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MACROECONOMIC ANALYSIS AND FORECASTING OF FOREIGN DIRECT INVESTMENT INFLOW: EVIDENCE FROM UKRAINE

ABSTRACT

Attracting foreign investment is a viable means of ensuring the economic growth of any country. The relevance of the study is substantiated by the creation of a favorable investment climate in the country, which will allow the establishment of guarantees of protection of foreign investments and stability of the legal basis for entrepreneurship performance. The article aims to analyze and forecast the inflow of foreign direct investment (FDI) into Ukraine. In order to achieve the stated purpose, the econometric model was developed, which demonstrates the correlation between macroeconomic indicators, their characteristics and the amount of FDI. A set of general scientific and special research methods were used, in particular: induction and deduction, grouping, summarization, comparison, complex and systemic approaches. The article reveals the essence of foreign investment for the Ukrainian economy and defines the characteristics of FDI. The impact of FDI on the economy of Ukraine is analyzed in detail and the conditions for their attraction are substantiated. Using statistical methods, the structure and dynamics of FDI by types of economic activity and investor countries are investigated. The conducted research has shown that through the attraction of foreign direct investment economic growth, the well-being of the population, the reduction of foreign indebtedness and efficient state capital investments are ensured. Taking all this into account the necessary preconditions for the attraction of foreign direct investments into the Ukrainian economy were substantiated.

Keywords: investments, foreign investments, FDI, investment climate, economy, correlation, factor analysis, Ukraine

JEL Classification: E20, E22, E27

INTRODUCTION

Creating conditions for intensifying the activities of entrepreneurs is one of the ways to intensify economic development, promote economic growth by increasing foreign trade, the competitiveness of domestic goods in world markets and bringing their quality parameters closer to the world level, wages and social benefits, improving working conditions and its motivation, increasing tax revenues, adopting legislation regulating tax, customs, investment, credit and depreciation policies in line with international standards, providing for the implementation of real-life science-intensive and resource-saving technologies that import, increasing the number of institutions that meet the needs of the population, meeting the services of productive and non-productive nature, the trust of individual foreign entities and states, improving the image of the state. Attracting foreign investment is an effective means of ensuring the economic growth of any country, Ukraine is no exception. Thus, the relevance and importance of the study are substantiated by the creation of a favorable investment climate in Ukraine, which will allow for establishing guarantees of protection of foreign investments, including FDI, and stability of the legal basis for entrepreneurship performance.

LITERATURE REVIEW

The problem of attracting foreign direct investment is quite relevant today. The development of investment processes and their regulation by the state are considered in economic theory in both classical and Keynesian concepts. Macroeconomic aspects of investment were quite fully disclosed in the works of famous foreign economists: J. Keynes, J. Clark, A. Marshall, D. Ricardo, P. Samuelson, A. Smith, G. Habler, R. Harrod, W. Sharpe, etc. Problems of investment, as well as investment processes, have been studied in detail in the works of modern foreign economists - P. Krugman, A. Culman, A. Mertens, M. Obstfeld and others.

A significant contribution to the issue was made by domestic scientists: I. Danylenko, B. Dmitruk, A. Dmytrenko, V. Fedorenko, B. Khudaverdieva, D. Fedorchuk, O. Dry, Yu. Spektorov, A. Merzlyak, S. Zakharin and others [4;5;6;16;17;18;19].

In the process of reflecting on any economic phenomenon in the course of economic analysis, the main thing is its general economic characteristics. Therefore, it is important to study the economic essence and conditions of investment activity development.

This study should be carried out based on the definition of the economic essence of the category "investment". It should be noted that in the literature there is no consensus on the approach to the interpretation of the definition of "investment". Thus, L. Vovk proposes to define the concept of investment as the "investment of funds in order to ensure their increase in the future" (2000, p. 5) [19].

O. Chabaniuk notes that the methodological basis for the formation of information about investment in accounting is defined in the provisions of accounting standards (2017, p. 15) [21].

A.V. Mertens considers macro-level investments as part of the total costs, which include expenditures on new means of production (production or fixed investment), investment in new housing and the growth of inventories [26, p. 3]. French economist P. Massé in his work "Criteria and methods of optimal determination of capital investment" defines investment as a capital investment [27, p. 46]. American scientists C. Fisher, R. Dornbusch and R. Schmalenzi in the publication "Economics" give the following definition of the term "investment" (investment costs): "these are the costs to create new capacities for the production of machines, financing of residential, industrial or agricultural construction, as well as stocks.

