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# The Role of Foreign Direct Investment in the Economic Development of EU Countries

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## **ABSTRACT**

This study examines the role of foreign direct investment in the economic development of EU countries. FDI plays an important role in stimulating economic growth, job creation, innovation development and integration of national economies into global chain. The study examines crucial aspects of FDI in Europe including its historical evolution, impact on economic growth employment and innovation as well the impact of events such as Brexit and trade agreements' changes. The methodology of the study is based on a theoretical review, comparative analysis and empirical data revealing the dynamics of FDI inflows and outflows, the main trends and determinants of investor's choice. The main results demonstrate that FDI does make a significant contribution to the economic development of Europe particularly in sectors such as high technology and sustainable development. However serious challenges remain here such as poorly coordinated investment policies and growing geopolitical instability. Based on the analysis suggestions are provided to improve investment climate and increase the attractiveness of the region for investors.

## INTRODUCTION

Foreign direct investment (FDI) is widely recognized as a key driver of economic growth, especially in developing and transition economies. They serve not only as a channel for technology transfer, but also as a platform for integrating local economies into global supply chains, which contributes to the modernization of production processes and increased competitiveness (Borensztein et al., 1998; Alfaro et al., 2004). Foreign direct investment provides access to modern technologies and practices, promotes professional growth of the workforce through the introduction of advanced management and training methods, and stimulates the development of small and medium-sized businesses, increasing incomes and living standards of the population (Moran, 1998). It is important to note that the positive effect of foreign direct investment is most pronounced in countries with developed infrastructure, stable macroeconomic situation and favorable institutional environment (Dunning, 2008).

Political stability, regulatory transparency and a reliable legal environment are consistently considered as the most important factors influencing investment decisions of multinational corporations. These factors often outweigh considerations such as labor costs or tax benefits, as global investors seek to minimize operational risks (Bnassy-Quére et al., 2007). For example, stable political regimes and transparent regulatory procedures in Central and Western European countries have attracted significant amounts of foreign direct investment, despite higher labor costs. At the same time, Eastern European countries face difficulties in attracting sustainable investment flows, despite the availability of natural resources or other competitive advantages (Bevan & Estrin, 2004).

Although many studies underline the importance of FDI in improving economic efficiency, there are gaps in the literature in understanding exactly how regulatory and macroeconomic conditions shape this relationship. For example, investment incentives such as tax incentives can effectively attract FDI, but their long-term effectiveness is reduced if investors focus only on access to domestic markets and resources rather than export-oriented production (Meyer & Jensen, 2004). In addition, legal protection mechanisms such as protection against political and regulatory risks (e.g. expropriation and currency controls) also play an important role in creating a sustainable investment climate (Busse & Hefeker, 2007). In the European context, the impact of such mechanisms has not yet been fully explored, especially given the diversity of legal systems and institutional approaches.

The role of foreign direct investment in the economies of the European Union is quite significant, as it is one of the factors preventing economic inequality between countries. Countries such as France and the Netherlands are known to have strong economies and therefore successfully attract large amounts of investment in their production sectors.: information technology, biotechnology, or green energy. (Resmini, 2000). And other EU countries mostly attract investments in sectors such as manufacturing and infrastructure (for example, Germany). (Carstensen & Toubal, 2004). Thus, it can be said that the effectiveness of attracting FDI largely depends on the internal policies of each of the EU countries, as well as the strategies themselves (that is, why investments are needed).

Foreign direct investment also contributes to the increase of innovation activity and the development of strategic industries in the EU countries. For example, studies have shown that the presence of multinational corporations in the region facilitates technology transfer and encourages local companies to increase competitiveness (Estrin and Uvalich, 2014). In addition, foreign direct investment plays a key role in job creation and human capital development. For example, the EBRD (2022) emphasizes that investors in Central and Eastern European countries contribute to the modernization of labor processes and the strengthening of human resources.

This work aims to identify what prevents an increase in investment in EU countries, as well as the role of FDI in the EU economy, based on the fact that each country has its own economic structure, regulatory framework and political component. In this study, we will look at the historical development of FDI, its impact on economic growth, employment and inflation; consider correlations and analyze global indices in the context of FDI. It is also worth noting the factors that have already affected and may still affect the investment climate of the EU countries, such as Brexit – Britain's exit from the European Union, the conclusion of new trade agreements and global crises.

The methodology of the work includes a review of the literature on this topic, comparative analysis, empirical studies and correlation and regression analysis. In this way, it will be possible to study the dynamics of FDI inflows and outflows, as well as identify key trends in the EU countries.

The main conclusions of the work confirm the significant contribution that FDI has made to the economic growth of countries, as well as the development of high technology and innovation in the European Union. (UNCTAD, 2023). However, there are still unresolved problems related to the heterogeneity of regulation and insufficient coordination of investment policy in the EU countries. In particular, the growing geopolitical uncertainty, such as Brexit,

has become a serious shock to the investment climate in the region, which further underlines the importance of stable trade agreements and stable policies to maintain a high level of attractiveness of EU countries to international investors (European Parliament, 2021). The next shock was the COVID-19 pandemic, at which time everyone saw the vulnerability of traditional sectors of the economy, and that in today's world it is worth reconsidering the importance of sectors such as digital technologies and environmental sustainability in production. (OECD, 2022)

Taking into account the above aspects, this study complements the existing body of knowledge, deepening understanding of the dynamic relationship between direct investment and economic development in Europe. It also offers practical policy recommendations aimed at increasing the investment attractiveness of the region. Among such recommendations are the creation of a unified regulatory framework for all EU member states, strengthening legal protection mechanisms for investors, developing strategic industries, including green energy and digital technologies, as well as increasing transparency and predictability of regulation. These steps can not only strengthen Europe's position as an investment-attractive region, but also contribute to more balanced and sustainable economic growth in all member countries.

# **CHAPTER 1. THEORETICAL FOUNDATIONS OF FDI IN THE EUROPEAN UNION**

## **1.1 Overview of the main trends in FDI, including key theories and models**

Foreign direct investment (FDI) is the investment of investors who are not residents of this country. From the point of view of doing business, there are various forms of such investments, and one of them is horizontal foreign direct investment. For example, if a soft drink company opens a similar new plant outside its state, this is a horizontal investment. Horizontal investments are usually accompanied by expansion by the parent company and massive investment of FDI in the economy of the host country. (Markusen, 1995).

There are two main reasons why a company decides to expand its operations outside its country: access to new (foreign) markets and the availability of cheap factors of production. (Neary, 2007). Horizontal investments involve the production of virtually the same products and services abroad as in the home country. This type of investment is called horizontal, because TNCs copy the same types of activities in different countries. Preference is given to horizontal FDI, when selling products to foreign markets is too expensive due to transportation costs and trade barriers. (Brainard, 1997).

Vertical FDI refers to those international companies that divide the production process geographically. They are called vertical because TNCs divide the production chain vertically, controlling some stages of production abroad. (Markusen, 2002). The peculiarity of this separation lies in the fact that the production process includes numerous stages of production that require different consumable materials. If the prices of these components vary by country, it will be beneficial for the company to divide the production chain. (Feenstra, 1998). Vertical FDI is divided into two groups: reverse and forward-facing vertical FDI.

In the case of vertical reverse FDI, TNCs establish an enterprise abroad as their own supplier of production factors, providing the parent company with the necessary components. Forward-looking investments include those TNC branches abroad that receive the necessary components from the parent company for their own production and, thus, stand in the production chain after the parent company. One TNC often has both types of investments, which is explained by the different cost of the necessary components in different countries. Next, we will consider these types of FDI in more detail. However, first, it is necessary to study the correct interpretation of these concepts, their interpretation in various literary sources and what is meant by these concepts in modern conditions of globalization.

The development of the theory of the emergence of multinational corporations took place in three stages (at the initial stage, monopolistic and neoclassical theories were created; at the middle stage, internalization theory; and the modern approach, institutional approaches) (Polyakov R.K. (2019)). Previously, the activities of TNCs were considered as part of the theory of capital flows. Representatives of this theory argue that the actual management of the company should be located in a country with excess capital, and production branches in countries with a shortage of this resource. Subsequently, the theory of multinational corporations was divided into two directions. The first direction reveals the origin of vertical FDI, when a company divides the production process geographically. It is based on the theory of capital flows, according to which direct investment is necessary for production in foreign branches. (Krugman, 1996). Another direction considers the model of horizontal FDI, when a company produces the same goods and services in different countries. (Markusen & Venables, 2000). There is a third direction that combines both of the above. This theory was called the model-KZ – "Capital of Knowledge". (Brainard, 1997). Before delving into the basic principles of the considered FDI models, it is important to familiarize yourself with the definitions of vertical and horizontal FDI that are most common in the economic literature. Here are the four earliest of them. The first is based on the motivation of investing. According to this definition, FDI can be divided into vertical and horizontal, depending on the motives of the company when establishing foreign branches.

Thus, the essence of vertical FDI is to save on production factors, the prices of which vary greatly across countries. The second way to distinguish between these two types of investment was proposed by L. Brainard, who introduced the concept of "proportion of factors" to explain the activities of TNCs abroad. This method is based on an empirical assessment of international trade flows. In the third direction, the geographical distribution of sales through foreign branches is applied.

Finally, the latter direction was developed by J. Markusen in 1995. He defined vertical FDI as the geographical division of the production process into stages, which is very similar to fragmentation. (Markusen, 1995). The modern concept includes some common features of these alternative directions and defines vertical FDI as a geographical division of production, while horizontal ones are considered as duplication of activities by a multinational corporation in different countries. Of course, it is impossible to draw a clear line between horizontal and vertical FDI, since even in the case of horizontal investments, foreign branches still use the consulting and management services of the parent company, even if the company duplicates the same activity in several countries.

Thus, any horizontally invested TNC has the features of vertical investment. In the economic literature, outsourcing and fragmentation are often referred to as very similar concepts to vertical FDI. These concepts very generally reflect the company's activities and usually include the division of the production process outside the home country. In addition, various prominent researchers define the geographical division of production in their own way. Robert C. Feenstra (1998) called this the "disintegration of production", P. Krugman (Paul Krugman, 1996) "breaking the value chain," and Edward E. Leamer attributed this process to "delocalization."

The main motive for horizontal FDI is to avoid transportation costs or access to foreign markets, which can only be done by placing your own enterprises producing goods/services there. The horizontal FDI model assumes the placement of investments in an environment of countries of equal economic level and well-being. The difference between horizontal and vertical FDI can be represented as an equation of costs and benefits. (Brainard, 1997)

Opening a new production facility abroad instead of the usual export of products to the market implies additional costs in connection with access to undeveloped territory. Moreover, it also entails production costs, both fixed and variable, depending on the prices of factors of production and technology. The level of scale savings at the plant will increase the cost of opening foreign enterprises. (Markusen & Venables, 2000). The other part of the equation can be represented by cost savings from exports due to the transition to local production. The most obvious of these are transportation costs and tariffs. Additional savings are associated with proximity to the market, since the goods are now much closer to be delivered and it is possible to react to market changes much faster. (Neary, 2007). Accordingly, if such savings outweigh the costs, a multinational company will prefer horizontal FDI to exports. But such savings on trade costs and economies of scale can only be achieved when horizontal FDI is distributed between equal countries. In order to explain this, let's give an example of two countries that differ in area or in the availability of necessary factors of production. (Markusen & Venables, 2000).

In both situations, we do not take into account transportation costs. In the first case, horizontal FDI is unlikely, because it makes it more difficult for a national company to manage and produce in a country with a larger territory. However, a TNC will also face ongoing costs when establishing an enterprise in a smaller country, while a national company in a larger country will incur costs related to exports to a small country. In the second case, the countries are equal in territory, but with different availability of necessary factors of production. In this case, horizontal investment will again be unprofitable for TNCs, since establishing an

enterprise in a resource-poor country is expensive. A national company located in a country with an excessive factor of production (for example, labor) leads to the production of finished products with low cost. (Brainard, 1997). The presence of transportation costs is extremely important, because in another case, the company will have to sell products through export and will receive only economies of scale in production at one enterprise.

A more generalized model by L. Brainard reveals the role of economies of scale and transportation costs at the enterprise level. This is because horizontal FDI is used as an alternative to exports when the trading costs of an enterprise are higher than the fixed costs of opening a new branch, which is also known as the "proximity–concentration approach". (Brainard, 1993). The point of this approach is the difference between reducing transportation costs due to proximity to the market and the effect of scale in production at a single enterprise, i.e. concentration. Economies of scale arise on the basis of fixed costs when opening a new enterprise. The model assumes two cases when horizontal FDI prevails over exports or completely displaces them. The first case occurs when transportation costs are quite high compared to the fixed costs of the enterprise, whereas in the second case, a TNK cannot serve all sales markets with the help of a single production facility. In other words, the greater the permanent transportation costs and the higher the returns from economies of scale, the more motivation there is for horizontal FDI. (Markusen, 1995).

Further development of the horizontal investment model was developed by J. Marcuse and A. Venable. They expanded the above-mentioned model to a multinational structure, taking into account the totality of multinational and local producers in each country. First of all, multinational companies dominate in countries of similar size, availability of production factors and technologies. The authors also showed that the difference in the allocation of factors of production reduces the size of horizontal FDI (Markusen & Venables, 1998).

First, horizontal FDI reduces the path of trade flows, since the supply of the market in this case occurs through local production, rather than through exports.

Secondly, horizontal FDI is preferred when the cost of imports is higher than the cost of investment.

Thirdly, horizontal FDI is typical for large foreign markets, which allows a new enterprise to reduce fixed costs through a large volume of production. Finally, the value of local production may exceed the simple calculation of net costs through the described equation, when the opening of a new production facility may have strategic value. In an oligopolistic market, each company's sales depend on the marginal costs of all competitors. (Neary, 2007).

By investing horizontal FDI, a company reduces its marginal costs, which, in turn, may force other companies to reduce sales. The opening of a new company means the appearance of another supplier in the local market, which changes the behavior of competitors. Both countries are usually equal in size, and with vertical ones, the home country must be larger than the host country. For the horizontal investment model, the main answer is how to market products to the foreign market (of the host country), whereas for the vertical FDI model, it is in the domestic market (of the home country). (Markusen & Venables, 2000).

The standard model of vertical FDI involves deciding where best to locate production in order to minimize costs. Management activities are usually concentrated in the home country, while production can be located both in the home country and abroad. Production costs can often be significantly reduced when manufacturing in the host country. Therefore, the difference is only in reducing the cost of production abroad and the inevitable cost of shipping the goods back to the home country. In the context of modern globalization, horizontal FDI still prevails. Developed countries are both donors and recipients of most of the FDI, as access to foreign markets is a greater motivation than the opportunity to reduce production costs. (Brainard, 1997).

In modern conditions, vertical investments in their pure form are not found. They are partly in heavy industry. As for horizontal FDI, they are mainly typical for the food industry, these are well-known branches-factories of Bonduelle, McDonalds, Pepsi and Coca Cola companies. According to L. Brainard, foreign subsidiaries of American TNCs export only 13% of foreign products back to the United States, and most enterprises from American multinational corporations are aimed at marketing their products in local markets. In the USA, 2-8% of the production of foreign subsidiaries is exported back to the parent company, the remaining 64% is sold on the American market. The dominant part of FDI is attracted by large foreign markets, rather than cheap labor (or any other factors of production), therefore, most of the FDI flows correspond more to horizontal rather than vertical FDI. (Markusen, 1995).

Considering that the number of horizontal FDI in the global market still prevails, as their main motive is to reduce trade costs (avoiding tariffs), the trends of the 1990s are somewhat puzzling. The incredible reduction in trade costs due to trade negotiations and technological changes was accompanied by a significant increase in FDI. J. Peter Neary (2007) found two explanations for this. He showed that the main motive for cross-border mergers is to reduce trading costs. Thus, mergers and acquisitions are more financially profitable than "investing from a green field", i.e. creating new enterprises, while horizontal FDI has gained great popularity. He also argues that horizontal FDI in trade unions is a consequence of trade

liberalization in them. When trade costs fall within such an association, foreign companies invest in one of the countries in order to further supply all the markets of this block. For example, American companies may manufacture in Ireland in order to ship goods to Europe, or German companies manufacture in Canada in order to sell goods throughout the North American market. Accordingly, the main motive for horizontal investment is access to new markets, and avoiding trade barriers is just a means to achieve it. These examples are the result of a more complex form of investment that has developed in the context of modern globalization. Recently, they have been referred to as an export platform for FDI (Hanson, 2001).

Today, this is a new term, which in modern literature is often attributed to the vertical activity of TNCs – "investing FDI in an export platform," a particularly popular subject of recent research. It is defined as production in the host country for the purpose of sale to a third country or back to the home country. Thus, this definition includes the characteristics of both vertical and horizontal investments. As a horizontally invested company, it markets products to a huge integrated market. At the same time, the location of the branch within a particular region is chosen for price reasons, which is inherent in vertical FDI. However, the empirical conclusions of Gordon H. Hanson (2001) suggest that this type of investment is very similar to vertical FDI, since they are closely related to price motives and inversely depend on the size of the foreign market. (Hanson, 2001).

The export platform of FDI is foreign direct investment, the main motive of which is export rather than marketing products to a foreign market. Previously, it was customary to consider the export platform as a purely vertical FDI, when exports are sent back to the home country. However, recently, another trend of the export platform has prevailed, when exports are carried out to third markets. Increasing integration trade associations with low internal trade barriers but high external ones are actively contributing to this. TNCs open branches within such associations and, using local enterprises, sell products to the entire market of this trade association. (Ekholm, 2007).

M. Motta and J. Norman (Massimo Motta, George Norman) found that increasing market access within such associations (initially through vertical FDI) leads to the emergence of an export platform for FDI. As an additional benefit (as FDI becomes more desirable for foreign firms, due to the fact that they can supply all the markets of a trading association with the help of one enterprise), subsidies aimed at opening new branches of foreign companies are reduced. Instead of a single host country market, a company can freely reach a large regional market through a national one. Since trade associations have a regional basis, the investor

manages to avoid both overt (transportation costs) and hidden (tariffs) trade barriers. (Motta & Norman, 1996).

S. Kumar (Saket Kumar, 1988) emphasizes that it is necessary to distinguish between an export platform of FDI focused on the home country and an export platform of FDI focused on third countries. For the first group of FDI, what matters is the cheapness of the factors of production in other countries and the trade costs of shipping back to the home country. For a group of FDI aimed at exporting to third countries, access to foreign markets is more important, and trade costs for the reverse transfer of products in this case play a lesser role.

In a subsequent study, Karolina Ekholm (2007) identified three types of FDI export platforms. The FDI export platform for the home country includes exports back to the parent company. The FDI export platform for third countries includes exports to large foreign markets. The global export platform of FDI is exports, both to the home country and to third countries. When the host country is located in a free trade zone, domestic companies invest in types 1 and 3, while external companies invest in types 2. According to this scenario, the branches of American TNCs in North America are focused on exporting back to their home country, while their European branches are focused on exporting to third countries.

The FDI export platform is a new phenomenon and has not yet been properly investigated. For example, when a TNK uses a host country as an export platform, local producers are not competitors for it, and then the TNK may not worry about industrial espionage. Since there is no particular risk for local producers in this case, the government may consider the FDI export platform favorable, unlike FDI, which aims only to market products on local markets, therefore, the FDI export platform does not overstock the market, which is often typical for FDI. (Hanson, 2001).

## **1.2 Key theories and models of foreign direct investment**

Foreign direct investment (FDI) is defined as investments aimed at acquiring long-term interest in enterprises operating outside the investor's economy. In today's business environment, an increasing number of multinational corporations are engaged in FDI. These companies are mainly motivated by the prospect of high profitability, as well as the possibility of reducing the cost of production, gaining access to the local market, acquiring higher-quality

natural, physical or human resources at a lower price, and increasing efficiency to improve their position in the global market. (Markusen, 1995).

As we might have guessed, one of the most important components of economic development is foreign direct investment. They have an almost equal impact on both developed and developing economies. Through FDI, capital is supplied to the country, as well as new technologies, which in turn provides a new level of production development, which creates competitive production in the host country. There are 2 main theories (modernization theory and dependency theory) that are worth considering in order to better understand the effect of foreign direct investment.

From the point of view of modernization theory, foreign direct investment is seen as a catalyst for economic growth, bringing with it advanced technologies, stimulating innovation and eliminating capital shortages in less developed economies. Early neoclassical models, such as the Solow growth model (1956), emphasize that capital accumulation underlies economic growth; foreign direct investment helps overcome the constraints associated with domestic savings and accelerates the transition to sustainability. The theory of endogenous growth, formulated by Romer (1990) and Lucas (1988), expands this point of view by emphasizing the role of knowledge dissemination: foreign investment can stimulate “learning by doing” and technology transfer, increasing productivity and supporting long-term economic growth. In addition, theories of multinational enterprises (Vernon, 1966; Hymer, 1976) emphasize the specific advantages of firms, such as patented technologies and effective management methods that allow foreign investors to successfully operate in new, sometimes unfamiliar regulatory conditions.

Let's start with the modernization theory. This theory accurately projects Rostow's famous theory of linear stages of development, which was presented in 1960, and states that countries go through several stages to move from a traditional society to an era of high mass consumption. It happens that at the initial stages, the country does not have enough of its domestic savings, and investments have not yet arrived in sufficient volume. Then attracting FDI can help, and in turn contribute to the construction of new infrastructure projects, as well as to the formation of a highly qualified workforce in general. Thus, thanks to FDI, it is moving from a "traditional economy" to an "advanced" one.

But the theory of addiction opens up in a different light. There is no longer such an unwavering belief that foreign direct investment can contribute to full-fledged economic growth. In theory, it is argued that, on the contrary, FDI increases inequality between countries and the dependence of one country on international capital. Many followers of dependency

theory, including Prebisch (1950) and Emmanuel (1972), believed that investors benefit more from FDI than host countries. This was explained by the fact that investors mostly use the resources of the host country as a result of production, and then send profits to their countries, so the host country does not develop in any way, but only loses in the process of the influx of foreign capital. Theorists Chase-Dunn (1975) and Santos (1970) also supported this view and argued that foreign investors exploit the labor force of the host country, and thereby provoke a gap in the income of the country's population. Such assumptions suggest that FDI can be a solution to certain problems for the country as a whole, but in the long term it can threaten the economic growth of the host country.

Empirical evidence on the impact of foreign direct investment varies significantly. Olomola (2004), Agrawal (2015), and Ray (2012) presented different conclusions on whether FDI stimulates economic growth or economic growth attracts FDI, depending on regional conditions and methodological approaches. Bellumi (2014) and Aga (2014) identified bidirectional and minor correlations, respectively, indicating that the impact of foreign direct investment on economic growth largely depends on the conditions of a particular country. Meanwhile, Adams (2009), from the property to fatmawati and others (2018) and Ding and others (2019) suggest a positive correlation between FDI and economic growth, citing the creation of jobs, increased productivity and reduction of poverty, while the FAL'kiv (2009), Sakib and others (2013) and Herzer (2012) reported a neutral or negative consequences caused by such factors as the repatriation of profits and weak technological side effects.

To understand why companies choose to invest abroad and how their decisions affect the host country's economy, researchers turn to classical, neoclassical, and modern theories of FDI. Early trading theories, including Ricardo and the Heckscher-Ohlin model, provide macro-level explanations for capital flows, but often ignore firms' strategies. On the contrary, Hamer's theory of market imperfection (Heimer, 1976) focuses on the specific advantages of the firm and the motives for internalization, while Vernon's product lifecycle model (Vernon, 1966) links investment decisions with the stages of product maturity. Dunning's (1980) eclectic paradigm (OLI model) states that FDI occurs when firms have advantages in ownership (O), take advantage of location (L) in the host country, and internalize (I) their activities rather than relying on licensing or joint ventures. These ideas have been combined. Based on this, endogenous growth models (Romer, 1990; Lucas, 1988) emphasize the role of technological progress and knowledge dissemination and assert that the impact of FDI on economic growth depends on human capital and the host economy's ability to absorb it.

As for global trends in foreign direct investment, there was a sharp increase in cross-border investment at the end of the 20th century amid trade liberalization and increased regional integration. While advanced economies such as the United States and the European Union continue to be major destinations for foreign direct investment due to strong institutions and innovative ecosystems, Asia stands out for its rapid industrialization and vast consumer base, and China and India attract significant investments in manufacturing and services. Africa, despite its abundance of natural resources, faces limited side effects from resource-based investments, while Latin America, exemplified by Brazil and Mexico, is heavily dependent on foreign direct investment in manufacturing, agriculture, and energy, but faces persistent inequalities.

Empirical analysis shows that the positive effects of foreign direct investment — technology transfer, job creation, market integration, and infrastructure development — can be negated by negative effects such as profit repatriation, dependence on foreign capital, environmental damage, and instability. Borenstein et al. (1998) illustrate the importance of human capital to maximize the side effects of technology, while Alfaro and Charlton (2013) show how foreign direct investment in manufacturing, in particular, can lead to higher skills and wages. On the other hand, Herzer et al. (2012) emphasize that the outflow of profits leads to a reduction in net benefits, and structural imbalances are still a concern for dependency theorists.

Case studies demonstrate the importance of institutional quality, human capital, trade openness, and sectoral distribution in shaping the contribution of FDI to economic growth. Countries with transparent governance, a strong legal framework, and a skilled workforce often benefit more from foreign direct investment. Conversely, weak institutions and insufficient investment development potential can lead to uneven development outcomes and increase dependence on external capital.

In conclusion, I would like to note that the debate on the role of FDI in economic development remains multifaceted. Modernization theory and empirical evidence indicate that FDI can boost economic growth, technological progress, and job creation. However, dependency theory and compensation studies caution that foreign investment may impose structural constraints, lead to limited side effects, or perpetuate inequality. In the future, a detailed, context-dependent approach is needed: future research should look more deeply at the interaction between FDI, local institutions, labor market dynamics, and technological potential. Ultimately, the degree of success of FDI in achieving sustainable growth depends on how host

countries align foreign capital inflows with broader development strategies, ensuring that economic benefits are comprehensive and sustainable over the long term.

### **1.3. The historical context of FDI in Europe and its evolution over time**

Foreign direct investment (FDI) has long been seen as a catalyst for restructuring, modernization, and economic development in Central and Eastern European countries with so-called transition economies. From a macroeconomic point of view, FDI has contributed to the transition from a planned to a market economy in Central and Eastern European countries and their integration into the global economy. After socialism finally collapsed, foreign investors from Western Europe, as well as other high-income countries, had to expand their markets and open subsidiaries (or buy out local businesses) in Central and Eastern Europe. Dunning, J. H. (1998)

Thus, the volume of FDI in Central and Eastern Europe has increased significantly since the early 1990s. The flow of investments increased annually, but due to the global financial crisis in 2008-2009, there was a sharp decline in FDI, and so far the annual volume of investments that were supplied to Central and Eastern Europe before the 2008 crisis has not been reached. Kalotay, K. (2006)

A large share of investments were supplied to Hungary, Poland and the Czech Republic, so in 2013, the total volume of FDI to these countries amounted to 48% of total investments in Central and Eastern Europe. The reason why these countries are chosen is simple - the geographical proximity to Western Europe, as well as the fact that the European Union has been working on agreements to facilitate the movement of goods, services, capital and labor between the countries. Kalotay, K. (2006)

Due to positive expectations regarding the impact of the development of foreign direct investment, many countries have introduced policies to attract foreign direct investment, such as tax holidays, exemption from import duties, direct subsidies to foreign firms, infrastructure improvements, and sometimes even monopoly rights. Such a policy helps to create an investor-friendly business environment, which is essential for sustainable and long-term investments. However, political schemes are only one of the factors in attracting foreign direct investment in CEE. There are also more traditional factors such as market size, proximity, and integration into the global economy. Last but not least, recent literature on institutional factors shows that

stable and reliable institutions are important for attracting foreign direct investment in CEE. Although every investment carries risks, foreign investments are even more vulnerable due to the uncertainty associated with distance, familiarity with the local environment, and possible changes in formal and informal institutions. Recent economic events in Eastern Europe related to the geopolitical tensions between Russia, Ukraine and the EU have reaffirmed the importance of a stable business environment for trade and foreign direct investment.

After the financial crisis in the United States in 2008, concerns arose among financially conservative investors in 2009 about the sovereign debt crisis in some European countries. Several eurozone member states (Greece, Portugal, Ireland, Spain, and Cyprus) have been unable to repay or refinance their government debt or rescue over-indebted banks under their national supervision without the help of third parties such as other eurozone countries, the European Central Bank (ECB), or the International Monetary Fund (IMF).

