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PROSPECTS FOR THE DEVELOPMENT OF INVESTMENT COOPERATION BETWEEN UKRAINE AND THE VISEGRAD GROUP COUNTRIES

Summary. The article examines the formation of a new format of cooperation between Ukraine and the Visegrad Group countries. A content analysis of scientific views of scientists on the peculiarities of the development of economic relations between the Visegrad Group and Ukraine in terms of the latter's desire for European integration has been made. The problems of analysis of direct investments from Ukraine to other countries as a consequence of ensuring compliance with the requirements of the Law of Ukraine "On State Statistics" on the confidentiality of statistical information are outlined. An analysis of the dynamics of the share of types of income from direct investment paid to non-residents in Poland and the Czech Republic for the period 2015–2020 is done. A structural analysis of direct investment in Ukraine from the Visegrad Group for the period 2015–2020 is made. The negative impact of the coronary crisis on the indicators of direct investments in Ukraine from the Visegrad Group countries is proved. The correlation analysis of the influence of factors on the dynamics of direct investments in Ukraine by the countries of the Visegrad Group is carried out. The forecast of direct investments in Ukraine by the countries of the Visegrad Group for the period 2021–2024 is made. under three scenarios (real, pessimistic, optimistic) based on exponential smoothing.

Key words: direct investment, Visegrad Group, income reinvestment, investment cooperation, integration.

Formulation of the problem. Attracting foreign capital is one of the most important factors for the successful economic development of Central and Eastern Europe. The development of mutual trade and investment cooperation between the Visegrad Group countries and Ukraine is becoming one of the main causes of economic growth and socio-economic transformation. Foreign direct investment (FDI) plays an important positive role in the development of the national economies of the Visegrad Group countries and Ukraine and their rapid integration into the world economy. Along with investments, foreign companies have brought technology, knowledge, modern organizational and managerial experience, increased the competitiveness and export potential of national economies. This has been made possible by effective government investment policies.

However, today we can identify excellent results of active FDI policy for some Visegrad countries. It is also possible to observe ambiguous and sometimes negative consequences of FDI on economic development in the short, medium and long term, ambiguous and uneven effects for different entities in terms of size, access to capital. Statistical and factual data, as well as existing scientific research, testify to this.

Analysis of recent research and publications. Many scientists study the problems of investment cooperation. In the framework of our study we will single out the most significant ones.

Palinchak M.M., Prykhodko V.P., Steblak D.M., Savka V.Ya. determine the possibilities of functioning of cross-border cooperation of Ukraine and V4 countries in such forms as: activity of Euroregions; action of neighborhood programs; activities of international regional organizations and associations; interregional cooperation (agreements on cross-border cooperation) [13].

Flissak K. states the need to ensure the positive dynamics of the investment segment of foreign economic activity of the

Visegrad Four, the priority of expanding investment presence in foreign markets and effective attraction of FDI into the national economy, despite the market status, role and impact of state regulation of these processes [16].

Kolomiets O.V. analyzes the priorities of modern foreign policy of the Visegrad Group, which shows a certain differentiation, discreteness and dualism due to internal contradictions in relations between member states, most of which have the ethnic color of the Hungarian minority [10].

Saveliev E., Lizun M., Kurilyak V., Lishchynsky I. state that in Central and Eastern Europe there are favorable conditions for the creation of a regionally integrated machine-building industry with fragmented production in the global network. The development of this area of integration requires the implementation of a joint strategy for technology transfer in industry 4.0, the implementation of which should include research and design institutions, quality human capital, large enterprises, small and medium enterprises, and multinational banks [5].

Kottsov V. and Lomzets Y. argue that the member countries of the Visegrad Group initiated the format of cooperation "V4 + Ukraine", took an active part in the most important processes that Ukraine has gone through. The experience of the Visegrad countries is relevant and useful for Ukraine on the way to realizing its Euro-Atlantic integration aspirations [3].

