

**Iryna Babets**

*Department of International Economic Relations,*

*Central Ukrainian National Technical University, Kropyvnytskyi, Ukraine (corresponding author)*

*E-mail: irina.babets@ukr.net*

*ORCID: <https://orcid.org/0000-0003-0635-9375>*

## **Assessment of the Impact of Trade With Poland on Ukraine's Economic Growth**

**Abstract**

*The purpose* of the study is to assess the impact of Ukrainian-Polish trade in goods on the economic growth of Ukraine. The *tasks* of the study include an analysis of the dynamics and structural changes in Ukraine's trade in goods with Poland, an assessment of the impact of the main indicators of the volume of trade with Poland on Ukraine's economic growth, and a study of the relationship between the indicators of Ukraine's economic growth and changes in the volume of exports and imports of the main groups of goods in trade with Poland. In the course of the research, the *method* of regression analysis was used to determine the influence of the total volume of exports and imports and the product structure of bilateral trade on the economic growth of Ukraine. As a result of the regression analysis, the dependence of Ukraine's economic growth on imports of goods from Poland was revealed, and the impact of changes in the volume of Ukraine's exports of goods on Ukraine's economic growth was statistically insignificant. The study confirmed the dependence of Ukraine's economic growth on changes in the volume of iron ore exports to Poland and imports of cosmetic industry products from Poland. A statistically insignificant influence of exports and imports of other main groups of goods in trade with Poland on Ukraine's economic growth was found. In the period of post-war reconstruction, the deepening of Ukrainian-Polish cooperation in the implementation of joint infrastructure and industrial projects, which provide for the establishment of production of necessary products using materials and components imported from Poland, can become an important component of the economic growth of Ukraine.

**Keywords**

Ukrainian-Polish trade, export, import, economic growth, regression analysis

**JEL:** C1, F14, F43, O52

**DOI:** <https://doi.org/10.30525/2500-946X/2023-1-7>

**1 Introduction**

In the conditions of the low effectiveness of the implementation of multilateral cooperation agreements within the framework of the WTO, which has been observed in the last ten years, the role of bilateral trade agreements of the EU countries with third countries is increasing. In order to facilitate the liberalisation of bilateral trade with post-Soviet countries, the European Union introduced the European Neighbourhood Policy instrument, which provides for the use of certain preferences in bilateral trade agreements. Poland, as a member of the EU, forms its foreign trade policy in accordance with the norms and provisions of the common policy of the European Union. Therefore, an important factor for the deepening of Ukrainian-Polish trade cooperation is the signing by Ukraine of the Association Agreement with the EU and the entry into force of the Agreement on the Deep and Comprehensive Free Trade Area between Ukraine

and the EU within the framework of this document. The improvement of trade conditions between Ukraine and Poland, despite the full-scale invasion of Russian troops on the territory of Ukraine, has ensured positive dynamics of Ukrainian-Polish trade turnover, but its structure has undergone significant changes. In this regard, an urgent scientific task is to study the main parameters of bilateral trade between Ukraine and Poland, to determine the influence of the dynamics and structure of trade on the economic growth of Ukraine, and to substantiate the prospective directions of development of trade between Ukraine and Poland in the context of global changes.

The aim of the study is to assess the impact of Ukrainian-Polish trade on the economic growth of Ukraine. Research objectives: analysis of the dynamics and structural changes in Ukrainian-Polish trade; assessment of the influence of the main indicators of the volume of Ukrainian-Polish trade on the economic growth of Ukraine;

assessment of the relationship between the indicators of economic growth of Ukraine and the commodity structure of trade with Poland. In the process of research the methods of dynamic and structural analysis were used to study the dynamics and product structure of bilateral trade between Ukraine and Poland. The method of statistical correlation analysis was used to determine the influence of the total volume of exports and imports and the product structure of bilateral trade on the economic growth of Ukraine.

