include 20 OECD countries and 29 non-OECD countries. The main finding is that FDI alone has an uncertain effect on growth, but its contribution to growth increases significantly in countries with highly developed financial markets. Their findings indicate that the degree of financial system development in the host country is a determining factor for the spread of technology and growth. While countries with weak financial institutions restrict the positive effects of FDI, countries with developed financial systems are more successful in guiding foreign investments to support growth.

In a regional growth perspective, Petrakou, et al. (2023) examine the relevance of FDI and financial depth on regional economic growth for the NUTS-2 regions of the EU. This study spans from 2005 to 2017 and employs a dynamic model estimated by GMM and takes into account endogeneity. This study suggests that FDI and financial depth positively affect regional economic growth. Specifically, the productivity and knowledge diffusion effects of FDI are stronger in less developed and peripheral regions. The essential contribution of the study is that the effects of FDI and financial development are not uniform across all regions, but differ according to regional income levels and geographical characteristics.

Similarly, Alfaro and Chauvin (2017) show that FDI promotes economic development through increasing external financing opportunities. In developing countries in particular, where capital is relatively insufficient, FDI is an important source of external financing. FDI complements domestic savings and provides additional resources to the economy. However, the extent to which FDI creates a permanent and net increase in capital in the economy depends to a large extent on the level of development of the country's financial system. This study particularly highlights complementarities between FDI and the local financial markets, suggesting that stronger financial systems make countries more effective in allocating foreign capital efficiently. Additionally, they find evidence on foreign companies are more likely to provide external capital to underdeveloped countries compared to developed countries which they may find the necessary financing from local markets.

More recent studies also support the importance of financial development in attracting FDI. Donaubauer et al. (2020) conduct a more detailed analysis of the impact of financial market development on bilateral FDI stocks covering 43 source and 137 host countries during the 2001–2012 period in a gravity framework. They rely on a composite financial market development index derived from nine financial indicators, including domestic credit to the private sector as a percentage of GDP and stock market measures. Their findings indicate that more developed financial markets in both the host and source countries increase FDI. Furthermore, a critical finding in the study is that for developing host countries, financial market development in either the source or host country can function as a substitute for the other. That is, developing countries can compensate for their weak financial infrastructure through the high financial development of the source country.

Keykanloo, et al. (2020) focus on the financial markets and the financial institutions index, which are two fundamental dimensions of financial development as determinants of FDI. By analyzing 11 countries over the period 1990-2014, they reveal that improvements in the financial institution depth, financial institution efficiency, and financial market depth, domestic credit to the private sector, significantly increase FDI inflows. They also demonstrate that some financial indicators harm FDI inflows. For instance, financial institution access, financial market access, and financial market

efficiency are negatively associated with FDI. Their results point to a non-uniform effect of financial indicators.

In addition to host countries' financial features, the level of financial development in source countries also plays a critical role in determining outward FDI. Firms from financially developed economies generally have easier access to capital and are therefore more capable of engaging in FDI.

Di Giovanni (2005) points out cross-border mergers and acquisitions and demonstrates that the level of financial market development strongly boosts outward foreign direct investment (FDI) from the source country. Firms in source countries with deep and liquid financial systems are more prone to international investments since they have easy access to external financing.

Manova (2008, 2013) highlights the effect of financial constraints on internationalization from an export perspective; but the findings also provide important results for FDI. Capital flows from countries with heavy financial constraints are inclined to be directed towards less diversified destinations with similar financial structures. This finding demonstrates that financial distance acts as a selective filter in determining to which countries FDI will flow.

In sum, the existing literature underlines that financial development in both host and source countries plays a significant role in FDI. While host-country financial development improves investment attractiveness, source-country financial development enhances firms' ability to finance international integration. There may also be a reverse causality relationship between FDI and financial development. While financial development can attract FDI, FDI inflows may also contribute to the development of the financial system.

These findings lead us to discuss that not only the level of financial development, but also differences in financial structures between countries, may affect bilateral FDI. With this motivation, we proceed to examine the concept of financial distance as a determinant of bilateral FDI flows. The body of literature reviewed above implies that

financial development matters; then we now need to pursue that, and differences in financial development may matter too.

2.4. FINANCIAL DISTANCE AND BILATERAL FDI

Although a large body of literature focuses on the impacts of financial development on FDI, relatively limited attention has been paid to the role of differences in financial systems between countries in affecting bilateral FDI flows. In recent years, there has been a growing interest in the concept of financial distance as a potential driver of FDI.

Financial distance refers to the degree of dissimilarity between the financial systems of source and host countries. These disparities may arise from the depth and size of the banking system, capital market development, financial accessibility, and overall financial development. In contrast to previous studies, in the analysis of bilateral FDI, financial distance is an indicator of heterogeneity of financial systems, not only capturing the absolute level of financial development in each country. In this context, there is a gap between financial structures. Naturally, how firms react to this gap becomes an important question.

The mechanisms by which financial distance matters to investors primarily relate to frictions arising from unfamiliar financial structures. A greater financial distance may complicate understanding the domestic financial conditions and increase the information asymmetries. These difficulties act as barriers that discourage foreign investors. Second, adaptation is costly for investors, so financial distance may distort the adjustment process. Accordingly, firms tend to invest in countries with more similar financial structures.

Third, financial distance may reduce investment efficiency. In contrast, similarity enhances a more predictable environment, and investors can manage risks more effectively.

Although the well-accepted theoretical expectation suggests that greater financial distance reduces bilateral FDI, under certain conditions, financial distance may encourage bilateral FDI. Lucas's (1990) and Alfaro et al.'s (2004) arguments can support this view. First, financial distance may be an investment opportunity. Firms

from financially developed countries may be attracted to financially underdeveloped host countries where there is scarce capital, which increases the marginal return on investment. Second, investors from countries with advanced financial systems may compensate for weak host-country financial systems if they are able to rely on internal financing or access to international capital markets. Donaubauer et al. (2020) provide evidence supporting this view by revealing that financial development in source countries can substitute for weak financial systems in host countries. Third, firms may seek market expansion and diversification. In these circumstances, financial disparities may encourage FDI.

In the bilateral FDI context, the similarities in economic size, the proximity of markets, and cultural ties are well-known determinants. In addition, many studies examine the effects of financial development in each country in the traditional gravity framework. However, empirical evidence on the financial distance and bilateral FDI nexus remains relatively limited. To the best of our knowledge, one of the recent and inspiring studies is Dellis (2024). This paper investigates the relationship between financial distance and FDI across 36 OECD countries over the period 2005–2016 using alternative specifications of the gravity model. It finds that a standard deviation decrease in the financial distance is associated with a 20–30% increase in bilateral FDI flows. This study highlights that financial system heterogeneity deters bilateral FDI flows across OECD countries. When financial dissimilarities increase, FDI flows decrease considerably because countries seek to invest in more similar financial systems, and similarities in financial structures lower information asymmetries and transaction costs, thereby attracting FDI.

Despite growing interest in the link between finance and FDI, the literature on financial distance remains limited in three dimensions. First, most studies focus primarily on aggregate indicators of financial development and do not distinguish different dimensions of financial systems. Second, studies that focus on developing countries are very scarce. Third, limited attention has been paid to the role of financial inclusion indicators, such as access to banking services and credit availability, in explaining bilateral FDI flows.

In this thesis, the empirical analysis also touches on institutional distance and the FDI nexus. Therefore, the next part presents a brief review of studies that examine the effect of the similarity of institutions on FDI flows.

2.5. INSTITUTIONAL DISTANCE AND BILATERAL FDI

Institutional distance is widely examined as a determinant of bilateral foreign direct investment. Institutional distance refers to the gaps in formal and informal institutional structures between source and host countries. These gaps may arise from disparities in regulatory quality, rule of law, corruption control, political stability, government effectiveness, and accountability. Institutional distance may influence cross-border investments by increasing uncertainty and adaptation costs. A well-accepted explanation is that firms prefer to invest in countries where the institutional environment is more familiar (Liou et al. 2016; Golesorkhi et al. 2019; Shirodkar and Konara, 2017). Broadly speaking, the higher the predictability, the lower the cost of doing business. Still, firms face adaptation costs when they operate in different legal systems, administrative procedures, and regulatory environments. These disparities act as barriers by increasing information asymmetries and reducing firms' ability to assess risks. Therefore, institutional distance is often expected to harm bilateral FDI. Below, we present the leading studies that point to the role of institutional distance on bilateral FDI briefly.

Habib and Zurawicki (2002) examine corruption as an institutional distance determinant and find a robust negative relationship between corruption-based distance and bilateral FDI flows. Their results suggest that countries having unfamiliar governance practices negatively impact FDI flows. Bénassy-Quéré, et al. (2005) also show the importance of institutions for bilateral FDI. Their studies demonstrate that both institutional quality and institutional similarity are important drivers of foreign investment. They point that the main channel to facilitate FDI is to decrease uncertainty and transaction costs.

Amal and Tomio (2015) highlight the effect of institutional distance and cultural distance on Brazilian outward FDI. The study employs a balanced panel dataset of 28 host countries that consist of roughly 70% of Brazil's foreign investments. It covers the period 2002-2012. By using the WGI, institutional distance is calculated. However,

cultural distance is calculated by using the Kogut and Singh (1988) index. Their results indicate that Brazilian multinational companies are prone to invest in countries with more developed structures than Brazil.

In contrast, cultural distance doesn't have an important effect on investments. Moreover, when the interaction between institutional distance and economic performance is examined, it is observed that the positive effect of institutional distance weakens as the host country's economic size and bilateral trade volume increase. The study shows that multinational companies originating from developing countries are shifting their focus to countries with higher-quality corporate structures, which can be an incentive in investment decisions.

Cezar and Escobar (2015) investigate the impact of institutional distance on FDI, and they use a gravity framework for countries with different economic development over 2004-2009. They employ six governance indicators of WGI, and they examine inward and outward FDI. Although four of these indicators measure the quality of governments, including the corruption index, government effectiveness, political stability, and regulatory quality, the remaining two indicators show the quality of public service. This study's results indicate that as institutional differences between countries increase, the adaptation costs for firms increase and extensive and intensive margins of FDI decrease. Moreover, firms in developed countries are more successful in adapting to institutional differences, unlike firms in developing countries.

Heavilin and Songur (2020) investigate the impact of institutional distance on Türkiye's outward FDI. The study used a panel dataset of 16 host countries representing approximately 73% of Türkiye's total foreign investment stock for the period 2002-2016. Institutional distance is calculated using the WGI dataset. The study shows that institutional distance has a positive and statistically significant effect on Türkiye's FDI. In other words, Turkish firms are inclined to invest more in countries with stronger institutional structures compared to Türkiye. Moreover, while distance in political stability, government effectiveness, rule of law, and control of corruption indicators is found to increase investments, regulatory quality and voice and accountability indicators did not have a significant effect. The study determined that cultural distance also has a positive effect on FDI, but concluded that the interaction between cultural

distance and institutional distance is not statistically significant. The research findings reveal that Turkish multinational businesses prefer countries with higher quality institutional structures and that institutional differences are an important determinant in investment decisions. The summary table for the previous studies explained above is given in Table 1.1.

Table 1.1 The Relationship Between Financial and Institutional Distance and FDI

Study	Period	Countries	Method	Result
Habib and Zurawicki (2002)	1985-2000	29 OECD Countries	Panel Data Model	Corruption as an institutional distance determinant and there is a negative relationship between FDI and corruption.
Alfaro et al. (2004)	1975-1995	71 Countries (20 OECD and 51 non-OECD) for banking-sector indicators; 49 countries (20 OECD and 29 non-OECD) for stock market indicators	Panel Data Model	Financial development strengthens the positive impact of FDI on economic growth.
Bénassy-Quéré, Coupet and Mayer (2005)	1985-2000	OECD Countries	Gravity model	Institutional quality and institutional similarity are

				important drivers of foreign investment.
Cezar and Escobar (2015)	2004-2009	31 OECD countries and 125 countries in different stages of economic development	Gravity model	As institutional distance increases, FDI reduces significantly due to increasing adaptation costs
Amal and Tomio (2015)	2002-2012	Brazil's outward FDI to host countries	Panel Data Analysis	Brazilian multinational companies rely on investing in countries with more developed structures. Cultural distance doesn't have significant effect on FDI.
Heavilin and Songur (2020)	2002-2016	Türkiye (16 host countries, 2002–2016)	Gravity Model	Institutional distance has a positive and statistically effect on Türkiye's FDI and cultural distance has influenced FDI positively.
Donaubauer	2001–2012	43 Source and	Gravity	More developed

(2020)		137 host countries	Model	financial markets in both the host and source countries increase FDI.
Dellis (2024)	2005-2016	36 OECD Countries	Gravity model	Financial system heterogeneity decreases bilateral FDI flows across OECD countries.

Overall, many studies that focus on the institutional distance suggest that differences in institutional environments shape bilateral FDI decisions through uncertainty, transaction costs, and governance-based barriers. Furthermore, the direction of this impact may depend on whether institutional distance represents risk or more access to a superior institutional environment. This distinction is important for this thesis because financial distance may operate through similar mechanisms. We believe that examining financial and institutional distance together provides a more comprehensive examination of how cross-country differences influence bilateral FDI.