Rozetska S. and Naumkina S. conclude that the commodity structure of Ukrainian trade with the V4 countries is irrational [4]. The main exports are raw materials – Ukraine depends on these countries. At the same time, Ukraine's exports to Hungary include a significant share of innovative goods.

Schmid A. analyzes the geopolitical position and potential advantages of V4. These countries have retained their importance and position in the European context. The author also identifies a special type of regional integration that can serve as a model for other partnerships [6].

When conducting a content analysis of researchers' research, it can be concluded that the authors of most publications focus on the issue of the connection between partnership and obtaining the status of an EU member; priorities in relations between the V4 countries and the Eastern Partnership; energy supply; identified foreign policy priorities of Ukraine within the Eastern Partnership; development of civil society.

The purpose of the article. The aim is to determine the formation of a new format of investment cooperation between Ukraine and the Visegrad Group countries.

Presenting main material. The scientific interest in the development of the theory and practice of cooperation of the Visegrad Group countries in the context of modern European integration processes is important for the development and implementation of foreign and domestic policy strategies in European countries and Ukraine [1]. At the beginning of the XXI century, during the changes in the geopolitical situation on the European continent, the countries of Central Europe formed a new operating system of international relations, and, accordingly, continue to delegate some of their powers to EU supranational institutions [2].

We can state that from the first quarter of 2020 in Ukraine there is a new method of direct investment. In connection with the revision by the National Bank of Ukraine (NBU) of data on direct investment for the period 2015–2019 [15] and their publication on June 30, 2020 on its official website, data from the state statistical survey on investment in foreign economic activity for the period 01 January 2016 year – December 31, 2019 are irrelevant [8].

Unfortunately, not all data are published in the existing NBU reporting in order to ensure compliance with the requirements of the Law of Ukraine "On State Statistics" on the confidentiality of statistical information [14]. Thus, in particular, when detailing the accounts "Income from direct investment paid to non-residents (by country)" of the Visegrad Group, data on two V4 countries – Hungary and the Czech Republic, were not disclosed, only for Poland

(Fig. 1) and Slovakia (Fig. 2). According to the latest method of estimating direct investment, there is no information for the studied years (2015–2020), there is only data "Direct investment from Ukraine: balances by country." These two main shortcomings of the methodology for evaluating direct investment create significant problems in the formation of information and analytical support for existing models of analysis of investment cooperation between countries.

We would like to perform a statistical analysis of investment cooperation of Ukraine with the V4 countries and Ukraine and individual V4 countries for the period 2015–2020 in accordance with the methodology mentioned above. In Fig. 1 we consider the dynamics of the share of types of income from direct investment paid to non-residents in Poland for the period 2015–2020.

The largest value of income from direct investment paid to non-residents in Poland for the period 2015–2020 was in 2016 at an average annual growth rate of 9.35%. The increase was due to an increase in income from equity instruments and shares in investment funds (8.4%) and interest (0.95%).

In fig. 2 we consider the dynamics of the share of types of income from direct investment paid to non-residents in Slovakia for the period 2015–2020.

The amount of the share of types of income from direct investment paid to non-residents in Slovakia for the period 2015–2020 years, compared to Poland, is much smaller. Especially in 2020 year – losses in the amount of 2 million US dollars were received at the expense of reinvested income. This situation may arise as a result of the company's losses in the context of deteriorating economic conditions in the sector in which it operates, or more global economic challenges in the host country. At the same time, in 2020, the coronacrisis led to a deterioration in the financial results of enterprises, which was reflected in the formation of retained earnings of enterprises.

