DOI: 10.15587/978-617-8360-14-6.CH2

2 METHODOLOGICAL APPROACH TO TWO-COMPONENT ASSESSMENT OF SUSTAINABILITY IN ORGANIZATIONS AND ORGANIZATIONAL NETWORKS AND STRATEGIC-ORIENTED MANAGEMENT OF THEIR DEVELOPMENT

Tatiana Vorkut, Lyudmila Volynets, Iryna Gorobinska, Yurii Lushchai

ABSTRACT

The object of the study is to assess the financial stability and readiness of logistics activities in organizations for development. The proposed two-component methodological approach makes it possible to optimize the assessment of the readiness of organizations for development based on determining a sufficient level of investment, on the one hand, and a balanced level of activity costs, on the other. Thus, for the first component, it is proposed to use an integral indicator of investment adequacy, the calculation method of which is based on combining the dependencies between the volumes of capital investments and other resource parameters of the activities of enterprises (depreciation deductions, long-term loan capital, non-current assets, equity, etc.). The second component reflects the ratio of material and other operating costs to the total income of logistics activities in organizations.

The study was carried out on the example of motor transport enterprises. The proposed methodological approach was tested, which showed low resource capacity of enterprises. The dynamics of the integral indicator of investment adequacy showed that in general for enterprises engaged in road freight transportation, its level is significantly lower than the normative value, which is equal to 3. Its value on average fluctuated at the level of 1.2–1.7, that is, it was in the range of the absence or limited resources for economic development. This indicates the dominance of survival strategies, not development, among motor transport enterprises, and weak state policy, which does not stimulate investment activity in a legal transparent environment.

The results obtained can be used both at the level of individual logistics organizations and organizational networks, and for an aggregated assessment of the industry as a whole. An additional advantage of the developed two-component methodological approach to assessing the state and readiness of an enterprise for development is the possibility of using different components for each component, differentiating their importance in an integrated assessment, and adjusting target ranges.

As a result of the study, several possible strategies for managing the development of logistics activities in organizations were identified, such as a reserve management strategy, an asset diversification strategy, a profit reinvestment strategy, a strategy for optimizing liabilities and obligations, a risk-oriented liquidity management strategy, and an active liquidity management strategy.

KEYWORDS

Strategic management, development strategies, organizations and organizational networks, logistics activities, motor transport enterprises, indicator of investment adequacy, level of material costs.

2.1 ASSESSMENT OF SUSTAINABILITY AND READINESS OF LOGISTICS ACTIVITIES IN ORGANIZATIONS FOR DEVELOPMENT: PROBLEMS AND SOLUTIONS

The difficult period of adaptation to modern conditions and requirements for the transport sector will accelerate the processes of transition to a new level of competition in the freight transportation market. Digital transformation is accelerating, consumer preferences are changing, new business models are being introduced [1]. In the future, the competitive environment will be determined by technological modernization, in fact, the restart of infrastructure in general, and transport in particular.

Most organizations have weak financial stability. Despite overcoming the ongoing crisis of unprofitability of motor transport enterprises in the freight transportation market, their profitability remains low, which does not allow forming enough capital to finance development [2].

This situation has led to the emergence of economic and social problems: aggravation of the deficit of working capital; low level of competitiveness and attractiveness for foreign investment; lack of effective policies aimed at stimulating the growth of financial resources; insufficient level of financial potential and economic base.

The negative impact of the ongoing processes has significantly increased the requirements for ensuring the sustainability of commodity supply chains, and in this market the processes of logistics optimization, mergers and acquisitions of transport companies have intensified. A growing trend is the development of e-commerce, wh ich stimulates the control of transport and logistics companies at all links of the supply chain — manufacturer, warehouse, sales centers [3–5]. Increasing investments in modern technologies of logistics supply chains is considered as a tool for improving the quality of transport services, reducing operating costs, and reducing environmental impact.

European initiatives on transport development strategies are supported by large-scale financial resources and various financial instruments for the restoration of the transport sector. The budget of the relevant funds for these purposes is estimated at over 1.8 trillion euros. This further emphasizes the conclusions of this study that the success of the transport sector development critically depends on a consistent state incentive policy, supported by the formation of powerful financial funds and instruments [6–8].

The priority innovative direction of the transport industry development is its digitalization. Accordingly, investments in the implementation of digital technologies in the business processes of transport enterprises will become increasingly important to ensure the maintenance of competitive positions in the market. At the same time, there is a wide range of digital technologies and tools, and their application depends on the type and functional area of logistics activities in organizations. In general, two main models of their activity can be distinguished:

1) organizations that provide goods transportation services;

2) organizations that manage a fleet and provide rental or outsourcing services.

For the first type of organizations, the priority areas of investment in digital technologies are digital tools that allow real-time receipt of data on the delivery of goods, possible obstacles and delays, etc. Such technologies are needed for a quick and timely response to possible problems or changes in the needs of service consumers to avoid delays and unplanned expenses.

For organizations of the second type, investments in digital solutions for monitoring the condition of their vehicles, their intended use, location, etc. are a priority. Such investments are necessary both for control and for the ability to meet modern standards of safety and environmental friendliness of the use of road transport.

Scientific research on the topic under study is important because the economic development of organizations cannot be achieved without innovative development. Low efficiency of spending on technological innovations does not provide opportunities for development. Therefore, it is necessary to take into account not only equipment and technology, but also the organization of the production process. The introduction of innovations requires an increase in sources of capital investment, the expansion of which is impossible without the use of state innovation policy instruments: public-private partnership programs, technological development, and preferential taxation [7, 8].

The current task is to develop a methodological approach to assessing the readiness of organizations for development and recommendations for expanding investment opportunities. The results of such studies are needed in practice, because they are determined by the need for organizations to update fixed assets, the need to transition to modern technologies, the introduction of innovative products and the growth of demand for qualitatively new transport services.

2.2 SCIENTOMETRIC ANALYSIS OF EXISTING PUBLICATIONS ON THE DEVELOPMENT OF METHODOLOGICAL APPROACHES TO ASSESSING THE SUSTAINABILITY AND DEVELOPMENT OF ORGANIZATIONS

International experts note that the development of sustainable transport infrastructure will be based on four dimensions of sustainability: environmental (climate change resilience), social (inclusiveness), institutional (technological development) and economic (productivity and flexibility) [9]. According to their estimates, by 2040 the need for investment in transport infrastructure will amount to up to 2 trillion USD. This is considered a "golden era" of transport infrastructure.

Among the main trends that will determine the development of transport in the EU countries for 2021–2024, the following are highlighted [10]:

1) prioritizing the transition to alternative fuels;

2) ensuring competition in the aviation industry;

3) a modal-neutral approach that promotes sustainable transport development;

4) green financing to increase the sustainability of the EU transport sector.

It should be noted that the current action plan for the implementation of the Transport Strategy provides for the development of multimodal transport technologies and infrastructure complexes to ensure interaction between different modes of transport. And, in particular, paragraph 21 of the plan provides for the partial reorientation of road freight transport to rail and inland waterway transport [11].