The specific causes of the debt crisis varied. In a number of countries, private debts incurred due to the real estate bubble were converted into sovereign debt as a result of the rescue of the banking system and the government's response to the economic downturn after the bubble. The structure of the eurozone as a monetary union (i.e., a single currency) without fiscal union (for example, different taxation rules and state pension provision) contributed to the crisis and limited the ability of European leaders to respond. As concerns intensified in 2010 and in subsequent years, leading European countries adopted a number of financial support measures, such as the European Financial Stability Facility (EFSF) and the European Stability Mechanism (ESM). The ECB also helped resolve the crisis by lowering interest rates and providing cheap loans worth more than one trillion euros to maintain cash flow between European banks. In 2012, the ECB calmed financial markets by announcing free unlimited support for all eurozone countries participating in the EFSF/ESM sovereign rescue/avoidance program through direct monetary transactions that reduce profitability.

The recovery of economic growth and the reduction of structural deficits allowed Ireland and Portugal to exit their bailout programs in 2014. Greece and Cyprus managed to partially restore market access in 2014. Spain has not officially received a financial assistance program. Nevertheless, the crisis had significant negative economic consequences: the unemployment rate in Greece and Spain reached 27%. He was also accused of slowing economic growth not only in the entire eurozone, but also in the entire European Union. Thus, it is believed that he had a serious political influence on the ruling governments in 10 of the 19 eurozone countries, contributing to the change of power in Greece, Ireland, France, Italy,

Portugal, Spain, Slovenia, the Slovak Republic, Belgium and the Netherlands, as well as outside the eurozone in the United States. The United Kingdom. OECD. (2014).

Despite the recent recession, Europe remains an attractive place for long-term investments. As competition for investment intensifies, European leaders must better represent all that the continent has to offer.

At the same time, an analysis of investment data shows that only a small proportion of enterprises that express a desire to change supply chains actually do so. This is unlikely to change, as high inflation in Europe, including electricity and labor costs, has made China an even more cost-effective supplier. Thus, this move is likely to occur in sectors where customers are relatively less price-sensitive.

New investments will focus primarily on consumer-oriented innovations and services, rather than on production facilities. Indeed, 55% of organizations intend to increase R&D over the next three years, while only 35% plan to increase production.

Foreign direct investment (FDI) in Europe decreased in 2023 by 4% compared to 2022 and by 11% compared to 2019, just before the start of the COVID-19 pandemic, according to the EY Annual Attractiveness Survey for 2024, the most in—depth and longest-running annual study. analysis of foreign direct investment on the continent. UNCTAD. (2023)

France and Germany continue to attract the majority of foreign direct investment and retain the top three positions, which account for about half of the total number of projects. The volume of foreign direct investment decreased by 5% (1,194 projects) in France and by 12% in Germany (733 projects). Germany is in second place with a 6% increase in the number of projects (985).

Despite hopes that foreign direct investment in Europe will recover from the pandemic, slow economic growth, rising inflation, rising energy prices and an unstable geopolitical environment have led to the first decline in foreign direct investment in Europe since 2020. UNCTAD. (2023)

To sum up, foreign direct investment has been and remains a key factor in economic growth and modernization. Despite global crises and geopolitical tensions, which cause periodic fluctuations in FDI flows and lead to a decrease in the indicator, the European Union as a whole attracts a significant amount of investment. The high level of development of most of the participating countries, proximity to key markets and support for the development of innovation and information technology in the long term contribute to the creation of a stable business environment, thereby strengthening the EU's position in the investment market.

## **1.4 The role of government policies and regulations in attracting FDI to Europe**

Historically, the European Union (EU) has not had a single Union-wide structure for verifying foreign direct investment (FDI). Instead, each Member State (PPP) could independently introduce its own FDI verification regimes without any supranational coordination or uniform standards. The lack of a harmonized approach has raised doubts about how effectively risks to security and public order can be identified and controlled, especially given the high degree of integration already achieved in the EU internal market (Baldwin, 2016).

On May 10, 2017, the European Commission (hereinafter referred to as the Commission) published the document "Reflections on the Use of Globalization", initiating a discussion on how the European Union and its member States can shape globalization so that it benefits everyone. The document highlighted the Commission's commitment to building an open, sustainable and rules-based global trading system, and recognized the importance of incoming FDI for economic growth, job creation and innovation in the EU. At the same time, the Commission confirmed the need to protect the economy and citizens from unfair acquisitions that threaten security and public order (Dunning, 1993).

In September 2017, the Commission published a "Message on welcoming foreign direct investment while protecting core interests" ([3]), where for the first time it presented a proposal to create a pan-European mechanism for verifying FDI. While recognizing the serious economic and social benefits of FDI, the Commission simultaneously drew attention to the potential threat to security or public order in situations where foreign investors — especially those associated with government structures — try to gain control over European companies operating in the field of critical technologies, infrastructure, resources or confidential information (Markusen, 1995). Based on the fact that closer cooperation between PPPs is the key to effective control of FDI, the Commission proposed (based on article 207 of the Treaty on the Functioning of the European Union) to create a unified structure for the verification of FDI on grounds of security and public order. (European Commission, 2019)

Already before the COVID-19 pandemic, many States had introduced or planned to introduce new, more stringent FDI verification regimes. The crisis has only accelerated this trend, especially in Europe. Thus, in March 2020, the Commission issued revised guidance encouraging Member States to make maximum use of existing mechanisms. France, the

Netherlands, Germany, Italy and Spain have tightened their national control systems, and the UK has also announced new verification procedures. The goal is to protect businesses involved in healthcare, the production of medicines (including vaccines), medical equipment, as well as in the areas of security and public order, especially if they are at risk of external acquisition due to the economic consequences of the pandemic. Some of these measures are temporary, but some may last for a long time (Moran, 2015).

The host country should monitor incoming investments and investors more closely. Recently, the European Union adopted a new Regulation setting out the procedure for verifying FDI inflows. Therefore, each EU country must now consult and coordinate all actions with the EU supervisory authorities. (Bellak, C., Leibrecht, M., & Stehrer, R, 2008)

The Regulations on the Review of Foreign Direct Investment officially entered into full force in April 2019. This verification mechanism is not intended to replace existing FDI verification regimes in countries, but it can help reduce risks to security or public order. The final decision on limiting certain FDI remains with the Member States, but the Regulation itself provides for a mechanism for information exchange, mutual control, cooperation and coordination (Johnson, 2020). If the Commission considers that potential FDI in one PPP may affect the safety or public order of several PPPs or the interests of the entire EU, it has the right to express its opinion, and Member States are obliged to take it into account or justify disagreement. (European Commission, 2019)

The aim of the EU FDI Regulation is to ensure that the EU is better prepared to identify, assess and mitigate risks to security or public order, while remaining one of the most open investment zones in the world. The Regulations are fully applicable from October 11, 2020. Given the deep economic integration in the EU, FDI in one member State may well pose a risk to other PPPs or to the Union as a whole. Therefore, enhanced information exchange and cooperation are needed to identify emerging threats and respond promptly to them.

A single form has also been developed for transmitting information to the Directorate General of the EU Commission on Trade, so all data is available on the website, which generally facilitates the review procedure by 26 States and the Commission, and avoids unnecessary delays in making decisions on the investigation of incoming investments.

At the beginning of 2024, the Commission has provided a package of standards consisting of 5 initiatives aimed at strengthening the economic security of the EU countries. This is very important in the context of geopolitical tensions and large-scale technological shifts. One of the initiatives is currently discussing the mechanism for verifying incoming FDI and how it can be improved. This decision was made based on more than 1,200 transactions

conducted over 3 years, as well as on the effectiveness of the existing regulations and the conclusions of the European Court of Auditors. (European Parliament, 2021)

According to the regulations, Member States can maintain current national mechanisms, adopt new ones, or do without them altogether. However, the Commission urges those who do not have a comprehensive verification system or the existing system does not cover all relevant transactions or does not provide for preventive verification to urgently introduce a comprehensive mechanism. At the same time, they are invited to use other legal instruments if, as a result of the acquisition or control of a critical business, infrastructure or technology, there may be a threat to security or public order in the EU.

The Regulation sets out a number of key requirements for national verification systems:

- transparency of rules and procedures,
  - Non-discrimination among foreign investors,
  - confidentiality of the exchanged information,
  - the possibility of appealing final decisions,
- mechanisms for detecting and suppressing circumvention of legislation.

Based on the notifications from the GCH, the Commission publishes an up-to-date list of verification laws in the EU. The Regulation also requires an annual report on the progress of its implementation to the European Parliament and the Council. The third "Report of the Commission on the audit of FDI in the Union" was adopted on October 19, 2023. It contains statistics and trends on FDI, information on legislative changes in PPPs, details of practical verification by PPPs, and an overall assessment of the cooperation mechanism in 2022. A working paper with economic data on foreign investments and additional information on the legislation of the Member States is also attached.

In 2017, the Commission established an expert group of representatives of the PPP to discuss aspects of investment verification, share experiences and lessons learned, as well as consider common issues on foreign investment. According to article 12 of the new regulations, the group may raise systemic issues related to its implementation.

As part of the cooperation mechanism provided for by the Regulations, the PPP and the Commission exchange information on FDI, which may include personal data of persons involved in the transaction ([13]). To protect such data (e.g. names and addresses), the GCH and the Commission have concluded a Joint Control Agreement (JCA), which provides for the allocation of roles and practical obligations in accordance with the General Data Protection Regulation (GDPR) and the relevant articles of the EU Regulation on FDI Verification. The document entered into force on April 28, 2022.

The Regulation also calls on the PPP and the Commission to cooperate with the competent authorities of third countries that share similar principles when it comes to verifying FDI for security and public order reasons. Such administrative cooperation should enhance the effectiveness of the verification of investments in the PPPs themselves, as well as their interaction with the Commission. The EU conducts international cooperation both bilaterally and on a broader multilateral basis, including by supporting the work of the OECD focused on investment policy in the field of national security. (Bellak, C., Leibrecht, M., & Stehrer, R, 2008)

In the long term, closer cooperation and information exchange between regulators based on the FDI Regulation can bring benefits to foreign investors: increased coherence of PPP actions creates a more predictable investment environment, even though political considerations are increasingly coming to the fore in direct investment verification procedures compared to traditional controls. for mergers.

## **CHAPTER 2. OVERVIEW OF FDI IN EUROPE AND POSSIBLE PROSPECTS FOR THEIR DEVELOPMENT**

### **2.1. Foreign direct investment in Europe: its trends and importance in the region's economy**

Foreign direct investment (FDI) plays an extremely important role in the global economy, providing capital, technology, and entrepreneurial expertise to host countries. In Europe, which has one of the largest and most diversified markets, foreign direct investment is a key driver of economic growth, as well as a means of stimulating employment, increasing productivity, and stimulating innovation. Nevertheless, the current situation with FDI inflows to Europe is undergoing significant changes under the influence of both global factors (geopolitical risks, changing competitive conditions, market fluctuations) and local (institutional and regulatory barriers). (Alena Dorakh, 2021)

Turning to an overview of the dynamics of FDI in recent decades, it is worth noting that from 2000 to 2016, the volume of accumulated FDI in global GDP increased from 22% to 35%. This was largely the result of an increase in the number of mergers and acquisitions (M&A), the most dynamic component of foreign direct investment, which reached a record \$1.2 trillion in the first quarter of 2018. Research shows that the expansion of multinational enterprises (MNEs) has been accompanied by a growing complexity of cross-border supply chains and a marked redistribution of production capacity and human resources at the global level. Such processes have a significant impact on both receiving and sending countries, affecting important aspects such as economic growth, employment, wages, and opportunities for innovation. (World Bank.,2023)

At the same time, it has traditionally been developed countries that have been both the largest exporters of capital and the main recipients of foreign direct investment. However, since the early 2000s, the situation has been gradually changing: emerging markets are increasingly attracting direct investment and in some cases are becoming serious competitors to traditional investment areas. In 2013, they collectively attracted more than 50% of global FDI for the first time, demonstrating a structural shift in the global distribution of capital and influence. This process is accompanied by an increase in the inflow of foreign direct investment from the same countries, which are becoming more visible abroad due to the growth of multinational corporations from the BRICS countries and other regions. At the same time, large companies

from developed countries still dominate in Europe, especially if we look at the indicators of foreign sales, the scale of assets and the share in global markets. (Rugman & Verbeke, 2004).

The structure of foreign direct investment and the predominance of certain forms of investment deserve special attention. For example, mergers and acquisitions (M&A) traditionally account for the largest volume of foreign direct investment inflows in the European Union and other developed countries. From 2003 to 2016, their share in the total volume of FDI inflows grew steadily and in 2016 amounted to about 80%. Investment from scratch (GI), that is, the creation of new enterprises from scratch, retains a significant role, but not as significant as in emerging market countries, where GI remains the predominant mechanism for entering markets (up to 80% in 2016). A similar situation is observed when considering outbound FDI: mergers and acquisitions predominate in developed countries, while GI predominate in developing countries. Overall, if we look at the global level, over the period 2003-2016, more than 60% of all investments in new projects were made in emerging markets, while the United States, European countries and other developed markets remained the main beneficiaries of mergers and acquisitions. (Rugman & Verbeke, 2004)

Based on real-world economic indicators such as overseas activity, the largest MNPs still mostly originate from large developed economies and the manufacturing sector, although EMNES and the service sector are becoming increasingly important. According to the ranking of the 100 largest MNPs in the world compiled by UNCTAD in 2015, only eight of them were EMNES. Moreover, 62 companies were from only four countries: the USA (21 companies), Great Britain (17), Germany (13) and Japan (11). More than half of these MNPs work in the following sectors: automotive; mining, quarrying and oil refining; pharmaceuticals; electric power, gas and water supply; oil refining; and in the service sector - telecommunications. Of the ten largest MNPs by market capitalization in 2016, half were in the information and communication technology (ICT) sector. (European Commission, 2019)

According to the UNCTAD classification, the world's largest multinational companies play a significant role in terms of employment, sales and assets in the host countries in which they operate. The foreign activity of these firms is impressive even compared to some national states: the leading company for employment abroad employs 800,000 people, which exceeds the total workforce of Estonia; the volume of foreign sales of one of the largest automotive corporations (190 billion US dollars) is equivalent to the annual GDP of countries such as Estonia. such as Greece and Portugal; and the foreign assets of the largest oil company (290 billion US dollars) are close to the annual GDP of economies such as Ireland and Colombia.

Similarly, the market capitalization of one of the largest ICT corporations (2016: about 600 billion US dollars) is on par with the GDP of Argentina.

If we compare the 92 largest MNPs from advanced economies with the 100 largest EMNS, then on average in 2015, the former recorded 4% more sales per employee than the latter. In addition, the ratio of capital to labor among MNPs from advanced economies was 31% higher, and the relative importance of their economic activity abroad, as measured by the external activity index, was 26% higher.

The reason for this downturn is a combination of slow economic growth, persistently high inflation, high energy prices, geopolitical uncertainty, and declining demand for office space. Large-scale incentive programs in other parts of the world may also divert investment away from Europe. For example, the Law on Reducing Inflation in the United States provides for the mobilization of investments in the amount of 98 billion dollars and the creation of more than 80,000 jobs. (WIR, 2021)

In recent years, Europe has had to face the difficult task of maintaining and increasing FDI inflows, while maintaining its competitive advantages as a large market with developed infrastructure, a highly skilled workforce and a solid research base. The combination of slowing economic growth (according to the IMF, growth in the eurozone will be 0.4% in 2023, compared with 2.5% in the United States and 5.6% in Asia), continuing inflationary risks, high energy prices and geopolitical uncertainty (mainly due to the conflict in Ukraine) has led to inflows of FDI The region has shrunk for the first time since 2020. According to the annual EY European Attractiveness Survey 2024, the number of FDI projects in Europe in 2023 decreased by 4% compared to last year and by 11% compared to the pre-crisis level in 2019. In the field of information technology, there is also a significant decrease in the indicator, it amounted to -19%, and in the field of services, relative to business, it decreased by 27%.

It is also worth noting that the structure of demand for real estate has changed. Now more and more companies are switching to the remote work format, which means reducing the need for office space. At the same time, there is increasing competition in the world. The United States, China and Asian countries are actively implementing incentive programs similar to the American Inflation Reduction Act (IRA), redirecting some of the investments from the European direction in their favor. As a result, the United States, China, and Japan remain the leading sources of foreign direct investment in the EU, while domestic flows in Europe (between EU member states) continue to play a dominant role.

France and Germany remain the main recipients of FDI in the European Union. Even though the number of projects in France decreased by 5%, and employment, on the contrary, increased by 4%, the country remains an attractive country for foreign investment. However, the situation is different in Germany. As mentioned earlier, due to a decrease in the number of projects, the inflow of FDI into the country also shows a decrease in 2023. The reasons may be different, it may be due to high labor, energy or administrative costs that hinder the implementation of new projects. However, in many countries of Southern and Eastern Europe (for example, Poland, the Czech Republic, Hungary), the number of projects in the manufacturing sector is growing, which is facilitated by the processes of reorganization and reengineering supply chains.

International investment has slowed due to disappointing economic growth, high inflation, rising global geopolitical tensions, and continued high energy prices, especially compared to the United States. (Holland, D., & Pain, N.,1998)

Another factor influencing the volatility of FDI is the constant changes in the work of enterprises. The need to rent large office spaces is becoming increasingly irrelevant, as companies are increasingly switching to remote or hybrid work (50% in the office and 50% remotely) using modern technologies. In addition, companies are increasingly trying to find a way to reduce costs in order to stay on the market even in difficult times. In 2023, the number of regional centers in Europe will decrease by almost 50%. (EBRD, 2022)

At the same time, despite the general downward trend, Europe still retains its investment attractiveness. According to surveys, 72% of companies plan to expand or open their operations in Europe over the next 12 months, and 75% are confident that the attractiveness of the continent will increase in the medium term. Among the reasons for this optimism is the hope for a stabilization of the economic situation, a gradual reduction in geopolitical risks and a weakening of inflationary pressures. However, in order to meet these expectations, European countries will have to find a balanced approach combining support for innovative industries (electric vehicles, artificial intelligence, semiconductors, biotechnologies), the development of a "green" economy and active efforts to modernize the regulatory framework.

In addition, the successful attraction of investments will largely depend on Europe's ability to shift its attention from "building up" existing capacities to creating new production sites capable of increasing technological competitiveness. Such "new" projects require a higher level of trust in economic and institutional stability, as well as significant financial and administrative support from national and supranational authorities. (Resmini, L. ,2000)

Thus, the importance of foreign direct investment for the European economy remains significant, as foreign direct investment creates new jobs, develops export-oriented industries and stimulates innovation activity. However, in order to restore pre-crisis dynamics and further strengthen its position in the global economic system, it is necessary to ensure transparent business conditions, overcome bureaucratic barriers, diversify energy sources and continue to improve infrastructure. If these goals are achieved, Europe will be able to re-strengthen its role as one of the main centers of attraction for global FDI, while maintaining and increasing its economic influence.

## **2.2 Assessment of the challenges and opportunities for FDI in Europe, taking into account factors such as Brexit, trade agreements and economic stability**

Foreign direct investment (FDI) is widely recognized as a key driver of economic growth, especially in developing and transition economies. They serve not only as a channel for technology transfer, but also as a platform for integrating local economies into global supply chains, which contributes to the modernization of production processes and increased competitiveness. However, global crises, as well as crises within the EU, have greatly affected the overall investment climate of the entire continent. One of the significant events was that in 2020, the United Kingdom officially left the European Union, which could not but affect the economic condition of all EU countries. Among other things, we are talking about the emergence of new agreements between the countries, as well as the generally unstable macroeconomic environment. These are the factors that can explain such strong volatility of FDI flows in the EU countries. (Michael J. Osei a, Jaebeom Kim, 2020)

Multinational enterprises make decisions about foreign investments based on various strategic goals, including entering new markets, obtaining technology, using resources, and reducing production costs.

This chapter examines the main challenges and opportunities for FDI in Europe, including the impact of Brexit on investment flows, the effect of trade agreements between the EU and other countries, and the role of economic stability in creating an attractive investment climate. The development of these factors will be crucial for future trends in foreign direct investment.

The internationalization of a company usually depends on three main prerequisites:

Multinational enterprises (MNPs) are also participants in investment activities. As a rule, they have their own strategic reasons. For example, it can be the acquisition or transfer of

new technologies, gaining access to necessary resources, as well as reducing production costs or using local platforms to enhance market penetration, which is one of the most popular reasons. (EBRD, 2022)

There are 3 main reasons why countries want to expand their business outside their territories, and therefore invest abroad.:

a) high productivity, since only the most productive firms have the opportunity to invest abroad;

b) the presence of company-specific advantages that are not easily transferred to third parties and that underlie the company's products; and

c) a relatively strong market position in the home country.

The determinants of FDI, in turn, can be grouped as follows:

a) property that allows the company to make the best use of its competitive advantages abroad;

b) location, which implies taking advantage of a worldwide location (for example, the supply of labor or natural resources); and

c) internalization, so the company explores the markets of other countries in order to create new assets or use existing ones in another country.

Accordingly, FDI is driven by four main factors:

a) markets;

b) assets;

c) natural resources; and

d) striving for efficiency.

Firstly, the main reason for investing abroad is access to new markets. Thus, the FDI indicator should positively correlate with the size of the economy and its market in which it invests. (Rugman, A. M., & Verbeke, A, 2004)

Secondly, many countries do not have enough resources and opportunities in their country, so they invest abroad, thus gaining access to new opportunities and more resources. As a rule, such companies want to expand their existing business by using new technologies and highly skilled labor (in developed countries). The main reason for receiving more investment is technological progress, and many EU countries are ahead of others. However, in countries with only emerging market economies, technological development does not positively correlate with FDI flows into the country.

Third, FDI flows may also be driven by a desire to gain access to natural resources. This type of FDI is likely to be directed to emerging market economies that have rich natural

resources. However, large reserves of natural resources can also deter the flow of foreign direct investment into emerging market economies due to the negative impact of large natural resources on the development of the country. For example, countries rich in natural resources (oil or gas) often become dependent on their exports. This may lead to ignoring other sectors of the economy, and may further hinder its ability to attract FDI.

Fourth, efficiency-oriented FDI is mainly driven by lower labor costs and higher productivity. It is generally expected that this type of investment will be directed to developing economies with a large supply of cheap labor (for example, China and Vietnam) to develop low-value-added economic activities.

Many studies underline the importance of institutions in variation of foreign direct investment flows. In countries with inefficient legal systems, high level of corruption and unpredictable legislative policy a business becomes more expensive and difficult to run. Multinational companies prefer to avoid countries with high instability because it may lead to unexpected changes in legal conditions as well as reduce the risk of nationalization if government regulations prohibit it. In addition they prefer not to invest in countries with strongly distinct corruption and complex bureaucracy as actually it leads to additional costs for companies when they do business. On the other hand the observance of the rule of law and the protection of private property are perceived positively by MNCs. Moreover aspects such as ease of doing business, access to finance, and trade regulation also play a key role in increasing FDI inflows. (Rugman, A. M., & Verbeke, A, 2004)

The country's macroeconomic stability is considered an important factor in attracting foreign direct investment. It is important to take into account that inflation and the exchange rate should be at a stable level. In this case, the EU will be able to attract much more investment, this is due to the reduction of risks associated with the projected value of assets and income earned abroad.

Openness to attracting foreign direct investment has remained and remains one of the fundamental elements of the domestic market. The agreements of the European Union countries form a joint trade strategy, which in turn contributes to the balanced development of global trade, the gradual lifting of restrictions on international trade and investment, as well as the reduction of customs and other barriers.

Taking into account the global turmoil, the countries of the European Union have begun to take actions to increase their protection against possible threats associated with the influx of foreign investment.

In 2021, the EU had incoming FDI totaling 117 billion euros, or 8% of the global total. FDI is widely seen as beneficial for the host and home economies, as well as for businesses that invest. For example, FDI can enhance growth and innovation in host countries, as well as contribute to job creation and human capital development. Foreign direct investment can improve the quality of life and promote best practices in business management. UNCTAD. (2022)

The risks of foreign direct investment have become even more urgent, especially when issues of strategic independence and ownership of key infrastructure such as nuclear power plants and ports are raised. We are also talking about industries that produce important defense resources, such as semiconductors or dual-use chips. The problem is that many EU countries are sounding the alarm that many investors are not residents of the EU, and their interests do not coincide with the members of the European Union, but there is still a large-scale technology transfer. It is worth approaching the situation very cautiously here, because in an attempt to increase the volume of EU investments, its national security and strategic defense may come under threat. The main task of the EU should be to protect and ensure the security of strategically important assets and technologies of EU countries. (European Commission, 2022)

Investment verification tools (that is, legal and administrative tools that allow for the analysis and investigation of foreign direct investment before it is authorized or even banned) have their roots in the 1960s in a number of countries. The introduction of such regulations gives Governments the opportunity to carefully examine investment projects for their potential impact on key aspects of national security. However, until recently, many States did not have such mechanisms, and they were limited to licensing requirements in certain sectors or, at best, similar tools. Over the years, only a few countries have taken legislative measures in this area, creating new mechanisms or modifying existing ones, until there was a sharp increase in interest in developing appropriate policies in 2016 and later.

The European Parliament began discussions back in 2012 in connection with the development of global trade and individual transactions in strategically important sectors, mainly taking into account security and defense issues. In 2017, the Governments of France, Germany and Italy expressed concern about the growth of foreign investment, especially in strategically important sectors. Special attention was drawn to cases when state-owned enterprises, implementing industrial policy, acquired key technologies or vital assets from EU companies without providing the same investment opportunities in their countries. France, Germany and Italy argue that existing EU legislation allows their countries to ban investments from abroad that could threaten the security of strategically important assets and technologies.

Some EU countries already apply this regulation on the territory of their countries. Thus, France, Germany and Italy have expressed their desire to apply similar mechanisms to protect the sustainable development of their countries in an unstable geopolitical situation. (European Parliament, 2021)

The first initiative of the European Commission on the topic of protecting the interests of EU countries was presented in 2017. It talked about a new mechanism for verifying foreign direct investment that enters EU countries. According to this initiative, personal criteria and internal factors of each country had to be taken into account here. In the same year, a full-fledged legal regulation was issued, according to which the inflow of investments into the EU countries will be monitored. Finally, in 2019, the proposal for this initiative was approved by the European Parliament and the Council of the EU. Regulation (EU) 2019/452 officially entered into force on October 11, 2020.

After the pandemic period (2019-2021), the EU countries again faced a decrease in the volume of foreign direct investment, in 2014 it amounted to 4%. Countries such as Germany were particularly affected, with a 12% decline in the indicator. What caused such drastic changes? Most likely, there is growing instability in the energy sector, which arose back in 2022 with the outbreak of the war between Russia and Ukraine, when prices for energy resources increased sharply. In addition, the problem could be that economic growth in Europe has been noticeably slowing down in recent years. Taken together, these factors have a strong impact on FDI flows to EU countries. (OECD, 2022)

In fact, the decline in foreign direct investment in the EU can be explained in several ways. Firstly, energy prices have skyrocketed since the start of Russia's war with Ukraine. It also led to an unstable political situation in the world. Secondly, with the development of technology, governments are introducing new regulatory measures in the technological and information industries, that is, everything related to areas such as artificial intelligence or green technologies. Innovations, as a rule, can cause the inability of small and medium-sized businesses to compete with other market players.

The European Union is currently developing new reforms in the field of foreign direct investment. As this is one of the main factors of the country's economic growth. It is necessary to develop a unified energy policy in order to unite the market, as most European countries depend on energy prices and can no longer afford them. It is also worth considering increasing the funding of scientific research in the field of energy, it can help to get out of dependence on third parties. Such measures can help EU countries attract more investments and gain better positions in the investment market.

The investment climate in Europe is constantly changing, which entails a change in previous strategies and plans. If we talk about France, the country is steadily increasing the volume of incoming investments, creating new jobs, and attracting more interesting projects. The stability and quality of incoming investments guarantee that France will quickly become the leading country in Europe in terms of FDI inflows into the economy.

The new Regulation on Foreign Investment, adopted by the EU Government, insists that each country in the EU increasingly implements a new mechanism for checking foreign investors. The Regulations describe a general structure with a list of verification factors, which can be a good basis for starting work in this direction. These measures have already been taken in Romania and Ireland.

The implementation of the Verification Regulation has contributed to more thorough compliance by Member States. For example, Germany has revised and clarified its thresholds for mandatory verification to better comply with this Regulation, while Hungary has implemented legislative changes aimed at bringing its national regime in line with the Verification Regulation. (European Commission, 2019)

Another major impact of the Screening Regulation is the coordination mechanism it has created. Through this cooperation mechanism, member States that verify foreign investments at the national level will notify about certain transactions, thereby notifying all other Member States and the EU about the transaction.

Other EU states can provide their comments to the country conducting the audit. However, the final decision remains with this country within the framework of its national FDI control procedures. The cooperation mechanism allows countries that have the right to cancel transactions (even if they do not meet their national notification thresholds) to receive general information about such transactions that might otherwise go unnoticed.