We cannot analyze the dynamics of the share of types of income from direct investment paid to non-residents in

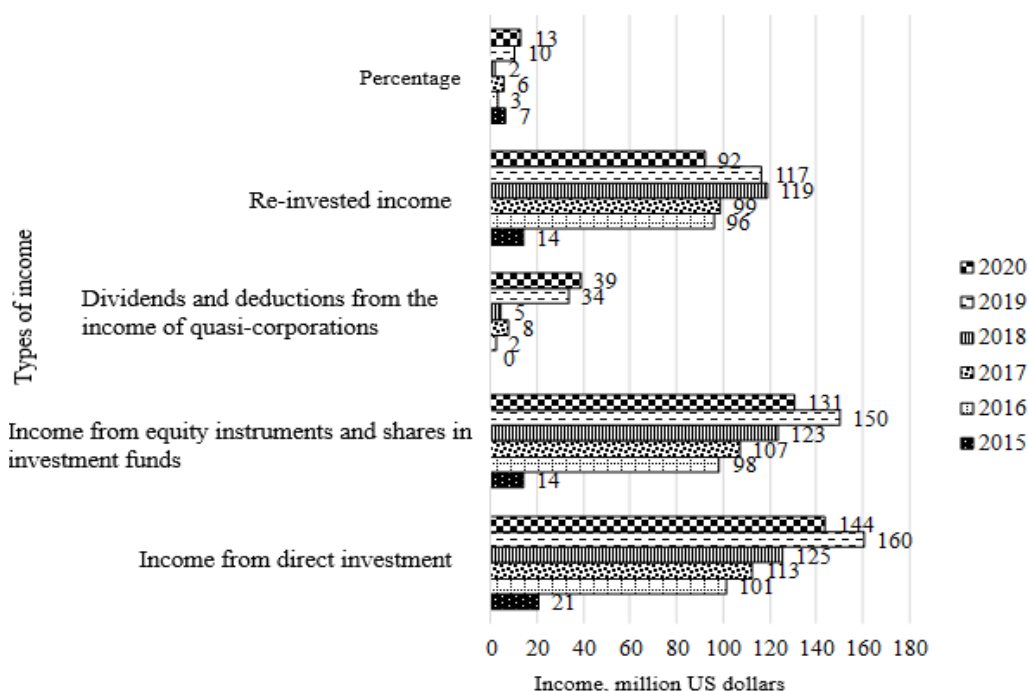


Fig. 1. Dynamics of the share of types of income from direct investment paid to non-residents in Poland for the period 2015–2020 years

Source: the dynamics are built on [15]

Hungary and the Czech Republic for the period 2015–2020 – zero values of income.

The next stage of the study is the analysis of direct investment in Ukraine from V4 countries for the period 2015–2020 years. First, we will perform a structural analysis

of the dynamics of direct investment. Direct investment in Ukraine consists of two components: equity instruments and debt instruments.

In Fig. 3 we consider the direct investment in Ukraine: operations by V4 countries for the period 2015–2020 years.

