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## EFFECT OF THE RUSSIAN MILITARY INVASION ON THE ENDOGENOUS POTENTIAL OF UKRAINE

### ВПЛИВ ЗБРОЙНОЇ АГРЕСІЇ РОСІЇ НА ЕНДОГЕННИЙ ПОТЕНЦІАЛ УКРАЇНИ

**Havryliuk Ivanna**

Candidate of Economic Sciences (PhD), Acting Associate Professor  
Lviv National Environmental University  
ORCID: <https://orcid.org/0000-0002-9517-3021>

**Гаврилюк Іванна Іванівна**

кандидат економічних наук, в. о. доцента,  
Львівський національний університет природокористування

The research determines main risks for the endogenous development of the regions of Ukraine in the war conditions. It is stressed that the highest rate of decrease was demonstrated by the export of agricultural and metallurgical products. In the conditions of war, the main risks for the endogenous development of the regions of Ukraine have been identified. It was emphasized that the greatest rate of decline is demonstrated by exports of agricultural and metallurgical products. The growing risks of loss of the export market of Ukraine because of the war was the main reason for export reduction in the first half of 2022. The work specifies structure of the main export goods of Ukraine and defines geographical and commodity structure of the foreign trade of Ukraine in the first half of 2022. It is noted that blockade of export routes for agricultural products increased tension at the international food market. The author analyzes behaviour of companies during the war.

**Keywords:** endogenous development, export, import, relocation, regions.

Ендогенний потенціал є основою та джерелом соціально-економічного розвитку регіону або цілої держави. Іноземні країни досить результативно використовують ендогенний потенціал, що дає можливість розвиватись регіонам, тому для нашої країни надзвичайно корисним є вивчення досвіду регіонального розвитку та його ендогенних факторів. Війна росії проти України спричинила безпрецедентну гуманітарну кризу, зниження економічної активності та втрату ендогенного потенціалу в регіонах країни. В умовах війни визначено основні ризики для ендогенного розвитку регіонів України. Це питання є особливо актуальним в сучасних умовах світової фінансово-економічної кризи, що охопила Україну та її регіони, що суттєво зменшує можливості використання зовнішніх ресурсів. Підкреслено, що найбільші темпи падіння демонструє експорт сільськогосподарської та металургійної продукції. Основною причиною падіння експорту в першому півріччі 2022 року визначено зростання ризиків втрати експортних ринків України в міру подовження тривалості війни. Уточнено структуру основних експортних товарів України. Визначено географічну та товарну структуру зовнішньої торгівлі України у першій половині 2022 р. Зазначається, що блокада експортних шляхів для сільськогосподарської продукції збільшила напруженість на міжнародному продовольчому ринку. У статті проаналізовано поведінку фірм у повоєнні місяці, визначено масштаби їх збитків, показано основні напрямки адаптації до нових умов діяльності – переміщення виробничих потужностей і працівників, галузева трансформація фірм. На основі системного з'ясування причин і наслідків надлишкового ендогенного розвитку регіону доводиться практична значущість реалізації, формуються передумови та принципи внутрішньорегіональної стратегії розвитку. Проведені дослідження підтверджують актуальність пошуку нових методів формування ендогенного розвитку економічної політики, який буде ґрунтуватись на підтримці економічного напрямку та розвивати національне виробництво в контексті забезпечення повного циклу виробництва.

**Ключові слова:** ендогенний розвиток, експорт, імпорт, релокація, регіони.

**Problem setting.** After the start of the Russian invasion of Ukraine on 24 February 2022, Ukrainian regions had to tackle unprecedented challenges. Russian invasion of

Ukraine has caused huge destructive economic consequences, and in the regional terms, the greatest losses of the internal potential have been experienced by the areas of active hostilities.

The damage to production assets and infrastructure, disruptions in the chains of demand and supply, logistic problems, loss of labor force, increased uncertainty and risks making negative effect on the macroeconomic stability are the main spheres of economy experiencing the negative war effects. According to estimates, the country will suffer from a significant decline in the GDP. The volume of the GDP reduction will depend on duration, intensity and location of hostilities and it is predicted to be from 35% to 45% as compared to 2021 [11].