## **2 Theoretical Framework for Studying the Impact of Bilateral Trade on Economic Growth**

Bilateral cooperation involves the establishment of a preferential regime between two countries, which contributes to improving mutual access to their markets, increasing trade turnover and accelerating economic growth of the countries participating in the bilateral agreement. An example of the active development of modern bilateral trade relations is the European Union's activity aimed at concluding agreements on the creation of free trade zones with countries participating in the European Neighbourhood Policy (ENP) programmes. Deep and Comprehensive Free Trade Areas (DCFTAs) as an instrument of EU trade policy involve not only the reciprocal removal of trade barriers, but also the harmonisation of economic laws and regulations (related to investment protection, public procurement and competition policy) with the *acquis communautaire* (Woolcock, 2010). Based on traditional trade theory, it has been concluded that developing countries (such as the vast majority of ENP countries) are likely to benefit more from FTAs with high-income countries (such as the vast majority of the EU) than from the possible effects of concluding FTAs with other developing countries (Venables, 2003).

When studying the impact of bilateral trade on the GDP indicators of partner countries, it is important to take into account the theoretical basis formed by scientists based on the results of research on the dependence of the country's economic growth on the volume of exports and imports. In particular, the results of the study of Japan showed that exports contribute to economic growth in that country (Awokuse, 2006). Based on Granger causality tests, there is empirical evidence that exports contribute to economic growth in the Czech Republic, but not in the other eight new EU members. (Bajo-Rubio & Díaz-Roldán, 2012). The results of some studies suggest that the positive effect of exports on growth is conditional. In particular, for nine countries in the Middle East and North Africa, the hypothesis of export-led growth holds only when the share of exports of manufactured

goods exceeds a certain threshold (Abu-Qarn & Abu-Bader, 2004), and in some countries the hypothesis of export-led growth is confirmed only under the condition of a certain level of human capital, investment growth and import growth (Riezman, Whiteman & Summers, 1996).

Empirical studies have demonstrated the positive impact of imports on countries' economic growth. For example, imports have driven growth in China mainly because they provide the country with access to new technologies (Herrerias & Orts, 2013). It is theoretically justified and empirically confirmed that a larger share of foreign capital goods compared to domestic capital goods provides a higher level of economic growth (Lee, 1995). Some studies show that imports are more important than exports in driving productivity growth. In particular, exports had a small impact on productivity growth in Hong Kong, Indonesia, Japan, Taiwan and Thailand, while the import-led growth hypothesis was confirmed for India, Indonesia, Malaysia, the Philippines, Singapore and Taiwan (Thangavelu & Rajaguru, 2004). For Argentina, Colombia and Peru, a significant contribution of both exports and imports to economic growth is confirmed, but the impact of import growth is more substantiated (Awokuse, 2008).

The results of modern studies of international trade confirm the significant influence of trade relations on the economic growth of countries. At the same time, for some countries the export is a more important factor of economic growth, and for the economies of other countries – the import, which is due to the importance of not only the volume of foreign trade of countries, but also the structure of export and import. The exports of developed countries are dominated by goods with a higher degree of processing, so the impact of exports on the GDP of these countries is greater than the impact of exports on the economy of developing countries. Accordingly, the impact of bilateral trade depends on the level of development of the economies of the countries involved, which is a determining factor in the commodity structure of trade between these countries. Therefore, the export of raw materials does not always have a positive effect on the economic growth of the exporting country, and the import of raw materials, as a resource component of the creation of gross value added, is mainly a factor in the economic growth of the importing country.

## **3 Dynamics and Structure of Trade in Goods between Ukraine and Poland**

In the period from 2010 to 2021, the volume of trade in goods between Ukraine and Poland increased significantly. According to statistical data (State Statistics Service of Ukraine, 2021a), exports of Ukrainian goods to Poland will increase almost three times (from 1,787.2 million USD to 5,227.4 million

USD), while imports will increase 1.8 times (from 2,788.8 million USD to 4,962.5 million USD). During this period, export growth rates were significantly higher than import growth rates, which indicates positive changes in the dynamics of Ukraine's trade with Poland. Over the period analysed, the foreign trade turnover of bilateral trade increased from 4,576 to 10,189.9 million USD, and the share of Poland in the total volume of Ukraine's foreign trade in goods increased from 4.1% to 13.5%.

According to official statistics (State Statistics Service of Ukraine, 2021b), the commodity structure of exports from Ukraine to Poland (according to HS2 classification) in 2021 will be dominated by ferrous metals (26.6%), ores, slag and ash (10.6%), fats and oils of animal or vegetable origin (7.6%), electrical machinery (7.6%) and furniture (6.9%). In 2011–2021, the share of fats and oils of animal or vegetable origin in Ukraine's exports to Poland will increase almost threefold (from 2.8% in 2011), the share of furniture will increase fourfold (from 1.6% in 2011) and the share of ferrous metals will increase slightly (from 25.3% in 2011).