Other European Union countries may submit comments to the verifying State. This State retains the right to make a final decision as part of its procedures for analyzing foreign investments within the country. However, in practice, Member States tend to try to resolve issues raised by the EU and other participants. The cooperation system implies that countries that have sufficient authority to cancel a transaction (which does not meet their national criteria) will receive general information about all transactions that may otherwise remain outside their control. (European Commission, 2019)

Legal authorities dealing with the influx of foreign direct investment may notify about transactions in different ways. Some investors send a notification about absolutely every completed transaction, while others, as a rule, do this when absolutely necessary. This happens

even though, according to the new regulation of the European Commission, each investor must submit a report on the fulfillment of all requirements that are required in the course of investment activities.

According to the European Union's annual report on foreign direct investment, which was published in October 2023, it says that in 2022, 17 member states submitted a total of 423 notifications, of which more than 90 percent were from countries such as Austria, Denmark, France, Germany, Italy and Spain.

The annual report notes that 20% of the cases identified through the cooperation mechanism in 2022 related to multidisciplinary transactions on foreign direct investment. These transactions mainly took place in such areas as manufacturing (31%), information and communication technology (20%), professional services (14%), as well as wholesale and retail trade (11%). (World Bank, 2022)

As for active modes, the annual report also indicates that more and more transactions are being formally verified, undoubtedly at least in part as a result of the general movement towards rigor. In 2022, 55 percent of all cases required formal verification, up from 29 percent in the previous year. However, the good news is that resolution remains the norm: 86 percent of notifications subject to formal verification were resolved without any conditions.

There are significant discrepancies between the legislative regimes. For example, whether they provide for mandatory filing of applications or allow for voluntary filing of applications; conduct ex officio investigations or allow a combination of the two. The German regime in this topic is indicative. It provides for the mandatory filing of a declaration based on the activities of the facility, the size of the acquired share and the citizenship of the investor himself. If these conditions are not met, the government can intervene in the process, and investors have the right to submit a voluntary declaration under certain circumstances.

An ex officio investigation requires either the direct or indirect acquisition of at least 25% of the voting shares of a German company, as well as an increase in the existing stake to more than 40, 50 or 75 percent. In addition, it is important to take into account the acquisition of "atypical control" by an investor outside the EU or EFTA countries. Otherwise, the government has no right to verify this transaction. This regime establishes the obligation of suspension when the submission of applications is mandatory, but not in situations where it is carried out on a voluntary basis. (Eurostat, 2022)

Some regimes also provide the parties with the opportunity to formally consult with the authorities on whether a particular transaction falls under the rules of foreign direct investment, for example, in the Czech Republic, Spain or France.

Different national financial regimes may vary in scope: some deal exclusively with investments from non-European investors, while others affect all foreign buyers. Some approaches offer hybrid solutions.

For example, the German system carries out a thorough review of investments by any foreign investors in the field of defense and cryptotechnology, if they intend to purchase more than 10 percent of shares. However, in other industries, investments from buyers from EU or EFTA countries do not require prior applications and cannot be analyzed automatically. It is important to note that the government proceeds from a very broad understanding of the concept of "non-resident", which makes it difficult to determine the status of an investor from the EU or EFTA. (European Commission, 2022).

The French system, in turn, monitors the acquisition of control by any investor who does not have French citizenship, however, minority investments are allowed only if the investor is located outside the EU/EEA with 25 percent of voting rights for all types of companies.

In contrast, the Spanish system requires reporting only on investments by non-residents from non-EU/EFTA countries if their share or control exceeds 10% and concerns specific sensitive sectors. However, filing a declaration is mandatory regardless of the type of activity of a potential investment object if the investor is subject to certain conditions: he is controlled by the government; he is subject to sanctions or involved in illegal activities; or he has already invested in sensitive industries in another EU member state. This also includes the fact that investors from EU or EFTA countries, whose capital investment exceeds 500 million euros, must notify about any FDI entering Spain. This also applies if investors want to purchase 10% of the shares of a Spanish company that is already listed on the stock exchange. In the same way, Belgium and the Czech Republic monitor incoming investments and verify investors who do not have EU citizenship.

Thus, the assessment of the challenges and opportunities for foreign direct investment (FDI) in Europe highlights important changes driven by factors such as Brexit, trade agreements, and economic stability. Brexit has created uncertainty, which is causing some investors concerns about market access and a changing regulatory environment. At the same time, others perceive this as an opportunity for new investments in alternative jurisdictions or sectors. New trade agreements with third countries may increase the attractiveness of Europe as a logistics base for the distribution of goods and services, which opens up prospects for increased foreign direct investment. Economic stability, supported by a strong financial system and a high standard of living, continues to arouse interest among investors. However, issues

related to inflation and changes in monetary policy in response to economic difficulties can also affect confidence in the investment climate. As a result, Europe shows a mixed picture, where opportunities coexist with specific challenges that require a strategic approach from investors. (EBRD, 2022)

### **2.3 Forecast of future trends in FDI and their development prospects based on key indicators**

Over the past two decades, the productivity gap between Europe and the United States has steadily widened, with U.S. labor productivity growing more than twice as fast as in the eurozone. The European "competitiveness crisis" can be explained by several factors, including insufficient public and private investment, a shortage of technology companies and venture capital funds, as well as the demographic decline on the continent. Another possible explanation, which is often overlooked, is a reduction in foreign direct investment (FDI).

Foreign direct investment is a crucial driver of productivity growth, introducing recipient countries to new technologies, knowledge, and management skills. After falling by 4% in 2023, the inflow of foreign direct investment to Europe is now 14% below the peak level in 2017. Germany experienced a sharp 12% drop in the amount of FDI last year, which actually destroyed its recovery from the pandemic period. In the United Kingdom FDI inflows has declined by almost 30% since 2016-17, this happened because Brexit caused the phenomenon in which foreign investors decided to change their investment route to other European countries. French politicians seem determined to get some benefit of this alteration, and President Emmanuel Macron is actively promoting his country to foreign investors. (EBRD,2023)

The EU has demonstrated resilience during the pandemic through coordinated measures, including the establishment of recovery funds such as Next Generation EU. These measures have supported the flow of investments into strategically important sectors, including the digital economy and renewable energy (European Commission, 2022). The recovery in investment activity is largely due to the increased demand for digital technologies, which is especially noticeable in countries such as Germany and Ireland, which are actively developing the infrastructure of industry 4.0.

However, the economic recovery in different regions is uneven. Southern countries such as Greece and Italy faced additional difficulties related to high debt burdens and structural economic problems. The analysis shows that successful adaptation to post-pandemic realities

depends on institutional resilience and the ability of governments to attract FDI through innovation incentive programs (OECD, 2022).

Attracting foreign direct investment is crucial for the European Union as it faces two new challenges: reducing risks in its supply chains and preventing a China-related shock similar to that experienced by the United States after China joined the World Trade Organization in 2001.

Foreign direct investment flows can play a key role in solving both of these problems. Climate change and increased geopolitical tensions have made global supply chains increasingly vulnerable, especially since most of the resources for the green industry, such as semiconductors and battery cells for electric vehicles (EM), come from Taiwan, South Korea and China. A 2012 article by Daron Acemoglu, an economist at the Massachusetts Institute of Technology, and co-authors suggests that for so a geographical concentration of resource providers increases the risks for economic shocks and other undesirable events. Since that disruptions in supply influence on the entire global economy they create multiplier effects which add to the initial disruption.

Moreover, companies cannot protect themselves from such disruptions by diversifying their suppliers, because there aren't other alternative sources outside the Asia. This vulnerability was highlighted in 2021 when Taiwan Semiconductor Manufacturing Company had to close some of its factories after the drought and severe pandemic COVID-19 at that time affecting a pause of worldwide car production (European Commission, 2020)

To promote diversification the EU has agreed to subsidise foreign investment in batteries and semiconductors through the European Chip Act and the European Battery Alliance. Similar to the International Climate Action Act and the CHIPS and Science Act in the United States they aim to ensure that alternative suppliers exist in the most extreme environmental situations.

Unfortunately, despite these efforts there are signs that Europe has begun to experience its own China shock. In 2022 Germany imported in China more cars and machinery than exported, for the first time ever. A recent Allianz Research Report showed that China has outperformed Germany in crucial sectors of the global export market. For example China's share of machinery and equipment exports in 2022 increased to 29% compared with Germany's 15%. although Germany continues to lead the world in exports of automobiles and transport equipment with a 17% share compared to China's 9% it is declining. (World Bank, 2023)

This should alarm politicians for two reasons. First, the loss of leadership in critical high-tech sectors poses a serious threat to Germany's economic model. Secondly, the European

Chinese shock could spur the rise of far-right parties such as the German Alternative for Germany (AfD).

The United States should serve as a cautionary tale. The Chinese shock of the early 2000s had a devastating impact on manufacturing regions, as workers displaced by Chinese competition had difficulty finding new jobs and were often forced to settle for significantly lower wages. The decline in manufacturing employment has contributed to an epidemic of "deaths from despair" — from suicides, drug overdoses, and alcohol—related liver diseases - and paved the way for Donald Trump's victory in the 2016 presidential election.

With this in mind, EU politicians are considering the possibility of imposing import duties on Chinese electric vehicles. In a recent speech, European Commission President Ursula von der Leyen said the Commission had launched an anti-subsidy investigation into the Chinese electric vehicle industry and accused China of violating fair competition rules in an attempt to "flood our market with electric vehicles with huge subsidies." (EBRD, 2016)

Such a move could have the added benefit of increasing Chinese foreign direct investment flows to the EU, as Chinese automakers may try to circumvent import duties by building new factories in Europe and selling electric vehicles directly to European consumers.

But more needs to be done. By forming partnerships with companies in technologically advanced economies such as China, Taiwan, South Korea, and Israel, European firms could bridge the knowledge gap on electric vehicles and digital technologies and increase foreign direct investment flows to the EU. For decades, China has used this strategy to become a global leader in green technology, forcing Western companies to form joint ventures with domestic manufacturers to access the vast Chinese market.

U.S. President Joe Biden's decision to impose a 100% duty on Chinese-made electric vehicles is likely to redirect Chinese exports of electric vehicles from the United States to Europe, leaving European politicians with no choice but to impose their own import duties.

Today, the roles have reversed: China is now a technologically advanced economy seeking access to the large EU market for its electric vehicles, and European countries lack the necessary technical expertise to remain competitive. In order to increase foreign direct investment flows and increase its competitiveness, the EU should review China's industrial policy and require Chinese electric vehicle manufacturers to establish joint ventures with domestic companies in exchange for market access. (EBRD, 2020)

Over the past 30 years American and European companies have increased presence in major developing countries and deepened their presence for several reasons. These include high growth rates, growing demand for goods and services as well as improved technological

skills, and reducing costs. However investing in developing countries does not mean moving away from the transatlantic economy. It's more about rebalancing: using global value chains to integrate other countries' added value into transatlantic investment and trade links.

This closely interconnected space has experienced many difficulties in recent decades, such as recessions, costly military conflicts, the US financial crisis, the EU sovereign debt crisis, and the economic recession, all of which affect each other's economies.

Analysts predict that the EU's economic prospects include a slow recovery, high unemployment (especially among young people) and further austerity as the norm in relation to sovereign debt problems.

The study of global economic trends shows that foreign direct investment inflows into the European Union depend on the complex interaction between various macroeconomic and institutional factors. This post-pandemic recovery process focuses on the importance of investing in innovation and sustainable energy while inflation processes and the global energy crisis in the economy require a review of investment approaches. Geopolitical uncertainty creates both risky situations and potential opportunities which contribute to a change in the direction of investments in more stable markets.

In order to increase the appeal of investment in the European Union countries the following steps can be taken. Firstly, the government should continue the development of digital and energetic infrastructure as well as support areas related to innovation. Secondly, it should strengthen institutions that promote transparency and stability in investment. Thirdly, the government should develop strategies aimed at the reducing risks associated with geopolitical conflicts.

These events will help the European Union not only cope with modern challenges, but also maintain its position as a leader in the global investment market.

Forecasts show that Germany and France will actively compete for foreign direct investment in strategic industries such as semiconductor manufacturing, renewable energy sources and artificial intelligence. At the same time, success depends on continued investment in human capital and infrastructure development (OECD, 2022).

The indices of economic freedom and global competitiveness provide useful indicators for analyzing the distribution of foreign direct investment in EU countries. Ireland the Netherlands, Luxembourg Germany and France keep their leading positions, it happens because these countries a strong institutional system, high innovative development and strategic location. Although if countries want to keep these advantages they need to adapt to global economic challenges such as increased regulatory pressures, rising interest rates, and

changes in global supply chains. By investing in human capital development and human infrastructure modernization, the countries will be able to keep their high positions in FDI market.

Today digital economy and introduction of advanced technologies are becoming crucial factors in the redistribution of foreign direct investment flows. The Fourth Industrial Revolution implies using of artificial intelligence, blockchain, cybersecurity, and cloud technologies. It encourages the redistribution of FDI to countries that are actively implementing and developing digital systems.

Ireland continues to be one of the main centers for attracting foreign direct investment in the IT sector due to a combination of favorable tax policies, a highly skilled workforce and support for scientific research. According to the OECD (2022), Dublin has become a European hub for corporations such as Google, Facebook and Microsoft, which are actively investing in digital transformation. Similarly, Estonia, through its digital government program and initiatives such as e-residency, has attracted significant investments in blockchain and fintech. These initiatives make Estonia attractive to startups and multinational corporations seeking innovation.

Forecasts show that in the coming years, countries that are actively investing in digital technologies will continue to strengthen their positions. For example, the development of artificial intelligence, especially in the field of production automation and big data analysis, will boost investment in Germany and France. In turn, the introduction of cybersecurity and cloud technologies will become the main focus of countries such as Poland and the Czech Republic, which seek to strengthen their role in global digital supply chains (UNCTAD, 2023).

European Union has a various EU's strategies to attract foreign direct investment, and one of it is the environmental transformation which comes from the European Green Agreement. This environmental program includes the transition to sustainable energy sources reduction of carbon dioxide emissions and the development closed loop systems. Some countries such as Denmark, Sweden and the Netherlands have already attracted a big amount of FDI in sectors of renewable energy and environmentally friendly technologies

Innovation and environmental transformation are becoming key factors in the redistribution of foreign direct investment flows in EU countries. The development of digital economy and the introduction of environmentally friendly technologies can stimulate the attraction of new investment opportunities and strengthen position of European Union as a global leader in innovative field. However the successful implementation of these strategies requires coordinated actions from EU members, which will aim at removing barriers for the

investors and developing human capital. In near future countries which implement the digital and environmental systems into their economic strategies will become the most attractive for foreign direct investment.

The Central and Eastern Europe (CEE) region has been an attractive platform for foreign investors for several decades. This is due to low salaries, favorable location and the active position of the authorities on infrastructure development. This is especially true for such countries as Poland, Czech Republic, Hungary or Romania, which have become the main recipient of this investment. Their governments offer various tax benefits, subsidies as well as they support formation of industrial clusters to attract foreign direct investment. These measures are made to create more conducive business climate, which further can stimulate increase of FDI flows to these countries. (Neuhaus, M, 2006)

Poland keeps a strong position in the EU region because the country has its quite developed transport network and generally good geographical location because it is placed between Western Europe and the CIS countries. According to the OECD (2022), the country continuously attracts FDI in the automotive, electronics and information technology sectors, which helps the country's manufacturing sector grow and increased export flows. For example, Tesla and Samsung factories, which have chosen Poland as a strategic center for entering the European market. (World Bank, 2020)

The Czech Republic is attracting significant amounts of investment in areas such as automotive, energy, and electronic component manufacturing due to its highly skilled workforce and effective economic reforms. Its central location in Europe makes the country an ideal hub for logistics and exports to other EU states. For example, the automaker Škoda, which is part of the Volkswagen Group, continues to increase its production facilities in the Czech Republic, making the country one of the leading centers of the automotive industry in the region.

Hungary, along with the Czech Republic, is effectively developing its field of production of automotive parts and batteries for electric cars. Recently BMW opened a factory in Debrecen, which will become a crucial supplier of electric vehicles to the European market. (EBRD, 2022). Also the country actively implements the programs for digital systems and modernisation of infrastructure, making it more appealing to foreign investors.

Romania strengthens its market position because of competitive labor costs and increased infrastructure investments in the country. In recent years the country's economic climate has been supportive to attract foreign capital into fields such as information technology and manufacturing including projects related to software development management and

support services. Large companies like Microsoft and Amazon have expanded their operations in Romania. This has led to the creation of many IT and outsourcing jobs. (UNCTAD, 2023).

On the other hand, the countries of Central and Eastern Europe, which have significant political and economic instability, such as Italy and Greece, are at risk of losing their positions in attracting of foreign direct investment. Structural problems including high levels of government debt, slow economic reforms and confusing regulatory systems negatively affect the competitiveness of these countries.

Italy, despite its large domestic market and well-developed infrastructure, faces a number of long-term economic challenges, such as slow GDP growth and bureaucratic obstacles to doing business. According to the European Commission (2022), in 2020-2022, the Italian economy attracted only a limited amount of new investment, especially in high-risk sectors such as construction and tourism. The lack of structural reforms and the high cost of doing business continue to alienate potential investors.

For example, Greece remains one of the most instable economies in the European Union because of its economic crisis history, high unemployment level and weak banking system. Despite the efforts of Greek government to liberalize economic activity and create a favorable climate for foreign investments, a great number of foreign investors are suspicious due to regulatory risks related with lending.

Central and Eastern Europe continue to maintain its position in the international market of attracting FDI keeping propitious conditions such as low production costs, the availability of highly qualified workforce and technical support. Countries such as Romania the Czech Republic Poland, Hungary and Moldova continue to be crucial growth economies for industry sectors such as automotive, wind energy and information technology.

However, the successful development of these countries depends on the ability to modernize infrastructure, reduce regulatory barriers, and ensure long-term political stability. Countries with high political instability, such as Italy and Greece, need to step up efforts to reduce risks, simplify bureaucratic procedures and support innovative industries in order to attract the interest of foreign investors again. (World Bank, 2023)

The future map of regional FDI in the EU will therefore be determined by interactions between economic policy, the level of institutes' development and geopolitical situation in the country. Countries that have managed to create an attractive investment environment will gain major part of advantages in the competition for international capital.

Germany is a key player in the EU semiconductor industry due to its strong manufacturing infrastructure and government support. Infineon is one of the largest

semiconductor manufacturers in Europe and it is going to expand its production facilities to meet global demand.

Also France pays special attention to the development of innovative products and technologies for microelectronics, therefore attracting significant investments from companies such as STMicroelectronics (UNCTAD, 2023).

The Netherlands continues to occupy an important place in the semiconductor ecosystem thanks to ASML, the world's leading manufacturer of lithographic systems for creating microchips. Investments in research and development, as well as in the expansion of production capacities, allow the Netherlands to strengthen its position as one of the leading centers of the semiconductor industry (OECD, 2022).

The technology sector, renewable energy and semiconductor manufacturing will remain the main growth areas of foreign direct investment in the EU in the coming years. Success in these industries will depend on the ability of countries to adapt to changing global conditions, implement the principles of sustainable development and ensure a favorable investment environment. At the same time, competition for attracting foreign direct investment between EU member states will stimulate innovation, promote economic growth and strengthen Europe's position on the global investment map.

Foreign direct investment (FDI) remains an important instrument of economic growth for the European Union (EU), but its inflow is significantly affected by various risks and constraints. These factors may reduce the attractiveness of the region for investors and cause an imbalance between the member countries. Among the key aspects that need to be considered are changes in legislation and institutional differences that form structural constraints for attracting FDI.

Global economic instability caused by the consequences of the COVID-19 pandemic, the conflict in Ukraine and the energy crisis has a significant impact on inflows of foreign direct investment. Investors are showing increased caution, especially in high-risk sectors such as tourism and real estate. Moreover, rising protectionist sentiments and increasing trade barriers in the international arena may limit capital transactions between countries and hinder the economic integration of the European Union with other regions of the world (OECD, 2022).

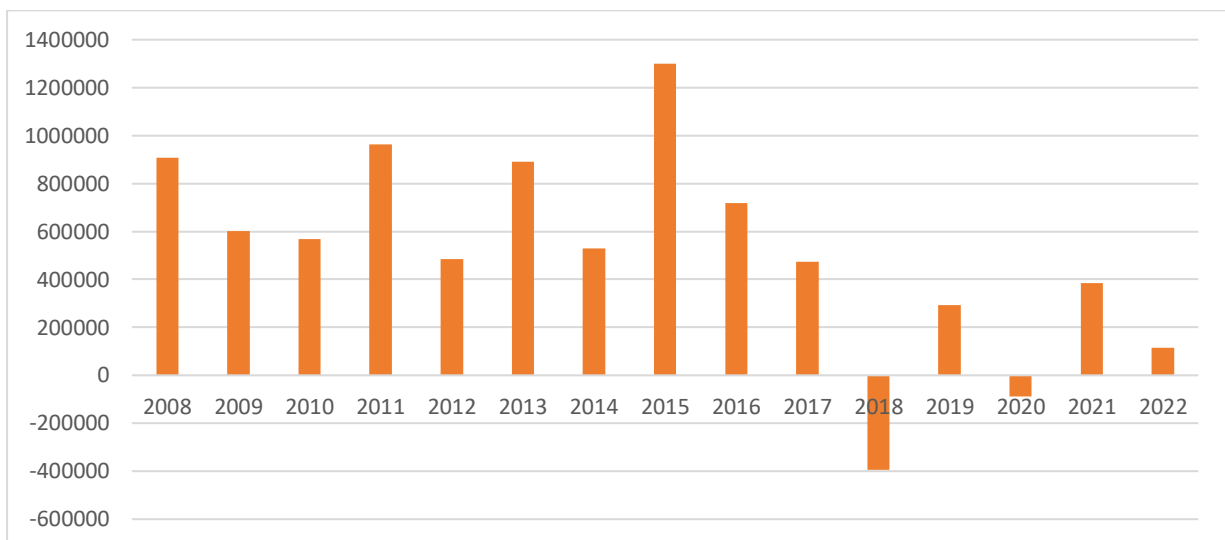
In order to reduce risks and overcome existing constraints, the European Union needs to review its policy, finding a balance between protecting national interests and creating an attractive investment environment. Strengthening cooperation between Member States, unifying regulatory approaches, and developing infrastructure in less well-off regions will help reduce the gap between leading and lagging countries. In addition, strategic projects such as

the green technology course and the Chips program can enhance the EU's competitiveness in the international arena and provide additional incentives for foreign investors by targeting foreign direct investment flows to sectors with high added value and sustainable development.

## **CHAPTER 3. EMPIRICAL ANALYSIS AND REGRESSION ANALYSIS OF FDI**

### **3.1 Empirical data on FDI inflows and outflows to European countries**

The volume of inflows and outflows of foreign direct investment is one of the main indicators of the development of the EU countries. As a rule, FDI has a significant effect on the economic growth of a country, the development of the innovation sector, and, of course, the competitiveness of the state. It is from these factors that the confidence of foreign investors in the economy of the EU countries is formed, and a favorable investment climate is created. Further analysis of the indicators of FDI inflows and outflows for 2008-2022 will help to trace the impact of the financial crises and COVID-19 on the investment attractiveness of EU countries, as well as their positions in the investment market. (Kumar, S., & Singh, R. , (2025)). And let's start with an analysis of the total outflow of FDI from the EU countries, the data are shown in graph № 1.



Graph №1. Net FDI Outward in EU, total  
Source: <https://ec.europa.eu/eurostat/en/>

Data on net outbound FDI flows to the EU for the period from 2008 to 2022 show several key trends. To begin with, we note that against the background of the global crisis of 2008-2010, the volume of outbound foreign direct investment in most EU countries has sharply

decreased. The largest losses were observed in such large economies as Germany, France and the United Kingdom, which is mainly due to a decrease in the activity of multinational corporations (UNCTAD, 2010).

The period 2011-2014 is marked as a period of economic recovery, while in the EU countries one can observe a gradual increase in the inflow of foreign direct investment. Germany, the Netherlands and Luxembourg became the top 3 leaders in terms of FDI, as it was in these countries that the rapid recovery of industrial production and the development of the financial sector began.

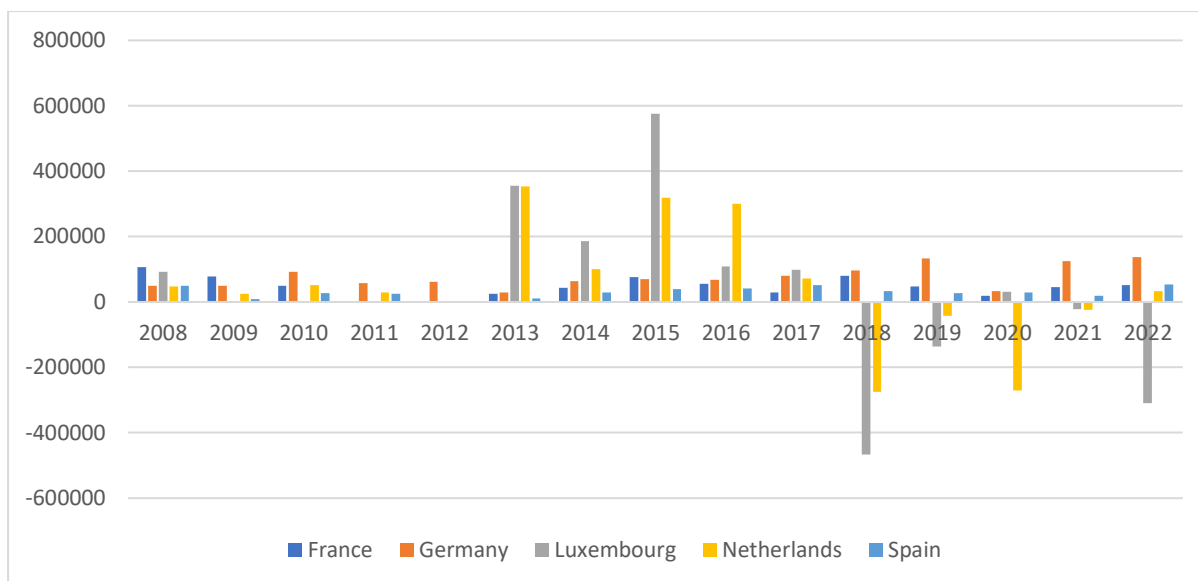
In 2015, the outflow of foreign direct investment reached its maximum value – 1,299,991. This drastic change is due to the fact that the economic situation has become more favorable, and the number of mergers and acquisitions has increased significantly. The leading countries at that time were the Netherlands and Ireland, as these countries are known for their tax advantages.

During the COVID-19 pandemic, foreign direct investment abroad declined sharply due to global uncertainty, declining demand, and travel restrictions. The largest decrease in this indicator was recorded in countries such as France and Germany.

However, in 2022, we can observe a gradual recovery in the volume of foreign direct investment from EU countries. For example, countries such as the Netherlands and Sweden showed the best results in terms of 33.981 and 63.479 million euros, respectively, and it was in these countries that active activity in the field of information technology and the financial sector began.

Now we will conduct a comparative analysis of the EU countries for the period from 2008 to 2022 and identify five leading countries and five outsider countries in terms of net foreign direct investment outflow. Here we explore the main trends of change and the factors that have influenced the differences between countries. The country data is shown in Graph № 10.

The net outflow of foreign direct investment is one of the main indicators of the economic dynamics of the countries' development. Therefore, countries such as Luxembourg, the Netherlands, Germany, France and Belgium stand out as the main players. Each of these countries has its own unique characteristics and reasons that contribute to a high value in terms of FDI outflow abroad.



Graph №2. Top 5 countries in Net FDI Outward  
Source: <https://ec.europa.eu/eurostat/en/>

Based on Graph № 2, we will characterize each of the leading countries. Let's start with Luxembourg. It ranks first in terms of net FDI outflow, reaching a record high of 574.805 million euros in 2015. Luxembourg is known for its strong financial sector, favorable tax environment and status as a global investment center. It is thanks to these characteristics that Luxembourg attracts significant amounts of capital and continues to hold a leading position for many years.

The Netherlands is in second place. In 2013, the outflow of FDI reached 352,862 million euros, which was the highest value for the entire period under review. The Netherlands has a strategically advantageous location, and the country is also known for its well-developed infrastructure and favorable tax conditions. This is why the Netherlands is considered one of the most attractive countries for TNCs, which ensures a continuous influx of FDI into the country's economy.

Germany ranks third. The country reached the highest levels of FDI outflow in 2022 – 137.868 million euros and in 2019 – 134.067 million euros. Germany is primarily known for its economic stability, diverse economy, and strong manufacturing sector. It is the MNCs in the manufacturing sector that provide Germany with such a strong position in the foreign direct investment market.

