



***Microeconomics***

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**CROSS-BORDER TRANSPORT  
AND LOGISTICS CLUSTER AS A TOOL  
FOR TERRITORIAL DEVELOPMENT  
OF UKRAINE AND POLAND:  
INSTITUTIONAL BASIS**

**Abstract**

Intensification of cross-border cooperation in border regions of Ukraine and Poland should be one of the priorities in the wartime and post-war period. This is primarily substantiated by the significant problems in organizing international logistics of international trade due to the blockade of the sea ports. The paper presents a comprehensive approach to assessing the effectiveness of international logistics and its organization in Poland and Ukraine. The approach utilizes a set of indicators that characterize the current conditions of the transport-logistics system in terms of infrastructural support. Namely, indicators in-

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clude the Logistics Performance Index, logistics costs, 3PL revenues, export of goods, import of goods, export of transport services, import of transport services, the balance of export-import operations, export-import coverage ratio, volumes of cargo transportation by various modes of transport, cargo turnover by various types of transport, volume of direct Ukrainian investments in Poland, volume of direct Polish investments in Ukraine. The diagnostics results make it possible to identify the key barriers inhibiting the effective organization of foreign economic logistics in the foreign trade of Ukraine and Poland. Restoration of Ukraine's economy requires a flexible logistics system capable of quickly responding to external threats and adapting to them. For this reason, the authorities, business, academia and researchers, the public, and the international community must direct their efforts at overcoming the challenges created by the war. Current logistics infrastructure must be reoriented and all export flows must be redirected from the southern seafaring ports to western land ports. Finally, there should be sufficient institutional basis for the emergence of a cross-border transport and logistics cluster as a tool for territorial development of Ukraine and Poland.

### **Key Words:**

regional economy, cross-border cooperation, transport logistics, transport and logistics system, Logistics Performance Index, logistics costs, 3PL revenue, foreign trade indicators, logistics barriers, martial law, infrastructure support, transport and logistics cluster, institutional support, partner programs of economic cooperation, efficiency.

**JEL:** F40; L91; M31; O18; R10; R58.

7 tables, 52 references.

## Literature Review and Problem Statement

In the conditions of global challenges and external threats that Ukraine has faced in recent years, building partnership relations with EU countries and deepening international economic partnership and cross-border cooperation are of highest priority. Ukraine has chosen the European vector of economic development.

One of the main priorities of the Ukrainian economy is the cross-border cooperation with Poland in transport logistics on the basis of clustering, digitalization, and environmentalization in the context of ensuring sustainable development. This corresponds to the main provisions of Chapter 27 of the Association Agreement, regulatory and programmatic documents on regional policy and cross-border cooperation, and agreements on economic partnership and cooperation between Ukraine and Poland.

Moreover, the issues of cooperation with Poland are becoming particularly relevant at the moment of Russia's armed aggression against Ukraine due to the emergence of significant problems in the organization of foreign economic logistics caused by the blockade of Black Sea ports. The relevance of this topic is confirmed by the organization of many scientific and practical events, for example, the online conference «Ukraine-Poland: logistic issues, prospects and possibilities of bilateral cooperation» (on June 15, 2022 in Kyiv by the Ministry of Infrastructure of Ukraine, Chamber of Commerce and Industry of Ukraine, Foreign Trade Bureau of the Polish Investment and Trade Agency); extended meeting of the Anti-Crisis Headquarters (on July 21, 2022 in Kyiv by Ukrainian Union of Industrialists and Entrepreneurs); Ukrainian-Polish forum «Opportunities of logistics infrastructure (ports) of Poland to increase export-import with Ukraine» (on July 28, 2022 in Kyiv by the Ukrainian Union of Industrialists and Entrepreneurs), etc.

This raised the question of finding fundamentally new mechanisms, ways, possible organizational forms of partnership, and effective institutions of regional development in the field of transport logistics in the modern conditions of martial law. This determined the choice of the selected research topic.

