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STUDYING THE RELATIONSHIP BETWEEN ECONOMIC FREEDOM, FINANCIAL DEVELOPMENT AND FOREIGN DIRECT INVESTMENT

Abstract. *The relationship between economic freedom and financial development is important for economic growth and development in countries. The concept of financial development refers to the expansion and development of a country's financial system. Economic freedom, on the other hand, refers to an indicator that measures the freedom of people to engage in economic activity, the protection of property rights, freedom of trade, and the degree of government intervention. This study conducted correlation, cointegration, and causal analyses for the financial development and economic freedom indices and foreign direct investment of the E7 countries using an annual data set covering the period 1995-2024. The results of the correlation analysis revealed a negative correlation between financial development and economic freedom and a positive correlation between foreign direct investment.*

Keywords: *financial development, economic freedom, analysis, causal relationships, foreign investment, EU countries.*

Introduction

The concept of financial development can be defined as an increase in the variety of financial instruments used in any economy or their availability (Erim and Türk, 2005:22). In other words, financial development can be defined as an increase in the volume of funds in the financial markets, accompanied by an increase in the number of financial intermediary institutions, as a result of an increase in the number of financial assets or instruments available in the financial markets. For long-term sustainable economic growth, it is necessary to meet the financing needs of the real markets and increase production. In this case, the impact of the financial system on the real markets becomes important. The transformation of unused funds of the financial system into investments that can be effectively used in the real markets becomes possible through the development of financial markets (Darıcı, 2009:23).

Institutional diversity is one of the most important elements of financial markets. This diversity ensures the efficient use of idle or inefficient savings in the financial system and, therefore, increases the volume of funds. Although the increase in the volume of funds significantly contributes to meeting the financing needs of financial markets, it also improves market efficiency through financial development, allowing investors to manage their portfolios more efficiently. This allows identifying optimal portfolios and improving the balance of risk and return through diversification (Akusta, 2024). This confirms the positive impact of financial development on investor behavior and market efficiency. Therefore, the diversity of financial institutions is important as one of the main indicators of financial development.

Literature Review

The concept of financial development is multifaceted, includes many different elements and has important implications for the economic development of countries. In this context, this concept has been and continues to be studied by researchers in both domestic and foreign literature. The studies that have used financial development indicators in domestic and foreign literature are listed below. Kularatne (2001) examined the long-run effects of financial development in South Africa using the Johansen analysis method using data from 1994 to 2002. The study concluded that foreign direct investment had a positive impact on some components of economic freedom. Chukwu and Agu (2009) examined the relationship between financial deepening and economic growth in Nigeria using data from 1991 to 2008. The findings support the demand-following hypothesis for the banking sector, private sector credit and real broad money. The findings support the supply-leading hypothesis for the loan to deposit ratio and bank deposit liabilities.

The most important finding is that the measure of financial development used has a significant impact on causality. Gries et al. (2009) conducted a principal component analysis using data on financial development of the banking sector in 16 sub-Saharan African countries. The study found that one of the indicators of banking sector development was Commercial Bank Assets/Commercial Bank Assets. Central Bank Assets had a more positive value compared to the other indicators. Ozturk et al. (2010) examined the relationship between financial development and economic growth using a panel data analysis of 10 emerging markets for the period 2002 to 2017. The study concluded that financial development will lead to economic growth. Onoriode and Olu-Koris (2013) examined the effect of financial deepening on economic growth in Nigeria using cointegration analysis and found that the data series are cointegrated and there is a long-run relationship between them.

Oruc and Turgut (2014) investigated the relationship between financial development and economic growth in Turkey using Granger causality analysis using data from 1990 to 2010. The study found that financial development has a significant effect on economic growth. Marashdeh and Al-Malkawi (2014) investigated the relationship between financial development and economic growth in Saudi Arabia using ARDL model using data from 1990 to 2010. Trabelsi and Sherif (2016) investigated the impact of cross-border financial transactions on the financial sector using panel estimation techniques using data from 1990 to 2019 for 90 developed and developing countries. The study found a non-linear relationship between financial development and external financial reform in middle-income countries. Ndalu (2016) examined the relationship between financial development, economic growth and insurance in Kenya using data from 2003 to 2018.