Great English economist, founder of the Keynesian direction in economic theory J. Keynes gave a fairly broad definition of the term "investment", having conducted deep and comprehensive research at the micro and macro levels. He believed that investment is "the current increase value of the capital property as a result of production activity of a given period", and "that part of the profit for a certain period that was not used for consumption". He believed that at the macro level investment is a kind of multiplier that induces rapid growth of demand and income.

Thus, at the macro level, the economic essence of investment is manifested in financial instruments for creating new capital, balancing demand, income and consumption, providing profit to investors and strengthening the economy of the country.

However, given the practical importance of investment in the reproductive process of the enterprise and the importance of studying certain aspects of the theory and practice of analysis of the investment activity of the enterprise, - taking into account the peculiarities of modern economic processes in the country, requires further research in this area, development of new approaches, since the performed scientific developments for the most part concern only certain aspects of the analysis of investment activity of the enterprise, in fact, not covering general theoretical issues that would systematically reflect this process as certain structured integrity. Taking this into account, it is expedient to deepen the study of the features of the current state and trends in the development of investment activity for the purpose of their theoretical generalizations.

At the same time, the issue of identifying factors/factors of investment attractiveness remains somewhat controversial. attractiveness. In particular, the paper presents a classification of investment attractiveness factors, components of external and internal factors are identified and characterized.

The analysis of scientific works shows the controversial provisions on the allocation of factors that determine investment attractiveness. Therefore, there is a need to clarify the concept of factors that determine investment attractiveness.

AIMS AND OBJECTIVES

The article aims to analyze and forecast the inflow of foreign direct investment (FDI) into Ukraine by developing the econometric model.

To realize the set goal, the following tasks were set:

- to analyze the development trends of foreign investment in Ukraine;
- to develop an econometric model in order to establish a correlation between the macroeconomic indicators and the amount of the FDI;
- to substantiate the necessary preconditions for the attraction of foreign direct investments into the Ukrainian economy.

METHODS

In order to achieve the purpose a set of general scientific and special research methods were used, in particular: induction and deduction, grouping, summarization, comparison, complex and systemic approaches. In addition, using statistical methods, the article determines the structure and dynamics of foreign direct investment, taking into account the types of economic activity and investor countries.

The inflow of foreign direct investment is determined mainly by the reinvested earnings of foreign investors. Foreign direct investment (FDI) in the economy of Ukraine due to the participation of a direct investor in the capital increased in January-June 2021 by 2.7 billion USD, of which 2.3 USD - reinvested earnings of a direct investor.

At the same time, excluding reinvested earnings, the direct investor's investment in the capital of the direct investment company (USD 430 million) was insufficient even to compensate for the outflow of direct investors from direct investment companies through debt instruments (USD 460 million) [20].

The Cabinet of Ministers expected foreign direct investment (FDI) at USD 6.5 billion in 2021, while in 2020 the outflow of FDI amounted to USD 420 million. The National Bank of Ukraine (NBU) predicted that foreign direct investment (FDI) in 2021 would be USD 3.5 billion higher than previously estimated at USD 6.5 billion.

Revenues from foreign investment in Ukraine remain low in 2021 and do not play a significant role in stimulating economic activity or supplying foreign currency in the market. In the nine months since the beginning of 2021, the payment of income from direct investment to non-residents amounted to almost USD 11 billion, of which USD 5.2 billion - dividends paid, USD 5.2 billion - reinvested earnings, USD 0.6 billion - interest payments to foreign direct investors. According to portfolio investments, the net payment of income in favor of foreign investors amounted to USD 2.2 billion.

Excluding USD 5.2 billion in reinvested earnings from non-residents in Ukraine, direct investment in direct investment enterprises in Ukraine amounted to only USD 744 million.

Relevant direct investment in equity (excluding reinvested earnings) only slightly exceeded payments to foreign direct investors through debt instruments (USD 0.5 billion for 9 months of 2021) and, excluding the crisis of 2020, was the lowest since 2014.

Such dynamics of foreign investments requires focusing the government's efforts on creating conditions for attracting both foreign and domestic investments for the development of an investment-oriented model of Ukraine's economy.