In research preparation for this study, the authors reviewed conclusions of publications supporting various scientific schools. For example, M. Porter (1985; 1998) examined the cluster approach to the problems of increasing competitiveness, while F. Fukuyama (1999) identified the specifics of information networks and typical network structures. M. Castells (2010) propagated the theory of the information age and network society; meanwhile H. Etzkowitz (2008; 2018) and L. Leydesdorff (1995; 2012) developed the triple helix model. K. Ketels (2004; 2008) investigated the development and support of cluster initiatives and L. Orvedal (2002) determined the structure of cluster associations.

The issues of clustering of the national economy, development and implementation of various types of cluster policies and cluster initiatives are among the scientific interests of many leading foreign scientists (Benner, 2017; Delgado et al., 2010; Dussauge et al., 2000; Enright, 1992; Feser, 1998; Fornahl & Grashof, 2021; Hassink, 2021; Kowalski, 2020; Morgulis-Yakushev & Sölvell, 2017; Swann & Preveser, 1996).

The development of the network approach as a specific form of business organization began in the mid-1960s as a result of the scientific and technological revolution and the emergence of globalization processes. Then the internationalization of economic processes intensified, integration took on a global scale. Business entities started to actively use various forms of cooperation and network partnership. The growing need to understand network interaction caused the emergence of the business network theory, which was significantly developed by Western researchers like J. Podolny and K. Page (1998), and T. Broekel and R. Boschma (2012).

Issues of interstate and cross-border cooperation in various spheres of economic activity have been extensively studied around the world (Guo, 2015; Holsti, 1973; Johnson, 2009; Liska, 1968; Löfgren, 2004; Milner, 1992; Snyder, 1997; Wolfers, 1962). Ukrainian researchers have also investigated this topic (Babanska, 2017; Bila et al., 2011; Holovnia, 2015; Yevchak et al., 2020; Markovych, 2015; Mikula, 2004, 2012; Mytko & Tykhomyrova, 2013; Pavlikha, 2006; Romanenko, 2018; Sedliar & Kravchenko, 2017).

Literature review (Wolfers, 1962; Liska, 1968; Holsti, 1973; Snyder, 1997; Löfgren, 2004; Johnson, 2009; Guo, 2015; Mikula, 2004, 2012; Pavlikha, 2006; Bila et al., 2011; Mikula & Zasadko, 2014; Mytko & Tykhomyrova, 2013; Markovych, 2015; Holovnia, 2015; Babanska, 2017; Sedliar & Kravchenko, 2017; Romanenko, 2018; Yevchak et al., 2020), shows that there is currently no single conceptual approach to defining cross-border cooperation. This is due to how ambiguous and multifaceted this concept is, as well as due to the fact that representatives of various economic theories and schools have their own scientific approaches and ideas. After all, the term *cross-border cooperation* can be considered from the standpoint of international law, state and regional administration, national and economic security, management of foreign economic activity, territorial marketing, or international business.

For the most part, researchers understand the concept of *cross-border cooperation* as an element of state policy, a type or component of interregional cooperation, a method of achieving the political interests of states; a specific sphere of foreign economic activity; a form of international cooperation; one of the promising directions of international integration; a type of international activity; a complex and multifaceted phenomenon of the development of international relations; a form of interstate integration through deepening ties of border regions; a component of the system of international relations at the interregional and local levels; an element of the system of international economic relations; a form of world

economic integration; a tool of regional development; joint activity of authorities of border regions; a regional marketing tool, etc.

Based on the generalization of conceptual provisions regarding this issue, we propose to consider the term *cross-border cooperation* as an important factor in increasing the level of national security of the state, an effective form of furthering European integration, a strategic priority of sustainable territorial development, and a key component of the regional development strategy.

Thus, **the aim of this article** is to provide scientific and methodological substantiation of the institutional foundations for the creation of a cross-border transport and logistics cluster in the context of the implementation of territorial development strategies of the border regions of Ukraine and Poland.

