



Impact of JSC “Ukrainian railways” Railway Freight Tariff Initiatives in 2025 on the Ukrainian Economy



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1. Positions of JSC "Ukrainian railways" in the Ukrainian freight transportation market in 2018-2024

1.1. Amount and structure of freight transportation in Ukraine by mode of transport in 2018-2024

The main volumes of freights in Ukraine are transported by railway and road transport. They are actively competing, as evidenced by the constant change in their shares in the structure of freight transportation.

Thus, the total volume of freight transportation in Ukraine in the pre-war period amounted to 456-503 million tons per year, of which 62-71% (or 306-322 million tons per year) was accounted for by railway transport (Table 1.1). A wide range of products is transported by railway, and the product structure is described below in Clause 1.2.

Road transport transported 134-190 million tons annually, mainly grain and mineral construction materials (sand and crushed stone). Before the war, road transport was a significant competitor to the railway, especially when transporting small consignments of goods over distances of up to 300-350 km. For example, the delivery of grain from the southern and central regions of Ukraine to seaports for further export by sea.

With the outbreak of a large-scale war, freight transportation in Ukraine decreased by 53% to 230 million tons in 2022. Both railway (-52%) and road transport (-56%) significantly reduced their transportation volume.

Subsequently, in 2023-2024, there was a gradual increase in the volume of freight transportation by railway and road transport, but in 2024 they still remain significantly lower than the pre-war level.

The portion of JSC "Ukrainian railways" in freight transportation in 2023-2024 decreased to 62-63%, down from 66% in 2022. This decline in the share indicates that road transport is starting to win the competition with JSC "Ukrainian railways", in particular due to the increase in railway freight tariffs since the beginning of the war (see more in Clause 2.2).

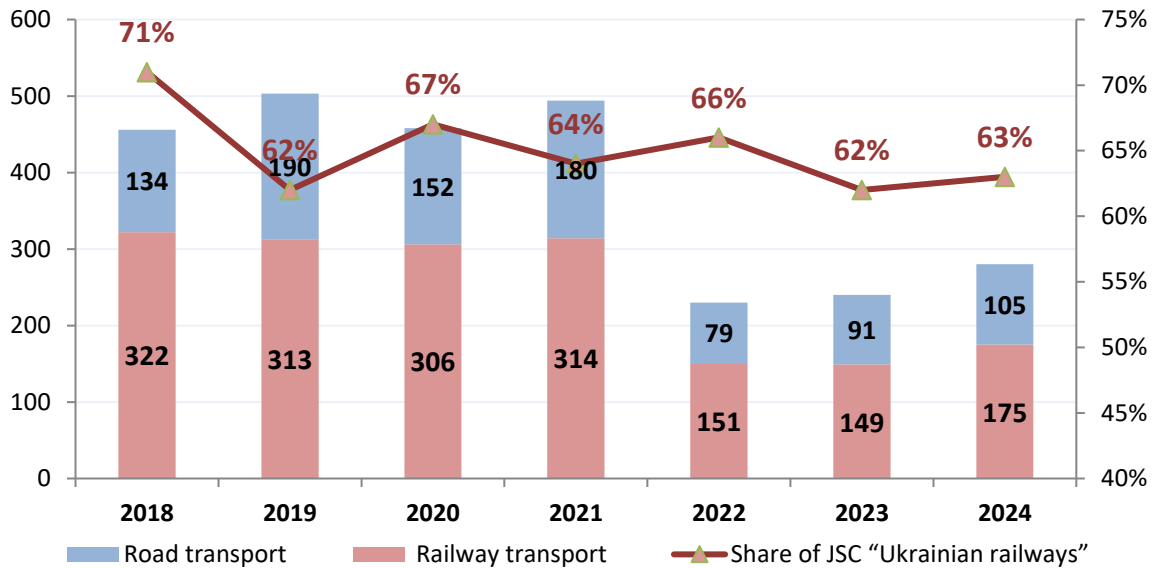
Table 1.1

Volume and structure of freight transportation by railway and road transport in Ukraine in 2018-2024, MT

Mode of transport	2018		2019		2020		2021		2022		2023		2024	
	MT	%	MT	%	MT	%	MT	%	MT	%	MT	%	MT	%
Railway transport	322	71%	313	62%	306	67%	314	64%	151	66%	149	62%	175	63%
Road transport*	134	29%	190	38%	152	33%	180	36%	79	34%	91	38%	105	38%
Total	456	100	503	100	458	100	494	100	230	100	240	100	280	100

*commercial transportation by road transport enterprises, it does not include local transportation of goods to serve the needs of own production

Source: JSC "Ukrainian railways", State Statistics Service of Ukraine, River Information Service



* excluding the temporarily occupied territory of the Autonomous Republic of Crimea and part of the temporarily occupied territories, as well as excluding the volume of freight transportation by road transport to serve the needs of own production

Fig. 1.1 Freight transportation volumes in Ukraine (MT) and specific portion of JSC "Ukrainian railways" (%) in 2018-2024

Thus, the main volumes of freights in Ukraine are transported by railway and road transport, which actively compete.

The total volume of freight transportation in Ukraine decreased by 53% to 230 million tons in 2022 due to the large-scale war. Subsequently, in 2023-2024, the volume of freight transportation increased to 280 million tons per year, but this is still significantly less than the pre-war level (494 million tons in 2021).

JSC "Ukrainian railways" specific portion of freight transportation fell to 62-63% in 2023-2024, down from 66% in 2022, as it loses competition to road transport, in part due to higher railway freight tariffs since the start of the war.

1.2. Volumes and commodity composition of JSC "Ukrainian railways" freight transportation in 2021-2024, and the importance of railway transport for key sectors of the Ukrainian economy

The railway is a key mode of transportation in the Ukrainian economy, and for many sectors of the economy it remains unalterable or limitedly substitutable. This primarily concerns the mining and metallurgical sector (production of ore, coke and metal), thermal energy (coal mining), construction and the agricultural sector. In these segments, significant amounts of raw materials and manufactured products need to be transported over long distances, which only railway transport can fully provide.

For example, the production of one ton of rolled steel requires the transportation of ~4 tons of cargo (supply of raw materials to a steel plant + removal of manufactured steel products and metallurgical slag). Therefore, the production of steel products in the amount of 10 million tons per year requires the transportation of ~40 million tons of freights. Housing and road construction requires the delivery of large volumes of low-cost bulk building materials (sand, crushed stone, limestone, stone), as well as cement and dry building mixtures from the deposits to the construction sites. The growth of grain production in Ukraine has increased its exports to more than 50 million tons per year, and only railways can provide transportation of such volumes.

