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Article

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The Quality of Governance and Its Impact on FDI Inflows. A Comparative Study of EU Member States

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Abstract

The principal goal of the article is to assess the quality of governance (QG) in the EU-28 over the period 2004–2020. It also examines the relationship between QG and FDI inward stock as a % of GDP. The study has been divided into five stages. The first one, based on the Worldwide Governance Indicators (WGI), attempts to identify countries that represent similar levels of institutional quality. Based on this criterion and using clustering methods, we divided the EU Member States into four groups. In the second step, we used the values of the synthetic index of QG to compare the level of institutional quality among the Member States between 2004 and 2020. The third step assesses FDI as a % of GDP in the Member States. Due to substantial differences, we divided them into four groups, arranged in ascending order of FDI as a % of GDP. In the fourth stage of the analysis, we examined the relationship between FDI as a share of GDP and groups of countries with similar QG. Finally, we examined the relevance of six individual dimensions of governance for FDI inflows in the EU-28 countries.

The study demonstrates that the EU Member States differ significantly regarding the overall QG measured with the WGI. The results of the statistical analysis allow us to positively verify the hypothesis about a positive relationship between QG and the inflow of FDI. The most important partial variable is regulatory quality. The added value of this article comes from grouping the EU-28 based on the similarity of their quality of governance (measured by six dimensions



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of governance) and demonstrating that it impacts FDI inflows. We created a synthetic index of governance quality values to compare the level of institutional quality among the Member States between 2004 and 2020.

Keywords: quality of governance, FDI, EU Member States, hierarchical cluster analysis

JEL: F21, F23

Introduction

Globalisation involves flows of capital seeking attractive investment locations. Capital flows, in particular, those that take the form of foreign direct investment (FDI), are of strategic importance to the economy as they impact GDP and exports, which, in turn, indirectly generate new jobs and promote regional and local economic recovery (Chipalkatti, Le, and Rishi 2021, pp. 1–18).

FDI may speed up economic growth by increasing labour force productivity by introducing advanced modern technologies. To ensure the inflow of FDI, a country should focus on improving the investment climate. Traditional location advantages, such as cheap labour, availability of raw materials, or cheap production factors, are still relevant and strongly impact the attractiveness of a location. Nevertheless, foreign investors' desire to invest largely depends on the host country's credibility, which is a derivative of the level of economic development, economic and political stability, economic (e.g., tax) policy, legal framework, and the institutional development of bodies that support entrepreneurship. All of those make up what is called *good governance*, a process which ensures transparent operations and accountability of institutions, boosts institutional effectiveness, helps to foster economic competitiveness of the country, and builds trust in the business community.

The literature on the subject mostly claims that “a certain optimal level of institutional development is a prerequisite for the materialisation of the growth-enhancing effect of FDI” (Yeboua 2020, p. 2) and that the host country's institutional quality “affects profitability, and institutionally strong countries can attract foreign investors by offering high returns” (Sabir, Rafique, and Abbas 2019, p. 4). The quality of institutions and good governance enhance productivity and economic stability, attracting and enhancing foreign investment (Hayat 2019, pp. 561–579). Many studies have demonstrated that strong institutions of host countries attract more FDI (Hayat 2019, pp. 561–579; Sabir, Rafique, and Abbas 2019, pp. 1–20; Belfqi, Qafas, and Jerry 2021, pp. 1–29; Khan, Weili, and Khan 2022, pp. 30594–30621). By contrast, weak and inadvertent governance discourages FDI because of political instability, a weak rule of law, inactive mechanisms for reducing corruption, and a lack of accountability and transparency (Hossain and Rahman 2017, p. 165).

The role of governance indicators in increasing FDI has attracted attention from researchers and policymakers for the last few decades. Governments thus strive to create a good business atmosphere to attract FDI and offer a favourable working environment for multinational companies. They do it irrespective of how economically advanced their country is, although most studies suggest that it is very relevant, in particular, for those who invest their capital in transition and developing economies.

In light of the above considerations, the paper attempts to answer the following questions: Is there really any relationship between the quality of governance and FDI inflow? What is the role of governance in stimulating FDI inflows into the EU-28? Which of the six dimensions of governance quality impacts the most FDI inward stock as a % of GDP in the EU Member States? Hence the principal goal of the article is to assess the quality of governance (QG) in the EU-28 and to examine the relationship between governance and FDI inward stock as a % of GDP. The main hypothesis states that there is a positive relationship between the quality of governance and the value of FDI inward stock as a % of GDP.

To achieve our goal, we used various statistical methods, i.e., hierarchical cluster analysis, contingency analysis, synthetic index values, and descriptive statistics. We used Worldwide Governance Indicators (WGI) to assess the QG in the EU MS for the period 2004–2020. The WGIs capture the quality of governance in six dimensions: (1) voice and accountability, (2) political stability and absence of violence, (3) government effectiveness, (4) regulatory quality, (5) the rule of law, and (6) control of corruption. They have been used as a measure in similar analyses by many researchers (e.g., Subasat and Bellos 2013, pp. 107–131; Shah and Afridi 2015, pp. 31–55; Khan, Weili, and Khan 2022, pp. 30594–30621).

Literature review

Although the literature offers several definitions of *governance*, most emphasise the importance of a capable state, which is accountable to its citizens and operates under the rule of law (Kaufmann and Kraay 2007, pp. 1–43; Rothstein and Teorell 2008, p. 170). One of the most frequently quoted definitions was put forward by the World Bank in 1992. It defined *governance* broadly by describing it through the following qualities: open and development-seeking policymaking, professional administration, working in the public interest, the rule of law, transparent processes, and a strong civil society. In this context, good governance is “central to creating and sustaining an enabling environment for development” (World Bank 1992, p. 47), and it is an essential complement to sound economic policies. That mainly refers to public administration and its capacity to deliver on public services, which was highlighted on many occasions in later World Bank publications (e.g., World Bank 1994; 1997; 2002; Lateef 2016). Nowadays,

we can also hear about “the demand for good governance” (Bhargava, Cutler, and Ritchie 2011). It stresses the relevance of actions that can be undertaken by the government to create effective and responsible programmes and public services. They include reforming financial management, the judiciary, and public procurement, and adopting anti-corruption laws and right-to-information laws.

