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UKRAINIAN RAIL TRANSPORT ON THE WAY TO THE EU: THE IMPLEMENTATION OF LEGISLATION, REFORMS AND PROSPECTS

| Abstract

- *Goal* – The purpose of the study is to analyse the process of implementing EU legislation in the field of the rail transport in Ukraine as a key instrument for adapting the national transport system to the requirements of the single European market.
- *Research methodology* – The article applies a comprehensive analytical approach that includes regulatory and legal analysis, institutional analysis, project analysis, and empirical data.
- *Score/results* – The results of the study demonstrate Ukraine's significant achievements in harmonising transport legislation with EU law, but at the same time, the study points to significant challenges. Thus, the assessment is balanced: successes are recognised, but systemic problems that need to be addressed are highlighted.
- *Originality/value* – The value of the article is reflected in its comprehensive, interdisciplinary examination of the issue, combining regulatory, managerial, technical, and socio-economic aspects of the reform.

| **Keywords:** implementation, European integration, rail transport, EU directive, Ukrainian Railways, modernisation, solidarity routes, European gauge, traffic safety, reform

1. Introduction

The implementation of the European Union's railway legislation is a key element in the modification of Ukraine's transportation system to the requirements of the European Single Market. European legal norms establish an integrated approach to ensuring a high level of safety, market transparency, equal access to infrastructure and the development of a competitive environment. In the Ukrainian context, this process is accompanied by both regulatory changes, including the adaptation of the basic EU directives (as part of the Association Agreement), and structural challenges related to the public administration reform, corporatisation of the operator, and the introduction of the principles of separation of infrastructure and transportation management functions. At the same time, in practice, the implementation of these norms faces a number of challenges, including institutional incompleteness of reforms, insufficient level of technical compatibility of infrastructure, limited financial resources, and legal uncertainty of certain procedures [www 1]. The existing gap between the regulatory adoption of European acts and their practical implementation slows down the progress of reforms in the railway sector and makes it difficult to achieve certain EU standards. This necessitates an in-depth analysis of the actual state of implementation, identification of key barriers, and creation of effective mechanisms to accelerate the process of harmonisation of the legislative framework and management practices in the railway sector.

2. Transport security and European integration amid geopolitical instability

Transport serves as a vital foundation for the economy, facilitating the movement of persons and products, granting access to services, and contributing to trade expansion and economic progress. Since 2014, Ukraine's trade flow dynamics has undergone considerable transformation: previously, trade with Russia and transit through the Ukrainian territory played a prominent role, whereas today the increasing trade with the European Union has elevated the significance of the western transport corridors [www 2].

The escalation of Russia's military aggression against Ukraine has underscored the critical importance of safeguarding supply chains, while transportation remains a key pillar of national resilience. The rapid repair of the damaged infrastructure and the implementation of the joint EU-Ukraine Solidarity Lanes

project allowed Ukraine to export more than 122 million tons of goods and import about 45 million tons of essential goods between May 2022 and February 2024 via Danube ports and road and rail connections (according to the European Commission). Since Russia's decision to terminate the Black Sea Grain Initiative on July 17, 2023, and the bombing of ports and infrastructure necessary for the Ukrainian grain exports, the development of the EU's Solidarity Lanes initiative has been important to support the national economy of Ukraine. Additionally, the Solidarity Lanes help establish the foundation for Ukraine's prospective integration into the European Union's Single Market and transport infrastructure. Enhanced connectivity between the EU and Ukraine is also important as it provides secure trade routes [www 2].

Ukraine's transport system has a pivotal function in ensuring the mobility of the population and economic development, including rail transport, which is one of its most important segments. As of August 2024, the operational length of railway tracks in Ukraine, including the temporarily occupied territories, was 19 759.8 kilometers. An extensive network of railways ensures the efficient movement of goods and passengers both within the country, and abroad, playing an important role in ensuring logistics chains, access to markets and increasing the transport accessibility of regions [www 3].

In the context of economic resilience and adaptation to new geopolitical conditions, the modernisation of logistics infrastructure is of strategic importance. Restoring and expanding the capacity of key transportation corridors, along with diversifying export routes, creates the preconditions for ensuring continuous supply of products to foreign markets. This, in turn, strengthens the competitiveness of Ukrainian exports, reduces dependence on certain destinations, and facilitates integration into the European and global economic space.