That is why iron ore (21-26%), coal (13-19%), construction materials (16-19%), and grain (11-23%) are dominated in the commodity composition of JSC "Ukrainian railways" freight transportation (Table 1.2). Since the outbreak of the war, the portion of coal (due to the occupation of mines and the destruction of thermal power plants) and ferrous metals (due to the loss of two Mariupol steel mills and a decrease in production at others) in the composition of railway freight transportation has decreased, while the portion of grain has increased.

Table 1.2

Volumes and commodity composition of freight transportation of JSC "Ukrainian railways" in 2021-2024, MT

Products	2020		2021		2022		2023		2024	
	MT	%	MT	%	MT	%	MT	%	MT	%
Oil and oil products	11	3.6%	12	3.8%	7	4.6%	5	3.4%	5	2.9%
Coal	49	16.0%	50	15.9%	29	19.2%	26	17.4%	23	13.1%
Coke	5	1.6%	5	1.6%	2	1.3%	1	0.7%	2	1.1%
Ore	80	26.1%	78	24.8%	32	21.2%	28	18.8%	43	24.6%
Cement	6	2.0%	6	1.9%	3	2.0%	4	2.7%	5	2.9%
Chemicals and fertilizers	9	2.9%	11	3.5%	3	2.0%	3	2.0%	3	1.7%
Timber	1	0.3%	1	0.3%	1	0.7%	1	0.7%	1	0.6%
Ferrous metals and scrap	22	7.2%	24	7.6%	10	6.6%	9	6.0%	9	5.1%
Cereals	35	11.4%	34	10.8%	29	19.2%	31	20.8%	40	22.9%

Building materials	54	17.6%	56	17.8%	24	15.9%	29	19.5%	30	17.1%
Other	34	11.1%	37	11.8%	11	7.3%	12	8.1%	14	8.0%
Total	306	100%	314	100%	151	100.0%	149	100.0%	175	100.0%

Source: JSC "Ukrainian railways", State Statistics Service of Ukraine

For a significant number of industrial enterprises, railway transport is unavailable, or its substitutability by other modes of transport (primarily road transport) is technologically limited.

In particular, this applies to coal (supplies from mines/enrichment plants to thermal power plants), iron ore (supplies from mining and processing plants to steel mills and for export), grain (for export from regions remote from ports), mineral building materials and cement (interregional transportation).

Therefore, in these sectors of the economy, the rate policy in the field of railway transport directly affects their competitiveness, and an increase in freight tariffs may lead to a decrease in production.

2. Proposed Railway Freight Tariff Initiatives of JSC "Ukrainian railways" (tariff increase by +37%) and their impact on freight transportation and the Ukrainian economy
2.1. The relationship between changes in railway freight tariffs and freight turnover: correlation and elasticity

According to the analysis of statistical data for 2015-2023, there is a high negative correlation between changes in the cost and volume of railway freight transportation (Table 2.1).

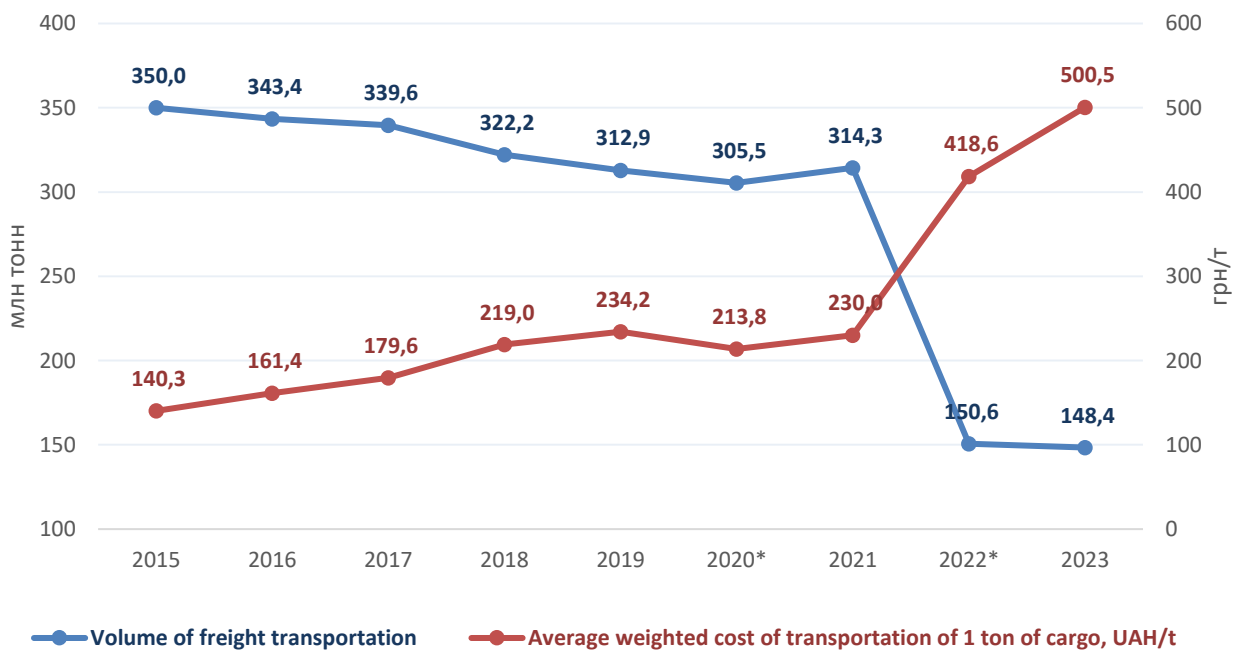
In other words, an increase in cost leads to a decrease in railway freight transportation.

Table 2.1

Correlation dependence between the cost and volume of railway freight transportation in 2015-2023

Indicator	2015	2016	2017	2018	2019	2020	2021	2022	2023
Revenue from freight transportation, UAH million	49,099	55,424	60,991	70,571	73,289	65,330	72,287	63,047	74,275
Volume of freight transportation, MT	350.0	343.4	339.6	322.2	312.9	305.5	314.3	150.6	148.4
Weighted average cost of transportation of 1 ton of cargo, UAH/t	140.3	161.4	179.6	219.0	234.2	213.8	230.0	418.6	500.5
Correlation coefficient	-0.98								

Source: JSC "Ukrainian railways", calculations



*there are force majeure circumstances: 2020 — Covid-19, 2022 — outbreak of the war

Fig. 2.1 - Dynamics of volumes and weighted average price of freight transportation by JSC "Ukrainian railways" in 2015-2023

2.2. Railway Freight Tariff Initiatives of JSC "Ukrainian railways" in 2025 and their impact on the cost and volume of freight transportation, production of certain types of products, and the most affected sectors of the economy

Starting from February 1, 2025, JSC "Ukrainian railways" plans to increase the infrastructure component of the railway freight tariff by 37%. According to estimates, this will increase financial costs for consumers of railway freight transportation services by approx. UAH 24 billion.