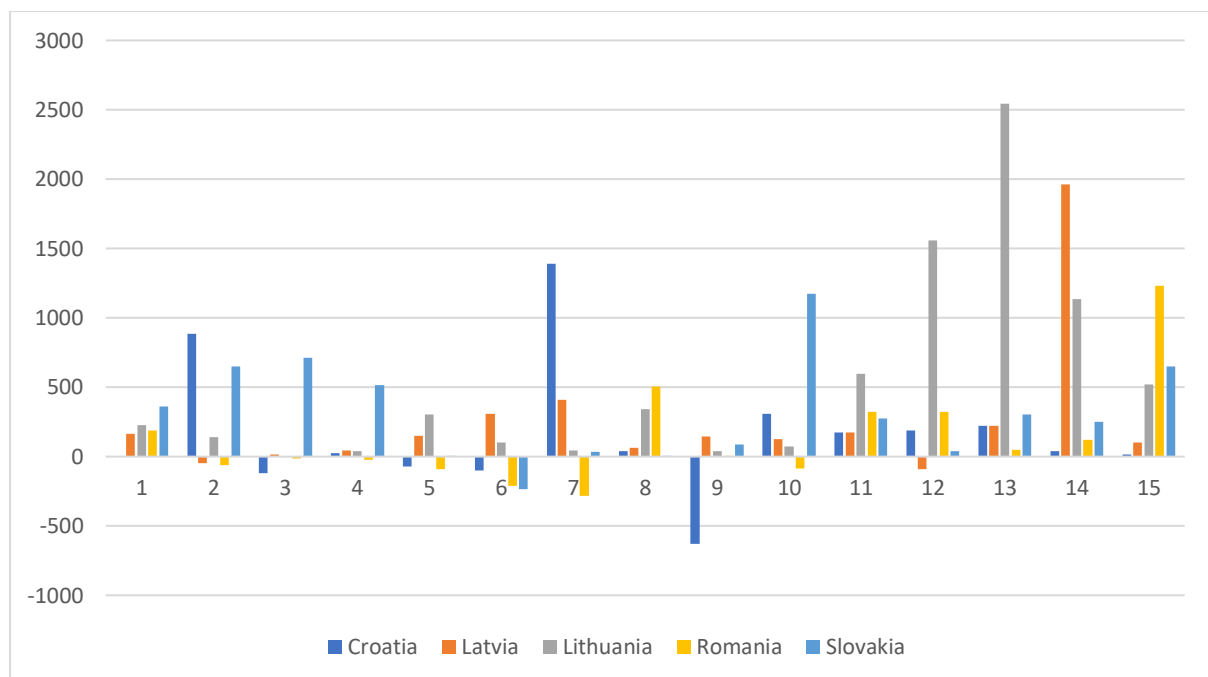
France is in fourth place, with the highest volume of foreign direct investment abroad reaching 105.847 million euros in 2008. Despite strong fluctuations in this indicator, the country demonstrates almost stable growth and a noticeable maximum in 2018 and 2022, when

the outflow of FDI amounted to 81.097 and 50.624 million euros, respectively. France's economy is quite diverse, it is known for its luxury goods, aerospace industry and energy sector. And despite the internal economic problems and global crises, France consistently invests abroad and occupies a firm position in the investment market.

The last leader in the top five is Spain. The maximum value in terms of FDI outflow abroad was reached in 2022 — 53.083 million euros. Spain has a relatively small domestic market, so many Spanish companies are actively investing in other countries to expand production. Global crises have a strong impact on the Spanish economy, so in order to reduce dependence on the national market, the country continues to invest steadily abroad.

Thus, countries such as Luxembourg, the Netherlands and Germany demonstrate strong and diversified economies, which helps attract foreign direct investment. Stable financial sector and favorable tax conditions make them centers of international investments. These States also show resilience during periods of economic downturns, recovering quickly from financial crises and benefiting from the stages of economic recovery.

Now let's turn to graph № 3, where the 5 outsider countries are located in terms of the volume of net outflow of foreign direct investment. This indicator is an important indicator of the economic condition of the country. And countries such as Croatia, Latvia, Lithuania, Romania and Slovakia are among the most vulnerable. Each of these countries faces its own challenges, which limit their ability to attract and withdraw investments abroad.



Graph №3. Top 5 Losers countries in Net FDI Outward  
Source: <https://ec.europa.eu/eurostat/en/>

Croatia is among the countries experiencing the greatest difficulties, showing minimal or negative net FDI outflows during the time period under review from 2008 to 2022. The country reached the lowest value in 2016, which was -631 million euros. A negative value means that Croatia's economy receives more foreign investment than it invests abroad. The small size of the economy, the effects of financial crises and insufficient diversification of investment flows have made the country particularly vulnerable to external economic shocks.

Latvia ranks second in the ranking. In 2019, the country achieved the lowest figure in terms of FDI outflow - 93 million euros. In 2021, the figure rose to 1,964 million euros. However, Latvia has a small economy compared to Luxembourg and Germany, so combined with the global financial crisis and limited access to capital, the country does not have high rates of FDI.

Lithuania ranks next. The country reached the lowest value in terms of FDI outflow in 2010, and it amounted to 4 million euros; in 2020, Latvia has already increased this figure to 2.545 million euros. However, despite a significant increase in investment outflows, Lithuania has a rather limited domestic market, and it largely depends on external economic factors. This is exactly what is the biggest problem – to be competitive in order to attract more investments from your economy and invest abroad.

Romania ranks fourth in terms of the lowest outflow of FDI. In 2014, the figure was - 282 million euros. Romania is in a rather difficult situation: the country has many institutional barriers, as well as irregular economic reforms. This and the lack of any infrastructure make the country unable to participate in global investment flows.

The last place is occupied by Slovakia, whose minimum figure was only 5 million euros in 2015. Slovakia has been able to successfully integrate into the euro area, but the country still has a fairly small market and clearly lacks institutional support. Therefore, Slovakia occupies the lowest and most unstable position in the investment market.

Each of these countries was significantly affected by the financial crisis and the pandemic period, which led to protracted economic problems and a limited flow of foreign direct investment to other countries. When a country's economy is not stable enough, it makes it very vulnerable to any kind of external and internal shocks. Therefore, Croatia, Latvia, Lithuania and Romania were unable to ensure a significant outflow of FDI.

The global financial crisis occurred in 2008-2012. It was this period that became a test for many countries of the world and contributed to reducing the outflow of FDI worldwide. The period of financial instability has limited any opportunities to invest abroad. That is why Croatia, Latvia and Lithuania have demonstrated such low rates of outflow of foreign direct

investment. After the crisis, in 2010, many countries gradually began to recover, but for all EU countries it was evenly distributed. And while some were experiencing difficulties, other countries with stable economic conditions, such as Luxembourg, the Netherlands and Germany, recovered quite quickly after a severe blow and even increased their investment rates abroad.

Further, from 2013 to 2019, the outflow of FDI from Europe can be observed to increase. For example, in Luxembourg and the Netherlands, this indicator has reached its maximum values. The economies of the EU countries are recovering, and favorable conditions in the world are becoming an important factor in increasing investment capital. However, some countries, such as Croatia, Latvia and Romania, remained in low positions, and data on FDI outflows remained insignificant, as the underdeveloped economy is struggling to cope with global crises and current problems.

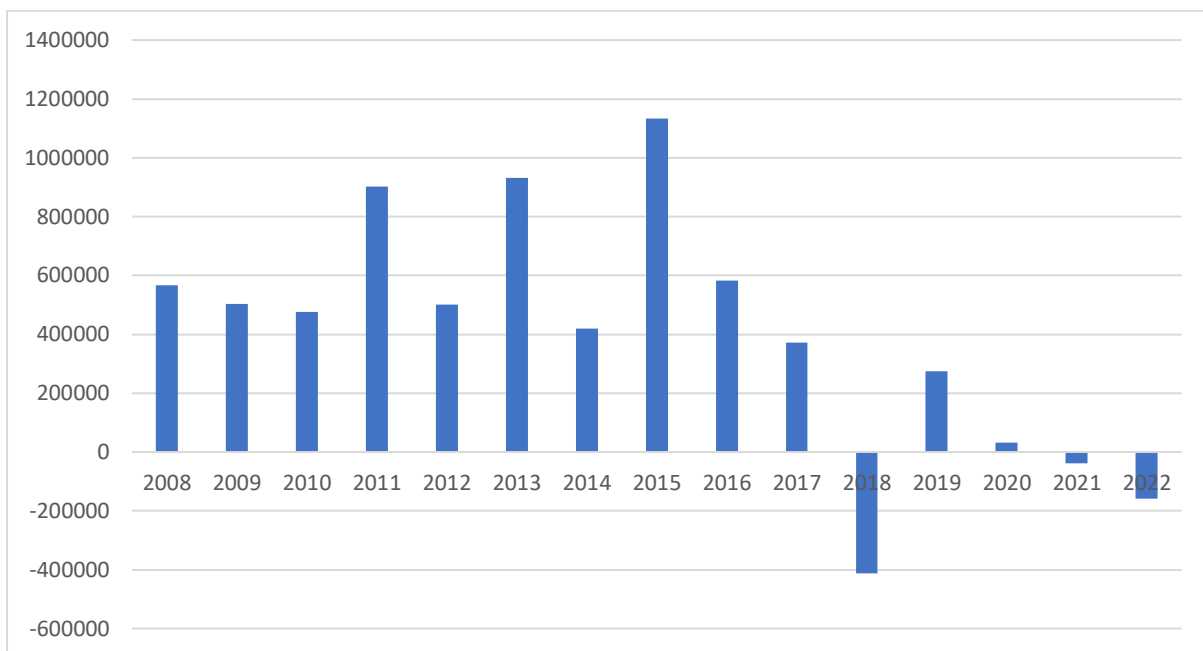
During the 2020-2021 pandemic, the outflow of foreign direct investment from EU countries decreased in many countries, but after 2022, a significant recovery can already be seen, for example, this is especially evident in countries such as Germany and France. Although there is always a factor of internal changes and crises in the country that affect the outflow of FDI and lead to a decrease, for example, as we see in Luxembourg, Ireland, Denmark.

In this analysis for 2008-2022, significant differences can be seen in the data on the outflow of foreign direct investment from EU countries between members. Yes, countries with stable economies like the Netherlands, Luxembourg and Germany are known for their favorable investment environment, so it is not surprising that they have taken a leading position in this indicator. However, countries such as Croatia, Latvia and Romania, faced with economic crises, simply cannot cope with difficulties and structural deficiencies, which in turn provokes an inability to improve the investment climate and invest more abroad. As a rule, major crises everywhere lead to significant economic downturns, which shows exactly how global and regional conditions affect countries. However, as already mentioned, some countries are recovering quite quickly and are gaining momentum again, while others are trying to cope with the new problems that have arisen.

It is worth noting that the net inflow of foreign direct investment is an important indicator of the economic development of the EU countries. This indicator explains the ability of countries to attract investments from abroad for the development of their strategically important industries such as manufacturing, real estate, finance and information technology. Looking at the period from 2008 to 2022, I would like to note that the dynamics of FDI inflows showed both periods of rise and fall due only to global or regional events.

Now let's start analyzing the following indicator – the volume of net foreign direct investment inflows for the period 2008-2022 in the EU countries. Analyzing chart № 12, we can say that in 2008-2022, the net inflow of foreign direct investment to the EU countries demonstrated rather high volatility.

The financial crisis of 2008 put significant pressure on the inflow of foreign direct investment. At that time, investors began actively withdrawing capital from many EU countries, especially from the Southern part of Europe. At that time, countries such as Greece, Spain and Italy suffered the most, where FDI flows decreased by more than 30%. (Eurostat, 2009)



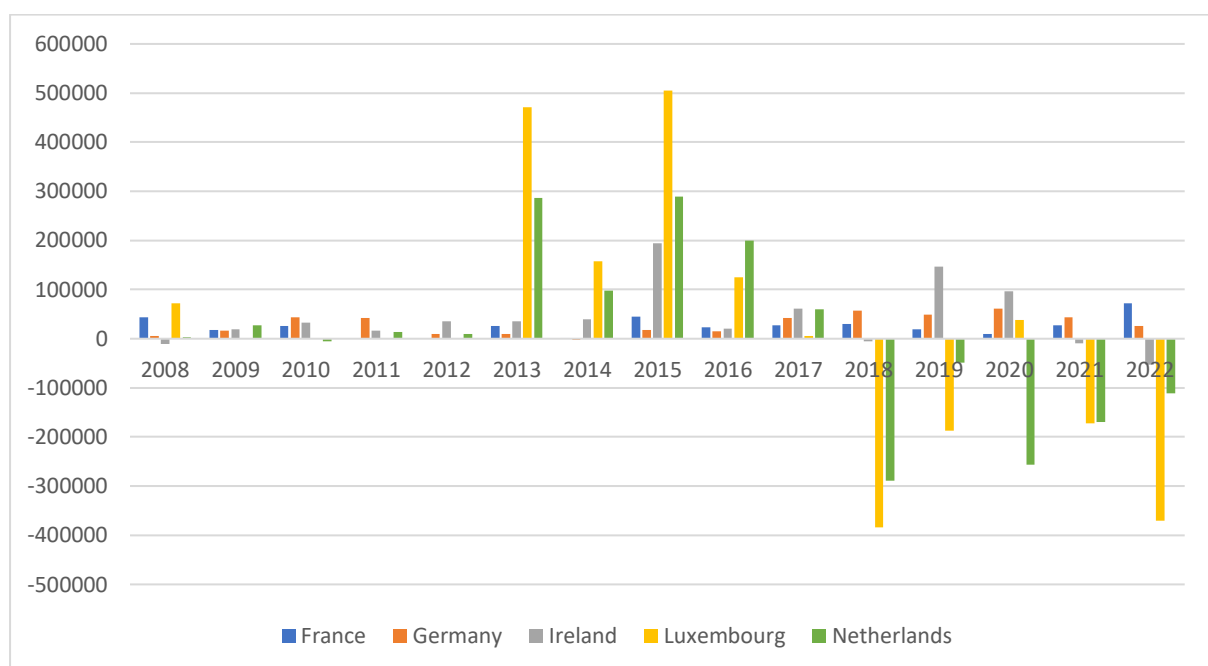
Graph №4. Net FDI Inward in EU, total  
Source: <https://ec.europa.eu/eurostat/en/>

During the recovery period from 2010 to 2015, the rate of FDI inflows in the EU countries increased significantly. In 2015, the total inflow of FDI in all EU countries reached a maximum value of 1.133.376 million euros, as by that time most countries had been able to regain their positions on the investment market. Countries such as the Netherlands and Ireland have seen the greatest growth in this indicator, as confidence in EU countries and strategically important industries such as industrial production, the financial sector, real estate and the information technology sector has begun to recover.

During the COVID-19 pandemic, the inflow of foreign direct investment declined sharply and reached an all-time low. Obviously, the decline in mass consumption, as well as global uncertainty, have had a strong impact on the investment climate of the EU countries.

Sectors such as real estate, retail trade and tourism have suffered the most, and it is here that the largest decrease in incoming FDI into the EU economies can be observed.

In 2022, there was a moderate recovery in the inflow of foreign direct investment due to the revival of economic activity and the stabilization of markets. The most significant growth was recorded in countries such as France, Italy, Spain and Sweden. Graph 13 below shows the volume of net inflows of foreign direct investment (FDI) to various countries of the European Union from 2008 to 2022. Based on this indicator, we will identify and compare the top five and the top five outsiders, as well as discuss the main trends and factors that affect the volatility of the indicator and the immediate differences between countries.



Graph №5. Top 5 countries in Net FDI Inward  
 Source: <https://ec.europa.eu/eurostat/en/>

According to the analysis, Luxembourg ranks first in terms of net FDI inflows, the highest value was achieved in 2015 – 505.174 million euros. During the period under review from 2008 to 2022, the country has consistently attracted significant amounts of investment, but since 2018, the country has experienced a significant decline in this indicator. Luxembourg is considered a global financial center, it is known for its attractive tax policy and stable regulatory framework. That is why many TNCs invest in Luxembourg's economy by moving their companies here, which contributes to a steady influx of investments.

The second place is occupied by the Netherlands, whose maximum value in terms of FDI inflows was also reached in 2015 and amounted to 288.694 million euros. During the

period under review from 2008 to 2022, a steady increase in investment flows can be observed, but since 2018 there has been a decline and a negative value in terms of the indicator. The Netherlands is considered the center of international business, as its convenient strategic location and well-developed infrastructure contribute to maintaining a stable inflow of FDI into the country's economy, but it is the favorable business climate, which includes tax incentives for TNCs, that makes the Netherlands an attractive country for investment.

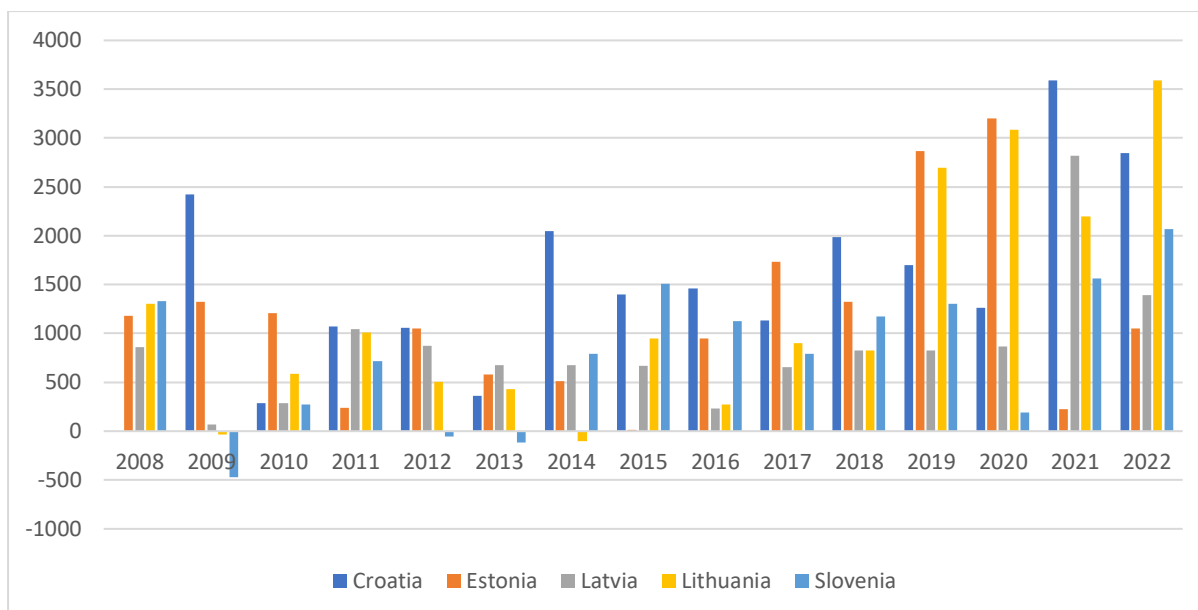
Ireland ranks third in the top. The maximum inflow of FDI was reached in 194.213 million euros. The country has one of the highest values for this indicator relative to the size of its economy. However, over the past 3 years, starting in 2021, there has been a sharp decline in the country. As we know, Ireland has fairly low corporate tax rates, and the market has a highly educated workforce. Ireland is considered the technological and pharmaceutical center of Europe, which is why many TNCs, especially in the technological and pharmaceutical sectors, prefer to move their production here and invest in the country's economy.

Germany ranks fourth, with the highest value of 61.148 million euros, which was achieved in 2020. The inflow of foreign direct investment to Germany remained positive and has steadily increased since 2015. The country has a large and diversified economy, as well as a developed industrial production sector. Due to this, the country enjoys economic stability and low unemployment, which is why Germany is considered the main economic center of Europe, which means that all this contributes to its attractiveness in the eyes of potential investors.

France is in last place, and the country reached the maximum value in terms of FDI inflows in 2022, which amounted to 72.665 million euros. FDI inflows to France are quite unstable, but in general, an absolute increase can be seen over the entire period under review from 2008 to 2022. France has a fairly diverse economy and a large market. In addition, the country is known for its sectors such as aerospace, energy, and luxury goods.

Thus, countries such as Luxembourg, the Netherlands, and Germany have been able to maximize the benefits of their countries' strong economic factors, including economic diversification, political stability, and a favorable investment climate, which have made them attractive destinations for foreign direct investment. Pro-business policies such as low corporate tax rates, strategic location and high-quality infrastructure have played a crucial role in maintaining high FDI inflows to these countries.

Now let's move on to the next analysis and look at Chart № 14. Here we compare the five countries with the lowest net inflows of foreign direct investment between 2008 and 2022. It is necessary to identify the main causes of the economic difficulties of these countries and the observed trends.



Graph №6. Top 5 Losers countries in Net FDI Inward  
 Source: <https://ec.europa.eu/eurostat/en/>

Croatia ranks first among the lagging countries. The lowest value in terms of FDI inflows was achieved in 2010, it amounted to only 286 million euros. A rather low value indicates limited opportunities for attracting foreign investment. This may also be due to the small size of the market and poorly developed infrastructure. Unfortunately, Croatia is therefore not an attractive country for investment.

Estonia ranks second, having reached a minimum level of 12 million euros in 2015. The country is showing a clear decline in investment in the economy. Despite the successes in the field of digital governance and innovation, the country has too limited a labor market, which is the reason for the decline in its investment attractiveness.

Latvia is in third place. The country reached its lowest value in 2009, when the net inflow was only 67 million euros. The main reasons are the small domestic market, and the effects of the global financial crisis have worsened the ability to attract foreign investment into the country's economy.

Lithuania ranks fourth. In 2014, the indicator showed a negative value of -100 million euros, which indicates structural problems, a lack of strategic investments and the need to strengthen national investment policy.

Slovenia ranks fifth. The minimum value in terms of FDI inflows to the country was reached in 2022 and amounted to 795 million euros. Slovenia has a fairly small economy and slow growth rates, so the impact of various crises and shocks has a strong effect on the country's

investment climate, which creates numerous obstacles to attracting foreign investment into the economy.

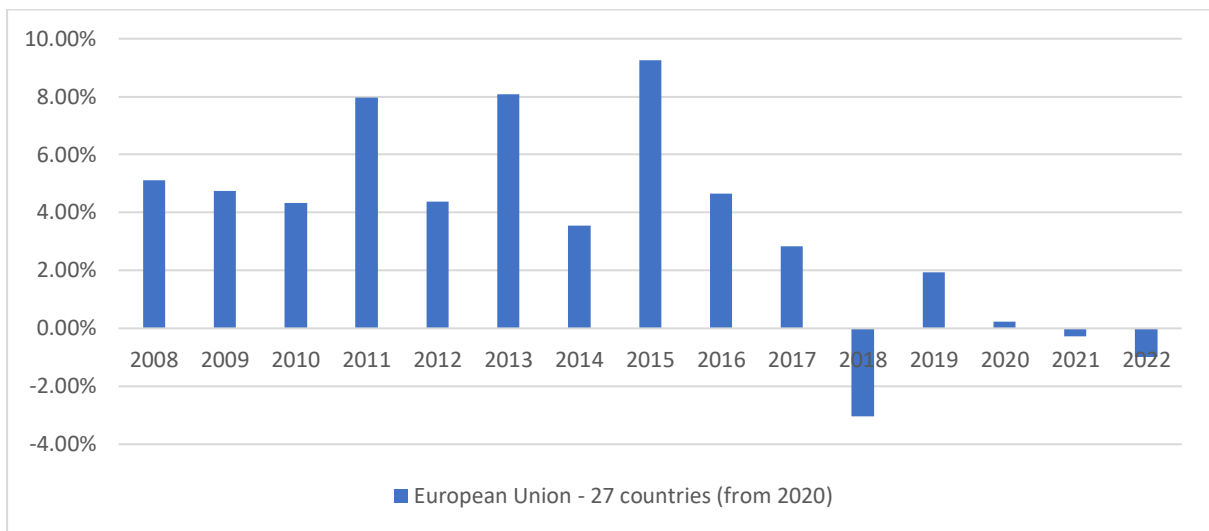
To summarize, we would like to note once again that countries with small economies and underdeveloped infrastructure, such as Croatia, Estonia, and Latvia, are much more susceptible to external and internal factors, such as global crises, labor shortages, and institutional problems. Therefore, their ability to attract investments faces many difficulties. That is why it is so important to review the current structural reforms, increase the transparency of the economy and focus on the investment climate so that the lagging EU countries can increase their competitiveness and take a firm position in the investment market.

The period under review in the analysis of 2008-2022 included the main global financial crises - the global financial crisis of 2008 and the European debt crisis of 2010-2015, which led to a sharp reduction in the inflow of foreign direct investment to many EU countries. Investor confidence was no longer as stable, and the economic uncertainty in the world led to a decline in overall investment activity. In the period from 2015 to 2019, the economic recovery began in the world, and then the inflow of foreign direct investment began to increase, especially in countries such as Luxembourg, the Netherlands and Germany. However, by the end of this period, Europe was facing the UK's withdrawal from the European Union, and the whole of Europe was facing a new uncertainty caused by Brexit. The next shock was COVID-19, which led to a temporary reduction in foreign direct investment inflows in 2020, but we may see significant changes in 2022, especially in countries such as Germany and France.

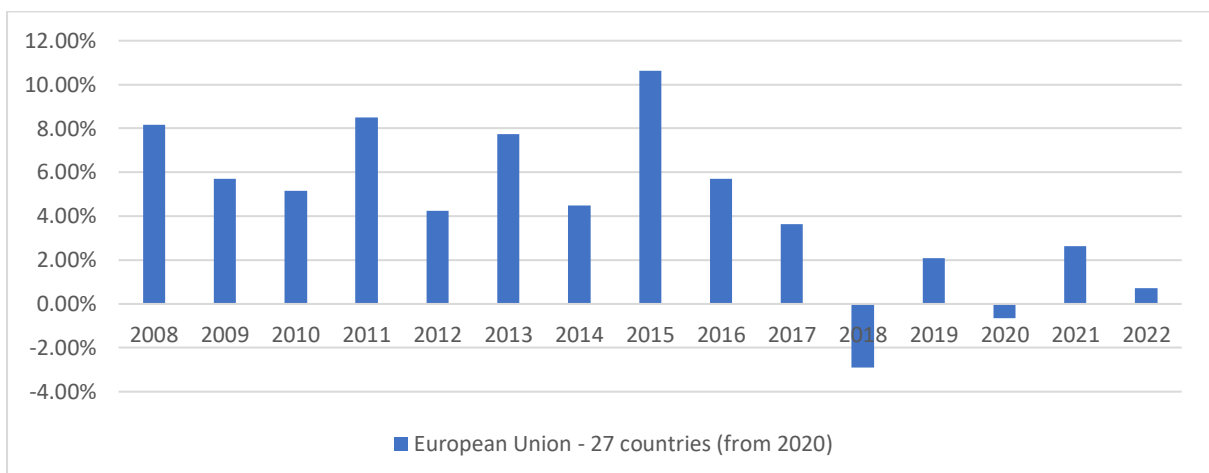
Summing up all the above in this part, according to the comparative analysis for 2008-2022, the main reasons for the sharp changes in indicators of outflows and inflows of FDI were global economic crises, a pandemic and political changes within countries. Countries such as Germany, the Netherlands, and Luxembourg are known for their strong economies and favorable tax conditions, which is why they consistently maintain their positions in the investment market. But countries such as Croatia, Latvia and Slovenia, faced with the debt crisis and having a weak institutional mechanism themselves, have dropped significantly in terms of both outflows and inflows of FDI. One of the latest shocks, COVID-19, has led to a temporary reduction in FDI flows everywhere, but in 2022 we may see a partial recovery, especially in countries such as Germany, Ireland and Luxembourg. It can be concluded that the main important factors in attracting FDI to EU countries and increasing investment abroad are economic stability, economic transparency and a strategic approach to the development of key sectors.

Foreign direct investment affects unemployment through a number of mechanisms. Incoming investments contribute to jobs creation by opening new production facilities and expanding foreign companies' activities while outgoing investments may lead largely to job losses outside the country. In each case the results depend on many factors: the level of economic development, the structure of labor markets and the quality of public administration. According to research, countries with highly developed institutions and a favorable investment climate show the most pronounced reduction in unemployment due to foreign investment.

For the analysis I used data from Eurostat and UNCTAD on FDI flows into European countries and economic indicators for 2008-2022. Key indicators were considered: GDP growth rates employment the level of investment in innovative industries as well as sectoral and geographical differences in the distribution of FDI.



Graph №7. Inward FDI flows % of GDP in EU  
Source: <https://ec.europa.eu/eurostat/en/>



Graph №8. Outward FDI flows % of GDP in EU  
Source: <https://ec.europa.eu/eurostat/en/>

Analysis of the share of foreign direct investment (FDI) in the gross domestic product (GDP) of the EU countries helps to understand the important role that foreign investment plays. FDI is a long-term financial investment in a country's economy by foreign firms to control businesses. It is an important factor influencing structural changes in the economy, technological development and productivity levels. A study of FDI as a percent of GDP over the past 20 years shows that EU economies have varying levels of dependence on FDI and its contribution to competitiveness and economic growth.

