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**ANTI-CRISIS MANAGEMENT OF TRANSPORT ENTERPRISES IN MODERN ECONOMIC CONDITIONS**

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**ABSTRACT**

This study is devoted to the development of a system of anti-crisis management of transport enterprises to ensure their effective functioning in modern economic conditions.

The state of the transport industry of Ukraine was studied, where the following indicators were analyzed: the number of operating business entities, the number of employees, the volume of products sold (goods, services), the level of profitability of enterprises. It was determined that most of the analyzed indicators are decreasing in dynamics, which is primarily due to the consequences of military aggression against Ukraine. The main problems that hinder the development of the transport industry of Ukraine were identified. The prerequisites for the emergence of crisis phenomena in the activities of transport enterprises were studied – internal and external factors that can lead an enterprise to a crisis were identified.

The need for the implementation of anti-crisis management to overcome crisis phenomena in the activities of transport enterprises was substantiated. A system of anti-crisis management is proposed, which is represented by four main consecutive stages: diagnostics of the state of the enterprise, formation of an anti-crisis strategy and program, application of anti-crisis methods and measures and assessment of the effectiveness of the proposed methods and measures. Each component of this system is disclosed in detail.

It is found that the crisis caused by war is a special type of crisis phenomena. A comparison is made between the traditional and “war” crisis at the enterprise. In particular, it is determined that the second is systemic, long-term, carries not only financial losses, but also a threat to people’s lives, destruction of infrastructure and loss of assets. This necessitated the adaptation of traditional anti-crisis management to the conditions of the war period. The features of anti-crisis management of transport enterprises during the war period are considered, in particular diagnostics, strategies, methods, measures and performance assessment.

**KEYWORDS**

Transport industry of Ukraine, military aggression, anti-crisis management, enterprise crisis, state diagnostics, anti-crisis strategy, military crisis, enterprise profitability.

**4.1 STATE OF THE TRANSPORT INDUSTRY OF UKRAINE AND PREREQUISITES FOR THE EMERGENCE OF CRISIS PHENOMENA IN THE ACTIVITIES OF TRANSPORT ENTERPRISES**

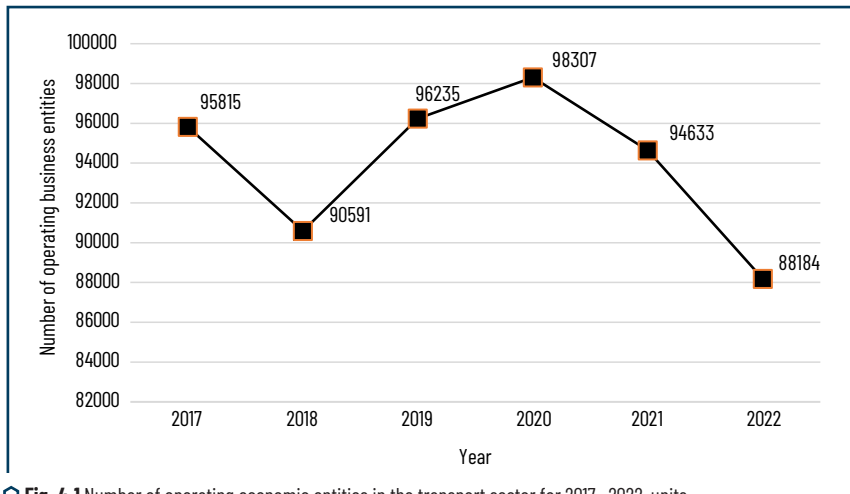
Today, transport plays a key role in ensuring the effective functioning of the economy and meeting the needs of society. Transport enterprises ensure the movement of goods, services and people both within the

country and at the international level. However, the functioning of transport enterprises in a market economy is influenced by various factors of the external and internal environment. In Ukraine, the conditions of martial law open up new challenges and threats for transport enterprises, which significantly affects the stability and functioning of this industry. The introduction of anti-crisis management in the activities of transport enterprises will make it possible to avoid or reduce the negative impact of crisis phenomena and ensure their sustainable functioning in modern economic conditions.