In general, the trend in the development of intermodal and multimodal transport also determines the priority for road transport enterprises to invest in projects that will allow them to quickly adapt and integrate into such technologies. The objective priority for investing in development is projects to prepare for

the transition to renewable fuels through the renewal of the transport fleet and ensuring compliance with new environmental standards.

The complexity and multifaceted nature of economic development determine the presence of a wide range of scientific interpretations and understandings of such development, for the disclosure of which various algorithms and methods of its assessment are developed and applied. Domestic and foreign researchers use various methodological approaches to assess the financial condition of enterprises, their readiness to implement various strategies of economic development. Thus, the author of the work [12], systematizing methodological approaches to enterprise development, distinguishes the following types: innovative, economic, strategic, marketing and competitive. The author concludes that each of the above approaches or their combination has its own advantages for application, but at the same time reflects only a separate specific effect associated with the development of the enterprise. But the effectiveness of their application will depend primarily on the readiness to implement development strategies on an alternative basis and adapt to new operating conditions. This occurs under the influence of internal and external changes, which complicates the process of assessing the readiness of enterprises for development.

Considering the functioning and development of an enterprise through the prism of competitiveness, methodological approaches are developed to assess the level of such competitiveness. Thus, some researchers note that the competitiveness of an enterprise depends on many factors: technical and technological, organizational and managerial, financial and economic, socio-psychological, natural and geographical, transport, environmental, industry and market. Therefore, competitiveness cannot be measured by a single statistical indicator [13]. Accordingly, the authors' approach to the need to apply different assessment methods, which are systematized according to two criteria: the degree of objectivity/subjectivity and the type of assessment (quantitative and qualitative), is justified. They thus distinguish 4 groups of methods for assessing competitiveness: objective-quantitative (calculated and calculated-graphic), objective-qualitative (models of structural and strategic analysis), subjective-qualitative (matrix methods) and subjective-quantitative (methods of expert assessments).

Different methods have their advantages and disadvantages, and accordingly, their application must correspond to the goals and possibilities of their effective use. Difficulties arise due to the fact that some assessment methods require complex algorithms for calculating performance indicators, and hence more costs for their application. Other methods are less complex, but also with a lower probability of accuracy and validity of their results. This complicates the choice of the optimal method.

Often, the development of an enterprise is considered in the context of assessing its potential. The implementation of this approach is based on the application of various methods for assessing such potential, which, in turn, is also considered by its individual types, in particular: innovative, investment, technological, competitive, marketing, labor, etc.

In the work [14], the author singled out the following principles for assessing the potential for economic development of an enterprise:

1) determining the key properties of the enterprise;

2) considering the potential for economic development of an enterprise as a set of its properties;

3) identifying a criterion functional property;

4) identifying the controllable basic properties of both the enterprise and its components;

5) identifying the uncontrollable basic properties of the enterprise and its components;

6) taking into account external environmental factors;

7) organizing the process of searching for reserves for the enterprise's economic development.

Despite the rather broad interpretation of these principles, they show the systematicity and complexity of the enterprise's potential and, accordingly, methodological approaches and tools for its assessment.

The author also emphasizes the need to use three levels of potential assessment indicators: partial, general, generalizing. Partial will characterize the possibilities of improving the basic properties of the enterprise (in particular, consumer properties of products or services). General will characterize key properties (in particular, financial results, sales volumes, etc.). Generalizing will characterize the criterion properties of the enterprise (for example, its market value).

The author's grouping of methods for assessing the potential of economic development of enterprises includes: the use of individual indicators or their combination; quantitative and qualitative assessment; absolute and comparative assessments; different levels of the hierarchy of assessment indicators, etc. Such diversity opens up wide possibilities for finding effective tools and indicators for assessing the current state or potential of the enterprise at the appropriate stage of its development. But the issue of determining the optimal methodology remains unresolved due to the fact that excessive overload can blur the accuracy and validity of the results of their application when making management decisions regarding strategic and tactical tasks of enterprise development.

In the context of assessing the potential of enterprises, traditional methods are to determine the effectiveness and feasibility of investments, investment projects for individual enterprises. In particular, this involves assessing the payback period of investments, the level of net present value, investment profitability, and systematization of risks for the relevant industry or market of goods/services. Undoubtedly, assessing the effectiveness of investments is critically important for the development of an enterprise, but it is advisable to apply it to specific investments, relevant target goods, services, and markets. The problem remains that such methods should be preceded by an integrated assessment of the state and readiness of the enterprise for development. But investments should serve as the basic criterion and indicator for conducting such assessments.

A number of studies are aimed at developing methodological tools for assessing the state and potential of development, which take into account industry specifics and aspects of the functioning of business entities. In particular, such an approach is disclosed in the works: [15] on the development of agricultural enterprises, [16] on the development and livelihoods of food industry enterprises, etc. There is no single methodological approach to assessing the development of motor transport enterprises, so this issue remains relevant.

In general, it should be noted that the development of methodological approaches to assessing various aspects of the activities and development of enterprises is carried out in accordance with the theoretical basis of the issues under study. And, accordingly, the application of existing and new criteria, indicators, characteristics should be adapted to management tasks, the existing information base for the use of such methodological approaches and tools.

Most researchers justify the need to combine different assessment methods that will provide an acceptable level of validity of conclusions and recommendations regarding the analysis of the current and potential state of development of the enterprise, but this issue remains unresolved.

All this allows to argue that it is advisable to conduct a study dedicated to optimizing the assessment of the readiness of enterprises for development based on the development of a two-component methodological approach that takes into account investment adequacy and material costs. This methodological approach determines the logic of monitoring the sustainability of motor transport enterprises based on the consistency of key economic indicators with the level of investment and achievement of target parameters of structural cost balance. The advantage of this methodological approach is the possibility of using different components for each component, the possibility of adjusting target ranges and establishing different specific weights in the integral assessment [17].

2.3 RESULTS OF THE DEVELOPMENT OF A METHODOLOGICAL APPROACH FOR ASSESSING THE SUSTAINABILITY AND DEVELOPMENT OF ORGANIZATIONS

The aim of the study is to optimize the assessment of the readiness of road transport enterprises for economic development based on a two-component methodological approach. This will make it possible to investigate the level of investment adequacy and balance of the enterprise's costs, as well as develop recommendations for solving existing problems and outlining strategies for further development.

To achieve the aim, the following objectives were set:

— to propose a methodological approach to assessing the readiness of enterprises for development based on the calculation of an integral indicator of investment adequacy and the level of material costs;

— to test the proposed two-component approach to assessing the state and readiness of enterprises for development;

— to develop strategies for managing the development of enterprises.

The object of the study is to assess the financial sustainability and readiness of road transport enterprises for development. Enterprises engaged in freight transportation chronically lack working capital, which increases risks for current activities and blocks investment opportunities in their development strategies. Thus, in general, net working capital for such enterprises has been negative for the last 10 years, which requires the introduction of modern instruments for financing their activities, which will be accessible and effective [18].