In 2020, Ukraine faced for the first time a net outflow of direct investment - minus USD 868 million. In 2019, the inflow of FDI amounted to USD 2.5 billion, in 2018 Ukraine invested USD 2.35 billion, in 2017 - USD 2.2 billion, 2016 - USD 3.28 billion, in 2015 - USD 2.96 billion, in 2014 - USD 410 million. In the first half of Ukraine attracted USD 2.83 billion in direct investment, of which USD 2.33 billion came from the European Union. Ukraine attracted USD 4.8 billion in foreign direct investment in the first three quarters of 2021 [6]. However, despite a large number of publications, this topic needs further research.

The main and decisive macroeconomic factor in the export orientation of direct business capital is the positive balance of imports and exports of investments, which has been observed in Ukraine in recent years.

The dynamics of foreign direct investments (FDI) in Ukraine and from Ukraine for the period 2010-2021 is analyzed in Table 1.

Table 1. FDI in and from Ukraine in 2010-2021. Note: since 2014 - excluding the occupied territories (Crimea, Sevastopol, parts of Donbass). (Source: compiled by the authors according to the State Statistics Service of Ukraine [14])

Years	FDI in Ukraine		FDI from Ukraine	
	USD, mln.	+ increase (- decrease)	USD, mln.	+ increase (- decrease)
2010	6495	+1679	736	+574
2011	7207	+712	192	-544
2012	8401	+1194	1206	+1014
2013	4499	-3902	420	-786
2014	410	-4089	111	-309
2015	-458	-868	-51	-162
2016	3810	+4268	16	+67
2017	3692	-118	8	-8
2018	4455	+763	-5	-13
2019	5860	+1405	648,0	+653
2020	-868	-6728	82,0	-566
2021	2836	+3704	41,0	-41

According to the State Statistics Service, the total volume of FDI in Ukraine until 2014 has a steady upward trend. However, since 2015 there has been a stable trend to reduce the inflow of total investment in the country's economy. The reason for the decline in the number of foreign investments was when the war in Donbas began, and the political situation in the country was extremely unstable.

Analysis of foreign investment in the regions of Ukraine shows an uneven contribution to the regions of Ukraine. According to the State Statistics Service of Ukraine, from 2014 to 2017 there is a decrease in investment activity in all regions of Ukraine, and most in Dnipropetrovsk, Donetsk, Kharkiv, Cherkasy regions and the city of Kyiv. Since 2018, there has been a slight increase in foreign investment in almost all oblasts compared to the previous year, but this trend is insignificant and has little effect on the total amount of investment [7,8,13,15]

A more detailed analysis of the structure of foreign investment in the regions of Ukraine in 2018 shows that most foreign investment is attracted to Kyiv (51.7%), Dnipropetrovsk region (11.7%), Donetsk region (3.5%), Kyiv region (5%) and Odesa region (3.8%) in % of the total value in Ukraine. The above regions receive 75.7% of all foreign direct investment. The last foreign investments were attracted to the Kirovograd region (0.2%), Rivne region (0.4%), Ternopil region (0.1%), Khmelnytskyi region (0.5%) and Chernivtsi region (0.1%) [9,10,13,15].

RESULTS

Let's analyze the dynamics of foreign direct investment (cumulative total) in the economy of Ukraine, million USD. (y) depending on internal and external factors of influence, in particular GDP, mln (x1), average monthly salary, USD (x2), gross external debt of Ukraine, billion USD (x3), capital investment, million USD (x4) and inflation index, % (x5) using multifactor correlation-regression analysis. The selected factors have a significant impact on GDP and are selected as the most influential. The initial data for the analysis are the statistical data of the State Statistics Committee of Ukraine during 2000–2020 (Table 2).