Governance is a way of governing exercised in a responsible, accountable, and transparent manner based on the principles of efficiency, legitimacy, and consensus (Munshi 2004, p. 51). It promotes the development of an effective framework for business operations through stable regulations, the rule of law, efficient state administration adapted to the roles of democratically elected government, and a strong civil society that is independent of the state (Hirst 2000, p. 14).

As stated by many authors, *governance is thus equated with institutional quality*. For instance, according to Huther and Shah (1999, p. 2), governance encompasses “all aspects of the exercise of authority through formal and informal institutions in the management of the resource endowment of a state”. Similar conclusions were reached by Kaufmann, Kraay, and Mastruzzi (2003, pp. 1–115), Zhuang, de Dios, and Lagman-Martin (2010, pp. 1–55), or Kaufmann, Kraay, and Zoido-Lobaton (1999, pp. 1–60). Kaufmann, Kraay, and Zoido-Lobaton defined governance as “the traditions and institutions by which the authority in a country is exercised” (1999, p. 1). Kaufmann and Kraay (2007, pp. 1–43) use the terms “governance”, “institutions”, and “institutional quality” interchangeably throughout their paper.

The assertion that QG seriously impacts economic performance has been confirmed by several studies (e.g., Knack and Keefer 1997, pp. 590–602; Khan 2006; Helpman 2008; North 2019). The impact of governance on economic growth has been examined by Mira and Hammadache (2017, pp. 107–120), while the relationship between governance and economic development was investigated by Sharma (2012, pp. 729–744) and Khouya and Benabdelhadi (2020, pp. 47–67). In light of current global challenges, some focus on the impact of governance on inclusive growth (OECD 2015; Doumbia 2018, pp. 1–35; Ivanyna and Salerno 2021, pp. 1–44) or sustainable development (Magoni, Adami, and Radaelli 2021, pp. 547–561).

The relevance of good governance is also considered an element of a country’s investment attractiveness, and we examine the relationships between the development of domestic institutions and FDI inflows and outflows. Numerous empirical studies have demonstrated that countries with strong institutions attract more FDI (Globerman and Shapiro 2002, pp. 1899–1919; Buchanan, Le, and Rishi 2012, pp. 81–89; Jadhav 2012, pp. 5–14; Peres, Ameer, and Xu 2018, pp. 626–644; Hayat 2019, pp. 561–579; Sabir, Rafique, and Abbas 2019, pp. 1–20; Belfqi, Qafas, and Jerry 2021, pp. 1–29; Dobrowolska, Dorożyński, and Kuna-Marszałek 2021, pp. 23–44; Khan, Weili, and Khan 2022, pp. 30594–30621). Dunning (2002) stated that institutional factors, such as good governance and econom-

ic freedom, are increasingly more important and popular determinants of FDI because the motivations of multinational companies have shifted from market-seeking and resource-seeking to efficiency-seeking. Higher institutional quality means the country's consumer market is more active and efficient, and consumer demand ensures the profitability of the investment projects conducted there (Aibai et al. 2019).

On the other hand, some studies have found a *negative and insignificant relationship* between institutional factors and FDI inflows (Subasat and Bellos 2013, pp. 107–131; Nondo, Kahsai, and Hailu 2016, pp. 12–30). Bellos and Subasat (2012a, pp. 565–574; 2012b, pp. 303–328) provide evidence that weak governments in selected countries of Latin America that undergo economic transformation attract FDI. They confirmed these results in a follow-up study, this time covering as many as 18 Latin American countries (Subasat and Bellos 2013, pp. 107–131). Usually, however, poor institutional quality is seen as an obstacle to FDI inflows, as it represents a threat to investments and increases the cost of doing business (Aziz 2018, p. 111). Foreign investors will see avoiding problems with regulatory, bureaucratic, and judicial frameworks, property rights, enforceable contracts, or performance and content requirements as positive. Poor institutions are like a tax. They increase investment costs and thus impede foreign investment (Buchanan, Le, and Rishi 2012, pp. 81–89). This is why governments should carefully “adjust policies and institutions”. Otherwise, they may adversely affect the size of FDI inflow and “be detrimental to economic growth” (van Bon 2019, pp. 601–623).

The literature also examines the reverse causality – the effect of FDI on institutional quality, though the number of studies is limited (Wako 2021, p. 1). The findings of those studies are diverse, ranging from negative or insignificant effects (Lee 2014; Demir 2016, pp. 341–359; Fon et al. 2021, pp. 1–18) to positive effects (Long, Yang, and Zhang 2015, pp. 31–48). Other studies reveal that FDI positively affects the economic growth of host countries only if strong institutions exist in the host economy (e.g., Miao et al. 2020, pp. 1–20).

Researchers who examine the effect of institutional quality upon the inflow of FDI usually focus on developing, emerging and transition economies (Busse and Hefeker 2009, pp. 397–415; Wernick, Haar, and Singh 2009, pp. 317–322; Dorożyński and Kuna-Marszałek 2016, pp. 119–140; Hossain and Rahman 2017, pp. 164–177; Kurul and Yalta 2017, pp. 1–10), while developed countries are rarely examined. The studies mostly deal with comparisons between developing and developed countries (Buchanan, Le, and Rishi 2012, pp. 81–89; Qureshi et al. 2020, pp. 80–91). Some conclude that institutional quality positively and significantly impacts FDI inflow in Asia (Mengistu and Adhikary 2011, pp. 281–299; Raza et al. 2021, pp. 2596–2613), Latin American countries (Subasat and Bellos 2013, pp. 107–131), South Asian Association for Regional Cooperation countries, Central Asian countries and the Association of South-East Asian Nations (Shah and Afridi 2015, pp. 31–55; Ullah and Khan 2017, pp. 833–860), and African coun-

tries (Ajide and Raheem 2016, pp. 319–341; Nondo, Kahsai, and Hailu 2016, pp. 12–30). On the other hand, the region of Central and Eastern Europe, which has attracted many foreign investors over the last two decades, is relatively rarely investigated. Studies confirming the positive impact of institutional quality on investment attractiveness can be found in Doytch and Eren (2012, pp. 14–32), Dorożyński and Kuna-Marszałek (2016, pp. 119–140), Dobrowolska, Dorożyński, and Kuna-Marszałek (2020, pp. 91–110), and Owczarczuk (2020, pp. 87–96).