The imbalance in the financing model of motor transport enterprises is further exacerbated by the dominance of material intensity of cost price and operating costs. The share of material costs and services takes up about 80 % of all operating costs of the enterprise, which forms a dependence on working capital and the settlement system at enterprises. But the problem of settlements for the provided services for cargo transportation is acute for the studied industry enterprises, whose current assets consist of accounts receivable on average by 2/3. About 20 % is accumulated in inventories, highly liquid assets are quite limited [18]. Such a cost structure requires additional working capital to pay VAT and excise duties when making

material costs, although it reduces the real burden of value added tax. At the same time, it increases the dependence of enterprises on the level of tax burden by direct taxes – on profit, on property, on the payroll.

The study used methods of generalization (to systematize modern mechanisms for the formation and implementation of economic development), statistical observations (to structure data on the financial activities of motor transport enterprises in Ukraine), a systematic approach (to study the principles of implementing economic development), and the method of expert assessments (to determine the criteria for the economic development of motor transport enterprises and internal indicators of the effectiveness of their activities).

The proposed methodological approach to assessing the state and readiness of motor transport enterprises for development consists, on the one hand, in determining a sufficient level of investment for development, and on the other, a balanced level of activity costs. To take into account the first component, it is proposed to use an integral indicator of investment adequacy, compliance with the minimum regulatory level of which will confirm the accumulation of a sufficient and sustainable level of investment at the enterprise. The components of the integral indicator of investment adequacy are the ratio of capital investments with such parameters as: depreciation, long-term loan capital, non-current assets and equity. The normative minimum level of the integral indicator of investment adequacy of the enterprise will depend on the specified parameters of its components, which allows for multivariate calculations. The proposed integral indicator can be used both at the level of individual enterprises and for an aggregated assessment of the industry as a whole. Taking into account the second component involves determining the level of material costs as the ratio of material and other operating costs to the total amount of income from all types of activity at the enterprise.

2.4 RESULTS OF RESEARCH ON THE USE OF THE PROPOSED METHODOLOGICAL APPROACH BASED ON A TWO-COMPONENT MODEL

The methodological approach to assessing the state and readiness of motor transport enterprises for development consists in determining two components: a sufficient level of investment for development and a balanced level of activity costs.

Definition of the integral indicator of investment adequacy.

The integral indicator of investment adequacy is calculated as follows:

$$IS_t = \sum_{i=1}^{n} \frac{CI_t}{SD_{it}} \cdot P_{it} + \sum_{j=1}^{m} \frac{SD_{jt}}{CI_t} \cdot P_{jt}, \tag{2.1}$$

where IS_t – integral indicator of investment adequacy in the t-th period; CI_t – capital investment in the t-period; P_{it} – weight of the i-th type of resource for the integral indicator of investment adequacy for development in the t-th period; $i = 1, 2, ..., n$; SD_{it} – indicators of the i-th type of development resources in the t-th period; SD_{jt} – indicators of the j-th type of development resources in the t-th period; P_{jt} – weight

of the *j*-th type of resource for the integral indicator of investment adequacy for development in the *t*-th period; $j = 1, 2, .., m$.

One of the options for the normative level of the integral indicator of investment adequacy is given in **Table 2.1**.

Table 2.1 Normative level of the integral indicator of investment adequacy

Components of the integral indicator of investment adequacy	Calculation of indicators	Minimum level	Weight	Contribution to the integrated indicator
1	2	3	4	5 (gr.3*gr.4)
Depreciation adequacy	Ratio of capital investments to depreciation deductions	2.5	0.25	0.625
Adequacy of long-term loan capital	Ratio of capital investments to long-term debt capital	4	0.25	1.0
Production adequacy	Ratio of non-current assets to capital investments	3.5	0.25	0.875
Equity adequacy	Ratio of equity to capital investments	2	0.25	0.5
Integral indicator of investment adequacy	–	–	1	3.0

Source: compiled by the authors

The first component of the integral indicator of investment adequacy allows to assess depreciation adequacy through the ratio of the annual volumes of capital investments of the enterprise and the volumes of depreciation deductions. The target minimum level for this ratio is set at 2.5, based on the logic of the formation of its components. Thus, depreciation deductions show only the actual level of wear and tear of existing means of production (fixed assets) formed in previous years. Accordingly, capital investments at the level of depreciation deductions will not ensure even a simple reproduction of fixed assets. Especially in conditions of their fairly rapid depreciation, both moral and technological, and physical.

Therefore, capital investments should not be less than 2.5 times higher than the annual volumes of depreciation deductions. There are certain risks for enterprises that have practically worn out fixed assets and, accordingly, minimal depreciation deductions. This can lead to a wide range of values for this component. This feature is generally inherent in indicators that reflect the ratio between different financial and economic indicators of the activities of enterprises. Therefore, it is advisable to use limit levels of the ratio, in particular, if they exceed 3–4 times the minimum target standard, then such a three-fold minimum is applied, and not the actual result.

The second component of the integral assessment allows to assess the adequacy of long-term loan capital through the ratio of annual volumes of capital investments and accumulated long-term liabilities of the enterprise. Similarly to the previous ratio, capital investments should exceed such liabilities several times, which will indicate an active investment strategy aimed at the economic development of the enterprise.

The next component of the integral assessment is aimed at determining production adequacy through the ratio of the cost of non-current assets and capital investments. The inverse ratio is used here, since this allows to apply comparable weighted rates and target standards. The proposed target standard may be a 2–4-fold excess of assets over capital investments and will depend on the need for fixed assets for the production of goods or the provision of services. Thus, for motor transport enterprises, especially medium and large ones, the presence of a modern transport fleet and its renewal is a critically important condition for maintaining competitiveness, market positions and implementing development strategies.

The next component of the integral assessment is the adequacy of equity, which is assessed through the ratio of equity and capital investments. Similarly to the previous ratio, compliance with the parameters of financial autonomy requires an adequate level of equity. Accordingly, a multiple excess of equity over capital investments is acceptable.

In general, the use of different regulatory limits allows for multivariate calculations and evaluation of results in accordance with the goals and strategies of economic development of enterprises.

To calculate the integral indicator of investment adequacy, the same specific weight of its individual components (ratio) was used, i.e. each of them was 25 % (0.25). At the same time, different specific weights can be used for research, as well as expanding the components of the integral indicator. Four components of the integral indicator were used. Accordingly, the minimum normative value of the integral indicator of investment adequacy is 3. And the higher the value of this indicator, the better the potential of the enterprise to implement its economic development strategy, and therefore, a more effective mechanism for managing its economic development is used.

In this case, it seems appropriate to supplement the minimum target level with a sufficient level, in particular, which will be twice as high as the minimum. Conceptually, this is shown in **Fig. 2.1**.