## Methodology

In terms of theory and methodology, the research is based on the provisions of the institutional theory, in particular the paradigms of evolutionary development, the cluster theory, cross-border cooperation, the concept of strategic and logistics management.

The following methods were used in the process of research: analysis and synthesis, statistical analysis, expert assessments, sociological surveys, marketing analysis, classification and system approach, comparison and structural-logical generalization.

Primary data sources of the study include:

- statistical information of the State Statistics Service of Ukraine; analytical materials of the World Bank, Armstrong & Associates, Inc., American Chamber of Commerce in Ukraine, Center for Economic and Business Research (CEBR), S&P Global Market Intelligence, European Business Association, Center for Economic Strategy, KSE Institute, research agency Info Sapiens, and The Mieroszewski Centre;
- legislative and regulatory acts: Association Agreement between Ukraine and the European Union (chapter 27 «Cross-border and regional cooperation»); Poland's Sustainable Transport Development Strategy until 2030; laws of Ukraine On Cross-Border Cooperation, and On the Principles of State Regional Policy; resolutions of the Cabinet of Ministers of Ukraine «On the approval of the State Strategy for Regional Development for 2021-2027», «On the approval of the State Programme for the Development of Cross-Border Cooperation for 2021-2027»; Decree of the Cabinet of Ministers of Ukraine «On the approval of the National Transport Strategy of Ukraine for the period

until 2030»; Treaty between the Polish Republic and Ukraine on Good-Neighborliness, Friendly Relations, and Cooperation; strategic documents for the development of the Volyn, Zakarpattia and Lviv regions for the period until 2027, etc.

## Research Results

Research by the World Bank revealed a positive trend in Poland's position in the rating of the main indicators characterizing the efficiency of logistics (Table 1). Thus, according to the Logistics Performance Index, Poland went up 12 places in 2007-2018. This happened due to an increase in all indicators: *Ease of arranging shipments* by 40 points; *Timeliness of shipments* – by 17; *Infrastructure quality* – by 16; *Logistics services quality* and *Consignments tracking and tracing* – by 9; *Customs performance* – by 5 points.

The general rating of Ukraine also improved by 7 positions. This is due to the improvement of the country's position according to the indicators *Logistics services quality* – by 29 points; *Consignments tracking and tracing* – by 28; *Ease of arranging shipments* – by 15; *Customs performance* – by 8 points. However, the *Infrastructure quality* indicator deteriorated significantly – by 45 points.

Table 1

### The place of Poland and Ukraine in the Logistics Performance Index

Indicator	Country / Year							
	Poland				Ukraine			
	2007	2014	2016	2018	2007	2014	2016	2018
Customs performance	38	32	33	33	97	69	116	89
Infrastructure quality	51	46	45	35	74	71	84	119
Ease of arranging shipments	52	24	33	12	83	67	95	68
Logistics services quality	38	33	31	29	90	72	95	61
Consignments tracking and tracing	40	27	37	31	80	45	61	52
Timeliness of Shipments	40	15	37	23	55	52	54	56
Logistics Performance Index	40	31	33	28	73	61	80	66

Source: compiled using the data of Arvis et al. (2018).

According to Armstrong & Associates, Inc. (2021), the share of logistics costs in Poland's GDP in 2020 was 10.1%, in Ukraine – 15.9% (world average – 10.8%). During this period, the share of revenues of the 3PL sector in Poland was 10.1% of the volume of logistics costs, and in Ukraine – 8.2% (the world average is 10.6%). In 2020, the share of Poland's GDP in the global GDP was 0.7%, Polish logistics costs – 0.66% of their total volume in the world, revenues of the 3PL sector – 0.63% of the global volume. The value of these indicators in Ukraine was 0.18, 0.27, and 0.21, respectively (Table 2).

Table 2

**Main development indicators of the logistics services market**

Country	Indicator				
	GDP, billion USD	Logistics costs		3PL sector revenues	
		billion USD	share of GDP, %	billion USD	share of logistics costs, %
Poland	594,2	60,3	10,1	6,1	10,1
Ukraine	151,5	24,1	15,9	2,0	8,2
World	84574,8	9092,1	10,8	961,8	10,6

Source: compiled using the data of Armstrong & Associates, Inc. (2021).