The most important goods in the structure of exports from Ukraine to Poland (according to the HS4 classification) in 2010 were iron ore (381 million USD), hot-rolled iron (250 million USD), insulated wire (160 million USD). In 2020, Ukraine will export goods to Poland for a total amount of 3.26 billion USD, and the main products exported from Ukraine to Poland will be iron ore, insulated wire and seats. Thus, the commodity structure of Ukrainian exports changed somewhat in 2020 (Table 1). The share of hot rolled iron decreased more than threefold, or in value from 250 million USD to 129 million USD, and the share of iron ore almost halved (in value from 381 million USD to 373 million USD). At the same time, the share of higher value-added products in the structure of Ukrainian exports increased during the period under review. Exports of seats rose from 12.2 million USD to

171 million USD, insulated wire from 160 million USD to 298 million USD, soybean oil from 23.4 million USD to 124 million USD, seed oils from 24 million USD to 108 million USD).

During the period 2010–2020, the export value of insulated wire almost doubled, the export value of soybean oil increased more than fivefold and the export value of sunflower oil increased almost fivefold. A significant increase in the volume of exports of these goods should lead to additional GDP growth, and a decrease in exports of rolled metal to Poland could have a negative impact on Ukraine's GDP.

Polish imports to Ukraine in 2010 were dominated by refined petroleum (131 million USD), coke (43.2 million USD) and insulated wire (127 million USD). Over 10 years, the share of these goods in the total volume of imports from Poland to Ukraine has decreased significantly: refined oil – to 0.37%, which in value terms amounted to 20.9 million USD, coke – to 0.52% (29.6 million USD) and insulated wire – to 1.72% (298 million USD). At the same time, the share of imports from Poland increased for high-tech goods such as packaged medicines (from 1.09% to 1.93%) and cars (from 0.7% to 5.75%). In 2020, Ukraine imported a total of 5.68 billion USD worth of goods from Poland, the most important of which were motor vehicles (327 million USD), packaged medicines (110 million USD) and motor vehicles, parts and accessories (106 million USD). The decrease in the import of components, especially insulated wire, and raw materials (refined oil) indicates a decrease in the need of Ukrainian enterprises for these intermediate goods and a decrease in the production of final products using them, which could also become a significant factor influencing the dynamics of Ukraine's GDP.

Despite the full-scale invasion of Russian troops and the imposition of martial law in Ukraine, the volume of trade with Poland increased in 2022.

TABLE 1 Dynamics of the product structure of Ukrainian-Polish trade in 2010–2020

Exports from Ukraine to Poland			Imports to Ukraine from Poland		
Products	Share in exports, %		Products	Share in imports, %	
	2010	2020		2010	2020
Insulated wire	8,67	9,12	Refined petroleum	3,32	0,37
Iron ore	20,6	11,4	Coke	1,1	0,52
Hot-Rolled iron	13,5	3,95	Insulated wire	3,23	1,72
Soybean oil	1,27	3,79	Video displays	1,97	0,92
Seats	0,66	5,24	Toilet paper	3,45	1,5
Seed oils	1,3	3,32	Motor vehicles, parts and accessories	2,09	1,86
Vegetables	0,22	2,72	Beauty products	1,84	0,95
Sawn wood	1,3	0,94	Packaged medicaments	1,09	1,93
Ferroalloys	1,95	1,49	Cars	0,7	5,75

Source: compiled by the author based on the data (Trade Ukraine-Poland)

According to the Polish-Ukrainian Chamber of Commerce (PUIG), in July Ukraine ranked 7th among the main partners of Polish companies in terms of export volume and 14th in terms of import volume (Szybko rośnie handel). In the seven months of 2022, Polish exports to Ukraine increased by 27% compared to the previous year and amounted to almost 5.1 billion USD. Imports of goods from Ukraine to the Polish market grew even faster: in January-July their value increased by as much as 35% year-on-year, reaching 3.9 billion USD (Szybko rośnie handel). As a result, the negative balance of Ukraine's foreign trade with Poland amounted to 1.2 billion USD, which is half as much as in 2020, when its value was at the level of 2.42 billion USD.