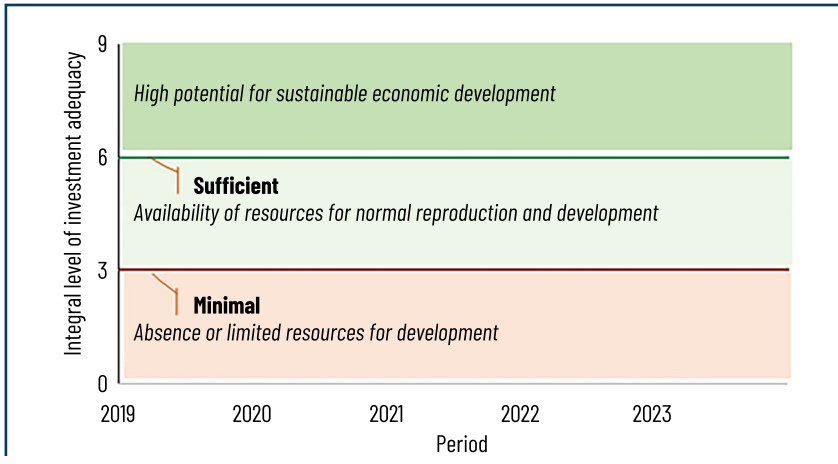

Fig. 2.1 Ranges of the level of the integral indicator of investment adequacy

Source: developed by the authors

This will allow to obtain three ranges for the integral indicator:

1) less than the minimum level – the actual value in this range will indicate the absence or significant limitation of resources for development at the enterprise;

2) between the minimum and sufficient levels – the actual value in this range will demonstrate the availability of resources for normal reproduction and development of the enterprise;

3) above the sufficient level – the actual value in this range will demonstrate a high potential for sustainable development of the enterprise.

Determining the level of material costs.

Taking into account the second component of the methodological approach to assessing the state and readiness of enterprises for development involves determining the level of material costs, the calculation of which is proposed to be carried out as follows:

$$CL_t = \frac{MC_t + OC_t}{I_t} \cdot 100\%, \tag{2.2}$$

where CL_t – level of material costs in the t-th period; MC_t – volume of material costs and costs for payment of services used in production in the t-th period; OC_t – volume of other operating expenses in the t-th period; I_t – total amount of income from all types of activities in the t-th period.

Thus, the level of material cost is the ratio of material and other operating expenses to the total amount of income of the enterprise. As with the first component, it is possible to apply only the minimum target standard or to apply several ranges (**Fig. 2.2**).

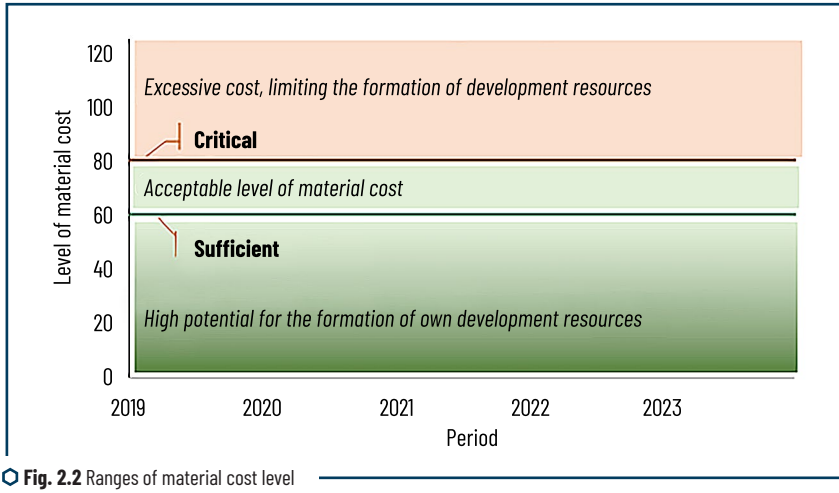

Fig. 2.2 Ranges of material cost level

Source: developed by the authors

So, actual values of the material cost level less than 50 % will indicate the presence of a high potential for the formation of the enterprise's own development resources. Values at the level of 50–75 % will indicate an acceptable level of material cost, and above 75 % will mean a critical level and excessive cost, which limits the formation of sufficient development resources at the enterprise.

The information base for calculating the material cost level is the data of the report on the financial results of the enterprises [19]. Sources of input data for applying the proposed methodological approach to assessing the state and readiness of enterprises for development are given in **Table 2.2**.

Table 2.2 Input data for assessing the state and readiness of enterprises for development

No.	Indicator	Reporting form	Line code
1	Integral indicator of investment adequacy		
1.1	Capital investments	Notes to the reporting	–
1.2	Depreciation and amortization	Financial statement (form 2)	2515
1.3	Profit before tax		2290/2295
1.4	Non-current assets	Company balance sheet	1095
1.5	Equity		1495
1.6	Long-term debt capital		1595
2	Level of material costs		
2.1	Material costs and costs of services	Financial statement (form 2)	2500
2.2	Other operating expenses		2520
2.3	Net income from sales of products (goods, works, services)		2000
2.4	Other income from operating activities		2105, 2110, 2111, 2112, 2120, 2121, 2130, 2180
2.5	Income from financial activities		2200, 2220
2.6	Other income		2240

Source: compiled by the authors

A certain problem for assessing the state and readiness of enterprises for economic development for external experts and researchers is the rather veiled data on investments in general, and capital investments in particular, in the financial statements of enterprises. On the one hand, such data are quite confidential and require proper protection of commercial interests.

2.5 TESTING THE PROPOSED TWO-COMPONENT METHODOLOGICAL APPROACH TO ASSESSING THE READINESS OF ORGANIZATIONS FOR DEVELOPMENT

The testing of the methodological approach showed low resource capacity of the studied enterprises.

Thus, the dynamics of the integral indicator of investment adequacy showed that in general for enterprises engaged in road freight transportation, its level is significantly lower than the target normative value.

In particular, in 2013 it was 2.1 points with a minimum level of 3 points. And during 2015–2023 its value on average ranged from 1.2 to 1.7, that is, it was in the range of absence or limited resources for economic development [18]. This confirms the widespread practice of domestic enterprises in general to rely on internal resources for financing investments. In particular, in 2020, only 6.6 % of capital investments in the economy as a whole were financed by bank loans and other loans [18].

The calculation of the second component of assessing the state and readiness of enterprises for development based on aggregated data for freight road transportation enterprises in Ukraine showed the following. The overall level of material costs of the specified type of economic activity is quite moderate and during 2013–2023 did not exceed 40 % [18]. This confirms the presence of the potential for ensuring the efficiency and profitability of providing freight transportation services by road transport. At the same time, the application of the developed approach to the reporting of individual motor transport enterprises showed results that differ from industry-wide calculations.

The calculations were carried out using data from three motor transport enterprises from different regions of Ukraine and with different potential: Kyiv Production Company Rapid, PJSC ATP 11263, Dnipro, PJSC Chernihiv Motor Transport Enterprise 17462. The calculation of the integral indicator of investment adequacy showed that during 2018–2023 the studied enterprises did not reach the target regulatory level (**Table 2.3**).