The analysis of the data and analytical materials of the State Statistics Service of Ukraine shows that the volume of export in the trade of Ukrainian goods with Poland increased 2.93 times during 2010-2021, the volume of import – 1.79 times (Table 3). At the same time, the export-import ratio decreased: while in 2010 the value of this indicator was 1.56, in 2021 it was only 1.05. The volume of Ukrainian exports in services to Poland increased 5.1 times in 2021 compared to 2010, while imports grew 1.94 times. The balance of export-import operations in Poland increased 3.7 times: in 2010 it had a negative value, and in 2021 – positive.

During 2010-2020, the volume of exports of transport services from Ukraine to Poland increased 2.5 times, and the volume of imports – 2 times (Table 4). The balance of export-import operations increased 16.6 times, i.e., the value of the export-import ratio increased from 1.03 to 1.28.

According to the UN Economic Commission for Europe, the volume of freight transportation by rail in Poland increased by 26.1% in 2000-2019. Volumes of road transport increased by 39.1%. However, the volume of cargo transportation by river transport in Poland decreased by 73.4% (Table 5).

Table 3

**Ukraine's foreign trade in goods and services with Poland**

Year	Export, billion USD		Import, billion USD	
	<i>Goods</i>	<i>Services</i>	<i>Goods</i>	<i>Services</i>
2010	1785,6	90,5	2778,1	141,1
2011	2791,8	132,4	3164,2	142,5
2012	2571,0	140,3	3545,3	175,4
2013	2547,8	217,9	4068,7	167,5
2014	2644,7	202,8	3070,8	148,4
2015	1977,3	181,9	2324,0	98,7
2016	2200,0	220,6	2693,3	138,6
2017	2724,6	296,3	3453,8	150,2
2018	3257,2	336,8	3641,9	163,6
2019	3295,8	377,3	4109,1	177,0
2020	3272,7	417,9	4140,9	190,3
2021	5227,4	462,7	4962,5	273,2

Source: compiled using the open-access data and materials of the State Statistics Service of Ukraine.

Table 4

**Export-import operations for the provision of transport services between Ukraine and Poland**

Indicator	Year	
	2010	2020
Export, thou. USD	48072,5	118653,0
Import, thou. USD	46510,3	92784,6
Balance of export-import operations, thou. USD	1562,2	25868,4

Source: compiled using the open-access data and materials of the State Statistics Service of Ukraine.

From 2000 to 2019, freight turnover of railway transport in Poland increased by 1.1%, while the freight turnover of road transport increased 4.8 times. At the same time, during the studied period, the freight turnover of river transport in Poland decreased by 92.8% (Table 6) even though it is considered to be one of the most eco-friendly and economic types of transport. Therefore, the Polish government should develop and implement a set of measures to improve the efficiency of the operation of water transport.



Table 5

**Volumes of freight by various modes of transport in Poland in 2000-2019**

Year	Freight by various modes of transport, thou. tons		
	Rail transport	Road transport	River transport
2000	185334	1083071	10433
2005	269553	863396	9607
2010	216767	1216083	2820
2013	232596	1300608	3185
2014	227820	1300382	5899
2015	224320	1264960	4907
2016	222523	1313657	3821
2017	239501	1501811	3412
2018	249260	1390184	2988
2019	233744	1506450	2779

Source: compiled using the open-access data and materials of the UN Economic Commission for Europe.

Table 6

**Freight turnover by various types of transport in Poland in 2000-2019**

Year	Freight turnover by type of transport, million tons/km		
	Rail transport	Road transport	River transport
2000	54015	72842	1173
2005	49972	111826	1277
2010	48705	202308	130
2013	50881	247594	91
2014	50073	250931	110
2015	50603	260713	83
2016	50650	290749	105
2017	54797	335220	108
2018	59388	315874	119
2019	54584	348952	84

Source: compiled using the open-access data and materials of the UN Economic Commission for Europe.

