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THE ROLE OF FOREIGN DIRECT INVESTMENTS IN ROMANIA'S ECONOMIC DEVELOPMENT: ANALYSIS 2013-2023

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Abstract

The paper aimed to emphasize the importance of foreign direct investments in fostering the sustainable development of the Romanian economy, as well as their influence on economic growth and the evolution of the business environment. Statistical data on foreign direct investments (FDI) provided by the National Bank of Romania formed the basis of the research. The study presents the dynamics, structure, and volume of foreign direct investments in Romania during the 2013–2023 period. A simple linear regression econometric model was employed to analyze the impact of foreign direct investments on economic growth. The findings revealed a rising trend in foreign direct investments in Romania. Additionally, there was a strong and statistically significant correlation between FDI and the gross domestic product (GDP). The overall conclusion highlights that FDI serves as a vital instrument for narrowing the economic disparity between developed and developing nations, promoting sustainable economic growth, and tackling structural challenges in Romania.

Key words: *Foreign direct investment (FDI), Romania, economic growth, GDP correlation, investment trends*

INTRODUCTION

According to the definition given by UNCTAD Foreign direct investment (FDI) is defined as an investment reflecting a lasting interest and control by a foreign direct investor, resident in one economy, in an enterprise located in another economy (foreign affiliate) [21].

Foreign direct investment (FDI) is a robust foundation for fostering economic growth, even during periods when economic stability and growth are under pressure, because [12]:

• FDI complements public financing sources and provides essential capital for economic development;

• FDI generates employment not only within the invested companies but also by stimulating growth in upstream and downstream enterprises;

• FDI brings more than capital, introducing technology, knowledge, and organizational practices that drive economic growth. Foreign investors implement efficient work methods and innovative technologies that enhance employee productivity and company competitiveness. These advantages cascade across the supply chain, compelling businesses to adapt and remain competitive in the market;

• FDI offers long-term stability, as it is defined by the sustained interest of the investor in the company. Investors who establish new companies are unlikely to abandon their investments easily, even in times of economic turbulence.

FDI inflows include capital supplied by a foreign direct investor to a foreign affiliate or received by a foreign direct investor from a foreign affiliate. In contrast, FDI outflows describe these transactions from the perspective of the foreign affiliate's home economy. FDI flows are measured on a net basis, calculated as credits minus debits, allowing for negative values in cases of reverse investment or disinvestment. FDI stock represents the aggregate value of capital and reserves held by a non-resident parent enterprise, plus the net debt of foreign affiliates owed to the parent enterprise. (UNCTAD, 2020) [22].

Adam Hayes define foreign direct investment (FDI) as a type of cross-border investment where an investor from one economy acquires

a lasting interest in and significant control over a business in another economy [22]. A significant investment relationship is indicated by owning at least 10% of the voting power in a company based in another country. Foreign Direct Investment (FDI) plays a crucial role in fostering international economic integration by establishing stable, long-term connections between economies. It serves as a vital means for transferring technology across borders, enhancing global trade by providing access to new markets, and acting as a powerful driver of economic development. Key metrics used to analyze FDI include inward and outward stocks, flows, and income, broken down by industry, partner countries, and measures of FDI restrictiveness [18].

The attracted investments must be directed to those economic sectors that contribute to sustainable economic growth - agriculture, tourism, manufacturing industry - and not to speculative sectors, such as the real estate or retail sector [13].

Foreign direct investments have positive effects both at the macroeconomic and microeconomic levels, expressed through economic growth, through the creation of new jobs, new production capacities and also through the increase of contributions to the state budget, as a result of taxes and taxes paid by new taxpayers. From a macroeconomic perspective, foreign direct investment (FDI) drives economic growth by establishing new production facilities and creating additional jobs, particularly through greenfield investments. It also stimulates domestic investment by encouraging local producers to enhance the quality of their goods and services and to boost operational efficiency in response to newly introduced foreign competition. Furthermore, FDI facilitates access to valuable knowledge and resources, enabling local businesses to collaborate more effectively with foreign investors and adapt to global market demands.

Foreign direct investments also have a positive effect on national producers who will invest in their turn, out of the desire to make the activity more efficient, but also to have the opportunity to become suppliers of the foreign business partner [2].

