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ORGANIZATIONAL AND ECONOMIC MECHANISM FOR THE DEVELOPMENT RAILWAY TRANSPORT ENTERPRISES IN UKRAINE

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An analysis the trends in the functioning the railway transport Ukraine was conducted, which allowed us to identify significant problems that have a destructive impact on the situation in the industry and cause a number contradictions in the development enterprises in this sphere. It was stated that the effective solution to modern problems railway transport enterprises requires a comprehensive approach, which is implemented through the formation of an effective organizational and economic mechanism to ensure their development. It was established that the main elements of the organizational and economic mechanism for the development of railway transport enterprises should be such subsystems as social and economic responsibility, strategic and adaptive management, strategic partnership and anti-crisis management of resource potential. It was determined that the strategic management subsystem is focused on the formation a balanced economic portfolio of railway transport enterprises. Given that the further development of railway complex enterprises is associated with the attraction of additional resources and opportunities, the expediency of forming long-term economic relations of enterprises in this sphere with other business entities for the implementation processes expanded reproduction of the production potential the railway industry is argued. It was found that the key tools of the adaptive management subsystem should be the intellectualization both strategic assets and processes of production and economic activity management. It was determined that improving the quality parameters the functioning of railway transport enterprises requires balanced resource provision and coordination the goals and values enterprises and persons interested in their development, which are implemented through anti-crisis management resource potential and social and

economic responsibility. The presented subsystems the mechanism as a whole are aimed at taking into account changes in the operating environment railway transport and allow achieving strategic competitive advantages.

Keywords: *organizational-economic mechanism, enterprise, management, development, railway transport*

ОРГАНІЗАЦІЙНО-ЕКОНОМІЧНИЙ МЕХАНІЗМ РОЗВИТКУ ПІДПРИЄМСТВ ЗАЛІЗНИЧНОГО ТРАНСПОРТУ УКРАЇНИ

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Проведено аналіз тенденцій функціонування залізничного транспорту України, що дозволило встановити суттєві проблеми, які мають деструктивний вплив на ситуацію в галузі та обумовлюють виникнення ряду протиріч у розвитку підприємств даної сфери. Констатовано, що ефективне вирішення сучасних проблем підприємств залізничного транспорту потребує комплексного підходу, який реалізується через формування дієвого організаційно-економічного механізму забезпечення їхнього розвитку. Встановлено, що головними елементами організаційно-економічного механізму розвитку підприємств залізничного транспорту мають стати такі підсистеми, як соціально-господарська відповідальність, стратегічне та адаптивне управління, стратегічне партнерство та антикризове управління ресурсним потенціалом. Визначено, що підсистема стратегічного управління орієнтована на формування збалансованого господарського портфеля підприємств залізничного транспорту. Зважаючи на те, що подальший розвиток підприємств залізничного комплексу пов'язаний з залученням додаткових ресурсів і можливостей, аргументовано доцільність формування довгострокових економічних відносин підприємств даної сфери з іншими суб'єктами господарювання для реалізації процесів розширеного відтворення виробничого потенціалу залізничної галузі. З'ясовано, що ключовими інструментами підсистеми адаптивного управління мають стати інтелектуалізація як стратегічних активів, так і процесів управління виробничо-господарською діяльністю. Визначено, що підвищення параметрів якості функціонування підприємств залізничного транспорту потребує збалансованого ресурсного забезпечення і узгодження цілей-цінностей підприємств і зацікавлених у їхньому розвитку осіб, що реалізуються через антикризове управління ресурсним потенціалом та соціально-господарську відповідальність. Подані підсистеми механізму в сукупності націлені на врахування змін середовища функціонування залізничного транспорту та дозволяють досягти стратегічних конкурентних переваг.

Ключові слова: *організаційно-економічний механізм, підприємство, управління, розвиток, залізничний транспорт.*

Introduction. At the current stage from other modes transport (primarily road economic activity, the effective operation transport), incomplete structural railway transport enterprises and their future transformations in the railway sector, competitiveness are constrained by both progressive aging fixed assets, low quality of internal and external factors. These include services, lack state support for innovative the decline in domestic production, limited development, and an imperfect legal use of transit potential, increased competition framework for attracting investments.

Additionally, there is a low level of collaboration with domestic transport engineering, petrochemical industries, instrumentation, communications, and many other sectors.