Table 2.3 Average level of indicators for assessing the state and readiness for development for individual enterprises during 2018–2023

Indicators / enterprises	Value
Integral indicator of investment adequacy	Standard level > 3
PJSC "Kyiv Production Company "Rapid", Kyiv	2.4
PJSC "Chernihiv Motor Transport Enterprise 17462"	2.0
PJSC "ATP 11263", Dnipro	2.7
Level of material costs of the enterprise's activities	Standard level < 60
PJSC "Kyiv Production Company "Rapid", Kyiv	63.9
PJSC "Chernihiv Motor Transport Enterprise 17462"	54.5
PJSC "ATP 11263", Dnipro	74.3

Source: compiled by the authors based on enterprise reporting [19]

In addition, more powerful enterprises from Kyiv and Dnipro generally have a higher level of the investment adequacy indicator, which confirms the feasibility of building potential and investment opportunities.

Analysis of the integral indicator of investment adequacy by individual components in the context of the studied enterprises shows significant differences in their business models and ability to implement development strategies (**Table 2.4**).

Table 2.4 Assessment of compliance with the regulatory level of individual components of the integral indicator of investment adequacy for individual enterprises during 2018–2023

Indicators / enterprises	Depreciation adequacy	Long-term debt capital adequacy	Production adequacy	Equity adequacy
Standard level	> 2.5	> 4	> 3.5	> 2
PJSC "Kyiv Production Company "Rapid", Kyiv	4.79	2.24	1.36	0.91
PJSC "Chernihiv Motor Transport Enterprise 17462"	1.23	2.13	5.03	3.41
PJSC "ATP 11263", Dnipro	0.98	0.40	5.47	3.68

Source: compiled by the authors based on enterprise reporting [19]

So, PJSC "Kyiv Production Company "Rapid" in 2018–2023 has a high level of depreciation adequacy, which was achieved primarily due to active investment activity. The enterprise, while maintaining a traditionally low share of depreciation deductions in the structure of operating expenses for the industry, directs resources to capital investments that are several times higher than the annual depreciation of fixed assets. The enterprise also uses long-term loan resources more actively, although their volumes are somewhat lower than capital investments.

The greatest influence on the formation of the integral indicator of investment adequacy for PJSC "Chernihiv Motor Transport Enterprise 17462" and PJSC "ATP 11263" was production adequacy and equity adequacy. In particular, during the period under study, these indicators exceeded the target standard. Probably, enterprises are serious about maintaining an appropriate level of financial autonomy and minimizing risks associated with obligations to creditors.

Analysis of financial statements of transport enterprises showed that most of them do not provide open data on their capital investments, which complicates the analysis of their activities by external experts. Therefore, their investment activity can be evidenced by data on the renewal of fixed assets, cash flows from investment and financial activities, etc.

For PJSC "Chernihiv Motor Transport Enterprise 17462", the results of assessments of the integral indicator of investment adequacy by components are largely comparable with the studied enterprise from the city of Dnipro. In general, it should be noted that an important aspect of applying the developed methodological approach is a sufficient information base, primarily regarding the volumes of capital investments or another aggregate indicator of investment volumes.

The assessment of the studied enterprises showed that the problem of excessive cost is quite relevant. Thus, the level of material costs for enterprises is almost twice as high as that calculated for the freight road transportation industry as a whole. In particular, for PJSC "ATP 11263" it is almost 75 %, that is, the costs of fuel, spare parts and other material costs make up almost 3/4 of the total revenue of the enterprise.

The minimum target standard of the level of material costs is not observed for PJSC "Kyiv Production Company "Rapid". And only PJSC "Chernihiv Motor Transport Enterprise 17462" has a level of material costs lower than 60 %, but also significantly exceeds the average industry level.

Calculation of the integral indicator of investment adequacy and the level of material costs for individual ATPs confirms the conclusions obtained about their weak investment readiness to implement ambitious strategies of economic development in the freight transportation market. This increases the risks of further technological lag of enterprises in the industry, the preservation of non-equivalent exchange and pressure of the transport sector on all other related sectors of the economy and markets, and the limitation of the resource base for the formation of budgets at various levels.

2.6 DISCUSSION OF THE RESULTS OF IMPLEMENTING A TWO-COMPONENT METHODOLOGICAL APPROACH TO ASSESSING THE READINESS OF ORGANIZATIONS FOR DEVELOPMENT

A methodological approach to assessing the sustainability of organizations based on a two-component assessment is substantiated, which consists, on the one hand, in determining a sufficient level of investment for development, and on the other, a balanced level of activity costs.

For the first component (2.1), it is proposed to use an integral indicator of investment adequacy. The methodology for its calculation is based on combining the dependencies between the volumes of capital investments and other parameters of activity (depreciation deductions, long-term loan capital, non-current assets, equity, etc.). The normative minimum level of the integral indicator of investment adequacy will depend on the specified parameters of its components, which allows for multivariate calculations. One of the options for the normative level of the integral indicator is given in **Table 2.1**. The calculation was carried out on the basis of four components, such as: depreciation adequacy, adequacy of long-term loan capital, production adequacy, adequacy of equity. Under these conditions, the integral indicator of investment adequacy is determined at the level of 3.0. The ranges of the level of the integral indicator of investment adequacy are proposed: minimum, sufficient, high (**Fig. 2.1**).

The second component (2.2) reflects the ratio of material and other operating costs to the total income of the enterprise. It is possible to apply the minimum (critical) target standard, which is set at 60 %, or to apply several ranges (**Fig. 2.2**): sufficient, acceptable, critical.

An assessment of the dynamics of volumes and the level of material costs for freight road transportation enterprises in Ukraine was carried out, based on the results of which it can be concluded that during 2013—2023 the level of material costs did not exceed 40 %. This confirms the potential for ensuring the efficiency and profitability of providing freight transportation services by road. At the same time, the application of the developed approach to reporting by individual road transport enterprises showed results that differ from industry-wide calculations.

The sustainability of road transport enterprises was monitored based on the consistency of key economic indicators with the level of investment and the achievement of target parameters of the structural balance of its costs. It was found that the majority of road transport enterprises have weak financial stability.

Three road transport enterprises from different regions of Ukraine and with different potential were selected for the study: PJSC "Kyiv Production Company "Rapid", Kyiv, PJSC "ATP 11263", Dnipro, PJSC "Chernihiv Road Transport Enterprise 17462".

Testing of the proposed two-component assessment of the state and readiness of enterprises for development showed their low resource capacity and the presence of the problem of excessive cost (**Table 2.3**). Thus, the level of material costs for enterprises is almost twice as high as that calculated for the freight road transportation industry as a whole. The assessment of compliance with the regulatory level of individual components of the integral indicator of investment adequacy for the studied motor transport enterprises in 2018–2023 is presented in **Table 2.4**.

The dynamics of the integral indicator of investment adequacy showed that, in general, for enterprises engaged in road freight transportation, its level is significantly lower than the normative value. This indicates the dominance of survival strategies among enterprises, rather than development, and weak state policy that does not stimulate active investment in a legal transparent environment.

It is proposed to take into account the developed approach in the implementation of state support for enterprises that actively invest, increase legal turnover, income and labor costs. Benefits can be introduced for enterprises that have higher than the normative values of the developed indicators and will adhere to such conditions for a long period. In particular, if they are fulfilled for three or more years, such enterprises may be exempted from paying income tax if they are invested in development.