CHAPTER 3

DATA AND METHODOLOGY

In this chapter, we present the data and methodology used in the empirical analysis. Our analysis is based on bilateral FDI flows and financial distances between countries over 2000-2020². Hence, we rely on the gravity-type models estimated via panel data techniques. We begin by explaining data issues and proceed with the details of empirical methods.

In this study, we focus primarily on the developing countries. The developing countries refer to the middle-income countries classified by the World Bank. The middle-income country group consists of two subgroups: lower and upper middle-income countries. Our pre-analysis shows that these subgroups indicate a considerably heterogeneous structure in terms of FDI flows and financial development. Thus, we first analyze the full sample of middle-income countries to understand the overall impact of financial heterogeneity for developing countries; then we divide the sample into lower-and upper-middle-income groups to specify their diversifying nature.

Additionally, we analyze OECD countries separately to control for the results for a group of countries, including both developed and developing countries. This approach helps to compare the results of different country groups and allows for a more comprehensive robustness test.

Access to data is our main limitation in the empirical analysis. Both bilateral FDI and financial distance data have reporting problems. To get plausible results, we work under data constraints. While the full sample includes 27 developing countries (15 of them are upper-middle income and 12 of them are lower-middle income), the OECD has 37 countries with different levels of economic development. The country lists are given in the Appendix. We explain the details of the variables used in the analysis in the next part.

² This time period is used for all country groups due to data limitations

3.1. EMPIRICAL MODEL AND VARIABLES

In this study, we use panel data methods in a gravity model framework to measure the effects of various financial, institutional, macroeconomic, and dyadic variables on bilateral FDI flows. Currently, the gravity model is a widely used model to examine the determinants of bilateral trade and foreign direct investment flows. (Demir, 2020). The gravity model provides an appropriate framework for testing bilateral FDI flows because it explicitly considers both the economic size of countries and several forms of distance that may facilitate or hinder cross-border capital flows. While traditional gravity models emphasize geographical distance, the framework has been widely extended to incorporate institutional, cultural, political, and financial distances. In our analysis, the financial distance shows differences in financial system development, financial market depth, and financial accessibility between source and host countries, which may affect information costs, financing conditions, risk perceptions, and investment decisions. From a theoretical perspective, financial distance can be viewed as a transaction-cost element that affects investors' ability to obtain information, access financial services, evaluate risks, and mobilize financial capital across borders. The greater the financial distance, the heavier the informational frictions and coordination costs, thereby affecting bilateral FDI decisions. Therefore, a gravity-type model offers a theoretically consistent and empirically well-established framework to analyze the impact of financial distance on bilateral FDI flows. There is also a practical advantage of the gravity model. The data required for the model are easily accessible and reliable, and the theoretical foundations underlying the model have been extensively discussed (since the pioneering work of Tinbergen (1962) and further developed by numerous scholars. Based on the information given above, our gravity model is given as follows:

$$\begin{aligned}
 FDI_{ijt} = & \beta_0 + \beta_1 FD_{ijt} + \beta_2 INST_{ijt} + \beta_3 \ln(GDP_{it}) + \beta_4 \ln(GDP_{jt}) + \beta_5 \ln(DIST_{ij}) \\
 & + \beta_6 COMLANG_{ij} + \beta_7 COMRELIG_{ij} + \beta_8 FTA_{ijt} + \beta_9 BIT_{ijt} + \alpha_i + \alpha_j + \alpha_t \\
 & + \varepsilon_{ij,t}
 \end{aligned} \tag{1}$$

In this model, FDI_{ijt} denotes bilateral FDI inflow between the home and host countries. FDI is our dependent variable, and measured as the inflow of FDI from reporter country.

Bilateral FDI inflow is expressed in millions of US dollars. The data for bilateral FDI inflows are obtained from the UNCTAD Bilateral FDI Statistics database. FD_{ijt} refers to the financial distance measure, which is calculated separately by using the 5 alternative financial distance indicators (FD1, FD2, FD3, FD4, FD5). FD1 refers to the domestic credit to the private sector (%GDP), FD2 is for the stock market capitalization %GDP, FD3 is the Financial Development Index, FD4 is the Financial Institutional Index, and FD5 is the Financial Market Index. Although domestic credit to the private sector (%GDP) and stock market capitalization (%GDP) are single-dimensional indicators that show the depth of bank-based and market-based financial development, respectively, the other financial indicators capture the multidimensional financial development by integrating the depth, access, and efficiency dimensions of financial systems. The selected five financial indicators are entered separately in the model to avoid multicollinearity and to enable a clean, independent assessment of each dimension's explanatory contribution. All five financial distance measures between host country i and origin country j in year t are constructed as the absolute difference between the relevant financial variables for the two countries, and can be shown as follows:

$$FD_{ijt} = |FD_{it} - FD_{jt}|$$

where FD_{it} and FD_{jt} denote the financial distance indicators of host and origin countries, respectively, in year t . We have examined all financial distance measures in detail below.

The first financial distance measure is FD1, which refers to “domestic credit to the private sector to GDP”. It is computed as the absolute bilateral difference in domestic credit provided to the private sector as a percentage of GDP between the two countries. The FD1 data are taken from the World Bank Global Financial Development Database. This indicator is defined by the World Bank as the ratio of total credit, commercial loans, and similar financial resources provided by banks and other financial institutions to private firms and households, relative to GDP.

The second financial distance measure FD2 is “Stock Market Capitalization to GDP. It is computed as the absolute bilateral difference in the stock capitalization market to GDP between two countries.

The third financial distance measure is FD3, which is calculated as the absolute bilateral difference in the Financial Development Index between two countries. Financial Development Index takes values between 0 and 1.

Financial development index is a combination of depth (size and liquidity of markets), access (the ability of individuals and firms to access financial services), and efficiency (the ability of institutions to deliver financial services at low cost and sustainable revenues, and the level of activity of capital markets) (Svirydzenka, 2016). According to the IMF, the financial development index combines the two sub-indices that include the financial market and financial institutions index.

The fourth financial distance measure, FD4, is computed as the absolute bilateral difference in the Financial Institutions Index between two countries. According to the IMF definition, this index compiles data on bank credit to the private sector in percent of GDP, pension fund assets to GDP, mutual fund assets to GDP, and insurance premiums, life and non-life to GDP (Svirydzenka, 2016).

The fifth financial distance measure, FD5, is computed as the absolute bilateral difference in the Financial Market Index between two countries. This index indicates the depth, access, and efficiency of financial markets. It consists of stock markets, bond markets (both government and private), and international debt markets. (Svirydzenka, 2016).

As an extension to the baseline model, we consider financial inclusion distance across countries to assess the financial accessibility heterogeneity and the FDI nexus. In the literature, the link between financial inclusion distance and bilateral FDI is rarely examined. Therefore, our empirical analysis fills a gap by adding financial inclusion distances as a further transactional and informational friction on FDI flows.

Financial inclusion has three significant dimensions, including access, use, and quality. (Sarma, 2008). In this context, we measure financial inclusion by using the ATMs per

100,000 adults and bank branches per 100,000 adults. Our financial inclusion data spans 20 years, from 2004 to 2024, and was obtained from the World Bank Findex database and the IMF Financial Access Survey. The financial inclusion distance is measured by taking the absolute difference between these variables.

The other independent variable is $INST_{ijt}$ that denotes the institutional distance between the host and reporting countries. This variable is calculated by averaging the six governance dimensions of the World Bank Worldwide Governance Indicators (WGI). These are voice and accountability, political stability and absence of violence, government effectiveness, regulatory quality, rule of law, and control of corruption. We have first computed the institutional distance variable by applying normalization to the institutional indicators, since we have aimed to make indicators measured at different scales comparable. Then, an unweighted average of the normalized indicators is taken to create an institutional structure index for each country. Lastly, the absolute difference between these institutional indicators of the reporting country and the host country is calculated to determine the institutional distance variable.

In this model, the set of control variables includes a standard set of bilateral gravity variables from the CEPII gravity dataset. These variables are incorporated to encompass the economic, geographical, cultural, and policy dimensions of bilateral relations that have been identified as determinants of FDI flows in the previous empirical literature.

Traditionally, in a gravity model, we include GDP_{it} and GDP_{jt} which refer to the host country's GDP and the reporting country's GDP. They indicate the economic size of both countries and are expected to be positively correlated with bilateral FDI in the gravity model. Macroeconomic variables are taken from the World Bank World Development Indicators. $DIST_{ij}$ is another conventional gravity variable that denotes the geographical distance between the countries obtained from the CEPII gravity set. We transform these three gravity variables, $GDP_{it}, GDP_{jt}, DIST_{ij}$ to logarithmic form, consistent with the multiplicative form of the gravity model. This also allows the predicted coefficients to be understood as elasticities (Anderson & Van Wincoop, 2003). However, dependent and independent variables have not been calculated in logarithmic forms because of the nature of bilateral FDI inflows and financial distance measures.

$COMLANG_{ij}$ is the common language variable, which takes a value of 1 if the official language of the two countries is the same; otherwise, it takes a value of zero. FTA_{ijt} shows the presence of a free trade agreement between countries. This is again a binary variable that takes a value of 1 if both countries are parties to the same regional trade agreement, and zero if they are not. BIT_{ijt} is a bilateral investment agreement variable, which takes a value of 1 if a bilateral investment treaty is in effect between the pair of countries. $COMRELIG_{ij}$ is a common religion variable that gauges the likelihood that a randomly chosen individual from each country has the same religious affiliation. (Guiso et al., 2009). A common religion can influence the investment behaviors of countries.

α_i , α_j , and α_t note the reporting country, host country, and year fixed effects, respectively. Finally, ε_{ijt} represents the error term in our model.

Descriptive statistics are given in Appendices 2, 3, and 4 for Lower Middle Income, Upper Middle Income, and OECD Countries. In these tables, among other country groups, the highest number of observations belongs to OECD countries, with approximately 13,000 observations for FD1, FD3, FD4, and FD5. The mean of bilateral FDI inflow in the OECD group varies between USD 155 and USD 297 million. It increases to between USD 368 million and 693 million in the Upper Middle Income group, and the Lower Middle Income group has only USD 22–36 million FDI inflow. The higher mean in the Upper Middle Income group compared to the OECD group is explained by the fact that bilateral investment partnerships involving large economies such as China, Brazil, and Mexico pull this group's mean upwards. (Čihák et al., 2012).

The much lower average in the Lower Middle Income group reflects that developing economies lag behind upper-middle and high-income economies, which are the main recipients of bilateral FDI flows, and that bilateral investment relationships in these groups are much more limited in number and volume. Our observation is consistent with the work of Alfaro et al.,(2008).

For FD1, the sample means are 51.84 for OECD, 56.36 for Upper Middle Income, and 67.78 for Lower Middle Income and FD2 means are 67.63, 69.74, and 257.49 for OECD, Upper Middle Income, and Lower Middle Income respectively, and the Lower Middle Income standard deviation (424.71) is nearly three times that of the OECD

(147.82) and Upper Middle Income (166.23) groups. The mean values of FD3, FD4, and FD5 are considerably higher in the Lower Middle Income group (0.422, 0.365, and 0.486, respectively) than in the OECD and Upper Middle Income groups, where the corresponding values range from 0.277 to 0.278, 0.235 to 0.254, and 0.329 to 0.342.

Institutional distance is lowest in the OECD group, with mean values ranging from 0.141 to 0.192. The highest institutional distance is observed in the Lower Middle Income group, where mean values range between 0.160 and 0.166. The Upper Middle Income group's mean values range from 0.140 to 0.156. Therefore, these results indicate that institutional structures are relatively more homogeneous among OECD countries, whereas greater variation in governance quality exists among lower-middle-income economies.

Fifth, the OECD group has the largest sample size of 12,859 observations. This is roughly twice the size of the Upper Middle Income group, which has 6,406, and almost thirty times the size of the Lower Middle Income group, which has 438 observations. Particularly due to data limitations in the lower-middle-income group, the relatively small sample size of this group may reduce statistical power of the estimation.

In addition, the small sample size of the Lower Middle Income group reflects both the limited number of bilateral foreign direct investment relationships between these economies and the more restricted availability of data.

The binary control variables, common language, free trade agreement, and bilateral investment treaty show comparable rates across the three income groups. The free trade agreement rate, however, is considerably higher in the OECD group (52.9 percent) than in the Upper Middle Income (32.0 percent) and Lower Middle Income (15.8 percent) groups, reflecting the denser network of preferential trade agreements among advanced economies as previously noted by Baier and Bergstrand (2007).

Common language rates are counterintuitively highest in the Lower Middle Income group (12.6 percent) and lowest in the OECD group (6.8 percent), suggesting that bilateral investment relationships in the Lower Middle Income group are more

concentrated in geographically and linguistically proximate regional clusters than those in the other two groups, as addressed by Guiso et al., (2009).

Bilateral investment treaty rates are broadly similar across groups (8.2 percent for OECD, 7.9 percent for Upper Middle Income, and 10.1 percent for Lower Middle Income).