FDI inflow to the EU Member States

The COVID–19 pandemic caused a substantial decline in global FDI in 2020, bringing FDI flows back to the level seen in 2005 (in 2020, they fell by one-third to 1 trillion USD). The crisis has negatively impacted the most productive types of investment, i.e., greenfield investments in industrial and infrastructure projects. This means that international production, one of the key drivers of economic growth, has been severely affected (World Investment Report 2021, pp. 3–4).

Europe was also strongly affected by COVID–19. Foreign investors announced ca. 5000 new projects in Europe in 2020, which means a 30% drop compared to 2019. Capital investment also declined by 18%, to USD 177.3 bn in the same period. The UK was the top destination country for FDI in Europe in 2020, with 868 projects, followed by Germany (733 projects, i.e. 14% of the market share). They were followed by Spain, France, Poland, the Netherlands, and Ireland. Poland was the only Member State from Central and Eastern Europe. Of the top 10 host European countries, only Ireland recorded a higher number of FDI projects in 2020 compared to 2019, with a 2% increase (*The FDI Report... 2021*, pp. 16–17).

In general, investors still see the EU as an attractive and relatively safe location, even though the member countries greatly differ in their ability to attract FDI. The Northern Member States are the most effective in competing for foreign investors. At the end of 2020, the total value of the FDI inward stock in four leading countries (the Netherlands, the UK, Ireland, and Germany) exceeded the value of FDI stock in all the other countries combined (ca. USD 7,506 bn compared to USD 6,263 bn). However, the examined values look different when we consider the FDI inward stock as a % of GDP. Then we find that the undisputed leaders are Cyprus, Malta, and Luxembourg (respectively 2034%, 1693%, and 856% of their GDP). At the bottom of the ranking are Germany, Greece, and Italy, with a share of FDI stock in GDP of less than 30% (Table 1).

Table 1. FDI inward stock (in millions of USD) and FDI inward stock as a % of GDP (as at the end of 2020)

No.	EU MS	FDI inward stock as % of GDP (2020)	No.	EU MS	FDI inward stock in millions of USD
1	Cyprus	2034.43	1	Netherlands	2,890,579
2	Malta	1692.78	2	UK	2,206,202
3	Luxembourg	856.30	3	Ireland	1,350,055
4	Ireland	321.88	4	Germany	1,059,326
5	Netherlands	317.35	5	France	968,138
6	Belgium	123.65	6	Spain	853,291
7	Estonia	110.98	7	Belgium	635,929
8	Bulgaria	88.37	8	Luxembourg	627,358
9	UK	81.53	9	Italy	485,842
10	Portugal	79.49	10	Cyprus	480,867
11	Czechia	78.22	11	Sweden	408,824
12	Sweden	76.10	12	Poland	248,732
13	Spain	66.61	13	Malta	240,905
14	Hungary	65.44	14	Austria	194,058
15	Slovakia	61.18	15	Czechia	188,772
16	Latvia	60.97	16	Portugal	183,556
17	Croatia	57.29	17	Denmark	135,125
18	Austria	45.29	18	Romania	107,526
19	Romania	43.41	19	Hungary	100,993
20	Lithuania	42.58	20	Finland	96,903
21	Poland	41.84	21	Slovakia	63,992
22	Slovenia	38.60	22	Bulgaria	59,724
23	Denmark	38.13	23	Greece	51,801
24	France	37.16	24	Estonia	34,450
25	Finland	35.69	25	Croatia	32,066
26	Germany	27.95	26	Lithuania	23,709
27	Greece	27.34	27	Latvia	20,457
28	Italy	25.77	28	Slovenia	20,420

Source: own elaboration based on UNCTADSTAT.

The quality of governance based on the Worldwide Governance Indicators¹

Governance quality and its components in individual countries or regions of the world have been assessed for many years by different institutions and international organisations. It provides the basis for annual reports with rankings of countries based on selected indicators and assessment criteria. These data are used by, among others, foreign investors when making location decisions.

The most popular measures of QG based on aggregate data and international comparative studies include rankings published by the World Bank, the European Central Bank, the International Institute for Management Development, and the World Economic Forum. Unfortunately, institutional quality indicators are usually highly correlated (Globerman and Shapiro 2002; Buchanan, Le, and Rishi 2012; Ullah and Khan 2017). To avoid the problem, we used aggregate and individual governance measures, such as the Worldwide Governance Indicators².

The WGIs report aggregate and individual governance indicators for over 200 countries and territories over the period 1996–2020, for six dimensions of governance (Documentation n.d.):

- 1) **Voice and Accountability**, which captures the perceptions of the extent to which a country's citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and a free media;
- 2) **Political Stability and Absence of Violence/Terrorism**, which measures perceptions of the likelihood of political instability and/or politically motivated violence, including terrorism;
- 3) **Government Effectiveness**, which captures perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies;
- 4) **Regulatory Quality**, which measures the perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development;

¹ Based on Worldwide Governance Indicators.

² WGI were initiated by Kaufmann and Kraay in 1999 and developed by Zoido and Mastruzzi.

- 5) **Rule of Law**, which captures perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular, the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence;
- 6) **Control of Corruption**, which measures perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as the “capture” of the state by elites and private interests.

These aggregate indicators combine the opinions of numerous enterprises, citizens, and expert survey respondents in developed and developing countries. They are based on over 30 individual data sources composed of various survey institutes, experts, non-governmental organisations, international organisations, and companies³.

The relationship between the quality of governance and FDI inflow into the EU Member States

Based on the results of studies that assess the quality of governance in the EU Member States published in the Worldwide Governance Indicators Reports, in the first step of our analysis, we used hierarchical cluster analysis methodology⁴ to identify countries that represent similar QG. Using Ward’s method⁵, we obtained a dendrogram which shows a hierarchical structure arranged in order of descending similarity of components in the set (see Figure 1).