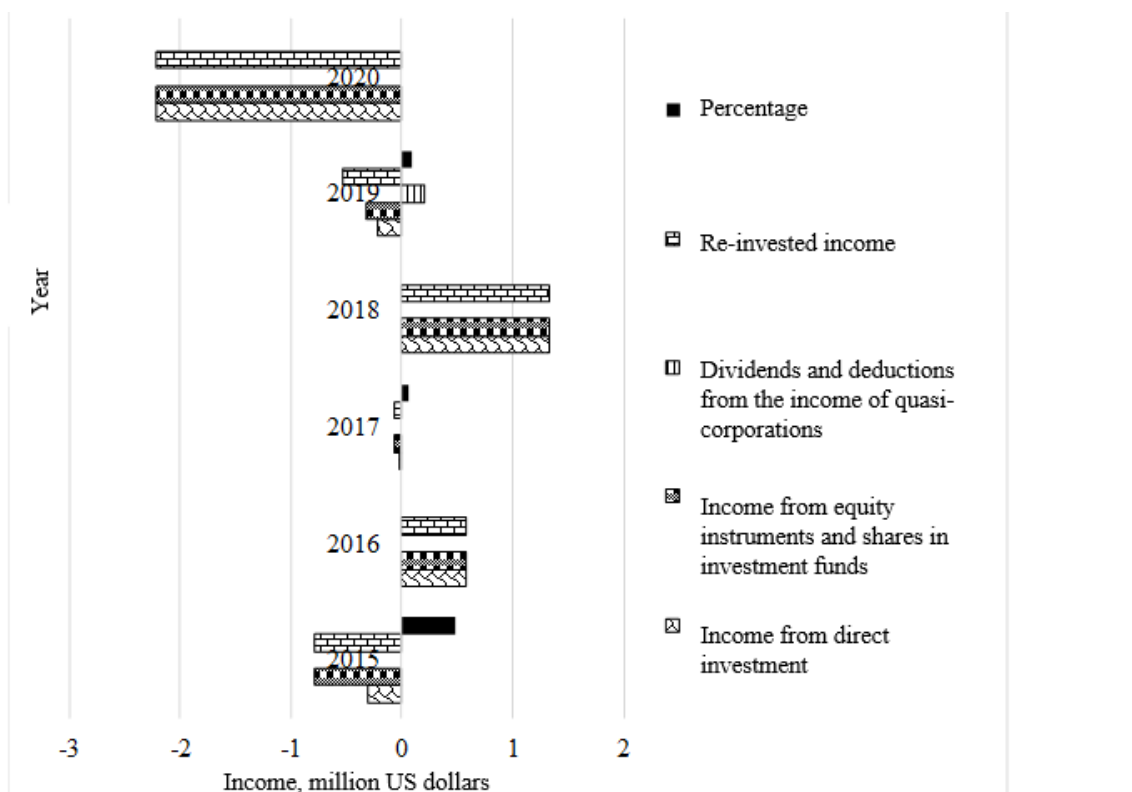


Fig. 2. Dynamics of the share of types of income from direct investments paid to non-residents in Slovakia for the period 2015–2020 years

Source: the dynamics are built on [15]

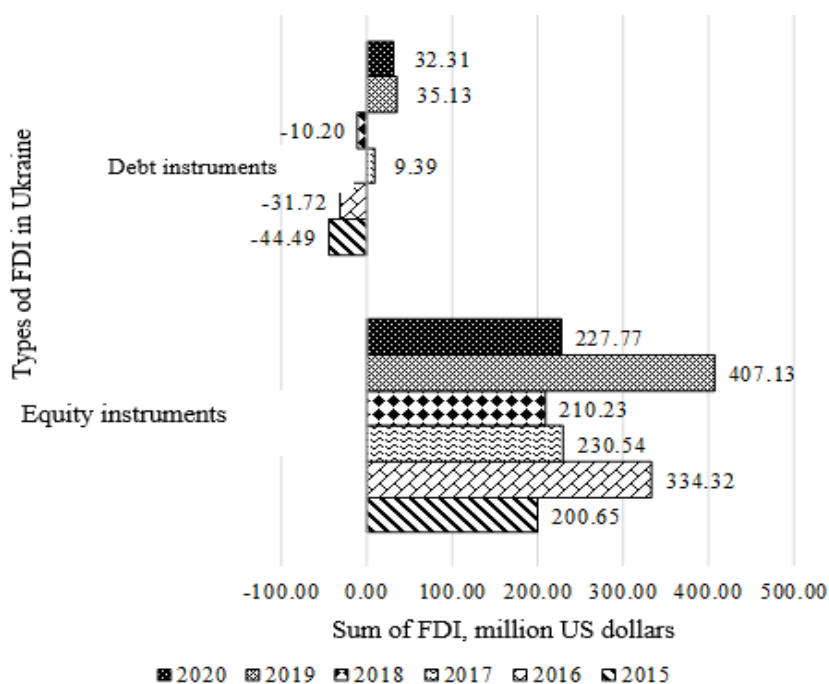


Fig. 3. Direct investment in Ukraine: operations by V4 countries for the period 2015–2020 years

Source: the figure is built on [15]

The coronacrisis in 2019–2020 significantly affected the receipt of direct investment in Ukraine from V4 countries. First, the reduction of the amount of investment from equity participation in 2020 year compared to 2019 year at 179.36 million US dollars (55.95%). Second, the increase in debt instruments in 2019 year compared to 2018 year at 45 million US dollars. In 2020 year, debt instruments decreased compared to the previous year, but the amount of reduction is insignificant – 2.82 million US dollars (8.03%).