The leading domestic scientists and economists tried to estimate the costs of military actions for the Ukrainian economy. Thus, V. Heiets determined that the economic losses will take 22–46% of the GDP, almost 50% of industrial production, 48% of export revenues, 45% of capital investments [2]. L. Deineko and co-authors [3] predict that in March 2023, industrial production will be reduced by 60–65% comparing to the indicators of the corresponding period in the last year, and almost 30% of the industrial potential will be lost irrevocably. Scientists note that one third of the country's industrial potential is still not engaged because of the high risks, disruption of production and transport chains, no access to resources (raw material and labor force). Ye. Libanova has assessed that the total number of people displaced because of the military aggression accounts for 7.5 million people [7]. Nowadays, however, there is no adequate studies of the damage undergone by the regions of Ukraine because of the war.

**Analysis of recent researches and publications.** Scientific community is actively studying the issue of endogenous development of the regions of Ukraine. The works of

V. Heiets [2], L. Deineko [3], T. Ostashko [7], S. Khanin [12] devoted to these issues are worth mentioning. Different aspects of the endogenous development of the regions are studied by the scientists from the State Institution "M.I. Dolishnyi Institute of Regional Research of the NAS of Ukraine" [1]. It is necessary to analyze the rapidly changing situation in the country, to study the war conditions, losses and opportunities to grow the endogenous potential in different regions.

**Presenting main material.** Russian military invasion of Ukraine has caused significant economic transformations. Almost 50% of enterprises either have ceased their activity or are about to do it because of terrible damage. Business activity has been also slowed down. Moreover, exporters experience significant difficulties because of the blockage of ports and as a result, the logistics covers less than 20% of export. In addition, almost 10 million Ukrainians have been forced to leave their homes and a great share of them are seeking shelter abroad. That large outflow has resulted in liquidation of about three million job places and thus, a great number of population are at the risk not to earn their living.

Endogenous development of the regions is negatively influenced by reduction of the export potential and loss of export markets due to a considerable export decline faced by the economy. Products of agriculture and metallurgical industry have been the principal constituent of the commodity exports of Ukraine in 2021, but these branches have endured great losses during the war that is shown in the Table 1. In particular, the share of export of the goods of "Machines, equipment and mechanisms, electric equipment" group decreased in the period from 2019 to 2021.

Table 1

**Structure of the main commodities of Ukrainian export  
(first half of 2022 comparing to the first half of 2021)**

Kinds of commodities	Export volume, million USD			Share in the total export volume, %			Rates of export growth, %
	2020	2021	2022	2020	2021	2022	2022/ 2021
Ferrous metal	7691	13950	323	15.6	20.5	14.2	5.4
Ore, slag	4421	7120	224	9.0	10.5	9.8	5.6
Cereals	9411	12344	424	19.1	18.1	18.6	9.5
Fat and oil	5747	7037	275	11.7	10.3	12.1	8.3
Machines and equipment	4487	5260	211	9.1	7.7	9.3	8.2
Total	49192	68072	22732	100	100	100	5.4

Source: composed using the data [5; 6; 10]

Because of the war, local enterprises which have previously created the financial fundamental of the regional development of Ukraine suffer from huge destructions. The problems of material and technical supply, lack of orders and deficit of raw material are the main difficulties the domestic enterprises have to tackle. The aggression has made millions of people are homeless, and enterprises have to reconstruct and recover the property they have been building for years. In a moment, one missile can destroy capital investments being worth millions. As a result, thousands of people can lose their jobs and income. One can hardly imagine the scale of damage caused by the war.

According to the program of relocation to safer regions, 761 enterprises have been relocated and 80% of them have already resumed their operation. Other 274 enterprises are in the search for the appropriate location or way of transportation. Within the program of relocation, the state provides support for each business which tries to move to some safer area and continue its performance till the victory. The program both supports the production potential of the country and saves thousands of jobs. Among the relocated enterprises which have already resumed their operation on a new place, the greatest share is made by enterprises in the field of wholesale and retailing, repair of motor vehicles and motorbikes (40.24% of the total number of relocated enterprises);

- processing industry (31.71%);
- information and telecommunication (6.34%);
- professional, scientific and technical activity (5.85%);
- construction (4.15%).