Öztürk and Tuğan (2017) analyzed the relationship between financial deepening and economic growth using the ordinary least squares method and Granger causality test using the data from 1996 to 2010. Yetiz and Şimşek (2017) investigated the relationship between financial development and economic growth in Turkey using the Granger causality test and concluded that the banking system plays the only role in achieving financial development in Turkey. Çoltu (2017) investigated the relationship between financial development and economic growth using ARDL and Toda-Yamamoto methods using the data from 2001 to 2016. The study concluded that the relationship between financial development and economic growth is long-term and that there is a causal relationship between financial development and economic growth.

Methodology

Various measurement tools are used to measure financial development. Figure 1 presents the indicators of financial development. These indicators include real interest rates, diversity of financial products, structural indicators, financial exchange costs and quantitative indicators. Real interest rates, one of the indicators of financial development, are one of the basic elements of the economy. Although there is a relationship between real interest rates and financial deepening, they are also considered to increase savings and investment (Erim and Türk, 2005:26).

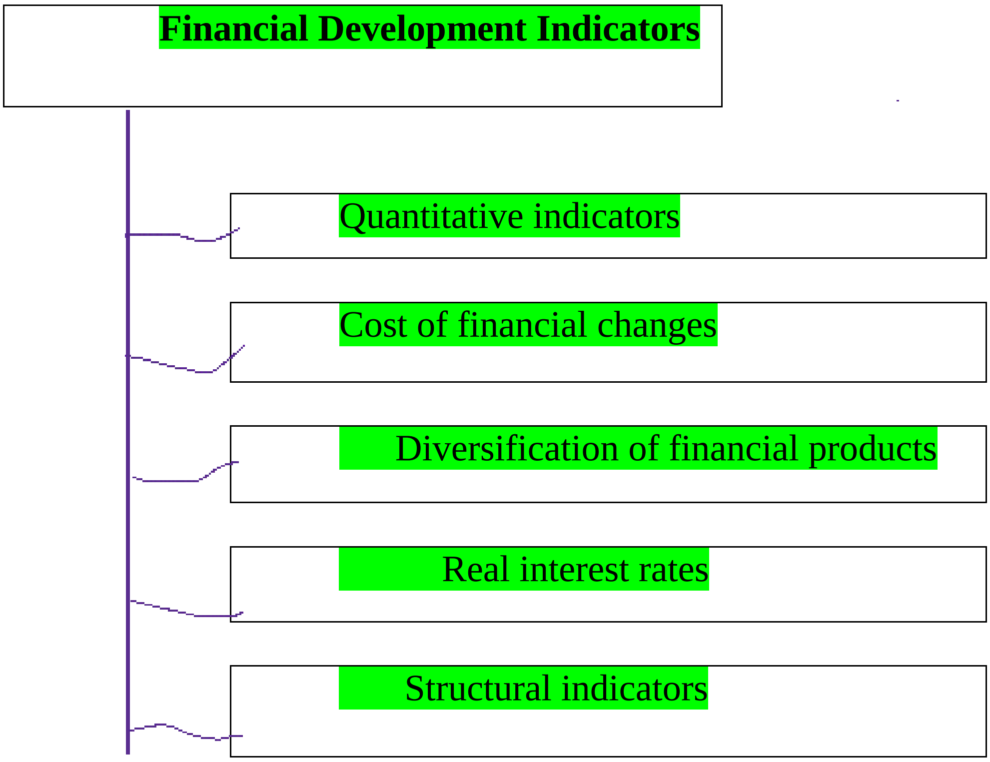

Figure 1 - Indicators of Financial Development

Diversity of financial products, in turn, increases the variety of securities available in the capital markets, which leads to an increase in the volume of transactions. At the same time, the risks inherent in financial assets affect the launch of new assets and increase the depth of markets (Gündogdu, 2016:64). Structural indicators that play an important role in financial deepening are the ratio of broad money to the monetary aggregate M2/M1. Another indicator: the lower the cost of financial exchange, the more funds are converted into investment. Monetary indicators, which are related to quantitative ones, are important indicators used to assess financial development. The factors that determine financial deepening, an important concept for economies, are shown in Figure 2.

Legality, one of the determinants of financial development, directly determines the relationships between individuals or institutions in the home countries. These systems are administrative and legal regulations. In order to achieve financial maturity, laws must be adaptable to changing conditions and flexible in this context. The complexity of the legal system prevents the prompt regulation of financial innovation and investor rights, thereby hindering financial maturity (Ağır, 2010:3). Another determinant, liberalization policy, implies unwanted state intervention in the financial sector. In this context, the concept of economic freedom acquires special significance.

