

University College London
CHARLES UNIVERSITY
FACULTY OF SOCIAL SCIENCES
Institute of International Studies
Department of Russian and East European Studies

**The impact of institutional quality on FDI: a study based
on EU countries**

Master's Thesis

Author of the Thesis: Yuhan Zhang

Study programme: International Masters in Economy, State and Society

Supervisor: Doc. Mgr. Tomáš Holub, Ph.D and Sangaralingam Ramesh

Year of the defence: 2024

Declaration

1. I hereby declare that I have compiled this thesis using the listed literature and resources only.
2. I hereby declare that my thesis has not been used to gain any other academic title.
3. I fully agree to my work being used for study and scientific purposes.

In Prague on
30.07.2024

Yuhan Zhang

References

Zhang, Yuhan. *The impact of institutional quality on FDI: a study based on EU countries*. Praha, 2024. 73p. Master's thesis (Mgr). Charles University, Faculty of Social Sciences, Institute of International Studies, Department of Russian and East European Studies. Supervisor doc. Mgr. Tomáš Holub, Ph.D.

Abstract

The correlation between the quality of institutions and foreign direct investment (FDI) has been a prominent area of interest in academic theoretical research. This thesis takes 26 EU countries as research objects, aiming to study the impact of institutional quality (IQ) on FDI inflows. This thesis combs through the relevant concepts and basic theories of FDI, institutional quality and their interrelationships. In addition, the development history of FDI in the EU region and the basic status quo of institutional quality and FDI in EU countries are described and analyzed in a panoramic way. This strengthens the theoretical foundation for empirical analyses and provides support for empirical research. On this basis, this thesis uses the panel data of 26 EU countries from 2004 to 2021 as a sample for variable selection, data characterization, model construction and hypothesis inference. It adopts the ordinary least squares method, GMM model and other econometric methods to carry out benchmark regression, robustness test, endogeneity control, moderating effect test, heterogeneity analysis and other work. This thesis draws the following conclusions through empirical analyses from multiple perspectives: First, there is a positive correlation between IQ and FDI inflows. Second, abundant natural resources have no significant effect on the correlation between IQ and FDI inflows. However, trade openness has a significant positive moderating effect on the relationship between IQ and FDI. Specifically, the positive impact of better IQ on FDI growth increases when market openness increases. Third, the relationship between IQ and FDI is heterogeneous, and it is more pronounced in CEE countries. In response to the findings, the thesis also provides targeted policy recommendations on capturing institutional quality factors in FDI activities at the EU country level.

Keywords

Institutional quality, foreign direct investment, EU countries, CEEC, WE

Length of the Thesis (word count): 20619

Abstrakt

Souvislost mezi kvalitou institucí a přímými zahraničními investicemi (FDI) je významnou oblastí zájmu akademického teoretického výzkumu. Cílem této práce je zkoumat vliv institucionální kvality (IQ) na příliv přímých zahraničních investic ve 26 zemích EU. Tato práce pročesává příslušné koncepty a základní teorie FDI, institucionální kvality a jejich vzájemných vztahů. Dále je zde popsána a panoramaticky analyzována historie vývoje FDI v regionu EU a základní stav institucionální kvality a FDI v zemích EU. To posiluje teoretický základ empirických analýz a poskytuje podporu empirickému výzkumu. Na tomto základě tato práce využívá panelová data 26 zemí EU z let 2004 až 2021 jako vzorek pro výběr proměnných, charakterizaci dat, konstrukci modelu a odvození hypotéz. Využívá metodu obyčejných nejmenších čtverců, GMM model a další ekonometrické metody k provedení srovnávací regrese, testu robustnosti, kontroly endogenity, testu moderujícího efektu, analýzy heterogenity a dalších prací. Na základě empirických analýz z více hledisek vyvozuje tato práce následující závěry: Za prvé, existuje pozitivní korelace mezi IQ a přílivem přímých zahraničních investic. Za druhé, bohaté přírodní zdroje nemají významný vliv na korelaci mezi IQ a přílivem FDI. Otevřenost obchodu má však významný pozitivní moderující účinek na vztah mezi institucionální kvalitou a FDI. Konkrétně se pozitivní vliv lepší institucionální kvality na růst FDI zvyšuje, když se zvyšuje otevřenost trhu. Za třetí, vztah mezi IQ a FDI je heterogenní a je výraznější v zemích střední a východní Evropy. V reakci na tato zjištění práce rovněž poskytuje cílená politická doporučení týkající se zachycení faktorů institucionální kvality v aktivitách v oblasti FDI na úrovni zemí EU.

Klíčová slova

Institucionální kvalita, přímé zahraniční investice, EU, CEEC, WE

Table of Contents

Introduction	7
1 Literature review.....	11
1.1 Conceptual definition	11
1.1.1 Definition of institution and measurement of its quality	11
1.1.2 Definition of FDI.....	13
1.2 Theoretical foundations	14
1.3 FDI and institutional quality.....	17
1.4 Research gap.....	21
2 Analysis of FDI development and related conditions in EU countries	21
2.1 Analysis of the FDI situation.....	22
2.1.1 Analysis of the history of FDI	22
2.1.2 Analysis of the distribution of FDI sources.....	24
2.1.3 FDI inflows by country	26
2.2 Analysis of the institutions in the EU	26
2.2.1 Institutional development in Central and Eastern Europe	27
2.2.2 Institutional development in Western Europe	28
3. Hypotheses, Model and variable description.....	29
3.1 Formulation of questions	29
3.2 Formulation of hypotheses	30
3.3 Sample description	31
3.4 Variable selection and data sources.....	32
3.4.1 Explained Variables.....	32
3.4.2 Core Explanatory Variables.....	32
3.4.3 Control variables	35
3.4.4 Moderating variables	39
3.5 Data characterization	40
3.5.1 Descriptive statistics	40

3.5.2 Variance inflation factor test	41
3.5.3 Model construction	42
3.5.4 Heteroscedasticity test	44
3.5.5 Autocorrelation test	44
4 Regression analysis	45
4.1 Baseline regression	45
4.1.1 Baseline regression	45
4.1.2 Endogenous Modification----GMM	46
4.2 Analysis of moderating effects	48
4.2.1 Natural resources	48
4.2.2 Trade openness	51
4.3 Heterogeneity analysis.....	53
5 Discussion.....	55
5.1 Institutional quality and FDI	55
5.2 Moderating effects.....	58
5.3 Heterogeneity analysis.....	59
6 Conclusion.....	60
6.1 Main findings.....	60
6.2 Research limitations	63
6.3 Research Prospects	64
6.4 Policy recommendations	64
List of References	66

Introduction

Foreign direct investment is a global phenomenon. It facilitates the movement of capital around the world and helps to achieve an efficient allocation of resource factors. According to the OECD (2024), the EU has been one of the main destinations for FDI for many years. After the accession of some CEE countries to the EU in 2004, FDI inflows rose even more dramatically, reaching almost \$50 billion in 2018 (Dorakh, 2020). The share of FDI attracted by the EU in global FDI flows has remained relatively stable in recent years, accounting for about 25% of total global FDI inflows. This shows that FDI has long been an important driver of economic development in EU countries.

However, although the benefits of FDI to countries are indisputable, these advantages do not arise automatically. Significant differences exist between countries in attracting foreign direct investment (Buchanan, and Rishi, 2012). Therefore, countries have shown increasing interest in understanding the factors that impact FDI inflows and in developing policies to enhance the investment climate and attract more FDI.

Historically, scholars have considered economic factors such as economic development potential, labour costs, market size as key determinants of FDI location choices (Dunning, 1981; Bellak, Leibrecht, and Riedl, 2008; Nielsen, Asmussen, and Weatherall, 2017; Bailey, 2018). However, issues related to factors affecting FDI go well beyond economic environment. Recent research has increasingly recognized that the quality of institutions is also critical to the impact of FDI. In detail, financial crises have highlighted weaknesses in institutional infrastructure that were previously masked during the credit and commodity booms (Buchanan, Le and Rishi, 2012). For example, the two financial crises since 1997 have exposed the inadequacies of the economic and political systems that exist in many countries, which have led to serious capital losses (Mohan, 2009). In the wake of these crises, the central role of institutions in cross-border investment began to be recognized. Many countries started to undertake institutional reforms to improve their investment climate and attract FDI. Reports issued by the likes of the OECD and the IMF have also continued to highlight how innovation and development of the institutional environment can help countries maximize the benefits of FDI (OECD, 2002). The advocacy of these international authoritative organizations has led to a wider focus on institutional quality. In this context, the importance of IQ in attracting FDI has gradually come to the fore.

For EU countries, the importance of institutions is even more pronounced. The EU has made institutional quality a mandatory criterion for EU membership. In the process of EU integration, member states need to abide by the common rules and legal institutions of the EU, which requires that the institutional quality of each country must meet a certain standard to ensure the stability and consistency of the Union as a whole. According to the Copenhagen Criteria of 1993, the first criterion that countries applying for EU membership must fulfil is the possession of stable institutions. Eastern enlargement of the EU in 2004 was the culmination of the institutional reform of the EU. The countries of Central and Eastern Europe have undertaken a full range of institutional reforms in order to join the EU. Poland, for example, reformed its judicial institution before joining the EU to ensure transparency and enforcement of the law. Hungary carried out extensive market economy reforms prior to its accession to the EU in order to increase the competitiveness of its economy (Grabbe, 2001). Such institutional reforms have led to a significant and radical improvement in the institutional quality of the new EU countries over the last three decades. These countries have been able to fulfil their EU accession goals while attracting more FDI on the basis of their improved institutional quality. The institutional quality of the EU countries is therefore of particular significance in terms of its impact on FDI.

Against this background, this thesis takes EU countries as the object of study to explore in depth the impact of institutional quality on FDI. This thesis aims to reveal how institutional quality affects the inflow of FDI from different perspectives, and to provide theoretical support and policy suggestions for enhancing the investment environment and attracting more foreign investment in EU countries.

Most of the existing literature suggests that there is a strong link between institutional quality and FDI. Composite indicators designed to measure institutional quality have been constructed by researchers such as Daude and Stein (2007), Chen and Jiang (2023), and Buchanan and Bonnie (2012) among others. The findings from these studies consistently indicate that superior institutional quality tends to significantly enhance the inflow of FDI. Additionally, numerous scholars contend that various aspects of institutional quality affect FDI. For example, Jurčić, Franc, and Barišić (2020) suggest that certain IQ variables do not significantly influence foreign direct investment inflows in Croatia, whereas economic institutions positively affect them. Kariuki (2015) reported that financial and political institutional risks slightly dampened foreign direct investment inflows, while trade freedom and infrastructure levels significantly boosted foreign direct investment. Other studies suggest that these effects are regionally heterogeneous

and cannot be generalized. Globerman and Shapiro (2002), for example, look at the impact of government efficiency on FDI, noting that returns are higher in transition or developing economies. Sabir's (2019) study revealed that the correlation coefficient of institutional quality is higher in developed countries than in developing countries.

However, research in related areas has not been harmonized. Xing and Kolstad (2002), Resnick and Li (2003), Gorg and Greenaway (2004), Hale (2006), Goswami and Haider (2014) and others have argued that the institutional quality in general, or an aspect of the institutions, has a negative effect on FDI. For example, Xing and Kolstad (2002) argue that a host country's overly restrictive institutional environment can have an avoidance effect on foreign business, while Li and Resnick (2003) find that an increase in the level of democracy leads to a decrease in FDI inflows, and Kolstad and Wiig (2012) find that host country's institutional quality is negatively correlated with FDI. Cuervo-Cazurra (2006) discovered that less corrupt home nations are deterred from making foreign direct investment in more corrupt host countries. However, more corrupt home countries may be more inclined to invest in such situations. In addition, the seminal textbook *International Macroeconomics* contains a model in which investment flows from poor to rich countries in extreme cases due to information asymmetry and moral hazard problems. Arguably, a weak institutional environment exacerbates this moral hazard problem, thus making it more likely that investment will "go uphill".

It is important to note that despite the increasing focus on the impact of institutional quality on FDI, this aspect has not been as extensively studied or harmonized as other factors, particularly within EU countries. So based on the literature research, this paper poses three research questions: 1. Whether better institutional quality promotes FDI inflows? 2. Are market openness and natural resources moderating variables? Do they enhance or weaken the role of institutional quality in attracting FDI? 3. Does the impact of institutional quality on FDI inflows differ between WEC (West European countries) and CEEC (Central Eastern European countries)?

The framework of this thesis consists of seven major parts: introduction, literature review, analysis of FDI development and related conditions in EU countries, model and variable description, empirical study, discussion, and conclusion. Introduction, explains in detail the background of the study, the reason for selecting the topic, the objectives of the study, the main research ideas, the research methodology and the framework of the thesis. It also explains the innovation of the thesis and the significance of the research. Chapter 1, Literature Review,

systematically and comprehensively reviews the existing theoretical foundations and relevant research results. In the literature review, the basic concepts of FDI and institutional quality are specifically sorted out, and the existing representative literatures on institutional quality and FDI are listed and categorized. On this basis, we summarize the existing research gaps. Chapter 2, Relevant situation analysis, combines official data to make charts, and analyses the development of FDI and institution in EU countries in the past 30 years based on the charts and history. In Chapter 3, Model and variables are described. This chapter begins with a research question and hypotheses based on the literature review and historical situation analysis. This section also demonstrates the construction of the empirical model for this paper. The data sources, variable definition and selection, and data characteristics are described in detail. In Chapter 4, Empirical analysis, the impact of institutional quality on foreign direct investment is firstly analyzed using a baseline regression. Then specifically focuses on the moderating effect and heterogeneity in it. This thesis adds market openness and natural resource abundance into the model. It divides the sample into CEE and WE for the comparison of coefficients and significance. At the same time, I also tested model correction and endogeneity control to ensure the robustness of the results. Chapter 5, Discussion, analyses and discusses the empirical results, compares and analyses the results with the existing literature, and explores the reasons and internal logic of the empirical results. Conclusion, combines the content of the whole thesis to draw conclusions, and analyze the impact and shortcomings of this research.

This thesis introduces several innovations. Firstly, it addresses a gap in the current research on institutional quality and foreign direct investment by incorporating moderating effects, which are seldom considered in this field. I use market openness and natural resources as moderating variables to explore how they influence the impact of institutional quality on FDI, thereby enriching the field. Secondly, acknowledging the unique political histories and resulting institutional evolutions of Western and Central European countries, this thesis provides a comparative analysis of the two regions to highlight the differences in their responses to FDI. Given the scant research comparing the impacts within WE countries and CEE countries, this thesis fills a significant gap in the literature.

This thesis also has rich practical significance. The development of foreign direct investment has not been smooth but has fluctuated frequently. 2008 international financial crisis and the 2009 European debt crisis both led to a clear downward trend in global FDI flows. After that, global trade and investment showed a gradual rebound in 2010-2015, reaching a peak in 2015, but lost

its growth momentum in 2016, and global FDI flows still did not return to the historical peak in 2017 due to weak economic growth. In 2019, FDI was hit hard by the impact of COVID-19. Yet the achievement of long-term stable economic development in countries is often constrained by a lack of domestic finance. Against this backdrop, World Bank data shows that economies across the globe are committed to Doing Business reforms, with a sustained and focused reform process keeping economies competitive and urgent. Therefore, this study can make a practical contribution by providing new perspectives on attracting FDI in European countries.

1 Literature review

1.1 Conceptual definition

1.1.1 Definition of institution and measurement of its quality

In recent years, institutions have emerged as a significant topic across various academic disciplines, with numerous scholars dedicated to defining the concept and developing metrics to assess its quality.

There has never been a single definition of institutions, the concept is broad. Jurisprudence defines institutions as laws and legal systems—including constitutions, courts, and statutes—which form the basis of the legal framework and regulate social behavior, rights, and obligations (Llewellyn, 1925; La Torre, 2010; Ross, 2001). From an institutional economics perspective, Thorstein Veblen (1899), the pioneer of old institutional economics, considered institutional change as exogenous transformations originating from the physical and technological environment. He defined institutions as "habits of mind" within a given society. Commons, J.R. (1936), another exponent of old institutional economics, viewed institutions as consisting of collective actions that, together with conflicts of interest, define the economy. The New Institutional Economics tends to define institutions as underlying social rules and codes of behaviour, and sees institutions as comprising three levels: international, national and corporate. The most authoritative scholar in New Institutional Economics is Douglass North. In his seminal work, North (1990) offers a widely accepted definition of institutions, describing them as the "rules of the game" in society. He perceives institutions as artificially imposed limitations that organize political, economic, and social exchanges, influenced by historical and practical elements. These constraints include both external and internal coercive forces that aim to reduce uncertainty in interpersonal transactions. Scott (1995) sees institutions as consisting of three main

factors: regulation, norms and perceptions. Institutions, as defined by Menard and Shirley (2005), encompass all regulations and patterns of conduct designed to mitigate uncertainty arising from imperfect information and limited reasoning. They also serve to exert control over the environment or game and minimize transaction costs. Coase's research focuses on the boundaries of the firm and the problem of externalities. He defines institutions as "systems of rules" that solve resource allocation and coordination problems, and Coase argues that the design and functioning of institutions are critical to solving market failures. Oliver E. Williamson defines institutions as "the integration and control of institutional arrangements", and argues that institutions exist to address transaction costs and coordination problems. Elinor Ostrom, who defines institutions as "a combination of rules, norms and strategies", emphasizes the importance of institutional arrangements based on co-management and resource sharing in addressing the management of public resources.

Considering that the research topic of this thesis is how institutional quality affects the inflow of FDI, which belongs to the field of economics, it basically follows the definition of North, the most authoritative scholar of new institutional economics.

Institutional quality has an abstract and unmeasurable character, but academic research needs to assign certain indicators or characteristics to institutions to measure how good they are. Therefore, more and more institutions and scholars have constructed a large number of indicators to quantify institutional quality.