Ensuring the sustainable growth of the railway industry is a vital aspect of the national economic strategy, facilitating the country's integration into international and European transport systems. Due to its European integration commitments and the need to intensify the foreign economic activity, the rail transportation sector is facing new requirements in terms of service quality, competition, and infrastructure efficiency. In the context of globalisation and incorporation into the European Union, Ukraine must adjust its transport infrastructure to the European norm, which includes market openness, equal conditions for all participants and transparent tariff setting.

The implementation of European standards in the railway sector involves reorganising the infrastructure management system, separating the management

and service provision functions on the railways, and creating conditions for competition between different operators. One of the most important aspects is the creation of transparent tariff-setting mechanisms that ensure a fair price for services for consumers and stimulate investment in the infrastructure modernisation.

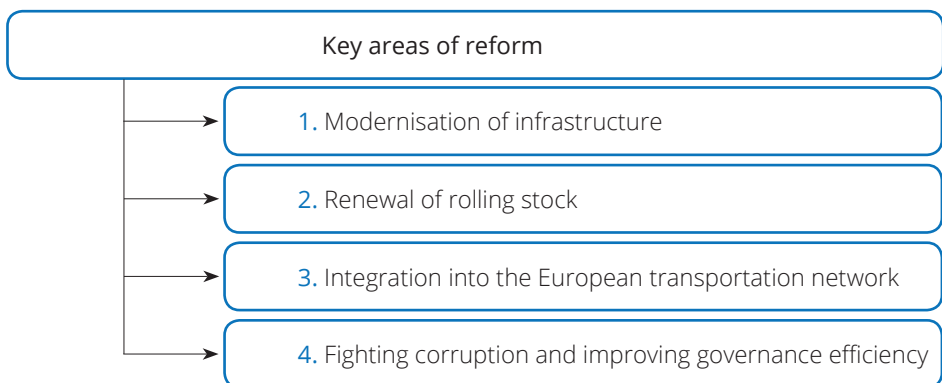
3. Infrastructure reforms as a condition for integration with the European transport network

Ensuring the efficient use of infrastructure resources is a key task for improving the economic efficiency of the rail transportation. At the same time, the adaptation of national legislation to the European levels, which provide for the introduction of modern technologies and innovations in traffic management, as well as the development of digital platforms to optimise the transportation processes and safety control [www 4], is an important aspect.

Thus, ensuring the competitiveness of Ukrainian railways in international markets and integration into the European transport network is only possible if the industry is comprehensively reformed to meet high European standards of safety, service quality and economic efficiency.

This approach will not only contribute to the development of Ukraine's economy, but will also ensure its stable and effective integration into the single European transport space, which is critical for long-term sustainable development.

Figure 1. Key areas for reforming the Ukrainian railway industry



Source: the authors' own work.

The key areas of reforming the railway industry in Ukraine Fig. 1, include the following main blocks:

1. Modernisation of infrastructure – the restoration and increase of the capacity of key transport links are necessary to ensure the efficient operation of rail transport. In particular, in 2024, the overhaul of 459 km of tracks began, which is a significant improvement compared to the previous years.

In 2025, as part of an intergovernmental agreement between Ukraine and France, the JSC Ukrainian Railways received a batch of rail products manufactured by the company from France Saarlouis Rail SAS. The first shipment amounted to 1 083 thousand tons of broad gauge rails out of a total of 19 thousand tons to be delivered by the early fall of 2025.

Table 1. Key parameters of the rail supply project from France

Indicator	Meaning
Supplier	Saarlouis Rail SAS (France)
Total volume of deliveries	19 000 tons of rails
First batch (spring 2025)	1 083 tons
Delivery completion date	By early fall 2025
Expected volume of reconstructed tracks	About 145 km
Main areas of reconstruction	Lviv-Uzhhorod, Kyiv-Lviv-EU border, Kyiv-Odesa, Kyiv-Dnipro, Kyiv-Kharkiv
Financing	Loan of EUR 37.6 million for 35 years at 0.0161% per annum
Grace period	14 years without the repayment of the loan principal

Source: the authors' own work.