The high interest in the field of foreign direct investments is justified by the fact that they represent a factor for stimulating economic growth and GDP[3], do not generate external debt, being complementary to domestic investments [15].

Foreign direct investment is regarded as the most promising solution for narrowing the competitiveness that separate the economies of developed countries from the economies of developing countries. It is recognized that foreign direct investments represent an important source of jobs for host countries, thus more and more emphasis is placed on their role in the creation or reallocation of jobs. Also, they could be a way to reduction social exclusion from the rural areas [10].

Investors focus their attention on the implications of expanding the production activity internationally.

Foreign direct investments (FDI) are typically drawn to countries with stable political and economic environments. Experience demonstrates that developed nations, as the primary recipients of FDI, reap considerably greater benefits compared to developing countries. Key advantages include fostering economic growth, stimulating domestic investments, facilitating restructuring and privatization efforts, and enhancing state budget revenues through increased tax contributions. However, FDI can also produce negative impacts, both at the macroeconomic and sectoral levels. These adverse effects, often short-term in nature, are closely tied to how well the investment is implemented and its overall efficiency.

In this context, the paper aimed to highlight the role of foreign direct investment in supporting the sustainable development of the Romanian economy and their influence on economic improvement and the business climate enhancement.

MATERIALS AND METHODS

The structural analysis of foreign direct investments recorded in Romania in the period 2013-2023 was carried out based on

the information supplied by the statistical study on foreign direct investments (FDI) conducted by the National Bank of Romania in collaboration with the National Institute of Statistics, as well as data provided by the official database of the European Commission [16].

The comparison method involves analyzing similarities and differences between two or more phenomena to identify patterns, trends, or disparities. This method is foundational in empirical research and is applied across disciplines like economics, sociology, and natural sciences [19], [4].

The index method involves creating indices, which are numerical measures used to summarize and compare changes in data relative to a base period or value. Indices can be simple or complex and are frequently used in economics and finance [18], [9].

The correlation method examines the relationship between two variables to determine if they are associated. It measures the strength and direction of their linear relationship [20], [9].

The regression method explores the relationship between dependent and independent variables to model and predict outcomes. It extends correlation by quantifying the impact of one or more independent variables on a dependent variable [11], [5].

RESULTS AND DISCUSSIONS

GDP is an important economic indicator used to assess the health of a nation's economy, as well as to compare the economic performance of different countries. Romania's GDP is structured on three large sectors: agriculture, manufacturing industry and construction, and the service sector.

Over the years, the services sector has had the largest share in GDP, especially due to the development of the IT and telecommunications, trade and tourism sectors [17].