The Index of Economic Freedom covers more than 184 economies worldwide. It consists of ten components in four categories: Rule of law; Size of government ; regulatory efficiency ; and open markets (The Heritage Foundation, 2024). The Index covers multiple dimensions. This comprehensiveness allows the index to provide a broad perspective on the economic policy environment of a country or region (Miles, 2004). The Global Competitiveness Index (GCI) consists of an overall score and 12 pillars of indicators on institutions, infrastructure, macroeconomic stability, market size, financial institutions, and innovativeness. It is published by the World Economic Forum. The GCI measures how good or bad a country's institutions are through the competitiveness of those countries that are at different stages of development. The variables in the ICRG compiled by the PRS Group are also common indicators for quantifying the quality of institutions. These indicators rely exclusively on expert opinion polls and assess the level of risk in over 140 countries and territories around the world along three main dimensions:

political, economic, and financial. The main advantage of this dataset is that it can be used over a fairly long time horizon (Daude and Stein, 2007). Apart from the commonly referenced indicators, the World Governance Indicators (WGIs) developed by the WB are among the most popular and widely used. These indicators stem from the research of Kaufmann, Kraay, and Mastruzzi (KKZ/KKM). In their 2004 study, they established a comprehensive framework for assessing governance quality across countries, encompassing dimensions such as political stability, rule of law, and corruption levels. This framework provides valuable tools for researchers and policymakers to measure governance. KKZ/KKM defines 'governance' as the traditions and institutions through which power is exercised in a country. Their definition has led to the creation of what are probably the most widely utilized governance indicators. The WGIs are obtained from over 30 surveys that gather opinions and perceptions from a range of sources, such as investment consultancy businesses, non-governmental organizations, think tanks, governments, and international institutions. The surveys are classified into six clusters. The indication is quite comprehensive and carries significant authority (Zhuang, de Dios, and Martin, 2010).

1.1.2 Definition of FDI

In contrast to institutions, foreign FDI is a concept that is clearly and precisely defined. Hymer's (1960) groundbreaking work was the initial elucidation of FDI within the framework of industrial organization. Hymer regarded FDI as a mechanism for transferring both explicit and implicit knowledge, as well as other tangible and intangible business resources, with the purpose of organizing production in foreign countries. Contrary to portfolio investment, these transfers do not require giving up ownership or control. Markusen and Venables (1999) state that FDI is a form of international investing in which an investor from one state establishes or buys an undertaking in another state and owns or controls the assets or equity of the undertaking in that state. Dunning (1981) further states that FDI as the act of investing in one country by firms or persons from another country, with the purpose of gaining financial rewards and exerting control through the acquisition or establishment of a business, and actively participating in the management and operation of these businesses in the foreign country. Outward direct investment is defined by the IMF as an investment that involves a cross-border presence of the investor in one country and the exertion of significant control or managerial influence over an entity based in another economy (IMF, 2009). Regarding the forms of FDI, Root (1994) posits that FDI entails multinational corporations or individuals investing directly in a foreign country, thereby acquiring assets or control over an enterprise. This type of investment typically involves long-term commitments, technology transfers, and the exchange of management expertise. According to

Stewart (1994), FDI generally manifests in the form of equity investments such as greenfield investments, acquisitions, joint ventures, and the reinvestment of corporate earnings. Additionally, as noted by Nayyar (2014), FDI encompasses non-equity forms of investment, including franchising, licensing, and turnkey agreements.

1.2 Theoretical foundations

As economic globalization has progressed, FDI has emerged as a pivotal component of economic activity, garnering widespread scholarly interest over the past several decades. A variety of academic theories have been advanced to elucidate the behavioral patterns and influencing factors of FDI, each distinguished by its unique characteristics. Despite the inherent limitations and specific focuses of these theories, an in-depth examination allows for a more nuanced understanding of FDI's motivations and behaviors. This, in turn, provides a robust theoretical foundation and reference for decoding the dynamics of the evolving economic landscape.

1.2.1 The Internalization Theory

This theory, developed by Buckley and Casson in 1976, is extensively utilized in behavioral studies of multinational corporations. It is a highly specialized principle aimed at elucidating the location of organizational boundaries and how these boundaries shift in response to environmental changes (Buckley and Casson, 2015). Firms may achieve their objectives by creating an internal market through investments in multiple countries, thereby establishing the necessary market infrastructure. If an intermediate products market required by a multinational company is nonexistent or inefficient externally, the company will internalize these transactions. The transaction costs of intra-firm operations are negligible compared to those incurred in external markets. Specifically, a key motivation for internalization is to mitigate the risks and costs associated with relying on imperfect markets (Buckley, 2009). Due to the incompleteness of external markets, especially intermediate product markets, MNCs can consider industry, company, country and location, and establish the concept of "large company networks" to create a unified internal market for the distribution of their products through cross-border investment and operations, thus facilitating the sharing of resources within the firm and reducing the risk of uncertainty and uncertainty in external transactions. This will facilitate the sharing of resources within the firm, reduce the uncertainty of external transactions and the risk of spillover of intangible assets, and reduce transaction costs (Rugman, 2010). Overall, the theory explains both developed and developing country firms' preference for host country institutional quality, market size, geographic distance, cultural distance, etc., when investing abroad, and answers the

phenomenon that most firms choose to operate cross-border in knowledge-intensive industries, innovative industries, etc. (Adegboye, Osabohien, Olokoyo, 2020).

1.2.2 Product Life Cycle Theory

This theory, first proposed by Vernon, a professor of economics at Harvard University, in 1966, examines the life cycle of a product through the lenses of marketing and dynamic comparative advantage. Vernon's theory divides the product life cycle into four distinct stages: introduction, growth, maturity, and decline (Vernon, 1979). It categorizes research subjects into three groups: developed countries (new product innovators), sub-developed countries and developing countries (industrialized countries capable of rapidly absorbing and imitating the technology of developed countries, and countries with labor cost advantages). During the introduction and growth stages, developed countries possess a monopoly on product production technology and institutional advantages, allowing them to meet foreign demand through exports. In the maturity stage, as technology diffuses and market competition intensifies, innovative countries maintain market share by investing in and establishing factories abroad. In the decline stage, the production technology of the product loses its competitive edge, prompting innovative countries to transfer production to developing countries with lower labor costs. (Vernon, 1979) By investing in and setting up factories abroad, these countries can achieve significant production cost reductions. According to this theory, enterprises dynamically adjust their investment strategies based on the developmental stage of their products (Vernon, 1992). This approach surpasses the static analysis level of monopoly advantage theory by integrating the location choices of foreign direct investment with monopoly advantages dynamically. It provides a systematic analysis of the motivations behind FDI. However, limitations remain, such as the theory's inability to explain resource-oriented and technology acquisition-driven outward FDI behaviors (Taylor, 1986).

1.2.3 Transaction Cost Theory

Ronald Coase's initial ideas in "The Nature of the Firm" published in 1937 were the origins of the transaction cost theory. This theory was later developed by economist Oliver E. Williamson in the 1970s. The theory suggests that there are various types of costs associated with market transactions, called "transaction costs". The theory focuses on transaction costs between firms and their impact on the form of economic organization, including their investment decisions (Williamson, 1981). According to Williamson's theory of transaction cost economics, the functioning of markets and the effective distribution of resources rely heavily on two factors: the extent of transactional freedom and the magnitude of transaction costs. The key factors affecting

transaction costs are the specificity, uncertainty and frequency of transactions. When the cost of trading a particular good or service in the market exceeds the cost of producing or providing the same good or service internally, firms will tend to internalize these transactions. In countries with strong institutional environments, the legal institutions is usually more robust and contract enforcement is stronger, which reduces monitoring and enforcement costs for firms. Countries with high institutional quality tend to offer better property rights protection, reducing the risks and costs for foreign investors in acquiring land, buildings or intellectual property. Transparency and stability in policymaking can significantly reduce uncertainty for firms operating in these markets. Policy changes in environments with high institutional quality are usually well foreseen and the process of change is reasonably transparent, reducing the difficulty and cost of future forecasting for firms (Hennart, 2010). Thus transaction cost theory explains well why institutional quality affects FDI.

1.2.4 Theory of Eclectic Paradigm

This theory is a combination of foreign direct investment theories and was first proposed by the famous British economist Dunning in 1977. This theory posits that foreign direct investment results from the combined effects of three factors: ownership advantage, internalization advantage, and location-specific advantage. Ownership advantage, also known as monopoly advantage, refers to the superior attributes of a country's enterprises compared to those of other countries in terms of production factor endowment, production technology, innovation capacity, and management level. Ownership advantage can be divided into three categories: Advantages related to scale, monopoly, and resource acquisition, such as extensive production scales, monopolistic control over certain intangible assets, and proximity to raw materials or product markets; Advantages obtained by subsidiaries from the parent company, including access to low-cost factor inputs, management expertise, research and development outcomes, and market information; Advantages arising from transnational operations, such as the ability of multinational corporations to leverage a larger number of subsidiaries and broader global coverage to fully utilize diverse global factors and market opportunities. Internalization advantage refers to the preference of multinational enterprises to replace unreliable external markets with the internal market of the enterprise to reduce transaction costs caused by incomplete external markets. This approach helps them bypass trade barriers and government intervention, maintain technological monopolies, implement internal price transfers and strategies, enforce strict internal management, and reasonably avoid taxes through the internal transfer of profits and funds. Location-specific advantages pertain to the host country's factor endowments, including abundant natural resources,

strategic geographical locations, large market sizes, favorable policies and regulations, robust economic institutions, and a conducive investment environment. These location factors are inherent to the host country and immovable, directly influencing the location decisions and strategic arrangements of transnational corporations (TNCs) (Dunning, 1977). The ownership, internalization, and location-specific advantages of FDI are interrelated and closely interconnected.

From the perspective of international production trade-off theory, only when the host country has a locational advantage in terms of system costs, the FDI enterprise has an ownership advantage to compete with similar enterprises, and can achieve economies of scale by internalizing the company's production, management and technology, these three conditions are satisfied at the same time, then the FDI enterprise can reap the benefits of cross-border production of industries, and the international production activities can be carried out. international production activities are possible (Cantwell, and Narula, 2001). This shows that institutional differences are only a necessary but not a sufficient condition for international capital flows.

1.3 FDI and institutional quality

With the increasing number of academic studies on the factors affecting FDI, institutional quality has also gradually appeared as a core variable in relevant studies since the end of the 20th century. Existing studies have two main directions. First, macro studies using comprehensive indicators of institutional quality. Second, research focusing on a certain aspect of the institution. At present, there is no uniform conclusion on the role of institutional quality on FDI inflows, but most scholars believe that good institutional quality has a positive role in promoting foreign direct investment.

Many researchers have conducted empirical studies using composite institutional indicators. Their findings consistently show that there is a positive correlation between IQ and FDI. Daude and Stein (2007) created composite indicators by utilizing the WGI. And they discovered that enhancements in the overall institutional quality have a favorable effect on the FDI inflow. However, the extent of this impact differs among various institutions. Specifically, the primary obstacles to FDI inflows are the presence of uncertain laws, regulations, and burdensome regulatory requirements, political instability, policies, and a lack of commitment from the government. Peres and Ameer's (2018) empirical analysis revealed that institutional quality and governance capacity significantly positively impact FDI in both developed and developing

countries. Chen and Jiang (2023) discovered a positive correlation between institutional quality and FDI inflows in G20 countries by using indicators from the components of economic freedom to comprehensively measure institutional quality. They argued that high-quality institutions influence FDI primarily through greater trade openness, enhanced scientific and technological innovation, and industrial structure upgrading. Buchanan, Le, and Rishi (2012) examined the impact of IQ on the quantity and stability of FDI. They accomplished this by constructing composite indicators utilizing a governance index. Their research suggests that the institutional quality has a strong negative correlation with the volatility of FDI, but has a considerable positive effect on the FDI inflows.

Some scholars focus on the heterogeneity of the relationship between institutional quality and FDI. For instance, Globerman and Shapiro (2002) emphasize the impact of comprehensive institutional quality on FDI, noting that this positive correlation is more pronounced in transition economies and developing countries. Hayat (2019) empirically analyzes panel data from 104 countries and finds that enhancing institutional quality helps low- and middle-income countries attract FDI, thereby promoting economic growth. Peres and Ameer's (2018) empirical analyses show that in developed countries both institutional quality and governance capacity have a significant positive impact on FDI. And in developing countries, they find the same pattern, but with relatively weaker significance.

Scholars such as Jensen (2003), Aizenman and Spiegel (2006), and Hakimi and Hamdi (2017) have conducted empirical studies on various aspects of institutions. Aizenman and Spiegel (2006) examine the influence of property rights enforcement strength on the behavior and patterns of multinational firms. They discover that the effectiveness of institutions is strongly linked to the proportion of foreign direct investment in relation to total domestic investment. Knack and Keefer (1995) also highlight the significance of property rights in promoting foreign direct investment. Al-Sadig (2009) noted that corruption reduces the expected rate of return on investment projects. In this context, investors consider the level of corruption in the host country when making foreign investment decisions. Mudambi, Navarra, and Delios (2013) empirically examine FDI inflows in 55 countries and find that the level of government regulation is a major determinant of FDI inflows and the extent of corruption, but corruption itself has no independent impact. Habib and Zurawicki (2002) also explore the impact of corruption on FDI and show that foreign investors usually avoid countries with high levels of corruption because corruption inhibits FDI inflows. Hakimi and Hamdi (2017) used the Corruption Index and carried out a data analysis with the aim

of analyzing the impact of corruption on investment and growth in 15 MENA countries, which showed that corruption severely affects economic growth of these countries as it hinders investment activities and FDI inflows. Aziz (2018) argues that economic freedom has a significant positive impact on FDI inflows to Arab economies and that ease of doing business has a similar impact on FDI. Globerman and Shapiro (2003) conclude that political-legal institutions are crucial determinants of FDI. Mishra (2007) studied IQ and FDI in Asian and Latin American countries and found that government efficiency, political stability, regulatory quality and the rule of law are positively related to FDI. However, the studies by Globerman and Shapiro (2003), and Mishra (2007) put different indicators from the same institution into the same regression equation, potentially causing serious multicollinearity problems and affecting the accuracy of the results.

There are also a number of scholars who have conducted relevant empirical studies specifically on EU countries. Dorożyński, Dobrowolska, and Kuna Marszałek are experts in this field of research in the European region, and their findings provide several pieces of strong literature to support the impact of institutional quality on FDI in EU countries, especially in CEEC. Dorożyński, Dobrowolska, and Kuna-Marszałek (2019) evaluate the level of institutional quality in CEEC and investigate the correlation between institutional quality, as evaluated by a composite index, and FDI. The results show that, overall, those countries that are at the forefront of institutional transformation and have joined the EU are the most efficient in attracting FDI. Dorożyński, Dobrowolska, and Kuna Marszałek (2020) group 17 CEE countries according to the Global Competitiveness Index. They study the impact of institutional quality on FDI inflows to these countries. The results show that there are significant differences in IQ in CEE countries and that institutional quality has a significant impact on the FDI to GDP ratio. Dobrowolska, Dorożyński and Kuna Marszałek updated their study in 2021. They divided the EU member states into groups of countries with similar institutional quality and groups of countries ranked from largest to smallest FDI inflows in terms of FDI inflows as a percentage of GDP. They then examined the relationship between the two groups. Their research study proves once again that there are differences in institutional quality among EU states and that there is a positive correlation between the level of institutional quality and the attractiveness of FDI. Jurčić, Franc, and Barišić (2020) argue that some institutional quality variables have little effect on FDI inflows to Croatia, while better economic institutions have a significant positive influence on FDI inflows to Croatia. Radulović (2020) compares the influence of IQ on FDI between EU and non-EU countries. They point out that in EU countries there is a long-run relationship between all important institutional quality variables and economic growth. In contrast, in non-EU countries (in South-Eastern

Europe), only government efficiency, political stability, absence of violence, regulatory quality and accountability have a significant effect on FDI inflows.

However, some scholars have noted the negative impact or uncertainty of institutions on FDI. Xing and Kolstad (2002) argue that an overly restrictive institutional environment in the host country deters foreign investors, whereas a less restrictive institutional environment significantly attracts them. Li and Resnick (2003) find that an increase in the level of democracy leads to a decrease in FDI inflows after analyzing factors contributing to FDI inflows in 53 countries. Gorg and Greenaway (2004), Hale (2006), and other scholars have found that institutional factors positively affect FDI inflows to developed countries, but their impact on FDI inflows to developing countries remains uncertain. Goswami and Haider (2014) analyze 140 countries from 1984 to 2009 and show that political risk does not negatively impact FDI. Kariuki (2015) in an empirical study analyzed the factors influencing FDI inflows in African countries. He found that financial and political risks have a negative impact on FDI inflows, which is relatively weak. In addition, control variables such as trade openness and level of infrastructure positively and significantly affect FDI. Lucke and Eichler (2016), based on their study of FDI stock factors in 65 countries over the period of 1995-2009, suggest that foreign investors favor countries with higher political system risk and corruption compared to their home countries. Cheung (2012) and others find that China's outward FDI has a peculiar preference for systemic risk, mainly because it is more likely to go to countries with lower levels of economic development and higher resource endowments. Khoury and Peng (2011), using 14 years of data from 18 Latin American and Caribbean countries, show that property rights reforms do not lead to higher FDI inflows without a strong domestic innovation base. Cuervo Cazorra (2006) argues that while FDI from less corrupt home countries is discouraged by more corrupt host countries, FDI from more corrupt home countries may be more willing to invest in these environments. These factors indicate that further exploration is needed to fully understand the complex relationship between institutional factors and FDI. In addition, the seminal textbook *International Macroeconomics* includes a model that, in extreme cases, investment flows from poor to rich countries because of information asymmetry and moral hazard problems. It can be argued that a weak institutional environment exacerbates this moral hazard problem, thus making it more likely that investment will "go uphill".