3.2. ESTIMATION STRATEGY

In this study, we have tested the model in Equation (1) by using three different approaches. To ensure the robustness of the findings, the empirical analysis employs Ordinary Least Squares (OLS), Fixed Effects (FE), and Poisson Pseudo-Maximum Likelihood (PPML) estimators. Each estimator addresses different econometric concerns. First, the OLS estimator provides a benchmark specification and facilitates comparison with a large body of previous studies. This the traditional way of gravity estimation. However, OLS may suffer from omitted variable bias arising from unobserved country-specific heterogeneity (Santos Silva and Tenreyro, 2006, and Head and Mayer, 2014). To account for this issue, FE estimations are employed, allowing the analysis to control for time-invariant unobservable characteristics of countries that may simultaneously affect financial distance and bilateral FDI flows. FE estimators absorb all time-invariant unobserved characteristics of each country. Anderson and van Wincoop (2003) emphasize that factors not observable between countries can cause bias in this estimation. Therefore, the reporting country fixed effects control for characteristics of investing countries that do not change significantly over time, such as economic size, investment culture, and institutional structure. Host country fixed effects control for geographical location, natural resources, legal infrastructure, and other structural characteristics that affect the investment attractiveness of countries. In addition, year fixed effects include the impact of global economic crises, changes in international capital movements, and common shocks affecting all countries simultaneously. Finally, PPML estimations are applied because gravity-type models often exhibit heteroskedasticity and a substantial number of zero observations. Unlike log-linear OLS estimations, PPML produces consistent estimates in the presence of heteroskedasticity and allows zero FDI observations to be retained in the sample. Furthermore, the PPML estimation provides more consistent results than log-linear OLS

estimations under heteroskedasticity (Santos Silva and Tenreyro, 2006, 2011). Weidner and Zylkin (2021) argue that the PPML with high-dimensional FE offers accurate and consistent estimates in gravity models. Thus, using these three estimators enables a comprehensive interpretation of the relationship between financial distance and bilateral FDI and also presents a robustness check. We aim to better describe the model under alternative estimation strategies.

CHAPTER 4

EMPIRICAL RESULTS

This chapter presents the empirical findings and assesses the results. The results are organized as follows: first, the findings of the full sample of middle-income countries, second, separately, upper and lower-middle-income groups, third, the OECD countries, and finally, the results for the financial inclusion distance.

4.1. MIDDLE INCOME GROUP (THE FULL SAMPLE)

We estimate Equation (1) for the full sample of middle-income countries and present the results in Tables 4.1 to 4.5. Each table shows results for a different financial distance measure. Also, each table consists of three alternative estimation strategies, such as OLS, FE, and PPML. While zero and negative FDI values are kept for PPML estimation, they are excluded for OLS and FE estimations.

Table 4.1 Middle-Income Countries (Full Sample). Financial Distance Measure: FD1

Variables	(1) OLS	(2) Host & Rep & Year FE	(3) PPML
GDP_host	0.478*** (0.088)	1.880 (1.629)	-0.353 (0.221)
GDP_rep	0.265*** (0.038)	0.875 (0.709)	0.501 (0.423)
DIST	-0.437*** (0.097)	-0.607* (0.316)	-0.982*** (0.162)
FD1	-0.000 (0.001)	-0.022 (0.014)	0.001 (0.002)
INST	2.404*** (0.402)	-0.523 (1.156)	-5.619*** (1.232)

COMRELIG	-0.039 (0.131)	0.873 (0.569)	1.855*** (0.476)
FTA	0.667*** (0.186)	1.196 (0.997)	0.418** (0.202)
COMLANG	4.814*** (1.155)	4.341 (3.499)	2.665*** (0.350)
BIT	-0.946*** (0.245)	-1.483 (1.392)	-0.198 (0.313)
_cons	-16.392*** (2.593)	-66.320 (57.281)	7.357 (12.975)
<i>N</i>	5066	5066	5066
<i>R</i> ²	0.097	0.237	
<i>R</i> ² _a	0.095	0.217	

Standard errors in parentheses.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

In Table 4.1, FD1 refers to the distance of the domestic credit to private credit as a percentage of GDP, which is related to banking depth, access to credit, and the size of the banking system. As seen, the FD1 is not statistically significant across all three models, indicating that differences in the size of credit or banking sector depth between country pairs do not affect FDI for middle-income countries. This result provides a different perspective for developing countries.

Although private sector credit to GDP is a well-known and traditional indicator of financial development, it mostly measures the depth of credit access in the banking system. That is, it does not reflect all dimensions of the financial system, such as access, efficiency, capital market development, and institutional quality. The insignificant coefficient suggests that differences in banking-sector depth do not constitute a major determinant of bilateral FDI flows among middle-income countries. Investors may place greater emphasis on broader financial and economic conditions rather than differences

in domestic credit availability when making investment decisions. Also, investors may not necessarily rely on credit availability in the host country where they invest; instead, they may obtain financing from their own countries. The presence of different sources of financing, such as capital markets (bond and equity finance), may weaken the relationship between FDI and banking sector development. If multinationals rely on internal capital markets, retained earnings, or international financing sources rather than domestic credit markets, banking sector size and depth may not be critical. Consequently, differences in private sector credit availability between countries may have only a limited impact on bilateral FDI flows. Furthermore, middle-income countries may not display sufficiently large differences in credit provision for such disparities to influence investment decisions.

As shown, the coefficient of institutional distance is significantly negative in the OLS and PPML estimations. This negative coefficient of institutional distance indicates that greater institutional dissimilarity between home and host countries discourages bilateral FDI. Larger institutional distance may increase uncertainty, information costs, and adaptation costs faced by multinational enterprises, thereby reducing cross-border investment activities. This finding complements the result for financial distance. Similarity facilitates cross-border investment. Higher institutional similarity can ease business operations, reduce adaptation costs, and enhance investor confidence.

Considering the other gravity variables, we see that home and host country GDPs are only significant in the OLS regression. The larger the size of countries, the greater the bilateral FDI flows. Geographic distance has a negative and significant effect on FDI. The positive and significant coefficients of source-country and host-country GDP in OLS estimations support the traditional gravity hypothesis that larger economies generate and attract more FDI. However, the coefficients lose significance in FE estimations because a substantial portion of the cross-country variation in economic size may be absorbed by country-specific fixed effects. In addition, common language and common religion coefficients are positively significant. These results suggest that linguistic and religious proximity facilitates bilateral FDI by reducing communication barriers, information asymmetries, and transaction costs.

In our model, the role of FTAs and BITs is also important. Our findings reveal that the presence of a free trade agreement suggests that deeper economic integration encourages bilateral FDI flows. FTAs reduce trade barriers, improve market access, and enhance policy predictability, thereby creating a more favorable environment for investors. In contrast, for the OLS estimation only, the presence of BITs harms FDI flows. One possible factor is that BITs are often signed with countries that have weaker institutional environments. Therefore, the negative coefficient may indicate the higher risk profile of partner countries instead of the direct impact of investment treaties. Another reason may be related to middle-income countries. Investment decisions may rely heavily on market opportunities and institutional conditions for middle income countries. They pay little attention to formal investment protection treaties. Consequently, BITs may not provide additional incentives for FDI once other determinants are controlled for.

Our second financial distance variable is FD2, which represents the stock market capitalization. The results of FD2 for upper- and lower-middle-income countries are given in Table 4.2.

Table 4.2 Middle-Income Countries (Full Sample). Financial Distance Measure: FD2

	(1) OLS	(2) Host & Rep & Year FE	(3) PPML
GDP_host	0.663*** (0.112)	1.100 (1.139)	-0.620** (0.300)
GDP_rep	0.276*** (0.036)	0.446 (0.678)	0.504 (0.377)
DIST	-0.622*** (0.136)	-0.722* (0.400)	-0.896*** (0.183)
FD2	0.007*** (0.002)	0.008 (0.007)	0.001*** (0.000)
INST	1.965***	-1.028	-4.955***

	(0.449)	(2.029)	(1.432)
COMRELIG	0.499*** (0.166)	1.559 (1.030)	1.803*** (0.520)
FTA	1.217*** (0.329)	2.669 (1.991)	0.106 (0.265)
COMLANG	5.442*** (1.298)	7.146 (5.442)	3.116*** (0.411)
BIT	-0.602*** (0.194)	-1.460 (1.347)	-0.274 (0.345)
_cons	-20.745*** (2.955)	-35.897 (44.681)	13.852 (12.664)
<i>N</i>	3143	3143	3143
<i>R</i> ²	0.201	0.291	
<i>R</i> ² _a	0.198	0.265	

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

In Table 4.2, the results show that stock market capitalization distance has a positive and statistically significant coefficient in the OLS and PPML estimations, while it becomes insignificant in the FE specification. This finding reveals that this positive link between capital market size differences and bilateral FDI is mainly driven by cross-country variation rather than within-country-pair changes over time. Once unobserved fixed effects are controlled for, the independent effect of stock market capitalization distance weakens. For OLS, a one-unit increase raises FDI by 0.7%, and for PPML, by 0.1%. Consequently, FD2 provides some evidence that capital-market gaps may facilitate bilateral FDI among middle-income countries, but this impact is not likely to be robust to FE estimation.

This finding may not be an anomaly. As argued by Martin and Rey (2004), stock market differences can create international portfolio diversification, and investors from

countries with large stock markets may invest in different countries with different financial structures. Therefore, this situation can reduce their risks and take advantage of different return opportunities. Unlike domestic credit indicators, stock market capitalization reflects the relative size and capacity of capital markets. Larger disparities in capital market development may create complementary investment relationships. In other words, firms from countries with larger and more developed stock markets possess greater financing capacity and invest in countries with relatively less developed capital markets. Therefore, differences in capital market size may generate investment opportunities rather than informational frictions. (Martin and Rey, 2004). Also, Di Giovanni (2005) states that countries with larger stock markets generate more outward FDI since firms in these countries can increase capital more easily and bear the risks of cross-border investment. Additionally, foreign investors are less reliant on local capital markets. By providing their financial sources in the host country, they may turn shallow domestic equity markets from a potential obstacle into a factor that attracts foreign direct investment (Alfaro, 2015). Investors may also prefer different stock markets in order to access asset classes, sectors, and risk profiles that are not available in their home countries, so they may not perceive it as a barrier, and it is considered a new investment opportunity.

We proceed to our analysis by adding FD3 to the estimations. As mentioned in Chapter 3, the FD3 (Financial Development Index distance) represents the overall efficiency of the financial system, financial access, market depth, and the operational capacity of financial institutions. The results of FD3 are given in Table 4.3

Table 4.3 Middle-Income Countries (Full Sample). Financial Distance Measure: FD3

	(1) OLS	(2) Host & Rep & Year FE	(3) PPML
GDP_host	0.325*** (0.060)	0.653 (0.645)	-0.100 (0.214)
GDP_rep	0.208*** (0.027)	0.554 (0.498)	0.543* (0.315)

DIST	-0.295 ^{***} (0.065)	-0.483 [*] (0.255)	-0.785 ^{***} (0.146)
FD3	-0.715 ^{***} (0.146)	-2.896 [*] (1.698)	-2.571 ^{***} (0.713)
INST	2.230 ^{***} (0.358)	0.132 (0.836)	-1.954 [*] (1.019)
COMRELIG	-0.064 (0.122)	0.678 (0.441)	2.505 ^{***} (0.494)
FTA	0.492 ^{***} (0.132)	0.988 (0.847)	0.537 ^{***} (0.149)
COMLANG	4.303 ^{***} (1.061)	4.813 (3.961)	2.528 ^{***} (0.391)
BIT	-0.702 ^{***} (0.197)	-1.102 (1.152)	-0.292 (0.366)
_cons	-11.734 ^{***} (1.753)	-26.846 (27.355)	-3.748 (8.630)
<i>N</i>	6580	6580	6580
<i>R</i> ²	0.090	0.208	
<i>R</i> ² _a	0.089	0.192	

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

As shown in Table 4.3, the distance of FD3 has a negative and statistically significant effect on bilateral FDI flows in all three estimations. It seems that the impact of financial development distance on FDI is substantially larger than the impacts of other determinants. The FD3 coefficients are -0.715 in the OLS, -2.896 in the FE, and -2.571 in the PPML, respectively. The negative and significant coefficients across OLS, FE, and PPML estimations indicate the consistency of results. We provide evidence that

financial development distance is a significant barrier to bilateral FDI among middle-income countries. Our results suggest that greater differences between the financial systems of reporting and host countries may increase information asymmetries, transaction costs, and uncertainty. Foreign investors tend to invest in countries with more financially harmonious and similar structures in their economies. (Dellis, 2024).

Once again, the results for control variables are consistent with previous models. The GDPs of the host and home countries are significant, and positive effects suggest that bigger markets attract more foreign investment. Geographical distance hurts FDI, as expected in the model.

The impact of institutional distance varies across estimations. While its coefficient is significantly positive in the OLS model, it is significantly negative in the PPML estimation. This finding suggests that the nexus between institutional gaps and FDI is not straightforward. The positive OLS coefficient may reflect the importance of the efficiency-seeking motive of investors who exploit institutional differences across countries. The negative PPML coefficient indicates that institutional dissimilarities may increase uncertainty and transaction costs. We can consider PPML estimators, because the PPML estimation is accepted as a more robust estimator and is able to address heteroskedasticity and retain zero-valued observations. To assess, greater weight may be placed on the negative association provided by the PPML estimation.

Regarding the other variables, common language and common religion positively affect FDI. Free trade agreements also have a positive impact by strengthening economic integration between countries. In contrast, bilateral investment treaties display a negative impact on FDI.