The developed two-component methodological approach makes it possible to optimize the assessment of the readiness of motor transport enterprises for economic development. Based on the interpretation of economic development as a transition to a new qualitative state and new possibilities for the functioning of the enterprise, the basis for its implementation is a sufficient level of investment and the availability of sources of their financing. And the necessary result of the success of such investments should be a more balanced structure of operating costs, which will confirm the systematicity, long-term nature and durability of changes.

The development of research using the proposed methodological approach is that its use will allow rationalizing the mechanism of economic development management and more clearly identifying the correspondence of current and projected performance indicators of both domestic and foreign enterprises to their development goals.

The limitations of the developed methodological approach include the impossibility of including profitability as the main internal resource for financing the development of the enterprise in the integrated assessment of the adequacy of profitability. This component quite organically corresponds to the task of assessing the integral indicator of investment adequacy. But its practical application is complicated by possible losses of the enterprise or minimum profit values. This is a fairly typical situation for many motor transport enterprises, which will actually lead to excessive values of this ratio and distortion of the results obtained. Therefore, its application requires the availability of adequate data on the profit of enterprises and their proper calibration.

The disadvantages include the fact that the problem for assessing the readiness of enterprises for development for external experts is the rather veiled data on investments in general and capital investments in particular in financial statements.

2.7 STRATEGICALLY-ORIENTED MANAGEMENT OF ORGANIZATIONAL DEVELOPMENT

Strategically-oriented management of organizational development is a scientifically substantiated influence of management on the socio-economic development of an organization, which ensures long-term, sustainable growth of the results of production and commercial activities. The development management system consists of interconnected subsystems: production, technological, financial, innovation, communication, structural and organizational, marketing, personnel, legal support, economic, socio-psychological, motivational subsystems [20].

The main tools of strategically-oriented management of development in order to achieve the main target benchmarks are the development and implementation of appropriate strategies. Organizations that have a strategy and implement strategically-oriented management of activities always have the opportunity to act consistently and systematically both in the internal environment and in the conditions of a changing external environment, which increases the likelihood of achieving the set goals for further development.

Let's consider the strategies that can be implemented by an organization to ensure financial stability and optimize resources:

1. The reserve management strategy involves an active process of accumulating and managing financial reserves to ensure financial stability and the ability to meet its obligations. The main provisions of this strategy are presented in **Fig. 2.3**.

2. The asset diversification strategy consists of distributing investments between different asset classes in order to reduce risk and ensure greater liquidity. The main provisions of this strategy are presented in **Fig. 2.4**.

3. The profit reinvestment strategy involves the redistribution of profit received from activities in order to maintain or increase the organization's liquid assets. The main goal is to use the cash that the enterprise already has to generate additional profit. The main provisions of this strategy are presented in **Fig. 2.5**.

4. The strategy of optimizing liabilities and obligations is aimed at balancing the structure of the organization's liabilities and assets in order to ensure an optimal balance between the liquidity of assets and their financial stability. This strategy can help reduce financial costs, increase profitability and improve financial risk management. The main provisions of the strategy are presented in **Fig. 2.6**.

5. The risk-based liquidity management strategy emphasizes control over risks associated with liquidity, in particular ensuring financial stability in a changing financial environment, and helps manage the liquidity of assets in conditions of increasing risk and financial uncertainty. The main provisions of the strategy are presented in **Fig. 2.7**.

6. The strategy of active asset liquidity management involves active investment and management of liquid assets to ensure maximum efficiency and profitability, as well as optimization of the organization's risk. The main provisions of the strategy are presented in **Fig. 2.8**.

The study determined that the implementation of combined strategies can be a key factor in achieving financial stability and ensuring the development of organizations. The need for further improvement of resource management strategies, careful monitoring and risk management, as well as the development of the ability to adapt different strategies to the unique conditions and needs of their activities is important.