In addition to examining the direct impact of institutional quality on FDI, some scholars have incorporated moderating variables into their studies, though such research remains limited. Chen

and Jiang (2023) include financial development and natural resource abundance as moderating variables. Their results indicate that two variables positively enhance the impact of institutional quality on FDI. Chengying, Wang, Ali Shah, and Zhou (2023) explore the moderating role of national absorptive capacity in the relationship between institutional quality and FDI inflows, finding that better AC amplifies the effect of institutional quality on FDI. Huang Yuanchong (2021) examines market openness as a moderating variable, demonstrating that it positively influences the effect of institutional quality on FDI.

1.4 Research gap

This chapter surveys the relevant concepts on FDI, and institutional quality. It begins with a particularly detailed literature review on the impact of institutional quality on FDI. Among the existing studies, there are two main ways of research, firstly, constructing a comprehensive indicator of institutional quality for regression analysis; secondly, selecting a particular aspect of the institution to be analyzed. Ultimately, it is found that the impact of institutional quality on FDI is not uniform, and no consistent conclusions have been reached so far. We can find that, firstly, the literature on institutional quality as a core explanatory variable is still relatively small compared with other economic factors, and there is a large research space. Secondly, most of the current studies focus on specific countries or regions and lack systematic cross-country comparative studies. Comparative studies within and across regions would help to gain a deeper understanding of how institutional factors affect FDI in different cultural and economic contexts. Third, in the existing literature, most of the studies on the relationship between institutional quality and foreign direct investment have focused on the direct effects, while studies that consider institutional quality, FDI, and their intrinsic influencing mechanisms, such as the main effect and moderating effect, in an integrated manner are relatively rare. This triple point exposes a clear research gap.

2 Analysis of FDI development and related conditions in EU countries

Since the establishment of the EU in 1993, there has been some volatility in the net inflows of FDI and the ratio of net inflows to GDP in the EU region. However, the overall stock of FDI has been on a steady upward trend. As the EU is a highly economically integrated union of countries and has been at the forefront of economic globalisation, most EU countries attach great importance to inter-country economic exchanges and direct investment. At the same time, however, this has led to a situation in which FDI inflows are very sensitive to the economic and

institutional environment, and are also more vulnerable to external risks and susceptible to various factors such as the international market.

2.1 Analysis of the FDI situation

2.1.1 Analysis of the history of FDI

According to trends in FDI net inflows and their share of GDP in the EU countries (includes all FDI inflows from within and outside the EU), Since 1990, the FDI situation in the EU can be broadly divided into five phases:

(1) The period of high growth (1993-2001)

During this period, the net inflow of foreign direct investment rose from \$69,609.29637 million in 1993 to \$366,252.7702 million. In the 1990s, with the end of the Cold War and the stabilization of the global situation, a wave of reforms was launched in European countries. According to the Single Market Review report issued by the European Union in 1997, most countries fully implemented policies such as financial and trade liberalization, foreign direct investment liberalization and privatization of state-owned enterprises. Countries have revised their foreign investment regulations, expanded the areas of foreign investment and opened up many important industries of national importance, such as energy, electricity and communications. To a certain extent, these initiatives have improved the business environment in the European Union countries and facilitated the inflow of large amounts of foreign direct investment.

(2) Contraction period (2001-2005)

During this period, there was a downward trend in net inflows of FDI and its ratio to GDP. The main reason for the decline in cross-border FDI in 2001 may have been the global recession, particularly the weak economic growth of the three largest economies and the downturn in stock markets, which weakened the ability and intention of TNCs to invest abroad (UNCTAD, 2002). Simultaneously, the bursting of the Internet bubble in 2000 had a major impact on the technology sector, leading to numerous corporate bankruptcies and a significant reduction in investment. This event directly impacted FDI flows, particularly in the high-tech sector (OECD, 2002). FDI net inflows declined for four consecutive years during this period, reaching a nadir in 2005.

(3) Period of rapid growth (2005-2008)

During this period, according to the International Monetary Fund, the EU attracted 41% of global FDI (IMF, 2007). This is mainly attributed to the expansion of the EU market. In 2004 and 2007, the EU welcomed the accession of 10 and 2 new member states respectively, expanding the size and potential of the European internal market and attracting more FDI. The trend of globalization continued between 2003 and 2008, with firms increasingly tending to look for investment opportunities on a global scale. The EU, as a region with a large economy, a sound legal institution and a relatively stable business environment, has attracted a significant amount of FDI. Overall, the EU economy is growing, especially between 2004 and 2007. This economic growth provided more opportunities for foreign investment as companies saw the potential for returns in the European market.

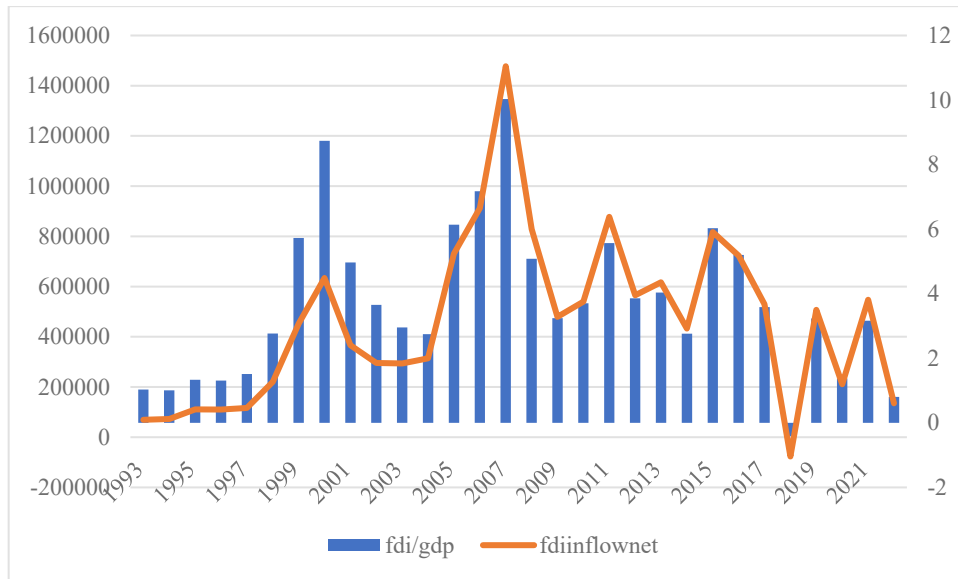
(4) Recessionary period (2008-2013)

The financial crisis of 2008, which led to a global recession, and large exchange rate fluctuations led to an increase in settlement risk, affecting the stable operation of global trade. The global financial crisis caused a high degree of uncertainty in foreign direct investment, which led to a decrease in FDI activities worldwide.

(5) Period of slowing growth (2013 -2021)

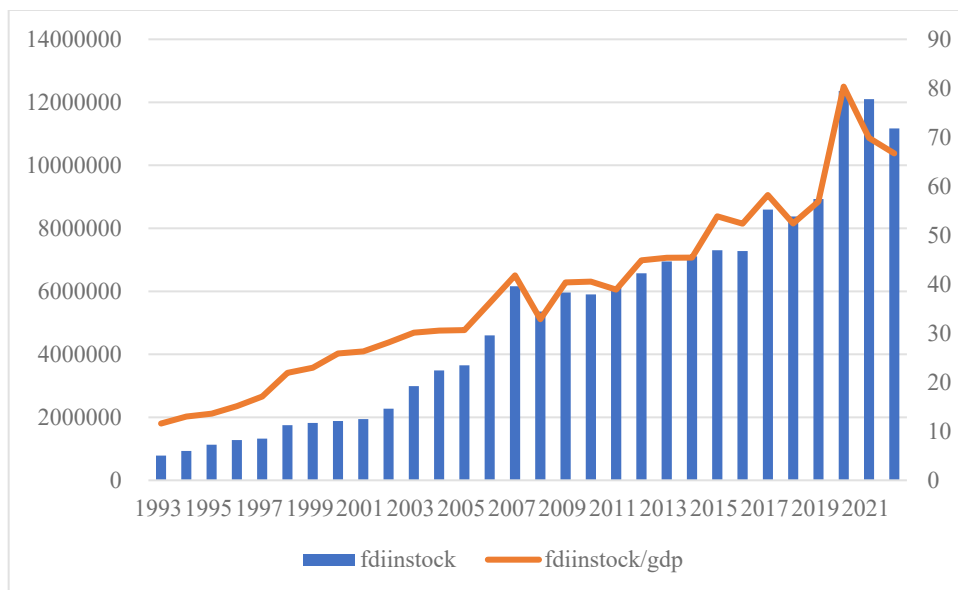
By 2013, FDI began to recover from the crisis. However, net FDI flows relative to GDP showed volatility between 2013 and 2021, suggesting that investors experienced a period of persistent uncertainty. The sovereign debt crisis in the European Community was the source of this uncertainty. The debt crisis has weakened market confidence and made investors sceptical about the fiscal health and economic stability of EU countries. A deterioration in government finances could lead to higher tax revenues or cuts in public spending, which would have an adverse impact on the investment climate and economic growth. Second, the political and economic turmoil triggered by the crisis has increased risks, and investors have become more cautious in their decision-making. And by 2019, net FDI inflows have declined for the third consecutive year. Net FDI inflows turned negative in 2019 due to the COVID-19 epidemic, indicating reverse investment or two-way disinvestment.

Chart1 -Trends in FDI net inflows and their share of GDP in the EU countries, 1993-2021(\$ million)



Data source: WB database

Chart 2-Trends in FDI stock and its share in GDP in EU countries , 1993-2021(\$ million)



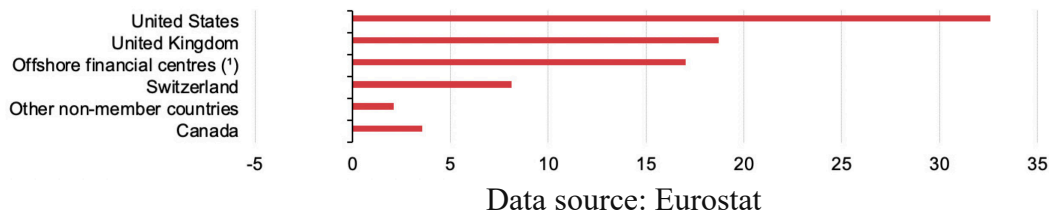
Data source: WB database

2.1.2 Analysis of the distribution of FDI sources

FDI consists of investments between EU Member States (intra-EU FDI) or between Member States and non-EU countries (extra-EU FDI). By the end of 2020, the stock of all inward FDI in the EU (including both intra-EU and extra-EU FDI) accounts for 28.0 % of the global total. Of this, intra-EU FDI accounts for 15.6 % and extra-EU FDI for 12.4 % (EU and the world: key data, 2023). Due to the difficulty of analyzing the intra-EU FDI for each country, only investments in non-EU countries are analyzed and ranked specifically.

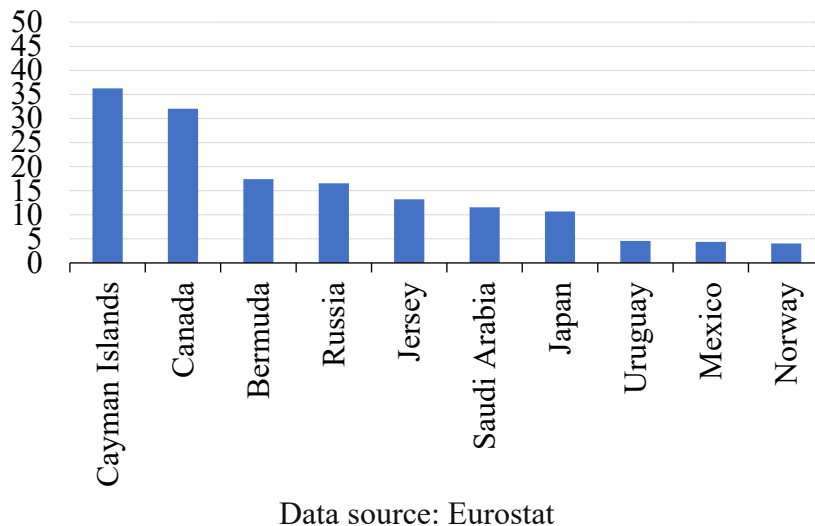
In terms of the distribution of the stock of investment from the rest of the world into the EU's intrastate investment, the EU's inward FDI stock currently comes mainly from developed countries. By the end of 2021, the US holds the largest share of the EU's stock of FDI inflows, holding nearly a third of the rest of the world's investment into the EU's intra-EU, with a share of more than 30%. The UK and offshore financial centres are the second and third largest sources, with shares of between 15 and 20 %. Switzerland is the fourth largest source of investment in the EU, with a share of 9.5 %. Canada is the fifth largest source of investment, with a share of about 4 %.

Chart 3- Extra-EU FDI positions, by partner, EU, 2021(€billion)



Looking at net FDI inflows from the rest of the world, the largest source of inward investment to the EU in 2021 was the offshore financial centre Cayman Islands, contributing €36.2 billion of FDI, slightly ahead of Canada (€32 billion). Bermuda, another offshore financial centre, was the third largest source, followed by Russia (€16.5 billion). Other countries investing more than €10 billion in the EU included Jersey, Saudi Arabia, and Japan.

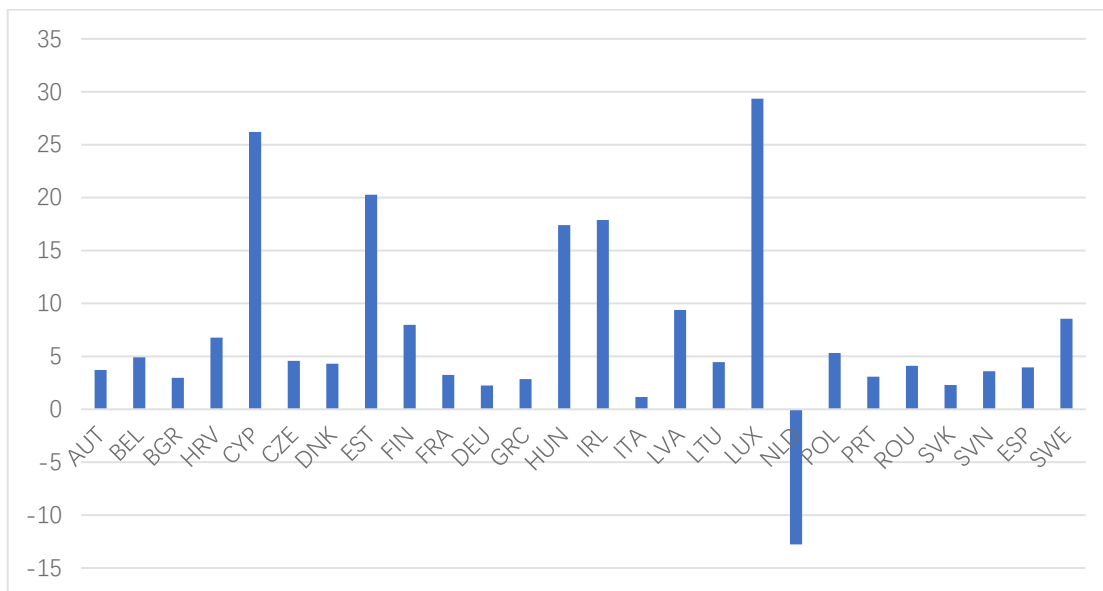
Chart 4-Top 10 partners for flows of extra-EU foreign direct investment, EU, 2021(€ billion)



2.1.3 FDI inflows by country

The chart illustrates the net FDI inflows as a percentage of GDP for 26 countries in 2021. We can observe how different countries are performing in terms of attracting FDI. Norway has the highest net FDI inflow as a percentage of GDP at nearly 35%. Hungary, Lithuania, and Cyprus also have relatively high net FDI inflows as a percentage of GDP, all exceeding 10%. Austria (AUT), Germany (DEU), Italy (ITA), and Portugal (POR) have relatively low net FDI inflows as a percentage of GDP, close to or around 0. Compared to the other countries, Luxembourg has a negative net FDI inflow of around -10 per cent, which may reflect the withdrawal of certain large-scale investments or changes in the economic environment.

Chart 5-A comparison of FDI net inflows as a percentage of GDP in the 26 analyzed countries in 2021



Data source: World Bank

2.2 Analysis of the institutions in the EU

In the 20th century Europe was divided into two camps, Western Europe and Central and Eastern Europe. The countries in the two regions have different histories of institutional development. Most of the countries of CEE were once divided into the Soviet system, while others were part of the communist bloc. Therefore unlike Western Europe, Central and Eastern Europe experienced more drastic and radical institutional reforms during the shift from communism to capitalism (Fischer, and Sahay, 2000.). Due to the difference in the history of institutional development between the two, we will analyze them separately. Later in the empirical analyses, the comparative analyses between WE and CEE are also conducted using grouped regressions.

2.2.1 Institutional development in Central and Eastern Europe

Some of the Central and Eastern European countries experienced the rule of the Soviet-led communist institution in the second half of the 20th century. These countries included Poland, Czechoslovakia, Hungary, Romania, and others. And there are also countries that are part of the communist bloc. The countries of Central and Eastern Europe adopted a socialist economic institution and a one-party authoritarian political institution. The economic institution in these countries was mainly controlled by the state ownership and planned economy, and there was strict central control over the political and legal institutions (Autio-Sarasma, and Miklóssy, 2011; Sebestyen, 2009).

In the early 1990s, with the dramatic changes in Eastern Europe and the collapse of the Soviet Union, these countries underwent drastic political changes, ending communist rule and achieving full-fledged democratic transformation. It can be said that the institutions of the Central and Eastern European countries underwent a complete reconstruction from the 1990s (Bohle, and Greskovits, 2019).