Furthermore, we divide the financial development index into sub-categories: the Financial Institutions Index and the Financial Markets Index. Under the IMF methodology, the financial institutions index measures the depth, access, and efficiency of banks, insurance companies, pension funds, and other financial intermediaries. Therefore, the FD4 difference represents not only credit volume or stock market size but also the financial institution's capacity, financial institutional maturity, and service delivery efficiency. The result of FD4 is seen in Table 4.4.

Table 4.4 Middle-Income Countries (Full Sample). Financial Distance Measure: FD4

	(1) OLS	(2) Host & Rep & Year FE	(3) PPML
GDP_host	0.334*** (0.060)	0.608 (0.621)	-0.139 (0.255)
GDP_rep	0.200*** (0.027)	0.613 (0.509)	0.569 (0.359)
DIST	-0.294*** (0.065)	-0.546* (0.286)	-0.799*** (0.146)
FD4	-0.903*** (0.200)	-2.081* (1.069)	-1.620** (0.795)
INST	2.451*** (0.399)	0.739 (0.882)	-1.783* (0.972)
COMRELIG	-0.089 (0.124)	0.608 (0.414)	2.432*** (0.496)
FTA	0.468*** (0.130)	0.927 (0.820)	0.577*** (0.169)
COMLANG	4.328*** (1.063)	4.896 (4.030)	2.574*** (0.379)
BIT	-0.737*** (0.202)	-1.091 (1.139)	-0.245 (0.353)
_cons	-11.771*** (1.760)	-27.150 (27.014)	-3.470 (9.735)
<i>N</i>	6580	6580	6580
<i>R</i>	0.091	0.203	
<i>R</i> ² _a	0.089	0.188	

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

In line with the results for FD3, the findings for FD4, the development of financial institutions, show that when financial development diverges between two countries, foreign investors may face difficulties understanding the behavior of financial intermediaries, evaluating risks, and predicting service standards in the host country. Moreover, banks from distant home countries have a more limited impact in host economies where financial infrastructure differs markedly. (Claessens, and Van Horen, 2014).

FD5, which is the financial market development index, measures the depth, access, and efficiency of stock markets, bond markets, and derivative markets together according to the IMF methodology.

Table 4.5 Middle-Income Countries (Full Sample). Financial Distance Measure: FD5

	(1) OLS	(2) Host & Rep & Year FE	(3) PPML
GDP_host	0.320*** (0.058)	0.643 (0.641)	-0.026 (0.214)
GDP_rep	0.204*** (0.028)	0.416 (0.428)	0.508 (0.317)
DIST	-0.295*** (0.064)	-0.439* (0.233)	-0.781*** (0.150)
FD5	-0.644*** (0.120)	-1.805* (1.094)	-1.601*** (0.454)
INST	2.067*** (0.347)	-0.200 (0.854)	-2.444** (1.040)
COMRELIG	-0.071 (0.124)	0.631 (0.421)	2.537*** (0.500)

FTA	0.511*** (0.134)	1.027 (0.869)	0.441*** (0.153)
COMLANG	4.293*** (1.059)	4.847 (3.978)	2.536*** (0.398)
BIT	-0.660*** (0.193)	-1.018 (1.107)	-0.344 (0.374)
_cons	-11.469*** (1.720)	-23.444 (25.547)	-4.976 (9.063)
<i>N</i>	6580	6580	6580
<i>R</i> ²	0.091	0.207	
<i>R</i> ² _a	0.090	0.192	

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

As shown in Table 4.5, the coefficient of FD5 is significantly negative across all three estimations. These consistent results underline that greater divergence in the equity markets, bond markets, and derivative markets significantly reduces bilateral FDI flows in the developing country. This result suggests that asymmetries between countries may complicate foreign investors to understand market structures, managing financial risks, and conducting investment activities effectively. (Di Giovanni, 2005).

In sum, our findings provide evidence that financial distance is not a uniform concept. Differences in banking-sector depth, measured by domestic credit to the private sector (FD1), do not significantly affect bilateral FDI, whereas differences in stock market capitalization (FD2) may facilitate investment by creating opportunities for capital allocation between countries with different levels of capital market development. However, we find that the most robust results emerge for broader indicators of financial development. The consistently negative coefficients of FD3, FD4, and FD5 suggest that greater differences in overall financial development, financial institutions, and financial markets reduce bilateral FDI flows among middle-income countries. This evidence implies that foreign investors are more sensitive to the overall compatibility and

sophistication of financial systems. Taken together, financial system similarity appears to be an important determinant of bilateral FDI in middle-income economies.

Unlike financial development distance, whose negative effect remains stable across all estimation techniques, institutional distance does not display a consistent relationship with bilateral FDI. The variation in coefficient signs across estimators suggests that institutional differences may simultaneously generate investment opportunities and investment barriers. Furthermore, Across all models, the variables for common language and common religion appear positive for the full middle-income sample. This result indicates that cultural proximity fosters foreign direct investment flows. Countries prefer to invest in nations sharing the same religion and language, because these factors enhance cultural proximity, strengthen mutual trust, and align business cultures.

4.2. THE ANALYSIS OF LOWER MIDDLE INCOME GROUP

In the previous section, upper-middle-income countries and lower-middle-income countries have been analyzed together under a single sample. However, this group may be substantially heterogeneous in terms of financial development and attractiveness of FDI. To better interpret the results and reach more specific conclusions, we re-run the tests. We begin with the lower-middle-income countries. The results given in Table 7 indicate that domestic credit to disparities in the private sector (% of GDP) positively influence the bilateral flows in lower-middle-income countries. This finding in the lower-middle-income country sample suggests that banking-sector differences play a more important role in shaping FDI within this group. This result can be attributed to their relatively less developed and more bank-dependent financial systems. So, differences in credit availability may have a stronger impact on investment decisions. Because financial systems in these economies are generally shallower and access to credit is more limited, foreign investors may consider financially less developed countries as opportunities to fill financing gaps and create competitive advantages. (Alfaro et al., 2004; Harrison et al., 2004). In this context, differences in domestic credit levels may not be a barrier, but they can be a new opportunity. (Harrison et al., 2004; Desai et al., 2004). Additionally, if financially less developed countries are perceived by investors as having stronger growth potential, opportunities for financial expansion, and lower competition, the rise in FDI flows becomes clearer.

Table 4.6 Lower-Middle-Income Countries. Financial Distance Measure: FD1

	(1) OLS	(2) Host & Rep & Year FE	(3) PPML
GDP_host	0.018*** (0.005)	0.018 (0.021)	0.564 (0.407)
GDP_rep	0.011*** (0.003)	0.026 (0.030)	0.788 (0.781)
DIST	-0.016*** (0.004)	-0.013 (0.009)	-1.064*** (0.256)
FD1	0.000*** (0.000)	0.001* (0.000)	0.010*** (0.004)
INST	-0.008 (0.023)	-0.136 (0.134)	-2.357 (2.571)
COMRELIG	-0.005 (0.006)	0.002 (0.016)	0.241 (1.005)
FTA	-0.004 (0.008)	-0.004 (0.013)	0.207 (0.471)
COMLANG	0.001 (0.015)	0.019 (0.024)	0.865** (0.369)
BIT	0.004 (0.013)	-0.019 (0.036)	-0.159 (0.268)
_cons	-0.643*** (0.225)	-1.061 (1.172)	-31.250 (27.750)
<i>N</i>	474	461	461
R ²	0.202	0.354	

R^2_a	0.187	0.215
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Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

These results suggest that differences in banking sector development and credit market structures may encourage investment in lower-middle-income countries. The other variable is FD2, which is stock market capitalization, and we examine the relationship between FDI and FD2 in the lower-middle-income countries, but we do not provide strong evidence for a significant link between capital markets and FDI flows. When the OLS estimator is considered, differences in capital market size may be associated with higher bilateral FDI among lower-middle-income countries; however, the relationship does not appear to be robust across estimation methods.

Table 4.7 Lower-Middle-Income Countries. Financial Distance Measure: FD2

	(1) OLS	(2) Host & Rep & Year FE	(3) PPML
GDP_host	0.023*** (0.009)	0.041 (0.025)	0.436 (0.405)
GDP_rep	0.036* (0.019)	0.001 (0.025)	-0.666 (0.635)
DIST	-0.022*** (0.005)	-0.013 (0.014)	-0.855*** (0.302)
FD2	0.000** (0.000)	-0.000 (0.000)	0.000 (0.000)
INST	0.153*** (0.031)	-0.071 (0.174)	0.267 (2.707)
COMRELIG	0.016 (0.010)	-0.012 (0.040)	-0.295 (1.298)

FTA	-0.013 (0.011)	0.006 (0.027)	0.010 (0.474)
COMLANG	0.002 (0.028)	0.034 (0.029)	0.910** (0.461)
BIT	-0.031 (0.060)	-0.101 (0.111)	-0.891** (0.376)
_cons	-1.428* (0.737)	-0.911 (1.110)	12.436 (21.401)
<i>N</i>	238	238	238
R^2	0.239	0.401	
R^2_a	0.209	0.276	

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Recall that these countries do not have more developed stock markets and their stock markets may have low market depth, limited liquidity, low trading volume, and weak market infrastructure (Beck et al., 2000; Chinn and Ito, 2006). Therefore, foreign investors may not prefer to make an investment while taking into consideration the stock market capitalization index, and they can assess the entire financial system in lower-middle-income countries.

Furthermore, the financing structure in lower-middle-income countries is largely bank-based. As the role of capital markets in the economy remains limited, differences in stock markets may not have a strong impact on investment decisions (Beck et al., 2000; Levine, 2005). We proceed with the financial development index as a broader measure (FD3).

Table 4.8 Lower-Middle-Income Countries. Financial Distance Measure: FD3

	(1)	(2)	(3)
	OLS	Host & Rep & Year FE	PPML
GDP_host	0.017*** (0.005)	0.021 (0.019)	0.774** (0.371)
GDP_rep	0.010** (0.004)	-0.013 (0.019)	0.844 (0.743)
DIST	-0.019*** (0.004)	-0.013 (0.009)	-1.087*** (0.278)
FD3	0.056** (0.022)	0.062 (0.062)	5.364** (2.126)
INST	0.037 (0.028)	-0.097 (0.127)	-4.330 (2.729)
COMRELIG	-0.008 (0.008)	-0.013 (0.024)	-0.376 (1.101)
FTA	0.007 (0.010)	0.009 (0.017)	0.660 (0.428)
COMLANG	0.012 (0.021)	0.045 (0.034)	0.936** (0.449)
BIT	0.013 (0.020)	-0.027 (0.049)	-0.733** (0.322)
_cons	-0.563** (0.219)	-0.052 (0.759)	-38.922 (23.664)
<i>N</i>	422	422	422
<i>R</i> ²	0.179	0.304	
<i>R</i> ² _a	0.161	0.221	

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

The results given in Table 9 show that the coefficient of the FD3 is positive and significant. In particular, the positive coefficient in the PPML model indicates that as differences in financial development increase, foreign investment increases. Antràs and Caballero (2009) point out that financial disparities may not necessarily deter international investments and can provide incentives for capital inflows to lower-middle-income countries. Even greater financial distance may reflect financial advantages for strengthening financial structures and exploiting profitable investment opportunities. (Manova, 2013; Harrison et al., 2004). Additionally, this finding may be related to Aker, Foley, and Wurgler's (2009)'s hypothesis about the cheap financial capital and the low cost of financing in the source country. Thus, more developed economies can invest in less financially developed countries by using their financing advantages.

Table 4.9 Lower-Middle-Income Countries. Financial Distance Measure: FD4

	(1) OLS	(2) Host & Rep & Year FE	(3) PPML
GDP_host	0.014*** (0.005)	0.019 (0.019)	0.371 (0.347)
GDP_rep	0.012*** (0.004)	-0.011 (0.019)	0.850 (0.730)
DIST	-0.016*** (0.003)	-0.013 (0.009)	-1.093*** (0.298)
FD4	-0.001 (0.021)	-0.136 (0.118)	-2.375 (3.332)
INST	0.084*** (0.030)	-0.074 (0.125)	-2.173 (3.007)
COMRELIG	-0.015* (0.008)	-0.011 (0.019)	-0.347 (0.347)

	(0.009)	(0.024)	(1.054)
FTA	0.010 (0.010)	0.008 (0.016)	0.635 (0.453)
COMLANG	0.009 (0.020)	0.045 (0.034)	0.955** (0.423)
BIT	0.010 (0.020)	-0.028 (0.049)	-0.724** (0.347)
_cons	-0.560** (0.218)	0.030 (0.739)	-25.351 (20.864)
<i>N</i>	422	422	422
<i>R</i> ²	0.174	0.308	
<i>R</i> ² _a	0.156	0.225	

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 4.9 presents the results for the Financial Institutions index (FD4) for lower-middle-income countries, which is insignificant in all three estimations. This result indicates that cross-border investment decisions do not rely on financial institutional disparities. In other words, since most financial institutions in lower-middle-income countries can work in a limited capacity, financial institutional differences between countries may not be considered sufficiently distinctive from an investor's perspective. Therefore, there is no strong relationship between FD4 and FDI. The last variable is FD5, which represents the financial market development variable for lower-middle-income countries. The results of FD5 for lower-middle-income countries are presented in Table 4.10.