In turn, investments from equity instruments consist of equity instruments, other than income reinvestment, and income reinvestment. In fig. 4 considers direct investment in Ukraine in accordance with the structure of equity participation instruments by V4 countries for the period 2015–2020 years.

The reduction of investments from equity participation in 2020 year compared to 2019 year (according to Fig. 4), was due to the rapid decline of the component "Instruments of participation in capital, except for reinvestment of income" – a decrease of \$ 161.23 million US dollars (92.21%).

It can be concluded that the coronary crisis significantly affected the dynamics of direct investment in Ukraine from V4 countries. However, all countries are pursuing active policies regarding COVID-19 vaccination, which significantly improves the incidence situation. As a result, it should change the economic situation in the studied countries.

Based on the results of the analysis, a forecast of direct investments in Ukraine from V4 countries for the next 4 years was developed (Fig. 5). The forecast is made on the basis of the capabilities of MS Excel package "forecast sheet".

According to the results obtained, conclusions can be drawn. Direct investment in Ukraine from V4 countries for the forecast period (2021–2024) will increase according to the considered scenarios: realistic option – change in the range

[min; max] = [260, 1; 337, 5]; pessimistic option – change in range [min; max] = [260, 1; 185, 4]; optimistic option – a change in range [min; max] = [260, 1; 569, 6].

In our opinion, in order for the optimistic option of growth of direct investments in Ukraine of the V4 countries to take place, it is necessary to have an appropriate level of development of integration trade and economic relations both between the countries and other EU member states. That is, there is a synergistic effect, which can be formally described:

$$E_{int} \rightarrow \max \text{ on condition } \begin{cases} (C; P; S; U) \cup V4 \\ (C; P; S; U) \cup EU \\ (Uk) \Leftrightarrow V4 \\ (Uk) \Leftrightarrow EU \end{cases} \quad (1)$$

where: E_{int} – synergetic effect from the development of integration trade and economic relations between countries (Ukraine, Poland, Slovakia, Hungary, the Czech Republic) and groups of countries (Visegrad Group, European Union); C – Czech Republic; P – Poland; S – Slovakia; U – Hungary; Uk – Ukraine; $V4$ – Visegrad countries; EU – European Union.

Prospects for investment cooperation between Ukraine and the Visegrad Group countries on the basis of the development of integration trade and economic relations can be determined by building a gravitational model, namely – the use of correlation analysis.

In constructing the model, the official information of the National Bank of Ukraine and the State Statistics Committee of Ukraine for the period 2015–2020 years was used.

An important step in the analysis is to characterize the change in the structure of the population over time.

The most common indicators of structural change are [7]:
1) linear coefficient of structural shifts:



Fig. 4. Direct investments in Ukraine in accordance with the structure of equity participation instruments by V4 countries for the period 2015–2020

Source: the figure is built on [15]