The analysis allowed us to divide all of the EU–28 Member States into four groups that represent similar levels of QG:

- Group 1_{gov}: Finland, Sweden, Luxembourg, Denmark, Netherlands, Austria, Ireland;
- Group 2_{gov}: Belgium, France, Germany, United Kingdom, Cyprus, Estonia, Spain;
- Group 3_{gov}: Malta, Latvia, Portugal, Slovak Republic, Czech Republic, Hungary, Slovenia, Poland, Lithuania;
- Group 4_{gov}: Bulgaria, Romania, Greece, Italy, Croatia.

3 These data sources are rescaled and combined to create the six aggregate indicators mentioned above, using a statistical methodology known as an *unobserved components model*. A key feature of the methodology is that it generates margins of error for each governance estimate. These margins of error need to be taken into account when making comparisons across countries and over time (Kaufmann, Kraay, and Mastruzzi 2010).

4 Hierarchical cluster analysis is used to identify homogenous groups of elements based on selected characteristics in a given set of data (Lasek 2002; James et al. 2014).

5 Ward’s method is one of the agglomeration methods used in hierarchical cluster analysis.

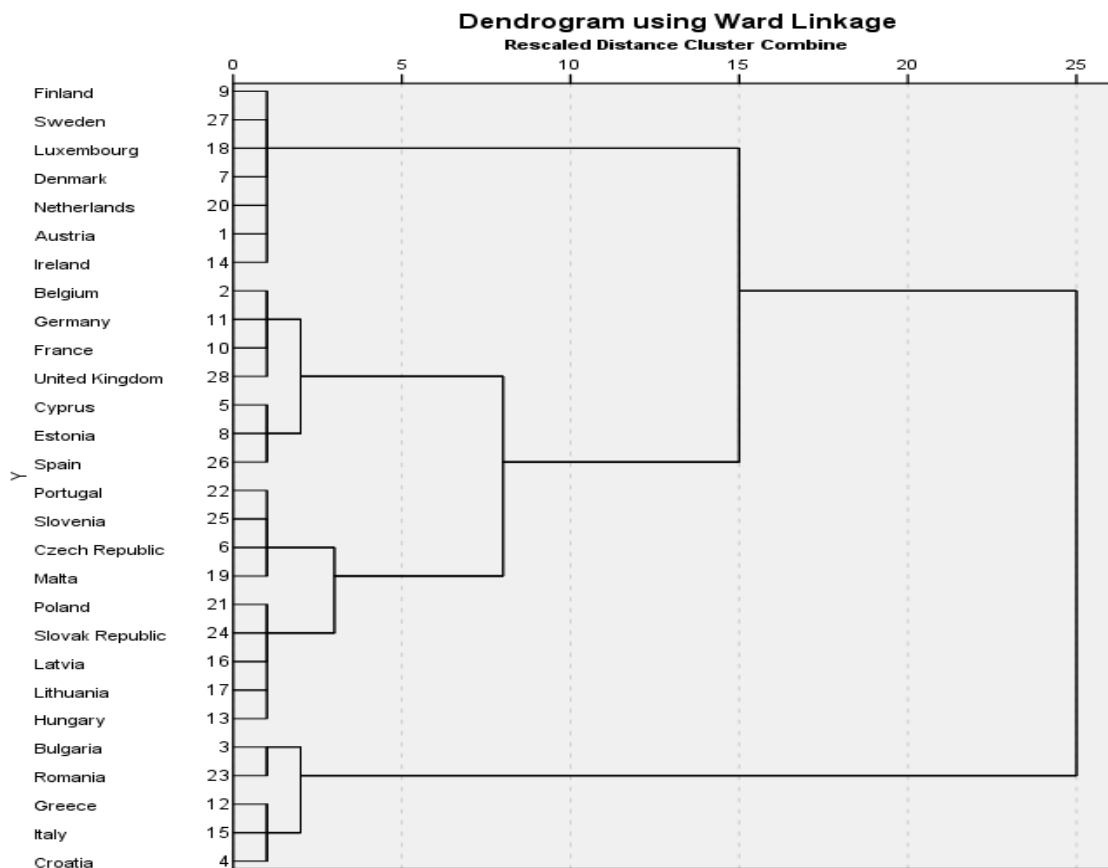


Figure 1. Dendrogram for the EU-28 obtained using Ward's linkage method

Source: own compilation using PS IMAGO.

Although hierarchical cluster analysis helped to distinguish four groups of countries with similar QG, it failed to identify which group performs better than others. Hence, in the second step of the analysis, we compared the quality of governance among the four groups of countries. We constructed a synthetic index of governance quality values for each Member State based on the data from 2004–2020. This measure is a sum of percentile ranks⁶ for the countries published by the WGI for six dimensions of governance over the investigated period. The ranking of the EU countries based on the synthetic index is presented in Figure 2.

⁶ Percentile ranks from 0 (the lowest) to 100 (the highest).