Table 2. Dynamics of the main macroeconomic indicators influencing the FDI of Ukraine in 2000-2020. (Source: compiled by the authors considering [1;2;3])

Years	FDI (increased total) in the economy of Ukraine, mln. USD (Y)	Gross domestic product, million mln. USD (X1)	Average monthly salary, USD (X2)	Gross external debt of Ukraine, bln. USD (X3)	Capital investments, mln. USD (X4)	Inflation index, % (X5)
2000	3281.8	31262	42.47	7.99247	4343.45	125.8
2001	3875	38009	58.01	7.97828	5862.21	106.1
2002	4555.3	42393	70.59	8.07904	8741.62	99.4
2003	5471.8	50133	86.74	8.55473	11232.4	108.2
2004	6794.4	64883	111.02	8.80782	16791.5	112.3
2005	9047	86142	157.30	8.70422	21693.8	110.3
2006	16890	107753	206.51	9.80318	29499.5	111.6
2007	21607.3	142719	267.87	10.59166	44094.8	116.6
2008	29542.7	179992	343.43	11.17183	51654.3	122.3
2009	35616.4	117228	245.05	17.02270	24755.9	112.3
2010	52872	136419	283.12	22.83597	23824.3	109.1
2011	58654	163160	331.24	24.50705	32212.2	104.6
2012	65121	175781	379.42	26.14000	32904.2	99.8
2013	67031	183310	409.59	27.93182	31232.4	100.5
2014	49839	131805	292.32	30.82253	17167.2	124.9
2015	43780	90615	162.60	34.40986	11497.3	143.3
2016	45195	93270	203.02	36.04834	12765	112.4
2017	45179	112154	267.16	38.49011	15521.2	113.7
2018	44009	130832	325.99	37.62640	19350.4	109.8
2019	51387	153781	406.40	37.85359	22613.1	104.1
2020	48933	149789	430.21	39.70663	14994.1	105.0

Currently, it is difficult to consider investments in their general sense, especially when it comes to attracting foreign investments into the Ukrainian economy. Obviously, investors are waiting for the end of the war and the plan for the reconstruction of the country.

In today's realities, the main customer and the one who sets the vector of development is the state. Almost all funds collected to the state budget are directed to support the country's defense capability. The money that comes from partners and, for the most part, cannot be involved in military procurement, is used to meet the needs of the social component of the country.

Currently, the main task is to maximize the preservation of macroeconomic stability and support the purchasing power of the population.

In early October 2022, the Ministry of Economy announced more than 250 applications received by the government for future investments in Ukraine.

Such a number of initiatives in just a month and in the midst of a hot war is an indicator that Ukraine remains interesting for foreign investors who not only believe in its victory but would also like to become part of its economic revival.

Foreign direct investment in Ukraine from 2002 to 2022 (USD million) (Table 3).

Table 3. Foreign direct investment in Ukraine from 2002 to 2022. (Source: [25])

Years	FDI to Ukraine		FDI from Ukraine		Balance	
2002	693		-5		+698	
2003	1424	731	13	18	+1411	102.1%
2004	1715	291	4	-9	+1711	21.3%
2005	7808	6093	275	271	+7533	340.3%
2006	5604	-2204	-133	-408	+5737	-23.8%
2007	9891	4287	673	806	+9218	60.7%
2008	10913	1022	1010	337	+9903	7.4%
2009	4816	-6097	162	-848	+4654	-53.0%
2010	6495	1679	736	574	+5759	23.7%
2011	7207	712	192	-544	+7015	21.8%
2012	8401	1194	1206	1014	+7195	2.6%
2013	4499	-3902	420	-786	+4079	-43.3%
2014	410	-4089	111	-309	+299	-92.7%
2015	-458	-868	-51	-162	-407	-236.1%
2016	3810	4268	16	67	+3794	-1032.2%
2017	3692	-118	8	-8	+3684	-2.9%
2018	4455	763	-5	-13	+4460	21.1%
2019	5860	1405	648	653	+5212	16.9%
2020	-868	-6728	82	-566	-950	-118.2%
2021	6687	7555	-198	-280	+6885	-824.7%
2022	-210	-6897	81	279	-291	-104.2%

The first step in constructing a multifactor regression is to determine the relationship between the selected factors of influence (Table 4).

Table 4. Results of the assessment of the relation between FDI in Ukraine (cumulative total) and macroeconomic factors. (Source: compiled by the authors considering [1;2;3])

Indicator	Legend	Coefficient of determination	Regression equation
Gross domestic product, mln. USD	X1	$R^2 = 0.823$	$y = 0.000034x^{1.76}$
Average salary, USD	X2	$R^2 = 0.849$	$y = 13.312x^{1.406}$
Gross external debt of Ukraine, bln. USD	X3	$R^2 = 0,9401$	$y = -130,29x^2 + 7348,8x - 45049$
Capital investments, mln. USD	X4	$R^2 = 0.390$	$y = 0.8673x^{1.039}$

The constructed correlation indicates the closest correlation between FDI and these factors, observed with GDP per capita in USD (0.849), average wages in USD (0.852) and gross external debt of Ukraine (0.810). The link between FDI and capital investment was weak, insignificant - with the inflation index. Thus, the relationship between foreign direct investment and inflation in Ukraine is insignificant.