It is worth noting that since the beginning of the large-scale war, JSC "Ukrainian railways" has already increased the cost of the infrastructure component by 1.7-2.4 for different types of products, and most of all for the transportation of ore, coal, fertilizers, and crushed stone (Table 2.2).

After the planned increase of 37%, the cumulative increase in the value of the infrastructure component of JSC "Ukrainian railways" since the beginning of the war will be 2.5-3.6 times.

Table 2.2

The cost of the infrastructure component of JSC "Ukrainian railways" in the railway freight tariff for transportation for 500 km in 2019-2025, UAH/ton

Type of freight (products)	Car type	Freight class	2019	2020	2021	2022	2023	2024	2025 (+37% indexation)
Ore, coal, and fertilizers	Gondola car	1	117.8	134.6	134.6	193.2	328.4	328.4	485.8
Coke	Gondola car	2	117.8	194.3	194.3	217.8	370.2	370.2	547.6
Grain	Grain hopper car	2	180.1	205.7	205.7	230.9	392.5	392.5	580.6
Rolled metal products	Gondola car	3	263.9	301.4	301.4	301.4	512.4	512.4	757.9
Crushed stone	Gondola car	pc	98.1	112.0	112.0	147.5	250.7	250.7	370/9

Source: calculation according to https://uz.gov.ua/cargo_transportation/electronic_transportation/cost/

In terms of US dollars, the cost of the infrastructure component of the railway freight tariff has increased by 1.3-1.8 since the beginning of the war (Table 2.3).

After the planned increase of 37%, the cumulative growth of the infrastructure component since the beginning of the war will be 1.7-2.5 times in USD terms for different product groups.

Table 2.3

The cost of the infrastructure component of JSC "Ukrainian railways" in the railway freight tariff for transportation for 500 km in 2019-2025, USD/ton

Type of freight (products)	Car type	Cargo class	2019	2020	2021	2022	2023	2024	2025 (+37% indexation)
Ore, coal, and fertilizers	Gondola car	1	4.3	5.7	4.8	7.1	9.0	8.6	11.8
Coke	Gondola car	2	4.3	8.2	6.9	8.0	10.1	9.7	13.3
Grain	Grain hopper car	2	6.5	8.7	7.3	8.5	10.7	10.3	14.2
Rolled metal products	Gondola car	3	9.5	12.7	10.7	11.0	14.0	13.5	18.5

Crushed stone	Gondola car	pc	3.5	4.7	4.0	5.4	6.9	6.6	9.0
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Source: calculation according to https://uz.gov.ua/cargo_transportation/electronic_transportation/cost/, official NBU exchange rate

Considering the share of the infrastructure component in the railway freight tariff, its increase by 37% will lead to a 26-31% increase in the cost of railway freight transportation of various types of products.

According to the results of a study of the freight transportation market in European countries¹, a 1% increase in railway freight tariffs leads to a 0.29-1.01% decrease in railway freight transportation volumes. That is, there is a price elasticity of demand for railway freight transportation.

Ukrainian manufacturers are shifting their focus to road transport whenever possible, but railway transport is either unavailable or its substitutability is limited (partial) for the main part of products. This is especially true for coal (supplies to thermal power plants), iron ore (supplies to steel mills), building materials, and cement (interregional transportation). Railway transport can be replaced by road transport only in the segment of grain, timber and oil products transportation, but this will require a significant additional number of trucks (over 75,000 pcs).

An increase in railway freight tariffs in commodity segments with limited substitutability of railway transport by other modes of transport will increase the cost (selling price) of their products, which will lead to a decrease in sales and, consequently, production volumes.

Table 2.4 shows the calculation of changes in railway freight transportation volumes and production of major products as a result of the implementation of JSC "Ukrainian railways" Railway Freight Tariff Initiatives.

For example, transportation volumes and, consequently, production of coal, building materials, iron ore, and rolled metal will decrease. In the context of grain production and transportation, it is important to note the following. Increased transportation costs will reduce the purchase price of grain for small farmers. As a result, they will receive less income and, accordingly, buy less fertilizers, which will negatively affect the volume of their harvest (-3 million tons of grain)².

In total, the railway freight transportation of various types of products may decrease by approx. 27 million tons per year, and production volumes may decrease by approx. 23 million tons per year.

¹ *Estimating Freight Transport Price Elasticity in Multimode Studies: A Review and Additional Results from a Multimodal Network Model*, https://www.researchgate.net/profile/Bart-Jourquin/publication/265972255_Estimating_Freight_Transport_Price_Elasticity_in_Multimode_Studies_A_Review_and_Additional_Results_from_a_Multimodal_Network_Model/links/59e45be8aca2724cbfe8c994/Estimating-Freight-Transport-Price-Elasticity-in-Multimode-Studies-A-Review-and-Additional-Results-from-a-Multimodal-Network-Model.pdf

² <https://unn.ua/amp/ukrainski-fermery-obureni-zrostanniam-vantazhnykh-taryfiv-ukrзалiznytsi-yaki-vtraty-prohnozuiut>

Table 2.4

Potential loss of annual volumes of rail transportation and production of certain types of products as a result of JSC "Ukrainian railways" Railway Freight Tariff Initiatives

Products	Freight transportation volumes in 2024, MT	Changes in the cost of freight transportation as a result of JSC "Ukrainian railways" Railway Freight Tariff Initiatives, %	Elasticity of railway transportation ³ , %.	Loss of freight volumes, %	Change in railway transportation volumes, MT/year	Change in production volumes, MT/year
Oil and oil products	5	+28%	-0.50	-14.0%	-0.7	
Coal	23	+26%	-0.51	-13.3%	-3.0	-3.0
Coke	2	+28%	-0.51	-14.3%	-0.3	
Ore	43	+27%	-0.51	-13.8%	-6.0	-6.0
Cement	5	+28%	-0.41	-11.5%	-0.6	-0.5
Chemicals and fertilizers	3	+27%	-0.41	-11.1%	-0.3	
Timber	1	+28%	-0.42	-11.8%	-0.1	
Ferrous metals and scrap	9	+28%	-0.99	-27.7%	-2.5	-2.5
Bread	40	+31%	-0.29	-9.0%	-3.6	-3.0
Building materials	30	+26%	-1.01	-26.7%	-8.0	-7.5
Other	14	+26%	-0.42	-10.9%	-1.5	
Total	175	-	-	-	-26.6	-22.5