As the statistical analysis shows, there is a negative trend of financing the Polish economy at the expense of direct investments from Ukraine (Table 7). Thus, the share of direct investments from Ukraine in the Polish economy in 2019 was 0.13% of the total European FDI (in 2010 – 0.77%). The share of direct investments from Poland in the economy of Ukraine was 2.45% of the total European FDI in 2019.

Table 7

**Volume of direct investment in 2010-2019, million USD**

Year	Inflow of direct investment	
	From Ukraine into Polish economy	From Poland into Ukrainian economy
2010	47,0	913,0
2011	46,3	834,3
2012	52,3	897,2
2013	56,4	819,8
2014	53,4	708,0
2015	50,2	679,4
2016	48,7	509,1
2017	6,7	571,3
2018	6,7	631,7
2019	8,1	693,7

Source: compiled using the open-access data and materials of the State Statistics Service of Ukraine.

According to the Ministry of Infrastructure and Development of the Republic of Poland, over the past 10 years, the volume of funding for the development of the country's infrastructure from various EU funds amounted to more than 34 billion euros. In Poland, planning at the national level is done with a long-term perspective in mind.

The main planning document is the 2020 Transport Development Strategy (with prolongation until 2030). This strategic document defined operational goals that were implemented in 2014-2020 for the development of road, rail, sea and inland water transport using EU funds. By 2023, 88% of the total budget is to be mastered (33% refers to projects within the framework of the TEN-T infrastructure policy). This will make it possible to reach average European indicators. For example, one goal is to reduce the average travel time between the centers of

voivodships by 15% (this is about 40 minutes) and increase the level of road safety.

At the same time, there is also a negative trend in the development of the transport and logistics system in Poland: experts point out an imbalance in the development of road and railway infrastructure. Majority of investments is directed to the road sector, and the share of funding for the development of railway infrastructure is decreasing.

This is why Polish practitioners emphasized the insufficiency and ineffectiveness of the integrated transport system of Poland at the European Economic Congress in Katowice in September 2020. One of the main goals of the transport development strategy in Poland, updated in 2019, is to strengthen the role of railways in the integrated transport network. However, in practice, the share of the volume of freight transportation by rail transport decreases annually, and the amount of investments in the railway infrastructure is significantly lesser than that in the development of the road network. For example, the volume of investments in the development of railway infrastructure for 2000-2019 amounted to 73 billion zlotys (approximately 18.6 billion US dollars), while investment in the main roads was 203 billion zlotys (51.7 billion USD). At the same time, there is a significant degree of deterioration of the railway infrastructure, numerous bottlenecks in the network, insufficient integration with other modes of transport, while the government endeavors to shift transportation from road transport to more ecological modes, including railway.

Therefore, in the future, considerable attention should be devoted to solving the problems of investing in the development of the national economies of Ukraine and Poland, including their transport and logistics infrastructure.

It should be emphasized that the issue of Ukraine's cooperation with Poland in the field of transport and logistics is currently gaining even more relevance due to Russia's war of aggression against Ukraine, as significant problems in the organization of foreign economic logistics activities arise due to the blockade of sea ports.

According to the Center for Economic and Business Research (CEBR), as a result of the conflict with Russia the total loss of products that could have been manufactured in Ukraine in 2014-2020 amounted to 280 billion US dollars, i.e., up to 40 billion USD every year, which is 19.9% of Ukraine's pre-conflict GDP. At the same time, the long conflict has had a significant impact on the national economy of Ukraine. One negative consequence has been the decrease of investor confidence in the economy, which has resulted in a loss of 72 billion US dollars in investments in total or up to 10.3 billion USD annually. At the same time, the constant reduction in the volume of exports has compounded the country's total losses for 2014-2020 to 162 billion US dollars, largely due to blockade of sea ports.