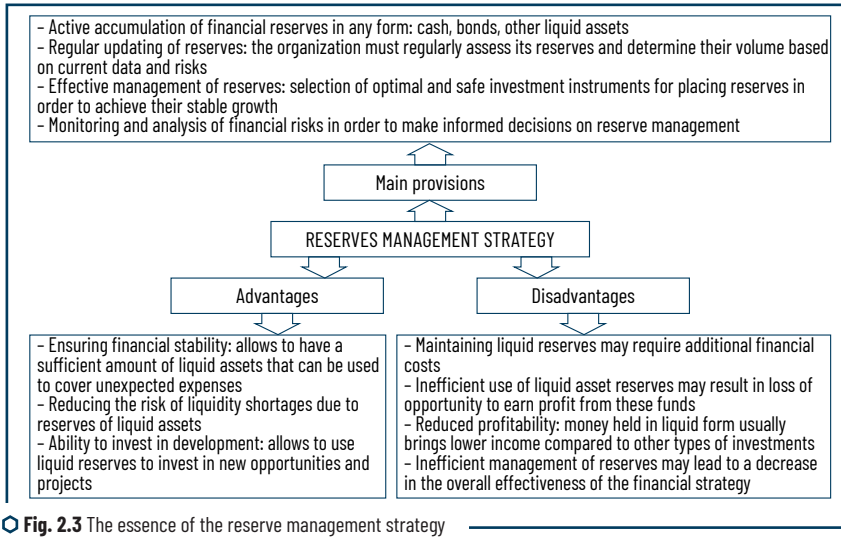

Fig. 2.3 The essence of the reserve management strategy

Source: compiled by the authors

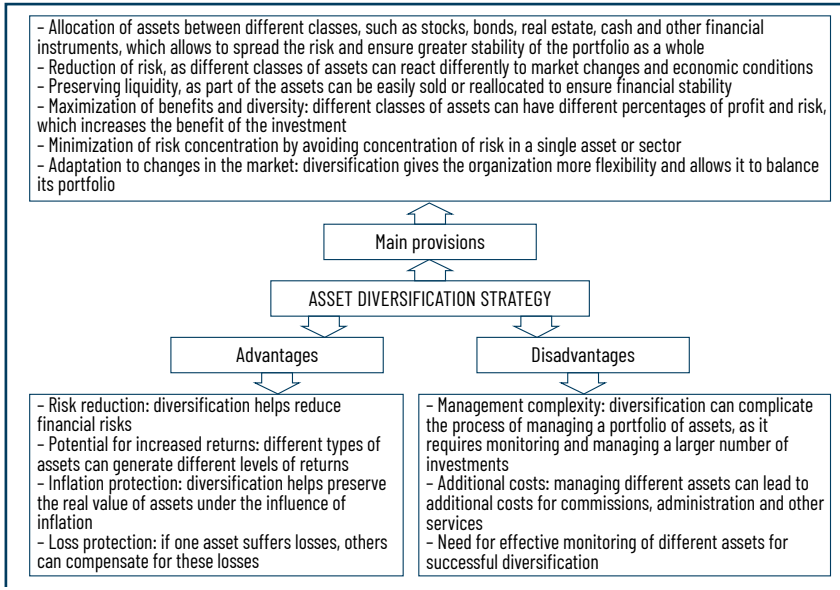

Fig. 2.4 The essence of the asset diversification strategy

Source: compiled by the authors

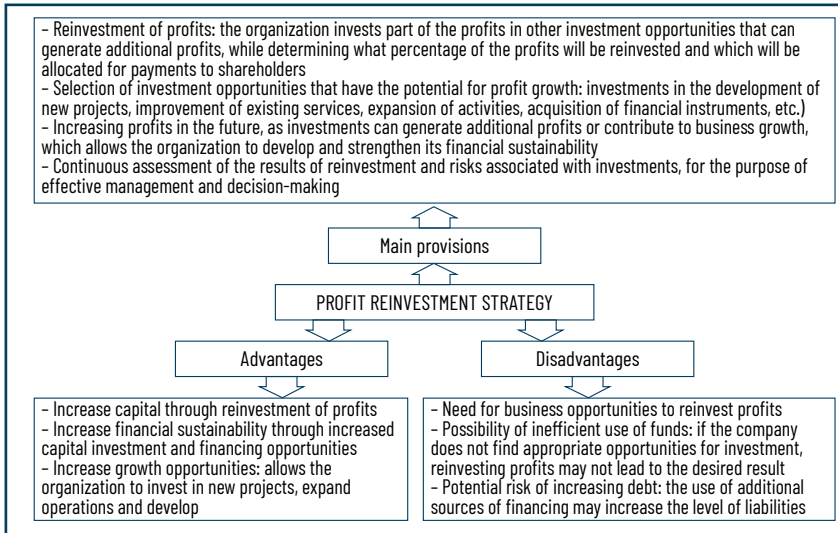

Fig. 2.5 The essence of the profit reinvestment strategy

Source: compiled by the authors

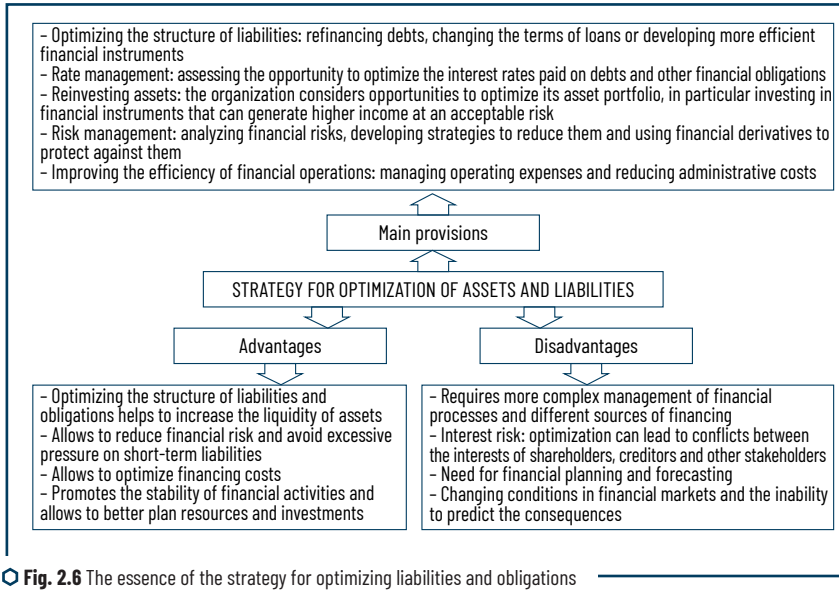

Fig. 2.6 The essence of the strategy for optimizing liabilities and obligations

Source: compiled by the authors

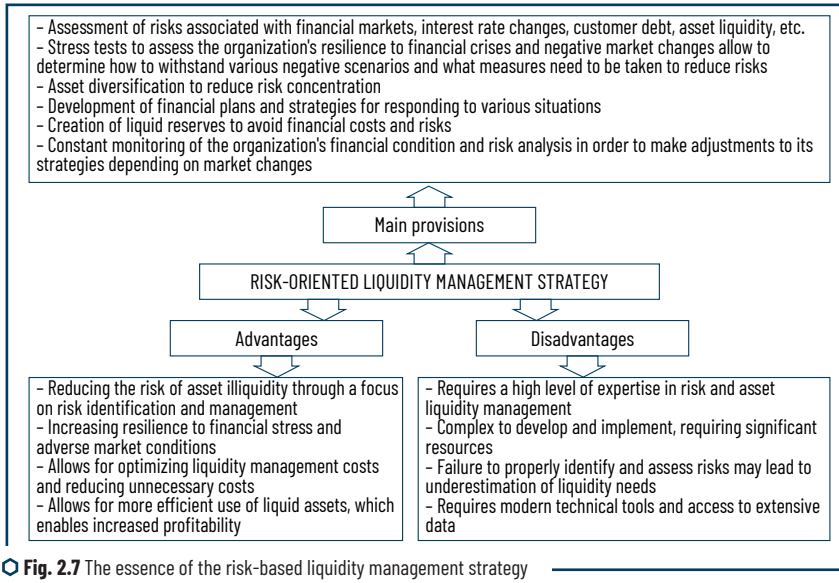

Fig. 2.7 The essence of the risk-based liquidity management strategy

Source: compiled by the authors

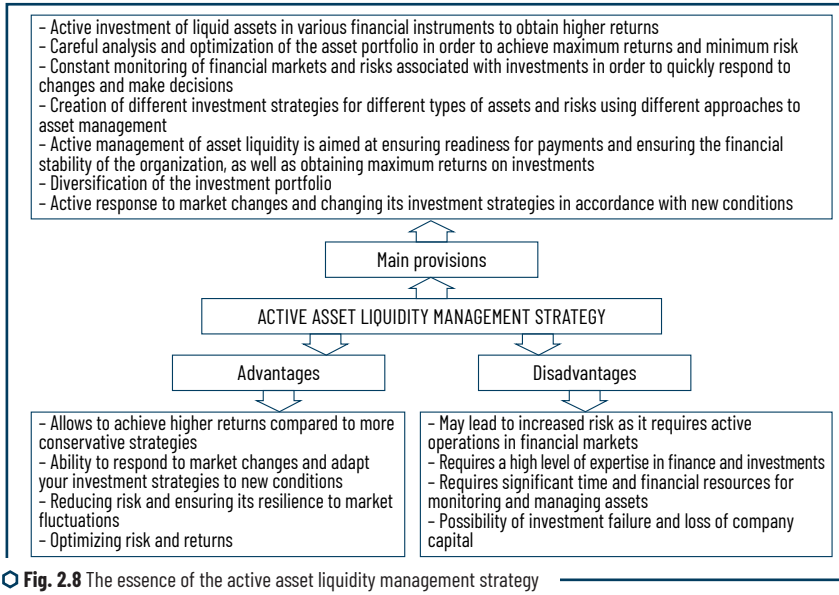

Fig. 2.8 The essence of the active asset liquidity management strategy

Source: compiled by the authors

To further strengthen financial stability and maintain competitiveness, it is worth considering opportunities for the implementation and improvement of innovative strategies. The emphasis on the implementation of advanced technologies can not only provide an advantage in the market, but also help solve possible challenges and make any organization less vulnerable to fluctuations in the external environment. The key drivers of success and sustainable development in the future may be the expansion of markets and the ability to implement innovations.