Source: calculation by the State Enterprise "Ukrainian Industry Expertize", JSC "Ukrainian railways": *Estimating Freight Transport Price Elasticity in Multimode Studies: A Review and Additional Results from a Multimodal Network Model*

2.3. Impact of JSC "Ukrainian railways" 2025 Railway Freight Tariff Initiatives on key macroeconomic indicators

To calculate the economic impact of the increase in railway freight tariffs on the main macroeconomic indicators of the Ukrainian economy (output, GDP, exports, imports), the Input-Output Model of the Ukrainian economy was used.

The Input-Output Model was developed using the Input-Output Table for the Ukrainian economy for 2021 available at the time of the calculation.

³According to *Estimating Freight Transport Price Elasticity in Multimode Studies: A Review and Additional Results from a Multimodal Network Model*, pp. 14-15 https://www.researchgate.net/profile/Bart-Jourquin/publication/265972255_Estimating_Freight_Transport_Price_Elasticity_in_Multimode_Studies_A_Review_and_Additional_Results_from_a_Multimodal_Network_Model/links/59e45be8aca2724cbfe8c994/Estimating-Freight-Transport-Price-Elasticity-in-Multimode-Studies-A-Review-and-Additional-Results-from-a-Multimodal-Network-Model.pdf

The model considers the direct and indirect impacts on the economy resulting from changes in railway freight tariffs and, accordingly, their impact on exports and the economy of Ukraine.

The direct impact is the projected change in production and employment volumes in the sectors that directly consume raw materials, work, and services in the process of railroad transportation.

The indirect impact is a change in production and employment volumes in related sectors that supply goods and services to these sectors.

In the Input-Output Model, the vector of gross output (X) is calculated based on the vector of final demand Y and the inverse matrix of coefficients $[(I-A)]^{-1}$:

$$X = [(I-A)]^{-1} Y$$

GDP is calculated as the difference between gross output and intermediate consumption.

The import vector is calculated in the model based on intermediate and final consumption. Changes in intermediate import consumption are calculated using a Table of import cost factors.

Results of Economic Simulating

An increase in railway freight tariffs will reduce the Ukrainian GDP by 1.18% (Table 2.5), or by UAH 95.8 billion in 2024 prices (Table 2.6). Gross output will also decline during this period, by a total of -1.52%, or by UAH 259 billion in 2024 prices.

Among the economic sectors, the largest decline in production will be in metal ore mining (-5.38%, or UAH 30.8 billion) and metallurgical production (-6.9%, or UAH 63.6 billion). The wholesale and retail trade sector will also see a significant drop in output (-0.96%, or UAH 21.5 billion), as well as transport (-1.02%, or UAH 10.0 billion).

Export volumes will decline by -2.98% (UAH 97.8 billion), as rising transportation costs will indirectly reduce the production of exportable goods. Accordingly, we should expect a negative impact on the hryvnia exchange rate, as the balance of payments will deteriorate as well.

The expected changes in GDP, gross output, gross value added, and foreign trade of the Ukrainian economy as a result of the increase in railway freight tariffs in monetary terms are calculated in 2024 prices. For this purpose, the 2021 figures have been adjusted for inflation in the period from 2022 to 2024.

Table 2.5

Impact of the increase in railway freight tariffs on changes in GDP, gross output, gross value added and foreign trade, %

Type of economic activity	GDP	Gross value added	Production output	Export	Import
Total in the economy	-1.18	-1.25	-1.52	-2.98	-0.78
Agriculture, forestry, and fisheries		-1.54	-1.54	-3.47	-0.42
Industry		-2.87	-2.81	-3.91	-0.78
Mining and quarrying		-4.77	-5.27	-5.13	0.71
incl.					
Crude oil and natural gas production		-1.74	-1.74	-	-1.67

Type of economic activity	GDP	Gross value added	Production output	Export	Import
Extraction of metal ores and other minerals, and quarrying; rendering of auxiliary services in the mining and quarrying		-5.38	-5.38	-5.32	-4.68
Processing industry		-1.94	-2.37	-3.72	-0.98
incl.					
Manufacture of food products; beverages, and tobacco products		-0.26	-0.26	-	-0.37
Metallurgical production		-6.88	-6.88	-8.83	-3.16
Production of other non-metallic mineral products		-4.23	-4.23	-29.85	-1.01
Supply of electricity, gas, steam, and make-up air		-2.26	-2.26	-	-0.37
Water supply; sewerage, and waste management		-1.23	-1.23	-	-1.73
Wholesale and retail trade; repair of motor vehicles and motorcycles (including trade margin)		-0.96	-0.96	-	-1.00
Transport and warehousing (including transport margin)		-1.02	-1.02	-	-1.25
Financial and insurance activities		-1.07	-1.07	-	-1.09
Real estate transactions		-0.51	-0.51	-	-0.71

Source: calculations of the State Enterprise "Ukrainian Industry Expertize"

Table 2.6

Impact of the increase in railway freight tariffs on changes in GDP, gross output, gross value added, and foreign trade, UAH million in 2024 prices

Type of economic activity	GDP	Gross value added	Production output	Export	Import
Total in the economy	-95,812.9	-87,099.9	-259,272.5	-97,819.0	-26,612.3
Agriculture, forestry, and fisheries		-13,640.6	-32,111.3	-22,353.5	- 432.4
Industry		-47,611.2	-175,281.2	-75,465.4	-22,373.1
Mining and quarrying		-24,949.3	-53,831.0	-15,707.1	2,345.2
incl.		-	-	-	-
Crude oil and natural gas production		-3,230.1	-4,456.2	-	-3,533.0
Extraction of metal ores and other minerals, and quarrying; rendering of auxiliary services in the mining and quarrying		-13,619.8	-30,794.4	-15,707.1	- 578.5
Processing industry		-16,216.4	-99,790.5	-59,758.4	-24,666.3
incl.		-	-	-	-
Manufacture of food products; beverages, and tobacco products		- 694.8	-3,520.2	-	- 904.7
Metallurgical production		-9,825.3	-63,640.4	-52,158.2	-3,428.6
Production of other non-metallic mineral products		-1,923.0	-12,121.3	-7,600.2	- 454.3
Supply of electricity, gas, steam, and make-up air		-6,095.2	-20,395.6	-	21.4

Type of economic activity	GDP	Gross value added	Production output	Export	Import
Water supply; sewerage, and waste management		- 350.3	-1,264.1	-	- 30.6
Wholesale and retail trade; repair of motor vehicles and motorcycles (including trade margin)		-10,570.7	-21,541.0	-	- 49.3
Transport and warehousing (including transport margin)		-4,380.5	-10,016.2	-	-2,113.7
Financial and insurance activities		-2,586.3	-3,887.8	-	- 398.6
Real estate transactions		-2,371.3	-3,176.4	-	- 72.9

*recalculated to 2024 prices using a deflator⁴: the price increase was 1.49 compared to 2021.