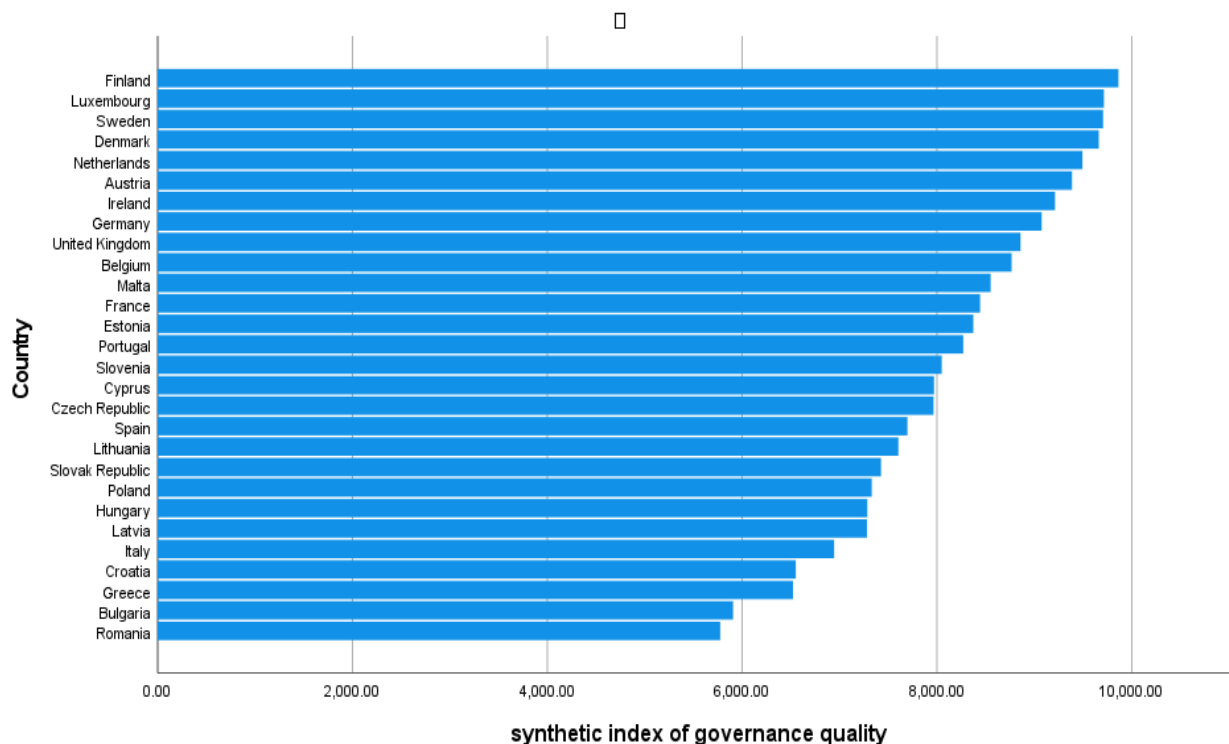


Figure 2. Ranking by the synthetic index of governance quality in EU Member States, 2004–2020

Source: own compilation using PS IMAGO.

Using the synthetic index of governance quality, we calculated the mean value of the index for the four groups of countries (see Table 2).

Table 2. The mean value of the synthetic index of governance quality for the EU Member States, 2004–2020

Group	Country	Mean of synthetic index of governance quality
group 1 _{gov}	Finland, Sweden, Luxembourg, Denmark, Netherlands, Austria, Ireland	9577.43
group 2 _{gov}	Belgium, France, Germany, United Kingdom, Cyprus, Estonia, Spain	8455.80
group 3 _{gov}	Malta, Latvia, Portugal, Slovak Republic, Czech Republic, Hungary, Slovenia, Poland, Lithuania,	7752.36
group 4 _{gov}	Bulgaria, Romania, Greece, Italy, Croatia	6340.85

Source: own compilation using PS IMAGO.

The ranking revealed that the highest QG was reported by countries from Group 1_{gov}: Finland, Sweden, Luxembourg, Denmark, Netherlands, Austria, and Ireland. At the other

extreme is Group 4_{gov}: Bulgaria, Romania, Greece, Italy, and Croatia, where investors can expect the lowest quality of governance.

Tables 1 and 3 show the inflow of FDI and descriptive statistics of the FDI inward stock as a % of GDP for the EU–28 at the end of 2020. It is clear from the tables that the data are very differentiated, highly skewed, and with high kurtosis. The 5% trimmed mean and M-estimators differ significantly from the mean, which is evidence of the absence of homogeneity in the examined population.

Table 3. Statistics describing FDI inward stock as a % of GDP in the EU in 2020

Descriptives	Statistic	Std. Error
Mean	234.870	92.6708
95% Confidence Interval for Mean – Lower Bound	44.725	
95% Confidence Interval for Mean – Upper Bound	425.014	
5% Trimmed Mean	151.909	
Variance	240460.602	
Std. Deviation	490.3678	
Minimum	25.8	
Maximum	2034.4	
Range	2008.7	
Interquartile Range	65.9	
Skewness	3.056	.441
Kurtosis	8.781	.858
Percentiles 25	39.413	
Percentiles 50	63.310	
Percentiles 75	105.331	
M-Estimators		
Huber's M-Estimator ^a	65.001	
Tukey's Biweight ^b	56.586	
Hampel's M-Estimator ^c	57.315	
Andrews' Wave ^d	56.598	

^a The weighting constant is 1.339

^b The weighting constant is 4.685.

^c The weighting constants are 1.700, 3.400, and 8.500.

^d The weighting constant is $1.340 \cdot \pi$.

Source: own compilation using PS IMAGO.

Given the circumstances, in the third step of our analysis, we divided the countries into four groups arranged in ascending order of FDI inward stock as a % of GDP based on measures of position such as quartiles. We transformed the FDI inward stock as a % of the GDP variable measured on a numerical scale into a variable measured on an ordinal scale. As a result, we produced the following groups of countries:

- Group 1_{fdi}: Belgium, Cyprus, Estonia, Netherlands, Ireland, Luxembourg, Malta;
- Group 2_{fdi}: United Kingdom, Sweden, Spain, Portugal, Hungary, Czech Republic, Bulgaria;
- Group 3_{fdi}: Austria, Croatia, Lithuania, Latvia, Poland, Romania, Slovak Republic;
- Group 4_{fdi}: Greece, Italy, France, Germany, Slovenia, Denmark, Finland.

In the fourth step of the study, we assessed the relationship between the QG in the countries of EU–28 from 2004–2020 and FDI inward stock as a % of GDP in 2020. The correlation analysis started with the drafting of the scatterplot for the variables (Figure 3).