At the end of the 19th century, in order to join the European Union as soon as possible, these countries accelerated the pace of transformation. Central and Eastern European countries must reform their institutions in order to establish a market economy and fulfil the preconditions for EU membership. According to the 1993 Copenhagen Criteria, the first criterion that must be met by a country seeking EU membership is the existence of stable institutions. Therefore, it is necessary to have an institutional framework where institutions operate in line with these criteria and are aligned with the EU institutions in order for the country to become a member of the EU. These CEE countries once again undertook a massive renewal of their institutions in order to join the EU. And they have continued to carry out subsequent institutional reforms after joining the EU in order to keep up with the development of other EU countries. According to the EU's report in 2013, CEE 11 has significantly improved the quality of its business environment by trying to bring its regulations and institutions closer to the most effective ones in Europe. Against this backdrop, the economic growth rate of the CEE 11 continued to be higher than that of other EU member states after the financial crisis. Even in the midst of a recession in the eurozone countries, the EU11 economy grew by 1% in 2012. In 2011, the EU-11 economy grew by 3.5% twice as fast as the rest of the EU. In addition, Poland was ranked as the country with the most improved business environment in the Doing Business Global Ranking 2012. This shows the great efforts and progress made by the CEE countries in terms of institutional quality after joining the EU.

After the transition of the institutions, there are differences in each country's institutions, but we can briefly summarize the general characteristics.

With regard to the political institution, after the overthrow of the past communist regimes, these countries were faced with the reconstruction of political institutions and the establishment of democratic institutions. The establishment of multi-party systems and electoral systems became an important part of the political transformation. Countries held free elections one after another and established multi-party systems, and political power gradually shifted from single-party to multi-party competition. For example, free elections were held in Poland in 1989, which put an end to the one-party rule of the Communist Party and ushered in the era of the multi-party system; and the first free elections were held in Czechoslovakia in 1990, which saw the triumph of the democratic forces and marked the end of the socialist system.

In terms of economic institution, CEE countries gradually abandoned planned economy and implemented market economy reforms, which produced great systemic changes (Tilcsik, 2010.). These countries undertook a series of reform measures such as privatization, price liberalization, trade liberalization, etc. to attract foreign investment and promote economic growth. Burgundy (2007) argues that the post-communist countries of Central and Eastern Europe are perhaps the best examples of the important role that institutions play in economic development.

With regard to the judicial and legal institution, the countries of Central and Eastern Europe usually adopted politically manipulated legal institution during the communist period, and the principles of judicial independence and the rule of law were greatly restricted. During the transition period, these countries began to develop more independent and professional judicial systems to ensure the fair application of the law (Zielonka, 2001). CEE countries have also undertaken judicial reforms aimed at improving the efficiency, transparency, and independence of the judicial system. This includes aspects such as the reorganization of court organizations, the establishment of mechanisms for the professional training of judges, and the reform of trial procedures (Gorynia, Nowak, Trąpczyński, and Wolniak, 2019).

2.2.2 Institutional development in Western Europe

According to reports such as World Bank (2019), OECD (2019) and other authoritative organizations in the world, the quality of institutions in Western European countries has been at

the forefront of the world. But equally, Western European countries have experienced a series of important institutional changes, just a bit more muted compared to the EU (Bohle and Greskovits, 2019).

With globalization, Western European countries undertook a series of market-oriented reforms in the 1990s and early 2000s. These included privatizations of State-owned enterprises, deregulation of capital and labour markets, and the promotion of free trade policies. These reforms were aimed at improving the efficiency of domestic markets and international competitiveness (Kallianiotis, 2012).

The official launch of the euro in 1999 and its circulation in 2002 was an important milestone in the institutional transformation of Western European countries. Currency unification has simplified cross-border transactions and strengthened economic integration, but it has also imposed new demands and challenges on the fiscal policies and banking systems of member countries (Padoa-Schioppa, 2004).

In terms of political institutions, Western European countries began to focus on local autonomy and pluralism. Some countries have strengthened the power of local governments and promoted the development of local politics and the building of local democracy. At the same time, the political party system has also shown a trend towards pluralism, with the emergence of new political parties, making the political system more diverse and inclusive.

3. Hypotheses, Model and variable description

3.1 Formulation of questions

In order to fill the existing research gap in the literature, and in order to verify the correctness of the moderating variables proposed by Chen and Jiang(2023), this paper firstly poses two research questions: 1. Is the institutional quality of EU countries positively related to FDI inflows? 2, Are market openness and natural resources moderating variables? Do they enhance the role of institutional quality in attracting FDI?

Moreover, when conducting historical analyses on institutional quality and FDI, it is clear that Western Europe and Central and Eastern Europe exhibit very different histories of institutional evolution and economic trajectories. Given the significant differences in the political, economic

and social structures of these two regions, a single model may not accurately capture the impact mechanisms specific to each. Therefore, this study adopts the strategy of distinguishing between Western and Central and Eastern Europe, and conducts independent regression analyses on data from these two regions separately, aiming to find out whether the impact of institutional quality on FDI inflows is significantly different in Western and Central and Eastern Europe. Based on this, this thesis asks a third research question: Is the impact of institutional quality on FDI inflows different in Western and Central and Eastern European countries?

3.2 Formulation of hypotheses

Based on the existing theoretical results and combined with the actual situation of the sample, we can believe that good institutional quality is conducive to improving the efficiency of institutional operation, reducing the costs and risks in the transaction process, protecting the innovation and interests of investors, and improving the stability and certainty of transaction expectations, thus promoting the creation of more economic opportunities. On this basis, most scholars, such as Buchanan and Le (2012), believe that there is a positive interaction between IQ and FDI, and that good institutional quality is conducive to attracting FDI inflows. Therefore we can put forward the following hypothesis:

Hypothesis 1: Institutional quality is positively correlated with FDI net inflows % of GDP to the EU.

Hypothesis 2: The market openness strengthens the role of institutional quality in attracting FDI.

Hypothesis 3: The abundance of natural resources weakens the role of institutional quality in attracting FDI.

In the third section of the study, we can see that the institutional level of WE has been at the forefront of the world. Compared to the disruptive institutional reforms in CEE, institutional change in Western Europe has been relatively stable. In addition, according to WB (2013), in the years following the financial crisis, at a time when other EU economies were experiencing a double-dip recession, the 11 EU countries in CEE continued to attract FDI, with the Czech Republic, Estonia, and Slovakia experiencing FDI levels in 2012 that were roughly equal to their pre-financial crisis levels, and Poland and Bulgaria experiencing FDI inflows in 2012 that Poland

and Bulgaria experienced significant increases in FDI inflows in 2012. This is closely linked to institutional reforms in Eastern Europe. Inspired by this fact, the paper proposes the following hypothesis:

Hypothesis 4: The impact of institutional quality on FDI inflows is different in Western and CEE countries. There is a more significant effect in CEE countries.

3.3 Sample description

This thesis uses EU countries as the study population. In order to enrich the observations of the panel data, the paper selects as many countries and longer time horizons as possible among the 27 countries of the EU. Due to various reasons such as data release, among others, there are missing cases of early economic and social data for Malta. In view of this, in order to pursue a balanced panel as much as possible and to ensure that complete country and year data are available for each variable, this thesis excludes countries with missing data, resulting in a final sample of 26 countries (see table for details). In addition, this sample of 26 countries is subdivided into two groups, (Western European countries and Central and Eastern European countries) as this paper will examine heterogeneity. This is mainly based on the political camps that existed before the collapse of the Soviet Union. This division makes it possible to classify the countries into a group that basically shares a common direction of institutional development. Since the complete institutional quality data are only documented in 2001, and data on some of the control variables are largely missing until 2004, this paper uses 2004 as the start of the study period. 2004 is also when most of the CEE countries joined the EU, thus avoiding the effects of the different timing of their accession to the European Union. The total number of data observations is 468. The panel is small in T and large in N, and is a short panel covering both the time dimension and the cross-section dimension.

Table 1-List of WE sample countries

Austria	Belgium	Denmark	Finland	France	Germany
Greece	Ireland	Italy	Luxemburg	Netherlands	Portugal
Spain	Sweden				

Table 2-List of CEE sample countries

Bulgaria	Croatia	Cyprus	Czechia	Estonia	Hungary
Latvia	Lithuania	Poland	Romania	Slovak Republic	Slovenia

3.4 Variable selection and data sources

3.4.1 Explained Variables

The explained variable is foreign direct investment. Drawing on the common practice of relevant empirical analyses such as Buchanan (2012), Sabir (2019), Jude and Levieuge (2017), Cavallari and d'Addona (2013), the variable is expressed as the share of net FDI inflows to the host country as a percentage of GDP in the current year, and includes both intra-EU FDI and non-EU FDI. Data are from the World Bank dataset.

3.4.2 Core Explanatory Variables

The core explanatory variable of this thesis is institutional quality (IQ). As mentioned in the literature review section, due to the subjective and abstract nature of institutional quality and its multifaceted interpretive nature, academics have not yet developed a single recognized indicator to quantify institutional quality. Current international authoritative indicators of institutional quality include the Index of Economic Freedom, the Worldwide Governance Indicators, and the Global Competitiveness Index and so on.

Based on the discussion of the definition of institutional quality above, institutions are viewed as social rules of the game that constrain individual behaviour and reduce uncertainty in interpersonal transactions through internal and external coercive forces (North, 1990). This definition emphasizes the multidimensionality and wide-ranging impacts of institutions, which include aspects such as the operational efficiency of government institutions, the completeness of the legal system, political stability, the level of the rule of law, the level of corruption, the level of competition in the market, etc. The WGI, as a comprehensive indicator of institutional quality, is more in line with this theoretical relevance and is able to reflect the impacts of institutions on various aspects in a more comprehensive way.

In detail, the outstanding contribution of Huther and Shah (1996) is to link governance to the concept of institutions. They define it as "all aspects of the exercise of power through formal and informal institutions in the management of a country's resource endowment". The work of Kaufmann, Kraay and Mastruzzi's (KKM, 2003) work explicitly articulates the inheritance of this concept, combining governance with measures of institutional quality. KKZ/KKM propose a working definition of 'governance': the traditions and institutions through which power is exercised in a country. This resulted in what is now probably the most widely used set of

governance indicators. In addition, the WGI is a global indicator produced jointly by World Bank and is widely recognized for its provenance and authority. The WGI is classified and divided into six groups: control of corruption, government effectiveness, political stability and absence of violence, regulatory quality, rule of law, voice and accountability. These six sub-dimensions measure the current status and potential of institutional development in each country. The sub-indices have a range from -2.5 to 2.5, where higher values indicate better institutional excellence in the corresponding domains.

Globerman and Shapiro (2002) contend that these indices exhibit a strong correlation, posing challenges in their utilization inside a regression equation. This research employs the same approach as Globerman and Shapiro (2002) and Buchanan, Le and Rishi (2012) by utilizing principal component analysis (PCA) to extract the initial main components of the six governance metrics. I designate this composite measure as IQ.

So we use PCA method to constructing explanatory variables. The correlation test was first performed on the six variables, and the results showed that there was a strong correlation between the six variables, which confirms Globerman and Shapiro (2002), and justifies the methodology of factor analysis that extracted the first principal components of the six governance indicators.

Table3-Correlation Coefficient

	cc	ge	ps	rq	rl	va
cc	1	0.949***	0.616***	0.892***	0.961***	0.941***
ge	0.942***	1	0.638***	0.876***	0.959***	0.908***
ps	0.601***	0.631***	1	0.569***	0.638***	0.630***
rq	0.886***	0.866***	0.544***	1	0.904***	0.853***
rl	0.954***	0.950***	0.618***	0.899***	1	0.925***
va	0.925***	0.901***	0.634***	0.845***	0.920***	1

The KMO test was then performed and the results showed that the KMO value was 0.93, which is much greater than the criterion of 0.6, making this group of variables very suitable for the use of principal component analysis.

Table4- Bartlett test of sphericity and KMO test

Chi-square.	=	4274.761
Degrees of freedom	=	15
p-value	=	0.000
HO: variables are not intercorrelated		
KMO	=	0.927

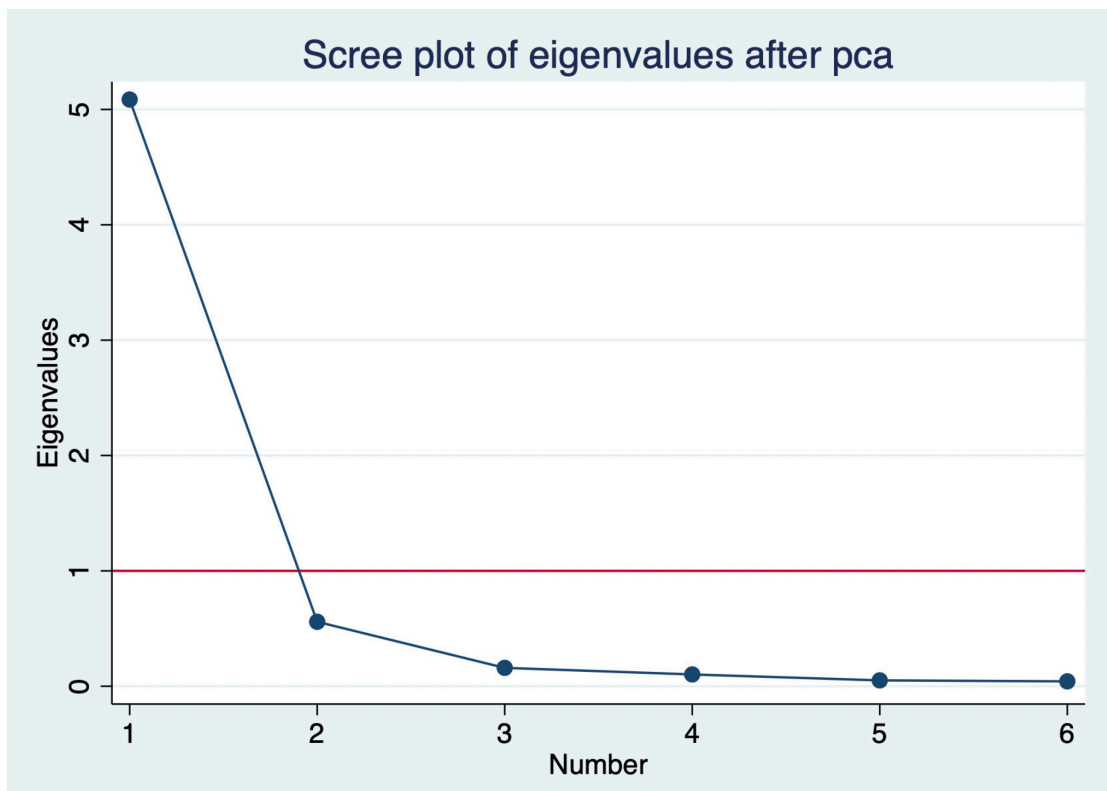
Table 5 shows that only the first component has an Eigenvalue greater than 1, i.e., the number of retained factors is 1, which indicates that there is one factor that can represent all the variables. We can see that the Proportion of the first component reaches 84.6%, which indicates that the first principal component can represent the variables well.

Table5- Principal components

Component	Eigenvalue	Difference	Proportion	Cumulative
Comp1	5.08617	4.52743	0.8477	0.8477
Comp2	.558742	.399228	0.0931	0.9408
Comp3	.159514	.0572134	0.0266	0.9674
Comp4	.102301	.0515644	0.0171	0.9845
Comp5	.0507364	.00820143	0.0085	0.9929
Comp6	.042535	.	0.0071	1.0000

Again, as can be seen from this graph, the first principal component is very highly representative and possesses sufficient representativeness to represent this data set.

Chart 6-Scree plot of eigencalues after pca



We have ranked the IQ averages between 2014 and 2021 in order of high and low to compare the differences in institutional quality between countries. It can be seen that highly rated countries have ratings above 0.8. These countries stand out among all assessed countries in terms of strong institutional quality, which is generally characterized by efficient governance structures, transparent policy making processes and high-quality public services. Medium-scoring countries,

with ratings between -1.0 and 0.8, perform moderately well or moderately poorly in terms of institutional quality: these countries perform well in terms of governance and public services, but there is room for improvement. Low-rated countries, with a rating of -1.0 or below, are countries that perform poorly in terms of institutional quality among all countries assessed: these countries face serious governance challenges, such as corruption problems, administrative inefficiencies, and weak legal institutions, which affect the quality of their institutions, which may limit their economic and social development. What is clear is that Western European countries mostly have better institutional quality, which validates our analysis in 2.2 (Analysis of the institutions in the EU).

Table6-Average IQ rating scale

	Country	Average IQ
High	FIN	1.57705556
	DNK	1.45725167
	SWE	1.38063667
	LUX	1.36921
	NLD	1.26308278
	AUT	0.98632461
	IRL	0.88446361
	DEU	0.87852622
Medium	BEL	0.50114833
	EST	0.19865094
	FRA	0.26063189
	PRT	-0.0037504
	CYP	-0.168608
	CZE	-0.1762679
	SVN	-0.2029846
	LTU	-0.3770294
	SVK	-0.5849686
	LVA	-0.6062701
	HUN	-0.7367038
	POL	-0.6699882
	ITA	-0.8882723
Low	GRC	-1.2156506
	HRV	-1.3254089
	BGR	-1.7203378
	ROU	-1.745855

3.4.3 Control variables

There are eight control variables:

(1) Labor force(laborforce): The labor force participation rate is defined as the proportion of all persons supplying labor for the production of goods and services to the total population over a specified period of time (WB). The labour force participation rate reflects the supply of labour in the host country. Referring to practices such as Cueva and Alvarado (2019), the indicator is expressed as Labour force participation rate, total (% of total population ages 15-64). This data is derived from the WB database. According to Boghean, and State (2015); Aggarwal, (2005); Jiménez (2011) and others, labour force participation is an important factor in the location choice of FDI, and FDI tends to flow to countries with more labour inputs.