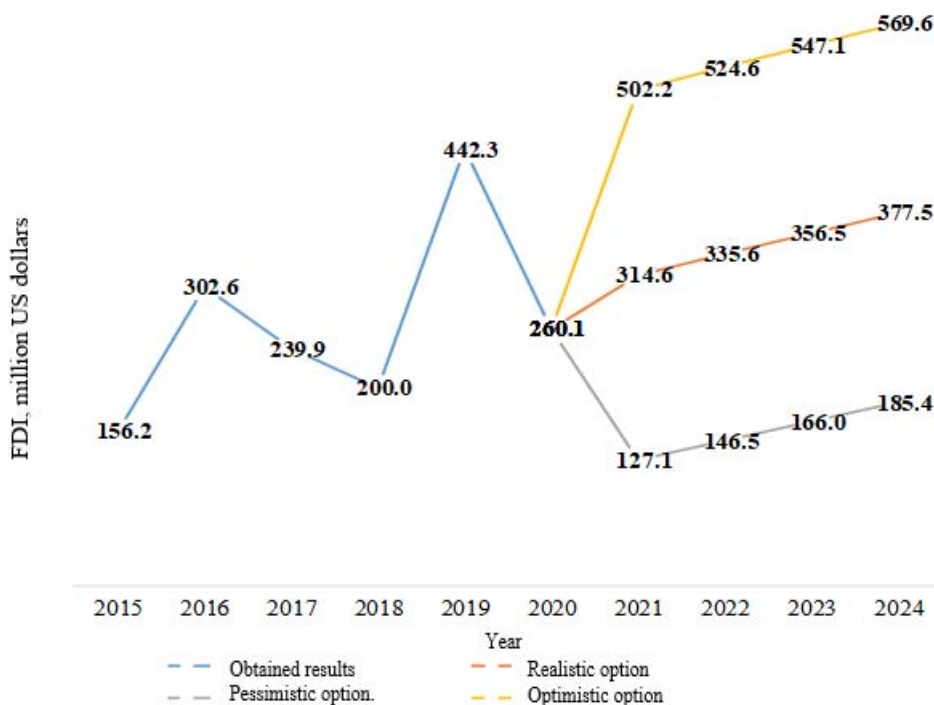


Fig. 5. Forecast of direct investments in Ukraine by V4 countries based on exponential smoothing

Source: the figure is built on [15]

$$S_d = \frac{\sum |d_1 - d_0|}{K} \quad (2)$$

where d_1, d_0 then the weight (%) of certain elements of the population in the current and base periods, the number of groups in the population;

2) the quadratic coefficient of structural shifts:

$$S_\sigma = \sqrt{\frac{\sum (d_1 - d_0)^2}{K}} \quad (3)$$

The coefficients show by how many percentage points the compared specific weights of the respective indicators deviate. Indicators do not have an upper limit, in the absence of changes in the structure are zero, the more changes in the structure – the greater their value.

Consolidated relative indicators of the structure are characterized by an integral indicator of structural shifts by K. Gatev (K_c) [7]:

$$K_c = \sqrt{\frac{\sum_{i=1}^K (d_1 - d_0)}{\sum_{i=1}^K d_1^2 + \sum_{i=1}^K d_0^2}} \quad (4)$$

and an index of differences:

$$Y_{\text{pass}} = \frac{1}{2} \sum |d_1 - d_0| \quad (5)$$

The indicators of formulas (4–5) vary in the range from 0 to 1. The closer their value to 1, the more significant changes in the structure of the population for the corresponding period of time.

The paper analyzes the intensity of direct investment in Ukraine from V4 countries in the structure. The calculated values of the corresponding indices according to formulas (2–5): $S_d = 4,92$; $S_\sigma = 11,13$; $K_c = 0,75$; $Y_{\text{pass}} = 0,47$.

The obtained calculations indicate significant changes in the structure of direct investment in Ukraine over the study period.

In order to analyze the links between the nature of direct investment between Ukraine and V4 investor countries, the study conducted a correlation analysis, which was used to determine the closeness of the links between the following factors: y_i – direct investment between Ukraine and investor countries (V4 countries); x_{1i} – GDP per capita; x_{2i} – geographical distance between Ukraine and countries; x_{3i} – population of the country.