Thus, the increase in railway freight tariffs will have a negative impact on the Ukrainian key macroeconomic indicators, reducing gross output by -1.52%, GDP by -1.18% and exports by -2.98%.

In monetary terms, the decline in gross output will amount to UAH 259.3 billion, GDP — UAH 95.8 billion, and exports — UAH 97.8 billion.

The following industrial sectors will suffer the most from the increase in railway freight tariffs: mining and quarrying (-5.3%), metallurgy (-6.9%), and production of other non-metallic mineral products (-4.2%).

⁴ Between 2022 and 2024, the prices increased by 1.49 times. Calculated considering the Consumer Price Indexes for 2022-2024: 1.266_{2022p}. *1.051_{2023p}. *1.12_{2024p}. Access mode: <https://index.minfin.com.ua/ua/economy/index/inflation/>

2.4. Impact of JSC "Ukrainian railways" Railway Freight Tariff Initiatives on employment and jobs

The reduction in product output caused by the increase in railway freight tariffs will lead to a decrease in the number of jobs and, consequently, a decline in household income (welfare) of the population and wages of workers.

Thus, according to the calculations, the total wages fund of employees in Ukraine will decrease by 1.02%, which in 2024 prices corresponds to UAH 33.9 billion (Table 2.7).

The largest decrease in the wages fund of employees will be in the industry (by -2.47% or UAH 18.8 billion in 2024 prices). Other sectors of the economy will also see a reduction in the wages fund of employees.

Table 2.7

Expected changes in employee remuneration as a result of the increase in railway freight tariffs

Sector/type of activity	Remuneration of employees, %.	2021 prices, UAH million	2024 prices, UAH million
Agriculture, forestry and fishing	- 1.54	-2,171.3	-3,235.7
Industry	-2.47	-12,614.3	-18,798.2
Wholesale and retail trade; repair of motor vehicles and motorcycles (including trade margin)	-0.96	-3,015.8	-4,494.2
Transport	-1.02	-1,758.9	-2,621.2
Real estate transactions	-0.51	- 200.2	- 298.3
Financial and insurance activities	-1.07	- 748.9	
Total in the economy	- 1.02	-22,750.2	-33,903.2

Source: calculations of the State Enterprise "Ukrainian Industry Expertize"

Labor productivity is an indicator that shows the level of production (creation) of gross value added per employee.

Thus, in 2021 (the latest available data at the time of this report), labor productivity indicator in Ukraine amounted to UAH 206,000-1,268,000 per employee for different sectors of the economy, or an average of UAH 300,000 per employee (Table 2.8).

Table 2.8

Gross value added, employment and labor productivity indicators by economy sectors in 2021

Sector/type of activity	Gross value added, UAH million	Employment, employee thousands	Productivity, UAH thousand per employee
Agriculture, forestry and fishing	593,367.00	2,692.7	220.4
Industry	1,111,762.00	2,313.2	480.6
Wholesale and retail trade; repair of motor vehicles and motorcycles (including trade margin)	742,123.00	3,604.7	205.9
Transport	286,814.00	961.0	298.5
Real estate transactions	314,763.00	248.2	1,268.2
Financial and insurance activities	161,933.00	210.6	768.9
Other services	1,323,652.00	4,888.8	270.8
Total	4,684,726.00	15,610.0	300.1

Detailed data by sectors are not presented in the State Statistics Service of Ukraine.

Source: State Statistics Service of Ukraine⁵, calculations of the State Enterprise "Ukrainian Industry Expertize"

Considering the projected changes in value added due to the increase in railway freight tariffs and labor productivity indicators, we obtain a possible decrease in employment in various sectors of the Ukrainian economy (Table 2.9).

Table 2.9

Expected change in employment level (formation/reduction of jobs) with an increase in railway freight tariffs

Sector / type of activity	Productivity UAH thousand/employee	Change in remuneration in UAH million, in 2021 prices.	Change in employment, employed persons*
Agriculture, forestry and fishing	220.4	-2,171.3	- 9,853
Industry	480.6	-12,614.3	- 26,246
Wholesale and retail trade; repair of motor vehicles and motorcycles (including trade margin)	205.9	-3,015.8	- 14,648
Transport	298.5	-1,758.9	- 5,893
Real estate transactions	1,268.2	- 200.2	-158
Financial and insurance activities	768.9	- 748.9	-974
Total	300.1	-22,750.2	- 75,806

*in round figures, calculated. The estimate was made using 2021 figures (latest available data of the State Statistics Service of Ukraine)

⁵ Access mode: https://www.ukrstat.gov.ua/operativ/operativ2014/rp/zn_ed/zn_ed_u/zn_ed_2020_ue.xls
https://www.ukrstat.gov.ua/operativ/operativ2021/vvp/kvartal_new/tvv_oc/vitr_vip_os21xl.UE.xlsx

Thus, the planned increase in railway freight tariffs will lead to a reduction of almost 76,000 jobs, most of them in industry (-26,000 jobs).

2.5. Impact of JSC "Ukrainian railways" Railway Freight Tariff Initiatives on tax revenue

The decline in economic activity due to the increase in railway freight tariffs will have a negative impact on tax revenue to budgets of various levels.

To estimate the impact of the railway freight tariffs increase, the following Table calculates the amount of major taxes as a share of GDP in 2020-2024 (Table 2.10).

It is important to note that personal income tax, corporate tax and VAT together generate more than 70% of all tax revenue of the Consolidated Budget.

As can be seen from the calculations in Table 2.10, in 2020-2024, the share of tax revenue in the GDP structure was 25.5%-27.5%, or an average of 26.4%.