(2) Level of Inflation (inflation): using scholars such as Jude and Levieuge, (2017); Hayat, (2019); Sabir, Rafique and Abbas (2019) as a reference, Inflation, consumer prices (annual %) was used to denote the variable. Inflation as measured through the consumer price index reflects the annual percentage change in the cost of a basket of goods and services purchased by the average consumer (WB). An increase in this value indicates a depreciation of the host country's currency, signaling a loss of purchasing power. Data from WB Statistical Database. High levels of inflation in the countries where FDI is taking place can deter FDI inflows by causing uncertainty and increasing investment risks. Additionally, it can make it challenging to plan for the long term in terms of pricing and profit expectations (Reece and Sam, 2011). Asiedu's (2002) study also suggests that high inflation rates generally have a negative impact on FDI, although the magnitude of this impact varies by region and by other economic conditions. Busse and Hefeker (2007) note that inflation, as an indicator of macroeconomic stability, has a significant impact on investment decisions. Overall, while high inflation may reflect economic dynamism, excessive inflation tends to increase investment risk and thus dampen FDI inflows. Thus, inflation may also be an important factor affecting FDI inflows.

(3) Infrastructure level (internet): the variable was expressed using Individuals using the Internet (% of population) with reference to Oladipo (2010); Pascual (2017); Moosa & Cardak, 2006, among others. The data were obtained from the WB database. Infrastructure has a significant positive impact on FDI inflows (Asiedi & Guimera, 2006; Resmini, 2000). Infrastructure, such as improved communication networks, can significantly reduce the cost of communication for firms. For foreign investors, these costs play a decisive role in the decision to set up manufacturing or service facilities in a country, especially for industries that rely on high technology and real-time data exchange. By improving infrastructure, foreign firms can be provided with a more cost-

effective operating environment. When considering cross-border investment, investors usually give preference to countries that can provide the necessary physical and technological support (Wheeler, and Mody, 1992; Kumar, 2006). Thus, the level of infrastructure is an important factor influencing FDI inflows.

(4) Market size (lnGDPper): using Garibaldi, Mora, Sahay, & Zettelmeyer (2002); Busse and Hefeker (2007); Ullah and Khan (2017); Wach (2016) and others as a reference, the host country's GDP per capita (current US\$) to denote the variable as a measure of a country's level of economic development and national income. The large order of magnitude of this indicator compared to other variables. Therefore, in order to reduce the effects of extreme values and heteroskedasticity, we logarithmize this variable. GDP per capita is an important indicator of a country's level of economic development and market potential. Chakrabarti (2001) suggests that the size of the market, as determined by the GDP or GNI per capita, is a crucial element in explaining foreign investment. When transnational corporations (TNCs) intend to manufacture goods for the domestic market (known as horizontal or market-seeking FDI), the size of the market might serve as an indicator of the desirability of a certain area for investment. While several researchers suggest that the correlation between GDP per capita and FDI may not be particularly robust, the majority of empirical investigations affirm the significance of this connection (Busse and Hefeker, 2007). For example, Blonigen and Wang (2005) find that countries with higher GDP per capita are usually able to attract more FDI because they have more stable economic environments and higher market demand. Resmini (2000) examined the determinants of EU FDI in CEE countries and found that countries with high GDP per capita are more likely to attract FDI in manufacturing and services. Thus, GDP per capita may be an important control variable.

(5) Level of domestic investment (gcf). This paper refers to Buchanan, Le, and Rishi, (2012); Ullah, and Khan (2017). et al. to express the level of domestic investment in a country using gross capital formation of gdp. The data is obtained from the World Bank database. Domestic investment is a good measure of the investment climate in the host country. Buchanan (2012) show that domestic private investors enjoy more information about the business environment in the host country than foreign investors. With asymmetric information, domestic investment signals to foreign investors about the investment climate of the host economy (Buchanan et al., 2012). Therefore the level of domestic investment is an important control variable.

(6) Tax level (tax). In this thesis, we refer to De Mooij, and Ederveen (2003); Bellak, Leibrecht, and Riedl (2008), among others, to represent a country's domestic investment climate. Denoted by TAX revenue of GDP. Domestic investment is a good measure of the investment climate in the host country. The review article by De Mooij, and Ederveen (2003) summarises several empirical studies on the relationship between taxes and FDI. The article notes that lower corporate tax rates typically increase a country's FDI inflows. The study provides evidence of the broader impact of tax policy on the attractiveness of FDI. A study by Desai, Foley, and Hines (2006) examines the impact of tax policy on the use of tax shelters by multinational corporations. The study finds that higher tax levels drive firms to seek out countries with lower tax rates to invest in and thus legally avoid taxes. Bellak, Leibrecht, and Riedl (2008) analyze how tax policy affects the ability of CEEC to attract FDI. The study finds that tax incentives and lower corporate tax rates are important factors in attracting FDI in these countries. Thus taxation is an important control variable.

(7) Innovation level (Inpatent). This paper follows Chen, and Jiang (2023) et al. and uses the number of resident patent applications to express this variable as a measure of the innovation level of the host country. The data are obtained from the World Bank database. Since the difference in the number of patent applications across countries is very large, with a standard deviation of 9224. we therefore take this variable in logarithms in order to reduce the effects of extreme values and heteroskedasticity. The level of innovation has a significant effect on foreign direct investment inflows. For example, Marin and Bell (2006) show that subsidiaries of multinational corporations can better realize technological spillovers in countries with high levels of innovation, which in turn promotes FDI inflows. This is further supported by Crescenzi, Gagliardi, and Iammarino (2015), who find that the high level of innovation in the European region is able to attract more FDI, mainly because these regions offer more local opportunities and innovation resources. Thus, the level of innovation significantly affects FDI inflows through mechanisms such as technological spillovers, market efficiency, human capital and policy support.

(8) Eurozone or not (eurozone). In this thesis, we follow Dorożyński, Dobrowolska and Kuna-Marszałek (2020) and use "being in the eurozone or not" as a control variable. We use dummy variables, defining countries that are in the euro area as 1 and countries that are not in the euro area as 0. Being in the euro area may affect foreign direct investment (FDI) inflows. Eurozone countries use a common currency (the euro), which reduces exchange rate risk in cross-border

investment. Currency stability usually increases investor confidence and may increase FDI inflows. There is a higher degree of co-ordination of fiscal and economic policies among Eurozone member countries, which helps to create a more stable and predictable investment climate. There is a higher degree of economic integration among euro area member countries, including a harmonized monetary policy and closer fiscal cooperation. This integration contributes to more efficient markets and lower transaction costs, which in turn attracts more FDI (De Sousa and Lochard, 2006). De Sousa and Lochard (2006) also discovered that the influence of the euro on foreign direct investment is more significant among euro area countries who are geographically and economically marginalized. Kılıc, Bayar, and Arıca (2014) analyze the influence of the European Economic and Monetary Union on foreign direct investment inflows to the euro area. Their study exposes a significant positive correlation between monetary union and FDI inflows.

3.4.4 Moderating variables

(1) Natural resource abundance (Natural). Drawing on Chen and Jiang (2023), natural resource abundance is used as a moderating variable. The data from the WB database, meaning total natural resource rents (% of GDP). Their findings suggest that natural resource abundance positively enhances the impact of institutional quality on FDI. Therefore, we argue that natural resources may have an impact on the relationship between institutional quality and FDI.

(2) Trade openness (openness). Drawing on Huang Yuanchuan (2021), market openness is used as a moderating variable. This figure is obtained by dividing GDP by the sum of total exports and total imports. Wei (2000) finds that countries with lower levels of corruption are more effective in attracting FDI in the global market. According to Javorcik (2004), an open market environment promotes technological spillovers, which attracts more high-technology investments. In this context, the economic and policy stability of the investment destination as well as the quality of the legal and property rights regime are particularly important for the protection of technology and innovation. We therefore include market openness as a moderating variable.

Table7-Description of control variables

Type	Label name	Meaning	Data source
Dependent variable	FDI	FDI net inflows (% of GDP)	World Bank Database
Independent variable	iq	Global governance indicators (Political institutional quality)	World Bank Database

Control variables	lngdpper	Ln (Per capita GDP)	World Bank Database
	inflation	Consumer price index(annual%)	
	gcf	Gross capital formation of GDP	
	laborforce	Labor force participation rate, total (% of total population ages 15-64)	
	eurozone	official exchange rate	
	tax	Tax revenue (% of GDP)	
	internet	Individuals using the internet of population	
Moderating variables	openness	Total imports and exports divided by GDP	World Bank Database
	natural	Natural resources abundance: Total natural resource rents (% of GDP)	

3.5 Data characterization

3.5.1 Descriptive statistics

Descriptive statistics provide the mean, standard deviation, maximum, and minimum values of each variable, specifically reflecting the distribution and range of fluctuation of each variable. Therefore, to understand the basic characteristics of the data, this thesis begins with descriptive statistics of the raw data. The main variables in this paper are shown in the table. Overall, the variables used in this paper have 468 observations, and there is no missing data, which avoids the estimation bias caused by missing data. Specifically, institutional quality has a minimum value of -2.119 and a maximum value of 1.88. The wide range indicates that there are significant differences in institutional quality across countries.

In addition, the individual variables are realistic. For example, the maximum value of the percentage of people using the “internet” is 98.05, and the minimum value is 21.5, reflecting the rapid growth of Internet usage over the past 20 years. FDI has a minimum value of -40.09 and a maximum value of 203.6. The maximum value of FDI occurs in Luxembourg, probably due to Luxembourg's high-quality infrastructure, important geographic advantages, and extremely well-developed service sectors, especially financial services, which have successfully attracted a large amount of FDI.

“Openness”, with a maximum value of 382.35, is also found in Luxembourg. This is due to the fact that Luxembourg is a small and open economy with a relatively small domestic market, relying on international trade to sustain its economic growth and development. Additionally, Luxembourg is located in the center of Europe and is a trade and transport hub within the European Union. Its economy is highly dependent on the services sector, particularly the financial services sector, which provides a large number of financial services mainly oriented towards the international market. To support its financial services sector, Luxembourg also needs to import a large number of related services and technologies. This results in a very high level of exports and imports.

The maximum value of total natural resources is found in Poland, which corresponds to the richness of the natural resources the country possesses. Poland is Europe’s largest producer of hard coal and copper and is also rich in salt.

Table8-Table of descriptive statistics

Variable	N	Mean	Min	Max	SD
fdi	468	9.603	-40.09	203.6	27.28
iq	468	0	-2.119	1.88	1
gcf	468	22.98	12.1	39.83	4.609
lngdpper	468	10.17	8.269	11.7	0.729
inflation	468	2.085	-1.429	10.36	1.992
laborforce	468	71.83	60.1	82.93	5.03
internet	468	70.89	21.5	98.05	18.24
tax	468	21.24	10.43	48.56	5.215
lnpatent	468	6.421	0	10.8	1.979
urozoneotnot	468	0.607	0	1	0.489
totalnatural	468	0.551	0	3.16	0.631
openness	468	1.398	53.9	382.35	0.708

3.5.2 Variance inflation factor test

The Variance Inflation Factor (VIF) is used to test the multicollinearity of each regression equation, and the results show that the maximum VIF value is less than 5, so there is no multicollinearity in the regression equations selected in this paper. The regression results are reliable.

Table9-VIF test

Variable	VIF	1/VIF
iq	3.68	0.27

lngdpper	4.01	0.25
laborforce	2.61	0.38
urozoneotnot	1.63	0.61
internet	2.71	0.37
inflation	1.56	0.63
gcf	1.46	0.63
tax	1.49	0.67
lnpatent	1.29	0.77
Mean VIF	2.28	

3.5.3 Model construction

When estimating a panel data model, it is first necessary to choose the form of model setting. There are mainly three forms of panel data models: fixed effect model, random effect model and mixed estimation model, and this paper adopts F-test and Hausmann test to make a comprehensive judgment. Observing the table, we can see that the p-value of F-test is 0.0000, so the original hypothesis of "random effect model is better" is strongly rejected, and the p-value of Hausman's test is 0. Therefore, it can be safely assumed that the fixed effect model is better than the mixed regression model. To sum up, this paper chooses to establish a fixed-effects model with both time and individual fixed effects.

Table10-Hausmann test

Test of H0: Difference in coefficients not systematic
chi2(10) = 52.63
Prob > chi2 = 0.0000

In order to test hypothesis 1, based on the existing research, the econometric model is set as 4-1 in this paper. In the regression equation, i and t represent country and year, α_1 - α_{10} are the presumed parameters. in the equation, μ_i , γ_t and $\varepsilon_{i,t}$ represent individual fixed effects, time fixed effects and measurement error terms respectively. The following equations also keep the same meaning. In model 4-1, if the coefficient (α_1) is significant, it means that institutional quality has a significant effect on FDI. If the coefficient (α_1) is significantly positive, it means that the improvement of institutional quality has a significant promotion effect on FDI, and hypothesis 1 holds. If the coefficient (α_1) is significantly negative, it means that the improvement of institutional quality has a significant inhibiting effect on FDI, and hypothesis 1 is not valid.

$$FDI_{i,t} = \alpha_0 + \alpha_1 IQ_{i,t} + \alpha_2 lngdpper_{i,t} + \alpha_3 inflation_{i,t} + \alpha_4 tax_{i,t} + \alpha_5 gcf_{i,t} + \alpha_6 er_{i,t} + \alpha_7 laborforce_{i,t} + \alpha_8 internet_{i,t} + \alpha_9 lnpatent_{i,t} + \mu_i + \varepsilon_{i,t} + \gamma_t \quad 4-1$$

Testing hypotheses 2 and 3, this thesis constructs Models 4-2 and 4-3. The core explanatory variable IQ and the two moderator variables are centred. We then construct two interaction terms for the interaction of institutional quality and trade openness (*newopenness*) and the interaction of institutional quality and trade openness (*newnatural*). Existing studies have shown that the regression equations for moderating effects are composed of the moderating variables, the interaction terms, the original core explanatory variables and the control variables. The control variables for this equation remain consistent with the baseline regression. However, since the inclusion of interaction terms may lead to multicollinearity, which affects the significance of the original core explanatory and moderating variables, we follow the existing authoritative practice and only consider the significance of the interaction terms. Drawing on this empirical approach (Hayes, 2017), this thesis constructs the model (4-2, 4-3) with the interaction term (*newopenness*, *newnatural*), the original core explanatory variable (IQ) and the moderating variables (*natural* and *openness*) as the core independent variables, and the explanatory variable (FDI) as the dependent variable, whilst keeping the control variables consistent with the base regression (4-1). Observing the coefficients β_1 and β_{12} , if the coefficients β_1 and β_{12} are significant, it means that there is a moderating effect of trade openness and natural resource abundance in the degree of direct and immediate impact of institutional quality on foreign business. Further, if the coefficients α_1 and β_{12} have the same sign, the moderating variable has a positive moderating effect, which will strengthen the main effect, i.e., there is an amplifying effect of trade openness on the quality of the institution on FDI, and the hypothesis 2 holds. If the sign of coefficients α_1 and β_1 are different, the moderator variable will weaken the main effect, i.e., natural resource abundance will weaken the influence of institutional quality on FDI, and hypothesis 3 holds.

$$FDI_{i,t} = \beta_0 + \beta_1 newnatural_{i,t} + \beta_2 natural_{i,t} + \beta_3 IQ_{i,t} + \beta_4 lngdpper_{i,t} + \beta_5 tax_{i,t} + \beta_6 gcf_{i,t} + \beta_7 er_{i,t} + \beta_8 laborforce_{i,t} + \beta_9 Internet_{i,t} + \beta_{10} lnpatent_{i,t} + \mu_i + \varepsilon_{i,t} + \gamma_t$$

4-2

$$FDI_{i,t} = \beta_{11} + \beta_{12} newopenness_{i,t} + \beta_{13} openness_{i,t} + \beta_{14} IQ_{i,t} + \beta_{15} lngdpper_{i,t} + \beta_{16} inflation_{i,t} + \beta_{17} tax_{i,t} + \beta_{18} gcf_{i,t} + \beta_{19} er_{i,t} + \beta_{20} laborforce_{i,t} + \beta_{21} Internet_{i,t} + \beta_{22} lnpatent_{i,t} + \mu_i + \varepsilon_{i,t} + \gamma_t$$

4-3

Deriving hypothesis 4, the paper constructs model (4-4) and (4-5). The regression equation is consistent with the base regression, and the sample is divided into two groups of Central and Eastern Europe and Western Europe for regression separately. This regression equation still takes IQ as the core independent variable and FDI as the dependent variable to construct the model. If the coefficient δ_1 is not significant or the significance is relatively weak, it means that institutional quality has no significant or relatively weak promotion effect on FDI in CEE countries, i.e., hypothesis 4 holds.

$$FDI_{i,t} = \delta_0 + \delta_1 IQ_{i,t} + \delta_2 \ln gdp_{i,t} + \delta_3 \ln inflation_{i,t} + \delta_4 tax_{i,t} + \delta_5 gcf_{i,t} + \delta_6 er_{i,t} + \delta_7 laborforce_{i,t} + \delta_8 Internet_{i,t} + \delta_9 \ln patent_{i,t} + \mu_i + \varepsilon_{i,t} + \gamma_t \quad 4-4$$

$$FDI_{i,t} = \delta_{10} + \delta_{11} IQ_{i,t} + \delta_{12} \ln gdp_{i,t} + \delta_{13} \ln inflation_{i,t} + \delta_{14} tax_{i,t} + \delta_{15} gcf_{i,t} + \delta_{16} er_{i,t} + \alpha_7 laborforce_{i,t} + \alpha_8 Internet_{i,t} + \alpha_2 \ln patent_{i,t} + \mu_i + \varepsilon_{i,t} + \gamma_t \quad 4-5$$

3.5.4 Heteroscedasticity test

When performing regression, it is easy to generate heteroskedasticity, which can seriously affect the robustness of the results, so before performing regression analysis, the equations were first tested for heteroskedasticity, and the results are shown in the table. $p=0$, which is less than 1% level of significance, so the original hypothesis is rejected and heteroskedasticity exists. Therefore SE robust to heteroscedasticity, standard errors are added to all regressions below.

Table 11-Breusch-Pagan/Cook-Weisberg test for heteroskedasticity

H0: Constant variance
Prob > chi2 = 0.0000
chi2(1) = 229.55

3.5.5 Autocorrelation test

In order to test for the presence of autocorrelation in the variables, the Wooldridge test was used in this paper. The p-value is 0.9440. since the p-value is greater than the 10% significance level, we cannot reject the null hypothesis, which means that there is no significant autocorrelation in this panel data.