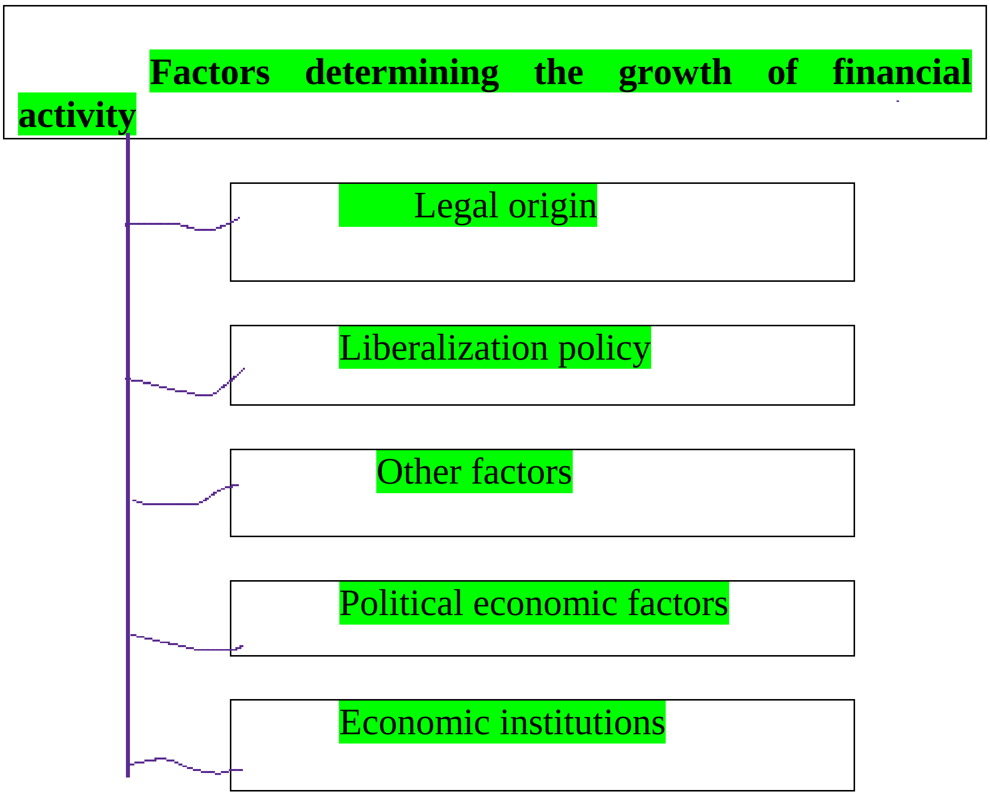

Figure 2 - Factors Determining Financial Market Development

People are more willing to invest when their property rights are secure or when they know that they will receive the fruits of their labor (Gökçeli, 2023:236).

In addition, strong property rights provide the basis for the rule of law, promoting compliance with contracts and agreements, and building trust and sustainability in economic relations (Şit, 2023:430). In societies with high economic freedom, the role of the state is limited to maintaining a transparent and fair legal framework, protecting property rights, and ensuring the safety of infrastructure. This allows for the allocation of resources based on supply and demand rather than centralized control. Thus, it ensures a more efficient and productive use of resources, promotes greater specialization, and helps companies and individuals adapt to changing market conditions.

They adapt more quickly to changing conditions. Moreover, economic freedoms contribute primarily to social well-being, not individual well-being. Societies with a high degree of economic freedom are characterized by higher standards of living, lower poverty rates, and increased social mobility. The wealth generated in societies with economic freedom can be directed to such important services as health care, education, and infrastructure that contribute to social well-being. Moreover, regulation against fraud and market failures that undermine the soundness of the financial system is an important element of economic freedom. An effective legal framework that ensures fair competition is crucial to maintaining economic freedom. In other words, economic freedoms are important elements of well-being and inclusiveness of societies. They expand opportunities for individuals, stimulate entrepreneurship, and create employment opportunities. By supporting economic freedoms, states can create an environment in which people and institutions can prosper, leading to social well-being and a high quality of life

The subcomponents of economic freedom are shown in Figure 3.