According to expert estimates of S&P Global Market Intelligence, Ukraine's GDP will decrease by 45.7% in 2022. The IMF predicts a 35% reduction in Ukraine's GDP, and the Ministry of Finance of Ukraine – from 30 to 50%. The national debt of Ukraine will grow to 60% of the national GDP in 2022. According to the estimates of the European Business Association, 57% of Ukrainian companies have stopped or suspended their economic activities.

According to the calculations of the Center for Economic Strategy, the volume of exports in March 2022 decreased by 50% (to 2.7 billion US dollars), and imports – by 30% (to 1.8 billion USD). The export of metals has almost stopped, export of agricultural products has decreased 4 times. At the same time, sea freight (62% of the all-Ukrainian volume of exports in 2021 in US dollars) was stopped due to the blockade of sea ports. Rail (12%) and road (23%) shipments of cargo have been severely obstructed.

According to the KSE Institute and experts from ministries and agencies of Ukraine, the total losses of the national economy due to the war amounted to 564–600 billion US dollars as of June 08, 2022. The total amount of direct documented losses from damage to infrastructure facilities is USD 103.9 billion or UAH 3 trillion. Losses in road infrastructure are at USD 30 billion (28.9% of the total amount of damages from infrastructure destruction); civil aviation – 6.8 billion (6.5%); railway and rolling stock – 2.7 billion (2.6%); ports and port infrastructure – 0.47 billion (0.5%); warehouse infrastructure – USD 0.32 billion (0.3%).

The American Chamber of Commerce in Ukraine conducted a survey in the period from June 9 to 21, 2022, in which 127 representatives of member companies were involved (these are the largest Ukrainian and international investors; among them 70% are company heads and 30% are top managers). During the survey, it was established that logistics and transport were recognized as the biggest challenges for companies during the war (55% of respondents), followed by export-import operations (36%), lack of customers / orders (28%), supply deficit (19%), relocation (18%), and others.

So, the key barriers that inhibit the organization of international logistics in Ukraine during the war include disruption of food supply chains, decrease in the volume of exports of goods due to the blockade of the sea ports, improper fulfillment of the conditions and terms of foreign economic contracts, increase in transaction and logistics costs, fuel shortage due to the destruction of fuel warehouses and complex transport logistics, limited amount of direct investments in the creation and operation of the relevant logistics infrastructure (terminals, warehouse complexes, distribution centers, clusters), etc.

Therefore, a flexible logistics system is needed to restore the national economy of Ukraine, as it would be able to quickly respond to external threats and adapt to them. This requires: (a) concentrated joint efforts of the government, business, academia, researchers, the public, and international community aimed at overcoming the challenges that arise in wartime conditions; (b) reorien-

tation of the existing logistics infrastructure; and (c) change in the direction of all export flows from southern ports to western land ports.

With this in mind, the Polish direction is becoming a key logistics route for Ukrainian exports due to the blockade of the Black Sea ports and given the new opportunities and prospects for cooperation with Poland as a strategic partner. For example, the Polish seaport of Kolobrzeg, located on the coast of the Baltic Sea between Swinoujście and Gdynia, offers transshipment of Ukrainian export agricultural products at the company's facilities. Several pilot projects have already been implemented.

This is confirmed by the data of the all-Ukrainian survey, which was conducted in August 2022 by Info Sapiens on behalf of The Mieroszewski Centre. This survey established that 73% of respondents have started feeling more positively towards Poles, 40% of respondents believe that in the future the partnership between Poland and Ukraine will be purely good-neighborly, and 58% think that the countries will be closer than mere neighbors. Meanwhile, 29% of respondents emphasize the need for mutual support and implementation of coordinated foreign policies.

At the same time, Ukraine and Poland have recently signed a memorandum on strengthening bilateral cooperation in the field of railway transport, which envisions the creation of a joint logistics enterprise. This, in turn, will make it possible to radically increase the volume of railway transportation of Ukrainian exports to the EU and to world markets through Europe.