The analysis of the pairwise relationships between foreign direct investment (FDI) indicators is a special case of assessing these relationships. However, in reality, this relationship is multifactorial, so an objective model of the real relationship may be a multifactorial regression relationship. We find out using the method of multifactor correlation analysis, which of the factors determines the change in the resultant feature - FDI. Among the selected factors are the following: GDP million USD. (x1), average monthly salary, USD (x2), gross external debt of Ukraine, billion dollars (x3) and capital investments, million USD (x4).

It was proved above that all these factors alone have a significant impact on FDI in Ukraine, so it is advisable to trace their overall impact on the dynamics of the performance indicator. The constructed correlation matrix between these factor features indicates the presence of multicollinearity between them. To get rid of multicollinearity, we transform the information base of factor features using a matrix of factor loads, using the principal components method.

Verification of the obtained data for the presence of multicollinearity indicates the elimination of it due to the method of principal components. The determinant of the correlation matrix is equal to one. Therefore, the transposed matrix F can be used as an input information base for multidimensional correlation-regression analysis. The closest relationship is observed between capital investment and FDI growth in Ukraine, an effective indicator. Using the Regression function in MS Excel) we will build a model (Table 5).

Table 5. Regression analysis of the model of foreign direct investment. (Source: compiled by the authors considering [1;2;3])

Regression statistics					
Plural R ²	0.99				
R ²	0.97				
Rationed R ²	0.97				
	df	SS	MS	F	Significance F
Regression	4	9360268576.54	2340067144.14	15.09	1,72162E-12
Remainder	16	247803234.79	15487702.17		
Together	20	9608071811.33			
	Coefficients	Standard error		t- statistics	
Y- crossing	33746.75	858.78		39.30	
Variable X1	18049.85	859.45		21,00	
Variable X2	-8251.78	858.89		-9.61	
Variable X3	-66.51	856.06		-0.08	
Variable X4	-5711.02	689.40		8,28	

The results of calculations on the choice of the form of the relationship between factors and performance showed that among the linear, quadratic and power dependencies more accurately approximate the initial data to study the impact of factors on foreign direct investment (FDI) - linear empirical dependence.

The multiple coefficient of determination of the multifactor model of the obtained coupling equation is 0.99. The bond density is characterized by a correlation coefficient and determination. In the obtained regression model, the latter is respectively equal to 0.97. This means that the variation in foreign direct investment by 97% is due to changes in the studied factors and less than 3% depends on other factors not taken into account.

Table 6 shows the calculated values of the factor characteristics for 2021 and the corresponding normalized values required for the calculation of the FDI forecast (cumulative total).

Table 6. Forecast of FDI on the basis of factor and performance characteristics. (Source: [6])

Indicator	Coefficient of determination	Regression equation	2021 year	Normalized values
Gross domestic product, mln. USD	R ² = 0.8283	$y = 19.874t^4 - 830.06t^3 + 10388t^2 - 30999t + 57747$	159871.37	0.99
Average salary, USD	R ² = 0.8516	$y = 0.0496t^4 - 2.0441t^3 + 25.821t^2 - 83.972t + 121.81$	327.96	0.72
Ukraine's external debt, bln. USD	R ² = 0.9875	$y = -0.0138t^3 + 0.4962t^2 - 3.0491t + 12.073$	20.205	-0.12
Capital investments, mln. USD	R ² = 0.7365	$y = -0.6364t^5 + 38.803t^4 - 837.19t^3 + 7324.2t^2 - 20317t + 20409$	$y = -0.6364t^5 + 38.803t^4 - 837.19t^3 + 7324.2t^2 - 20317t + 20409$	1.09
Foreign direct investment (cumulative total) in the economy of Ukraine, mln. USD: $Y = 33746.75 + 18049.85 X_1 - 8251.78 X_2 + 66.51 X_3 - 5711.02 X_4$		39476,46		

According to the four-factor model built in 2021, the volume of FDI (cumulative total) is USD 39476.46 million. Despite the positive forecasts of the NBU on increasing foreign direct investment flows, forecast calculations based on the model indicate the opposite situation - a decrease in FDI in 2021. Improving long-term forecasting of foreign direct investment based on econometric modeling will form a strategy for investment policy.