The challenges faced by railway transport enterprises are further exacerbated by infrastructural limitations, which pose threats to modernization processes and the transition to an innovative development path for both domestic railways and the country's economic system as a whole. This situation necessitates a deeper study of the scientific and practical issues related to justifying modern vectors and tools for ensuring the development of railway transport.

Analysis of research and publications. The issue of ensuring the effective development of enterprises is explored in the works of scholars such as Dykan V., Obruch H. [1], Korin M., Ostapiuk B., Romaniuk A. [2], Ovchynnikova V. [3], Pluhina Yu. [4], Tokmakova I. [5], Yurchenko Yu. [6], and others. While highly appreciating the scientific contributions these authors, it should be noted that the business environment in which Ukrainian railway

enterprises operate is characterized by an increased level threats, a high degree uncertainty, and instability. These factors complicate the enterprises' ability to ensure quality economic management and achieve socio-economic growth in the long term, necessitating the development of an effective organizational and economic mechanism for the development of railway transport enterprises.

The purpose of this article is to identify the subsystems the organizational and economic mechanism for the development railway transport enterprises that will enhance the efficiency JSC "Ukrzaliznytsia" in today's complex, volatile, and unstable conditions.

Presenting main material. Ukrzaliznytsia remains a key element Ukraine's economy. It is worth noting that Ukrainian railways accounted for up to 30% of the total "union" freight traffic, and in 1990, they transported over 1 billion tons goods [7]. According to the results of 2024, 174.9 million tons were transported by railway transport (Fig. 1).

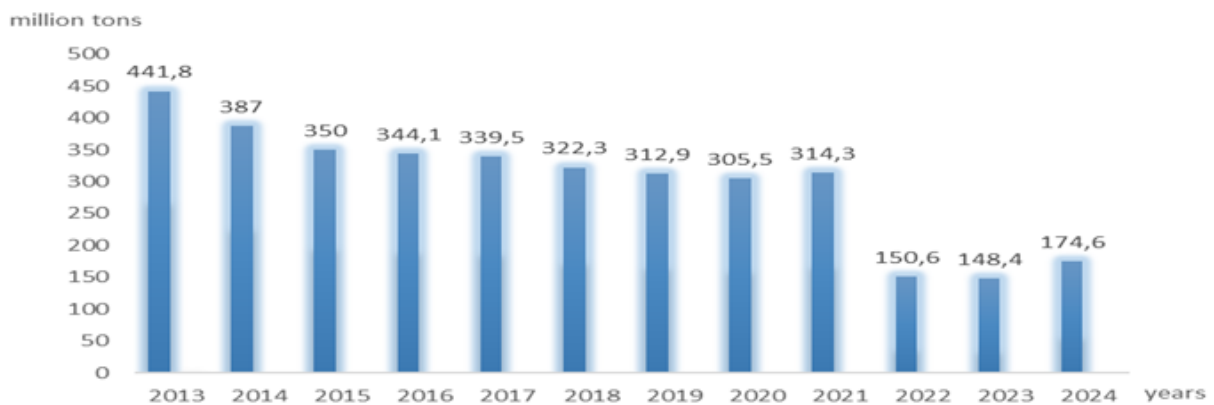


Fig. 1. Dynamics freight transportation volumes by railway transport enterprises for the period 2013-2024 (compiled based on [8])

Figure 1 illustrates the overall decline in production (or volume) over the specified period, with the lowest figures recorded in 2022 and 2023, which can be linked to military actions and the economic crisis. In 2024, there is a slight increase compared to

the previous two years, but the figures are still significantly lower than the levels before 2022.

The operational fleet is extremely outdated, with wear and tear percentages typically approaching 89-120% or more, and

the deadlines for renewal have been postponed. Most locomotives and wagons have long exceeded their service life. Three-quarters of freight diesel locomotives have been in operation for over 35 years. Passenger trains are also in poor condition. The practice of extending service life is widely used, leading to increased repair and maintenance costs, deteriorating transportation economics, and causing accidents. Additionally, 9,000 km of tracks require urgent repairs. The infrastructure is outdated, worn out, and no longer capable of withstanding the load.

Over 30 years of independence, Ukraine has lost its locomotive-building industry (diesel and electric locomotives). Of the 18 wagon-building and repair plants that previously produced and established freight wagon production, 16 have completely ceased production. Two plants are surviving on one-off orders.