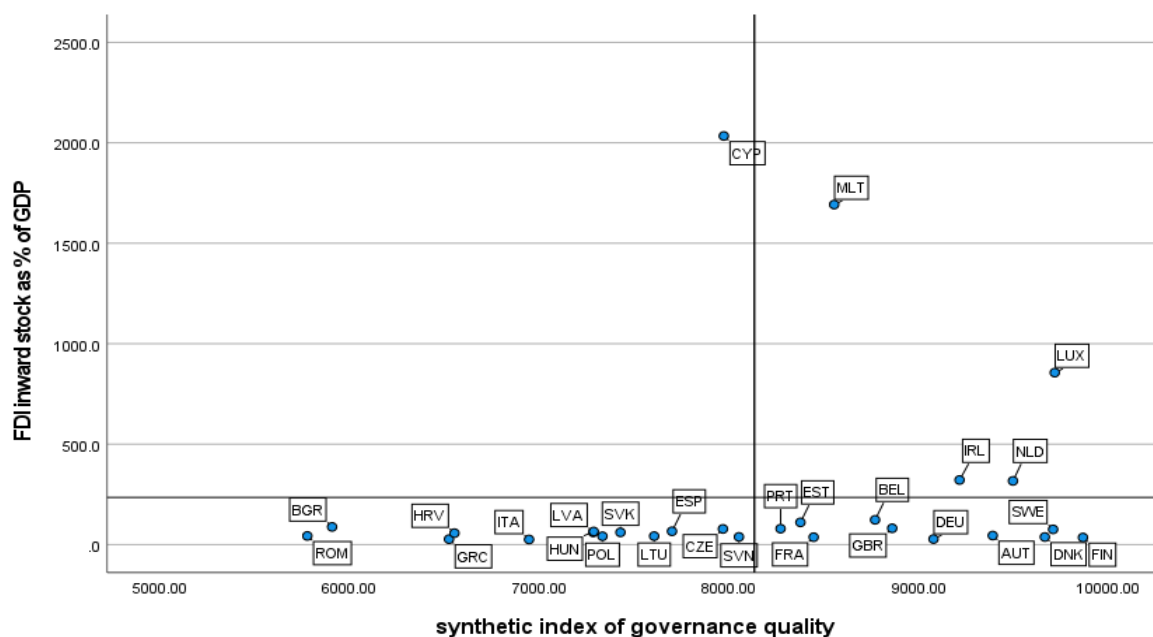
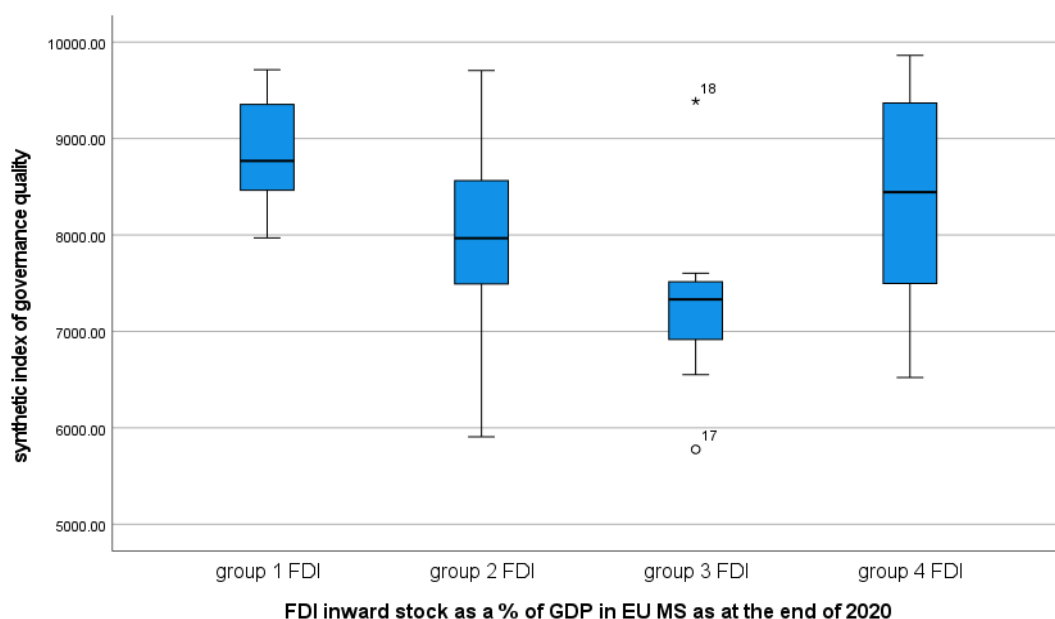


Figure 3. Scatterplot for the synthetic index of governance quality and FDI inward stock as a % of GDP

Source: own compilation using PS IMAGO.

The scatterplot confirms the conclusions drawn in the previous step, suggesting huge differentiation of the FDI inward stock as a % of GDP among the Member States largely due to the values of this variable for Cyprus, Malta, and Luxembourg. That is why we decided to assess how much the synthetic index of governance quality differs across

the four distinguished groups of EU Member States arranged in ascending order of FDI as a % of GDP based on the measures of position such as quartiles (see Figure 4).