According to the European Commission and Eurostat, FDI as a percentage of GDP varies significantly across EU countries. Countries such as Luxembourg, Ireland and the Netherlands are the largest FDI producers due to their attractive tax regimes and favorable business conditions. In this vein a study by David and Hanson (2019) note that the Netherlands is attractive for FDI due to its well-developed infrastructure, strategic geographical location and several multinational companies established in the country.

In contrast, Eastern European countries such as Romania, Bulgaria and Latvia where the share of FDI in GDP is significantly lower are showing positive dynamics due to their growing integration into Europe's market and access to EU funds despite the low share. An analysis of the FDI-to-GDP ratio shows that countries with a high FDI-to-GDP ratio are most often large financial centers or attractive to TNCs. For many years Luxembourg has been ranked first among EU countries in terms of FDI to GDP for many years due partly because of its status as an international financial center. A study by Black and Taylor (2021) showed that about 70% of FDI into Luxembourg are related to the banking sector and investment funds.

The share of foreign direct investment in GDP depends on a number of factors such as employment growth, productivity gains and technology transfer. For example, Ireland has a high share of FDI in GDP and excels well in high-tech sectors including information technology and pharmaceutical industry. These industries have attracted significant foreign investment leading to increased exports and innovation in the economy.

However, the high share of foreign direct investment in GDP may also have negative aspects. Foreign direct investment was expected to grow during the first half. As an example, a report by UNCTAD (2022) shows that significant dependence on foreign investment makes the economy vulnerable to external shocks such as changes in global investment flows or political instability. An example is the decline in foreign direct investment after the referendum on leaving the EU in the UK, which negatively affected the country's economic growth and

employment. The share of foreign direct investment in the GDP is also closely connected to the quality of institutional environments.

A study by Romer and Lucas (2016) notes that countries with low corruption have more likelihood of attracting long-term foreign investment. The share of foreign direct investment in GDP of Germany is demonstrating steady growth due to its robust institutional structure and high labor productivity. At the same time countries such as Greece and Italy have difficulty attracting foreign investors due to unstable economic policies and structural problems.

An important factor influencing the share of FDI among GDP is the availability of labor markets. Countries such as Finland and Sweden offering favorable conditions for the employment of highly skilled workers have higher rate FDI as a percentage in GDP. This is confirmed by a 2021 World Bank study. This study found positive correlation between education, infrastructure development and FDI. In particular countries with low-skilled labor and limited educational resources it is difficult to increase the share of FDI in their economies. Technology transfer over FDI also has significant impact on economic growth. Eastern European countries such as Poland and the Czech Republic have successfully increased the proportion of FDI in GDP in recent years by creating favorable conditions for technological innovation and modernization of production. For example, the automotive industry in Czech Republic attracted significant foreign investment which has led to increased exports and increased competitiveness in global market.

An analysis of the dynamics of the share in GDP is shown that global economic crises such as the 2008 financial crisis and the COVID-19 pandemic have significantly affected the volume of FDI in EU countries. During the crises the share of foreign direct investment in GDP declined due to a reduction in global investment flows and increased uncertainty. However, the economic recovery in subsequent years was accompanied by an increase in foreign direct investment especially in countries with stable economies and attractive business conditions. Thus the share of foreign direct investment in GDP is an important indicator reflecting the degree of integration of a country's economy into world markets. The EU countries show significant differences in this indicator due to the structural features of their economies, the quality of the institutional environment and availability of resources.

Periods of increased global trade and increased international investment have contributed to accelerated GDP growth in the EU especially in countries with more open economies and a high degree of integration into global value chains. However, Brexit events and trade wars have led to a reduction in FDI inflows to some countries which has had a negative impact on economic growth. The UK experienced a decline in foreign direct

investment after leaving the European Union which slowed the country's growth rate, according to the IMF (2021). The dependence of FDI on GDP growth in EU countries is therefore a complex and multiple process that depends on many factors including the institutional environment, the sectoral structure of the economy and the global economic situation. We found a stronger positive relationship between FDI and growth in countries with more stable economies developed infrastructure and highly skilled labor. At the same time, countries facing economic and institutional challenges need reforms to improve the investment climate and increase the efficiency of using external investments.

In the period 2008 to 2023 foreign direct investment had significant impact on economic development employment and innovation in European countries. While some countries, such as France Germany Ireland and Poland have successfully used foreign direct investment to boost growth and innovation some others can no longer attract the use of investments effectively. In general Foreign Direct Investment has been an important factor in overcoming the crisis and contributed to the growth of Europe's competitiveness on the global stage.

This survey should serve as a wake-up call to the whole continent. Politicians should work together with business to create an environment where investments can make a profit and businesses can thrive.

Foreign investment strengthens the European economy by creating jobs stimulating innovation and enabling growth in exports. Despite the continuing disappointing investment momentum in 2023, there is reason to be optimistic about the long-term future. But urgent measures must now be taken to help Europe remain competitive on the basis of increasingly fierce competition from the United States and China.

There is reason to be optimistic despite the general gloom. 72% of the companies surveyed reported that they plan to expand operations in Europe in the coming year (67% in 2020). This shows that Europe remains an important part of current and future business plans.

Investors are very optimistic about Europe's long-term prospects in the long term as a gradual improvement of the economic situation is expected. In the context of growing geopolitical tensions the relative stability of the largest economies in Europe is a significant advantage.

The leaders surveyed believe that the increased regulatory burden will be the most serious threat to Europe's attractiveness in the next three years. Europe announced a number of new regulatory initiatives in areas such as Carbon dioxide emissions disclosure, comprehensive supply chain verification, Data Protection and the Safe Use Of Artificial Intelligence. Investors are concerned by the expansion of the regulatory framework that is likely to restrict growth and

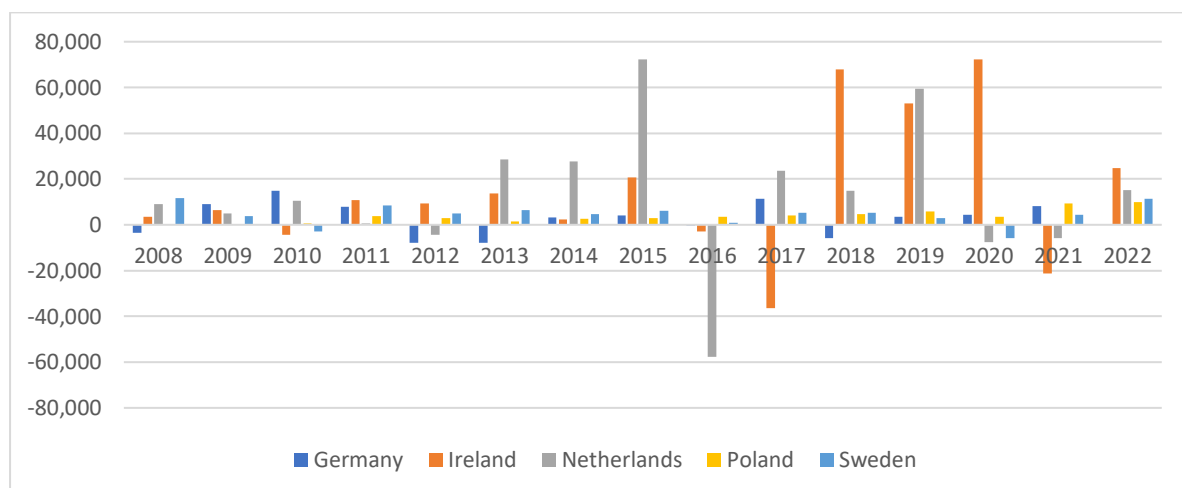
flexibility of European businesses. Reflecting concerns about the energy crisis of the past two years energy prices and supply problems are considered the second biggest threat to Europe's attractiveness with political instability in Europe ranking third. It is due to uncertainty ahead of the European elections and growing social tensions and political radicalism at the local level.

### 3.2. The main sectors attracting FDI in Europe and the reasons for their attractiveness

Foreign direct investment (FDI) remains an important driver of economic growth and innovative development in the European Union (EU), whose 27 regional markets are characterized by a high degree of integration, developed infrastructure and stable institutional structure. However, the distribution of FDI by country and sector varies greatly depending on the competitive advantages of a particular economic region.

Based on the analysis of Eurostat data, as well as international sources such as UNCTAD, the World Bank, and EY reports, five key sectors attracting FDI in Europe can be identified: manufacturing, information and communication technology (ICT), financial services, real estate, and retail. This chapter provides an in-depth analysis of these sectors, focusing on differences between countries.

It is worth starting a comparative analysis with the manufacturing sector. Manufacturing remains the main focus of FDI in Europe, especially in Germany, the Netherlands and Ireland.

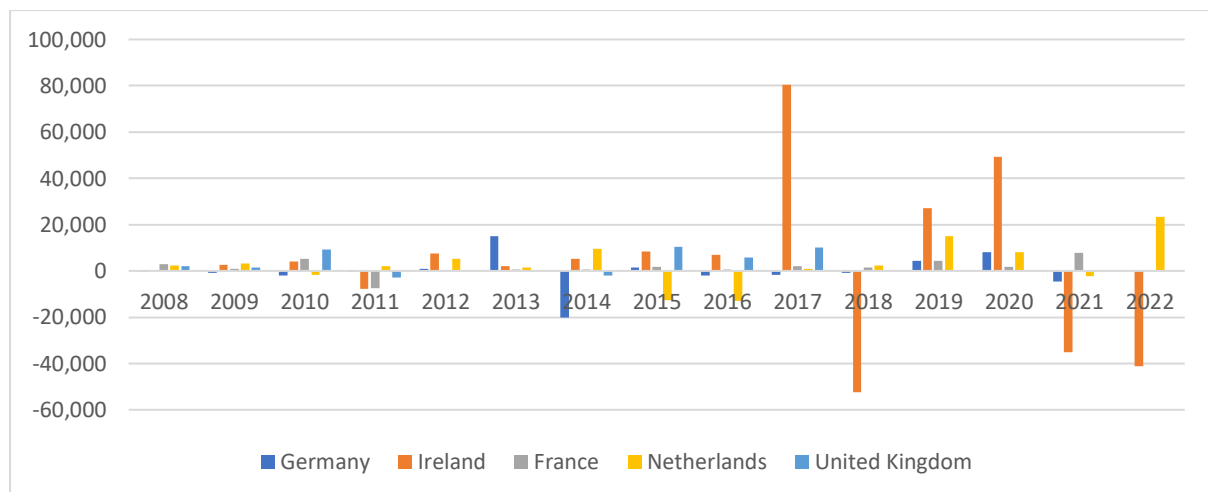


Graph №9. Manufacturing by EU countries, 2008-2022  
Source: <https://ec.europa.eu/eurostat/en/>

Let's pay attention to the data shown in graph № 9. The Netherlands and Ireland attract most of the investments in the manufacturing sector, these countries are known for their high-tech manufacturing and pharmaceutical production. The share of FDI in the Netherlands peaked in 2015 at 72.233 million euros. Tax incentives for manufacturing companies are also actively provided in the country. Ireland, in turn, reached a maximum in terms of FDI in 2020 – 72.179 million euros. Ireland is an attractive country for investments in the manufacturing sector due to the fact that the country has introduced a corporate tax of 12.5%, which is why many TNCs choose it for investment.

Germany, Poland and Sweden also occupy leading positions among the EU countries in terms of FDI inflows into the manufacturing sector. Germany is a world leader in the automotive industry and industrial machinery. Germany is also known for its highly skilled workforce and well-developed vocational education system. Germany reached the maximum value for FDI inflows in 2010, it amounted to 14.920 million euros. Poland occupies an advantageous geographical location for logistics between Western Europe, Russia and the Baltic States. Also, infrastructure in Poland is constantly developing, work is underway on railways, ports and roads are being modernized. Thus, many foreign investors are ready to invest in Poland's manufacturing sector. The country reached the maximum value of FDI in 2022 – 10.013 million euros. The Swedish government is actively promoting "green" production, the country is focused on creating advanced technologies in the manufacturing sector, the best engineers and technical staff work here. All this makes Sweden's manufacturing sector attractive for foreign investment.

The next sector that attracts the largest volume of all FDI in Europe is Information and communication technology. ICT is still one of the fastest growing destinations for FDI in Europe.



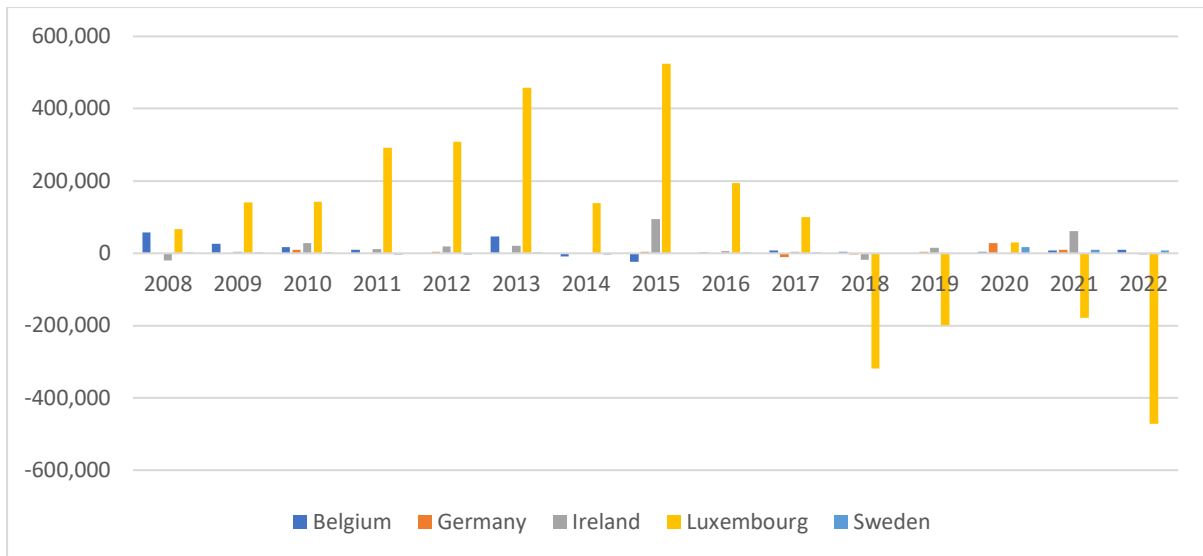
Graph №10. Information and Communication by EU countries, 2008-2022

Source: <https://ec.europa.eu/eurostat/en/>

Based on the graph №10, the leading countries in this sector are Ireland, the Netherlands and Germany. Ireland is a leading technology hub due to its low taxes and highly skilled workforce. Dublin is home to the headquarters of companies such as Google, Facebook and Amazon, making the country a hub for ICT FDI (OECD, 2023). The country reached the maximum value of FDI in 2017, it amounted to 80.461 million euros. The Netherlands, in turn, also occupies a leading position in terms of the indicator. The country has a very developed digital infrastructure, and the Internet speed in the Netherlands is considered one of the best. There are also many technology support programs that help startups attract large venture funds in the field of artificial intelligence and cybersecurity. The country reached the maximum value of FDI in 2022, it amounted to 23.256 million euros. Germany is considered the largest EU market, and this makes it the main country for international IT companies. The country has been actively developing the 5G system, cloud technologies and quantum computing for several years. The country reached the maximum value of FDI in 2013, it amounted to 15.099 million euros.

France and the United Kingdom are also considered the leading EU countries in terms of FDI inflows into the information and communication technology (ICT) sector. The digital economy is actively developing in France, and the country's government is launching new initiatives such as France 2030, thereby wanting to promote the development of AI and cloud technologies. The country reached the maximum value of FDI in 2021, it amounted to 7.829 million euros. In turn, the UK is considered a leader in the field of banking technologies, cryptocurrencies and blockchain. In 2015, the country reached 10.476 million euros in terms of FDI inflows.

Next, the financial sector is the leading investment destination. Based on Graph № 11 data. Luxembourg and Sweden are the leading countries in this sector.

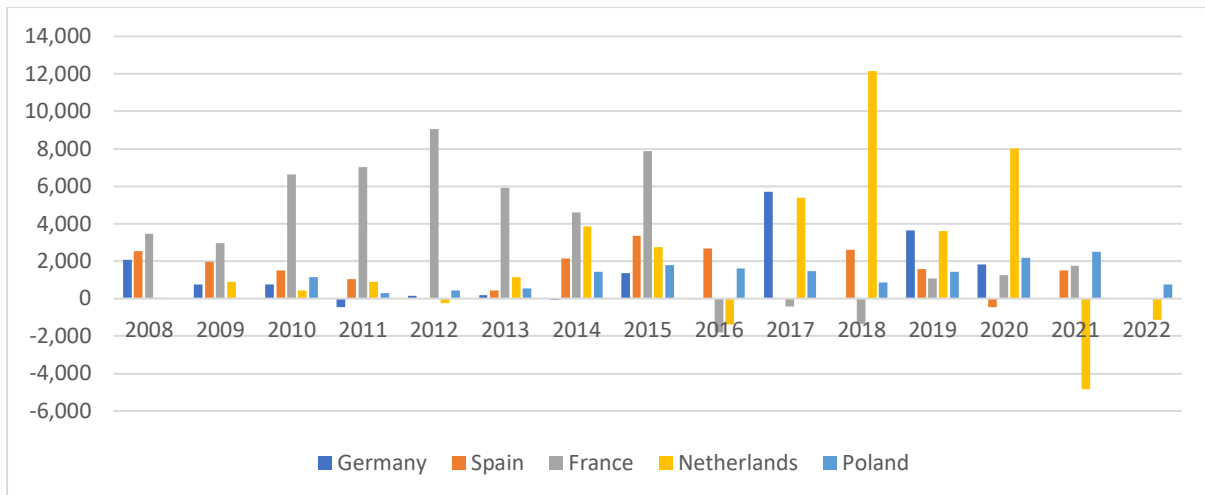


Graph №11. Financial and Insurance Activities by EU countries, 2008-2022  
 Source: <https://ec.europa.eu/eurostat/en/>

Luxembourg attracts FDI due to its preferential tax regime and stable financial system. Asset management and hedge funds are still key areas. Luxembourg's maximum investment in this sector reached 524.948 million euros in 2015. In Sweden, such large financial startups as Klarna, Trustly, iZettle, and Tink are developing, since Sweden is the most developed country in the EU in terms of the digital economy. The country has a high level of digitalization of banking and payment systems, and almost no one uses cash anymore. Sweden received the maximum amount of investments in this sector, reaching 16.502 million euros in 2020.

Belgium, Germany and Ireland also occupy leading positions, although they lag far behind Luxembourg. Belgium has a well-developed insurance and investment fund market, such as BNP Paribas Fortis and KBC Group. The maximum volume of investments in this sector in Belgium reached 26.029 million euros in 2009. Germany is home to Europe's leading banks: Deutsche Bank, Commerzbank, DZ Bank, as well as powerful insurance companies Allianz and Munich Re. The maximum volume of investments in this sector in Germany reached 28.309 million euros in 2020. Ireland is famous for its well-developed fintech sector, such systems as PayPal, Stripe, Revolut, as well as large financial data centers. The maximum volume of investments in this sector in Ireland reached 94.117 million euros in 2015.

The next leading area for investment is the real estate sector. Based on the graph №12, the leading countries in this sector are France, the Netherlands and Germany.

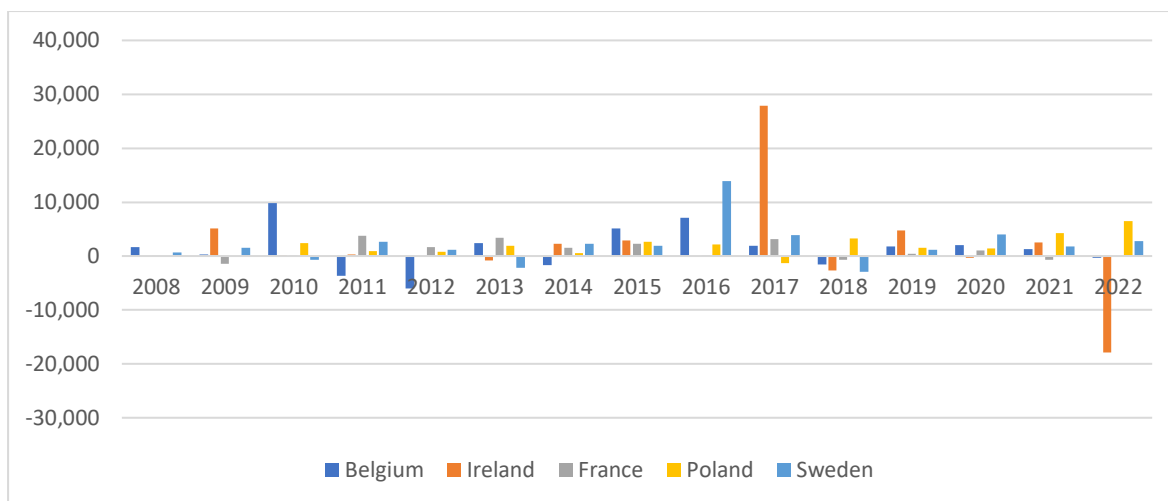


Graph №12. Real Estate Activities by EU countries, 2008-2022  
 Source: <https://ec.europa.eu/eurostat/en/>

The Netherlands is a strong leader in this indicator, all because Amsterdam is the leading financial center in Europe, where the headquarters of international companies are located. The largest port in Europe, Rotterdam, is also located in the Netherlands, so the demand for warehouses, logistics centers, as well as office and retail areas is constantly growing in the city. The Netherlands reached the maximum value of FDI in 2018 – 12.155 million euros. France is not too far behind the Netherlands and does not attract a large volume of investment in real estate. Paris is one of the world's financial and business centers in Europe, so the market is constantly in high demand for office, residential and retail space. France reached the maximum value of FDI in 2012 – 9.054 million euros.

Berlin and Munich are key destinations for commercial real estate investments, as logistics and storage facilities are becoming increasingly popular due to the growth of e-commerce and online shopping. Germany received the maximum value of FDI in 2017 – 5,710 million euros. Spain has a developed real estate market for tourists, and investors are actively investing in hotels, short-term rental apartments on Airbnb and resort properties, all because millions of tourists travel to Barcelona, the Balearic Islands and the Canaries every year). Spain reached the maximum value of FDI in 2018 – 3.369 million euros. Poland is also gaining momentum, with the rapid development of Warsaw, Krakow and Gdansk attracting more and more FDI in the construction of business centers, hotels and shopping malls. The Netherlands reached the maximum value of FDI in 2022 - 2.486 million euros.

The last leading area for investment is the retail sector. This sector includes the segments of e-commerce and automotive trade. Based on the graph №13, the leading countries in this sector are Ireland, Sweden and Belgium.



Graph №13. Wholesale and Retail Trade by EU countries, 2008-2022  
 Source: <https://ec.europa.eu/eurostat/en/>

According to Graph № 13, several conclusions can be drawn. Ireland is one of the fastest growing EU markets, with a per capita GDP exceeding 100,000 euros in 2023, resulting in a high purchasing power of the population. Also in Ireland, many American and British brands are opening their first stores there. The maximum value of Irish FDI reached 27.848 million euros in 2027. Sweden also holds a leading position in attracting FDI into the retail sector. The country has one of the most advanced e-commerce markets (more than 50% of the country's population regularly makes purchases online). Sweden is also known for its sustainable business models and advanced technologies in retail, for example, well-known brands H&M or IKEA. Sweden reached the maximum value of FDI in 2016 - 13.897 million euros. Belgium, in turn, has one of the most solvent consumer markets in Europe, especially in Brussels, Antwerp and Ghent. Belgium offers convenient logistics for international sellers such as Amazon, Zara or H&M. Belgium reached the maximum value of FDI in 2016 - 7.148 million euros.

France also holds a leading position in this indicator. There is a huge demand in the country for premium brands and specialty stores such as LVMH, Chanel, Hermès. France has a fairly well-developed network of shopping malls, such as La Défense and Galeries Lafayette, but foreign investors prefer to invest in new formats, such as outlets, pop-up stores or experience retail. Belgium reached the maximum value of FDI in 2013 - 3.361 million euros. On the contrary, in Poland, middle segment goods are popular, and demand for international chain stores such as H&M, Zara, IKEA, Lidl is growing in the country, as the standard of living in the country is gradually increasing, and with it the needs of the population. Poland reached the maximum value of FDI in 2022 - 6.520 million euros.

The investment attractiveness of a particular economic sector in the EU depends on a number of factors, ranging from political stability to the degree of innovative development. A comparative analysis reveals the main reasons why foreign investors invest in certain sectors of the EU economy. These factors can be divided into several categories, such as the political environment and the stability of institutions, economic integration, innovative development, the skill level of the workforce and the availability of government support.

One of the main factors influencing the inflow of foreign direct investment is the political and institutional stability of the EU countries. Investors evaluate the predictability of the regulatory framework, the degree of protection of property rights, and the quality of public administration. The EU, as a political and economic union, offers investors a high level of stability due to its well-developed institutional structures and a unified legal system.

The stability of the legislative framework is especially important for sectors with a long investment cycle, such as real estate and manufacturing. For example, Germany and the Netherlands, which have high rates of institutional transparency (according to the consumer price index), regularly attract large investments in industry and financial services. At the same time, countries with less stable political environments, such as Romania and Bulgaria, receive limited FDI flows, as evidenced by their low positions in international rankings (Transparency International, 2022).

The single market of the European Union ensures the free movement of goods, services, capital and labor, which is the reason why foreign investors choose to invest in EU countries. Within this market, companies have access to more than half a million potential consumers, which significantly reduces barriers to entry and creates new business expansion opportunities.

For example, the automotive industry, where countries such as Germany, Poland and Spain take full advantage of the single market, companies here can reduce their logistics costs and quickly respond to emerging market demand. There are no customs barriers in the single market, and it is much easier to integrate into global supply chains. Therefore, the logistics and infrastructure sectors also attract more FDI. (EY, 2023)

Many EU countries offer attractive government support programs to investors, including subsidies, tax breaks, and grants. Government support is especially important for innovative and environmentally oriented projects that require significant initial investments.

For example, within the framework of the European Green Deal program, EU countries actively subsidize projects in the field of renewable energy and energy efficiency. Germany and France are leaders in providing such incentives, which attracts significant investments in the production of batteries, solar panels and wind turbines. Ireland and the Netherlands also

use tax incentives to attract ICT companies and startups, making them leaders in the fintech sector (UNCTAD, 2022).

The European Union has traditionally been associated with a high level of innovation activity. Countries such as Sweden, Finland and the Netherlands consistently occupy leading positions in the Global Innovation Index (GII). The high level of research and development (R&D) funding, the presence of world-class universities and a well-developed venture ecosystem create favorable conditions for the influx of foreign direct investment in ICT and knowledge-intensive industries.

In particular, Sweden is attracting significant investments in artificial intelligence, biotechnology, and digital transformation. Projects such as the development of 5G technologies and smart cities are the basis for attracting large corporations interested in creating a long-term base for innovative growth (WIPO, 2022).

A well-educated and skilled workforce is an important element of the EU's attractiveness. Universities and research institutes, such as the University of Cambridge and the Graduate Technical School of Zurich, train highly sought-after specialists in the field of high technology and science. In addition, access to the EU's current and multicultural workforce allows investors to effectively use human capital to develop projects.

This is especially noticeable in countries such as Germany and Ireland, where investments in education and training contribute to the formation of a competitive workforce. These countries are actively attracting FDI in highly skilled industries such as fintech, biotechnology, and green technologies.

Geographical location is one of the factors influencing the volume of FDI inflows to EU countries. For example, Germany and Poland are located in the central part of Europe, so it is not surprising that they have become the main centers of logistics and distribution of goods. And, for example, the Netherlands has a very well-developed infrastructure and convenient ports, where there are no delays in cargo, and logistics costs are not so expensive. Thus, countries outside the EU find this factor extremely attractive for investing in the country.

The sustainable development policy promoted by the EU also increases the attractiveness of a number of sectors, especially the energy sector. Countries such as Denmark, Finland and the Netherlands are actively developing projects in the field of renewable energy sources, which attracts investors interested in long-term projects that meet ESG (Environmental, Social, Governance) standards.

These projects focus on creating environmentally sustainable systems such as wind farms in the North Sea, solar parks or carbon capture technologies. The state strongly supports

this area, and tax incentives are also provided in the country. Thus, foreign investors increasingly find this an opportunity for long-term investments. (EY, 2023).

In order to improve the investment environment in the EU countries, it is necessary to focus on new reforms aimed at reducing barriers between countries, increasing economic transparency and promoting innovation.

A study of the main sectors that attract foreign direct investment (FDI) in Europe demonstrates that the main areas of investment are manufacturing, information and communication technology (ICT), financial services, the real estate market and retail. The achievements of countries such as Germany, Ireland, and Sweden can be attributed to their competitive advantages, which include well-developed infrastructure, innovative ecosystems, and supportive legislative frameworks. At the same time, in order for Eastern Europe to increase investment inflows, it needs to improve its institutional conditions and raise the level of innovation activity.