This project is critical to ensuring the resilience of the railway infrastructure in the face of the armed aggression: the supply of rails allows for prompt the repair of the damage caused by hostilities, maintaining the continuity of logistics flows, and ensuring transport links between regions. According to the Deputy Minister of Communities, Territories and Infrastructure Development of Ukraine, active

cooperation with international donors is also underway to attract additional resources for recovery projects.

The total volume of rails supplied under the agreement will allow for the construction or overhaul of approximately 145 km of railway tracks. Particular attention will be paid to high-speed railways: Lviv–Uzhhorod, Kyiv–Lviv–EU border, Kyiv–Odesa, Kyiv–Dnipro, and Kyiv–Kharkiv.

The supply is financed by a preferential long-term loan in the amount of EUR 37.6 million provided for 35 years at 0.0161% per annum. According to the terms of the agreement, the JSC Ukrainian Railways is exempt from paying the principal amount of the loan for the first 14 years, which allows it to use the materials virtually free of charge. This was the first successful example of the JSC Ukrainian Railways attracting long-term concessional financing for the modernisation of the railway infrastructure [www 5].

2. Renewal of rolling stock – depreciation of rolling stock remains one of the main problems. It is estimated that 90% of passenger cars need to be replaced or repaired.

The State Budget of Ukraine for 2025 provides for comprehensive financing of measures aimed at modernising and developing the railway industry. The total expenditures for the needs of the JSC Ukrainian Railways cover both the rolling stock renewal and the infrastructure development in accordance with the strategic priorities of the state.

In particular, UAH 4.42 billion was allocated for the purchase of passenger railcars. These funds are used to continue the realisation of the government program for the renewal of passenger rolling stock using the capacities of the domestic machine building industry. As part of this program, 100 passenger railcars have already been delivered, and another 66 are in the process of being manufactured.

UAH 1.83 billion have been allocated for the purchase of rail products, which will help to further upgrade the track infrastructure and ensure safe and uninterrupted train traffic.

A separate area is the financing of development projects in the amount of UAH 1.217 billion. These funds are allocated for strategically important infrastructure initiatives, including the construction of intermodal terminals and the development of a European standard gauge (1435 mm), which is a key element of the incorporation of the Ukrainian transport system into the pan-European space.

It also provides UAH 128 million for co-financing of infrastructure projects in partnership with international financial institutions, which will attract additional resources and expertise to implement the industry's priorities [www 6].

This funding reflects Ukraine's strategic focus on modernising rail transport, improving its efficiency, environmental friendliness and integration into the European transport network.

3. Integration into the European transport network – in the context of the government's strategy aimed at developing railway infrastructure focused on the European integration, the construction of the European railway Chop-Uzhhorod began in 2024. The project involves laying 22 km of railroad track with a gauge of 1435 mm, which meets the EU standards, to replace the traditional 1520 mm gauge used in Ukraine and a number of post-Soviet countries. The infrastructure component of the project includes the reconstruction of artificial structures and engineering support facilities. In addition, the newly constructed section is to be equipped with two-way semi-automatic interlocking systems and modern micro-processor-based dispatching centralisation facilities.