In addition, a Memorandum was signed between the Ministry of Economic Development and Technologies of Poland and the Ministry of Economy of Ukraine, the main purpose of which is to develop tools to strengthen bilateral economic cooperation through the simplification of foreign trade operations. The implementation of this Memorandum will contribute to increasing the volume of export-import operations in the structure of foreign trade with Poland. Thanks to insurance instruments, Ukrainian business will be able to attract the maximum number of Polish logistics companies to service the required volume of export-import operations.

During previous research (Liashenko & Trushkina, 2021; Khaustova & Trushkina, 2022), we have established that a cross-border transport and logistics cluster would stimulate cross-border cooperation between Ukraine and Poland in the field of transport logistics. It should be based on joint initiatives and signed agreements, as well as development and implementation of projects, programs and strategies for the transformation of national transport and logistics systems.

However, a critical analysis of the current legal framework that regulates cross-border cooperation in Ukraine shows that only the State Regional Development Strategy for 2021-2027 mentions the creation of cross-border clusters while the 2030 National Transport Strategy of Ukraine discusses a network of

multimodal transport and logistics clusters. Yet, the Law of Ukraine on Cross-Border Cooperation does not mention cluster development, cluster initiatives, or cross-border transport and logistics clusters at all.

Admittedly, regional development strategies for 2021-2027 and action plans for their implementation for 2021-2023 do recognize the development of cross-border cooperation as a strategic priority. For example, the 2027 Development Strategy of the Volyn Region refers to infrastructure support for cross-border transport cooperation through the development of border infrastructure; the 2021-2027 Regional Development Strategy of the Transcarpathian Region expounds upon the development of cross-border economic relations based on the creation of international cross-border clusters; the 2021-2027 Development Strategy of Lviv Region includes the development of cross-border infrastructure and implementation of large infrastructure projects.

In addition, the State Program for the Development of Cross-Border Cooperation for 2021-2027 has now been developed and approved. There are several obstacles hindering the effectiveness of cross-border cooperation between Ukraine and Poland as a member of the Visegrad Four. Here, we can mention the problems of developing cross-border transport infrastructure, protecting and restoring regional ecosystems, the low institutional capacity of actors and participants of cross-border cooperation. These are caused, first of all, by the insufficient amount of financing of relevant activities and projects at the expense of the state budget.

This State program also pays insufficient attention to the creation and operation of cross-border transport and logistics clusters. The document does not provide proper mechanisms for ensuring their creation and development. Such mechanisms would contribute to the consolidation of efforts and concentration of resources in the field of transport and logistics to ensure the sustainable functioning of border regions and improve their socio-ecological development.

## Conclusions

At present, relevant practical recommendations for improving institutional support must be developed in order to increase the efficiency of international logistics in the system of cross-border cooperation of Ukraine and Poland. In particular, firstly, changes and additions should be introduced to a number of legislative and regulatory acts that regulate the development of cross-border cooperation and issues of state regional policy. Secondly, the strategic documents that regulate the territorial development of the border territories of Ukraine for the period until 2027 must be finalized to establish appropriate institutional, organizational, economic, and financial foundations for the creation of a cross-border

cluster in the field of transport and logistics. Thirdly, countries should develop and approve the Concept of the National Strategy for the Creation and Development of Cross-Border Clusters, and define the principles and tools of financial support for their functioning, namely: venture investing, crowd-investing, crowd-sourcing, public-private partnership, resources of credit unions, international investment funds, etc.

Should a cross-border transport and logistics cluster be developed and implemented in practice (or the basic institutional principles of its creation, at least), it will facilitate the achievement of many goals. It will create favorable conditions for quantitative and qualitative improvement of transport and logistics services on offer. Regions will be able to gain competitive advantages and strengthen economic partnership and cooperation in the field of transport logistics. The countries will implement a fundamentally new regional model of territorial development of the border territories, which will meet the modern requirements of management.

In further studies, we plan to develop the Concept of a cross-border transport and logistics cluster as a mechanism for ensuring effective territorial development of the border regions of Ukraine and Poland.

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