During the war, the dynamics of imports of Polish goods into Ukraine differed significantly by product group. Thus, in 2022, the import of machinery, mechanical and electrical equipment, and plastic products from Poland decreased, and the share of fuel in imports increased to 21% (Mroczek, 2022). The increase in the import of energy products from Poland is due to the formation of a fuel shortage in Ukraine after the destruction of the oil refining infrastructure as a result of missile attacks, as well as the rise in the price of diesel fuel and petrol and the corresponding increase in the cost of this product group. The second largest group of goods imported from Poland to Ukraine in 2022 will be vehicles, which will account for 18% of imports (Mroczek W., 2022), due to the introduction of a decision to suspend the payment of customs duties and VAT on the import of cars.

Thus, Poland remains an important trade partner of Ukraine, despite the problem of ensuring the production of goods under the conditions of destruction of industrial potential and energy infrastructure in Ukraine, and the complication of logistics of delivery of goods in connection with the congestion of border and customs checkpoints. Taking into account the positive dynamics of trade between Ukraine and Poland, as well as a significant increase in Poland's share in Ukraine's foreign trade turnover, the following hypotheses can be made H1 – an increase in exports and imports in bilateral trade has a positive impact on Ukraine's economic growth; H2 – the increase in the volume of exports of Ukrainian goods with a higher level of added value has a greater impact on the economic growth compared to the impact of raw materials; H3 – the import of basic goods from Poland has a positive impact on the economic growth of Ukraine.

#### **4 Dependence of Ukraine's Economic Growth on Trade with Poland**

In order to determine the relationship between bilateral trade and economic growth, this study uses a regression analysis of the dependence of Ukraine's

economic growth on the volume of exports and imports of goods within bilateral trade according to the following model:

$$Econ\_gr = f(Exp; Imp; Exp/Imp), \quad (1)$$

where  $Econ\_gr$  is a vector of the dependent variable characterizing the country's economic growth and includes indicators of GDP, GDP per capita ( $GDP\_pc$ ), GDP index for the previous year ( $Index\_GDP$ );  $Exp$  – volumes of goods exported to the partner country;  $Imp$  – volumes of imports from the partner country;  $Exp/Imp$  – coefficient of export coverage of import in bilateral trade with a partner country.

To determine the impact of the commodity structure of bilateral trade on Ukraine's economic growth, a linear regression model is estimated that expresses the dependence of economic growth (GDP, GDP per capita, GDP index) on the volume of exports and imports of major commodity groups:

$$Econ\_gr = f(Exp_1; Exp_2; Exp_n; Imp_1; Imp_2; Imp_n), \quad (2)$$

where  $Exp_1; Exp_2; Exp_n$  – volumes of export of basic goods (commodity group 1, 2.... n) to the partner country;  $Imp_1; Imp_2; Imp_n$  – volumes of import of basic goods (commodity group 1, 2.... n) from the partner country.

In order to assess the parameters of bilateral trade and its impact on the economic growth of the participating countries, it is advisable to use the linear regression equation, which is based on the theoretically justified interdependence of foreign trade indicators and economic growth. Accordingly, at the first stage of the research it is necessary to assess the impact of quantitative trade indicators (volume of exports to the partner country, volume of imports from the partner country) on the economic growth of Ukraine by means of regression analysis. In the second stage of the study, we will determine the dependence of Ukraine's economic growth on the commodity structure of exports and imports in trade with Poland based on the construction of a linear regression model.

In order to verify the proposed hypotheses on the dependence of Ukraine's economic growth on trade with Poland, a regression analysis of statistical data for 2010–2020 was carried out. Using the Statistica 7.0 program, a linear regression model was constructed, where the vector of the dependent variable includes indicators of GDP, GDP per capita, and GDP index for Ukraine and Poland, respectively, and the indicators of the volume of exports and imports in Ukraine's trade with Poland, as well as the export-import coverage ratio, were used as independent variables (Table 2).