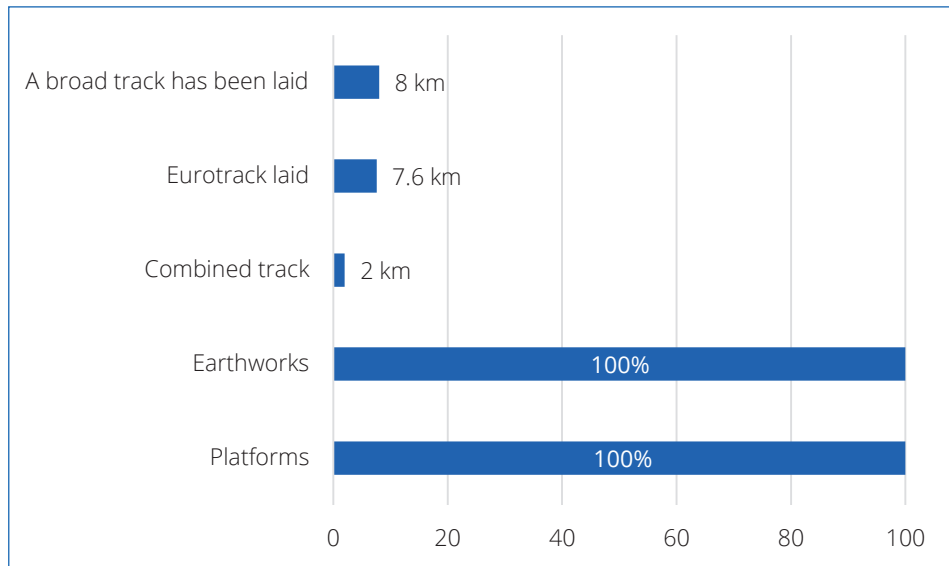
The implementation of this project will create the conditions for launching direct European-format passenger routes from Uzhhorod to EU countries, as well as provide convenient transfers from domestic trains in all regions of Ukraine for further international travel. This will contribute to enhancing cross-border mobility, integration into the European transport space, and the development of Ukraine's transit potential.

According to the Ministry for Development of Communities and Territories of Ukraine, as of spring 2025, significant progress has been made in the implementation of construction works, in particular: 8 km of broad gauge (1520 mm) were completed and 7.6 km of European standard gauge were laid (over 40% of the planned volume); 100% of the work on preparing 2 km of combined track was completed; all the planned earthworks have been completed; electrification, cable networking, construction of engineering infrastructure and reconstruction of passenger platforms are ongoing.

A separate area of the project is the modernisation of the railway station complex in Chop, which is considered an important transit hub on the way to the EU.

The project is approaching its final phase, with a planned completion date of August 2025. In addition to technical progress, attention is being paid to the social dimension of implementation, in particular, to ensuring decent working conditions for railway workers and the need to increase the level of mechanisation of the performed work [www 7].

Figure 2. Progress in the construction of the European railway from Chop to Uzhhorod (as of spring 2025)



Source: the authors' own work.

4. Fighting corruption and improving management efficiency – according to polls, 88% of Ukrainians believe that without reform and fighting corruption, the JSC Ukrainian Railways and passenger transportation will collapse. The main changes expected by citizens include: improved travel conditions, renewal of rolling stock, and increased passenger safety.

An analysis of the key areas of reform in Ukraine's railway industry shows that there is a systematic approach and data on the progress of individual infrastructure projects confirm the actual progress in implementing the planned changes.

The large-scale track modernisation program not only allows for a prompt response to the challenges posed by military threats, but also creates the preconditions for the implementation of high-speed rail projects, which is critical for the development of interregional mobility and strengthening economic integration. The financing model is also extremely important and can serve as a model for future infrastructure agreements.

Another key vector of development is the renewal of rolling stock and it is worth noting the progress in the implementation of the strategic project of laying the European gauge Chop-Uzhhorod, which will directly contribute to physical

integration into TEN-T. At the same time, reforms remain incomplete without systematic efforts to fight corruption.

Thus, the current policy in the field of railway transport demonstrates a transition from fragmented initiatives to comprehensive reforms with a focus on the European standards. Further effective implementation of the planned measures requires coherence of intergovernmental cooperation, stable financing, transparency of decision-making and systematic interaction with civil society. This is a prerequisite for the transformation of the railway industry into an innovative, competitive and integrated segment of the European transport space.