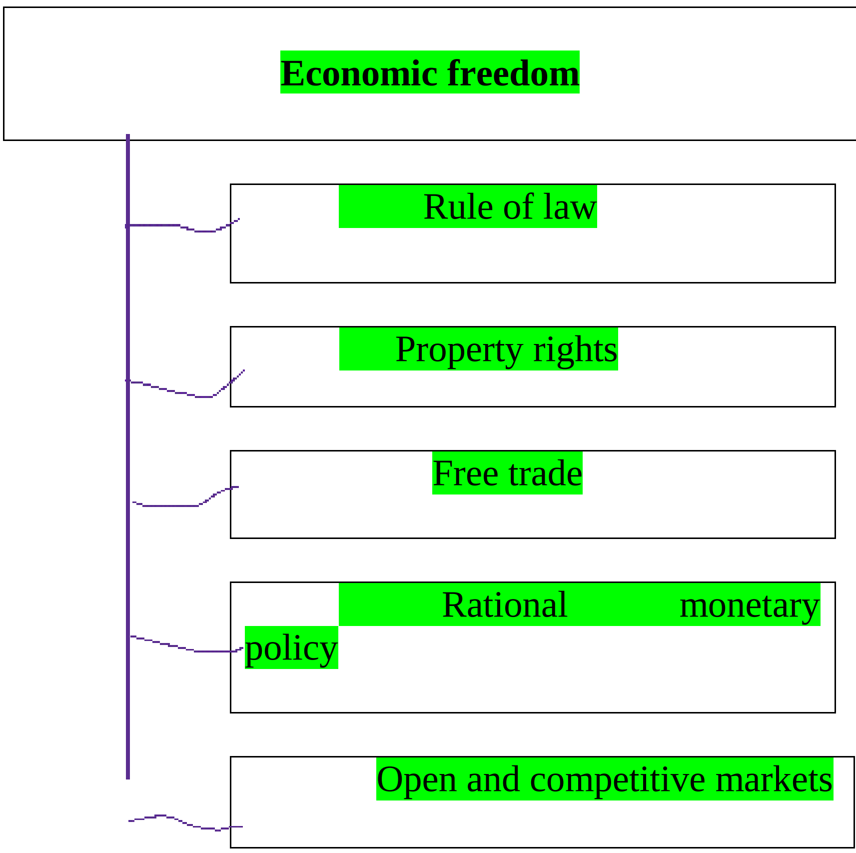

Figure 3 - Components of Economic Freedom

Economic freedoms are made up of subcomponents that support each other. These components are the rule of law, open and competitive markets, property rights, free trade, limited government, sound monetary policy, and free trade.

Results

The study used annual data for EU countries (China, Russia, India, Brazil, Turkey, Mexico and Indonesia) for the period 1995–2024. Table 1 presents information on the variables used in the study. The endogenous variables are the level of financial maturity, and the exogenous variables are the index of economic freedom, foreign direct investment and portfolio investment.

Table 1 - Variables used in the study

Variable type	**Abbreviations**	**Explanations of variables**	**Dataset Source**
Interior	FD	Financial development	World Bank
External	EF	Index of Economic Freedom	Heritage Institution
External	FDI	Foreign Direct Investment (US Dollars)	World Bank
External	PI	Portfolio Investments (US Dollar)	World Bank

The objective of the study is to examine the relationship between financial development (FD) and economic freedom (EF), foreign direct investment (FDI) and portfolio investment (PI). In this context, correlation, cointegration and causal analyses were conducted between the variables in the applied part of the study.

Table 2 - Descriptive test statistics of variables

	FD (%)	**EF (%)**	**FDI**	**PI**
Average	49. 3	56.8	41,800,000,000	-6,160,000,000
Median	37.0	56.8	22,100,000,000	-4,230,000,000
Maximum	186.2	68.3	344,000,000,000	289,000,000,000
Minimum	11.0	45.1	-39,800,000,000	-107,000,000,000
Distortion	1.7	0.3	2.7	4.0
Excess	5.6	2.0	10.6	43.6
Quantity of observations	196	196	196	196

Table 2 presents the descriptive test statistics for this study. For normal distribution, the skewness and kurtosis values are tested. The skewness values should be close to "0" and the kurtosis values should be close to "3". When analyzing the results of the variables, it is evident that the EF variable exhibits a relatively normal distribution, while the FR, FDI, and PI variables do not. The average value of the FR variable is 49.3%, the maximum value is 186.2%, and the minimum value is 11%. The average value of the EF variable is 56.8%, the maximum value is 68.3%, and the minimum value is 45.1%. The average value of the FDI variable is $41.8 billion, the maximum value is $344 billion, and the minimum value is -$39.8 billion. The average value of the PI variable is -$6.1 billion, the maximum value is $289 billion, and the minimum value is -$107 billion.