Table 12-Autocorrelation test

Test of H0: Difference in coefficients not systematic
Prob > F = 0.9440

4 Regression analysis

4.1 Baseline regression

4.1.1 Baseline regression

According to the regression results, the R² is 0.673, which indicates that the model has high explanatory power. The coefficient of the core explanatory variable (IQ) is 9.992 and passes the 1% significance test, indicating that the improvement of institutional quality has a significant positive impact on the growth of FDI, which increases by 9.992 p.p. when institutional quality rises by 1. This indicates that hypothesis 1 is valid. Good and stable institutional quality in the host country can help improve the business environment, raise foreign investors' expectations of the country's investment returns, and ensure the stability of long-term FDI returns, which can promote foreign direct investment in the country.

We also briefly analyze the results of the control variables. However, we will discuss these results specifically in Chapter 5.

The coefficient of $\ln g d p p e r$ is -49.404 which passes the 1% significance test. This indicates that there is a significant negative relationship between logarithm of market size and FDI. The coefficient of “laborforce” is 2.256 which is significant at 1% level which indicates that labour force participation is crucial in attracting FDI. The coefficient on internet penetration is significant at the 10% level, reflecting the positive but limited role of improved digital infrastructure in attracting investment. The coefficient of 9.670 for “eurozone” is significant at the 1% level, suggesting that an integrated currency is an important factor in attracting FDI. Tax levels are significantly negatively correlated with FDI. This result emphasizes the important impact of tax burden on FDI decisions, with higher tax rates potentially inhibiting foreign investment inflows. The coefficients of inflation, innovations ($\ln p a t e n t$) and domestic investment ($g c f$) are not significant, suggesting that these factors may not be the main determinants of FDI flows in the model setup.

Table13- Parallel analysis of baseline regression

	FDI
iq	9.992** (2.151)
gcf	0.322

	(0.951)
lngdpper	-49.404***
	(-7.914)
inflation	0.792
	(1.532)
laborforce	2.256***
	(2.829)
internet	0.275*
	(1.656)
tax	-1.961***
	(-4.473)
lnpatent	0.671
	(0.146)
eurozone	9.670***
	(3.702)
_cons	352.999***
	(5.111)

4.1.2 Endogenous Modification----GMM

Endogeneity is usually an unavoidable problem in regression models, which affects the accuracy of the results in terms of qualitative and robustness, so endogeneity correction is crucial. Common causes of endogeneity are omitted variables, two-way causation and sample selection bias (Cameron, and Trivedi, 2005; Antonakis, Bendahan, Jacquart, and Lalive, 2010).

Baltagi (2008) in his book "Econometric analysis of panel data" shows that fixed effects models are effective in mitigating the problem of unobserved heterogeneity and omitted control variables. However, in order to better deal with the endogeneity problem, we also use the GMM model to eliminate endogeneity. The GMM model addresses endogeneity by internally manipulating the data and including past values of the dependent variable. Dynamic panel estimation with GMM not only solves the endogeneity problem arising from unobserved heterogeneity, but also effectively overcomes the endogeneity problem arising from reverse causality (Ullah, Akhtar, Zaefarian, 2018). In this thesis, we choose the system GMM model. This method can better compensate for the shortcomings of the difference GMM, i.e., it can make use of the information in the difference and level equations at the same time as well as the instrumental variables used in the difference transformation. At the same time, the system GMM uses a larger amount of sample information and is generally more efficient than the differential GMM (Roodman, 2009).

Therefore, we use a two-step systematic GMM model to eliminate endogeneity to validate the accuracy of our findings.

In this thesis, the following two methods are used to discern the validity of the GMM model setting. Firstly, the Hansen test is used to determine whether the instrumental variables are valid or not, if the original hypothesis of "all instrumental variables are valid" is accepted, it means that the instrumental variables are reasonable (Chen, 2014). The second is to test the assumption of non-autocorrelation of residual terms, i.e., to test whether there is first- and second-order autocorrelation of the residual terms of the difference in the GMM regression system.

We use the GMM model to seriously base the regression. The validity of the model is first verified by observing the results of Arellano-Bond autocorrelation test and Hansen test. The results show that the Arellano-Bond test for AR(1) is 0.097, which is less than 0.1, and the Arellano-Bond test for AR(2) is 0.185, which is greater than 0.1. This suggests that there is no second-order correlation, which validates the model specification. The Hansen test has a result of 0.824, which is greater than 0.1 and less than 1. This indicates that the instruments used are appropriate and uncorrelated with the error term. Therefore, this GMM model meets all the requirements.

The coefficient of one period lag of FDI is 0.227 and passes the 5% significance test, which indicates that one period lag of FDI has a significant positive effect on current period FDI. It shows that FDI has a certain self-correlation in time, that is, the level of foreign direct investment in the previous period predicts the level of foreign direct investment in the current period to a certain extent. The significant and positive effect of institutional quality on FDI implies that after eliminating endogeneity, higher institutional quality can still significantly increase the level of FDI inflows. The significance of this coefficient supports the idea of institutional quality as a key factor in attracting FDI, again verifying that hypothesis 1 is correct.

In the GMM model, we can find that the iq's coefficient is 19.118, which is higher than the result obtained from the fixed effects model. This may indicate that the fixed effects model may have underestimated the effect of IQ on the outcome variable by failing to fully address endogeneity. Endogeneity leads to underestimation of IQ coefficients and lower estimates.

Table14- GMM of baseline regression

	FDI
L.fdi	0.227** (2.266)
iq	19.118** (2.199)
gcf	-0.14 (-0.185)
lngdpper	-38.185*** (-3.949)
inflation	2.26 (1.455)
laborforce	-1.819 (-0.959)
internet	0.562 (1.488)
tax	1.584* (2.007)
lnpatent	-1.713 (-0.714)
eurozone	18.695** (2.723)
_cons	451.994** (2.455)

4.2 Analysis of moderating effects

For hypothesis 2, the thesis generates two interaction terms with institutional quality (IQ) by centring the moderator variables trade openness and natural resources (openness, natural). These two interaction terms are included in equation (4.5). Using the regression methodology and reported results of model (1) as a reference, the existence and direction of the moderating effect of the interaction terms on the explanatory variables are assessed by looking at the significance and sign of the coefficients of the interaction terms, and the regression results are presented in Table.

4.2.1 Natural resources

In the study, natural resource abundance is introduced as an important moderator variable to explore its potential impact on the relationship between institutional quality and foreign direct investment. By employing a fixed effects regression model and including the interaction term of natural resource abundance with other variables (labelled newnatural) in the analysis, we obtained some findings.

The coefficient of the interaction term (newnatural) is -1.27, which does not pass the 10% significance test statistically, a result that suggests that the effect of natural resource abundance on the relationship between institutional quality and FDI inflows is negative, but that this effect is not significant in the EU countries as a whole. It is worth noting that it is also possible that natural resource abundance may have a significant effect on the relationship between institutional quality and FDI inflows in individual countries, which needs to be analyzed on a case-by-case basis.

Table15- Parallel analysis of regression

	FDI
newnatural	-1.27 (-1.149)
totalnatural	-3.451** (-1.996)
iq	10.667** (2.267)
gcf	0.347 (1.025)
lngdpper	-49.505*** (-7.931)
inflation	0.809 (1.577)
laborforce	2.317*** (2.898)
internet	0.292* (1.748)
tax	-1.986*** (-4.579)
lnpatent	0.639 (0.139)
eurozone	9.751*** (3.691)
_cons	350.247*** (5.033)

* p<0.1, ** p<0.05, *** p<0.01

The same GMM model was used for endogeneity adjustment. The results show that the AR(1) is 0.083, which is less than 0.1, and the AR(2) is 0.505, which is greater than 0.1. This indicates that

there is no second-order correlation, which validates the model specification, and the result of the Hansen test is 0.716, which is greater than 0.1. This indicates that the instruments used are appropriate and uncorrelated with the error term. The coefficient of FDI with one period lag is 0.243 and passes the 10% significance test, indicating that FDI is self-correlated over time. The interaction term newnatural has a negative and insignificant effect on FDI, which implies that the abundance of natural resources does not significantly affect the relationship between institutional quality and FDI inflows after eliminating endogeneity.

Table16- GMM analysis of regression

	FDI
L.fdi	0.243* (2.097)
iq	21.888* (1.890)
newnatural	-1.694 (-0.142)
totalnatural	-16.707 (-0.874)
gcf	-1.081 (-1.010)
lngdpper	-48.558*** (-3.390)
inflation	4.533** (2.563)
laborforce	0.020 (0.010)
internet	0.376* (1.815)
eurozone	9.334 (0.455)
tax	0.468 (0.237)
lnpatent	-1.765 (-0.350)
_cons	495.357*** (3.632)

* p<0.1, ** p<0.05, *** p<0.01

4.2.2 Trade openness

The coefficient of the interaction term (newopenness) is 12.450 and passes the 10 % significance test when market openness is used as a moderator variable. This indicates that market openness also affects the relationship between institutional quality and FDI inflows to some extent. Trade openness has a moderating role in the relationship between institutional quality and FDI, and the facilitating effect of the improvement of institutional quality on the development of FDI will be strengthened with the increase of market openness. In other words, when a country's market is more open, the positive effect of its institutional quality improvement on FDI attractiveness will be more significant than that of a country with a less open market. This verifies the correctness of hypothesis 3.

Table17- Parallel analysis of regression

	FDI
newopenness	12.450* (1.676)
openness	4.659 (0.512)
iq	10.615** (2.283)
gcf	0.372 (1.052)
lngdpper	-46.747*** (-7.412)
inflation	0.542 (0.980)
laborforce	2.423*** (3.047)
Internet	0.348** (2.029)
tax	-1.929*** (-3.307)
lnpatent	-1.661 (-0.401)
eurozone	9.259*** (3.166)
_cons	313.709*** (3.786)

* p<0.1, ** p<0.05, *** p<0.01

The same GMM model was used for endogeneity adjustment. The results show that the Arellano-Bond test for AR(1) is 0.079, which is less than 0.1, and the Arellano-Bond test for AR(2) is 0.543, which is greater than 0.1. This indicates that there is no second-order correlation (AR(2)), which validates the model specification. The result of the Hansen test is 0.995 which is greater than 0.1 and less than 1. This indicates that the instrument used is appropriate and uncorrelated with the error term. The coefficient of lagged one period of FDI is 0.164 and passes the 10% significance test, which indicates that lagged one period of FDI has a significant positive effect on current period FDI. The coefficient of the interaction term newopenness is 17.164 and passes the 5% significance test. This indicates that after eliminating endogeneity, the promotion effect of the improvement of institutional quality on the development of OFDI will be strengthened with the increase of market openness. Once again, hypothesis 3 is verified to be correct. We can similarly find that the coefficient of newopenness is larger in the GMM model. The fixed effects model may suffer from endogeneity and underestimate the impact of newopenness on the outcome variable.

Table18- GMM analysis of regression

	FDI
L.fdi	0.164* (1.812)
iq	13.755** (2.338)
newopenness	17.164** (2.349)
openness	6.220 (0.720)
gcf	0.243 (0.384)
lngdpper	-36.484*** (-5.215)
inflation	1.750** (2.268)
laborforce	0.595 (0.272)
internet	0.221 (0.573)
eurozone	16.564** (2.673)
tax	-0.563 (-0.505)

Inpatient	1.542 (0.564)
_cons	293.510* (1.854)

* p<0.1, ** p<0.05, *** p<0.01

4.3 Heterogeneity analysis

In conducting a comparative study of the impact of institutional quality on FDI, we find significant regional differences. In Western Europe, the coefficient of institutional quality on the growth of FDI inflows is 5.038, while the coefficient of the core explanatory variable (IQ) for CEE countries is 13.377. The larger coefficient implies that institutional quality has a stronger impact on FDI inflows. Therefore, the coefficient shows that the institutional quality of CEE has a more significant impact on FDI inflows compared to Western Europe.

In terms of statistical significance, the coefficient of institutional quality fails the 10 % statistical significance test for Western European countries, but the coefficient of institutional quality for CEE countries passes the 5% significance test. Therefore, in Western Europe, although institutional quality has a positive effect on FDI inflows, this effect is not statistically significant. In contrast, in Eastern European countries, institutional quality has a significant effect on FDI inflows. The possible explanation is that the institutional environment in the Western European countries is already relatively mature and stable, so that marginal improvements in institutional quality have a limited effect on attracting additional FDI. CEE countries, on the other hand, are still actively improving and developing their institutional environments after undergoing historical political and economic transformations. In these economies, the improvement of the institutional environment is seen as one of the key drivers for attracting more FDI. Investors may be more inclined to invest in countries that are politically stable, legally clear and administratively efficient, as these characteristics reduce the risks and costs of market entry. We will explore in detail the reasons for this heterogeneity in Chapter 5.

However, it is worth noting that such statistical results do not suggest that institutional quality has no effect on FDI inflows to WE countries. From a cross-country perspective, institutional quality may not have sufficient variability to produce statistically significant estimates.

Table19- Parallel analysis of regression

	CEE	WE
--	-----	----

	FDI	FDI
iq	13.377** (2.006)	5.038 (0.745)
gef	0.516 (1.119)	-0.056 (-0.112)
lngdpper	-51.869*** (-7.444)	-34.158*** (-3.815)
inflation	0.36 (0.502)	0.903 (0.829)
laborforce	2.757** (2.445)	0.154 (0.183)
internet	-0.343 (-0.960)	0.214 (1.232)
eurozone	4.887 (1.595)	
tax	-2.225*** (-3.676)	-1.545 (-1.570)
lnpatent	-4.222 (-1.129)	5.489 (0.652)
_cons	398.020*** (5.492)	336.079*** (2.801)

* p<0.1, ** p<0.05, *** p<0.01

The same GMM model is used to adjust for endogeneity. The regression results for the sample of Western Europe also show that institutional quality has a non-significant effect on FDI, implying that after eliminating endogeneity, it is possible that higher institutional quality in Western Europe does not significantly affect the level of FDI inflows. In contrast, the regression results for the sample of Central and Eastern Europe show a positive and significant effect of institutional quality on FDI, implying that higher institutional quality in Central and Eastern Europe can significantly increase the level of FDI inflows after eliminating endogeneity. The significance of this coefficient supports the idea that the effect of institutional quality on FDI is heterogeneous, again verifying that hypothesis 4 is correct.

In addition, a comparison of Tables 19 shows that for the CEE countries, the coefficients on iq in the GMM model are much larger than those derived from the fixed effects model. For WE countries, on the other hand, the coefficients on iq in the GMM model are slightly smaller than in the fixed effects model. We will discuss this result in detail in chapter 5.

Table20- GMM analysis of regression

	WE	CEE
	FDI	FDI
L.fdi	0.159 (0.385)	0.576*** (3.21)
iq	1.345 (0.158)	111.993** (2.457)
gcf	-0.242 (-0.171)	8.769** (2.536)
lngdpper	6.832 (0.157)	21.21 (0.982)
inflation	1.288 -0.582	-3.243 (-1.057)
laborforce	-0.715 (-0.440)	2.834 (1.241)
Internet.	0.047 (0.209)	0.046 (0.089)
eurozone	0.368 (0.017)	-66.436* (-2.199)
tax	-0.276 (-0.205)	-16.417* (-2.169)
lnpatent	-1.548 (-0.225)	-11.080** (-2.228)
_cons	2.181 (0.004)	-128.859 (-0.601)

* p<0.1, ** p<0.05, *** p<0.01

5 Discussion

5.1 Institutional quality and FDI

In the regression equation of the study on the impact of institutional quality on FDI inflows, the coefficient of the core independent variable IQ is positive and significant. That is, it shows that the improvement of institutional quality has a significant positive impact on the growth of net FDI inflows as a percentage of GDP, thus confirming that a sound, transparent and efficient institutional framework is a key factor in promoting the economy's attraction of foreign investment. This finding is consistent with the findings of empirical studies by many scholars. For example, empirical studies by Daude and Stein, Chen and Jiang, Hayat (2019); Peres and Ameer (2018) and others in other regions also show that improved institutional quality significantly contributes to FDI growth. In addition, studies by Dorożyński, Dobrowolska, and KunaMarszałek (2020), Radulović (2020), and Dobrowolska, Dorożyński, and KunaMarszałek (2021) for the EU

countries similarly support our findings. Their results also support the conclusions of this study on the importance of institutional optimization for attracting and sustaining foreign capital inflows.

Numerous scholars studying the impact of institutional quality on attracting FDI have argued that there are complex reasons behind this impact, and our findings confirm the validity of their conclusions. Firstly, according to Transaction Cost Theory, FDI will flow to countries with lower investment costs, and the findings of this paper confirm this theory. This is because investing in countries with low institutional quality incurs additional costs, such as political risk and corruption costs. Daude and Stein (2007); Wei (2000) agree that FDI in certain countries with poor administrative institutions and high levels of corruption incurs additional costs and increases operating costs. According to Mauro (1995), corruption has a detrimental effect on economic growth by raising operating costs through an increase in the country's workforce. According to Mauro (1995), corruption has a detrimental impact on economic growth by raising the expenses of conducting company and impeding efficiency, hence discouraging investment. Foreign investors usually prefer to invest in environments with lower transaction costs because it means that they can more easily obtain information, handle procedures, resolve disputes, etc., which makes foreign investors less willing to invest.

Second, better institutional quality reduces investment risks and thus affects FDI inflows. Good institutional quality usually means a more transparent, predictable and stable political, legal and economic environment. Stability and transparency in the rule of law mean that contract enforcement is more reliable, which reduces the risks faced by foreign investors and thus increases their willingness to invest, as shown by La Porta, Shleifer, and Vishny (2002), who suggest that an effective legal institution and a strong institution of property rights protection are key to attracting foreign investment. A high-quality legal institution reduces the risk that foreign investors' investments will be subject to unfair legal treatment or illegal appropriation of assets. The study by Djankov, La Porta, Lopez-de-Silanes, and Shleifer, 2008. analyses how the law affects corporate governance and international investment flows. It finds that a strong legal institution reduces management self-dealing and increases foreign investor confidence.