Table 2.10

Ukrainian GDP and tax revenue to the Consolidated Budget in 2020-2024

Indicator	2020	2021	2022	2023	2024
GDP, UAH million	4,194,102	5,459,574	5,191,028	6,537,825	7,600,000*
Tax revenue**:					
Personal income tax	295,107	349,785	420,673	496,343	583,626
Corporate tax	118,472	163,844	130,562	159,290	299,051
Value Added Tax	400,600	536,490	466,998	580,797	734,456
<i>incl. Value Added Tax on goods and services produced in Ukraine</i>	269,589	315,477	298,537	347,018	425,526
<i>Budgetary VAT refunds</i>	- 143,108	- 159,701	- 84,592	- 132,379	- 157,198
<i>Value added tax on goods and services imported into Ukraine</i>	274,119	380,714	253,053	366,158	466,128
Total tax revenue	1,136,687	1,453,804	1,343,225	1,638,085	2,088,284
Share of tax revenue in GDP, %:					
Personal income tax	7.0%	6.4%	8.1%	7.8%	7.7%
Corporate tax	2.8%	3.0%	2.5%	2.5%	3.9%
Value Added Tax	9.6%	9.8%	9.0%	9.2%	9.7%
Total share of tax revenue in GDP	27.1%	26.6%	25.9%	25.1%	27.5%

*preliminary data⁶ **the main types of taxes are shown

Source: data from the E-Data⁷ platform, an information portal of the Ministry of Finance

Table 2.11 below shows the calculation of the reduction in tax revenue to the consolidated budget due to the decline in economic activity after the planned increase in railway freight tariffs.

⁶ <https://pravda.com.ua/news/2024/10/31/721267/>

⁷ Access mode: <https://openbudget.gov.ua/national-budget/incomes>

Thus, total tax revenue will decrease by UAH 25.3 billion, with the largest declines in VAT (UAH -9 billion) and personal income tax (UAH -7.1 billion).

Table 2.11

Expected changes in tax revenue as a result of the planned increase in railway freight tariffs, UAH million, in 2024 prices

	Average percentage of GDP in 2020-2024	UAH million
GDP change		-95,813
<i>Personal income tax</i>	7.4%	-7,055
<i>Corporate tax</i>	2.9%	-2,819
<i>Value Added Tax</i>	9.4%	-8,991
<i>Other taxes</i>	6.7%	-6,455
Total tax revenue	26.4%	-25,321

It is important to note that the above calculations do not include the amount of lost additional tax revenue from ArcelorMittal Kryvyi Rih.

For example, ArcelorMittal Kryvyi Rih planned to launch an additional blast furnace in early 2025, which would allow the company to double its steel production. As a result, the company could at least double the number of taxes paid (UAH 6.6 billion was paid in 2024). However, due to the planned increase in railway freight tariffs, plans to launch the second blast furnace have been suspended⁸.

Considering the ArcelorMittal Kryvyi Rih data, the increase in railway freight tariffs will have a negative impact on tax revenue to budgets of all levels in the amount of at least UAH 31.9 billion (in 2024 prices).

Considering the expected inflation (~12% in 2025), the amount of tax gap as a result of the increase in railway freight tariffs could amount to at least UAH 35.7 billion in 2025.

⁸ <https://qmk.center/ua/news/arselormittal-krivij-riq-u-2024-roci-splativ-6-6-mlrd-qrn-podatktiv/>

3. The main deformations in the activities of JSC "Ukrainian railways" and opportunities for their compensation (QFT and Land Tax)

Currently, JSC "Ukrainian railways" operates under conditions of significant imbalances, and the key ones are the following:

- 1) Cross subsidization of the passenger transportation segment at the expense of freight transportation;
- 2) Non-core tax burden, namely the payment of land tax under the railway tracks
- 3) Maintaining redundant infrastructure and non-core assets

These disproportions hinder the development of railway transport, and in fact shift a significant portion of public expenditures to freight owners, thereby creating a significant additional quasi-fiscal taxation (QFT) for them.

Thus, the freight transportation segment of JSC "Ukrainian railways" is a highly profitable area even in the face of war and a significant drop in freight transportation, generating UAH 20-28 billion of EBITDA and UAH 11-20 billion of operating profit annually in 2020-2023 (Table 3.1). The EBITDA level of profitability increased from 30% in 2020 to 41% in 1H2024, and the operating profit level of profitability increased from 17% to 31%.

At the same time, the passenger transportation segment is unprofitable, with annual operating losses increasing from UAH 12.9 billion to UAH 15.8 billion in 2020-2023. For the first half of the year 2024, losses from passenger transportation amounted to UAH 8.5 billion, or ~UAH 17 billion in annualized terms. In 2025, the estimated losses from passenger transportation are expected to reach UAH 23-24 billion, which is a record in the history of JSC "Ukrainian railways"⁹.

Table 3.1
Dynamics of operating results of JSC "Ukrainian railways" by segments of freight and passenger transportation in 2020-2024 (6 months), UAH million

Segment/indicator	2020	2021	2022	2023	2024 6 months
Freight transportation					
Revenue from sales	65,330	72,287	63,047	74,275	43,018
Prime cost, excluding depreciation	45,506	49,573	41,156	45,890	25,394
EBITDA	19,824	22,715	21,891	28,385	17,624
EBITDA profitability, %	30%	31%	35%	38%	41%
Depreciation	8,712	8,822	8,553	8,546	4,377
Operating profit/loss	11,112	13,892	13,338	19,839	13,247
Operating profitability	17%	19%	21%	27%	31%
Passenger transportation					
Revenue from sales	4,133	6,229	5,891	9,861	5,351
Prime cost, excluding depreciation	14,429	17,467	17,188	22,496	12,239
EBITDA	-10,296	-11,238	-11,296	-12,635	-6,889

⁹ <https://glavcom.ua/economics/finances/kros-subsiduvannya-vzhe-ne-dopomozhe-zbitki-pasazhirkikh-perevezhen-ukraliznitsi-siahnuli-23-mlrd-1045584.html>