As a result of the regression analysis, a statistically insignificant influence of the export-import coverage ratio in the bilateral trade of Ukraine and Poland on the indicators of economic growth of Ukraine in 2010-2020 was found. The regression analysis confirmed the existence of a direct dependence of

TABLE 2 Indicators of economic growth of Ukraine and trade in goods with Poland in 2010–2020

Year	Economic growth			Trade with Poland		
	GDP, billion USD	GDP per capita, billion USD	GDP index, % to the previous year	Exports to Poland, billion USD	Imports from Poland, billion USD	Export-import coverage ratio
2010	141,21	2965	104,1	1,85	3,93	0,47
2011	169,33	3570	105,4	2,82	4,6	0,61
2012	182,59	3855	100,2	2,57	5,17	0,49
2013	190,5	4030	100,0	2,56	5,61	0,45
2014	133,5	3105	89,0	2,65	4,12	0,64
2015	91,03	2125	90,2	2	3,26	0,61
2016	93,36	2188	102,4	2,21	3,84	0,57
2017	112,09	2641	102,4	2,77	4,9	0,56
2018	130,89	3097	103,5	3,3	5,36	0,61
2019	153,88	3663	103,2	3,32	5,46	0,60
2020	156,62	3727	96,2	3,26	5,68	0,57

Source: compiled by the author based on the data (GDP Ukraine; Trade Ukraine – Poland)

Ukraine's GDP in current prices on changes in the volume of imports of Polish goods to Ukraine: a 1% increase in imports was associated with a 0.982% increase in GDP, other things being equal (Table 3). The value of the coefficient of determination shows that only 52.6% of the change in Ukraine's GDP at current prices is due to changes in the volume of imports of Polish goods to Ukraine, and 47.4% depends on other factors. The change in the volume of imports of goods from Poland also has a direct effect on the volume of Ukraine's GDP per capita: a 1% increase in the independent variable contributes to a 0.979% increase in the dependent variable, all else being equal. The value of Ukraine's GDP per person depends 66.8% on changes in the volume of imports from Poland and 33.2% on other factors.

The results of the regression analysis confirm the H1 hypothesis regarding the existence of a direct dependence of Ukraine's GDP and GDP per capita

on the increase in the volume of imports of goods from Poland. At the same time, the hypothesis of a positive effect of the increase in the export of Ukrainian goods to Poland was not confirmed. In order to test hypotheses H2 and H3, it is necessary to examine how the change in export and import of basic goods affected the indicators of economic growth of Ukraine in 2010–2020.

In order to verify the dependence of Ukraine's economic growth on the export of basic goods to Poland and the import of goods from Poland in the period 2010–2020, a regression analysis was carried out and a model was constructed in which the vector of the dependent variable includes indicators of GDP, GDP per capita, GDP index (Table 1). Indicators of export and import of the main goods in Ukraine's trade with Poland (Table 4) are used as independent variables.

According to the results of the regression analysis, only the change in the export of iron ore

TABLE 3 The dependence of indicators of economic growth of Ukraine on the volume of imports of goods from Poland in 2010–2020

Factor features	Dependent variable	
	GDP	GDP <sub>pc</sub>
Number of observations	11	11
Intercept	3,413*** (0,480)	6,537*** (0,355)
Import	0,982** (0,310)	0,979*** (0,230)
R	0,725	0,817
R <sup>2</sup>	0,526	0,668
F-criterion	F(1,9)=10,004	F(1,9)=18,133

\* – statistical error rate (p-level) ≤10%; \*\* – statistical error rate (p-level) ≤5%; \*\*\* – statistical error rate (p-level) ≤1%.

Source: calculated by the author

TABLE 4 Exports and imports of the main goods in trade of Ukraine with Poland in 2010–2020

Year	Export of goods to Poland, million USD					Imports from Poland, million USD					
	Iron ore	Hot-rolled iron	Insulated wire	Sunflower oil	Soybean oil	Insulated wire	Refined petroleum	Motor vehicles	Cars	Beauty products	Packaged medicaments
2010	381	250	160	24	23,4	127	131	82	27,3	72,2	42,9
2011	502	382	214	49,1	25,3	105	162	72,9	46,2	60,8	59,6
2012	377	266	180	66,2	38,3	112	308	64,5	67,5	57,9	60,4
2013	391	231	273	20,5	33,9	164	457	70,3	55,7	59,3	81,8
2014	363	289	297	15,7	36,4	166	317	50	33,1	51,4	63,5
2015	217	184	262	10,1	29,9	133	296	40	33,5	40,1	36,2
2016	192	238	251	15,4	35,1	125	141	48,4	72,8	39,2	75,8
2017	287	221	310	53,4	48,9	209	260	62,7	113	42,7	90,3
2018	381	210	344	42,4	56,1	213	32,3	90,9	131	53	98,3
2019	414	178	321	49,7	90,8	169	26,7	93	231	54,5	99,5
2020	373	129	298	108	124	97,8	20,9	106	327	53,9	110