The majority of enterprises have been relocated to Lviv region (30% of the relocated enterprises), Transcarpathian (17%), Chernivtsi (11%), Ivano-Frankivsk (8%), Khmelnytskyi (7%) and Ternopil (7%) regions [9].

Regions which today have become a place for the relocated business have a unique chance to strengthen their endogenous potential. For instance, relocation creates conditions for activation of production and business activity in the Western regions which are characterized by less developed industrial branches. It is especially important in case of a significant growth of expenditures related with the defense, solution of social issues and resettlement of refugees along with the considerable reduction in the amount of revenues to the state and local

budgets. New enterprises provide new jobs for the population to stay in the country thanks to the increased solvency. Thus, local power authorities should create a favorable business climate to keep the business on its area.

During the first month of the war in Ukraine, above 40 industrial enterprises were destroyed, and one nuclear power station was mothballed. Till the middle of April 2022, active hostilities took place on the area of nine regions of Ukraine and in Kyiv which provided 44.5% of the total volume of industrial production in 2021. Industrial potential of the leaders of industrial market, i.e. Dnipropetrovsk and Zaporizhzhia regions, was under threat as their infrastructure had undergone huge damages by missiles.

According to studies conducted by Gradus Research, 45% enterprises continue their previous operation; 42% perform partially, but their income has reduced by more than 58%; 12% have ceased their activity; 1% has started their business after the full-scale invasion of Ukraine. Top 10 business industries include: information and communication technologies (20%), retailing (15%), wholesaling (13%), commodity production (12%), construction (10%), IT-sector (9%), finance and insurance (5%), real estate transactions (5%), servicing, agriculture, forestry, and fishery (4%) [4].

The world history knows many examples when military conflicts influenced foreign trade of the countries being involved in them. They are similar to the conflict in Ukraine because the country area suffers from the impact or occupation, as well as from massive missile and artillery. There is, however, a significant difference, namely the huge military potential of the aggressor-state.

During the last years, hostilities have happened in many other countries of the world making different impacts on their foreign trade.

Hence, Russian military invasion of Georgia in 2008 did not make a significant impact on the country's foreign trade mainly because of a rather short period of the conflict duration (less than a week). In 2008, export of goods increased by 21.5%, and import – by 16.1%. The military conflict in Sudan caused the country was divided into Sudan and Southern Sudan in 2011. In 2010, Sudan's trade turnover accounted for USD 23.4 billion. In 2011, the trade turnover of Sudan reduced by 20.9%, i.e. down to USD 18.5 billion. In 2012, the total volume of trade between Sudan and Southern Sudan accounted for USD 10 billion. In 2012, a civil war started in Syria and it is still ongoing. That situation significantly

influenced the foreign trade of the country: in 2011, export from Syria was estimated at USD 8.2 billion; in 2012, it was reduced by 72.1%, down to USD 2.2 billion. [1].

In the first half of 2022, the value of commodity exports decreased by USD 7.2 billion comparing to the same period in 2021, i.e. down to USD 22.7 billion. Growth of the export of commodities could not compensate the 48.1% decrease in March-June. Decline in exports happened due to reduction of the supply of metals and metal goods (USD 3 billion). (For the first two months of 2022, export of that group of commodities increased by 35.3%). Export of mineral products also decreased by USD 1.9 billion (or by 44.2%); food and agricultural products – by USD 703 million (or by 6.5%); machines, equipment and transport – by USD 645 million (or by 21.4%); chemical products – by USD 589 million (or by 35.8%). At the same time, export of fuel and energy products increased by USD 61 million (or by 16.6%) mainly due to the export of electric energy from Ukraine.

For instance, in the commodity structure of the Ukrainian export of fuel and energy products, supply of electric energy to the EU and other foreign markets took the first position

with the share of 39.3% in the first half of 2022. For the first two months of 2022, export of electric energy from Ukraine increased more than four times, i.e. up to USD 97.5 million. Such changes caused some growth of the share of food and agricultural products in the commodity structure of Ukraine's export from 36.1 to 44.5% along with the reduction of the share of metals and metal goods from 23.5 to 17.6%. These two groups of commodities take almost two thirds of the total exports from Ukraine (Fig. 1).