Data on net inflows of foreign direct investment to the EU countries make it possible, for example through a European Union programme of research and development activities, to discern key trends in the investment attractiveness of the region. The analyses cover the period from 2008 to 2022 and reflect the impact of global economic crises COVID-19 pandemic as well regional factors such as political instability and structural reforms.

During the global financial crisis (2008-2012), net FDI inflows to most EU countries decreased significantly. The main reasons for this were the decline in investor confidence, economic instability and falling global demand. In the UK, there was a significant decrease in investment inflows, and in 2009 it was negative. Spain and Italy also suffered from heavy capital outflows due to the debt crisis in the Eurozone.

The recovery period (2013-2019) is characterized by a revival of the EU economy and an increase in investment inflows to leading countries. Luxembourg and the Netherlands occupy leading positions due to stable financial institutions and favorable tax regimes. In 2013, Luxembourg registered a record inflow of investments in the amount of 643,426 million euros. Germany and France are showing stable performance due to their large economies and developed industrial base.

The COVID-19 pandemic (2020-2021) has had a strong negative impact on investment flows. In Germany and France, FDI flows temporarily declined, especially in pandemic-sensitive sectors such as tourism and retail; investment flows recovered in 2022, especially in countries where high-tech and financial sectors play an important role, such as Germany, Ireland and the Netherlands.

Now let's talk about the key countries where most of the foreign direct investment comes from.

Luxembourg has been a traditional hub for international investors due to its stable financial system favorable tax policy and high regulatory transparency. Significant inflows of foreign direct investment were recorded in 2013 and 2015 due to the increased activity of multinational corporations.

The Netherlands ranks second with stable investment flows demonstrating stable investments. The country's attractiveness to foreign investors is due to its convenient geographical location, modern infrastructure and investments in strategic industries such as information technology and transport.

Germany remains one of the most attractive EU countries for foreign direct investment due to its large and diversified economy and developed industrial base especially in automotive and engineering industries. Investment inflows peaked at a record high between 2019 and 2021. France consistently attracts significant amounts of foreign direct investment despite fluctuation. A developed consumer goods market and a high level of innovation in sectors such as aerospace and energy are major factors.

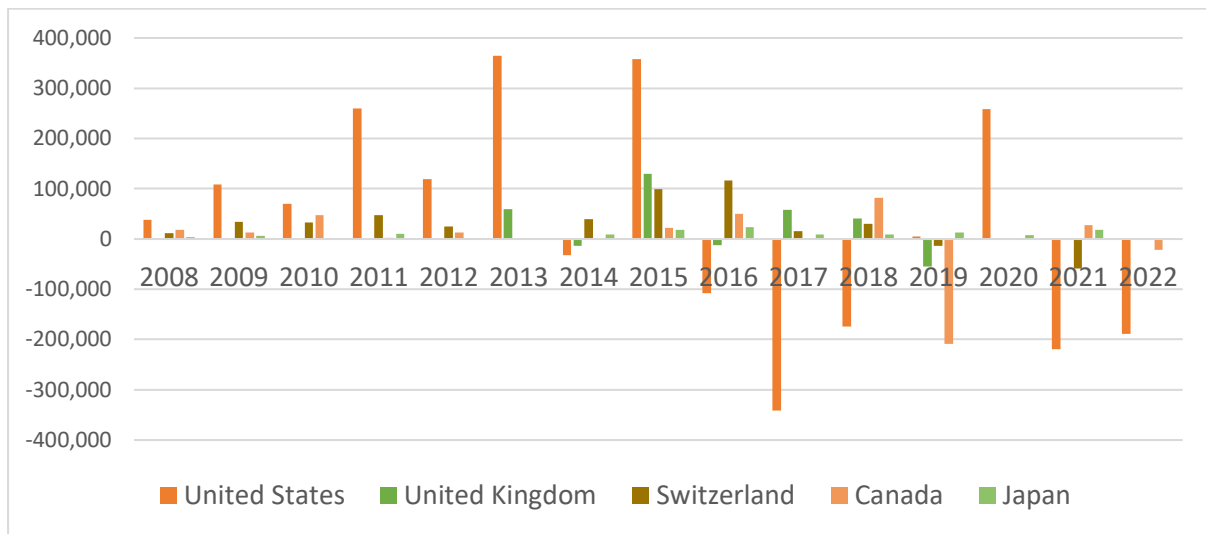
Ireland has seen significant growth in foreign direct investment due to low corporate taxes, its attractiveness to technology giants such as Google and Apple, and its highly skilled workforce.

However, it is also worth excluding lagging countries in this comparative analysis.

Greece's economic crisis and high public debt have limited Greece' investment attractiveness. FDI inflows remained low throughout the duration. Investment flows to Italy were limited by political inadequacy high debt levels and complex administrative procedures. In 2016 the rate of FDI inflows was particularly low and is now up 27% from earlier estimates. Spain has also been hit by the debt crisis and investment inflows have declined. However a gradual recovery began in 2015. As a result of the current depression conditions and the high prevalence of depression also declined. In recent years the small size of Slovenia's economy and limited opportunities for big-scale investments have led to low levels of FDI inflow. Portugal's high debt levels and structural problems have prevented significant inflow of investment, especially during periods of economic instability.

The data on net FDI inflows to EU countries for 2008-2022 highlight the importance of economic stability, a supportive investment policy and a well-developed infrastructure to attract investment. Leaders such as Germany, Luxembourg and the Netherlands are showing steady growth due to the diversification of their economies and strategic sectors. At the same

time, crisis-hit countries such as Greece and Italy face restrictions in attracting investment. The analysis confirms that FDI inflows are closely related to global and regional economic changes, as well as to internal reforms and conditions. Let's turn to graph № 8.



Graph №14. Net FDI inward in EU by recipient

Source: <https://ec.europa.eu/eurostat/en/>

Based on data from Graph №8 for 2008-2022 the net outflow of foreign direct investment from countries investing in the European Union is an important indicator of economic co-operation in international market. They demonstrate the degree of integration of the EU into the global economy and the confidence of large economies in its markets. Below is an analysis of key countries investing in the EU based on data from 2008-2022.

The United States has consistently held a leading position among EU investment countries demonstrating the largest investment volumes. During the analyzed period there were periods of both growth and decline in the volume foreign direct investment. The largest volume of investments was recorded in 2013. The net inflow amounted to 364.555 million Euro and the net inflow is expected to be This is due to the favorable economic situation in the EU and the growing activity of American corporations. The United States invests in the EU for several reasons, such as a developed sales market and a high level of integration of the European economy as well as innovative opportunities in financial technologies and pharmaceutical industries. However, the consequences of the COVID-19 pandemic led to a significant decrease in investment volumes to -57.232 million euros due to global economic instability.

Switzerland is one of the largest investors in the EU due to its financial institutions and international companies. The largest volume of investments was recorded in 2016 (117.279 million euros), due to activity in the financial and pharmaceutical sectors. The high share of

investments is due to its geographical proximity to the EU, as well as Switzerland's developed banking system, which supports cross-border investments. However, in 2022, the volume of investments decreased, which may be related to global economic challenges.

Before Brexit in 2016, the UK consistently invested heavily in the EU economy, due to its historical ties and integration into the common market. However, after the referendum on leaving the EU, there has been a decrease in investment volumes, which is associated with uncertainty in economic relations between the parties. In 2015, one of the highest investment volumes was recorded in the UK — 130.395 million euros.

Canada demonstrates relatively small but stable investment volumes. In 2015, the volume of foreign direct investment amounted to 20.354 million euros. The main investments are directed to resource-intensive and technological industries. The EU and Canada have concluded lucrative trade agreements (such as CETA) that encourage investment.

Japan remains one of the key Asian investors in the EU, focusing on the high-tech and manufacturing sectors.

In 2016, the volume of investments reached 23.204 million euros. Japan is interested in investing in the EU, primarily in order to have access to sales markets and innovative technologies.

In the period 2010-2015 there was a significant increase in outbound investment flows from the United States, Great Britain and Japan. This is due to the recovery of economic activity in the EU after the 2008-2009 global financial crisis. During this period Switzerland's activity was also driven by investments in the financial sector and manufacturing. The COVID-19 pandemic in 2020 led to a significant reduction of foreign direct investment flows especially from the United Kingdom and its neighbors. Global economic uncertainty has been a major factor in this downturn. In 2021-2022, the investor countries began to gradually increase their investment volumes. The largest growth was observed from the United States and Switzerland, which is associated with the recovery of markets and increased demand for European assets.

Investor countries such as the United States, Switzerland, the United Kingdom, Canada and Japan play a key role in supporting the EU economy through direct investment. Their activity reflects confidence in the stability of European markets, access to innovation and economic integration. Despite temporary downturns caused by global crises, such countries continue to invest in the EU, emphasizing its strategic importance in the global economy.

### 3.3 Assessment of the competitive landscape in the European Union: analysis of indices and their correlation with FDI flows

Foreign direct investment (FDI) is an important driver of economic growth and development in the European Union. In the context of globalization, FDI contributes to the integration of countries into international economic processes, provides capital inflows, creates jobs and supports successful technological development. (Michael J. Osei a, Jaebeom Kim, 2020). However, the attractiveness of EU countries to investors also depends on other factors such as the quality of the institutional environment, competitiveness, innovation environment and economic freedom. Global indexes are widely used to assess these factors: the Economic Freedom Index (EFI), the Global Competitiveness Index (GCI), the Ease of Doing Business Index (EoDB), the Corruption Perception Index (CPI) and the Global Innovation Index (GII).

The purpose of this chapter is to analyze the impact of these indicators on the distribution of FDI flows in EU countries and identify key relationships between institutional characteristics and investment attractiveness. Such an analysis is especially important in light of recent changes in the global economy, including the challenges posed by the COVID-19 pandemic and growing geopolitical instability.

Let's start by analyzing the economic freedom index for the period from 2008 to 2022 for all EU countries. The Index of Economic Freedom (EFI), published by the Heritage Foundation, measures the level of economic openness, protection of property rights, freedom of trade and regulatory effectiveness. High positions in this index indicate a favorable business environment that makes the country attractive to foreign investors.

**Table №15. Economic Freedom Index, 2008-2022.**

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Austria	18	16	18	17	18	21	23	23	29	28	25	26	28	28	24
Belgium	35	33	31	33	34	37	30	34	42	43	41	38	41	46	37
Bulgaria	50	40	41	43	42	41	45	47	34	34	35	38	37	43	35
Croatia						63	63	56	55	51	56	59	65	53	45
Cyprus	24	25	24	30	37	58	51	28	30	30	28	27	39	34	21
Czechia	29	27	25	23	20	27	23	24	22	20	23	22	22	17	32
Denmark	9	11	14	12	11	9	10	11	10	8	7	6	5	7	10
Estonia	15	12	10	14	15	14	11	9	11	11	11	10	8	12	7
Finland	11	10	10	7	9	15	15	18	22	23	17	18	18	17	9

France	23	23	22	29	29	31	29	32	37	37	45	43	45	47	52
Germany	16	14	15	13	13	11	13	12	12	18	18	20	20	23	29
Greece	54	53	53	58	63	69	66	91	91	94	79	73	80	72	44
Hungary	45	37	36	36	38	44	42	51	47	47	51	52	56	49	48
Ireland	12	16	13	10	8	7	7	6	8	10	9	7	10	6	3
Italy	40	42	37	41	42	42	42	40	45	44	48	46	50	53	57
Latvia	18	21	25	25	19	17	14	13	17	20	26	25	22	25	18
Lithuania	33	36	34	34	32	23	15	18	15	16	16	10	15	12	11
Luxembourg	13	18	20	21	22	16	11	17	17	11	14	14	16	15	14
Malta	20	15	17	18	22	19	20	22	21	18	19	19	21	23	50
Netherlands	16	21	19	20	20	22	20	21	24	26	20	20	19	21	16
Poland	64	61	65	65	52	54	49	49	54	55	64	60	64	59	39
Portugal	38	44	45	37	36	29	30	30	33	36	34	30	34	36	56
Romania	36	33	37	39	34	28	27	25	28	29	32	33	29	27	47
Slovak Republic	26	26	29	25	29	36	33	42	39	38	41	38	44	41	60
Slovenia	47	48	56	52	55	60	55	52	50	49	50	50	62	55	37
Spain	27	29	29	22	33	34	32	30	31	32	29	27	34	37	41
Sweden	24	19	16	16	17	20	19	16	26	27	30	30	26	17	11
United Kingdom	8	8	9	8	7	8	9	7	7	7	10	8	16		

Based on the data from Table №15, we can say that in 2022, Ireland, Estonia and Finland became the leaders among the EU countries in EFI. Ireland, which ranks 3rd in the world ranking, attracts significant amounts of foreign direct investment due to its stable legal system, low level of corruption and favorable tax conditions. Significant investments in the IT sector and finance are a direct consequence of its economic freedom. Estonia and Finland have efficient institutions, which makes the economy predictable and attractive to investors. Digital technologies, such as e-Governance, are also being widely introduced in Estonia, thus increasing transparency and reducing the level of bureaucracy in the country.

On the other hand, the countries ranked lowest in this ranking, such as Greece and Romania, face limited inflows of FDI into the economy. Greece ranked 44th in 2022, because the country is still experiencing difficulties due to the high level of bureaucracy, weak protection of property rights and insufficient regulatory transparency. Thus, we can confidently say that the indicator of economic freedom is one of the factors of a favorable investment environment.

Next, let's look at the Corruption Perception Index for the period 2008-2022. This index shows the prevalence of corruption in the public sector. The institutional environment plays a critical role in shaping the conditions for FDI inflows. High-quality governance, transparency and predictability of regulation contribute to strengthening investor confidence. The Corruption Perception Index (CPI), published by Transparency International, is a key indicator reflecting the level of trust in institutions.

**Table №16. The Corruption Perception Index (CPI), 2008-2022**

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Austria	12	16	15	16	13	9	23	16	17	16	14	12	15	13	22
Belgium	18	21	22	19	10	15	15	15	15	16	17	17	15	18	18
Bulgaria	72	71	78	86	29	77	69	69	75	71	77	74	69	78	72
Croatia						57	61	50	55	57	60	63	63	63	57
Cyprus	31	27	28	30	15	31	31	32	47	42	38	41	42	52	51
Czech Republic	45	52	56	57	24	57	53	38	47	42	38	44	49	49	41
Finland	5	6	4	2	1	3	2	3	3	3	3	3	3	1	2
Denmark	1	2	1	2	1	1	1	1	1	2	1	1	1	1	1
Estonia	27	27	26	29	17	28	14	23	22	21	18	18	17	13	14
France	23	24	25	25	12	22	27	23	23	23	21	23	23	22	21
Germany	14	14	15	14	9	12	12	11	10	12	11	9	9	10	9
Greece	57	71	85	80	30	80	69	58	69	59	67	60	59	58	51
Hungary	47	46	53	54	22	47	48	50	57	66	64	70	69	73	77
Ireland	16	14	14	19	13	21	17	18	19	19	18	18	20	13	10
Italy	55	63	69	69	28	69	69	61	60	54	53	51	52	42	41
Latvia	52	56	62	61	24	49	44	38	44	40	41	44	42	36	39
Lithuania	58	52	49	50	23	43	40	36	38	38	38	35	35	34	33
Luxembourg	11	12	11	11	8	11	9	7	10	8	9	9	9	9	10
Malta	36	45	39	39	21	45	44	34	47	46	51	50	52	49	54
Netherlands	7	6	7	7	6	8	8	9	8	8	8	8	8	8	8
Poland	58	49	45	41	20	38	36	29	29	36	36	41	45	42	45
Portugal	32	35	32	32	18	33	31	28	29	29	30	30	33	32	33
Romania	70	71	73	75	27	69	69	58	57	59	61	70	69	66	63
Slovak Republic	52	56	62	66	26	61	54	50	54	54	57	59	60	56	49
Slovenia	26	27	27	35	19	43	40	34	31	34	36	35	35	41	41
Spain	28	32	30	31	16	40	38	37	41	42	41	30	32	34	35
Sweden	1	3	4	4	3	3	4	4	4	6	3	4	3	4	5

United Kingdom	16	17	20	16	11	14	14	11	10	8	11	12	11		
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According to table №16, countries such as Denmark, Finland and Sweden consistently occupy the top positions of the rating, which makes them extremely attractive for long-term investments (Transparency International, 2022). For example, Denmark, which ranked first in the Corruption Perception Index in 2022, has seen significant growth in FDI in sectors such as renewable energy and high technology. Transparency of the system is also important, which means that if a country supports an open policy, then bureaucratic risks and corruption are significantly reduced.

In 2022, Romania ranked 63rd in the ranking, and Bulgaria 72nd, the latter positions indicate that the countries do not have a transparent economy, and as a result are not attractive countries for investment. The initial thing these countries need to regulate is the stability of institutions, which limits their ability to attract foreign investors to a greater extent.

The level of corruption in the country also has a significant impact on FDI inflows. In a study by Bénassy-Quéré et al. (2007) states that countries with high levels of corruption are facing a decline in investment, as foreign investors do not want to get involved in unstable markets. This is confirmed by the example of Greece, which ranked 58th in CPI in 2020. Despite its strategic geographical location, investors face difficulties with corrupt practices and lack of transparency in the economy.

Now let's look at the Global Competitiveness Index for the period from 2008-2019. The Global Competitiveness Index (GCI), developed by the World Economic Forum, evaluates a country's ability to create a productive and sustainable economic environment. This index is an important tool for assessing the investment attractiveness of countries, as it includes indicators such as infrastructure, innovation, labor market, and technological readiness.

**Table №17. Global Competitiveness Index, 2008-2019**

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Austria	14	17	18	19	16	19	21	23,0	19	18	22	21
Belgium	19	18	19	15	17	15	18	19,0	17	20	21	22
Bulgaria	76	76	71	74	62	74	54	54,0	50	49	51	49
Croatia						76	77	77,0	74	74	68	63
Cyprus	40	34	40	47	58	47	58	65	83	64	44	44
Czech Republic	33	31	36	38	39	38	37	31,0	31	31	29	32
Finland	6	6	7	4	3	3	4	8	10	10	11	11

Denmark	3	5	9	8	12	8	13	12,0	12	12	10	10
Estonia	32	35	33	33	34	33	29	30,0	30	29	32	31
France	16	16	15	18	21	18	23	22,0	21	22	17	15
Germany	7	7	5	6	6	6	5	4,0	5	5	3	7
Greece	67	71	83	90	96	90	81	81,0	86	87	57	59
Hungary	62	58	52	48	60	48	60	63,0	69	60	48	47
Ireland	22	25	29	29	27	29	25	24,0	23	24	23	24
Italy	49	48	48	43	42	43	49	43,0	44	43	31	30
Latvia	45	68	70	64	55	64	42	44,0	49	54	42	41
Lithuania	44	53	47	44	45	44	41	36,0	35	41	40	39
Luxembourg	25	21	20	23	22	23	19	20,0	20	19	19	18
Malta	52	52	50	51	47	51	47	48,0	40	37	36	38
Netherlands	8	10	8	7	5	7	8	5,0	4	4	6	4
Poland	53	46	39	41	41	41	43	41,0	36	39	37	37
Portugal	43	43	46	45	49	45	36	38,0	46	42	34	34
Romania	68	64	67	77	78	77	59	53,0	62	68	52	51
Slovak Republic	41	46	47	60	69	71	78	75	67	59	41	42
Slovenia	39	42	37	45	57	56	62	70	59	48	35	35
Spain	29	33	42	36	36	36	35	33,0	32	34	26	23
Sweden	4	4	4	2	3	4	6	10	9	7	9	8
United Kingdom	9	12	13	12	10	8	10	9	10	8	8	9

Based on the data shown in table № 17, several conclusions can be drawn. Germany is consistently ranked in the top 10 by GCI and remains one of the leaders in FDI inflows. In 2019, Germany ranked 7th in the index, due to the fact that Germany is known for its industrial manufacturing sector, automotive, mechanical engineering and information technology. The highly developed infrastructure sector and highly skilled workforce make Germany competitive compared to other EU countries. It is also worth considering the Netherlands, which ranked 4th in the GCI in 2019. The Netherlands is actively attracting large amounts of investment in high-tech and digital sectors of the economy, precisely because it has an open economy and an innovative ecosystem.

At the same time, countries with low positions in the GCI, such as Bulgaria and Croatia, face limited investor interest. This is due to an underdeveloped infrastructure and a low level

of innovation activity. For example, Bulgaria was ranked 62nd in the GCI in 2012, reflecting structural problems such as the complexity of doing business and low productivity.

Consider the Ease of Doing Business Index in the country, the data are presented for the period 2008-2019. Ease of Doing Business Index (EoDB) The World Bank compares the ease of business regulation, as well as the quality of property rights protection between countries. This index is an important indicator of the openness of the economy and the ease of attracting foreign direct investment.

**Table №18. Ease of doing business index, 2008-2019**

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Austria	25	27	32	32	32	29	30	21	21	21	26	26
Belgium	19	19	23	25	28	28	36	43	43	42	52	46
Bulgaria	45	45	44	51	59	66	58	38	38	50	50	59
Croatia						84	89	65	40	51	51	58
Cyprus	36	36	40	37	36	36	39	64	47	45	53	57
Czech Republic	56	75	74	63	64	65	75	44	36	27	30	35
Denmark	5	6	6	6	5	5	5	4	3	3	3	3
Estonia	22	22	24	18	24	21	22	17	16	12	12	16
Finland	14	14	16	13	11	11	12	9	10	13	17	17
France	31	31	31	26	29	34	38	31	27	29	31	32
Germany	20	25	25	22	19	20	21	14	15	20	24	24
Greece	96	96	109	109	100	78	72	61	60	61	67	72
Hungary	45	41	47	46	51	54	54	54	42	41	48	53
Ireland	8	7	8	9	10	15	15	13	18	18	17	23
Italy	65	65	78	80	87	73	65	56	45	50	46	51
Latvia	28	29	27	24	21	25	24	23	22	14	19	19
Lithuania	26	28	26	23	27	27	17	24	20	21	16	14
Luxembourg	24	24	19	42	50	56	59	61	61	59	63	66
Malta	51	52	51	54	51	102	103	94	76	84	84	84
Netherlands	21	26	30	31	31	31	28	27	28	28	36	36
Poland	74	76	72	70	62	55	45	32	25	24	27	33
Portugal	48	48	48	31	30	30	31	25	23	25	34	34
Romania	47	47	55	56	72	72	73	48	37	36	45	52
Slovak Republic	36	36	42	41	48	46	49	37	29	33	39	42
Slovenia	53	54	53	42	37	35	33	51	29	30	37	40

Spain	38	49	62	49	44	44	52	33	33	32	28	30
Sweden	14	17	18	14	14	13	14	11	8	9	10	12
United Kingdom	6	6	5	4	7	7	10	8	6	7	7	9

Analyzing the data in Table № 18, it is worth noting that Denmark ranks highly in EoDB. For the last 4 years, the country has been consistently in 3rd place. Investors are usually attracted by simplified business registration procedures and a transparent tax regime. It will also take no more than 24 hours to register a company in Denmark, and no minimum amount of capital is required to open one. Great Britain also holds high positions in the ranking. In 2019, she was ranked 9th. London is considered one of the largest financial centers in the world, so you can quickly and easily access investments and venture capital financing in the country. The country also has fairly transparent and predictable laws for starting and running businesses, which ensures a constant influx of FDI into the country's economy.

On the other hand, Greece and Malta, which occupied low positions in the ranking, face significant barriers to attracting FDI. In 2019, Greece was ranked 72nd, reflecting difficulties with access to justice, high regulatory compliance costs, and lengthy registration procedures. This creates an unfavorable environment for investors, despite the availability of significant natural and human resources. Malta, in turn, ranks 84th in 2019, and 103rd in 2014. Starting a business in Malta can take several weeks, and government transparency issues make it difficult to do business. Another problem is the narrow domestic market and the inability to expand business within the country.

The next index in line is the Global Innovation Index. The Global Innovation Index (GII), developed by the World Intellectual Property Organization, evaluates the innovation potential of countries. This indicator is becoming increasingly important for investors, especially in high-tech sectors.

**Table №19. The Global Innovation Index (GII), 2008-2022**

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Austria	10	15	17	19	19	23	20	18	20	20	21	21	19	18	17
Belgium	18	18	22	20	22	21	23	25	23	27	25	23	22	22	26
Bulgaria	50	44	43	53	43	41	44	39	38	36	37	40	37	35	35
Croatia						37	42	40	47	41	41	44	41	42	42
Cyprus	22	24	27	28	28	27	30	34	31	30	29	28	29	28	27
Czech Republic	33	33	36	27	27	28	26	24	27	24	27	26	24	24	30
Finland	6	7	12	5	4	6	4	6	5	8	7	6	7	7	9

Denmark	3	6	6	7	9	9	8	10	8	6	8	7	6	9	10
Estonia	24	25	23	23	19	25	24	23	24	25	24	24	25	21	18
France	19	19	24	22	24	20	22	21	18	15	16	16	12	11	12
Germany	11	11	16	12	15	15	13	12	10	9	9	9	9	10	8
Greece	35	38	65	64	62	55	50	45	40	44	42	41	43	47	44
Hungary	34	30	31	31	31	31	35	35	33	39	33	33	35	34	34
Ireland	13	13	9	13	9	10	11	8	7	10	10	12	15	19	23
Italy	29	31	38	35	36	29	31	31	29	29	31	30	28	29	28
Latvia	45	39	41	30	30	33	34	33	34	33	34	34	36	38	41
Lithuania	41	38	43	38	38	40	39	38	36	40	40	38	40	39	39
Luxembourg	12	12	11	11	12	12	9	9	12	12	15	18	18	23	19
Malta	37	27	20	21	21	24	25	26	26	26	26	27	27	27	21
Netherlands	9	9	10	12	6	4	5	4	9	3	2	4	5	6	5
Poland	44	56	44	43	44	49	45	46	39	38	39	39	38	40	38
Portugal	32	26	25	32	35	34	32	30	30	31	32	32	31	31	32
Romania	49	46	42	50	52	48	55	54	48	42	49	50	46	48	49
Slovak Republic	40	35	37	37	36	36	37	36	37	34	36	37	39	37	46
Slovenia	30	21	26	26	26	30	28	28	32	32	30	31	32	32	33
Spain	28	29	33	29	29	26	27	27	28	28	28	29	30	30	29
Sweden	4	5	2	2	2	2	3	3	2	2	3	2	2	2	3
United Kingdom	14	14	14	10	5	3	2	2	3	5	4	5	4		

Analyzing the data from table № 19 for 2008-2022, several conclusions can be drawn. Countries with leading positions in the GII, such as Sweden, Finland, and the Netherlands, attract significant amounts of FDI in IT, biotechnology, and renewable energy. Sweden is in 2nd place in this ranking for 2022 due to its developments in the field of artificial intelligence and green technologies. The country attracts a large volume of FDI due to its high level of innovation activity. The Netherlands took 5th place in 2022. The Netherlands spends a lot of money on research and development. The country has the largest data centers, the European Amazon and Microsoft Centers. The Netherlands also provides financial support to startups and new technology companies by providing grants and tax incentives.

At the same time, countries with low positions in the index, such as Romania and Greece, remain less attractive to investors. In 2022, Romania ranked 49th, and Greece 44th. This is due to limited opportunities for scientific research and insufficient support for innovation at the state level.

After conducting a comparative analysis of the data from 2008 to 2022 (and for some indices only up to 2019), it can be argued that the correlation between FDI flows and countries' positions in key global indexes is strictly positive. Countries such as the Netherlands, Sweden and Denmark occupy high places in the ratings, which leads to a stable influx of investments into these countries. But in the countries of Eastern and Southern Europe, for example, in Romania, Bulgaria and Greece, the low volume of FDI and even the negative flow can be explained by low positions in the ratings, the interest of foreign investors in these countries is quite low.

Ireland is an exemplary country in terms of its successful investment strategy. The country holds high positions in

Sweden is an example of a successful investment strategy. Occupying high positions in the Global Competitiveness Index and the Global Innovation Index, the country attracts a large volume of investments in high-tech sectors, the country spends 3% of GDP on research and development. The success of the investment policy can easily be explained by the fact that the country has a favorable institutional environment, low taxation and a developed digital economy.

Summing up all the above, this analysis of global indices confirms that the institutional environment, the level of competitiveness, innovation activity and ease of doing business play a crucial role in attracting FDI. The countries that occupy high positions in the main global rankings attract much more FDI than the countries at the bottom of the ranking. This is because economic transparency, structural reforms, and innovative development are essential for creating a favorable investment environment.

As for the countries of Southern and Eastern Europe, the primary objectives are to increase the transparency of economic regulation, reduce administrative barriers and develop innovative infrastructure. Strengthening their reliable positions in global indices will allow these countries to increase FDI inflows, which in the long term will contribute to sustainable economic growth and integration into global value chains.