Furthermore, the company is showing a decline in profits despite record tariffs and positive dynamics in freight volumes. For example, in the first half of 2024, profits, according to the report, fell by 1.7 billion UAH, even though the average monthly volume of transportation during this period amounted to 15 million tons/month, which is +27% more than last year. Despite a reported profit of 3.1 billion UAH for the first half of the year, the company forecasts a loss of 2.7 billion UAH by the end of the year [9].

The issue is not only with the equipment. Freight transport is carrying the losses from passenger transport. In other words, the money earned from freight is used to cover the losses from passenger transportation. This scheme leads to collapse: the freight sector cannot modernize, and the railway loses its competitiveness.

Financial difficulties persist, although the company showed positive financial results in 2023, in 2024 it may face new challenges due to the rising costs of energy resources and wages. The projected net loss for 2024 is 2.6 billion UAH, which marks a significant decline compared to the profitable

years. The main factors contributing to this include the increase in electricity and diesel fuel costs, which have significantly risen due to the global economic crisis and the consequences of the war. In 2024, electricity prices increased by 56%, which became the main reason for the rise in energy costs [9]. Additionally, JSC "Ukrzaliznytsia" is also facing difficulties in attracting qualified personnel. At the beginning of 2024, the company had over 9.8 thousand active vacancies in scarce professions, which negatively affects its ability to perform tasks on time. Thus, to date, the railway transport enterprises of Ukraine are losing their potential to effectively meet the needs of public production and both domestic and international passenger transport. The loss of capacity and the wear and tear of railway transport negatively impacts the national economy and threatens the stability and defense capability of the country. To address this issue, there is a need to form an effective mechanism to ensure the development of railway industry enterprises.

In modern conditions, the main elements of the organizational and economic mechanism for the development of railway transport enterprises should include: strategic and adaptive management, strategic partnership, and tools to ensure the quality of the functioning of railway transport enterprises (Fig. 2).

The identification the outlined subsystems of the mechanism for the development of railway transport enterprises is related to the following:

1) the mechanism socio-economic responsibility is an instrument for aligning the goals and values railway transport with the interests those involved in its development;

2) the goal adaptive management is to align the functioning of railway transport with changes in the external environment;

3) strategic partnership involves the alignment of the goals and activities railway transport enterprises with partners in the implementation of the processes extended

reproduction of the industry's production potential;

4) the introduction of strategic management is driven by the need to systematize and balance the activities of railway transport enterprises based on

defining strategic business zones (SBZ), strategic business units (SBU), and strategic business segments (SBS);

5) crisis management of resource potential aims to ensure balanced resource provision for railway transport enterprises.