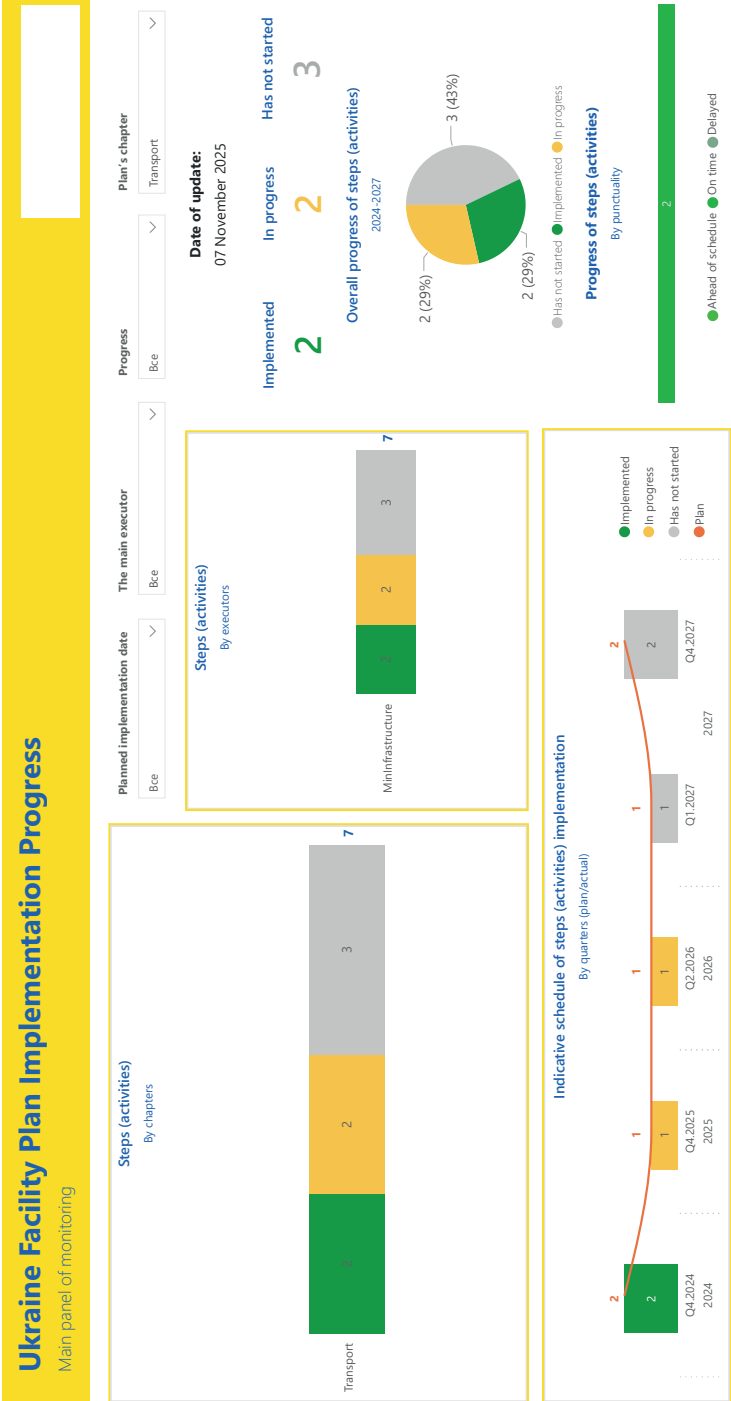
4. Implementation of the *acquis* EU in the field of rail transport: status, instruments, challenges

In June 2022, Ukraine was granted candidate status for the EU membership by the European Council, followed by the Council's decision in December 2023 to launch accession talks. This implies the implementation of not only the acts of legislation defined by the Association Agreement, but also of all relevant acts of the European Union legislation, in particular in the area of rail transport [www 8].

As part of the EU's Ukraine Facility, approved by the EU for 2024–2027, Ukraine has developed an Action Plan aimed at implementing structural reforms in key areas of the economy and public administration, including the transport sector. In particular, in the field of railway transport, it is envisaged to harmonise the national legislation with the requirements of the EU *acquis*, in particular, transparent management of infrastructure, ensuring non-discriminatory access to it and stimulating competition in the railway transportation market. One of the objectives of the Plan is to create an effective tariff setting system and introduce mechanisms to oversee market regulation by an independent body. The execution of these measures will not only help to improve the operational efficiency of the JSC Ukrainian Railways, but also ensure Ukraine's consistent progress towards integration into the Single European Transport Area [www 2].

The progress in implementing the Ukraine Facility Plan is an important indicator of Ukraine's ability to effectively implement structural reforms in line with the European standards. In particular, in the transport sector, the implementation of the envisaged measures demonstrates gradual integration into the Single European Transport Area and adaptation of legislation to the EU *acquis*.