### **3.4. The impact of foreign direct investment on economic growth. Correlation and regression analyses.**

#### **Introduction**

Foreign direct investment (FDI) plays a key role in the modern global economy, acting not only as a source of additional capital, but also as a means of transferring technology,

knowledge and management practices. In recent decades, the countries of the European Union (EU) have become one of the largest recipients and senders of FDI, which makes the study of their impact on economic development particularly relevant. (Nadeem, 2025)

The relevance of the study lies in the fact that FDI is traditionally considered as one of the engines of economic growth, but their impact is not always unambiguous. In some countries, they contribute to GDP growth by increasing productivity and introducing innovations, while in others they can lead to economic dependence and destabilization of markets. Therefore, it is necessary to assess how FDI affects the economic development of EU countries, and what factors can enhance or weaken this effect.

Now let's look at the key studies on the impact of FDI on economic growth.

Osei Research & Kim (2020) emphasizes that the development of the financial sector plays a key role in maximizing the positive impact of foreign direct investment (FDI) on economic growth. Analyzing data from 62 middle- and high-income countries, the authors found that FDI generally contributes to economic development. However, with an over-developed financial system (when the ratio of credit to the private sector to GDP exceeds 95.6%), the effect of FDI becomes negligible. This is important for our study, as EU countries have highly developed financial markets, and the impact of FDI on their economic growth may vary depending on the level of financial saturation.

The work of Alfaro et al. (2004) confirms that a country's ability to benefit from FDI largely depends on the development of its financial markets. In countries with an efficient banking system and a developed stock market, foreign investment is more successfully directed to productive sectors of the economy. This conclusion is especially relevant in the context of the European Union, where the financial systems of the member states differ in their level of development. For example, Germany and the Netherlands have strong financial institutions, which allows them to use FDI inflows more effectively, while in some countries of Southern and Eastern Europe this process may be less effective.

A study by Borensztein et al. is being completed by Hans Zümsz The positive impact of FDI on economic growth in developing countries depends on skills level of the workforce (1998) showed. This is important for the analysis of the EU, as the distribution of qualified personnel across the Union countries is heterogeneous. In countries with highly developed education systems, such as Finland and Sweden FDI can have a more pronounced positive impact than in countries with less developed human capital.

The work of Carkovic & Levine (2005) calls into question the universality of the positive effect of FDI on economic growth. The authors argue that after taking into account

other factors affecting economic development the statistically significant impact of FDI on growth disappears. This conclusion highlights the need to take into account the institutional differences between EU countries as well as the fact that FDI alone cannot guarantee accelerated economic development.

A study by Herzer et al. (2008) states that the effect of FDI on economic growth is not the same for all countries. It confirms that the effect of FDI on economic growth depends on factors such as the level of education, the openness of economy and the state. These conclusions have practical significance for the analysis of the world economy since these indicators are significantly different among the countries in the EU. In countries such as Luxembourg and Ireland for example the large openness of economy contribute to the fact that FDI has a pronounced positive effect on growth. At the same time this effect may be limited in countries with less favorable institutional environments.

The reviewed studies show that FDI is not automatically a favorable factor for economic growth, since in fact its effect depends on the level of development of financial markets, the quality of human capital and the institutional environment. This is especially important in our study, as the EU countries are a heterogeneous group where the impact of FDI can vary significantly from country to country. This highlights the need for a detailed analysis, not just of their volumes of internal and external FDI.; The conditions in which they operate are also important to us in order to identify the most effective mechanisms of their impact on the economy of each region.

### **Theoretical framework and hypothesis development**

Now let's make up the main hypotheses, which will need to be verified by correlation analysis. We will divide the hypotheses into 2 groups: for FDI Inward and for FDI Outward, in order to trace how inflows and outflows affect the macroeconomic indicators of EU countries.

Hypotheses for FDI Inward. These hypotheses will help to understand how FDI inflows affect economic development.

H1: The impact of FDI Inward on economic growth. The higher the FDI inflow (FDI Inward), the higher the economic growth rate (GDP Growth Rate).  $R > 0$ . A positive relationship means more investment, which in turn leads to a rapidly growing economy.

H2: The effect of FDI Inward on the level of education. Countries with higher levels of education attract more FDI.  $R > 0$ . A positive relationship means that educated countries are more attractive to investors.

H3: The effect of FDI Inward on unemployment. The inflow of FDI is associated with a lower unemployment rate.  $R < 0$ . A negative relationship means more investment, which in turn leads to a reduction in unemployment.

H4: The effect of FDI Inward on capital accumulation. The higher the level of Gross Capital Formation, the more a country attracts FDI.  $R > 0$ . Positive feedback – investors prefer countries with active domestic investments.

H5: The effect of FDI Inward on trade openness. The higher the level of trade Openness, the more a country attracts FDI.  $R > 0$ . A positive relationship means that investors choose countries with integration into global trade.

H6: The effect of FDI Inward on inflation. High inflation reduces FDI inflows.  $R < 0$ . A negative relationship means that investors avoid countries with macroeconomic instability.

H7: The impact of FDI Inward on government spending. The higher government spending (% of GDP), the more a country attracts FDI (provided it is used effectively).  $R > 0$ . A positive or neutral relationship means that if government spending is on infrastructure and innovation, FDI is growing.

Hypotheses for FDI Outward (outbound FDI):

These hypotheses will help to understand how the outflow of FDI is related to economic performance.

H1: The impact of Outward FDI on economic growth. The higher the Outward FDI outflow, the higher the economic growth rate.  $R > 0$ . In countries with strong economies, companies are actively investing abroad.

H2: The impact of Outward FDI on the level of education. Countries with a high level of education invest more abroad.  $R > 0$ . A high level of education means that companies are entering the international market.

H3: The impact of Outward FDI on unemployment. A high outflow of FDI may be associated with an increase in unemployment (due to the withdrawal of production abroad).  $R > 0$ . A positive relationship means that with the active transfer of business to other countries, the unemployment rate within the country may increase.

H4: The impact of Outward FDI on gross capital formation. The higher the level of domestic investment (Gross Capital Formation), the more a country invests abroad.  $R > 0$ . Large economies with a high level of investment are able to invest more abroad.

H5: The impact of FDI Outward on trade openness. The higher the country's trade openness, the more it invests abroad.  $R > 0$ . Open economies are investing more actively in foreign markets.

H6: The effect of Outward FDI on inflation. High inflation can stimulate the withdrawal of capital abroad.  $R > 0$ . If there is high inflation in the country, companies can look for stable investments abroad.

H7: The impact of FDI Outward on government spending. High government spending can encourage companies to invest abroad.  $R > 0$ . If the tax burden increases or the domestic market weakens, businesses can look for new opportunities abroad. Table №3. Hypotheses for FDI inflows

**Table №1. Hypotheses for FDI inflows**

№	Hypothesis	The expected relationship
H1	The inflow of FDI has a positive effect on the GDP growth rate.	+
H2	Countries with higher education levels attract more FDI.	+
H3	The inflow of FDI is associated with a lower unemployment rate.	-
H4	The higher the level of gross capital accumulation, the more a country attracts FDI.	+
H5	The higher the level of trade openness, the more a country attracts FDI.	+
H6	High inflation reduces FDI inflows.	-
H7	The higher government spending, the more a country attracts FDI (if spending is effective).	+

**Table №2. Hypotheses for FDI outflows**

№	Hypothesis	The expected relationship
H1	The higher the outflow of FDI, the higher the economic growth rate.	+
H2	Countries with a high level of education invest more abroad.	+
H3	A high outflow of FDI may be associated with an increase in unemployment.	+/-
H4	The higher the level of domestic investment, the more a country invests abroad.	+
H5	The higher the country's trade openness, the more it invests abroad.	+
H6	High inflation can stimulate the withdrawal of capital abroad.	+
H7	High government spending can encourage companies to invest abroad.	+

## DATA

This study carries out a correlation analysis, the purpose of which is to determine whether there is a statistically significant relationship between the inflow and outflow of FDI and key macroeconomic indicators of the development of the EU countries. The analysis is based on data for 27 EU countries (Table No. 3) contained in the table for the period from 2008 to 2022. We chose these countries because the purpose of our work is to determine the role and impact of FDI in the EU countries. The 15-year review period should be sufficient to assess possible trends and impacts despite global crises and other global events.

**Table №3. Countries for observation**

Countries	
Austria	Ireland
Belgium	Italy
Bulgaria	Latvia
Croatia	Lithuania
Cyprus	Luxembourg
Czechia	Malta
Denmark	Netherlands
Estonia	Poland
Finland	Portugal
France	Romania
Germany	Slovakia
Greece	Slovenia
Hungary	Spain
Sweden	

For the analysis I selected the following dependent and independent variables: The dependent variable is the inflow and outflow of foreign direct investment % of GDP. Foreign direct investment in a country is the number of foreign direct investments coming into a country as % of GDP. Over time FDI is considered to contribute significantly to economic growth through technology transfer job creation and capital increase. Outward FDI reflects the volume of direct investment by country abroad expressed as a percentage of GDP. Countries with strong economies and developed companies are actively investing in another countries - which may be a sign of economic maturity. A high outflow of FDI can mean both business expansion abroad and capital flight in case unfavorable conditions within the country.

The independent variables will be the following indicators:

- The growth rate of gross domestic product (GDP) (%). It is the main indicator of economic development of countries. It represents the most comprehensive measure of the expected growth rates in the coming years.

- The unemployment rate (%). It can reflect economic stability and influence the attractiveness of the country for investors. High unemployment limits consumer demand and reduces economic activity besides the wages. The flow of foreign direct investment can create new jobs, which reduce the unemployment rate. Although countries with high unemployment may experience a shortage of skilled labor which makes them less attractive to investors.

- Government expenses. Effective government expenses can attract foreign direct investment and therefore stimulate economic growth. However if government exceeds the expenses later it can cause high taxes and debts of the country. All of this can reduce the ability of a country to attract FDI. We analyze whether the parameter like government expenses increases the impact of foreign direct investment on economic growth or, conversely weakens it.

- Annual inflation rate (%). Stable and moderate inflation contributes to economic growth, as it stimulates consumption and investment. High inflation creates macroeconomic instability, reduces the purchasing power of the population and makes the country less attractive to investors. We analyze whether high inflation hinders FDI inflows and constrains economic growth.

- Gross capital formation (% of the GDP). Gross capital accumulation reflects domestic investment level in the economy. Countries with the highest investment in infrastructure and technology are more attractive to foreign investors. We are checking whether a high level of capital investment contributes to an increase in foreign direct investment and economic growth.

- Trade volume (% of GDP) and openness of trade. Open economies that actively trade with other countries tend to attract foreign investors more likely than closed economies to do this. Foreign direct investment in the country is more attractive as international trade gives access to markets technology and finance. We are also checking whether there is a positive relationship between trade openness and direct investment.

- The average number of years of schooling. In addition countries with high educated populations is more attractive to foreign direct investment as companies are looking for qualified workers. The high level of education promotes innovation and increases labor productivity; a high degree enhances innovation and production efficiency We analyze whether high degree of education enhances the impact on economic growth from foreign direct investment.

**Table №4. Variables**

Category	Variable	Source	Calculation	Description
<b>Independent variable (Macroeconomic indicators)</b>	GDP growth rate %.	Eurostat	$\frac{GDP_t - GDP_{t-1}}{GDP_{t-1}} \times 100$ (annual GDP growth in %)	This indicator measures the percentage change in a country's gross domestic product (GDP) over a given period (usually a year or quarter). It reflects how fast the economy is developing
	Unemployment rate %	Eurostat	$\frac{\text{Number of Unemployed}}{\text{Economically Active Population}} \times 100$	It shows the proportion of unemployed among the economically active population.
	Inflation rate of change %.	World bank	$\frac{CPI_t - CPI_{t-1}}{CPI_{t-1}} \times 100$	Reflects how quickly prices for goods and services change. It is usually measured through the consumer price index (CPI)
	Government expenditure % GDP.	World bank	$\frac{\text{Government Expenditure}}{GDP} \times 100$	This indicator shows how much of the economy is government spending (on education, healthcare, defense, etc.).
	Gross Capital Formation (% of GDP)	World bank	$\frac{\text{Investment in Fixed Capital}}{GDP} \times 100$	It measures investments in fixed assets: buildings, roads, and equipment. A high indicator means that the economy is actively expanding.
	Trade (% of GDP)/trade openness	World bank	$\frac{\text{Exports} + \text{Imports}}{GDP} \times 100$	It shows the total share of exports and imports in GDP
	Mean Years of Schooling	Eurostat	The average duration of education of the population	This indicator reflects the average number of years of formal education among the adult population.
<b>Dependent variable (Y)</b>	Net FDI inflow % of GDP	World bank	$\frac{FDI_{inward} - FDI_{outward}}{GDP} \times 100$	It measures how much foreign investment has

				entered a country, relative to the size of its economy.
	Net FDI outflows % of GDP	World bank	$\frac{FDI_{outward} - FDI_{inward}}{GDP} \times 100$	It shows how much money the country's companies invest abroad

## Methodology

The impact of FDI on considerable macroeconomic parameters is not always so clear, so we should use quantitative analysis methods such as correlation and regression analysis to identify the patterns and set possible causality.

Correlation analysis lets us to understand how FDI and selected macroeconomic variables are related to each other. However correlation does not mean causality but is only about the strength of the relationship between variables. So by conducting a deeper analysis we can consider also the structure of the economy, its level of highly skilled workforce and government policy.

On the other hand regression analysis allows us not only to assess the existence of a relationship but also the quantitative impact of FDI on the economic parameters. In addition regression models can consider at the same time some factors for example study how FDI affects GDP analyzing relation of inflation, unemployment and government expenses.

The next stage of the study will include the use of dynamic panel analysis models using the GMM method, which allowed for possible endogenous dependencies between variables, as well as temporal and individual effects. This method was chosen for the following reasons:

1. In real data, there is often an inverse relationship between variables.

For example, FDI inflows may not only depend on economic growth, but also affect its pace. To solve this problem, GMM used instrumental variables (lagged values), which eliminates possible distortions.

2. Temporal and individual effects: Using panel data allows you to take into account both the individual characteristics of countries and time trends. This is important because different countries may have different economic structures and levels of development, and external shocks may affect all countries at certain times.

Linear regression can be used to assess the impact of FDI Inward and FDI Outward on GDP growth rates, taking into account macroeconomic factors.

$$\text{FDI\_inward} = \beta_0 + \beta_1 \cdot \text{GDP\_growth} + \beta_2 \cdot \text{Unemployment} + \beta_3 \cdot \text{Inflation} + \beta_4 \cdot \text{Government\_expenditure} + \beta_5 \cdot \text{Gross\_Capital\_Formation} + \beta_6 \cdot \text{Trade\_openness} + \beta_7 \cdot \text{Mean\_Years\_Schooling} + \varepsilon$$

$$\text{FDI\_outward} = \beta_0 + \beta_1 \cdot \text{GDP\_growth} + \beta_2 \cdot \text{Unemployment} + \beta_3 \cdot \text{Inflation} + \beta_4 \cdot \text{Government\_expenditure} + \beta_5 \cdot \text{Gross\_Capital\_Formation} + \beta_6 \cdot \text{Trade\_openness} + \beta_7 \cdot \text{Mean\_Years\_Schooling} + \varepsilon,$$

where

- GDP\_growth is the GDP growth rate.
- FDI\_inward — inflow of FDI (% of GDP).
- FDI\_outward — outflow of FDI (% of GDP).
- Unemployment — unemployment rate (%).
- Inflation — change in inflation (%).
- Government\_expenditure — government spending (% of GDP).
- Gross\_Capital\_Formation — gross capital formation (% of GDP).
- Trade\_openness — trade openness (% of GDP).
- Mean\_Years\_Schooling — the average number of years of study.
- $\varepsilon$  is a model error.

## Results and discussions

The correlation matrix shows the following results. To begin with, let's consider the impact of FDI inflows on the given variables:

H1: FDI inflows have a positive effect on GDP growth. Partially confirmed. A correlation of 0.138 shows a weak positive relationship. This confirms that FDI can contribute to growth but its impact is limited by other macroeconomic factors.

H2: Countries with higher levels of education attract more FDI. Not confirmed. The correlation indicates -0.021 that there is no significant link between education and FDI inflows. This may mean that investors are not only focused on the level of education, but also other factors such as economic stability and tax policy.

H3: FDI inflows are associated with lower unemployment. Not confirmed. The correlation (-0.060) is too weak to state the effect of FDI on employment. This may be due to the fact that FDI is not always aimed at creating new jobs (for example, investments in technology can replace human labor).

H4: The higher the level of gross capital accumulation, the more a country attracts FDI. Not confirmed. The correlation (-0.081) shows a weak negative relationship, which may mean

that high domestic investment does not always attract more FDI, possibly due to competition between foreign and local investors.

H5: The higher the level of trade openness, the more a country attracts FDI. Confirmed. The correlation (0.237) indicates a moderate positive relationship. This confirms that countries that are actively involved in global trade are more attractive to foreign investors.

H6: High inflation reduces FDI inflows. Not confirmed. The correlation (-0.085) is too weak for a meaningful conclusion. This may mean that investors are assessing not only inflation, but also other macroeconomic indicators.

H7: The higher government spending, the more a country attracts FDI (if spending is effective). Not confirmed. The correlation (-0.142) indicates a weak negative relationship, which may mean that high government spending (for example, due to the tax burden) may even reduce investment attractiveness.

Now let's turn to the effect of Outward FDI on the set variables.

H1: The higher the outflow of FDI, the higher the rate for economic growth. Partially confirmed. The correlation (0.071) indicates a weak positive relationship. It may mean that countries with high FDI outflows do have advanced economies more developed, but the effect is negligible.

H2: Countries with a high degree of education invest more abroad. Not confirmed. The correlation (0.013) shows that degree of education does not significantly affect the volume of investments abroad. This may be due to the fact that investment decisions are made by international companies more often than individual employees.

H3: A high outflow of FDI may be associated with an increase in unemployment. Not confirmed. There is practically no correlation (-0.024), which suggests that investments abroad do not necessarily lead to an increase in unemployment within the country.

H4: The higher the level of domestic investment, the more a country invests abroad. Not confirmed.

The correlation (-0.096) indicates a weak negative relationship, which may mean that countries that actively invest internally do not always send significant amounts of capital abroad.

H5: The higher a country's trade openness, the more it invests abroad. Partially confirmed. The correlation (0.181) indicates a positive relationship, but it is not very strong. This confirms that open economies are more likely to invest abroad, but the effect may depend on other factors (for example, the strategy of national companies).

H6: High inflation may encourage capital withdrawal abroad. Not confirmed. The correlation which equals to -0.083 shows a weak negative relationship which refutes the hypothesis that high inflation makes companies to invest abroad.

H7: High government expenses encourage companies to invest abroad. Not confirmed. The correlation which equals to -0.076 indicates a weak negative relationship which proves that government expenses actually is not a significant factor for companies when they decide to invest abroad.

The selected variables cover key economic aspects that affect investment and GDP growth. Correlation analysis will help identify the most significant factors, and in the future, regression analysis can be used to establish cause-and-effect relationships.

Table №5. Discriptive statistic

Variable	N	Mean	SD	Min	Max
<b>GDP growth rate %.</b>	27	1,7	4,20	-16,0	24,6
<b>Unemployment rate %</b>	27	5,4	2,77	1,3	17,3
<b>Inflation rate of change %.</b>	27	2,4	3,05	-1,7	19,4
<b>Government expenditure % GDP.</b>	27	45,8	7,02	20,6	64,9
<b>Gross Capital Formation (% of GDP)</b>	27	22,3	4,34	11,9	53,7
<b>Trade (% of GDP)/trade openness</b>	27	126,5	50,99	45,1	393,1
<b>Mean Years of Schooling</b>	27	12,0	1,29	7,7	14,4
<b>FDI, net inflows (% of GDP)</b>	27	14,5	53,61	-360,4	452,2
<b>FDI net outflows (% of GDP)</b>	27	11,9	54,70	-360,4	453,2

Correlation	GDP growth rate %	Unemployment rate %	Inflation rate of change %.	Government expenditure % GDP.	Gross Capital Formation (% of GDP)	Trade (% of GDP)/trade openness	Mean Years of Schooling
<b>FDI inward</b>	0,138	-0,060	-0,085	-0,142	-0,081	0,239	-0,021
<b>FDI outward</b>	0,072	-0,024	-0,083	-0,076	-0,096	0,182	0,013

FDI inflows are positive associated with economic growth but the effect is weak ( $r = 0.138$ ). This suggests that FDI is not the only growth driver and depends on other macro economic conditions but could be a potential driver for business growth.

Trade openness is a key factor in attracting FDI (  $r = 0.237$  ) and international investment (  $r = 0.181$  ). According to this finding countries with high integration of world trade into the environment are more likely to attract and send investments.

Education, inflation, unemployment, and government spending did not show significant links to FDI. This may mean that investors evaluate a set of macroeconomic factors rather than individual indicators. FDI outflow has no significant impact on unemployment or inflation, which indicates the complex mechanisms of international capital movement.

Correlation analysis did not reveal strong correlations, which confirms the need for regression analysis to determine cause-and-effect relationships.

### **Regression Analysis and System Dynamic Panel GMM**

The purpose of this study was to study how the inflow (FDI Inward) and outflow (FDI Outward) of foreign direct investment (FDI) affect growth factors in EU countries. For this purpose, an integrated approach was used, including both dynamic panel analysis using GMM and linear regression analysis, in order to take into account temporal and individual effects, as well as possible endogenous dependencies in the data.

At the first stage, a correlation analysis was carried out to identify the initial relationships between the studied variables, such as economic growth, unemployment, inflation, government spending, gross capital accumulation, trade openness and educational attainment, with inflows and outflows of FDI. However, despite the presence of some significant correlations, methods such as correlation cannot account for temporal and individual effects, as well as possible feedback between variables (for example, between economic growth of the country and FDI). This limitation make us to try to apply more complex models to solve this case.

**Table №6. A system dynamic panel GMM**

<b>Full Sample</b>		
	<b>Lag(FDI_Inward, 1)</b>	<b>Lag(FDI_Outward, 1)</b>
<b>Lag(FDI_Inward, 1)</b>	0,60	0,50
<b>GDP Growth</b>	4,56	3,39
<b>Unemployment</b>	-0,47	-0,72
<b>Inflation</b>	5,79	5,50
<b>Capital Formation</b>	-0,11	-2,07
<b>Trade Openness</b>	-0,55	0,33
<b>Schooling</b>	-2,13	-3,72

<b>F-statistic</b>	6,32	3,33
<b>Observations</b>	351,00	351,00
<b>Countries</b>	27,00	27,00
<b>Hansen's J test</b>	0,00	0,00
<b>Autocorrelation test (AR2)</b>	0,78	0,89
<b>Wald test for coefficients</b>	3,28	4,61

Here we will conduct some diagnostic tests to check if the models and tools which we have chosen are really correct.

First of all, we will use Hansen's J test. It helps us to check the accordance of selected tools. The final results showed significance ( $p\text{-value} < 2.22e-16$ ), which confirms that we chose the tools in a correct way.

Next, autocorrelation test (AR2). It's a test for the autocorrelation of model errors. The final results showed that there is no second-order autocorrelation because  $p\text{-value}$  equals to 0.78111, which confirms that our model is correct as well.

And the last one, Wald test, which evaluates the importance coefficients. The final results showed that the major part of variables have a statistically significant impact on FDI.

Based on the analysis and the obtained data it is possible to write a detailed conclusion about each of these aspects. Firstly, we will discuss the impact of factors on FDI inflows.

The coefficient estimation for the lag variable(FDI Inward, 1) is 0.5995 (standard error = 0.0125), which means significant positive impact in terms of trade balance to foreign investors. This is confirmed by a very low  $p\text{-value}$  (  $2.2e-16$ ), which indicates statistical significance.

The coefficient of GDP growth was 4.56 (standard error = 0.85), which also confirms statistical significance ( $p\text{-value} = 8.68e-08$ ). The results confirm the hypothesis that GDP growth is associated with increased FDI inflows.

The coefficient for the unemployment rate was -0.47 (standard error = 1.85), but this value is not statistically significant ( $p\text{-value} = 0.79886$ ). The hypothesis that the unemployment rate affects the inflow of foreign direct investment is therefore not confirmed.

The coefficient for inflation is 5.79 (standard error = 2.51), which is also statistically significant ( $p\text{-value} = 0.02092$ ). FDI inflows may have increased significantly thanks to inflation increase over the past considered years which strengthens the likelihood of high inflation.

For investments, the coefficient was -0.11 (standard error = 0.92), which is not statistically significant. P-value = 0.9067 confirms the absence of a link between investments and FDI inflow

The coefficient of trade was -0.55 (standard error = 0.47), but this value is not statistically significant and confirms the weak impact of trade on FDI inflow.

The coefficient of the education variable was -2.13 (standard error = 5.23), which is also not statistically significant (p-value = 0.68352).

Here let us examine the statistical significance of the models and present some examples. The F-statistic for the model is 6.32 which indicates the statistical significance of the model. 351 observations were used in the FDI Inflow Model which provides sufficient sampling for analysis. The Hansen J test value is 0.00 (p-value = 2.22e-16), which confirms the absence of endogeneity of instruments. The Wald test value is 3284.415 (p-value 2.22e-16) which confirms the significance of the model coefficient for the model.

Now we will discuss the impact of factors on FDI Outflows.

The estimated coefficient for the lag variable (FDI Outward, 1) is 0.50 with a standard error = 0.01585, which also confirms the positive effect with high statistical significance (p-value < 2.2e-16).

The coefficient for GDP growth was 3.39 (standard error = 0.70), which is statistically significant (p-value = 1.409e-06) and confirms the positive association between GDP growth and FDI outflow.

The unemployment rate was -0.72 with a standard error = 2.55, which is statistically insignificant (p-value = 0.7788907), confirming a weak effect on FDI outflows.

The coefficient for inflation was 5.50 with a standard error = 1.90. This is statistically significant (p-value = 0.0038), confirming that high inflation can stimulate the outflow of FDI.

For the investment variable, the coefficient was -2.07 (standard error = 0.58), which is also statistically significant (p-value = 0.0003) and shows that high volume of investments can limit the outflow of FDI.

The trade coefficient equals to 0.33 with a standard error = 0.30, which is not statistically significant (p-value = 0.26). This fact demonstrates that there is no strong link between trade openness and FDI outflow.

The coefficient for education was -3.72 with a standard error = 5.92. That is still statistically insignificant (p-value = 0.5303884).

In conclusion, I would like to say that the models have shown that trade openness and inflation have a significant impact on FDI inflows and outflows, respectively.

FDI inflows have an important impact on economic growth and low inflation. Both inflation and investment are important for the outflow of FDI, with a pronounced dependence on the level of domestic capital. Government spending and education levels do not have a significant impact on both types of FDI. All tests, including Hansen's J Test and Wald Test, confirm the correct choice of tools and the statistical significance of the models.

To obtain more accurate and reliable results, both temporary and individual effects are taken into account. Instrumental variables were also used to adjust for possible endogenous problems in the data. As a result, dynamic panel analysis using GMM proved to be the most suitable for assessing the impact of macroeconomic factors on FDI inflows and outflows.

### **Conclusions**

Summing up our analysis it is worth noting that a comprehensive study was conducted on the impact of foreign direct investment (FDI Inward and FDI Outward) over the period 2008-2022 on economic development in EU Member States. The analysis was performed using correlation analysis multiple regression and GMM dynamic panel analysis system for each dimension. These systems allowed for the consideration of endogeneity individual and temporal effects.

The results obtained show that the inflow of FDI has quite weak positive impact on economic growth of the country, but other macroeconomic variables limit its affect. One of the key parameter which attracts foreign direct investments is trade openness. The relationship of these 2 variables (FDI inflow and trade openness) is significantly positive. However the impact of education unemployment, inflation and government expenses on FDI inflows turned out to be statistically insignificant. This says that investors evaluate a country based on a combination of macroeconomic factors rather than individual ones.

The data showed that the FDI inflow has weak positive impact on economic growth but its effect is limited by other macroeconomic factors. One key factor attracting foreign investment is trade openness which shows the most significant positive relationship with FDI inflows. However the impact of education unemployment inflation and government spending on FDI inflows turned out to be statistically insignificant leading to a further conclusion that investors concentrate mostly on individual factors than overall macroeconomic ones.

The FDI outflow also shows weak positive relationship with economic growth, that confirms the hypothesis that countries with a high level of development invest abroad much more. At the same time, inflation turned out to be an important factor which stimulates the outflow of FDI. This may explain why investors search for more stable economic conditions outside of their country. On an other hand, Gross capital accumulation shows a negative

relationship with the FDI outflow, which may mean that countries that actively invest in their country's economy are less likely to send FDI abroad.

In my opinion, GMM method confirms the importance of models, as they demonstrated that trade openness and inflation have the greatest impact on FDI volatility. Endogeneity, autocorrelation, and statistical significance tests proved the accuracy of the results. The final conclusion is that FDI plays an important role in economic development, even if its impact depends on the macroeconomic factors of particular country. This highlights the necessity for making economic policies which aim at making investment climate more favorable and sustainable economic growth more flexible.