Finally, better institutional quality can improve investment efficiency and thus affect FDI inflows, as shown by La Porta et al. (1997), who show that countries with an English law tradition generally have better property rights protection and higher stock market capitalization rates, due to the English law tradition's greater emphasis on property rights protection and contract

enforcement. Better institutions also promote investment efficiency, which attracts FDI inflows. Countries with high administrative efficiency are able to provide fast and cost-effective government services such as licensing and compliance reviews, and countries with more democratic and limited government have less stringent regulations on entry (Djankov,2002).

We also analyze the results for the control variables. The coefficient of $\ln gdp$ is negative and passes the 1% significance test. This indicates that there is a significant negative correlation between the logarithm of market size and FDI. This indicator seems to have the "wrong sign". However, it is open to interpretation. This finding may suggest that the larger economies in the sample may face higher levels of market saturation or other barriers to growth that reduce their ability to attract FDI (Globerman. and Shapiro, 2002). GDP per capita is often used to measure the affluence of consumers in a country. An issue with the GDP per capita variable is that it serves as an indirect indicator of wage rates, given the strong correlation between productivity levels and both wage rates and GDP per capita. Assuming all other factors remain constant, increased wage rates will deter FDI inflows. At the same time, richer countries may require less foreign financing because they have sufficient own resources (Globerman and Shapiro, 2002). The coefficient on labour force is positive and significant at the 1% level, suggesting that labour force participation is critical for attracting FDI. A high labour force participation rate means that there is more labour available for firms to employ. This is essential for foreign investors as adequate labour supply is essential for setting up and expanding business and ensures that firms have sufficient human resources to operate and produce (Kucera, 2002). The coefficient on Internet penetration is significant at the 10% level, reflecting the positive but limited effect of improved digital infrastructure on attracting investment. Since most of the EU countries, as developed countries, have a relatively good digital infrastructure, this is not enough to be a significant factor in attracting FDI. Tax levels are significantly negatively correlated with FDI. This result emphasizes the important impact of the tax burden on FDI decisions, with higher tax rates potentially inhibiting the inflow of foreign investment. Being in the eurozone is also an important control variable. The same monetary system can make cross-border investment easier and reduce transaction and investment costs, thus boosting FDI inflows. The coefficients on inflation, innovation ($\ln patent$) and domestic investment (gcf) are not significant, suggesting that these factors may not be the main determinants of FDI flows in the model.

In addition, we find that the coefficients of iq differ in the fixed effects model and in the GMM model. The coefficient of iq in the fixed effects model is 9.992, while the coefficient of iq in the

system GMM is 19.118. the fixed effects model may have underestimated the effect of iq on the outcome variable by failing to fully address the endogeneity. Endogeneity leads to underestimation of IQ coefficients and lower estimates. After correcting the endogeneity problem over the system GMM approach, the IQ coefficients increased significantly, suggesting that the actual impact of IQ on the outcome variable is greater. The estimates from the system GMM may be closer to the true effect of IQ. Overall, the results of both models can demonstrate that institutional quality has a significant impact on FDI inflows.

5.2 Moderating effects

According to the empirical results, resource abundance may be a negative moderating variable for institutional quality and FDI inflows, but this moderating effect is not statistically significant. This is inconsistent with the results of Yang (2021). First, in the EU, foreign investors are more concerned about the stability and predictability of the investment environment, which are usually determined by the quality of institutions. Even if resources are abundant, foreigners may still hesitate to invest if the quality of institutions is not high. Second, the harmonized market and policy coordination within the EU have removed many barriers to trade and investment. When foreign investors invest in EU countries, they can enjoy the advantages of a unified market across the EU, so the impact of resource abundance in individual countries on investment decisions is weakened. In addition, the EU is not very rich in natural resources, and most all FDI does not depend on natural resources. Many investments are likely to be concentrated in areas such as services, manufacturing, and technology R&D, which are less dependent on resource abundance and more demanding in terms of institutional quality and market environment (Dobson, and Safarian, 2008.). Finally, many EU countries place a high priority on environmental protection and sustainable development. While resource abundance is important, foreign investment may be more concerned with local environmental regulations and sustainable development policies, which are often determined by institutional quality. Thus, the moderation of resource abundance may not be significant in the EU region.

And another regression result is that the facilitating effect of improved institutional quality on FDI inflows is strengthened with increased trade openness. This result is consistent with the findings of Huang Yunchong (2023). Wei (2000) finds that countries with lower levels of corruption (i.e., higher institutional quality) are more effective in attracting FDI in the global market. Open markets facilitate the free flow of technology and knowledge, and a high-quality institutional environment supports intellectual property protection, encourages innovation, and

facilitates technology transfer, which is particularly important for FDI that relies on high technology and innovation capabilities. As Javorcik (2004) argues, an open market environment promotes technology spillovers, which attracts more high-technology investment. In this context, the economic and policy stability of the investment destination and the quality of the legal and property rights regime are particularly important in order to protect technology and innovation. In addition, Busse and Hefeker (2007) point out that an effective political institution can provide a more stable economic environment for foreign investors, which is particularly important in open markets. Open markets usually imply a higher degree of economic freedom and less government intervention, which requires an effective legal and regulatory institution to guarantee the fair functioning of the market. Thus, there is strong theoretical support for the idea that the contribution of improved institutional quality to OFDI inflows is reinforced by increased market openness.

5.3 Heterogeneity analysis

According to the empirical results, institutional quality is significantly and positively related to FDI inflows for CEE countries, while this effect is less significant in Western EU countries. There is almost no literature on comparative studies between Western and Central and Eastern Europe, but based on the available information, this result can be well explained. In Central and Eastern Europe, investors' trust in the institutions of these countries is low due to a history of political instability and economic mismanagement. However, from the mid-1990s onwards, the countries of Eastern Europe were undergoing a transition from planned to market economies. In a short period of time, these countries undertook large-scale reforms of their legal, political and economic institutions aimed at creating a transparent and efficient market environment. During this transition process, the quality of institutions was essentially improved. The improvement in institutional quality significantly reduces the uncertainty and risk of investing in the region. Bevan and Estrin (2004) point out that institutional trust is a key factor in attracting FDI to CEE countries. Campos and Kinoshita's (2002) study also shows that institutional change in CEE countries significantly increases FDI inflows. The relatively new markets in CEE countries, with huge growth potential and room for development, allow institutional reforms and optimization to translate more quickly into economic growth and investment opportunities. In these countries, a favourable institutional environment not only improves operational efficiency, but also opens up new business areas and attracts foreign investors. This is in contrast to Western countries, where markets are usually more saturated and institutional reforms are smoother and slower, so the marginal benefits of institutional improvements are relatively small. FDI inflows to Western

European countries are therefore less sensitive to improvements in institutional quality than in CEE countries. In the Western EU countries, the institutional environment, which has been more mature and stable, means that investors usually do not need to worry about fundamental political and legal risks. Changes in institutional quality in these countries therefore have a relatively small impact on FDI. It is worth noting, however, that this does not mean that institutional quality is unimportant for Western European countries in attracting FDI inflows. This is because, in the case of Western European countries, differences in IQ between countries may not be sufficient to produce statistically significant measures.

In addition, a comparison of Tables 19 and 20 shows that for the CEE countries, the coefficients on *iq* in the GMM model are much larger than those derived from the fixed effects model. For WE countries, on the other hand, the coefficient of *iq* is 5.038 in the fixed-effects model, while the coefficient is 111.993 in the GMM. the fixed-effects model assumes that the individual effects are independent of the explanatory variables, and controls for time-invariant heterogeneity by eliminating the individual effects, but it may not be able to completely solve the problem of endogeneity between the explanatory variables and the error term. the GMM approach, on the other hand, uses instrumental variables to control the endogeneity, and choosing appropriate instrumental variables can effectively address the endogeneity problem. Therefore, GMM may provide more consistent estimation results. If there is endogeneity between the IQ variable and the error term, the FE model may underestimate or overestimate the coefficients of IQ, whereas the GMM solves this problem through instrumental variables to produce larger coefficients. There are essential differences between the fixed effects model and the GMM approach in handling the data and controlling for endogeneity, and these differences may lead to significant changes in the estimated coefficients. For WE countries, the coefficients on *iq* in the GMM model are instead smaller, which is equally likely to be due to bias from endogeneity.

6 Conclusion

6.1 Main findings

FDI plays a crucial role in a country's economic development, not only as an important source of capital, but also as an important channel for technology transfer, industrial upgrading and global economic integration. This form of investment has a far-reaching impact on the economic structure and long-term development strategy of host countries, and significantly contributes to the innovation and competitiveness enhancement of local enterprises by bringing in advanced

management skills and operational technologies. With the acceleration of economic globalization, the global investment environment has become increasingly complex and competitive, and countries are committed to finding factors to attract FDI. And with globalization, there is a growing recognition of the importance of institutional quality for global trade.

Based on the literature, this thesis poses three research questions: 1. Is institutional quality positively related to FDI inflows in CEE countries? 2. are market openness and natural resources moderating variables? Do they enhance the role of institutional quality in attracting FDI? 3. Does the impact of institutional quality on FDI inflows differ between WE countries and CEE countries?

On the basis of reviewing the theories related to FDI and institutions, this paper constructs a theoretical framework for analyzing the impact of IQ on FDI inflows in EU countries, and analyses the historical development history and current situation of FDI and institutional quality. This thesis empirically tests the impact of institutional quality on FDI inflows, as well as the related moderating effect and heterogeneity, using 18 years of data from 26 EU countries as samples. The thesis identifies the fixed effects model as the main model for regression analysis through the Hausman test (Hausman test) and the F-test (F-test). In addition, moderating variables (natural resource abundance and trade openness) are introduced to investigate whether the relationship is weakened or strengthened under the influence of the moderating factor. Finally, the sample is divided into two groups, Western Europe and Central and Eastern Europe, for a comparative study to explore the heterogeneity.

Through the above theoretical and empirical research, this thesis obtains the following main research conclusions:

(1) Institutional quality is significantly and positively correlated with FDI inflows, and better institutional quality has a significant contribution to attracting FDI. Improved institutional quality means improved political, legal and economic institutions, and also represents a country's good governance capacity and market environment, and the attractiveness of such a good institutional environment to FDI is self-evident. A good institutional environment provides stable, transparent and predictable market rules, which provide foreign investors with more confidence and security and make them more willing to invest their money in the country's economic activities. The importance of this finding is not only reflected in the impact on foreign direct investment, but also

in the fundamental significance of institutional development for the country's economic development. By continuously improving and perfecting the institutional environment, the country is able to attract more foreign investment, promote economic growth and employment opportunities, and facilitate the upgrading of industrial structure and the advancement of technological innovation, thereby achieving sustainable economic development.

(2) Trade openness is a moderating variable between institutional quality and FDI inflows. However, resource abundance does not play a significant moderating role. The promotion effect of improved institutional quality on FDI inflows is not significantly weakened or strengthened by natural resource abundance, but it is strengthened by trade openness. Specifically, it is found that the contribution of enhanced institutional quality to FDI inflows is affected by trade openness, but not significantly by resource abundance. This finding not only provides a new perspective for a deeper understanding of the determinants of FDI, but also reveals the complex relationship between institutional quality and trade openness and resource abundance. First, for trade openness, the findings suggest that the facilitating effect of institutional quality on FDI inflows will be further strengthened as trade openness increases. This means that when a country adopts a more open trade policy, relaxes trade barriers and promotes international trade flows, higher institutional quality will be more attractive to foreign investors, leading to higher FDI inflows. This finding highlights the importance of trade openness in enhancing the role of institutional quality in the promotion of FDI, and provides an important reference for the formulation of trade policy and the promotion of trade liberalization. On the other hand, regarding the impact of resource abundance. The implementation of a unified market and policy coordination within the EU has eliminated many barriers to trade and investment. When foreign investors invest in EU countries, they can enjoy the advantages of the unified market of the whole EU, so the influence of the resource richness of individual countries on investment decisions is weakened. In addition, the EU is not very rich in natural resources, and most all FDI does not depend on natural resources. Many investments are likely to be concentrated in areas such as services, manufacturing, and technology R&D, which are less dependent on resource abundance and more demanding in terms of institutional quality and market environment. Finally, many EU countries place a high priority on environmental protection and sustainable development. While resource abundance is important, foreign investment may be more concerned with local environmental regulations and sustainable development policies, which are often determined by institutional quality. Thus, the moderation of resource abundance may not be significant in the EU region.

(3) The impact of institutional quality on FDI inflows is heterogeneous. Specifically, in WE countries, there is no statistically significant correlation between institutional quality and FDI inflows. However, it is worth noting that this does not mean that IQ is not important for FDI inflows in Western European countries. This is because for Western European countries, IQ may not have enough variability between countries to produce statistically significant measures. A plausible explanation for this result could also be that institutional reforms have been smoother and slower in Western European countries. Their institutional quality has been among the world leaders. The consistently more mature and stable institutional environment means that investors usually do not need to worry about basic political and legal risks, and changes in institutional quality have a relatively small impact on FDI. As a result, the marginal benefits of institutional improvements are relatively small, and FDI inflows to Western European countries are not as sensitive to improvements in institutional quality as they are in CEE countries. In CEE, on the other hand, institutional quality is significantly and positively associated with FDI inflows. Better institutional quality has a significant contribution to attracting FDI in CEE countries. In CEE countries, due to a history of political instability and economic mismanagement, improvements in institutional quality significantly reduce investment uncertainty and risk, and have a more significant impact on attracting FDI. CEE countries have relatively new markets with huge growth potential and room for development, which allows institutional reforms and optimizations to translate more quickly into economic growth and investment opportunities. In these countries, a favourable institutional environment not only improves operational efficiency but also opens up new business areas and attracts foreign investors.

6.2 Research limitations

First, institutional quality is a multidimensional concept that includes a number of dimensions, including political stability, efficiency of the legal institution, level of corruption, government transparency, and economic freedom. How these dimensions are quantified and how they are weighted in relation to each other presents challenges. Various sources and research may employ distinct metrics and methodologies to assess institutional quality, hence impeding the comparability of findings across different studies.

Secondly, there is the potential problem of omitted variables. Although this paper has endeavored to find control variables for which data are available, there are inevitably other unobserved variables that affect FDI that are not included in the model. For example, we have not addressed the role of FDI incentive programmes, which are quite important in many CEE countries.

6.3 Research Prospects

This thesis empirically analyses the impact of institutional quality and trade openness on FDI from multiple perspectives and in multiple ways, and around this research topic, the following aspects can be further explored and extended in the future:

(1) Further expand the sample countries. The empirical method of using EU countries as the research sample in this thesis has general applicability and technical feasibility. In the future, on the basis of data availability and operability, we can collate relevant data from other economic communities, such as the African Union and the Pacific Alliance, etc., so as to expand the empirical evidence to more countries, and examine and compare different regions under the roughly similar empirical methodology. We could expand the empirical evidence to more countries, so as to examine and compare the measurement results of different regions under the same empirical methodology, and to extract common conclusions and regional specificities, so as to enrich the theoretical research on FDI in developing countries.

(2) Analyze in depth the moderating effects of institutional quality and trade openness on foreign direct investment. The results of this paper show that there is an amplifying/reducing effect of trade openness on institutional quality on FDI. In the future, we can further explore the moderating variables of institutional quality and trade openness on FDI, clarify the moderating roles of various types of strengthening or weakening main effects, and enrich the research on the impact mechanism of foreign-related FDI, so as to provide better guidance for the development practice of avoiding harm and benefiting from it.

6.4 Policy recommendations

For EU countries, especially CEEC, the establishment of good institutions is the key to attracting FDI. According to this paper, good or bad institutions can largely determine market dynamics and foreign investors' interest. Therefore, it is necessary to improve and refine foreign investment-related institutions by starting with institutional design, taking into account the country's strategic development, institutions, legal policies and risk prevention. In particular, it is important to ensure that the economic institution creates a fair, efficient, non-discriminatory and predictable investment environment, and improves the institution's enforcement and effectiveness. The country can also address long-term structural problems through reforms, such as improving fiscal efficiency, standardizing monetary management, protecting and developing industrial and supply chains, and enhancing the economy's resilience and flexibility. This would seek a new balance in

the economy, avoid extreme volatility and create a favourable governance environment for the continued development of economic trade and investment. In addition, countries should have an in-depth understanding of the needs of foreign investors and actively promote and shape the image of the investment regime and environment internationally, avoiding negative impacts such as corruption, inefficiency, security problems and policy instability. Within the EU, they should strengthen the regulation and supervision of the investment market, improve the administrative environment, simplify the approval procedures for foreign investment projects, reduce the hidden costs caused by institutional barriers, and ensure a stable and convenient investment experience for foreign investors. For Western European countries, although the improvement of institutional quality does not have a significant impact on FDI, this does not mean that institutional quality is not important. These countries should still endeavor to improve their institutional strength to provide a better investment environment for foreign investment.