Table 3 - Results of correlation analysis of variables

		FD		**FDI**
EF	Корреляция t-статистика Вероятность	-0.227359 -3.251903 0.0014		
FDI	Корреляция t-статистика Вероятность	0.802247 18.71714 0.0000	-0.138036 -1.941196 0.0537	
PI	Корреляция t-статистика Вероятность	0.035291 0.491859 0.6234	-0.153783 -2.167737 0.0314	-0.144543 -2.034620 0.0432

The results of the correlation analysis for the variables in Table 3 are presented below. In the study, the correlation between the FD variable and the EF variable is negative, low and statistically significant. The correlation between the FD variable and the FDI variable is positive, high and statistically significant. The correlation between the FD variable and the PI variable is positive, low and statistically insignificant. In this context, as the financial depth of an economy increases, economic freedom decreases. Conversely, an increase in financial depth increases FDI. In other words, the higher the financial development of a country, the more FDI it can attract.

Table 4 - Results of the cause and effect analysis

	Quantity of observations	**F-statistics**	**Possibility**
EF is not the cause of Granger FD.	182	1.81780	0.1654
FD is not the cause of EF according to		5.77752	0.0037

Granger			
FDI does not cause Granger FD	182	6.42817	0.0020
FD is not a Granger cause of FDI		7.82301	0.0006
PI are not the cause of Granger FD.	182	3.97802	0.0204
FD is not a Granger cause of PI.		4.15640	0.0172
FDI is not a Granger cause of EF.	182	2.46006	0.0883
EF are not Granger-caused FDI		0.44916	0.6389
PI is not a cause of Granger EF.	182	0.42942	0.6516
EF is not a cause of PI according to Granger.		0.19756	0.8209
PI is not a Granger cause of FDI.	182	10.3488	6.3005
FDI is not a Granger cause of PI.		5.73947	0.0038

Table 4 presents the results of the causal relationship analysis between the variables. According to the results of the causal relationship analysis, the EF variable does not cause the FD variable, while the FD variable causes the EF variable. In other words, economic freedom does not cause financial changes, while financial development causes the economic variable. The FDI variable causes the FD variable, and the FD variable causes the FDI variable. The PI variable causes the FD variable, and the FD variable causes the PI variable. The study showed that there is no relationship between the EF variable and the FD variable, either in terms of correlation or causal analysis.

Conclusion

This study was conducted to examine the relationship between financial development and the index of economic freedom, foreign direct investment and portfolio investment in the EU countries for the period from 1995 to 2024. The results of the correlation analysis conducted in the study revealed a negative relationship between financial development and economic freedom, while there is a positive relationship between foreign direct investment and portfolio investment. The decision to invest in countries or regions is influenced by many different factors. It is especially important that the country in question is suitable for doing business, producing goods and services, and accessing markets for their sale. In addition, it is desirable that the country in question has basic infrastructure, security and a workforce that are appropriate for its business structure.

Many factors are considered, such as a country’s connections with other countries, its government regime and its impact on commercial life, its compatibility with free world economies, the absence of corruption and similar practices, and the independence of its banking and financial systems. Investments are considered only in fully independent and freely functioning economies. In this regard, the Index of Economic Freedom, which aims to measure the economic independence of countries across 10 subcategories, is an important resource for investors. The study finds a negative relationship between financial development, an indicator of the size of an economy, and the Index of Economic Freedom, which aims to measure the economic independence of countries. The reason for the negative relationship between the Index of Economic Freedom and financial development is not fully understood, but it can be identified by analyzing the subcomponents. However, the analysis found a positive relationship between financial development and foreign and portfolio investment. Thus, as financial development increases in economies, foreign and portfolio investment also increases.