## CONCLUSION

Foreign direct investment (FDI) continues to play an important role in the economic integration and development of the European Union (EU) countries. Over the past two decades, the dynamics of FDI inflows and outflows have reflected both the economic stability of the region and the structural problems associated with global changes. This study provides a detailed analysis of the number of aspects of FDI for the EU countries. We started with reminding historical background and theoretical basics. This was followed by an empirical analysis of the impact of FDI on economic growth of EU countries conducting correlation and regression analyses.

The study shows that FDI can have a significant positive impact on country's economy by stimulating innovation development, creating work places and increasing GDP growth. Countries such as Germany Ireland and the Netherlands win from stable FDI inflows which further promote innovation and capacity building, and international competitiveness. For example, in Ireland, high-tech and pharmaceutical companies play an important role in strengthening the economy through large-scale foreign investment. In Germany, FDI has a strong impact on economic growth and development due to its industrial base and stable economy.

However, the study also highlights that the benefits of FDI are unevenly distributed across EU countries. Countries in the south and east, such as Greece, Bulgaria, and Romania, continue to face difficulties in making effective use of foreign investment. This happens because of multiple institutional barriers, countries' infrastructure and workforce which isn't high-qualified enough.

Empirical analysis shows that generally FDI has a positive impact on GDP and employment in most EU countries, but the size of this impact varies significantly depending on national circumstances; analysis of the correlation between FDI and macroeconomic indicators shows that countries with highly developed institutions and a good investment climate, such as Sweden and Finland, attract more investment. Global indexes such as Global Competitiveness Index and the Economic Freedom Index demonstrate the importance of a transparent norms of policy regulation to keep investor stay confident about where they invest and what can happen. At the same time, the impact of FDI on economic growth is decreasing in countries which don't have stable complex institutes and economy such as Italy and Spain.

Conducted regression analysis shows that FDI inflow has a weak positive impact on country's economic growth, but its effect is limited by other macroeconomic factors. One key

factor attracting foreign investment is trade openness which shows the most significant positive relationship with FDI inflows. However the impact of education unemployment inflation and government expenses on FDI inflows turned out to be statistically insignificant leading to a further conclusion that investors concentrate mostly on individual factors than overall macroeconomic ones.

Sectoral analysis of EU countries shows that high-tech manufacturing, financial services and renewable energy sources remain the most attractive for foreign investors. Successful countries such as Poland Netherlands and Luxembourg have successfully used FDI to diversify their economy and increase international competitive abilities. At the same time, investments in low-value-added sectors such as real estate can have a limited impact on long-term economic growth.

The study also showed that the EU economies are vulnerable to the global crisis. Like we saw that during the global financial crisis of 2008 and the COVID-19 pandemic, volume of FDI inflows declined sharply, especially in retail sector. This proves that it's necessary to create sustainable economic structures that can stand up external crisis. Countries with diversified economies, such as Germany and Poland, were able to come back to their previous positions in the investment market much faster, while others couldn't do it at all.

Particular attention is paid to the role of FDI in contributing to the achievement of EU strategic objectives such as sustainable development and digital transformation. The growth of foreign investment in green technologies and infrastructure shows that FDI can contribute to achieving the EU's climate change goals. However, this requires coordinated cooperation between Member States to improve the investment climate.

One particular focus dedicates to how FDI helps to EU countries to achieve their strategic goals such as sustainability development and digital transformation. With strong growth in green technologies and infrastructures that FDI can also contribute to the EU's climate change goals. However it requires coordinated cooperation between Member States to improve the investment climate in Europe.

The impact of FDI on employment is important aspect of the analysis. The study confirms that foreign investment creates jobs, strengthen working skills and qualification of the population as well as social and economic stability. However, in countries with high unemployment, the impact of FDI is often limited due to a lack of infrastructure and institutional support. In conclusion, it should be noted that FDI is an important tool for economic development and integration into the EU.

Despite the positive impact of foreign investments on the regional economy, the efficiency of the distribution and use of these investments is uneven. To maximize the benefits of FDI, EU countries need to focus on reforms such as improving the institutional environment, investing in human capital, and developing infrastructure. Coordinating the actions of the member States and implementing common strategies will not only preserve the EU's leadership in the global investment market, but also ensure sustainable and inclusive development.

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## TABLES

**Table №26. Net FDI outward, million euros. Source: Eurostat**

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
European Union - 27 countries)	906552	602743	567183	964038	483717	891313	530598	1299991	718249	474409	-393980	294018	-89437	385977	114511
European Union - 28 countries						913770	426477	1343149	630376	706704	-290987	:	:	:	:
Austria	20106	7203	7546	15738	10336	5075	-1949	-302	-30227	:	:	:	:	:	:
Belgium	150886	-12822	-979	24836	9385	22206	-2774	35966	32861	26289	34618	12499	13323	18816	10327
Bulgaria	522	-68	174	118	270	160	202	124	366	293	211	402	206	324	623
Croatia	:	886	-121	25	-73	-101	1388	41	-631	309	173	188	220	38	16
Cyprus	1855	276	513	1583	-219	22930	44007	30214	-722	25857	67116	105572	-92429	789	-50
Czechia	2958	685	881	-236	1394	3028	-399	2243	1972	6713	7340	3688	2623	6539	5396
Denmark	:	:	:	9057	-8212	5237	2577	6210	15732	7589	2987	-2441	6629	23200	9030
Estonia	760	1114	107	-1037	813	389	32	144	431	796	50	1772	232	-743	943
Finland	6306	4049	7636	3564	5831	-1840	917	-14213	21760	-325	9784	4267	5680	8414	14304
France	105847	77119	48757	:	:	25441	43154	76577	56271	29886	81097	46808	19140	45353	50624
Germany	49670	50132	91757	58247	61958	29764	63775	69557	68140	79151	96654	134067	33649	124826	137868
Greece	:	:	1072	1232	503	-591	2273	1423	-1506	149	404	573	480	938	2887
Hungary	:	:	:	:	:	-1942	3929	-27996	40981	-104	-64498	62834	79791	14061	3246
Ireland	12936	19159	16874	-838	11897	17353	29430	151536	35273	-789	4204	30601	-9222	31700	-28070
Italy	44794	14649	23813	37740	5337	18930	19843	19508	14618	21715	26709	21762	2564	24987	16191
Latvia	165	-45	14	44	151	310	408	64	145	125	175	-93	224	1964	103
Lithuania	227	142	-4	40	305	99	44	340	39	71	596	1560	2546	1134	518
Luxembourg	92316	:	:	:	:	355767	186728	574805	108308	97640	-465618	-136461	30172	-20836	-309462
Malta	311	99	99	2	1987	1993	1765	-4721	-4856	:	:	:	:	:	:
Netherlands	46497	24753	51547	29443	3321	352862	100245	318333	300921	71826	-274726	-42700	-269973	-23811	33981
Poland	:	:	5455	5865	557	-977	2210	3825	10519	1976	759	1696	800	2736	6127
Portugal	:	:	:	:	:	1294	-2627	4964	1413	-261	850	3247	1343	1045	3995
Romania	188	-62	-16	-24	-89	-211	-282	507	4	-86	321	324	47	119	1232
Slovakia	362	651	714	513	7	-236	32	5	86	1173	272	39	305	251	648
Slovenia	1002	189	-156	85	-226	-161	207	241	262	300	238	545	454	1147	654
Spain	49277	8452	27748	25699	:	11741	28556	38839	41840	51771	32560	27085	29466	18234	53083
Sweden	:	18709	15213	21219	22333	22794	6908	11756	4249	24278	15108	14376	20349	25537	63479
United Kingdom	120229	24557	24650	67779	:	33794	:	-59117	-20174	104277	35160	-31562	:	:	:

**Table №27. Net FDI outward, million euros. Source: Eurostat**

Country	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
European Union - 27 countries	567259	503551	476155	902176	499868	931991	418450	1133376	583667	372118	-412157	273295	32606	-38756	-157536
European Union - 28 countries						970547	445185	1225347	831802	507227	-406589	:	:	:	:
Austria	4682	6697	634	7638	3224	-4092,00	20,00	-5829,00	30999,00	:	:	:	:	:	:
Belgium	132405	25642	38642	47773	15109	18923	-9339	21219	53521	-627	30241	19550	6125	-569	-10888
Bulgaria	6728	2437	1151	1330	1142	1247	347	1999	940	1606	968	1639	2761	1436	4023
Croatia	:	2420	286	1073	1057	364	2050	1397	1460	1130	1988	1699	1260	3588	2845
Cyprus	965	2499	578	1715	979	16916	37282	19767	5183	15536	45608	107223	-72916	1644	7928
Czechia	4415	2173	4546	1470	6040	2741	4454	419	8873	8455	9329	9030	8257	7652	8793
Denmark	1249	2837	-8716	9452	-12756	480	137	1294	6495	1875	4409	-11495	-671	6907	7768
Estonia	1182	1324	1208	237	1051	581	515	12	948	1736	1322	2866	3205	229	1051
Finland	-884	466	4866	1774	2704	-110	13991	1987	7846	2395	-1840	12833	-1425	11155	5688
France	43817	17437	25391	:	:	26114	728	44793	22692	27425	29486	19087	9945	27616	72665
Germany	5536	16167	43361	42670	10276	9620	-2052	18281	14497	42214	57101	48754	61148	43343	25650
Greece	:	:	186	761	1251	2122	2023	1143	2498	3085	3365	4484	2813	5351	7928
Hungary	:	:	:	:	:	-1986	6811	-25531	43527	1664	-61655	62865	82365	17527	7878
Ireland	-11232	18511	32319	16937	35184	35661	39530	194213	21071	61485	-4819	146322	95918	-9805	-53035
Italy	-9342	12060	5139	22898	-1595	18281	17504	17697	25719	19163	29769	18147	-18339	-1345	29781
Latvia	862	67	284	1041	871	679	675	666	230	656	826	828	870	2820	1393
Lithuania	1302	-34	586	1008	503	432	-100	951	273	904	827	2699	3083	2197	3593
Luxembourg	72299	:	:	:	:	470790	158165	505174	124742	5365	-383496	-187487	38325	-172658	-370386
Malta	642	287	702	182	10803	9063	8550	4188	3445	:	:	:	:	:	:
Netherlands	3106	27793	-5530	14320	9072	287158	98373	288694	200120	59287	-288270	-49184	-256401	-169284	-111317
Poland	:	:	10473	14829	4716	2340	11953	13584	14982	9500	14642	13708	13854	25928	33817
Portugal	:	:	:	:	:	6765	4011	6935	4744	7051	6428	11488	6989	8852	11119
Romania	9496	3486	2219	1814	2137	2712	2421	3461	4518	4797	5265	5173	3004	8965	10587
Slovakia	3203	-4	1336	2511	2321	-455	-386	96	728	3556	1418	2243	-2104	1539	3285
Slovenia	1330	-474	272	718	-58	-114	791	1510	1126	795	1172	1307	193	1561	2070
Spain	47229	3837	26285	14568	:	22198	16571	7787	27909	38538	50464	17787	13002	29837	49094
Sweden	24773	6979	-170	8911	12553	3106	3040	7566	17308	11099	3225	8136	16938	20661	52375

**Table №28. GDP growth rate %. Source: Eurostat**

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
<b>Austria</b>	1,5	-3,6	1,8	2,9	0,6	-0,3	0,8	1,3	2,1	2,3	2,5	1,8	-6,3	4,8	5,3
<b>Belgium</b>	0,4	-1,9	2,7	1,9	0,2	0,3	1,8	1,5	1,2	1,5	1,9	2,4	-4,8	6,2	4,2
<b>Bulgaria</b>	6,1	-3,3	1,6	2,1	0,7	-0,5	0,9	3,4	3,0	2,7	2,5	3,8	-3,2	7,8	4,0
<b>Croatia</b>	2,0	-6,8	-1,3	-0,1	-2,3	-0,1	-0,6	2,3	3,5	3,3	2,9	3,1	-8,3	12,6	7,3
<b>Cyprus</b>	3,6	-2,0	2,3	0,4	-3,4	-6,6	-1,8	3,4	6,6	5,8	6,3	5,9	-3,2	11,4	7,4
<b>Czechia</b>	2,6	-4,8	2,7	1,8	-0,8	0,0	2,2	5,0	2,6	5,2	2,8	3,6	-5,3	4,0	2,8
<b>Denmark</b>	-0,4	-5,0	1,6	1,3	0,0	1,4	1,3	2,1	3,1	3,1	1,9	1,7	-1,8	7,4	1,5
<b>Estonia</b>	-5,1	-14,6	2,4	7,6	3,7	1,8	3,3	1,8	3,1	5,6	3,7	3,7	-2,9	7,2	0,1
<b>Finland</b>	0,8	-8,1	3,2	2,4	-1,5	-1,0	-0,5	0,5	2,6	3,3	1,2	1,3	-2,5	2,7	0,8
<b>France</b>	0,4	-2,8	2,0	2,4	0,2	0,8	1,0	1,1	0,9	2,1	1,6	2,0	-7,4	6,9	2,6
<b>Germany</b>	0,9	-5,5	4,1	3,8	0,5	0,4	2,2	1,7	2,3	2,7	1,1	1,0	-4,1	3,7	1,4
<b>Greece</b>	0,1	-4,1	-5,7	-9,9	-8,3	-2,3	0,8	-0,2	0,0	1,5	2,1	2,3	-9,2	8,7	5,7
<b>Hungary</b>	1,0	-6,7	1,1	1,9	-1,3	2,0	4,3	3,7	2,4	4,1	5,6	5,1	-4,3	7,1	4,3
<b>Ireland</b>	-4,5	-5,1	1,7	1,6	-0,4	2,2	9,3	24,6	1,2	10,0	7,5	5,0	7,2	16,3	8,6
<b>Italy</b>	-1,0	-5,3	1,5	0,7	-3,1	-1,8	0,0	0,9	1,2	1,6	0,8	0,4	-8,9	8,9	4,7
<b>Latvia</b>	-3,4	-16,0	-3,7	3,0	7,3	2,1	2,1	3,8	2,6	3,4	4,3	0,7	-3,5	6,9	1,8
<b>Lithuania</b>	2,6	-14,8	0,4	6,3	4,4	4,0	3,8	2,8	2,7	4,6	4,9	4,7	0,0	6,4	2,5
<b>Luxembourg</b>	-0,3	-3,2	3,8	1,0	1,6	3,2	2,6	2,3	5,0	1,3	1,2	2,9	-0,9	7,2	1,4
<b>Malta</b>	4,4	-1,4	6,2	1,0	4,1	6,3	7,6	9,6	4,1	13,0	7,2	4,1	-3,3	13,2	4,3
<b>Netherlands</b>	2,1	-3,7	1,3	1,8	-1,0	0,0	1,6	2,1	2,4	2,8	2,3	2,3	-3,9	6,3	5,0
<b>Poland</b>	4,4	2,6	3,2	5,3	1,5	0,7	3,9	4,4	3,0	5,2	6,2	4,6	-2,0	6,9	5,3
<b>Portugal</b>	0,3	-3,1	1,7	-1,7	-4,1	-1,0	0,7	1,6	2,0	3,3	2,9	2,7	-8,2	5,6	7,0
<b>Romania</b>	9,3	-5,5	-3,9	4,5	1,9	0,3	4,1	3,2	2,9	8,2	6,1	3,9	-3,7	5,5	4,0
<b>Slovakia</b>	5,4	-5,5	6,8	2,6	1,6	0,7	2,7	5,2	1,9	2,9	4,1	2,3	-2,6	5,7	0,4
<b>Slovenia</b>	3,4	-7,6	1,1	0,7	-2,9	-0,8	2,8	2,4	3,0	5,2	4,4	3,5	-4,1	8,4	2,7
<b>Spain</b>	0,8	-3,8	0,1	-0,6	-2,9	-1,4	1,5	4,1	2,9	2,9	2,4	2,0	-10,9	6,7	6,2

Sweden	-0,9	-4,3	5,8	3,2	-0,4	1,1	2,3	4,4	2,3	1,8	1,9	2,5	-2,0	5,9	1,5
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**Table №29. Unemployment rate. Source: Eurostat**

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Austria	2,7	3,5	3,2	3,0	3,2	3,6	3,8	3,8	4,1	3,7	3,3	3,1	3,6	4,2	3,3
Belgium	4,2	4,7	5,0	4,2	4,5	5,1	5,1	5,1	4,7	4,2	3,6	3,2	3,3	3,8	3,4
Bulgaria	3,3	4,0	6,0	6,5	7,2	7,7	6,9	5,5	4,5	3,8	3,2	2,7	3,2	3,2	2,6
Croatia	5,0	5,4	6,7	7,8	9,2	9,7	10,0	9,5	7,4	6,4	4,7	3,7	4,2	4,4	4,0
Cyprus	2,5	3,6	4,3	5,3	8,0	10,7	11,0	10,0	8,6	7,4	5,7	4,9	5,2	5,0	4,5
Czechia	2,8	4,2	4,6	4,2	4,4	4,5	3,9	3,3	2,6	1,9	1,5	1,3	1,7	1,9	1,5
Denmark	2,6	4,5	5,4	5,4	5,3	5,0	4,7	4,2	4,1	4,0	3,5	3,5	3,9	3,6	3,2
Estonia	3,7	9,0	11,1	8,3	6,8	5,9	5,0	4,5	4,9	4,2	3,9	3,2	5,0	4,4	4,1
Finland	4,3	5,5	5,6	5,2	5,1	5,4	5,7	6,2	5,8	5,7	4,9	4,5	5,2	5,2	4,6
France	4,6	5,7	5,8	5,8	6,1	6,5	6,4	6,5	6,3	5,8	5,6	5,2	4,9	4,9	4,6
Germany	4,9	5,1	4,6	3,9	3,6	3,6	3,4	3,2	2,9	2,6	2,4	2,2	2,7	2,5	2,2
Greece	4,6	5,7	7,6	10,6	14,5	16,3	15,7	14,8	14,1	12,8	11,5	10,3	9,6	8,6	7,5
Hungary	4,2	5,4	6,1	6,1	6,2	5,8	4,5	4,1	3,1	2,6	2,3	2,2	2,7	2,6	2,4
Ireland	4,8	8,6	9,7	10,2	10,2	9,1	7,9	6,6	5,6	4,5	3,9	3,3	3,7	4,3	3,1
Italy	3,7	4,2	4,6	4,6	5,9	6,7	7,1	6,7	6,6	6,4	6,0	5,7	5,1	5,3	4,6
Latvia	5,2	11,5	12,6	10,4	9,9	7,8	7,2	6,7	6,6	6,0	5,2	4,4	5,7	5,1	4,7
Lithuania	3,6	8,6	11,1	9,8	8,6	7,6	7,1	6,1	5,3	4,8	4,3	4,4	6,0	5,0	4,2
Luxembourg	3,0	3,1	2,7	3,0	3,2	3,7	3,7	4,3	4,0	3,5	3,6	3,7	4,4	3,5	3,1
Malta	3,2	3,7	3,7	3,5	3,5	3,6	3,4	3,2	2,9	2,5	2,5	2,7	3,2	2,5	2,4
Netherlands	2,6	3,1	3,5	3,5	4,1	5,1	5,2	4,8	4,2	3,4	2,7	2,4	2,7	3,1	2,6
Poland	4,2	4,8	5,8	5,8	6,1	6,3	5,5	4,6	3,8	3,0	2,4	2,0	1,9	2,1	1,8
Portugal	5,2	6,4	7,4	8,6	10,5	10,8	9,2	8,3	7,3	5,9	4,7	4,4	4,5	4,4	4,1
Romania	3,4	4,0	4,2	4,2	4,1	4,2	4,1	4,1	3,5	3,0	2,5	2,4	3,1	3,2	3,2
Slovakia	6,0	7,5	9,0	8,5	8,8	9,0	8,4	7,3	6,2	5,2	4,2	3,7	4,3	4,5	4,1
Slovenia	2,8	3,8	4,7	5,2	5,6	6,4	6,2	5,7	5,0	4,3	3,4	2,9	3,2	3,1	2,6
Spain	7,4	11,7	13,1	14,2	16,5	17,3	16,0	14,5	12,8	11,2	9,9	9,1	9,9	9,6	8,5
Sweden	4,4	5,9	6,1	5,5	5,7	5,8	5,7	5,4	5,0	4,9	4,6	5,0	6,1	6,6	5,6
United Kingdom	3,9	5,2	5,3	5,5	5,4	5,2	4,2	3,7	3,3	3,0	2,8	2,6			

**Table №30. Correlation between Unemployment rate and FDI flows.**

	<b>FDI inward flows</b>	<b>FDI outward flows</b>
<b>Austria</b>	-0,732	-0,8793755
<b>Belgium</b>	0,119	-0,0740664
<b>Bulgaria</b>	-0,482	-0,4829481
<b>Croatia</b>	-0,509	0,0753652
<b>Cyprus</b>	0,145	0,20007895
<b>Czechia</b>	-0,790	-0,7683504
<b>Denmark</b>	-0,268	-0,3240776
<b>Estonia</b>	-0,188	-0,2418237
<b>Finland</b>	0,051	-0,3834979
<b>France</b>	-0,382	-0,1485157
<b>Germany</b>	-0,459	-0,5681349
<b>Greece</b>	-0,453	-0,3685731
<b>Hungary</b>	-0,211	-0,1961133
<b>Ireland</b>	-0,026	0,11432794
<b>Italy</b>	0,390	-0,362201
<b>Latvia</b>	-0,454	-0,2795971
<b>Lithuania</b>	-0,493	-0,3509494
<b>Luxembourg</b>	0,483	0,44875096
<b>Malta</b>	0,011	0,71066897
<b>Netherlands</b>	0,788	0,73218288
<b>Poland</b>	-0,659	-0,0187192
<b>Portugal</b>	-0,622	-0,2570469
<b>Romania</b>	-0,533	-0,3956874
<b>Slovakia</b>	-0,205	-0,1925304
<b>Slovenia</b>	-0,433	-0,7455015
<b>Spain</b>	-0,540	-0,4214873

Sweden	-0,025	0,19075653
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**Table №31. Correlation between GDP Growth Rate and FDI flows.**

	FDI inward flows	FDI outward flows
Austria	-0,276	-0,108
Belgium	-0,156	-0,023
Bulgaria	0,248	0,652
Croatia	0,526	-0,316
Cyprus	0,303	0,293
Czechia	0,142	0,400
Denmark	0,215	0,702
Estonia	-0,262	-0,463
Finland	0,307	0,177
France	0,350	0,107
Germany	0,032	0,434
Greece	0,736	0,180
Hungary	-0,547	-0,548
Ireland	0,460	0,580
Italy	0,407	0,415
Latvia	0,510	0,373
Lithuania	0,227	0,055
Luxembourg	0,041	0,123
Malta	0,456	-0,196
Netherlands	-0,035	0,172
Poland	0,510	0,264
Portugal	0,399	0,192
Romania	0,522	0,217
Slovakia	0,409	-0,049
Slovenia	0,795	0,523

Spain	0,476	0,381
Sweden	-0,124	-0,098

### GMM model for FDI inflows

```
> summary(model_fdi_inward)
Twoways effects One-step model Difference GMM

Call:
pgmm(formula = FDI_Inward ~ lag(FDI_Inward, 1) + GDP_Growth +
      Unemployment + Inflation + Capital_Formation + Trade_Openness +
      Schooling | lag(FDI_Inward, 2), data = df, effect = "twoways",
      model = "onestep", collapse = TRUE, transformation = "d")

Balanced Panel: n = 27, T = 15, N = 405

Number of Observations Used: 351
Residuals:
      Min.   1st Qu.   Median     Mean   3rd Qu.    Max.
-385.0758 -10.0929    0.1869    0.0000   13.2184   275.6189

Coefficients:
              Estimate Std. Error z-value Pr(>|z|)
lag(FDI_Inward, 1)  0.599504   0.012467 48.0873 < 2.2e-16 ***
GDP_Growth         4.560296   0.852012  5.3524  8.68e-08 ***
Unemployment       -0.470283   1.845526 -0.2548  0.79886
Inflation          5.794361   2.508961  2.3095  0.02092 *
Capital_Formation  -0.107722   0.919124 -0.1172  0.90670
Trade_Openness     -0.545644   0.477452 -1.1428  0.25311
Schooling          -2.132247   5.230433 -0.4077  0.68352

---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Sargan test: chisq(0) = 6.113873e-25 (p-value = < 2.22e-16)
Autocorrelation test (1): normal = NaN (p-value = NA)
Autocorrelation test (2): normal = -0.2778706 (p-value = 0.78111)
Wald test for coefficients: chisq(7) = 3284.415 (p-value = < 2.22e-16)
Wald test for time dummies: chisq(13) = 71.93621 (p-value = 3.5258e-10)
```

## GMM modl for FDI outflows

```
Call:
pgmm(formula = FDI_Outward ~ lag(FDI_Outward, 1) + GDP_Growth +
      Unemployment + Inflation + Capital_Formation + Trade_Openness +
      Schooling | lag(FDI_Outward, 2), data = df, effect = "twoways",
      model = "onestep", collapse = TRUE, transformation = "d")

Balanced Panel: n = 27, T = 15, N = 405

Number of Observations Used: 351
Residuals:
  Min.  1st Qu.  Median    Mean  3rd Qu.    Max.
-423.439  -9.701   1.552   0.000  10.216  264.325

Coefficients:
              Estimate Std. Error z-value Pr(>|z|)
lag(FDI_Outward, 1)  0.503542  0.015851 31.7666 < 2.2e-16 ***
GDP_Growth          3.394551  0.703723  4.8237 1.409e-06 ***
Unemployment        -0.715132  2.547084 -0.2808 0.7788907
Inflation           5.496544  1.900534  2.8921 0.0038267 **
Capital_Formation   -2.068926  0.575430 -3.5954 0.0003238 ***
Trade_Openness      0.331424  0.296508  1.1178 0.2636706
Schooling           -3.716065  5.922836 -0.6274 0.5303884

---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Sargan test: chisq(0) = 2.085422e-24 (p-value = < 2.22e-16)
Autocorrelation test (1): normal = NaN (p-value = NA)
Autocorrelation test (2): normal = 0.1438754 (p-value = 0.8856)
Wald test for coefficients: chisq(7) = 4607.352 (p-value = < 2.22e-16)
Wald test for time dummies: chisq(13) = 156.3072 (p-value = < 2.22e-16)
```

## Regression model for FDI inflows

```
> summary(model_fdi_inward)

Call:
lm(formula = FDI_inward ~ GDP_growth + Unemployment + Inflation +
    Government_expenditure + Gross_Capital_Formation + Trade_openness +
    Mean_Years_Schooling, data = data)

Residuals:
    Min       1Q   Median       3Q      Max
-421.50  -15.70   -6.14    3.31   395.17

Coefficients:
                Estimate Std. Error t value Pr(>|t|)
(Intercept)      118.61582    41.84255     2.835  0.00482 **
GDP_growth         0.97795     0.68363     1.431  0.15335
Unemployment      -1.72135     1.12439    -1.531  0.12659
Inflation         -1.41929     0.91085    -1.558  0.11998
Government_expenditure -0.39053     0.44193    -0.884  0.37740
Gross_Capital_Formation -1.53099     0.70816    -2.162  0.03122 *
Trade_openness     0.21022     0.05111     4.113 4.75e-05 ***
Mean_Years_Schooling -5.62470     2.30332    -2.442  0.01504 *
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 51.3 on 397 degrees of freedom
Multiple R-squared:  0.1003, Adjusted R-squared:  0.08441
F-statistic: 6.321 on 7 and 397 DF, p-value: 4.737e-07
```

## Regression model for FDI outflows

```
> summary(model_fdi_outward)
```

Call:

```
lm(formula = FDI_outward ~ GDP_growth + Unemployment + Inflation +  
    Government_expenditure + Gross_Capital_Formation + Trade_openness +  
    Mean_Years_Schooling, data = data)
```

Residuals:

Min	1Q	Median	3Q	Max
-412.92	-13.64	-5.00	2.09	411.96

Coefficients:

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	65.76313	43.73498	1.504	0.13346
GDP_growth	0.50475	0.71455	0.706	0.48036
Unemployment	-0.86355	1.17525	-0.735	0.46291
Inflation	-1.22646	0.95204	-1.288	0.19841
Government_expenditure	-0.13501	0.46192	-0.292	0.77022
Gross_Capital_Formation	-1.41194	0.74019	-1.908	0.05717 .
Trade_openness	0.17014	0.05342	3.185	0.00156 **
Mean_Years_Schooling	-2.57562	2.40749	-1.070	0.28534

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 53.62 on 397 degrees of freedom

Residual standard error: 53.62 on 397 degrees of freedom

Multiple R-squared: 0.05552,

Adjusted R-squared: 0.03887

F-statistic: 3.334 on 7 and 397 DF, p-value: 0.001833