Table 4.10 Lower-Middle-Income Countries. Financial Distance Measure: FD5

	(1)	(2)	(3)
	OLS	Host & Rep & Year FE	PPML
GDP_host	0.020*** (0.007)	0.023 (0.021)	0.674* (0.393)
GDP_rep	0.009*** (0.003)	-0.005 (0.021)	1.122* (0.659)
DIST	-0.017*** (0.004)	-0.011 (0.009)	-1.296*** (0.324)
FD5	0.050** (0.022)	0.107** (0.053)	3.851*** (1.292)
INST	0.053* (0.029)	-0.102 (0.128)	-4.245 (2.679)
COMRELIG	-0.009 (0.007)	-0.016 (0.025)	0.111 (1.042)
FTA	0.009 (0.011)	0.011 (0.017)	0.369 (0.400)
COMLANG	0.027 (0.026)	0.052 (0.037)	0.980** (0.448)
BIT	0.024 (0.020)	-0.026 (0.050)	-0.630** (0.316)
_cons	-0.635*** (0.240)	-0.365 (0.831)	-41.853*** (20.443)
<i>N</i>	407	407	407
<i>R</i> ²	0.203	0.316	
<i>R</i> ² _a	0.185	0.233	

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

As shown in Table 4.10, FD5 has a positive and statistically significant effect on bilateral FDI flows in lower-middle-income countries in all estimations. The estimated coefficient is 0.050 for the OLS model, 0.107 for the fixed-effects model, and 3.851 for the PPML estimation. These results suggest that greater differences in financial market development increase bilateral FDI flows.

Financial market distance does not necessarily act as a barrier for lower-middle-income countries. Instead, investors can view this situation as a growth opportunity, and it may create lower competition and higher returns for foreign investors.

4.3. THE ANALYSIS OF UPPER MIDDLE INCOME GROUP

Just as with lower-middle-income countries, we also examined upper-middle-income countries for five different financial variables separately. The first variable is FD1, and our results are given in Table 4.11 below.

Table 4.11 Upper-Middle-Income Countries. Financial Distance Measure: FD1

	(1) OLS	(2) Host & Rep & Year FE	(3) PPML
GDP_host	0.461*** (0.084)	1.883 (1.687)	-0.373 (0.231)
GDP_rep	0.289*** (0.040)	0.972 (0.713)	0.485 (0.426)
DIST	-0.480*** (0.107)	-0.625** (0.282)	-0.986*** (0.175)
FD1	0.003** (0.001)	-0.019* (0.011)	0.001 (0.002)
INST	2.831*** (0.471)	-0.952 (1.633)	-5.746*** (1.293)

COMRELIG	-0.227 (0.177)	0.689 (0.509)	1.857*** (0.489)
FTA	0.496*** (0.154)	1.229 (0.928)	0.385* (0.205)
COMLANG	6.654*** (1.558)	6.600 (4.691)	2.662*** (0.388)
BIT	-0.974*** (0.265)	-1.590 (1.455)	-0.185 (0.316)
_cons	-16.442*** (2.513)	-68.936 (58.515)	8.464 (13.236)
<i>N</i>	4592	4592	4592
<i>R</i> ²	0.118	0.301	
<i>R</i> ² _a	0.116	0.282	

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

In Upper Middle Income Countries, the result for FD1 is statistically insignificant for all three estimations. This shows that differences in the volume of credit provided through the banking sector do not have a direct determining impact on bilateral FDI flows in upper-middle-income countries. This result supports our findings for the full sample but differs from the lower-middle-income group. Our results underline the importance of heterogeneity in the middle-income group. Another distinct result in this group is for the institutional distance. As seen, an increase in institutional disparities reduces FDI flows. Banking size and depth are not likely to be a barrier, but the institutional gap is substantially influential.

The second variable, FD2, which is the stock capitalization ratio (% of GDP) distance, and our results are presented in Table 4.12 below.

Table 4.12 Upper-Middle-Income Countries. Financial Distance Measure: FD2

	(1)	(2)	(3)
	OLS	Host & Rep & Year FE	PPML
GDP_host	0.619*** (0.097)	1.086 (1.190)	-0.638** (0.304)
GDP_rep	0.290*** (0.036)	0.686 (0.781)	0.503 (0.377)
DIST	-0.802*** (0.156)	-0.900* (0.506)	-0.912*** (0.198)
FD2	0.011*** (0.003)	0.012 (0.011)	0.001*** (0.000)
INST	2.966*** (0.498)	-0.997 (2.323)	-5.068*** (1.460)
COMRELIG	0.093 (0.222)	1.046 (0.825)	1.774*** (0.537)
FTA	0.713*** (0.227)	2.453 (1.666)	0.064 (0.264)
COMLANG	7.762*** (1.651)	8.787 (6.023)	3.101*** (0.429)
BIT	-0.515*** (0.194)	-1.423 (1.306)	-0.265 (0.347)
_cons	-18.766*** (2.403)	-40.501 (47.911)	14.618 (12.852)
<i>N</i>	2905	2905	2905
<i>R</i> ²	0.288	0.351	
<i>R</i> ² _a	0.286	0.328	

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

As seen in Table 4.12, the coefficient of FD2 is positive and statistically significant in OLS and PPML regressions. The result indicates that as differences in stock market development increase, foreign direct investment increases. Equity markets may attract investors in the upper-middle-income countries through portfolio diversification and market complementarity (Martin and Rey, 2004), in line with the full sample results. The third variable is FD3, which is the Financial Development Index. The results of FD3 are given in Table 4.13.

Table 4.13 Upper-Middle-Income Countries. Financial Distance Measure: FD3

	(1) OLS	(2) Host & Rep & Year FE	(3) PPML
GDP_host	0.326*** (0.059)	0.662 (0.682)	-0.103 (0.218)
GDP_rep	0.220*** (0.028)	0.591 (0.468)	0.539* (0.317)
DIST	-0.307*** (0.068)	-0.466** (0.230)	-0.778*** (0.153)
FD3	-0.478*** (0.143)	-2.373* (1.284)	-2.602*** (0.722)
INST	2.424*** (0.397)	-0.168 (1.063)	-1.960* (1.041)
COMRELIG	-0.218 (0.162)	0.557 (0.390)	2.518*** (0.503)
FTA	0.359*** (0.106)	1.031 (0.810)	0.529*** (0.150)

COMLANG	5.626*** (1.357)	6.482 (4.837)	2.515*** (0.422)
BIT	-0.709*** (0.206)	-1.101 (1.157)	-0.286 (0.371)
_cons	-12.050*** (1.756)	-28.299 (27.747)	-3.588 (8.719)
<i>N</i>	6158	6158	6158
<i>R</i> ²	0.106	0.258	
<i>R</i> ² _a	0.105	0.244	

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

In Table 4.13, the coefficient of FD3 is significantly negative, indicating that as the financial development distance reduces, the flow of FDI increases in upper-middle-income countries. When we control for the sub-indices FD4 and FD5 (see Table 4.14 and Table 4.15), the significant and negative impact of financial development distance remains. That is, both financial institutions and financial market development distance matter for bilateral FDI flows. Similarity in financial institutions and markets facilitates cross-border investments.

In sum, the upper-middle-income country results heavily mirror those provided for the full sample. Overall findings are primarily driven by upper-middle-income economies. Given their larger economic size, sounder financial systems, and stronger participation in international investment activities, these countries appear to shape the link between financial distance and FDI flows within the middle-income country group. Conversely, the differences observed in lower-middle-income countries suggest that the impact of financial distance may vary according to the level of economic and financial development. Our analysis shows that the results are not uniform for each country group, and distance is an obstacle for the upper-middle-income group, while it is an opportunity for the lower-middle-income group.

Table 4.14 Upper-Middle-Income Countries. Financial Distance Measure: FD4

	(1) OLS	(2) Host & Rep & Year FE	(3) PPML
GDP_host	0.332*** (0.059)	0.611 (0.658)	-0.145 (0.261)
GDP_rep	0.214*** (0.028)	0.656 (0.484)	0.567 (0.362)
DIST	-0.305*** (0.067)	-0.516** (0.250)	-0.792*** (0.154)
FD4	-0.594*** (0.188)	-1.881* (0.994)	-1.624** (0.804)
INST	2.564*** (0.422)	0.406 (1.048)	-1.806* (0.993)
COMRELIG	-0.232 (0.162)	0.496 (0.372)	2.444*** (0.506)
FTA	0.345*** (0.106)	0.983 (0.791)	0.570*** (0.172)
COMLANG	5.637*** (1.357)	6.583 (4.900)	2.562*** (0.409)
BIT	-0.734*** (0.208)	-1.098 (1.149)	-0.238 (0.356)
_cons	-12.074*** (1.761)	-28.590 (27.495)	-3.262 (9.870)
<i>N</i>	6158	6158	6158
<i>R</i> ²	0.107	0.256	
<i>R</i> ² _a	0.105	0.242	

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 4.15 Upper-Middle-Income Countries. Financial Distance Measure: FD5

	(1) OLS	(2) Host & Rep & Year FE	(3) PPML
GDP_host	0.316*** (0.057)	0.648 (0.676)	-0.027 (0.218)
GDP_rep	0.224*** (0.030)	0.478 (0.420)	0.504 (0.319)
DIST	-0.303*** (0.066)	-0.430** (0.219)	-0.772*** (0.157)
FD5	-0.587*** (0.121)	-1.401* (0.766)	-1.638*** (0.464)
INST	2.346*** (0.402)	-0.420 (1.096)	-2.451** (1.062)
COMRELIG	-0.230 (0.163)	0.513 (0.376)	2.553*** (0.509)
FTA	0.376*** (0.108)	1.061 (0.824)	0.428*** (0.154)
COMLANG	5.622*** (1.355)	6.519 (4.857)	2.526*** (0.428)
BIT	-0.673*** (0.203)	-1.029 (1.124)	-0.340 (0.380)
_cons	-11.841*** (1.733)	-25.359 (26.390)	-4.877 (9.136)

N	6158	6158	6158
R^2	0.107	0.258	
R^2_a	0.106	0.243	

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

4.4. THE ANALYSIS OF OECD COUNTRIES

We have two purposes in analyzing OECD countries. First, to further interpret the heterogeneity of the financial distance–FDI nexus. OECD countries generally have more developed financial systems, stronger institutions, and higher levels of financial integration than middle-income countries. We examine this group because we explore whether the impact of financial distance varies with the level of economic and financial development. Second, to control for robustness. If a similar association appears in both middle-income and OECD countries, the mechanism becomes more general.

For OECD economies, we expect that if financial distance matters due to informational and financing frictions, its effect may weaken among OECD countries where financial systems are relatively more sophisticated and stronger.

In this part, to avoid redundancy, we prepare a summary table (Table 4.16) that demonstrates only the main variables of interest. Original and long versions of the tables are given in Appendix 5. According to this table, the FD1 variable is negative and statistically significant across all three estimations. This result shows that as the differences in banking depth increase, FDI decreases as expected. As a result, investors prefer to invest in countries with similar financial infrastructure. Unlike in lower-middle-income countries, financing gaps are not the primary motivation for investment. Instead, investors prioritize financial convergence, low transaction costs, and regulatory similarity. (Bénassy-Quéré, et al. (2005), Dellis 2024).

For FD2, the results demonstrate that FD2 has a negative effect on FDI flows. As differences in the size of stock capitalization decrease, FDI flows increase significantly. This result is consistent with the previous studies. Capital markets in OECD countries have high liquidity, developed regulatory structures, strong investor protection mechanisms, and standardized financial practices. Therefore, differences in market

structure between countries can create additional adjustment costs for investors. (Claessens and Van Horen, 2014). For FD3, we find a negative and statistically significant link between financial distance and FDI flows. This result suggests that financial development disparities act as an important barrier. Again, this finding supports the view that heterogeneity hinders FDI flows. As expected, FD4 and FD5 follow the impact of FD3 as subcategories. A greater gap in the development of financial institutions and markets leads to a reduction in cross-border investment. Our expectation of similarity facilitates FDI flows, which also emerges for the institutional distance. As seen in the tables in the Appendix, the institutional quality gap hinders FDI flows in OECD countries. The smaller the divergence between home and host, the deeper the integration through cross-border investment. In total, the OECD results provide strong evidence that both financial and institutional similarities play an important role in facilitating bilateral FDI among more developed economies. Unlike the imprecise findings obtained for institutional distance in the middle-income country sample, institutional quality distance is consistently negative and statistically significant across all estimations for OECD countries. This finding suggests that foreign investors operating in more developed economies mostly consider institutional compatibility. The financial distance results are in line with this, indicating that higher differences in financial system features reduce bilateral investment flows. We can conclude that as countries become more similar in terms of financial system development and institutional quality, frictions arising from information asymmetries, transaction costs, and investment uncertainty decline. Therefore, this is an encouraging factor for cross-border investment.