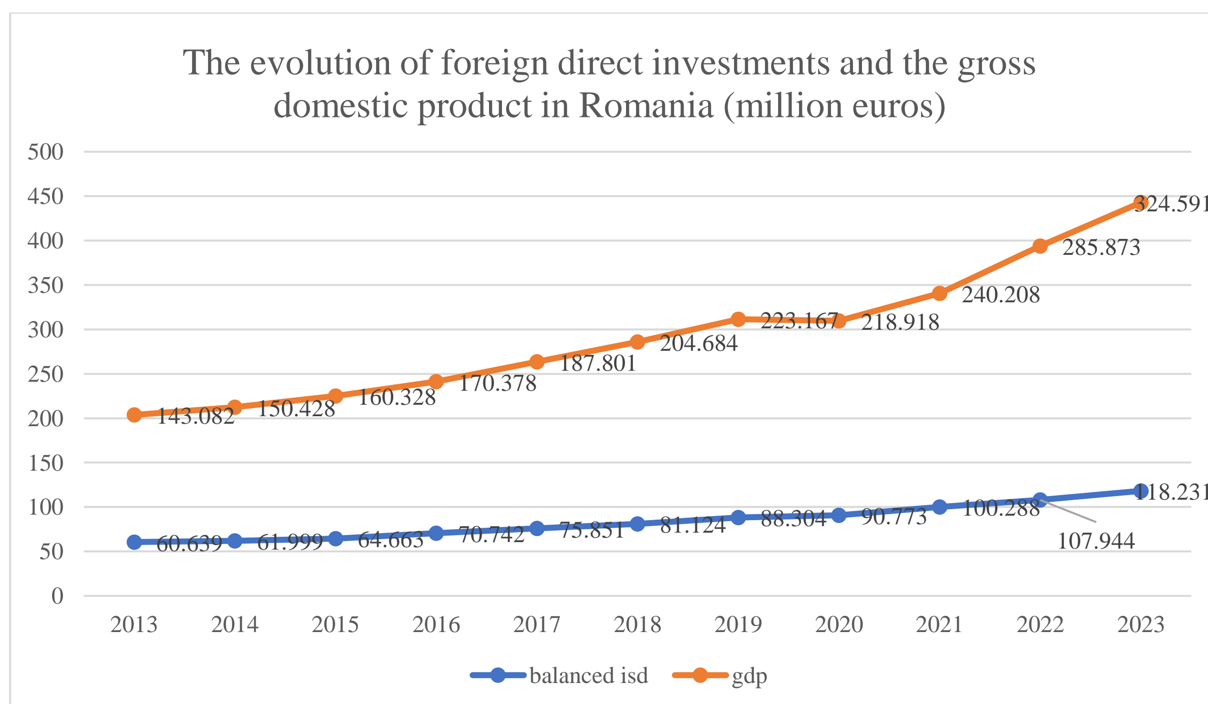

Fig. 1. The evolution of the GDP and the total FDI (ISD) in Romania (million euro) in the period 2013-2023
Source: National Bank of Romania, 2024, Annual Report 2023 [14].

Analyzing the evolution of GDP in Romania, a constant increase is found in the analyzed period, with the exception of 2020 compared to 2019, when a decrease of 2% is recorded, according to Figure 1.

This decrease is due to the restrictions imposed to limit the spread of the virus, which

directly affected economic activities, especially in the tourism, trade and transport sectors.

The government has implemented measures to support the economy, including financial aid for firms and incentives for consumers, but the global impact of the crisis has been significant.

The GDP growth in 2023 compared to 2013 was 125.7%. In 2023, compared to 2022, an increase of 13.5% was registered, while in 2022 compared to 2021, the increase was 19% (Figure 1).

GDP growth is due to economic reforms, increased foreign direct investment and integration into the single European market. But the positive effect from the IT sector, which experienced a rapid expansion, should not be omitted either, Romania is one of the main destinations for the outsourcing of IT and software services in Europe [7].

Despite steady economic growth in recent decades, Romania faces a number of challenges that can influence its GDP in the long term, such as insufficient infrastructure, which can limit productivity growth and attract new investment [15]. Shortage of skilled workers, especially in technical and specialized fields, which can limit the development of some key sectors. [9] An aging population and the migration of young people to other EU countries is a major challenge for the long-term sustainability of the economy and GDP [15]. Energy effects, inflation and external economic turbulences that can contribute negatively to the gross domestic product must also be taken into account [14].

Foreign Direct Investment (FDI) is the funds or capital that a company or investor from one country places directly in another country, usually by purchasing assets, opening branches or establishing subsidiaries, or buying shares in a local company.

According to graph 1, foreign direct investments in Romania are trending upward, with constant increases recorded.

The balance of foreign direct investments in Romania increased in 2023 by 94.9% compared to 2013. In 2023 compared to 2022 the increase was 9.5%, in 2021 compared to 2020 an increase of 10 .5%.

A series of both internal and external factors influence these increases.

Tax regulations, investment incentives, subsidies and trade policies have a direct impact on attracting FDI. The government can create a favorable environment through tax reductions, facilities for foreign investors or by providing subsidies. Foreign investors are looking for a stable environment with a clear legal framework and respect for property rights [20].

As a member state of the European Union, Romania enjoys unrestricted access to the European single market, which can serve as a motivation for foreign investors to establish their operations in Romania [6].

Multinationals, which come with technology, know-how and capital, are the main investors in Romania. They are attracted by lower production costs, a well-trained workforce and access to the European market [16].

Investment funds, pension funds and other international financial institutions play an important role in foreign direct investment, especially in sectors such as technology, infrastructure and energy [8].

Production relocation trends from China or Asian regions may bring more FDI to Eastern Europe [1].