Figure 3. Progress in the implementation of the Ukraine Facility Plan (Transport)



The analysis of the information in Figure 3 shows that as of April 2025, the Ukraine Facility Plan envisages the implementation of 7 measures in the transport sector, of which only 2 have already been implemented (29%), 2 are in the process of implementation (29%), and 3 remain unimplemented (43%). An analysis of the distribution of measures by implementers shows that all initiatives are coordinated by the Ministry of Infrastructure of Ukraine.

The indicative implementation schedule demonstrates the uneven dynamics of fulfillment of commitments: a surge in activity was recorded in the fourth quarter of 2024, while in subsequent periods there is a gradual decline in the pace of implementation of measures. This situation points to the potential challenges related to administrative, financial or institutional barriers.

Therefore, the effective implementation of the Plan in the transport sector requires increased attention from the state, in particular, in terms of timely launch of the planned measures that are key to infrastructure modernisation, harmonisation of the regulatory framework with EU law, and the overall progress in the European integration.

Rail transport reform is a priority for Ukraine as part of its European integration course and a prerequisite for strengthening the country's economic potential. The harmonisation of the Ukrainian legislation in accordance with Directive 2012/34/EU of the European Parliament and of the Council establishing a single European railway area is a key condition for Ukraine's integration into the European transport area. The Directive establishes rules for the creation of a single European railway area. Its goal is to make rail transport in the EU more open, competitive and efficient [www 9]. In other words, the Directive establishes unified conditions for railway operators across the European market.

Another important vector of European integration in the field of railway transport is the harmonisation of the national legislation with the key provisions of Directive 2016/797/EU of the European Parliament and of the Council on the interoperability of the railway system within the European Union and Directive 2016/798/EU of the European Parliament and of the Council on the safety of railway transport [www 9]. The implementation of these acts provides, in particular, for the introduction of a European model of the traffic safety system, the creation of legal mechanisms for the technical investigation of accidents on the railway, as well as for the formation of a regulatory framework for the technical regulation of interoperability, i.e. the ability of railway infrastructure and rolling stock to interact within a single system under safe conditions.

In the context of the negotiating chapter 14 “Transport Policy”, an initial assessment of the state of implementation of the EU acquis in the field of railway transport was carried out. The assessment was carried out in accordance with the Resolution of the Cabinet of Ministers of Ukraine of February 28, 2023 No. 189 “On Approval of the Procedure for Conducting an Initial Assessment of the Implementation of the European Union (EU) Acquis” [Response, [www 10](#)]. The analysis determined the current level of approximation of national legislation to the EU and outlined further steps to harmonize the legal framework.

In 2024, a bilateral meeting was held between Ukraine and the European Commission to conduct a press screening of Ukrainian legislation in the field of railway transport. This is one of the first steps in preparing for the official screening under negotiating Title 14 “Transport Policy”, which will determine the further negotiation process on harmonisation of Ukrainian legislation with the requirements of European directives, in particular on rail transport [[www 14](#)]. The discussion focused on legislative initiatives that are currently being developed by the Ministry for Development of Communities and Territories of Ukraine. In particular, it was about the draft Law of Ukraine “On the System and Peculiarities of the Functioning of the Railway Transport Market of Ukraine” (Reg. No. 12142 of 21.10.2024), which is currently under consideration by the Verkhovna Rada of Ukraine. This draft law envisages the introduction of a new model for organising the railway transportation market, focused on the principles of functioning of the European railway systems, in particular by: introducing a system of state railroad management bodies; defining the basic requirements, obligations and rights of the infrastructure operator, carrier, basic requirements for railway rolling stock, regulating the activities of railway rolling stock operators and owners of the rolling stock; enshrining the principle of equal access to infrastructure services; establishing a railway safety management system in accordance with the requirements of the European Union legislation; establishing the legal framework for technical regulation and approval of railway transport subsystems for operation [[www 8](#)].

The adoption of this draft law will ensure the fulfillment of the state’s obligations within the framework of the EU accession process and will create organisational, legal and economic frameworks for the functioning of a competitive rail transportation market in Ukraine.

The Law of Ukraine “On the System and Peculiarities of the Functioning of the Railway Transport Market of Ukraine” has a different impact on key stakeholders. Below is an infographic showing the nature of the impact and brief explanations Figure 4.