Source: compiled by the author based on the data (Trade Ukraine – Poland)

had a direct impact on Ukraine's economic growth (Table 5), while the impact of the change in the export of rolled metal, insulated wire, sunflower oil and soybean oil turned out to be statistically insignificant. A strong correlation was found between Ukraine's GDP and iron ore exports to Poland, as indicated by the high value of the correlation coefficient. When the independent variable increased by 1%, the dependent variable increased by 0.767%, all else being equal. There was also a positive effect of the change in iron ore exports on Ukraine's GDP: a 1% increase in the independent variable contributed to a 0.679% increase in the dependent variable, other things being equal.

During the period 2010–2020, Ukraine's GDP per capita also depended on changes in the import of cosmetics from Poland. A 1% increase in imports of Polish cosmetics contributed 0.877% to the growth of the dependent variable, ceteris paribus. At the same time, the coefficient of determination shows that 55.1% of Ukraine's GDP per capita depended on changes in cosmetic imports and 44.9% on other factors.

Thus, the hypothesis that Ukraine's economic growth is directly dependent on imports of goods from Poland is partially confirmed, as the impact of imports of cars, insulated wires, refined oil, vehicles and medicines was statistically insignificant. Such findings can be explained by the fact that Ukraine

TABLE 5 The dependence of Ukraine's economic growth on the export and import of certain goods in trade with Poland in 2010–2020

Factor features	Dependent variable		
	GDP	GDP <sub>pc</sub>	GDP <sub>pc</sub>
Number of observations	11	11	11
Intercept	0,447* (0,818)	4,080*** (0,722)	4,570*** (1,045)
<i>Exp_iron_ore</i>	0,767*** (0,140)	0,679*** (0,123)	-
<i>Imp_beauty_prod</i>	-	-	0,877*** (0,263)
R	0,877	0,877	0,742
R <sup>2</sup>	0,769	0,770	0,551
F-criterion	F(1,9)=30,009	F(1,9)=30,133	F(1,9)=11,058

\* – statistical error rate (p-level) ≤10%; \*\* – statistical error rate (p-level) ≤5%; \*\*\* – statistical error rate (p-level) ≤1%.

Source: calculated by the author

imports from Poland mainly finished goods, which are sold on the Ukrainian market but are not used in the creation of added value. Only imports of cosmetics had a positive impact on Ukraine's economic growth, as domestic companies produced cosmetic products or provided cosmetology services on the basis of cosmetic raw materials imported from Poland.

## 5 Conclusions

Traditionally, Poland has been one of Ukraine's top five trading partners, and in 2022 it became the largest partner among EU countries. The total volume of Ukrainian exports to Poland is dominated by raw materials (iron ore, hot-rolled iron), and the structure of imports from Poland to Ukraine is dominated by goods with a higher degree of processing and high-tech products. As a result of the regression analysis, the dependence of Ukraine's economic growth on changes in imports of goods from Poland was revealed. The increase in the volume of imports of goods from Poland contributed to the increase in Ukraine's GDP and GDP per inhabitant in the period 2010-2020. The effect of changes in the volume of Ukrainian exports to Poland and the coefficient of export coverage of imports in bilateral trade on Ukraine's economic growth turned out to be statistically insignificant. Therefore, hypothesis H1 was confirmed only with respect to the dependence of Ukraine's economic growth on imports of goods from Poland.

Despite the inefficient structure of Ukraine's exports, the study confirmed the dependence of Ukraine's economic growth on changes in the

volume of iron ore exports to Poland. At the same time, no dependence of Ukraine's economic growth indicators on changes in exports of hot-rolled iron, insulated wire, sunflower oil and soybean oil was found. Thus, the H2 hypothesis was not confirmed and the export of raw materials (iron ore) to Poland remains an important factor in Ukraine's economic growth. The impact of exports of Ukrainian goods with a higher degree of processing was statistically insignificant, which can be explained by the small volume of exports of these goods compared to exports of raw materials.