Table 4.16 Summary for OECD Countries: All Alternative Financial Distance Indicators

	FD1	FD2	FD3	FD4	FD5
OECD countries	Significantly negative	Significantly negative	Significantly negative	Significantly negative	Significantly negative in OLS and FE, not significant in PPML

4.5. THE ANALYSIS OF THE FINANCIAL INCLUSION FOR ALL COUNTRIES

Financial inclusion defines three fundamental dimensions: access, usage, and quality (Sarma, 2008). While financial access refers to the ability of individuals and firms to physically reach financial services, usage indicates how much people utilize these services, and the quality reflects the effectiveness, suitability, and affordability of the financial services. (Pesqué-Cela et al., 2021; Camara & Tuesta, 2014).

The level of financial inclusion varies substantially across countries and is commonly measured by indicators such as bank branch density, ATM availability, the number of borrowers, and account ownership (Demirgüç-Kunt et al., 2015). This study focuses on the access dimension of financial inclusion, and we employ bank branch density and ATM availability as indicators of financial access. Financial access reflects the fundamental infrastructure of the financial system and indicates the availability of banking services necessary for conducting international investment activities. Consequently, the number of commercial bank branches and ATMs represents differences in financial access between countries; in this study, "financial inclusion distance" between countries is calculated based on the number of ATMs and bank branches. We present the results in a summary table (Table 4.17) including all country groups.

When we evaluate the full sample of middle-income countries, ATM and bank branch financial distance have positive and statistically significant effects on bilateral FDI. These findings suggest that differences in financial access do not discourage FDI in this group of countries. Countries with more developed financial systems may invest in countries with relatively less developed financial infrastructure. Therefore, differences in financial access may reflect different stages of financial development rather than barriers to bilateral FDI.

The results also show that in upper-middle-income countries, bilateral FDI flows increase as the financial distance in terms of bank branch density and the number of

ATMs increases. For Lower Middle Income Countries, neither ATM-based nor bank branch-based financial distance has a statistically significant impact on bilateral FDI flows. These findings suggest that differences in financial access do not play a significant role in investment decisions in this country group since financial systems and banking infrastructure are generally underdeveloped in lower-income countries. Investors may give importance to other factors for making investments, like market size, institutional quality, political stability, and natural resources.

For OECD countries, we find a negative and statistically significant link between financial inclusion in terms of the number of bank branches and FDI flows. In contrast, the financial distance variable based on ATM density does not have consistent or robust results.

This suggests that investment decisions in OECD countries are more sensitive to the prevalence of bank branches that offer services such as corporate lending, corporate banking, investment advisory, and financing than to access to financial services like ATMs. In other words, similarity in the banking infrastructure of financial systems supports FDI flows between countries.

Table 4.17 The Summary of Financial Inclusion Results

Country Level	Financial Inclusion Distance	Financial Inclusion Distance
	(Number of ATMs)	(Number of Bank Branches)
Full sample of middle-income countries	Significant and positive	Significant and positive
Lower-middle-income	Not Significant	Not Significant
Upper-middle-income	Significant and positive	Significant and positive
OECD	Not significant	Significant and negative

CONCLUSION

This study examines how financial and institutional distances affect foreign direct investment (FDI) across different countries, grouped according to their levels of development. To this end, we analyzed 15 upper-middle income countries, 12 lower-middle income countries, and 37 OECD countries, between 2000 and 2020 using OLS, FE, and PPML models. This analysis allows us to make a comprehensive assessment of how similarity in financial and institutional development matters. Five measures of financial development distance and two alternative measures of financial inclusion distance are employed in the analysis. Domestic credit provided to the private sector and stock market capitalization distances reflect the banking capital market depth, respectively. The other financial development distance variables are formed by combining multiple financial dimensions such as depth, access, and efficiency of financial systems, so they are multi-dimensional. This study also touches on institutional distance by reflecting the disparities in voice and accountability, political stability and absence of violence, government effectiveness, regulatory quality, rule of law, and control of corruption.

This study contributes to the literature in several dimensions. First, it extends the previous bilateral FDI literature by interpreting financial distance as a multidimensional concept rather than relying on a single proxy of financial development. The multi-dimensional approach includes banking-sector depth, capital market size, overall financial development, financial institutions, financial markets, and financial inclusion. In particular, this study provides a new perspective by adding financial inclusion distance into the analysis and presents a more comprehensive understanding of how financial disparities shape bilateral FDI flows. Second, the study contributes empirically by analyzing middle-income countries. There is limited attention to this group in the financial distance and FDI literature despite their growing importance in global capital flows. This dimension improves our understanding of how financial frictions matter in emerging and developing economies. Third, by comparing lower-middle-income,

upper-middle-income, and OECD country groups, the study captures the substantial heterogeneity in the financial distance–FDI relationship across different levels of economic and financial development.

The empirical findings show that the relationship between financial distance and bilateral FDI is highly multidimensional and heterogeneous across country groups. For the full sample of middle-income countries, the results suggest that not all dimensions of financial distance similarly affect FDI. While banking-sector distance does not significantly affect FDI, stock market capitalization distance provides only limited evidence of a positive effect. In contrast, broader financial distance indicators such as overall financial development, financial institutions, and financial market distances consistently have negative impacts on FDI. These findings indicate that greater gaps in overall financial development can increase financing constraints, information, and transaction costs. Therefore, overall frictions discourage cross-border investment. However, there is a substantial heterogeneity across income groups. The upper-middle-income country results largely mirror the full sample. Contrarily, lower-middle-income countries have a different pattern, where financial distance often acts as an investment opportunity rather than a barrier. In these countries, banking-sector gaps play a more significant role because they have relatively more bank-dependent financial systems. For OECD countries, there is strong evidence supporting the similarity hypothesis. In these countries, almost all financial distance indicators are negatively related to FDI. Institutional distance presents imprecise patterns across groups. In general, its effect seems to be mixed and estimator-sensitive in middle-income countries. However, it is consistently negative and significant in OECD countries.

The institutional structure and legal framework are crucial for OECD countries to attract FDI. Investment decisions are heavily influenced by economic fluctuations, geopolitical developments, and increased institutional uncertainties. Therefore, middle income countries may strengthen institutional quality, ensure the rule of law, make the regulatory framework predictable, and establish a stable governance structure that inspires investor confidence. Strong and predictable institutions are key elements that support long term investment decisions by reducing the uncertainties.

The results for financial inclusion distance underline the heterogeneity once again. In middle-income and upper-middle-income countries, financial inclusion distance, measured by ATM and bank branch density, is positively associated with bilateral FDI, suggesting that differences in financial access may reflect investment opportunities rather than a barrier. By contrast, financial inclusion distance has no significant impact in lower-middle-income countries, where financial infrastructure is highly underdeveloped. For OECD countries, bank branch distance hurts bilateral FDI, revealing that proximity in banking infrastructure supports FDI among advanced economies. Overall, these results highlight that the impact of financial distance on bilateral FDI depends not only on the specific feature of financial development and inclusion but also on the level of economic and financial development of the countries. This study concludes that financial similarity appears to be most important among financially advanced economies. However, financial disparities may create investment opportunities in less developed markets.

This study presents several policy implications for countries seeking to attract FDI. For middle-income countries, the overall financial development similarity is important; so we suggest that these countries can attract FDI by increasing the quality of the financial system, in particular, strengthening the financial markets and institutions. In lower-middle-income countries, policymakers may use the finance gap as an opportunity, but in the long run, an upgrade in the financial system will be more beneficial to attract investments. For upper-middle-income countries, convergence may be a way to increase FDI, and hence, policies aiming at financial harmonization can be a future-oriented policy preference. OECD countries still have an opportunity to attract FDI by maintaining similarity and harmonization. Policymakers in advanced countries may focus on better coordination and alignment in improving the financial architecture. Finally, financial inclusion as a relatively new determinant of FDI can be a critical tool to improve financial infrastructure, benefiting all dimensions of society at different stages of development. In particular, improving banking infrastructure and financial access can further strengthen investment attractiveness, especially in less financially developed countries.

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APPENDIX 1 COUNTRY SAMPLES

Upper Middle Income Countries	Lower Middle Income Countries	OECD Countries		
Azerbaijan	Bangladesh	Australia	Hungary	Slovakia
Belarus	El Salvador	Austria	Iceland	Slovenia
Bosnia and Herzegovina	India	Belgium	Israel	Spain
Brazil	Kenya	Canada	Ireland	Sweden
China	Moldova	Chile	Italy	Switzerland
Costa Rica	Morocco	Colombia	Japan	Türkiye
Colombia	Nigeria	Costa Rica	Korea	United Kingdom
Kazakhstan	Pakistan	Czechia	Latvia	United States
Malaysia	Philippines	Denmark	Lithuania	
Namibia	Ukraine	Estonia	Luxembourg	
North Macedonia	Tunisia	Finland	Netherlands	
Russia	Zambia	France	New Zeland	
Serbia		Germany	Norway	
Thailand		Greece	Poland	
Türkiye		Hungary	Portugal	

APPENDIX 2 DESCRIPTIVE STATISTICS FOR LOWER MIDDLE INCOME COUNTRIES

Variable	Stat.	FD1	FD2	FD3	FD4	FD5
FDI (million USD)	N	870	246	438	438	422
	Mean	21.65	35.96	25.70	25.70	25.96
	Std. Dev.	64.24	82.38	67.29	67.29	68.47
	Min	-99.47	-1.13	-99.47	-99.47	-99.47
	Max	950.00	950.00	950.00	950.00	950.00
Financial Distance	N	870	246	438	438	422
	Mean	67.78	257.49	0.422	0.365	0.486
	Std. Dev.	55.24	424.71	0.222	0.214	0.236
	Min	0.05	0.39	0.002	0.001	0.003
	Max	247.82	1762.25	0.797	0.739	0.889
Institutional Distance	N	859	238	422	422	407
	Mean	0.295	0.285	0.270	0.270	0.260
	Std. Dev.	0.166	0.171	0.165	0.165	0.160
	Min	0.000	0.001	0.001	0.001	0.001
	Max	0.648	0.648	0.648	0.648	0.579
GDP Host Country	N	870	246	438	438	422
	Mean	25.903	25.839	25.392	25.392	25.361
	Std. Dev.	1.067	1.015	1.210	1.210	1.214
	Min	22.777	23.621	20.977	20.977	20.977
	Max	28.784	28.606	28.606	28.606	28.606
Gdp Reporting Country	N	870	246	438	438	422
	Mean	27.086	27.779	27.435	27.435	27.414
	Std. Dev.	1.744	1.279	1.771	1.771	1.769
	Min	22.666	25.837	20.977	20.977	20.977
	Max	30.990	30.694	30.694	30.694	30.694
Distance	N	870	246	438	438	422
	Mean	8.515	8.550	8.370	8.370	8.336
	Std. Dev.	0.816	0.649	0.906	0.906	0.905
	Min	5.990	6.958	5.990	5.990	5.990
	Max	9.820	9.524	9.635	9.635	9.635
Common Religio	N	870	246	438	438	422
	Mean	0.171	0.152	0.150	0.150	0.153
	Std. Dev.	0.300	0.313	0.311	0.311	0.317
	Min	0.000	0.000	0.000	0.000	0.000
	Max	1.000	0.986	0.986	0.986	0.986
FTA	N	485	246	438	438	422
	Mean	0.169	0.089	0.158	0.158	0.164
	Std. Dev.	0.375	0.286	0.365	0.365	0.370
	Min	0.000	0.000	0.000	0.000	0.000

	Max	1.000	1.000	1.000	1.000	1.000
Common Language	N	870	246	438	438	422
	Mean	0.136	0.138	0.126	0.126	0.100
	Std. Dev.	0.343	0.346	0.332	0.332	0.300
	Min	0	0	0	0	0
	Max	1	1	1	1	1
BIT	N	870	246	438	438	422
	Mean	0.200	0.110	0.101	0.101	0.090
	Std. Dev.	0.400	0.313	0.301	0.301	0.287
	Min	0	0	0	0	0
	Max	1	1	1	1	1

APPENDIX 3 DESCRIPTIVE STATISTICS FOR UPPER MIDDLE INCOME COUNTRIES

Variable	Stat.	FD1	FD2	FD3	FD4	FD5
FDI (million USD)	N	5.426	2.999	6.406	6.406	6.406
	Mean	517.88	693.45	368.08	368.08	368.08
	Std. Dev.	5056.95	5413.98	3747.29	3747.29	3747.29
	Min	-1734.91	-2251.77	-2251.77	-2251.77	-2251.77
	Max	137241.50	105793.36	105793.36	105793.36	105793.36
Financial Distance	N	5426	2999	6406	6406	6406
	Mean	56.36	69.74	0.277	0.254	0.329
	Std. Dev.	44.35	166.23	0.194	0.179	0.236
	Min	0.02	0.05	0.000	0.000	0.000
	Max	278.32	1759.59	0.848	0.831	0.994
Institutional Distance	N	5.345	2.950	6.235	6.235	6.235
	Mean	0.256	0.259	0.270	0.270	0.270
	Std. Dev.	0.146	0.140	0.156	0.156	0.156
	Min	0.000	0.000	0.000	0.000	0.000
	Max	0.626	0.635	0.675	0.675	0.675
GDP Host Country	N	5.426	2.999	6.406	6.406	6.406
	Mean	26.374	27.114	25.939	25.939	25.939
	Std. Dev.	2.200	1.772	2.181	2.181	2.181
	Min	22.715	23.083	22.034	22.034	22.034
	Max	30.539	30.339	30.339	30.339	30.339
GDP Reporting Country	N	5.353	2.999	6.406	6.406	6.406
	Mean	26.423	26.559	26.315	26.315	26.315
	Std. Dev.	1.735	1.647	1.725	1.725	1.725
	Min	22.026	22.127	21.116	21.116	21.116
	Max	30.990	30.694	30.694	30.694	30.694
Distance	N	5.384	2.994	6.406	6.406	6.406
	Mean	8.287	8.666	8.227	8.227	8.227
	Std. Dev.	1.044	0.804	1.010	1.010	1.010
	Min	5.125	5.759	5.125	5.125	5.125
	Max	9.857	9.857	9.857	9.857	9.857
Common Religion	N	5.426	2.999	6.406	6.406	6.406
	Mean	0.202	0.186	0.185	0.185	0.185
	Std. Dev.	0.339	0.314	0.327	0.327	0.327
	Min	0.000	0.000	0.000	0.000	0.000
	Max	1.000	1.000	1.000	1.000	1.000