2.8 DISCUSSION OF THE RESULTS OF THE DEVELOPMENTS ON THE ASSESSMENT OF FINANCIAL STABILITY AND READINESS OF LOGISTICS ACTIVITIES IN ORGANIZATIONS FOR DEVELOPMENT

As a result of the study, a two-component methodological approach was developed, which makes it possible to optimize the assessment of the readiness of enterprises for development based on the calculation of the integral indicator of investment adequacy and the level of material cost. The integral indicator of investment adequacy was calculated based on the comparison of depreciation charges, equity, long-term loan capital, non-current assets with the size of capital investments. The level of material cost was determined based on the comparison of material and other operating costs with the income of the enterprise.

The proposed methodological approach was tested, which showed the low resource capacity of enterprises. The dynamics of the integral indicator of investment adequacy showed that in general for enterprises engaged in road freight transportation, its level is significantly lower than the normative value. This indicates the dominance of survival strategies, not development, among motor transport enterprises, and weak state policy, which does not stimulate investment activity in the legal environment. The advantage of the developed methodological approach is the possibility of using different components for each component, setting different weights in the integral assessment, and the possibility of adjusting target ranges.

Strategies for managing the development of the organization have been developed: a reserve management strategy, an asset diversification strategy, a profit reinvestment strategy, a strategy for optimizing liabilities and obligations, a risk-oriented liquidity management strategy, and an active liquidity management strategy. The implementation of combined strategies can be a key factor in achieving financial stability, optimal risk management, and the possibility of further development of organizations.

REFERENCES

1. Alkema, V. G., Darushyn, O. V., Vorkut, T. A., Bilonog, O. Ye., Tretinichenko, Y. O. (2020). Theoretical base of modeling the project team with a 1 ervice technical systems by simulation. International Journal of Management, 11 (8), 453—465.
2. Vorkut, T. A., Lushchai, Yu. V., Kharuta, V. (2021). Conceptual model of precedent formation of a portfolio of logistics service providers in logistics outsourcing projects. World Science, 5 (66). https://doi.org/10.31435/rsglobal_ws/30052021/7586

3. Vorkut, T., Volynets, L., Bilonog, O., Sopotsko, O., Levchenko, I. (2019). The model to optimize deliveries of perishable food products in supply chains. Eastern-European Journal of Enterprise Technologies, 5 (3 (101)), 43—50. https://doi.org/10.15587/1729-4061.2019.177903
4. Gurnak, V., Volynets, L., Khalatska, I. (2019). Intellectualization of logistic supply chains on the basis of forecasting volumes of cargo transportation. MATEC Web of Conferences, 294, 04013. https://doi.org/10.1051/matecconf/201929404013
5. Volynets, L., Sopotsko, O., Sevostianova, A., Levchenko, I., Khrutba, Y. (2021). Optimization of international road transportation of cargoes in the management of enterprises of agricultural sector and road transport enterprises. Eastern-European Journal of Enterprise Technologies, 6 (3 (114)), 57—63. https://doi.org/10.15587/1729-4061.2021.248191
6. Stepanov, V. Yu. (2016). Public regulation in the transport sector. Visnyk of National University of Civil Protection of Ukraine. Public Administration series, 4 (1), 97—103.
7. Gorobinska, I. (2022). Creation of a motivational environment as a prerequisite for the development of motor transport enterprises. Collection of theses of scientific and methodical reports of scientific and pedagogical internship. Bala Mare, 68—71.
8. Volynets, L., Gorobinska, I. (2021). Means of implementation of the economic mechanism of regulation of activity of transport enterprises. Věda a perspektivy, 1 (1), 328—335. doi: https://doi.org/10.52058/2695-1592-2021-1(1)-328-335
9. Milani, L., Mohr, D., Sandri, N. (2021). Built to last: Making sustainability a priority in transport infrastructure. McKinsey & Company. Available at: https://www.mckinsey.com/industries/travel-logistics-and-infrastructure/our-insights/built-to-last-making-sustainability-a-priority-in-transport-infrastructure
10. The future of the EU transport sector (2021-2024) — four trends. Available at: https://dr2consultants.eu/the-future-of-the-eu-transport-sector-2021-2024-four-trends/
11. Pro zatverdzhennia planu zakhodiv z realizatsii Natsionalnoi transportnoi stratehii Ukrainy na period do 2030 roku (2021). Rozporiadzhennia KMU No. 321-r. 07.04.2021. Available at: https://www.kmu.gov.ua/npas/pro-zatverdzhennya-planu-zahodiv-z-realizaciyi-nacionalnoyi-transportnoyi-strategiyi-ukrayini-na-period-do-2030-roku-321-070421
12. Marynenko, N. Yu. (2016). Approaches to the enterprises' development: a methodological analysis. Ekonomika i Suspilstvo, 4, 164—170. Available at: https://economyandsociety.in.ua/journals/4_ukr/26.pdf
13. Yankovyi, O. H. (Ed.) (2013). Konkurentospromozhnist pidpryiemstva: otsinka rivnia ta napriamy pidvyshchennia. Odessa: Atlant, 470. Available at: http://oneu.edu.ua/wp-content/uploads/2018/01/monografiya_ep_2013.pdf
14. Yemelianov, O. Yu. (2020). Pryntsypy ta metody otsiniuvannia potentsialu ekonomichnoho rozvytku pidpryiemstv. Naukovyi prostir: aktualni pytannia, dosiahnennia ta innovatsiyi, 1, 32—34.
15. Dorofieiev, O. V. (2018). Modern directions for the provision of economic development of agri-manufacturing subjects. Ukrainian Journal of Applied Economics, 3 (3), 195—200.
16. Markova, S. (2020). Strategic vectors of life support management of the enterprise activity in a changing environment. Economic Analysis, 30 (3), 276—283. Available at: https://www.econa.org.ua/index.php/econa/article/download/1943/6565657005

17. Volynets, L., Gorobinska, I., Nakonechna, S., Petunin, A., Romanyuk, S., Khomenko, I., Zachosova, N. (2022). Principle of the assessment of the readiness of motor transport enterprises for economic development based on a two-component methodological approach. Eastern-European Journal of Enterprise Technologies, 4 (13 (118)), 12–21. https://doi.org/10.15587/1729-4061.2022.263041
18. State Statistics Service of Ukraine. Available at: https://ukrstat.gov.ua/
19. YouControl. Available at: https://youcontrol.com.ua/
20. Kobielieva, T., Vytvytska, O., Pererva, P., Kovalchuk, S. (2022). Strategic management of enterprise development on the basis of intellectual property. Bulletin of the National Technical University "Kharkiv Polytechnic Institute" (Economic Sciences), 1, 52–57. https://doi.org/10.20998/2519-4461.2022.1.52