As a result of the study, the positive impact of the import of cosmetic industry products from Poland on the economic growth of Ukraine was revealed, which is due to the further use of cosmetic materials in the production of consumer goods or in the provision of cosmetic services. No statistically significant influence of other product groups of Ukrainian-Polish trade on the economic growth of Ukraine was found. In particular, the import of cars and vehicles does not affect Ukraine's economic growth, as they are imported for the purpose of sale to consumers on the Ukrainian market and do not participate in the creation of added value in industry.

Possible areas of further research include the development of mechanisms for deepening Ukrainian-Polish trade relations after the end of the war in Ukraine, in the process of implementing joint projects for the reconstruction of infrastructure, the development of military-industrial complex enterprises, the component of which will be the production of necessary products using materials and components imported from Poland.

## References

- [1] Abu-Qarn, A., & Abu-Bader, S. (2004). The validity of the ELG hypothesis in the MENA region: Cointegration and error correction model analysis. *Applied Economics*, 36(15), 1685–1695.
- [2] Awokuse, T. (2006). Export-led growth and the Japanese economy: evidence from VAR and directed acyclic graphs. *Applied Economics*, 38(5), 593–602.
- [3] Awokuse, T. (2008). Trade openness and economic growth: Is growth export-led or import-led? *Applied Economics*, 40(2), 161–173.
- [4] Bajo-Rubio, O., & Díaz-Roldán, C. (2012). Do exports cause growth? Some evidence for the new EU members. *Post-Communist Economies*, 24(1), 125–131.
- [5] State Statistics Service of Ukraine (2021a). Heohrafichna struktura zovnishnoi torhivli Ukrainy tovaramy [Geographical structure of Ukraine's foreign trade in goods]. E-source: [https://ukrstat.gov.ua/operativ/operativ2020/zd/ztt/ztt\\_u/arh\\_ztt2020.html/](https://ukrstat.gov.ua/operativ/operativ2020/zd/ztt/ztt_u/arh_ztt2020.html/) (in Ukrainian)
- [6] State Statistics Service of Ukraine (2021b). Krainy za tovarnoiu strukturoiu zovnishnoi torhivli [Countries by commodity structure of foreign trade]. E-source: [https://ukrstat.gov.ua/operativ/operativ2021/zd/kr\\_tstr/arh\\_kr\\_2021.htm](https://ukrstat.gov.ua/operativ/operativ2021/zd/kr_tstr/arh_kr_2021.htm) (in Ukrainian)
- [7] GDP (current US\$) – Ukraine. E-source: <https://worldbank.org>
- [8] Herrerias, M., & Orts, V. (2013). Capital goods imports and long-run growth: Is the Chinese experience relevant to developing countries? *Journal of Policy Modeling*, 35(5), 781–797.
- [9] Lee, J. (1995). Capital goods imports and long-run growth. *Journal of Development Economics*, 48(1), 91–110.
- [10] Mroczek W. Wojenny wzrost polskiego eksportu do Ukrainy. 13.09.2022. E-source: <https://www.obserwatorfinansowy.pl/bez-kategorii/rotator/wojenny-wzrost-polskiego-eksportu-do-ukrainy>
- [10] Riezman, R., Whiteman, C., & Summers, P. (1996). The engine of growth or its handmaiden? A timeseries assessment of export-led growth. *Empirical Economics*, 21(1), 77–110.

- [11] Szybko rośnie handel Polski z Ukrainą. E-source: <https://www.rp.pl/handel/art37261041-szybko-rosnie-handel-polski-z-ukraina>
- [12] Thangavelu, S., & Rajaguru, G. (2004). Is there an export or import-led productivity growth in rapidly developing Asian countries? A multivariate VAR analysis. *Applied Economics*, 36(10), 1083–1093.
- [13] Trade Ukraine-Poland. E-source: <https://oec.world/en/profile/bilateral-country/pol/partner/ukr>
- [14] Venables, A. J. (2003). Winners and losers from Regional Integration Agreements. *Economic Journal*, 113(490), 747–761.
- [15] Woolcock, S. (2010). EU trade and investment policy-making after the Lisbon Treaty. *Intereconomics*, 45(1), 22–25.

Received on: 13th of April, 2023

Accepted on: 17th of May, 2023

Published on: 31th of May, 2023