Bilateral or regional trade agreements, such as those between the European Union and other states, can stimulate FDI flows to Romania [6]. To analyze the impact of foreign direct investments on the economic growth in Romania in the period 2013-2023, the method of econometric modeling was used, with the help of the computer software Excel, the Data Analysis module, and the results obtained are presented in Table 1.

The linear regression model is the following one:

$GDPt = \beta0+\beta1\cdot ISDt+\beta2\cdot X1+\beta3\cdot X2+\cdots+\epsilon t$ ....(1)

where:

• PIB_t is GDP in year t.
• FDI_t is the value of foreign direct investment in year t.
• X_1, X_2, ... are the control variables (eg inflation, government spending, etc.).

• β_0, β_1, β_2,... are the coefficients of the model.
• ε_t is the prediction error (error term).

Analyzing, according to Table 1, the correlation between the dependent variable, respectively the Gross Domestic Product and the independent variable, respectively the balance of Foreign Direct Investments, a very strong relationship between variables is observed due to the value of 0.987, a value very close to 1.

The coefficient of determination (R^2) indicates the percentage of the variation in the dependent variable (Y) that is accounted for by the regression model.

An R^2 of 0.973 reveals that 97.32% of the variation in the dependent variable is explained by your model. It is a very good model because a value close to 1 indicates an excellent fit.

Table 1. The results of the regression function

Regression Statistics	
Multiple R	0.986508669
R Square	0.973199355
Adjusted R Square	0.969849274
Standard Error	9,636.564859
Observations	10

ANOVA

	Df	*SS*	*MS*	*F*	*Significance F*
Regression	1	26976838000	26976838000	290.500274	0.00000014
Residual	8	742907058.3	92863382.29		
Total	9	27719745058			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95,0%*	*Upper 95,0%*
Intercept	-35,272.43	15,090.80	-2.33	0.0476	-70,071.90	-472.97	-70,071.90	-472.97
FDI	2.929	0.17	17.04	1.426E-07	2.5331	3.3258	2.53	3.32

Source: own calculations.

Adjusted R^2 corrects the R^2 value for the number of predictors in the model, given that it is very close to R^2, it suggests that the model is adequate and not overfitting.

The F statistic is used to test the overall significance of the regression model. The F-value of 290.5 is extremely high, suggesting that the model is statistically significant.

The Significance F (p-value) is extremely small at 0.00000014 (well below 0.05), which means that there is very strong statistical significance. The model explains a significant proportion of the variation in the dependent variable.

Regression equation reflecting the value of GDP (Y) depending on FDI (X) is given below:

Y= -35,272.43+ 2.929 FDI

According to the results in Table 1, for each unit of increase in the balance of foreign direct investments by 1 million Euro, the gross domestic product will grow by 2.2929 Million Euro. This coefficient is significant, having an extremely small p-value (1.43E-07), much lower than 0.05.

CONCLUSIONS

The analysis highlights that foreign direct investments (FDI) have played a crucial role in Romania's economic growth from 2013 to 2023. The econometric analysis using regression models demonstrates a strong correlation between FDI and GDP growth, with an adjusted R^2R^2R^2 of 0.973, indicating that 97.3% of GDP variance is explained by changes in FDI inflows.

FDI positively impacts both macroeconomic and microeconomic levels by creating jobs, enhancing production capacities, and increasing state budget contributions through taxes. Investments in sustainable sectors such as agriculture, manufacturing, and tourism were emphasized as drivers of sustainable growth, in contrast to speculative sectors like real estate and retail.

Foreign investments bring advanced technology, knowledge, and organizational practices to local industries, improving efficiency and competitiveness across the value chain.

There was a consistent increase in FDI during the studied period, with a 94.9% rise in FDI stock from 2013 to 2023. Economic reforms, EU integration, and competitive production costs contributed significantly to this growth.

The paper suggests that government measures such as tax incentives, infrastructure improvement, and clear legislative frameworks are critical for attracting FDI. Strengthening these areas will help mitigate challenges like an aging population, labor shortages, and external economic volatility.

Despite the positive impacts, FDI can have short-term negative implications, such as market dominance by foreign entities and dependency on foreign capital. Policies must balance the benefits of FDI with potential risks to national industries.

The overall conclusion highlights that FDI serves as a vital instrument for narrowing the economic disparity between developed and developing nations, promoting sustainable economic growth, and tackling structural challenges in Romania.

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