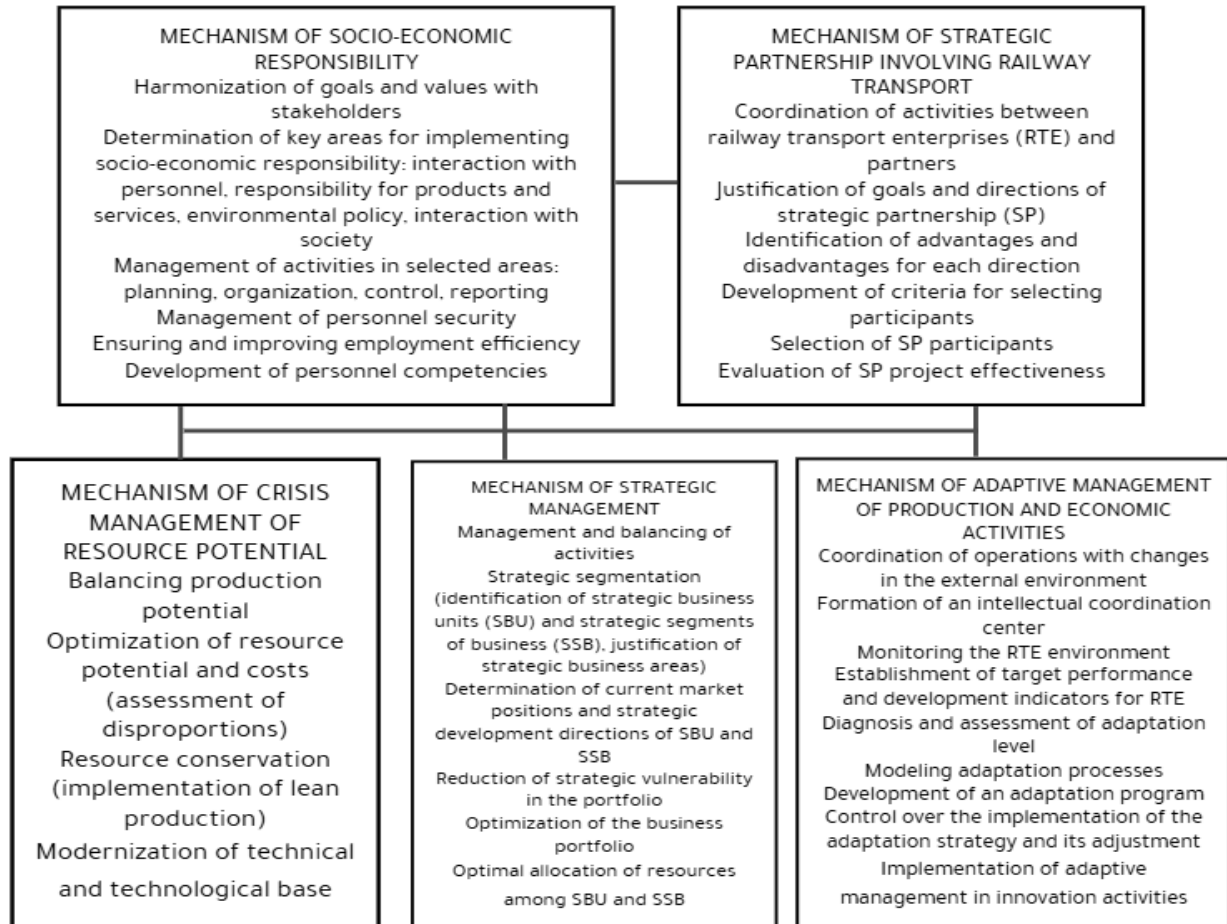


Fig. 2. Components the organizational and economic mechanism for the development railway transport

Based on the research by Kryvoruchko O. M. [10], we believe that the mechanism for the continuous improvement the functioning quality railway transport enterprises is the formation a set properties and characteristics of internal and external business processes these enterprises that allow them to meet the needs of stakeholders, primarily regarding the quality of transportation and the quality of labor life. A key direction the railway transport development strategy should be ensuring the quality workers' labor life in the sector's enterprises. Labor life quality is a systematized set of indicators that characterize working

conditions in the broadest sense—conditions of production life—and make it possible to account for the extent to which the interests and needs of workers are realized, as well as the use their abilities (intellectual, creative, moral, organizational, communication, etc.). The concept of labor life quality is based on creating conditions that ensure the optimal use human labor potential. Improving labor life quality involves enhancing the socio-economic content of labor, developing those characteristics of labor potential that allow employers to use intellectual, creative, organizational, and moral abilities of workers

more effectively.

The success the financial and economic activities, competitiveness improvement, and further economic growth of railway enterprises depend on resource provision, the structure of which must meet the environmental requirements, the speed of resource renewal, and the efficiency of their use. Available resources, combined with reserves, form the resource potential of railway transport enterprises. Effective use of the resource potential is closely linked to resource-saving, which is understood [11] as organizational, economic, technical, scientific, practical, informational activities, methods, processes, and a set of organizational and technical measures accompanying all stages of the life cycle of objects and aimed at ensuring the minimal consumption of material and energy at these stages per unit of the final product, based on the existing level technology development and with minimal impact on humans and natural systems. The transition to resource-saving production requires comprehensive rationalization resource use (labor, material, financial, intellectual, informational), structural reorganization production based on the actual needs of internal and external markets, implementation scientific and technological progress, and new management, analysis, and forecasting methods. Therefore, all necessary changes should be implemented comprehensively to achieve the desired synergistic effect from resource-saving. A key component harmonious development at the production level is the concept of lean production. The mechanism lean production is based on the persistent pursuit of eliminating all types of waste and involves engaging every worker in the business optimization process and focusing on the consumer. The application tools and methods lean production allows achieving significant improvements in enterprise performance, labor productivity, product quality, and competitiveness without substantial capital investments, making it highly promising for railway transport enterprises.