The dummy variables were also used in the relevant analysis: x_{4i} – the presence of a common border with Ukraine (1 – available, 0 – absent). x_{5i} – linguistic distance (1 – similarity of language, 0 – significant distance in language). x_{6i} – the presence of tension in relations between countries (1 – available, 0 – absent).

The results of the correlation analysis show that direct investments in Ukraine have significant links with the following factors: the presence of a common border with Ukraine (correlation coefficient +0.705 at the significance level of 0.01); language distance (correlation coefficient +0.670 at the significance level of 0.01); GDP per capita (correlation coefficient +0.541 at the level of significance 0.01).

It should be noted that the results of correlation analysis calculations should be interpreted with caution. This is due, firstly, to a small sample – 5 years; secondly, with the fact that the FDI inflow was not stable – it increased significantly during the analysis period – total FDI inflows amounted to 156.2 million US dollars in 2015 year, while in 2020 year this figure was already 260 million US dollars, ie grew at an average annual rate of 66%. In addition, the dynamics of FDI inflows from the V4 and the EU in general (in 2019 year, direct investment amounted to 4 710 million US dollars). That is, in 2019 year the share of direct investment in Ukraine from V4 countries amounted to only 9.58% of the total amount of direct investment from the EU.

In the long run, the positive dynamics of FDI from the Visegrad Group countries should be achieved provided that the growth of labor productivity is maintained taking

into account a stable inflation policy in order to reduce the difference between inflation in Ukraine (2020 year – 5% [9]) and V4 countries (average inflation rate for 2020 year – 3.17% [12]).

An effective policy to stimulate FDI from the Visegrad countries to Ukraine should be implemented on the positive experience of investor countries, taking into account national interests. For example, Poland has introduced tax and financial instruments for countries that provide direct investment: tax benefits – tax exemptions: for income, real estate, the acquisition of new technologies, funding of research centers; tax credit for R&D; functioning of the Polish Investment Zone [11].

Conclusions and suggestions. Thus, we state that the latest method of statistical evaluation of the external sector of Ukraine according to the methodology of the 6th edition of the "Balance of Payments and International Investment Position" in accordance with the requirements of the International Monetary Fund, does not allow a full analysis of direct investment from Ukraine. In the existing NBU reporting, not all data are published in order to ensure compliance with the requirements of the Law of Ukraine "On State Statistics" on the confidentiality of statistical information.

According to the analysis of the dynamics of direct investment in Ukraine from V4 investor countries for the period 2015–2020 years, it is possible to draw a conclusion about the significant impact of the coronary crisis. But the

forecast of direct investments in Ukraine from the V4 countries for 2021–2024 years that is made in three scenarios (real, pessimistic, optimistic) allows you to identify vectors for the development of investment cooperation.

Assessment of the degree of stability or mobility of the existing structure indicates significant changes in the structure of direct investment in Ukraine from V4 countries over the period under study. The correlation analysis revealed the factors that have the greatest impact on the volume of direct investment in Ukraine, namely, the presence of a common border with Ukraine, language remoteness, GDP per capita. The built model allows to analyze the connections, nature and dynamics of structural changes in direct investment between Ukraine and V4 countries.

In order to further develop investment cooperation, in our opinion, it is necessary for Ukraine to take into account the experience of V4 countries in its policy of stimulating foreign investment. Given the scale of the V4 project, its success can be achieved by creating an effective intergovernmental governance mechanism. Transformation of relations between Ukraine and V4, as an option, can be represented by the model "V5 = V4 + UA". Its framework provides a basis for joint development and implementation of large interstate projects. Such a strategy of cooperation between the V4 Group and Ukraine will have the potential for further interconnected economic development, which will facilitate the search for an appropriate political superstructure.