In the first half of 2022, Ukraine's import got reduced by USD 5.8 billion, i.e., down to USD 25.3 billion. The reduction mainly happened due a decline in the purchase of machines, equipment and transport by USD 3.5 billion (33.1%). Some decrease was also marked in the import of chemical products (USD 1.8 billion – 27.7%), food and agricultural products (USD 0.9 billion – 24.5%). By contrast, import of fuel and energy products increased by USD 1.4 billion (27.8%). As a result, the share of that group of goods in Ukraine's import increased from 16.2% to 25.4%. The share of imported machines, equipment and transport got reduced from 33.8% to 27.8% during the same period (Figure 1).

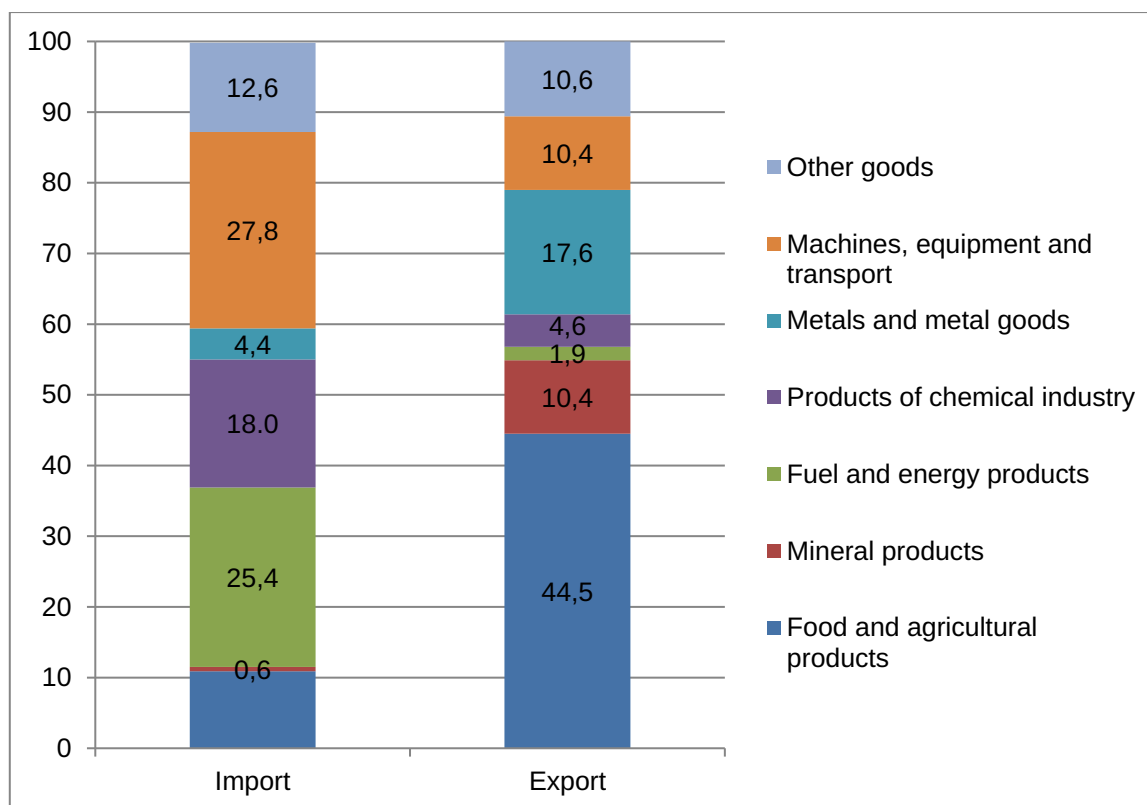


Figure. 1. Commodity structure of Ukraine's foreign trade in the first half of 2022, %

Source: [1]