The adaptive management mechanism is linked to adjusting the production and economic activities railway transport enterprises by considering changes in the external environment. Adaptive management elements that allow accounting for the instability and variability the external environment when performing the production and economic activities of the railway industry include: monitoring the environment of railway transport enterprises; setting target indicators for the functioning and development of railway transport enterprises; assessing the level of adaptation; diagnosing adaptability; modeling adaptation processes; developing an adaptation strategy program; controlling the implementation of the adaptation strategy and its adjustment.

Strategic management is management that relies on human potential as the basis the organization, focuses production activities on consumer needs, ensures flexible regulation and timely changes in response to challenges from the environment, and aims to form competitive advantages, which collectively allow the enterprise to survive and achieve its long-term goals. Strategic management is considered a set dynamic and interconnected management processes, including forming a strategic vision, setting goals, and developing and implementing strategies [12]. The direct determination the development goal the railway industry is directly dependent on the impact the economic and social state the country, regions, and sectors, i.e., on the target orientation railway transport. In general, the goal railway transport enterprises' development is to maintain their business model in a state that ensures the country's economic development, defense capability, and integrity. The philosophy of railway transport enterprises' activities is to ensure the alignment their own goals with long-term national interests, which requires the combination of state, consumer, and corporate interests. Thus, the mission of railway transport is to effectively develop a competitive transport business in national and global markets, considering the responsibility

of the national carrier and the owner of the railway infrastructure.

A key stage in the strategic management structure of railway transport is the development a strategy, which is a complex of development directions, the future position of the industry relative to other types of transport in the transport services market, and the system of methods to achieve related goals and tasks. From a theoretical point of view, a strategy is a set long-term development goals, tasks, actions, and resources for an economic system. The development strategy railway transport enterprises is related to the successful resolution the following tasks:

- a fundamental improvement in performance, achieving high market capitalization of Ukrzaliznytsia through the introduction advanced management methods and technologies for the transport process, and creating fundamentally new forms customer service.

- achieving a labor productivity level that matches the best global leaders in railway transport, including through effective human resource management policies.

- creating conditions for the sustainable, safe, and efficient functioning railway transport as an organizing element of the country's transport system to achieve the primary geopolitical and geo-economic goals the state.

- forming the infrastructure basis for a unified transport space the Ukrainian economy.

- ensuring rational interaction with other types transport based on logistics principles with the organizing role of railway transport.

- ensuring transport accessibility to resource supply points and industrial growth, as well as places work, rest, healthcare, education, and national cultural values for citizens.

- aligning transport service quality and safety with the population's and economy's demands, as well as the best global standards.

- creating sufficient capacity and

necessary reserves to meet demand during economic fluctuations.

- ensuring deep integration into the global transport system.

- maintaining high readiness for activities in emergency situations, in accordance with the country's defense and security requirements.

- increasing investment attractiveness of railway transport.

- reducing the transport load on the environment.

- implementing high standards labor organization, maximizing productivity, and achieving sustainable provision of the transport process with qualified personnel.

Strategic management railway transport creates conditions that minimize the likelihood of various threats: technical, financial, personnel-related, etc., thereby enabling the satisfaction societal and economic needs in competitive transport services. At the core of strategic management for the sustainable socio-economic development railway transport lies the task of forming a balanced business portfolio of railway transport enterprises. The sequence of strategic management implementation in railway transport enterprises is represented by the following stages:

- 1) strategic segmentation – defining strategic business units, strategic business segments, and strategic business zones;

- 2) defining current market positions;

- 3) determining the priorities of the business portfolio's development;

- 4) defining the directions of strategic development for SBU;

- 5) reducing the strategic vulnerability of the portfolio;

- 6) optimizing the business portfolio;

- 7) achieving a balance between long- and short-term development prospects;

- 8) optimal resource distribution between SBU.

We agree with the proposals by

Yurchenko Y. M. [6] on the need to form strategic business segments in railway transport enterprises, which represent areas of activity characterized by a unique combination of key success factors derived from analyzing available and potential resources during a given time period. Each strategic segment includes one or more strategic business units that ensure its functioning.

Given the need for integration into the European and global transport system, we consider a new approach to forming strategic segments that combines strategic business units from transport enterprises in different countries for joint activities (transportation and servicing) to form a unique combination of key success factors, which collectively ensures competitive transportation. This necessitates the development of theoretical and methodological foundations for forming strategic segments and ensuring their competitiveness.