FTA	N	4.775	2.959	6.315	6.315	6.315
	Mean	0.225	0.145	0.225	0.225	0.225
	Std. Dev.	0.418	0.352	0.418	0.418	0.418
	Min	0.000	0.000	0.000	0.000	0.000
	Max	1.000	1.000	1.000	1.000	1.000
Common Religion	N	5.426	2.999	6.406	6.406	6.406
	Mean	0.041	0.035	0.032	0.032	0.032
	Std. Dev.	0.197	0.185	0.175	0.175	0.175
	Min	0	0	0	0	0
	Max	1	1	1	1	1
BIT	N	5.426	2.999	6.406	6.406	6.406
	Mean	0.121	0.129	0.095	0.095	0.095
	Std. Dev.	0.326	0.336	0.294	0.294	0.294
	Min	0	0	0	0	0
	Max	1	1	1	1	1

APPENDIX 4 DESCRIPTIVE STATISTICS FOR OECD COUNTRIES

Variable	Stat.	FD1	FD2	FD3	FD4	FD5
FDI (million USD)	N	12.857	8.096	12.859	12.859	12.859
	Mean	155.75	297.50	168.27	168.27	168.27
	Std. Dev.	1870.97	2516.16	2021.99	2021.99	2021.99
	Min	-45630.68	-45630.68	-55168.10	-55168.10	-55168.10
	Max	78008.77	78008.77	78008.77	78008.77	78008.77
Financial Distance	N	12857	8096	12859	12859	12859
	Mean	51.84	67.63	0.278	0.235	0.342
	Std. Dev.	40.70	147.82	0.184	0.163	0.231
	Min	0.00	0.00	0.000	0.000	0.000
	Max	270.74	1766.63	0.834	0.766	0.971
Institutional Distance	N	12.554	7.813	12.365	12.365	12.365
	Mean	0.190	0.182	0.192	0.192	0.192
	Std. Dev.	0.141	0.136	0.141	0.141	0.141
	Min	0.000	0.000	0.000	0.000	0.000
	Max	0.729	0.729	0.729	0.729	0.729
GDP Host Country	N	12.857	8.096	12.859	12.859	12.859
	Mean	26.669	26.904	26.493	26.493	26.493
	Std. Dev.	1.585	1.499	1.671	1.671	1.671
	Min	22.842	23.572	22.461	22.461	22.461
	Max	30.990	30.990	30.694	30.694	30.694
GDP Reporting Country	N	12.857	8.096	12.859	12.859	12.859
	Mean	26.204	26.529	26.093	26.093	26.093
	Std. Dev.	1.715	1.660	1.740	1.740	1.740
	Min	22.026	21.932	21.116	21.116	21.116
	Max	30.990	30.990	30.694	30.694	30.694
Distance	N	12.784	8.079	12.859	12.859	12.859
	Mean	8.078	8.298	8.052	8.052	8.052
	Std. Dev.	1.114	1.159	1.124	1.124	1.124
	Min	4.013	4.013	4.013	4.013	4.013
	Max	9.883	9.883	9.883	9.883	9.883
Common Religion	N	11.108	8.096	12.859	12.859	12.859
	Mean	0.199	0.228	0.236	0.236	0.236
	Std. Dev.	0.273	0.283	0.316	0.316	0.316

FTA	Min	0.000	0.000	0.000	0.000	0.000
	Max	0.981	1.000	1.000	1.000	1.000
	N	11.191	7.385	12.853	12.853	12.853
	Mean	0.554	0.480	0.529	0.529	0.529
	Std. Dev.	0.497	0.500	0.499	0.499	0.499
	Min	0.000	0.000	0.000	0.000	0.000
	Max	1.000	1.000	1.000	1.000	1.000
Common Religion	N	12.857	8.096	12.859	12.859	12.859
	Mean	0.063	0.102	0.068	0.068	0.068
	Std. Dev.	0.244	0.303	0.251	0.251	0.251
	Min	0	0	0	0	0
	Max	1	1	1	1	1
BIT	N	12.857	8.096	12.859	12.859	12.859
	Mean	0.091	0.103	0.082	0.082	0.082
	Std. Dev.	0.287	0.304	0.274	0.274	0.274
	Min	0	0	0	0	0
	Max	1	1	1	1	1

APPENDIX 5 THE RESULTS OF FD1, FD2, FD3, FD4, FD5 FOR OECD COUNTRIES

Table E1: Result of FD1 for OECD Countries

	(1) OLS	(2) Host & Rep & Year FE	(3) PPML
GDP_host	0.075*** (0.010)	0.283** (0.133)	1.216*** (0.403)
GDP_rep	0.161*** (0.024)	0.001 (0.116)	1.005** (0.466)
DIST	-0.112** (0.049)	-0.171** (0.075)	-0.359*** (0.086)
FD1	-0.001* (0.000)	-0.001* (0.001)	-0.004** (0.002)
INST	-0.801*** (0.140)	-0.109 (0.161)	-0.256 (0.961)
COMRELIG	-0.061 (0.082)	0.079 (0.079)	0.847* (0.461)
FTA	0.007 (0.055)	0.148 (0.106)	-0.313 (0.203)
COMLANG	1.248*** (0.260)	0.772*** (0.273)	0.669*** (0.166)
BIT	-0.006 (0.051)	0.062 (0.106)	1.027*** (0.206)

_cons	-5.043*** (0.734)	-6.079 (3.840)	-57.803*** (14.432)
<i>N</i>	9417	9417	9417
<i>R</i> ²	0.043	0.103	
<i>R</i> ² _a	0.043	0.089	

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table E2: The Result of FD2 for OECD Countries

	(1) OLS	(2) Fixed Effects	(3) PPML
GDP_host	0.127*** (0.016)	0.366** (0.163)	1.180*** (0.345)
GDP_rep	0.262*** (0.033)	-0.178 (0.147)	0.786** (0.336)
DIST	-0.222*** (0.061)	-0.416** (0.172)	-0.311*** (0.066)
FD2	-0.000* (0.000)	-0.001** (0.000)	-0.001 (0.001)
INST	-1.106*** (0.166)	-0.143 (0.311)	-0.422 (0.846)
COMRELIG	0.030 (0.087)	0.174 (0.131)	1.970*** (0.506)
FTA	-0.047 (0.070)	0.086 (0.105)	-0.155 (0.197)
COMLANG	1.465*** (0.235)	0.746*** (0.243)	0.595*** (0.176)

BIT	0.004 (0.055)	-0.097 (0.125)	0.728*** (0.184)
_cons	-8.134*** (1.075)	-1.412 (5.413)	-51.873*** (12.550)
<i>N</i>	7085	7085	7085

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table E3: The Result of FD3 for OECD Countries

	(1) OLS	(2) Year FE	(3) PPML
GDP_host	0.090*** (0.011)	0.093*** (0.031)	0.437*** (0.048)
GDP_rep	0.160*** (0.020)	0.161*** (0.055)	0.641*** (0.107)
DIST	-0.133*** (0.041)	-0.128 (0.079)	-0.224*** (0.084)
FD3	-0.465*** (0.083)	-0.475*** (0.148)	-2.115*** (0.706)
INST	-0.565*** (0.098)	-0.564*** (0.157)	-4.755*** (1.222)
COMRELIG	-0.011 (0.042)	-0.010 (0.058)	0.976** (0.384)
FTA	-0.021 (0.040)	-0.000 (0.046)	-0.001 (0.220)
COMLANG	1.241***	1.237***	1.397***

	(0.222)	(0.416)	(0.297)
BIT	0.008 (0.041)	0.018 (0.075)	0.603** (0.263)
_cons	-5.153*** (0.609)	-5.321*** (1.670)	-28.345*** (3.860)
<i>N</i>	12361	12361	12361
R	0.052	0.054	
R ² _a	0.051	0.052	

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table E4: The Result of FD4 for OECD Countries

	(1) OLS	(2) Host & Rep & Year FE	(3) PPML
GDP _{host}	0.090*** (0.011)	0.231** (0.102)	1.109*** (0.340)
GDP _{rep}	0.163*** (0.021)	-0.031 (0.090)	0.848** (0.360)
DIST	-0.131*** (0.040)	-0.240* (0.123)	-0.283*** (0.070)
FD4	-0.589*** (0.099)	-0.867*** (0.233)	-1.454** (0.595)
INST	-0.433*** (0.093)	0.359 (0.244)	-0.099 (0.832)
COMRELIG	-0.018 (0.042)	0.006 (0.078)	1.243*** (0.435)

FTA	-0.027 (0.040)	0.173* (0.096)	-0.069 (0.205)
COMLANG	1.253*** (0.223)	0.617*** (0.223)	0.546*** (0.173)
BIT	0.001 (0.041)	0.042 (0.097)	0.864*** (0.185)
_cons	-5.258*** (0.620)	-3.230 (3.324)	-51.610*** (12.871)
<i>N</i>	12361	12361	12361
<i>R</i> ²	0.052	0.118	
<i>R</i> ² _a	0.052	0.109	

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table E5: The Result of FD5 for OECD Countries

	(1) OLS	(2) Host & Rep & Year FE	(3) PPML
GDP_host	0.085*** (0.010)	0.231** (0.103)	1.144*** (0.347)
GDP_rep	0.160*** (0.021)	-0.018 (0.090)	0.904** (0.355)
DIST	-0.138*** (0.041)	-0.252** (0.125)	-0.288*** (0.071)
FD5	-0.297*** (0.059)	-0.389*** (0.130)	0.031 (0.428)
INST	-0.674***	-0.034	-0.662

	(0.100)	(0.199)	(0.798)
COMRELIG	-0.028 (0.042)	-0.015 (0.079)	1.228*** (0.447)
FTA	-0.019 (0.040)	0.164* (0.095)	-0.025 (0.205)
COMLANG	1.242*** (0.222)	0.630*** (0.225)	0.610*** (0.176)
BIT	0.005 (0.041)	0.029 (0.098)	0.841*** (0.185)
_cons	-4.993*** (0.600)	-3.445 (3.390)	-54.300*** (13.203)
<i>N</i>	12361	12361	12361
R^2	0.052	0.117	
R^2_a	0.051	0.107	

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

APPENDIX 6 THE RESULT OF FINANCIAL INCLUSION FOR ALL COUNTRY GROUPS

Table F1: Financial Inclusion for the Full Sample of Middle Income Countries –

ATM Distance

	(1)	(2)	(3)
	OLS	FE	PPML
GDP_host	0.376*** (0.071)	0.881 (0.770)	0.198 (0.164)
GDP_rep	0.207*** (0.033)	0.553 (0.595)	-0.144 (0.385)
DIST	-0.316*** (0.081)	-0.518 (0.351)	-0.749*** (0.166)
FD_ATM	-0.003*** (0.001)	0.005 (0.005)	0.008*** (0.002)
INST	2.323*** (0.414)	0.640 (0.991)	-2.987*** (0.961)
COMRELIG	-0.125 (0.149)	0.693 (0.429)	2.828*** (0.565)
FTA	0.424*** (0.113)	0.954 (0.781)	0.553 (0.346)
COMLANG	5.645*** (1.476)	6.353 (5.224)	2.549*** (0.480)
BIT	-1.043***	-1.720	-0.892**

	(0.233)	(1.480)	(0.417)
_cons	-12.893*** (2.117)	-33.794 (32.710)	5.468 (11.134)
<i>N</i>	5339	5338	5338
<i>R</i> ²	0.104	0.217	
<i>R</i> ² _a	0.103	0.198	

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table F2: Financial Inclusion for the Full sample of Middle Income Countries – Bank Branch Distance

	(1) OLS	(2) FE	(3) PPML
GDP_host	0.366*** (0.080)	0.441 (0.295)	0.433** (0.186)
GDP_rep	0.184*** (0.029)	0.415 (0.494)	0.624 (0.449)
DIST	-0.301*** (0.088)	-0.610 (0.386)	-0.803*** (0.159)
FD_BB	0.003** (0.001)	0.019 (0.014)	0.012** (0.006)
INST	1.849*** (0.425)	-0.042 (0.872)	-2.479** (1.125)
COMRELIG	0.047 (0.145)	0.604 (0.416)	2.320*** (0.447)
FTA	0.429*** (0.129)	0.870 (0.792)	0.470 (0.291)