DISCUSSION

Attracting foreign investment is an effective means of ensuring the economic growth of any country. However, in order to create a favorable investment climate in the country, in addition to guarantees of protection of foreign investments and stability of the legal framework for entrepreneurial activity, it is important to have information transparency of the processes of managing the invested capital, clarity of information about the activities of the enterprise for foreign investors, which is ensured by the adequate organization and accounting of foreign investments.

The analysis of world experience shows that in countries with rapid economic growth and growth of foreign investment, much attention is paid to state support for foreign investment, the growth of the attractiveness of investment objects and the level of foreign investment, which is one of the indicators characterizing the degree of integration of any country into the world community.

In Japan, there are no special laws and bodies that would regulate foreign investment. Agriculture and forestry, fishing, oil and mining industry, leather industry are partially closed to foreign capital. For capital importers there are no restrictions on the purchase of the real estate in the country and the foreign partner can freely transfer its share of profits abroad. Joint ventures with foreign investment are established in the form of limited liability companies and joint stock companies.

Foreign investors are attracted by the UK tax system, which provides for the lowest taxes, unlimited transfer of profits abroad and there are no restrictions on the lease of premises for the establishment of joint ventures. For foreign investors, there are some restrictions on activities in aviation and water transport, broadcasting and insurance.

Foreign investment in the German economy occupies a much larger place than in the economy of other EU countries. In this country, the most favorable conditions for foreign investors have been created: the legislation does not impose restrictions on the import and export of capital; new firms in the first year of operation pay 25% of income tax, for the second year - half and only after the third year pay the tax in full; investment incentives are provided to small and medium-sized companies.

In Italy, the import and export of foreign capital are free. There are currency restrictions on the export of capital from the country. Non-residents can receive short-term loans and place securities in the country for foreign direct investment if they comply with the rules of currency control. The current taxation system in Italy is the same for both national companies and enterprises with foreign investments.

Analysis of the development of European countries, the USA and the rapid growth of Asian countries (USA, Germany, France, Great Britain, South Korea, Taiwan) shows that the main reason for investment activity was foreign capital, which played an active role in the development and restructuring of their economies.

Therefore, the issue of improving the investment climate and business environment is always relevant for any country, including Ukraine.

Having analyzed the tendency of establishing joint ventures in Ukraine, it can be stated that the volume of foreign investments in the Ukrainian economy remains insignificant, as there are currently no reliable tools to protect investors from the possibility of losing part of their investments, there are constant changes in legislation that hinder the attraction of investments into the national economy, potential investors are poorly informed about investment opportunities, there are certain difficulties in obtaining loans from foreign investors.

The difficulties of Ukraine's integration into the European Union are related to the problems of the country's economic situation and the production of competitive products. Countries applying for full membership in the European Union must have an established market economy and the ability to withstand competition. The discrepancy between Ukraine and the European Union is the difference between the regulatory framework, and the macroeconomic situation does not allow to quickly adapt Ukrainian legislation to the legislation of the European Union.

In addition to the above-mentioned problems, according to leading European experts, the entrepreneurial risk of investment in Ukraine is quite high and amounts to 80%, which leads to an insignificant flow of direct investment in our country.

The analysis of the development of foreign investments from and into Ukraine shows that the investment climate in Ukraine remains unfavorable due to the following reasons: imperfect legislation; instability of domestic tax legislation; high tax pressure on the capital of enterprises; inconsistency of the current regulatory documents governing investment activities; different business conditions for domestic and foreign investors; low level of national investment management; underdevelopment of the domestic investment climate; lack of investment and investment policy; lack of investment and investment policy in Ukraine.

In practice, there is a large number of ratings of the investment climate of the state or the investment attractiveness of the investment object, which are regularly published and differ in the list of components that are taken into account in the calculation.

For example, Standard and Poor's Corporation (S&P) and Moody's Investor Service, Inc. (Moody's) focus on the US market, Fitch Rating Ltd (Fitch) on European countries, and Rating & Investment Information Inc. is an indicator of issuers' solvency for Asian countries.