List of References

- Adegboye, F.B., Osabohien, R., Olokoyo, F.O., Matthew, O. and Adediran, O., 2020. Institutional quality, foreign direct investment, and economic development in sub-Saharan Africa. *Humanities and social sciences communications*, 7(1), pp.1-9.
- Aggarwal, A., 2005. The influence of labour markets on FDI: Some empirical explorations in export oriented and domestic market seeking FDI across Indian states. University of Delhi (<http://knowledgeforum.tifac.org.in/IndexServer/tifac/article/22.doc>).
- Aizenman, J. and Spiegel, M.M., 2006. Institutional efficiency, monitoring costs and the investment share of FDI. *Review of International Economics*, 14(4), pp.683-697.
- Arellano, M. and Bover, O., 1995. Another look at the instrumental variable estimation of error-components models. *Journal of econometrics*, 68(1), pp.29-51.
- Alba, J.D., Wang, P. and Park, D., 2010. The impact of exchange rate on FDI and the interdependence of FDI over time. *The Singapore Economic Review*, 55(04), pp.733-747.
- Al-Sadig, A., 2009. The effects of corruption on FDI inflows. *Cato J.*, 29, p.267.
- Antonakis, J., Bendahan, S., Jacquart, P. and Lalive, R., 2010. On making causal claims: A review and recommendations. *The leadership quarterly*, 21(6), pp.1086-1120.
- Autio-Sarasma, S. and Miklóssy, K. eds., 2011. *Reassessing Cold War Europe* (p. 66). London: Routledge.
- Auty, R.M., 2007. Natural resources, capital accumulation and the resource curse. *Ecological economics*, 61(4), pp.627-634.
- Aziz, O.G., 2018. Institutional quality and FDI inflows in Arab economies. *Finance Research Letters*, 25, pp.111-123.
- Bailey, N., 2018. Exploring the relationship between institutional factors and FDI attractiveness: A meta-analytic review. *International Business Review*, 27(1), pp.139-148.
- Baltagi, B.H. and Baltagi, B.H., 2008. *Econometric analysis of panel data* (Vol. 4, pp. 135-145). Chichester: Wiley.
- Bellak, C., Leibrecht, M. and Riedl, A., 2008. Labour costs and FDI flows into Central and Eastern European Countries: A survey of the literature and empirical evidence. *Structural Change and Economic Dynamics*, 19(1), pp.17-37.
- Bevan, A.A. and Estrin, S., 2004. The determinants of foreign direct investment into European transition economies. *Journal of comparative economics*, 32(4), pp.775-787.
- Bohle, D. and Greskovits, B., 2019. *Capitalist diversity on Europe's periphery*. Cornell University Press.

Boghean, C. and State, M., 2015. The relation between foreign direct investments (FDI) and labour productivity in the European Union countries. *Procedia Economics and Finance*, 32, pp.278-285.

Buchanan, B.G., Le, Q.V. and Rishi, M., 2012. Foreign direct investment and institutional quality: Some empirical evidence. *International Review of financial analysis*, 21, pp.81-89.

Buckley, P.J., 2009. Internalisation thinking: From the multinational enterprise to the global factory. *International Business Review*, 18(3), pp.224-235.

Buckley, P.J. and Casson, M.C., 2015. The internalisation theory of the multinational enterprise: A review of the progress of a research agenda after 30 years. *International business strategy*, pp.85-107.

Buckley, P.J. and Casson, M.C., 1998. Analyzing foreign market entry strategies: Extending the internalization approach. *Journal of international business studies*, 29, pp.539-561.

Busse, M. and Hefeker, C., 2007. Political risk, institutions and foreign direct investment. *European journal of political economy*, 23(2), pp.397-415.

Cameron, A.C. and Trivedi, P.K., 2005. *Microeconometrics: methods and applications*. Cambridge university press.

Campos, N.F. and Kinoshita, Y., 2002. Foreign direct investment as technology transferred: Some panel evidence from the transition economies. *The Manchester School*, 70(3), pp.398-419.

Cantwell, J. and Narula, R., 2001. The eclectic paradigm in the global economy. *International Journal of the Economics of Business*, 8(2), pp.155-172.

Che, Y., Lu, Y., Tao, Z. and Wang, P., 2013. The impact of income on democracy revisited. *Journal of Comparative Economics*, 41(1), pp.159-169.

Chen, F. and Jiang, G., 2023. The impact of institutional quality on foreign direct investment: empirical analysis based on mediating and moderating effects. *Economic research-Ekonomska istraživanja*, 36(2).

Cheung, Y.W., De Haan, J., Qian, X. and Yu, S., 2012. China's outward direct investment in Africa. *Review of international economics*, 20(2), pp.201-220.

Chengying, H., Wang, T., Ali Shah, S., Chang, Y. and Zhou, X., 2023. A study on the moderating role of national absorptive capacity between institutional quality and FDI inflow: evidence from developing countries. *Economic research-Ekonomska istraživanja*, 36(1), pp.2177-2198.

Commons, J.R., 1936. Institutional economics. *The American Economic Review*, 26(1), pp.237-249.

Crescenzi, R., Gagliardi, L. and Iammarino, S., 2015. Foreign multinationals and domestic innovation: Intra-industry effects and firm heterogeneity. *Research Policy*, 44(3), pp.596-609.

Cuervo-Cazurra, A., 2006. Who cares about corruption?. *Journal of international business studies*, 37, pp.807-822.

Daude, C. and Stein, E., 2007. The quality of institutions and foreign direct investment. *Economics & Politics*, 19(3), pp.317-344.

De Mooij, R.A. and Ederveen, S., 2003. Taxation and foreign direct investment: a synthesis of empirical research. *International tax and public finance*, 10, pp.673-693.

De Sousa, J. and Lochard, J., 2006. Does the single currency affect FDI? A gravity-like approach. Manuscript, University of Paris.

Desai, M.A., Foley, C.F. and Hines Jr, J.R., 2009. Domestic effects of the foreign activities of US multinationals. *American Economic Journal: Economic Policy*, 1(1), pp.181-203.

Djankov, S., La Porta, R., Lopez-de-Silanes, F. and Shleifer, A., 2008. The law and economics of self-dealing. *Journal of financial economics*, 88(3), pp.430-465.

Dobson, W. and Safarian, A.E., 2008. The transition from imitation to innovation: An enquiry into China's evolving institutions and firm capabilities. *Journal of Asian Economics*, 19(4), pp.301-311.

Dorakh, A., 2020. A gravity model analysis of FDI across EU member states. *Journal of Economic Integration*, 35(3), pp.426-456.

Dorożyński, T., Dobrowolska, B. and Kuna-Marszałek, A., 2020. Institutional quality in Central and East European countries and its impact on FDI inflow. *Entrepreneurial Business and Economics Review*, 8(1), pp.91-110.

Dorożyński, T., Dobrowolska, B. and Kuna-Marszałek, A., 2019. Institutional quality as a determinant of FDI inflow: the case of Central and Eastern European countries. *Journal of Management and Financial Sciences*, (36), pp.103-122.

Dobrowolska, B., Dorożyński, T. and Kuna-Marszałek, A., 2021. Institutional Quality and its Impact on FDI Inflow: Evidence from the EU Member States. *Comparative Economic Research. Central and Eastern Europe*, 24(4), pp.23-44.

Dunning, J.H., 1981. Explaining the international direct investment position of countries: towards a dynamic or developmental approach. *Weltwirtschaftliches Archiv*, 117, pp.30-64.

Dunning, J.H., 1977. Trade, location of economic activity and the MNE: A search for an eclectic approach. In *The international allocation of economic activity: proceedings of a Nobel Symposium held at Stockholm* (pp. 395-418). London: Palgrave Macmillan UK.

Fischer, S. and Sahay, R., 2000. The transition economies after ten years.

Globerman, S. and Shapiro, D., 2002. Global foreign direct investment flows: The role of governance infrastructure. *World development*, 30(11), pp.1899-1919.

- Globerman, S. and Shapiro, D., 2003. Governance infrastructure and US foreign direct investment. *Journal of international business studies*,
- Goldberg, L.S., 2009. Exchange rates and foreign direct investment. *The Princeton encyclopedia of the world economy*, 1(1), pp.393-396.
- Gorynia, M., Nowak, J., Trąpczyński, P. and Wolniak, R., 2019. Friend or foe? On the role of institutional reforms in the investment development path of Central and East European economies. *International Business Review*, 28(3), pp.575-587.
- Goswami, G.G. and Haider, S., 2014. Does political risk deter FDI inflow? An analytical approach using panel data and factor analysis. *Journal of Economic Studies*, 41(2), pp.233-252.
- Görg, H. and Greenaway, D., 2004. Much ado about nothing? Do domestic firms really benefit from foreign direct investment?. *The World Bank Research Observer*, 19(2), pp.171-197.
- Grabbe, H., 2001. How does Europeanization affect CEE governance? Conditionality, diffusion and diversity. *Journal of European public policy*, 8(6), pp.1013-1031.
- Hayes, A.F., 2017. *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. Guilford publications.
- Hayat, A., 2019. Foreign direct investments, institutional quality, and economic growth. *The Journal of International Trade & E*
- Hakimi, A. and Hamdi, H., 2017. Does corruption limit FDI and economic growth? Evidence from MENA countries. *International Journal of Emerging Markets*, 12(3), pp.550-571.
- Habib, M. and Zurawicki, L., 2002. Corruption and foreign direct investment. *Journal of international business studies*, 33, pp.291-307.
- Hale, G. and Long, C., 2006. What determines technological spillovers of foreign direct investment: evidence from China.
- Hakimi, A. and Hamdi, H., 2017. Does corruption limit FDI and economic growth? Evidence from MENA countries. *International Journal of Emerging Markets*, 12(3), pp.550-571.
- Hennart, J.F., 2010. Transaction cost theory and international business. *Journal of Retailing*, 86(3), pp.257-269.
- Hymer, S.H., 1960. *The international operations of national firms: A study of direct investment* (Doctoral dissertation).
- Huther, J. and Shah, A., 1998. *Applying a simple measure of good governance to the debate on fiscal decentralization* (Vol. 1894). World Bank Publications.
- Huang Yunchong, 2023. *Study on the Influence of Institutional Quality and Trade Openness on Foreign Direct Investment: Empirical Evidence from Latin American Countries*
- Javorcik, B.S., 2004. Does foreign direct investment increase the productivity of domestic firms? In search of spillovers through backward linkages. *American economic review*, 94(3), pp.605-627.

Jude, C. and Leveuge, G., 2017. Growth effect of foreign direct investment in developing economies: The role of institutional quality. *The World Economy*, 40(4), pp.715-742.

Jurčić, L., Franc, S. and Barišić, A., 2020. Impact of institutional quality on foreign direct investment inflow: Evidence from Croatia. *Business Systems Research: International journal of the Society for Advancing Innovation and Research in Economy*, 11(1), pp.44-58.

Kallianiotis, I.N., 2012. Privatization and financial markets in European Union: A social welfare perspective. *Social Welfare*, Rosario Laratta (editor), InTech Open Access Publisher, pp.25-60.

Kaufmann, D., Kraay, A. and Mastruzzi, M., 2009. Governance matters VIII: aggregate and individual governance indicators, 1996-2008. World bank policy research working paper, (4978).

Khoury, T.A. and Peng, M.W., 2011. Does institutional reform of intellectual property rights lead to more inbound FDI? Evidence from Latin America and the Caribbean. *Journal of World Business*, 46(3), pp.337-345.

Kılıc, C., Bayar, Y. and Arıca, F., 2014. Effects of currency unions on foreign direct investment inflows: the European economic and monetary union case. *International Journal of Economics and Financial Issues*, 4(1), pp.8-15.

Kolstad, I. and Wiig, A., 2012. What determines Chinese outward FDI?. *Journal of world business*, 47(1), pp.26-34.

Kumar, N., 2006. Infrastructure availability, foreign direct investment inflows and their export-orientation: A cross-country exploration. *The Indian Economic Journal*, 54(1), pp.125-144.

Kucera, D., 2002. Core labour standards and foreign direct investment. *Int'l Lab. Rev.*, 141, p.31.

La Torre, M. and La Torre, M., 2010. *Law as institution* (pp. 97-134). Springer Netherlands.

La Porta, R., Shleifer, A. and Vishny, R.W., 2002. Florencio Lopez-de-silanes. Spring 2002, p.91.

Llewellyn, K.N., 1925. The effect of legal institutions upon economics. *The American Ec*

Li, Q. and Resnick, A., 2003. Reversal of fortunes: Democratic institutions and foreign direct investment inflows to developing countries. *International organization*, 57(1), pp.175-211.

Lucke, N. and Eichler, S., 2016. Foreign direct investment: the role of institutional and cultural determinants. *Applied Economics*, 48(11), pp.935-956.

Markusen, J.R. and Venables, A.J., 1999. Foreign direct investment as a catalyst for industrial development. *European economic review*, 43(2), pp.335-356.

Marin, A. and Bell, M., 2006. Technology spillovers from foreign direct investment (FDI): the active role of MNC subsidiaries in Argentina in the 1990s. *The Journal of Development Studies*, 42(4), pp.678-697.

- Mauro, P., 1995. Corruption and growth. *The quarterly journal of economics*, 110(3), pp.681-712.
- Ménard, C. and Shirley, M.M. eds., 2005. *Handbook of new institutional economics* (Vol. 9). Dordrecht: Springer.
- Miles, M., Feulner, E. and Mary Anastasia O'Grady, 2004. 2004 Index of economic freedom. Washington, DC: Heritage Foundation.
- Mishra, A. and Daly, K., 2007. Effect of quality of institutions on outward foreign direct investment. *The Journal of International Trade & Economic Development*, 16(2), pp.231-244.
- Mohan, R., 2009. Global financial crisis: Causes, impact, policy responses and lessons. *Reserve Bank of India Bulletin*, pp.879-904.
- Mudambi, R., Navarra, P. and Delios, A., 2013. Government regulation, corruption, and FDI. *Asia Pacific Journal of Management*, 30, pp.487-511.
- Nayyar, R., 2014. Traditional and modern theories of FDI. *International Journal of Business and Management Invention*, 3(6), pp.23-26.
- Nielsen, B.B., Asmussen, C.G. and Weatherall, C.D., 2017. The location choice of foreign direct investments: Empirical evidence and methodological challenges. *Journal of World Business*, 52(1), pp.62-82.
- North, D.C., 1990. *Institutions, institutional change and economic performance*. Cambridge university press.
- OECD (2002). "Foreign Direct Investment for Development: Maximising Benefits, Minimising Costs"
- Padoa-Schioppa, T., 2004. *The euro and its central bank: Getting united after the union*. MIT Press.
- Peres, M., Ameer, W. and Xu, H., 2018. The impact of institutional quality on foreign direct investment inflows: evidence for developed and developing countries. *Economic research-Ekonomska istraživanja*, 31(1), pp.626-644.
- Poelhekke, S. and Van Der Ploeg, F., 2013. Do natural resources attract nonresource FDI?. *Review of Economics and Statistics*, 95(3), pp.1047-1065.
- Radulović, M., 2020. The impact of institutional quality on economic growth: A comparative analysis of the EU and non-EU countries of Southeast Europe. *Economic Annals*, 65(225), pp.163-181.
- Root, F.R., 1998. *Entry strategies for international markets*. John Wiley & Sons.
- Roodman, D., 2009. How to do xtabond2: An introduction to difference and system GMM in Stata. *The stata journal*, 9(1), pp.86-136.
- Ross, H., 2001. *Law as a social institution*. Bloomsbury Publishing.

Rugman, A.M., 2010. Reconciling internalization theory and the eclectic paradigm. *Multinational Business Review*, 18(2), pp.1-12.

Sayek, S., 2009. Foreign direct investment and inflation. *Southern Economic Journal*, 76(2), pp.419-443.

Sabir, S., Rafique, A. and Abbas, K., 2019. Institutions and FDI: evidence from developed and developing countries. *Financial Innovation*, 5(1), pp.1-20.

Scott, P., 1995. *The meanings of mass higher education*. McGraw-Hill Education (UK).

Schönfelder, N. and Wagner, H., 2019. Institutional convergence in Europe. *Economics*, 13(1), p.20190003.

Sebestyen, V., 2009. *Revolution 1989: The fall of the Soviet empire*. Hachette UK.

Sethi, D., Guisinger, S.E., Phelan, S.E. and Berg, D.M., 2003. Trends in foreign direct investment flows: A theoretical and empirical analysis. *Journal of international business studies*, 34, pp.315-326.

Taylor, M., 1986. The product-cycle model: a critique. *Environment and Planning A*, 18(6), pp.751-761.

Tilcsik, A., 2010. From ritual to reality: Demography, ideology, and decoupling in a post-communist government agency. *Academy of management journal*, 53(6), pp.1474-1498.

Tobin, J., 1958. Liquidity preference as behavior towards risk. *The review of economic studies*, 25(2), pp.65-86.

Ullah, I. and Khan, M.A., 2017. Institutional quality and foreign direct investment inflows: evidence from Asian countries. *Journal of Economic Studies*, 44(6), pp.1030-1050.

Ullah, S., Akhtar, P. and Zaefarian, G., 2018. Dealing with endogeneity bias: The generalized method of moments (GMM) for panel data. *Industrial Marketing Management*, 71, pp.69-78.

UNCTAD (2002). "World Investment Report 2002: Transnational Corporations and Export Competitiveness"

UNCTAD (2010). "Global Investment Trends Monitor"

Valli, M. and Masih, M., 2014. Is there any causality between inflation and FDI in an 'inflation targeting' regime? Evidence from South Africa.

Veblen, T., 1899. The barbarian status of women. *American Journal of Sociology*, 4(4), pp.503-514.

Vernon, R., 1979. The product cycle hypothesis in a new international environment. *Oxford bulletin of economics and statistics*, 41(4), pp.255-267.

Wei, S.J., 2000. How taxing is corruption on international investors?. *Review of economics and statistics*, 82(1), pp.1-11.

Wheeler, D. and Mody, A., 1992. International investment location decisions: The case of US firms. *Journal of international economics*, 33(1-2), pp.57-76.

Williamson, O.E., 1981. The economics of organization: The transaction cost approach. *American journal of sociology*, 87(3), pp.548-577.

Wijeweera, A., Villano, R. and Dollery, B., 2010. Economic growth and FDI inflows: A stochastic frontier analysis. *The Journal of Developing Areas*, pp.143-158.

Williamson, O.E., 1981. The economics of organization: The transaction cost approach. *American journal of sociology*, 87(3), pp.548-577.

Xing, Y. and Wan, G., 2006. Exchange rates and competition for FDI in Asia. *World Economy*, 29(4), pp.419-434.

Zhuang, J., de Dios, E. and Martin, A.L., 2010. Governance and institutional quality and the links with economic growth and income inequality: With special reference to developing Asia. *Asian Development Bank Economics Working Paper Series*, (193).

Zielonka, J. (Ed.). (2001). *Democratic consolidation in Eastern Europe*. Oxford University Press