COMLANG	4.494*** (1.491)	5.644 (5.061)	2.904*** (0.392)
bit	-0.799*** (0.298)	-1.514 (1.765)	-0.175 (0.267)
_cons	-12.265*** (2.155)	-17.760 (17.462)	-21.871** (10.724)
<i>N</i>	5072	5071	5071
r2	0.080	0.182	
r2_a	0.078	0.161	

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table F3: Lower Middle Income Countries - ATM Distance

	(1) OLS	(2) FE	(3) PPML
GDP_host	0.015** (0.007)	0.016 (0.015)	0.205 (0.474)
GDP_rep	0.028** (0.014)	-0.016 (0.012)	-0.956 (0.662)
DIST	-0.022*** (0.005)	-0.020 (0.012)	-0.892*** (0.319)
FD_ATM	-0.000 (0.000)	-0.000 (0.000)	-0.003 (0.006)
INST	0.158*** (0.027)	-0.125 (0.124)	-0.731 (3.224)
COMRELIG	0.003 (0.012)	0.020 (0.038)	1.492** (0.740)

FTA	-0.009 (0.010)	-0.010 (0.016)	0.123 (0.625)
COMLANG	0.031 (0.040)	0.005 (0.021)	0.495 (0.441)
BIT	-0.030 (0.045)	-0.402 (0.318)	-0.619 (0.416)
_cons	-0.988* (0.536)	0.297 (0.423)	26.845 (24.171)
<i>N</i>	255	255	255
R^2	0.234	0.561	
R^2_a	0.206	0.483	

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table F4: Lower Middle Income Countries - Bank Branch Distance

	(1) OLS	(2) FE	(3) PPML
GDP_host	0.020** (0.008)	0.030 (0.023)	0.669 (0.495)
GDP_rep	0.019** (0.009)	0.018 (0.025)	0.139 (0.825)
DIST	-0.011** (0.005)	0.002 (0.021)	-0.616** (0.298)
FD_BB	0.000 (0.001)	0.000 (0.001)	0.008 (0.046)
INST	0.166*** (0.028)	-0.044 (0.148)	0.422 (3.180)

COMRELIG	0.008 (0.009)	0.027 (0.041)	1.530** (0.746)
FTA	0.005 (0.012)	0.013 (0.025)	0.488 (0.538)
COMLANG	0.004 (0.020)	0.021 (0.032)	0.184 (0.469)
BIT	0.001 (0.041)	-0.086 (0.138)	-1.205*** (0.293)
_cons	-0.962** (0.483)	-1.253 (1.109)	-18.709 (30.815)
<i>N</i>	281	281	281
<i>R</i> ²	0.230	0.376	
<i>R</i> ² _a	0.205	0.278	

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table F5: Upper Middle Income Countries - ATM Distance

	(1) OLS	(2) FE	(3) PPML
GDP_host	0.365*** (0.067)	0.838 (0.750)	0.199 (0.167)
GDP_rep	0.212*** (0.034)	0.600 (0.608)	-0.151 (0.387)
DIST	-0.313*** (0.080)	-0.564 (0.370)	-0.739*** (0.170)
FD_ATM	-0.004*** (0.001)	0.002 (0.003)	0.007*** (0.002)

INST	2.711*** (0.494)	0.525 (1.213)	-3.013*** (0.971)
COMRELIG	-0.311 (0.196)	0.471 (0.333)	2.839*** (0.566)
FTA	0.266*** (0.080)	0.935 (0.722)	0.533 (0.355)
COMLANG	7.106*** (1.823)	8.523 (6.541)	2.591*** (0.506)
BIT	-1.124*** (0.250)	-1.729 (1.405)	-0.901** (0.422)
_cons	-12.755*** (2.036)	-33.305 (32.073)	5.554 (11.155)
<i>N</i>	5084	5083	5083
<i>R</i> ²	0.121	0.267	
<i>R</i> ² _a	0.120	0.251	

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table F6: Upper Middle Income Countries - Bank Branch Distance

	(1) OLS	(2) FE	(3) PPML
GDP_host	0.356*** (0.076)	0.403 (0.254)	0.447** (0.192)
GDP_rep	0.203*** (0.031)	0.389 (0.440)	0.617 (0.452)
DIST	-0.305*** (0.089)	-0.675 (0.423)	-0.798*** (0.169)

FD_BB	0.003** (0.001)	0.019 (0.013)	0.012** (0.006)
INST	2.192*** (0.521)	-0.078 (1.071)	-2.464** (1.138)
COMRELIG	-0.144 (0.205)	0.435 (0.347)	2.307*** (0.449)
FTA	0.263*** (0.084)	0.882 (0.753)	0.431 (0.302)
COMLANG	6.312*** (2.040)	8.029 (6.768)	2.959*** (0.412)
BIT	-0.854*** (0.328)	-1.507 (1.826)	-0.161 (0.267)
_cons	-12.463*** (2.123)	-15.514 (14.533)	-22.115** (10.784)
<i>N</i>	4791	4790	4790
R^2	0.098	0.227	
R^2_a	0.096	0.208	

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table F7: Financial Inclusion- OECD Countries- Bank Branch Distance

	(1)	(2)	(3)
	OLS	FE	PPML
GDP_host	0.118*** (0.017)	0.345* (0.183)	1.644*** (0.592)
GDP_rep	0.185*** (0.027)	-0.024 (0.198)	0.767 (0.670)
DIST	-0.154** (0.078)	-0.274** (0.121)	-0.385*** (0.090)
FD_BB	-0.001 (0.001)	-0.007* (0.004)	-0.012* (0.007)
INST	-1.212*** (0.185)	-0.447 (0.366)	0.564 (1.294)
COMRELIG	0.078 (0.108)	0.433* (0.250)	2.339*** (0.658)
FTA	-0.116 (0.072)	-0.038 (0.130)	0.250 (0.180)
COMLANG	1.083*** (0.287)	0.702** (0.294)	0.736*** (0.187)
BIT	0.106* (0.063)	0.016 (0.096)	0.567** (0.242)
_cons	-6.364*** (0.808)	-6.027 (6.461)	-63.441** (24.731)
N	4157	4157	4157
R ²	0.045	0.094	
R ² _a	0.043	0.070	

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table F8: OECD Financial Inclusion - ATM Distance

	(1)	(2)	(3)
	OLS	FE	PPML
GDP_host	0.088*** (0.014)	0.280* (0.149)	1.261* (0.723)
GDP_rep	0.129*** (0.021)	-0.122 (0.133)	0.654 (0.423)
DIST	0.054 (0.050)	0.013 (0.119)	-0.308*** (0.112)
FD_ATM	0.000 (0.001)	-0.002* (0.001)	0.002 (0.003)
INST	-1.024*** (0.179)	-0.224 (0.281)	0.816 (1.190)
COMRELIG	-0.001 (0.067)	0.500** (0.220)	2.640*** (0.751)
FTA	0.031 (0.049)	0.078 (0.107)	0.264* (0.152)
COMLANG	0.372* (0.208)	-0.012 (0.242)	0.420* (0.220)
BIT	0.114* (0.063)	0.130 (0.084)	0.454* (0.258)
_cons	-5.933*** (0.712)	-4.209 (4.197)	-51.078** (24.429)
N	3942	3942	3942
R ²	0.036	0.101	

R^2_a	0.034	0.076
Standard errors in parentheses		

APPENDIX 7 ORIGINALITY REPORT

	HACETTEPE UNİVERSİTESİ SOSYAL BİLİMLER ENSTİTÜSÜ	Doküman Kodu Form No.	FRM-YL-15
		Yayın Tarihi Date of Pub.	04.12.2023
	FRM-YL-15 Yüksek Lisans Tezi Orijinallik Raporu <i>Master's Thesis Dissertation Originality Report</i>	Revizyon No Rev. No.	02
		Revizyon Tarihi Rev. Date	25.01.2024

HACETTEPE ÜNİVERSİTESİ SOSYAL BİLİMLER ENSTİTÜSÜ İKTİSAT ANABİLİM DALI BAŞKANLIĞINA	
Tarih: 28/07/2026	
Tez Başlığı (Türkçe): İki Yönlü Doğrudan Yabancı Yatırım Akımları: Kurumsal ve Finansal Uzaklığın Rolü.....	
Tez Başlığı (Almanca/Fransızca)*:.....	
Yukarıda başlığı verilen tezimin a) Kapak sayfası, b) Giriş, c) Ana bölümler ve d) Sonuç kısımlarından oluşan toplam 98 sayfalık kısmına ilişkin, 27/07/2026 tarihinde şahsım/tez danışmanım tarafından Tumitin adlı intihal tespit programından aşağıda işaretlenmiş filtrelemeler uygulanarak alınmış olan orijinallik raporuna göre, tezimin benzerlik oranı % 15'dir.	
Uygulanan filtrelemeler*:	
1. ☒ Kabul/Onay ve Bildirim sayfaları hariç 2. ☒ Kaynakça hariç 3. ☐ Alıntılar hariç 4. ☒ Alıntılar dâhil 5. ☒ 5 kelimeden daha az örtüşme içeren metin kısımları hariç	
Hacettepe Üniversitesi Sosyal Bilimler Enstitüsü Tez Çalışması Orijinallik Raporu Alınması ve Kullanılması Uygulama Esasları'nı inceledim ve bu Uygulama Esasları'nda belirtilen azami benzerlik oranlarına göre tezimin herhangi bir intihal içermediğini; aksinin tespit edileceği muhtemel durumlarda doğabilecek her türlü hukuki sorumluluğu kabul ettiğimi ve yukarıda vermiş olduğum bilgilerin doğru olduğunu beyan ederim.	
Gereğini saygılarımla arz ederim.	
Pelin TAMKOÇ TURKOGLU	

Öğrenci Bilgileri	Ad-Soyad	Pelin TAMKOÇ TURKOGLU
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**TO HACETTEPE UNIVERSITY
GRADUATE SCHOOL OF SOCIAL SCIENCES
DEPARTMENT OF ECONOMICS**

Date: 28/07./2026

Thesis Title (In English): Bilateral Foreign Direct Investment Flows: The Role of Institutional and Financial Distance.....

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Pelin TAMKOC TURKOGLU

Student Information	Name-Surname	Pelin TAMKOÇ TURKOĞLU
	Student Number	N23136029
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	Programme	Economics (English)

SUPERVISOR'S APPROVAL

APPROVED
Assoc. Prof. Dr. Zühal KURUL

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APPENDIX 8 ETHICS COMMISSION FORM

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		Yayın Tarihi Date of Pub.	22.11.2023
	FRM-YL-09 Yüksek Lisans Tezi Etik Kurul Muafiyeti Formu <i>Ethics Board Form for Master's Thesis</i>	Revizyon No Rev. No.	02
		Revizyon Tarihi Rev. Date	25.01.2024

HACETTEPE ÜNİVERSİTESİ SOSYAL BİLİMLER ENSTİTÜSÜ İKTİSAT ANABİLİM DALI BAŞKANLIĞINA
Tarih: 28/07/2026
Tez Başlığı (Türkçe): İki Yönlü Doğrudan Yabancı Yatırım Akımları: Kurumsal ve Finansal Uzaklığın Rolü Tez Başlığı (Almanca/Fransızca)*:
Yukarıda başlığı verilen tez çalışmam: 1. İnsan ve hayvan üzerinde deney niteliği taşımamaktadır. 2. Biyolojik materyal (kan, idrar vb. biyolojik sıvılar ve numuneler) kullanılmamasını gerektirmemektedir. 3. Beden bütünlüğüne veya ruh sağlığına müdahale içermemektedir. 4. Anket, ölçek (test), mülakat, odak grup çalışması, gözlem, deney, görüşme gibi teknikler kullanılarak katılımcılardan veri toplanmasını gerektiren nitel ya da nicel yaklaşımlarla yürütülen araştırma niteliğinde değildir. 5. Diğer kişi ve kurumlardan temin edilen veri kullanımını (kitap, belge vs.) gerektirmektedir. Ancak bu kullanım, diğer kişi ve kurumların izin verdiği ölçüde Kişisel Bilgilerin Korunması Kanuna riayet edilerek gerçekleştirilecektir.
Hacettepe Üniversitesi Etik Kurullarının Yönergelerini inceledim ve bunlara göre çalışmamın yürütülebilmesi için herhangi bir Etik Kuruldan izin alınmasına gerek olmadığını; aksi durumda doğabilecek her türlü hukuki sorumluluğu kabul ettiğimi ve yukarıda vermiş olduğum bilgilerin doğru olduğunu beyan ederim.
Gereğini saygılarımla arz ederim. Pelin TAMKOÇ TURKOĞLU

Öğrenci Bilgileri	Ad-Soyad	Pelin TAMKOÇ TÜRKOĞLU
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	HACETTEPE ÜNİVERSİTESİ SOSYAL BİLİMLER ENSTİTÜSÜ	Doküman Kodu Form No.	FRM-YL-09
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HACETTEPE UNIVERSITY GRADUATE SCHOOL OF SOCIAL SCIENCES DEPARTMENT OF ECONOMICS	
Date: 28/07/2026	
Thesis Title (In English): Bilateral Foreign Direct Investment Flows: The Role of Institutional and Financial Distance.....	
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I respectfully submit this for approval.	
Pelin TAMKOÇ TURKOĞLU	

Student Information	Name-Surname	Pelin TAMKOÇ TÜRKÖĞLU
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