According to the results of the causal analysis applied in the study, although the economic freedom variable does not cause the financial development variable, the financial development variable causes the economic freedom variable. In other words, financial development in economies leads to economic freedom in that economy. In this context, there is a one-way relationship between financial development and economic freedom. Hussein et al. (2022) and Tutgun and Savas (2023) concluded that there is a relationship between financial development and economic growth in their studies and obtained similar results. There is a bidirectional causality between financial development and another variable, foreign direct investment. In this regard, financial freedom in economies affects investment in the economy, and at the same time, an increase in this investment affects financial development. It was found that there is a one-way causality between financial development and portfolio investment. Therefore, although financial development in economies causes portfolio investment, portfolio investment does not cause financial development. The study concluded that there is no relationship between the economic freedom variable and financial development, both in terms of correlation and causal analysis.

To understand the reason for this, it would be useful to analyze the subcomponents of the indices of economic freedom separately. Similarly, it would be useful to examine different economic variables when examining the relationship between financial development and portfolio investment. To promote financial development, countries should prioritize the subcomponents that determine financial development. In this context, laws should be adaptable to changing conditions and flexible. The complexity of the legal system hinders financial development by preventing rapid regulation of financial innovation and investor rights. Another determinant, liberalization policies, can be useful for governments in preventing unwanted interventions in the financial sector.

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ЭКОНОМИКАЛЫҚ ЕРКІНДІК, ҚАРЖЫЛЫҚ ДАМУ ЖӘНЕ ТІКЕЛЕЙ ШЕТЕЛДІК ИНВЕСТИЦИЯЛАР АРАСЫНДАҒЫ БАЙЛАНЫСТЫ ЗЕРТТЕУ

Аннотация. *Экономикалық еркіндік пен қаржылық даму арасындағы байланыс елдердің экономикалық өсуі мен дамуы үшін маңызды. Қаржылық даму тұжырымдамасы елдің қаржы жүйесінің кеңеюі мен дамуын білдіреді. Экономикалық еркіндік, керісінше, адамдардың экономикалық қызметпен айналысу еркіндігін, меншік құқығының қауіпсіздігін, сауда еркіндігін және мемлекеттің араласу дәрежесін өлшейтін көрсеткішке жатады. Осы тұрғыда осы екі ұғымның өзара байланысы экономикалық даму мен тұрақтылық үшін шешуші мәнге ие. Бұл зерттеуде 1995-2024 жылдар аралығын қамтитын жылдық деректер жиынтығын пайдалана отырып, ЕО елдерінің қаржылық даму және экономикалық еркіндік, тікелей шетелдік инвестициялар индексі үшін корреляциялық, коинтеграция және себептік талдаулар жүргізілді. Корреляциялық талдау нәтижелері қаржылық даму мен экономикалық еркіндік арасындағы теріс корреляцияны және тікелей шетелдік инвестициялар арасындағы оң корреляцияны анықтады.*

Түйінді сөздер: *қаржылық даму, экономикалық еркіндік, талдау, себепті байланыстар, шетелдік инвестициялар, ЕО елдері.*

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ИССЛЕДОВАНИЕ ВЗАИМОСВЯЗИ МЕЖДУ ЭКОНОМИЧЕСКОЙ СВОБОДОЙ, ФИНАНСОВЫМ РАЗВИТИЕМ И ПРЯМЫМИ ИНОСТРАННЫМИ ИНВЕСТИЦИЯМИ

Аннотация. *Взаимосвязь между экономической свободой и финансовым развитием важна для экономического роста и развития стран. Концепция финансового развития относится к расширению и развитию финансовой системы страны. Экономическая свобода, с другой стороны, относится к показателю, который измеряет свободу людей заниматься экономической деятельностью, защищенность прав собственности, свободу торговли и степень государственного вмешательства. В этом контексте взаимосвязь между этими двумя концепциями имеет решающее значение для экономического развития и стабильности. В данном исследовании были проведены корреляционный, коинтеграционный и причинно-следственный анализы для индекса финансового развиия и экономической свободы, прямых иностранных инвестиций стран ЕС с использованием годового набора данных, охватывающего период 1995-2024 годов. Результаты корреляционного анализа выявили отрицательную корреляцию между финансовым развитием и экономической свободой и положительную корреляцию между прямыми иностранными инвестициями.*

Ключевые слова: *финансовое развитие, экономическая свобода, анализ, причинно-следственные связи, иностранные инвестиции, страны ЕС.*