The parameters of the most popular indicator among domestic analysts, the Doing Business Index, include starting a business, procedures for obtaining permission to create a logistics base, hiring employees, property registration, obtaining credit, investment protection, tax payments, trade with foreign countries, drawing up a contract, closing a business. It is calculated taking into account the laws and regulations that affect the conditions of doing business.

Experts from the Heritage Foundation and The Wall Street Journal calculate the Heritage Foundation's Economic Freedom Index and define economic freedom as "the absence of government interference or obstruction of the production, distribution and consumption of goods and services, other than protecting and upholding freedom as such."

The index of economic freedom is based on 10 indices, measured on a scale from 0 to 100, with an indicator of 100 corresponds to the maximum freedom, and 0, respectively, the minimum. Among the main parameters: business freedom, trade freedom, financial freedom, government spending, currency freedom, investment freedom, financial freedom, property rights, freedom from corruption, freedom of labor.

During the period from 2012 to 2021, Ukraine gradually moved to the end of the lists. These indices give a clear signal that the investment climate in Ukraine is not comfortable for businesses, especially in the short and medium term, due to the lack of practical steps to ensure economic freedom and protect the interests of all participants in business processes with clear, predictable and unbiased rules of doing business [11,12].

CONCLUSIONS

Thus, the outpacing growth of gross investment compared to the dynamics of GDP indicates the strengthening of the investment component in Ukraine's economic growth. This indicates that Ukraine's economy is developing at a slow pace, and it needs to import investments into the country. Factor analysis of FDI indicates a significant but insufficient lead in the growth of positive investment flows (in Ukraine) over the negative (from Ukraine). The actual amount of FDI does not meet the current needs of the country's economy. Changes in the dynamics of FDI (cumulative total) are closely linked to GDP and capital investment in millions of dollars, average wages in dollars, and gross external debt in billions of dollars. The constructed model and the established correlation between the factors determine the conditions, attracting sufficient FDI, namely the growth of the state economy, welfare, reducing the country's external debt and effective public investment. Management decisions developed in these areas will contribute to the formation and implementation of Ukraine's investment policy.

Thus, the classification of factors affecting investment attractiveness is presented, defines a wide range of economic and social categories under consideration. Such an approach to investment attractiveness, i.e. based on aggregate factors for all sectors of economic activity, determines the approximate overall investment attractiveness. Taking into account the specifics of specific activities and production sectors, the criteria considered in the location analysis may contribute to different location analysis may contribute to the actual decision to varying degrees.

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МАКРОЕКОНОМІЧНИЙ АНАЛІЗ ТА ПРОГНОЗУВАННЯ ЗАЛУЧЕННЯ ПРЯМИХ ІНОЗЕМНИХ ІНВЕСТИЦІЙ: ПРИКЛАД УКРАЇНИ

Залучення іноземних інвестицій є дієвим засобом забезпечення економічного зростання будь-якої країни. Актуальність обраної тематики підкреслюється створенням сприятливого інвестиційного клімату в країні, що дозволить установити гарантії захисту іноземних інвестицій та стабільності правової бази здійснення підприємницької діяльності. Метою статті є аналіз та прогноз надходження прямих іноземних інвестицій (ПІІ) в Україну. Для досягнення поставленої мети розроблено економетричну модель, яка демонструє взаємозв'язок між макроекономічними показниками, їхніми характеристиками та обсягом ПІІ. Використано комплекс загальнонаукових та спеціальних методів дослідження, зокрема: індукція та дедукція, групування, підсумовування, порівняння, комплексний та системний підходи. У статті розкрито сутність іноземних інвестицій для економіки України та визначено характеристики ПІІ. Детально проаналізовано вплив ПІІ на економіку України та сформульовано обґрунтування умов їх залучення. Із використанням статистичних методів досліджено структуру та динаміку ПІІ за видами економічної діяльності та країнами-інвесторами. Дослідження показали, що саме за допомогою залучення прямих іноземних інвестицій забезпечується зростання економіки держави, добробуту населення, зменшення зовнішніх боргів країни та ефективні державні капіталовкладення. З урахуванням цього сформовано передумови необхідності залучення прямих іноземних інвестицій в економіку України.

Ключові слова: інвестиції, іноземні інвестиції, інвестиційний клімат, економіка, кореляційний зв'язок, факторний аналіз, Україна

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