The further development of railway enterprises is related to attracting additional resources and opportunities. This requires forming long-term economic relations between industry enterprises and other economic entities interested in their activities based on strategic partnership principles. Strategic partnership in railway transport should be considered a mechanism for engaging economic entities in long-term cooperation, interested in the railway industry's work, based on aligning interests to achieve the goals of railway transport development. One promising form of strategic partnership in railway transport is cooperation with industrial enterprises, aimed at procuring new rolling stock. A key direction of strategic partnership is the development of intermodal transport and the formation of a unified national transport system. Ensuring interaction between different types of transport should be based on the sequence and coordination of transportation operations and consist of the following main principles: organizational and managerial; technological; technical; informational; and economic. Overall, the development of partnership relations will shorten the

timeframes for implementing socially significant projects and contribute to improving the efficiency of railway transport operations.

Conclusions. Recent trends in the decline public production levels have led to a significant reduction in transportation volumes, which, combined with inflationary processes, negatively affect the financial performance and further worsen the already dire state the railway industry. The effective operation of railway transport enterprises is also complicated by a number of internal problems, including the progressive aging fixed assets, the unsatisfactory condition of infrastructure, the insufficient quality transport services, and others. Given the multifaceted nature of the railway transport issues, it is considered necessary to apply a systemic and integrated approach to address them, which is implemented through the formation of an organizational and economic mechanism for the development of railway industry enterprises. Thus, it is proposed that the main elements the organizational and economic mechanism for the development railway transport enterprises in Ukraine should include strategic and adaptive management, strategic partnership, and the mechanism to ensure the quality the functioning industry enterprises, which collectively aim to account for changes in the operating environment railway transport and help achieve strategic competitive advantages.

REFERENCES

1. Dykan V., Obruch H. (2021) Formuvannia biznes-modeli zbalansovanoho rozvytku pidpriemstv v umovakh tsyfrovizatsii ekonomiky. [Formation a Business Model for Balanced Development Enterprises in the Context Economic Digitalization]. *Adaptyvne upravlinnia: teoriia i praktyka*. Serii : Ekonomika. Vyp. 11 (22). P. 1-21.
2. Korin M. V., Ostapiuk B. B., Romaniuk A. V. (2023) Tsyfrovyi rozvytok pidpriemstv zaliznychnoho transportu: stratehichni aspekt. [Digital Development

Railway Transport Enterprises: A Strategic Aspect]. *Visnyk ekonomiky transportu i promyslovosti*. № 84. P. 63-72.

3. Ovchynnikova V. O. (2017) *Strategichne upravlinnja rozvytkom zaliznychnogho transportu Ukrainy* [Strategic management the development railway transport Ukraine]. Kharkiv: Ukrainian State University of Railway Transport. (in Ukrainian).

4. Pluhina Yu. A. (2011) *Orhanizatsiino-ekonomichni mekhanizm upravlinnia rozvytkom pidpriemstv zaliznychnogho transportu*. [Organizational and Economic Mechanism for Managing the Development Railway Transport Enterprises]. *Visnyk ekonomiky transportu i promyslovosti*. № 33. P. 211-220.

5. Tokmakova I.V. (2015) *Zabezpechennja gharmonijnogho rozvytku zaliznychnogho transportu Ukrainy* [Ensuring the harmonious development of rail transport in Ukraine]. Kharkiv: Ukrainian State University Railway Transport. (in Ukrainian)

6. Iurchenko Yu. M. *Rozrobka mekhanizmu stratezhichnoho planuvannia na zaliznychnomu transporti* [Development a strategic planning framework for rail transport]: avtoref. dys... kand. ekon. nauk: 08.00.03; *Ukrainska derzh. akademiia zaliznychnogho transportu*. Kh., 2009. 19 p.

7. Kopylov M. *Yak zminylasia Ukrainska zaliznytsia za 30 rokiv Nezalezhnosti* [How Ukrainian Railways Have Changed Over 30 Years Independence]. RAIL.INSIDER : veb-sait. URL : <https://www.railinsider.com.ua/yak-zminylasya-ukrayinska-zaliznyczya-za-30-rokiv-nezalezhnosti/>

8. *Dovidnyk osnovnykh pokaznykiv roboty rehionalnykh filii AT «Ukrainska zaliznytsia» (2007-2022 roky)*. [Reference Guide to Key Performance Indicators Regional Branches of JSC "Ukrainian Railways" (2007-2022)]. (2023). Kyiv, 41 p. (in Ukrainian)

9. *Ukrzaliznytsia otrymala 3,1 mlrd hrn prybutku za piv roku* [Directory of key performance indicators of regional branches of JSC "Ukrainian Railways" (2007-2022)].