Segment/indicator	2020	2021	2022	2023	2024 6 months
EBITDA profitability, %	-249%	-180%	-192%	-128%	-129%
Depreciation	2,646	2,441	2,819	3,166	1,654
Operating profit/loss	-12,942	-13,678	-14,115	-15,801	-8,543
Operating profitability	-313%	-220%	-240%	-160%	-160%
Other segments					
Revenue from sales	5,829	7,471	6,754	9,472	5,539
Prime cost, excluding depreciation	1,328	2,064	3,635	4,409	2,201
EBITDA	4,501	5,407	3,120	5,063	3,338
EBITDA profitability, %	78%	72%	46%	53%	60%
Depreciation	1,429	1,239	1,135	1,136	559
Operating profit/loss	3,072	4,167	1,985	3,927	2,779
Operating profitability, %	53%	56%	29%	41%	50%
Total by JSC "Ukrainian railways"					
Revenue from sales	75,292	85,987	75,693	93,608	53,908
Prime cost, excluding depreciation	61,263	69,104	61,978	72,794	39,835
EBITDA	14,029	16,884	13,715	20,814	14,073
EBITDA profitability, %	19%	20%	18%	22%	26%
Depreciation	12,787	12,503	12,507	12,847	6,589
Operating profit/loss	1,242	4,381	1,208	7,966	7,483
Operating profitability	2%	5%	2%	9%	14%

in round figures

Source: financial statements of JSC "Ukrainian railways"

The cross subsidization of the passenger transportation segment is the most obvious and significant disproportion in the activities of JSC "Ukrainian railways". In 2020-2024 (6 months), the passenger transportation segment generated UAH 65.1 billion in losses, which were covered by profits from freight transportation.

On average, UAH 2.2 of losses accounted for UAH 1 of passenger transportation revenue. That is, revenues in the passenger segment cover only approx. 40% of expenses. The most critical situation is in the suburban transportation segment, where revenues cover less than 10% of expenses. This situation is a result of the low cost of tickets on suburban trains, the lack of subsidization of passenger transportation by both the state and local budgets (the main customers for passenger transportation, including privileged categories of citizens), and the lack of effective control over the purchase of tickets. In long-distance transportation, revenues cover no more than 60% of expenses.

Therefore, it is necessary to review the approaches to pricing intercity passenger transportation (at the first stage, at least in the premium segments of transportation) to achieve break-even operation of this segment. Critical to stabilizing JSC "Ukrainian railways" economic condition and maintaining the competitiveness of the freight transportation segment of JSC "Ukrainian railways" is the assumption of responsibility for covering the difference in the cost of suburban transportation services (i.e., the difference between the full economically justified cost and the actual monetization of services in the form of tickets sold) by the state, and, in the future, by local authorities. Further delays in resolving this issue will exacerbate not only economic but also

technical problems: railway transport becomes more risky due to the high degree of wear on the railway tracks, and the number of accidents increases.

Another distortion that negatively affects JSC "Ukrainian railways" financial results is the non-core tax burden, namely the payment of land tax under the railway tracks.

Unlike European countries, railway tracks in Ukraine are subject to land tax. For example, until January 1, 2019, according to Article 284 (Clause 284.4) of the Tax Code of Ukraine, "Land payment for land plots provided for railways within the right of way... was levied at the rate of 25 percent of the tax...". Starting from January 1, 2019, the Tax Code does not provide for this discount for JSC "Ukrainian railways", and JSC "Ukrainian railways" pays the land tax in full. In 2020-2023, a total of UAH 13.2 billion of land tax was paid.

The total amount of non-core taxation of JSC "Ukrainian railways" (land tax) in 2020-2023 amounted to UAH 13.2 billion (Table 3.2).

Table 3.2

Dynamics of the level of non-core tax burden of JSC "Ukrainian railways" in 2020-2023, UAH million

Indicator	2020	2021	2022	2023	2020-2023
Land tax, UAH million	3,630	3,799	3,165	2,613	13,206

Source: Annual Reports of JSC "Ukrainian railways"

The total unproductive financial burden on JSC "Ukrainian railways" (subsidizing passenger transportation + non-core tax burden), which was actually paid by shippers in 2020-2023, amounted to UAH 69.7 billion (Table 3.3).

As a result, the total unproductive load increased by 2.3 from 2020 to 2023, from 54 UAH/t to 124 UAH/t, respectively.

Table 3.3

Estimated total unproductive load of JSC "Ukrainian railways" on freight owners in 2020-2023.

Indicator	2020	2021	2022	2023	2020-2023
Losses (subsidization) of passenger transportation, UAH million	12,942	13,678	14,115	15,801	56,536
Land tax, UAH million	3,630	3,799	3,165	2,613	13,206
Total unproductive load, UAH million	16,572	17,477	17,280	18,414	69,742
Volume of freights transported, MT	306	314	151	149	920
<i>Unproductive load per 1 ton of freights</i>	<i>54</i>	<i>56</i>	<i>114</i>	<i>124</i>	<i>76</i>

Source: Annual Reports of JSC "Ukrainian railways"

JSC "Ukrainian railways" has also accumulated significant amounts of scrap metal and non-core property that is not currently used and has no potential for future use. Its sale will provide additional cash inflows and reduce the cost of ongoing maintenance of non-core property.

4. The Impact of the Increase in the Cost of the Infrastructure Component of JSC "Ukrainian railways" on the Ukrainian Economy and the Company's Revenues in 2025

JSC "Ukrainian railways" planned 37% increase in the infrastructure component of the railway freight tariffs will lead to a 26-31% increase in the cost of railway freight transportation for various types of products.

As the analysis described in Clause 2.1 above shows, there is a high negative correlation between changes in the cost and volume of railway freight transportation. In other words, an increase in cost leads to a decrease in railway freight transportation.

Ukrainian manufacturers are shifting their focus to road transport whenever possible, but railway transport is either unavailable or its substitutability is limited (partial) for the main part of products. This is especially true for coal (supplies to thermal power plants), iron ore (supplies to steel mills), building materials, and cement (interregional transportation). Railway transport can be replaced by road transport only in the segment of grain, timber and oil products transportation, but this will require a significant additional number of trucks (more than 75,000 pcs.).

An increase in railway freight tariffs in commodity segments with limited substitutability of railway transport by other modes of transport will increase the cost (selling price) of their products, which will lead to a decrease in sales and, consequently, production volumes. For example, transportation volumes and, consequently, production of coal, building materials, iron ore, and rolled metal will decrease. In the context of grain production and transportation, it is important to note the following. Increased transportation costs will reduce the purchase price of grain for small farmers. As a result, they will receive less income and, accordingly, buy less fertilizers, which will negatively affect the volume of their harvest (-3 million tons of grain).

In total, the railway freight transportation of various types of products may decrease by approx. 27 million tons per year, and production volumes may decrease by approx. 23 million tons per year.