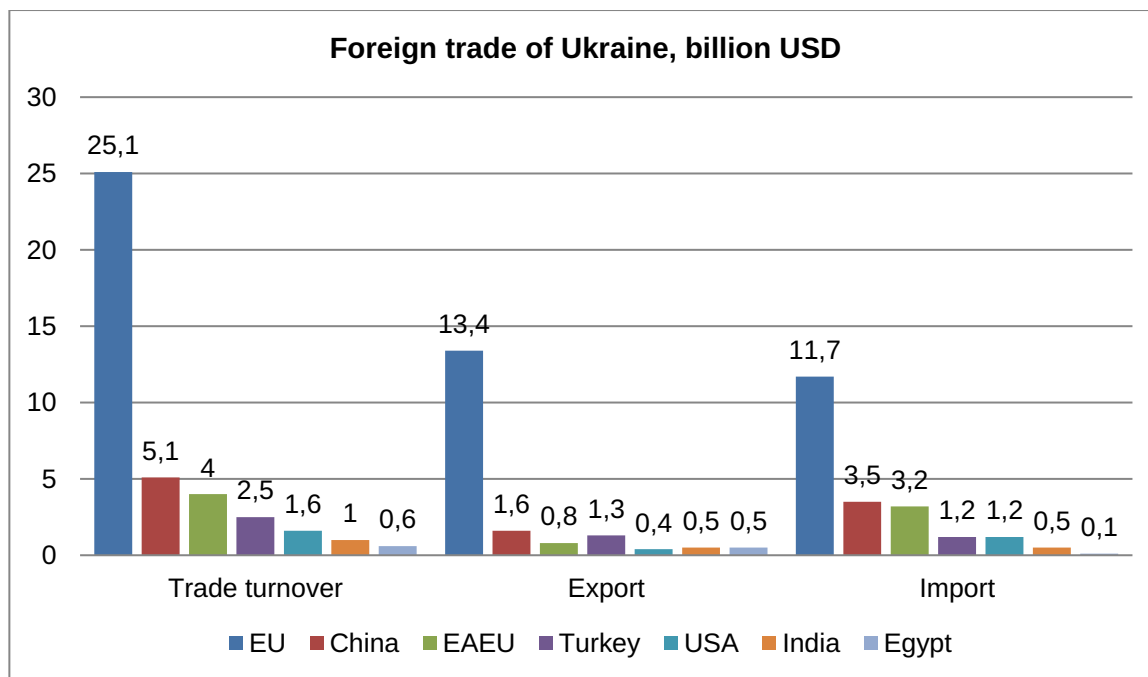


Figure 2. Geographical structure of Ukraine's foreign trade in the first half of 2022

Source [1]

The loss of sea traffic has also negatively influenced the trade with other countries. Its volume decreased by 34.5% comparing to the first half of 2021, and their share got reduced from 47.5% to 39.5%. It was the result of the ceased trade with China (-42.6%), India (-33%) and Turkey (-19.1%). Such decline also happened due to the curtailing trade with the countries of Asia by 36.1%. Trade with the countries of America and Africa also decreased by 40% and 32.6% respectively. In total, the negative balance of foreign trade increased more than twice (from USD 1.2 billion to USD 2.6 billion), but in the first half of 2022, a positive balance was shaped in the amount of USD 120 million due to the high rates of decrease in export comparing to import (Figure 2).

The priority sectors which immediately provide human living and strengthen the state defense capability include agriculture, retailing of food and non-food products, and other services. The government and departments of local administrations should support these sectors by providing privilege crediting and taxation as well as other stimuli for development. Moreover, it is important to promote domestic products at the market and support employees.

**Conclusions.** The conducted analysis discloses priorities in the work of the regional power authorities in the conditions when the Russian military aggression threatens the further erosion of the endogenous potential of Ukrainian regions, particularly assistance in promoting domestic products at the market and search for new export opportunities, further support in relocation of enterprises to safer areas, intensification of the public-private partnership to develop new infrastructure and restore the damaged one, introduction of the mechanisms of relocated enterprises' participation in the legal system of existing industrial parks on safer areas, etc.

In the current conditions, all regions of Ukraine face numerous challenges, but also get new opportunities to increase efficiency of using endogenous potential of their development. However, to maximum engage all available opportunities, it is necessary to initiate development of the appropriate conceptual solutions which should create fundamentals for the program of strategic documents focused on adaptation of the business entities' performance to the conditions of martial law and support for the growth of regional competitiveness in the long run.

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