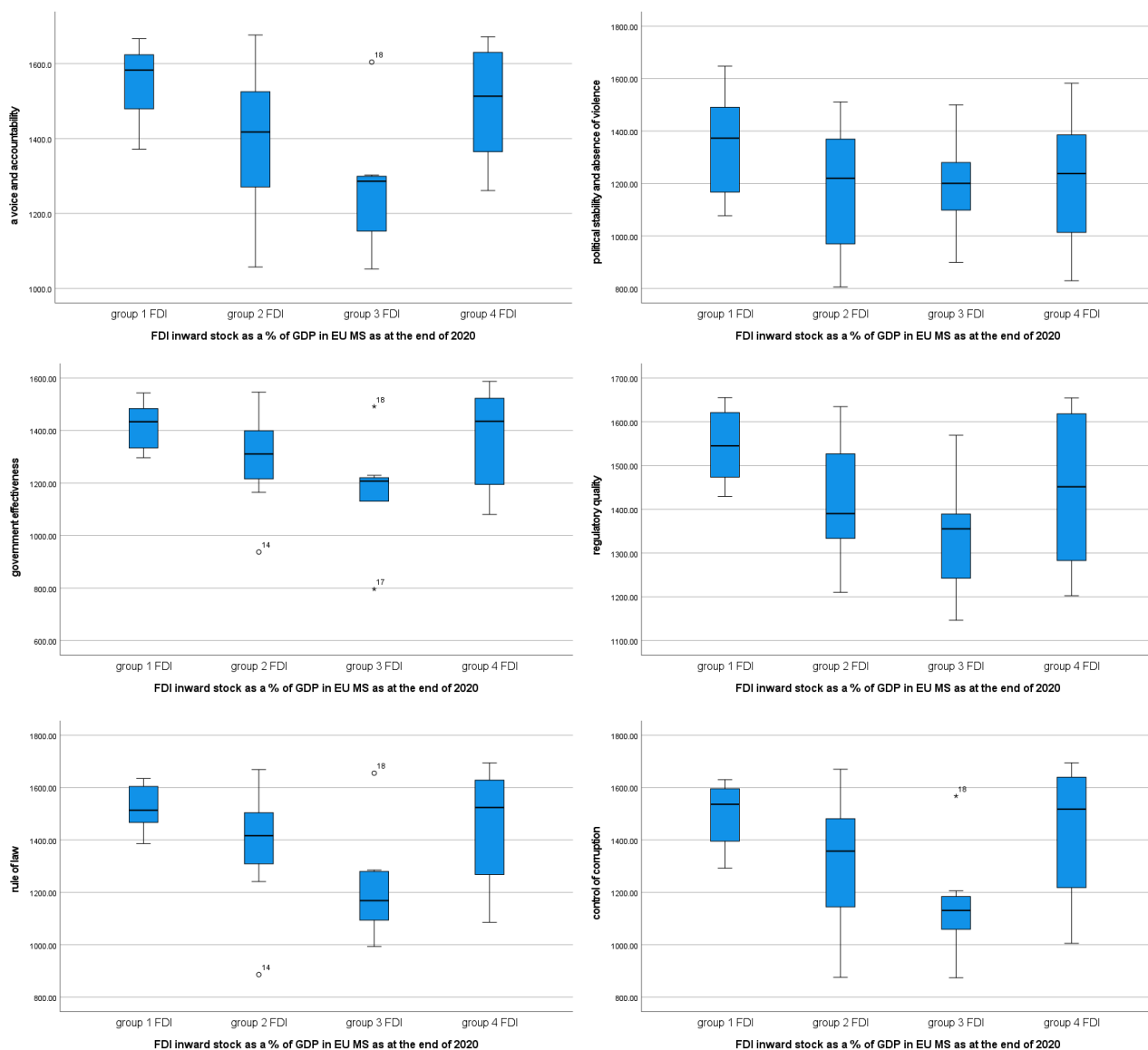


° number 17 – Romania, * number 18 – Austria.

Figure 4. Boxplot for the synthetic index of governance quality in groups of countries based on the FDI inward stock as a % of GDP in the EU Member States as at the end of 2020

Source: own compilation using PS IMAGO.

The highest median of the synthetic index of governance quality among the Member States was reported for Group 1_{fdi}, which means that the largest inflows of FDI inward stock as a % of GDP are characterised by countries offering the highest institutional quality to potential investors. The median values are lower in Group 2_{fdi} and Group 3_{fdi}, which comprise countries with moderate levels of FDI inward stock as a % of GDP. The results for Group 4_{fdi}, which contains countries reporting the lowest levels of FDI inward stock as a % of GDP, are surprising. It comprises Greece, Italy, France, Germany, Slovenia, Denmark, and Finland, i.e., leaders of governance quality (e.g., Finland, Denmark, Group 1_{gov}) who simultaneously report relatively low FDI inward stock as a % of GDP (35.69% and 38.13%, respectively, i.e., Group 4_{fdi}). A similar relationship can be observed for France and Germany (Group 2_{gov} in governance quality ranking and Group 4_{fdi} in FDI inward stock as a % of GDP).



° number 17 – Romania, number 18 – Austria, number 14 – Bulgaria

Figure 5. Boxplot for the synthetic index of governance quality for six dimensions of governance in groups of countries based on FDI inward stock as a % of GDP

Source: own compilation using PS IMAGO.

In the last stage, we examined the relevance of individual dimensions of QG for FDI inflows. The results are presented in Figure 5. The distribution of median values in all areas covered by the study is analogous to the distribution in the synthetic index. The biggest differences between the groups can be found in the following dimensions: *voice and accountability*, *regulatory quality* and *rule of law*. On the other hand, for *political stability and absence of violence*, the values of the median of the synthetic index of governance quality in Groups 2–4 are almost identical and slightly below results scored by Group 1_{fdi}, which is a sign of the relatively small differences across the groups of Member States.

Grouping countries in ascending order of FDI as a % of GDP based on quartiles and dividing them into groups with a similar quality of governance allowed us to construct a contingency table (Table 4). By examining the data from Table 4, one may assume that countries with higher governance quality usually report higher FDI inward stock as a % of GDP (e.g., Netherlands, Luxembourg, Ireland). However, there are exceptions to this rule (e.g., Malta).

Table 4. Correlation matrix for groups of the EU Member States for the quality of governance and FDI inward stock as a % of GDP

Groups of countries with similar levels of FDI inward stock as a % of GDP	Groups of countries with a similar quality of governance				Total
	Group 1 _{gov} Finland, Sweden, Luxembourg, Denmark, Netherlands, Austria, Ireland	Group 2 _{gov} Belgium, France, Germany, United Kingdom, Cyprus, Estonia, Spain	Group 3 _{gov} Malta, Latvia, Portugal, Slovak Republic, Czech Republic, Hungary, Slovenia, Poland, Lithuania	Group 4 _{gov} Bulgaria, Romania, Greece, Italy, Croatia	
Group 1 _{fdi} Belgium, Cyprus, Estonia, Netherlands, Ireland, Luxembourg, Malta	3	3	1	0	7
Group 2 _{fdi} United Kingdom, Sweden, Spain, Portugal, Hungary, Czech Republic, Bulgaria	1	2	3	1	7
Group 3 _{fdi} Austria, Croatia, Lithuania, Latvia, Poland, Romania, Slovak Republic	1	0	4	2	7
Group 4 _{fdi} Greece, Italy, France, Germany, Slovenia, Denmark, Finland	2	2	1	2	7

Source: own compilation using PS IMAGO.

To assess the strength of the correlation between the dimensions of QG and FDI inward stock as a % of GDP, we used the contingency coefficient (Table 5). Its value for the six dimensions of governance quality for the EU–28 was 0.503,⁷ which shows

⁷ Own calculations carried out using PS IMAGO.

that there is a moderate positive correlation⁸ between the QG and FDI inward stock as a % of GDP. By ensuring appropriate governance quality, the Member States increase FDI as a % of GDP. The values of the contingency coefficients between the six dimensions of governance and FDI as a % of GDP suggest that voice and accountability, regulatory quality, and rule of law exert the biggest impact on FDI. As indicated by the results of our analysis, differences across the Member States are the biggest in these areas.