This decrease in production of certain types of products due to the planned increase in railway freight tariffs will have a negative impact on Ukrainian key macroeconomic indicators, reducing gross output by 1.52%, GDP — by 1.18% and exports — by 2.98%. In monetary terms, the decline in output (at 2024 prices) will amount to UAH 259.3 billion, GDP - UAH 95.8 billion, and exports - UAH 97.8 billion.

The mining industry (-5.3%), metallurgical production (-6.9%), and production of other non-metallic mineral products (-4.2%) will suffer the most from the increase in railway freight tariffs.

Due to the decline in output, the total number of jobs will be reduced by almost 76 thousand people, with the largest reduction in industry (-26 thousand people).

The total reduction in tax revenue to the budgets of all levels will amount to at least UAH 35.7 billion in 2025 prices. This amount includes both a direct decrease in tax revenue from the reduction in output and a shortfall in tax revenue due to the failure to launch the 2nd blast furnace by AMKR in 2025.

At the same time, due to the aforementioned decrease of ~27 million tons/year in railway freight transportation of various types of products, JSC "Ukrainian railways" will not receive the

planned additional revenue from freight transportation, which will not allow it to fully cover losses from passenger transportation.

Thus, according to JSC "Ukrainian railways" financial plan, which was made public in December at a meeting with business, the company's loss in 2025 will amount to UAH 22.8 billion without a tariff increase. It is planned to cover it by increasing the infrastructure component by 37%.

However, due to the decrease in freight transportation by 27 million tons per year, additional revenue of JSC "Ukrainian railways" will increase by only UAH 11 billion (Table 4.1). This will cover only half of the company's expected losses in 2025.

Table 4.1

Calculation of additional revenue of JSC "Ukrainian railways" in 2025 from a 37% increase in the infrastructure component of the tariff, UAH billion

Indicator	2024	2025 (after +37% indexation)
Freight transportation volumes, MT	175	148
Revenue from freight transportation, UAH billion	82	-
including the infrastructure component, UAH billion	72*	-
Average infrastructure component indicator in the railway freight tariff, UAH/ton	411	563
Revenue from the infrastructure component of the railway freight tariff, UAH billion	72	83

**JSC "Ukrainian railways" revenue from freight car leasing is about UAH 10 billion per year*

Source: Annual Report of JSC "Ukrainian railways" (2024)

5. Conclusions and Recommendations

At the end of last year, JSC "Ukrainian railways" announced an initiative to **increase** the infrastructure component of railway freight tariffs by +37% in 2025, which is necessary **to cover losses** from suburban and intercity passenger transportation of almost **UAH 24 billion**¹⁰.

At the same time, the calculations indicate that the planned increase in JSC "Ukrainian railways" railway freight tariffs by +37% will lead to **a reduction in the company's freight base** by -15% (or **-27 MT/year**) due to the transition of freight owners to road transport and **a reduction in the production of export-oriented sectors** due to a decrease in their competitiveness in foreign markets.

The shrinking freight base will limit expected revenue — JSC "Ukrainian railways" **revenue are expected to grow by only UAH 11 billion, instead of the expected UAH 24 billion**. This will **cover only half of the planned losses** from passenger transportation, but the other half will remain uncovered. Accordingly, the goal will not be achieved, as additional revenue from freight transportation will not cover the losses of passenger transportation. However, due to the negative consequences for the economy, the **state budget will lose about UAH 36 billion in taxes and fees**.

An additional increase in railway freight tariffs to cover the residual loss of UAH 11-13 billion will not solve the problem in the current conditions, as JSC "Ukrainian railways" freight base and volumes of industrial and agricultural production will shrink again. According to the Federation of Transport Employers of Ukraine (FRTU), road transportation will become more competitive for grain, metals, coal, cement, and even ore over short and medium distances with further indexation of JSC "Ukrainian railways" tariffs.

To cover the residual loss, we propose a list of measures that require regulatory decisions by the Government and the Parliament. Their implementation in 2025 will allow **attracting additional financial resources and optimizing excess costs of JSC "Ukrainian railways"**, in particular, but not limited to:

- 1) **Liberalization of pricing in premium segments of passenger transportation** (coach-sleeping car and compartment car) — those who choose comfort should pay a fair price, not a preferential one
- 2) **Approve the procedure and increase sales of JSC "Ukrainian railways" scrap metal and other non-core property** that is not currently used and has no potential for future use
- 3) **Simplifying the procedure for JSC "Ukrainian railways" to abandon land plots** that are not used but for which land tax is paid
- 4) **Abolishing the non-core tax burden**, namely the payment of **land tax under railway tracks** (which would be in line with the practice of **EU countries**);

¹⁰ Thus, according to the comments made by Oleksandr Pertsovsky, Chairman of the Board of JSC "Ukrainian railways", the total loss of passenger transportation in 2025 will amount to UAH 22 billion, where only international routes are profitable (up to UAH 2 billion). Accordingly, the loss of suburban and intercity transportation is expected to be UAH - 24 billion

- 5) Study the feasibility and develop a necessary action plan for **the conservation of the inactive railway network**, which was formed as a result of structural changes in the Ukrainian economy due to the long-term full-scale war.

Thus, the analytical and calculation work performed indicates that an **increase in railway freight tariffs by +37% will cover only up to half of the losses from preferential passenger transportation**. The adoption of regulatory decisions will allow JSC "Ukrainian railways" to accumulate funds to cover the remaining loss by generating additional revenue and optimizing excess costs.

However, in this scenario, JSC "Ukrainian railways" loses its freight base in the profitable segment, which creates a risk of even greater losses in future periods, and the state loses gross output of UAH 259.3 billion, GDP of UAH 95.8 billion, and exports of UAH 97.8 billion. **The total reduction in tax revenue to the budgets of all levels will amount to at least UAH 35.7 billion in 2025 prices.**

Considering the negative impact of the growth of railway freight tariffs to cover unprofitable privileged suburban and intercity passenger transportation on the State Enterprise JSC "Ukrainian railways", the Ukrainian economy and tax revenue, and, at the same time, the high social importance for the state in maintaining privileges for passenger transportation (in the non-premium segment), **it is more appropriate to consider the possibility of providing JSC "Ukrainian railways" with a subsidy/grant from the state budget to ensure uninterrupted passenger transportation under martial law in the amount of UAH 12 billion, which is 50% of the loss of privileged suburban and intercity passenger transportation. The remaining funds will need to be accumulated through the implementation of the above regulatory decisions.**

The proposed alternative solution will help **finance unprofitable privileged suburban and intercity passenger transportation without reducing the freight base in the profitable segment, maintain production of important export-ready products, and prevent a reduction in state budget revenue during the wartime period.**