RAIL.INSIDER : veb-sait. URL : <https://www.railinsider.com.ua/ukrzaliznyczya-otrymala-31-mlrd-grn-prybutku-za-piv-roku/>

10. Kryvoruchko O. M. (2006) *Menedzhment yakosti na pidpriemstvakh avtomobilnoho transportu : teoriia, metodolohiia i praktyka*. [Ukrzaliznytsia Earned 3.1 Billion UAH in Profit Over Six Months]. Kharkiv: KhNADU. 404 p. (in Ukrainian)

11. Krykhtina Yu. O. (2009) *Rozrobka ekonomichnoho mekhanizmu efektyvnosti resursozberezhennia na pidpriemstvakh transportu (metodychni pidkhid)* [Development an Economic Mechanism for Resource Conservation Efficiency in Transportation Enterprises (Methodological Approach)]: avtoref. dys... kand. ekon. nauk: 08.00.04. *Ukr. derzh. akad. zalizn. transp.* Kh., 20 p.

12. Dykan V. L., Zubenko V. O., Makovoz O. V., Tokmakova I. V., Shramenko O. V. (2012). *Stratezhichne upravlinnia [Strategic Management]: navchalnyi posibnyk..* Kharkiv : UkrDAZT, 331 p. (in Ukrainian)

ПЕРЕЛІК ВИКОРИСТАНИХ ДЖЕРЕЛ

1. Дикань В., Обруч Г. Формування бізнес-моделі збалансованого розвитку підприємств в умовах цифровізації економіки. *Адаптивне управління: теорія і практика. Серія : Економіка*. 2021. Вип. 11 (22). С. 1-21.

2. Корінь М. В., Остапюк Б. Б., Романюк А. В. Цифровий розвиток підприємств залізничного транспорту: стратегічний аспект. *Вісник економіки транспорту і промисловості*. 2023. № 84. С. 63-72.

3. Овчиннікова В. О. Стратегічне управління розвитком залізничного транспорту України : монографія. Харків : УкрДУЗТ, 2017. 427 с.

4. Плуґіна Ю. А. Організаційно-економічний механізм управління розвитком підприємств залізничного транспорту. *Вісник економіки транспорту і промисловості*. 2011. № 33. С. 211-220.

5. Токмакова І. В. Забезпечення гармонійного розвитку залізничного транспорту України : монографія. Харків : УкрДУЗТ, 2015. 403 с.

6. Юрченко Ю. М. Розробка механізму стратегічного планування на залізничному транспорті : автореф. дис... канд. екон. наук: 08.00.03; Українська держ. академія залізничного транспорту. Х., 2009. 19 с.

7. Копилов М. Як змінилася Українська залізниця за 30 років Незалежності RAIL.INSIDER : веб-сайт. URL : <https://www.railinsider.com.ua/yak-zminylasya-ukrayinska-zaliznyczya-za-30-rokiv-nezalezhnosti/>.

8. Довідник основних показників роботи регіональних філій АТ «Українська залізниця» (2007-2022 роки). Київ, 2023. 41 с.

9. Укрзалізниця отримала 3,1 млрд грн прибутку за пів року. RAIL.INSIDER : веб-сайт. URL :

<https://www.railinsider.com.ua/ukrzaliznyczya-otrymala-31-mlrd-grn-prybutku-za-piv-roku/>.

10. Криворучко О. М. Менеджмент якості на підприємствах автомобільного транспорту : теорія, методологія і практика : Харків: ХНАДУ, 2006. 404 с.

11. Крихтіна Ю. О. Розробка економічного механізму ефективності ресурсозбереження на підприємствах транспорту (методичний підхід) : автореф. дис... канд. екон. наук: 08.00.04. Укр. держ. акад. залізн. трансп. Х., 2009. 20 с.

12. Дикань В. Л., Зубенко В. О., Маковоз О. В., Токмакова І. В., Шраменко О. В. Стратегічне управління: навчальний посібник. Харків : УкрДАЗТ, 2012. 331 с.