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ПЕРСПЕКТИВИ РОЗВИТКУ ІНВЕСТИЦІЙНОЇ СПІВПРАЦІ МІЖ УКРАЇНОЮ І КРАЇНАМИ ВИШЕГРАДСЬКОЇ ГРУПИ

Анотація. У статті досліджено питання формування нового формату співробітництва України та країн Вишеградської групи. Здійснено контент-аналіз наукових поглядів вчених стосовно особливості розвитку економічних взаємовідносин країн Вишеградської групи та України в умовах прагнення останньої до євроінтеграції. Окреслено проблеми аналізу прямих інвестицій із України в інші країни як наслідок забезпечення виконання вимог Закону України «Про державну статистику» щодо конфіденційності статистичної інформації. Здійснено аналіз динаміки частки видів доходів від прямих інвестицій, сплачені нерезидентам у Польщі та Чехії за період 2015–2020 рр. Здійснено структурний аналіз прямих інвестицій в Україну з країн Вишеградської групи за період 2015–2020 рр. Зменшення інвестицій від участі в капіталі у 2020 р. у порівнянні з 2019 р. відбулося за рахунок стрімкого падіння «Інструменти участі в капіталі, крім реінвестування доходів» – зменшення суми на 161,23 млн. дол. США (92,21%). Доведено негативний вплив коронакризи на показники прямих інвестицій в Україну з країн Вишеградської групи. Здійснено структурний аналіз прямих інвестицій в Україну з країн Вишеградської групи за період 2015–2020 років. Доведено негативний вплив коронакризи на показники прямих інвестицій в Україну з країн Вишеградської групи. Здійснено кореляційний аналіз впливу факторів на динаміку прямих іноземних інвестицій в Україну країнами Вишеградської групи. Визначено, що фактори найбільшого впливу на обсяги прямих іноземних інвестицій в Україну є: наявність спільного кордону з Україною, мовна віддаленість, ВВП на душу населення. Здійснено прогноз прямих інвестицій в Україну країнами Вишеградської групи на період 2021–2024 рр. за трьома сценаріями (реальний, песимістичний, оптимістичний) на основі експоненціального згладжування. З метою подальшого розвитку інвестиційного співробітництва необхідно врахувати Україні у політиці стимулювання іноземного інвестування досвід країн-інвесторів. Розглянуто можливість стратегії співпраці моделі «V5=V4+UA» з метою економічного розвитку та інвестиційного співробітництва.

Ключові слова: прями інвестиції, Вишеградська група, реінвестування доходів, інвестиційне співробітництво, інтеграція.

ПЕРСПЕКТИВЫ РАЗВИТИЯ ИНВЕСТИЦИОННОГО СОТРУДНИЧЕСТВА МЕЖДУ УКРАИНОЙ И СТРАНАМИ ВЫШЕГРАДСКОЙ ГРУППЫ

Аннотация. В статье исследованы вопросы формирования нового формата сотрудничества Украины и стран Вышеградской группы. Проведен контент-анализ научных взглядов ученых относительно особенности развития экономических взаимоотношений стран Вышеградской группы и Украины в условиях стремления последней к евроинтеграции. Обозначены проблемы анализа прямых инвестиций из Украины в другие страны, как результат обеспечения выполнения требований Закона Украины «О государственной статистике» относительно конфиденциальности статистической информации. Осуществлен анализ динамики части видов доходов от прямых инвестиций, уплаченных нерезидентам в Польше и Чехии, за период 2015–2020 гг. Осуществлен структурный анализ прямых инвестиций в Украину из стран Вышеградской группы за период 2015–2020 гг. Доказано негативное влияние коронакризиса на показатели прямых инвестиций в Украину из стран Вышеградской группы. Проведен корреляционный анализ влияния факторов на динамику прямых инвестиций в Украину странами Вышеградской группы. Осуществлен прогноз прямых инвестиций в Украину странами Вышеградской группы на период 2021–2024 гг. по трем сценариям (реальный, пессимистический, оптимистический) на основе экспоненциального сглаживания.

Ключевые слова: прямые инвестиции, Вышеградская группа, реинвестирование доходов, инвестиционное сотрудничество, интеграция.