Figure 4. Impact of the Law on key stakeholders

Stakeholder	Impact of the Law Implementation	Explanation
Railway Transport Workers	□ Positive	New jobs will be created in the railroad sector.
JSC Ukrainian Railways	□ Negative	Competition → potential loss of market share.
Maintenance Operators, Educational Institutions	□ Positive	Conditions for competition in maintenance and training sectors.
Owners of Access Roads	□ Positive	Clarification and regulation of rights and responsibilities.
Potential Carriers	□ Positive	Equal access to infrastructure → end of monopoly.
Passengers	□ Positive	Defined rights and quality management system → better service.
Shippers	□ Positive	Competition among carriers → improved service quality and options.
Impact of the law's implementation		

Source: the authors' own work.

Thus, as can be seen from Figure 4 above, the overall balance of impacts is positive: 6 out of 7 stakeholders benefit from the implementation of the Law. The Law opens up market opportunities, promotes competition, investment, and improves the quality of services in the freight and passenger segments. The JSC Ukrainian Railways is the only party that will potentially suffer losses, but this is a natural stage of reforming the sector in the context of the European integration.

From a public policy perspective, the reform is aimed at adapting to EU standards, increasing the efficiency of the industry, and improving the consumer experience.

It should also be noted that the Ministry for Development of Communities and Territories of Ukraine is currently preparing for a bilateral meeting between Ukraine and the European Commission within the framework of the official screening of the compliance of Ukrainian legislation with EU law under negotiating chapters 14 “Transport” and 21 “Trans-European Networks”, which is to take place on June 24–27, 2025 in Brussels (Royaume de Belgique), and which will result in a report by the European Commission on the official assessment of the level of implementation of European legislation [Response, [www 10](#)].

5. Conclusions

Rail transport remains a strategically important sector for Ukraine, especially in times of war. Sustainable development of the railway industry has been recognised as a national policy priority, which means opening the market to competition, improving the quality of services and ensuring equal access to infrastructure. The European integration process requires Ukraine to harmonise its railway legislation in line with the key EU directives

The initial assessment of the implementation of the *acquis* EU showed partial compliance of the Ukrainian legislation with the European standards and identified areas for further harmonisation. According to the Ministry of Communities and Territories Development of Ukraine, as of the end of 2024, the overall progress in implementing the Association Agreement in the areas of transport, transport infrastructure, postal and courier services was only 58 percent.

It is expected that the results of the official screening in 2025 will form the basis for a roadmap for further reforms in the Ukrainian railways sector.

The implementation of the European legislation in the field of rail transport is not only an international obligation of Ukraine, but also a strategic tool for modernising the national transport system. The complexity of the reform process, from harmonising legislation to modernising infrastructure and changing the management model, demonstrates the gradual transition of the railway industry to the EU standards.

The results of the study show that Ukraine has taken a number of key steps towards integration into the European Transport Area: a new legislative framework has been adopted, large-scale infrastructure projects are being implemented, cooperation with international donors has intensified, and the modernisation of rolling stock and the development of new European-style routes have begun. At

the same time, a number of systemic legal, technical, managerial, and financial challenges have been identified that slow down the implementation of European integration measures.

The factor of institutional capacity and effective public administration in implementing reforms is of particular importance, in particular, in terms of ensuring transparent access to infrastructure, introducing common safety standards, and creating a competitive environment. An analysis of the impact of the new market model on stakeholders shows mostly positive expectations in the freight, passenger, and service segments. Negative consequences are possible only for the current monopolist the JSC Ukrainian Railways, but this opens up prospects for its transformation in a competitive environment.

In the context of the European integration, the reform of the rail transport in Ukraine is not only a sectoral task, but also a key element of the macroeconomic stability, national security and the development of the country's logistics potential. Further deepening of integration depends on the pace of implementation of the Ukraine Facility Plan, the coherence of government policy, stable financing, anti-corruption initiatives, and active participation of the civil society.

Thus, the transformation of the Ukrainian rail transport in the European direction is not only a necessity, but also a realistic prospect, provided that political will, institutional stability and consistent implementation of reforms in accordance with the *acquis* EU are maintained.

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