Table 5. Contingency coefficients between the six dimensions of governance and FDI inward stock as a % of GDP in the EU Member States

Dimensions of governance		Contingency coefficient
1	voice and accountability	0.548
2	political stability and absence of violence	0.429
3	government effectiveness	0.492
4	regulatory quality	0.634
5	rule of law	0.548
6	control of corruption	0.484
Six dimensions of governance		0.503

Source: own compilation using PS IMAGO.

Conclusions

The principal goals of the article were to assess the quality of governance in the EU–28 and to examine the relationship between the quality of governance and FDI inward stock as a % of GDP. The analysis led us to the following conclusions:

1. Numerous studies have demonstrated that there is a relationship between governance quality and economic growth. At the same time, governance quality is often equated with institutional quality. Most researchers agree that it is one of the main determinants of FDI inflow.
2. The EU is one of the most attractive investment locations in the world. The statistical data suggest there is a big discrepancy across the EU–28 regarding the absolute value of invested capital, as well as the value of FDI as a share of GDP.

⁸ The direction of the relationship was assessed based on the distribution of data in the contingency table (Table 4) and the ranking of variables that describe the quality of governance in the EU Member States (Figures 2 and 3).

3. EU Member States differ significantly in the overall quality of governance, measured with the WGI, as well as the main six dimensions. Simultaneously, it turned out that the examined countries can be divided into groups representing a similar quality of governance. Using hierarchical cluster analysis, we selected four groups. Countries that belong to these four groups exhibit some identical features, e.g., political stability, rule of law, and control of corruption.
4. The results of the statistical analysis revealed a moderate yet positive correlation between the quality of governance and the inflow of FDI. The most important of the partial variables is the regulatory quality, which measures the perceptions of the government's ability to formulate and implement sound policies and regulations that permit and promote private sector development.
5. In addition, relatively important are the rule of law, which captures perceptions of the extent to which agents have confidence in and abide by the rules of society, and voice and accountability, which captures perceptions of the extent to which a country's citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and a free media.

The results of our study are in accordance with the literature addressing empirical FDI incentives, which stresses the importance of governance for FDI inflow (e.g. Hayat 2019, pp. 561–579; Sabir, Rafique, and Abbas 2019, pp. 1–20; Belfqi, Qafas, and Jerry 2021, pp. 1–29; Khan, Weili, and Khan 2022, pp. 30594–30621). The added value of this article is that it grouped the EU–28 member states based on the similarity of their quality of governance (measured by six dimensions of governance) and demonstrated that it impacts the size of FDI inflow. To achieve this, we created a synthetic index of governance quality values to compare the level of institutional quality among the EU Member States between 2004 and 2020. We examined the relationship between FDI and four groups of countries with similar QG. The novelty was that we examined the relevance of six individual dimensions of governance for FDI inflows in the EU–28.

The study has some limitations. Due to data availability, we investigated only FDI inward stock as a % of GDP. No distinction was made between different entry modes of FDI or specific motivations that drive FDI inflow. Such an investigation would be interesting, especially in the context of EU countries which are so different regarding economic and social development. Furthermore, in subsequent studies, the relationship between other dimensions of governance quality, such as the protection of investors' interests or economic freedom, could be examined. The spectrum of factors that are potentially relevant to FDI inflow could also be expanded. Future studies could also be oriented towards investigating differences in the quality of governance and FDI inflows between the EU–15 (i.e., the “old members”) and the EU–13 (the “new members”). It would thus be interesting to compare the role of governance quality between these two groups of countries that exhibit different levels of economic growth.

This study has specific implications for research and practice. Given the positive relationship between QG and FDI inflow, policymakers should consider the importance of institutional quality indicators in attracting FDI. A good governance profile of the host country encourages to invest in it. Thus, governments should implement institutional reforms to ensure a favourable climate for the inflow of FDI and boost the investment attractiveness of their respective economies. Our research demonstrates that government policies should also focus on improving specific dimensions of governance quality, such as regulatory quality. The results show that this dimension of governance has been the most relevant for FDI inflow in the EU–28 Member States.

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Jakość rządzenia a napływ zagranicznych inwestycji bezpośrednich Badanie porównawcze wśród państw członkowskich UE

Głównym celem artykułu jest porównawcza ocena jakości rządzenia w krajach członkowskich UE w latach 2004–2020 oraz zbadanie jego związku z napływem zagranicznych inwestycji bezpośrednich (ZIB). Badanie podzielono na pięć etapów. Pierwszy, oparty na *Worldwide Governance Indicators* (WGI), jest próbą identyfikacji krajów o podobnym poziomie jakości rządzenia. Na podstawie tego kryterium, stosując statystyczne metody grupowania, podzieliliśmy państwa członkowskie UE na 4 grupy. W drugim etapie wykorzystaliśmy syntetyczny wskaźnik do porównania poziomu jakości rządzenia wśród państw członkowskich UE. Następnie przeanalizowaliśmy napływ ZIB do krajów członkowskich UE. Ze względu na znaczne różnice w tym zakresie podzieliliśmy je również na cztery grupy uszeregowane rosnąco pod względem skumulowanej wartości ZIB w relacji do PKB. W czwartym etapie zbadaliśmy związek między napływem ZIB a zagregowaną wartością jakości rządzenia. Na koniec zbadaliśmy znaczenie sześciu zmiennych częściowych jakości rządzenia dla napływu ZIB do krajów członkowskich UE.

Badanie wykazało, że państwa członkowskie UE różnią się istotnie pod względem jakości rządzenia, mierzonej wskaźnikiem WGI. Wyniki analizy statystycznej dostarczyły podstaw do pozytywnej weryfikacji hipotezy o pozytywnym związku pomiędzy jakością rządzenia a napływem ZIB. Stosunkowo największe znaczenie można przypisać jakości wprowadzanych regulacji.

Słowa kluczowe: jakość rządzenia, ZIB, państwa członkowskie UE, hierarchiczna analiza skupień