In order to be able to apply anti-crisis management, it is important to timely identify the symptoms of crisis phenomena and establish the factors that led to the emergence of a crisis situation at the enterprise. To clarify the prerequisites for the emergence of crisis phenomena in the activities of transport enterprises, it is first necessary to examine the current state of the transport industry of Ukraine. The general state of the transport industry in 2022 deteriorated significantly, as evidenced by the following indicators:

1. Number of operating business entities.

According to the State Statistics Service [1], the number of operating business entities in the “Transport, warehousing, postal and courier activities” industry began to decline starting in 2020. In 2022, the reduction process intensified due to the war (**Fig. 4.1**).

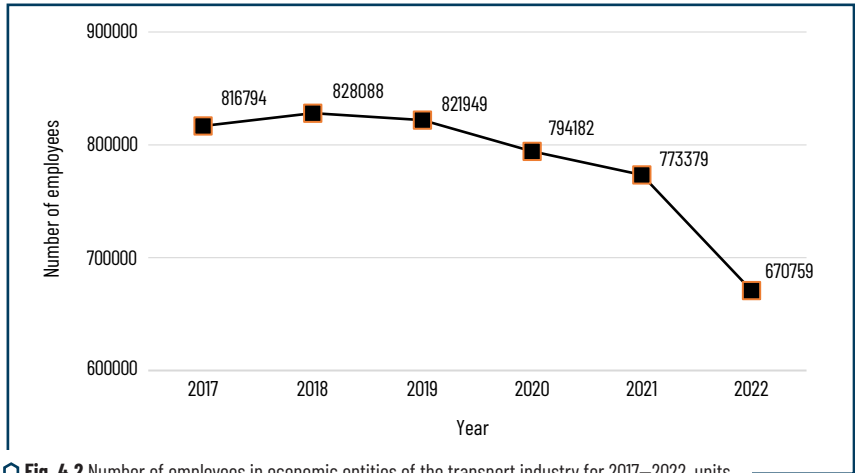


**Fig. 4.1** Number of operating economic entities in the transport sector for 2017–2022, units

Source: [1]

2. Number of employees.

The number of employees in the transport sector in 2022 decreased by 102,620 people (**Fig. 4.2**) [1]. Due to the consequences of the war, many enterprises were forced to reduce their activities or lose their infrastructure, which led to a decrease in the number of employees.

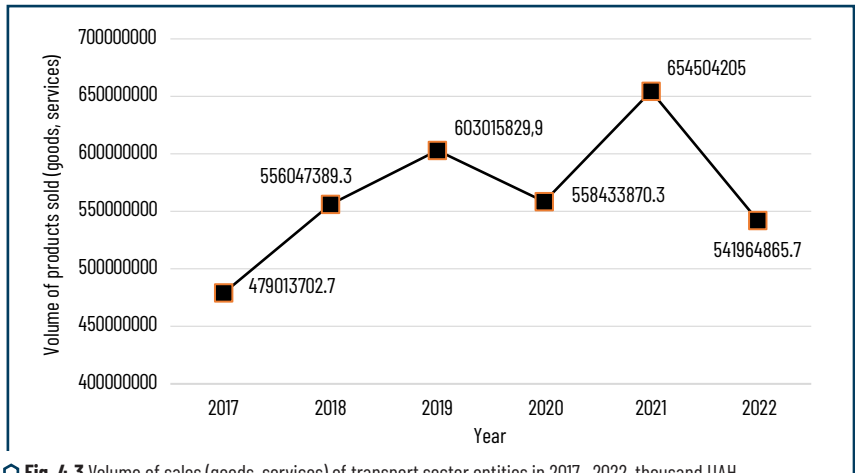


**Fig. 4.2** Number of employees in economic entities of the transport industry for 2017–2022, units

Source: [1]

### 3. Volume of products sold (goods, services).

Before the start of the war in 2022, the volume of products sold (goods, services) was constantly increasing, as evidenced by the data (**Fig. 4.3**) [1]. In 2022, the volume of products sold decreased by 112,539,339.3 thousand UAH.



**Fig. 4.3** Volume of sales (goods, services) of transport sector entities in 2017–2022, thousand UAH

Source: [1]

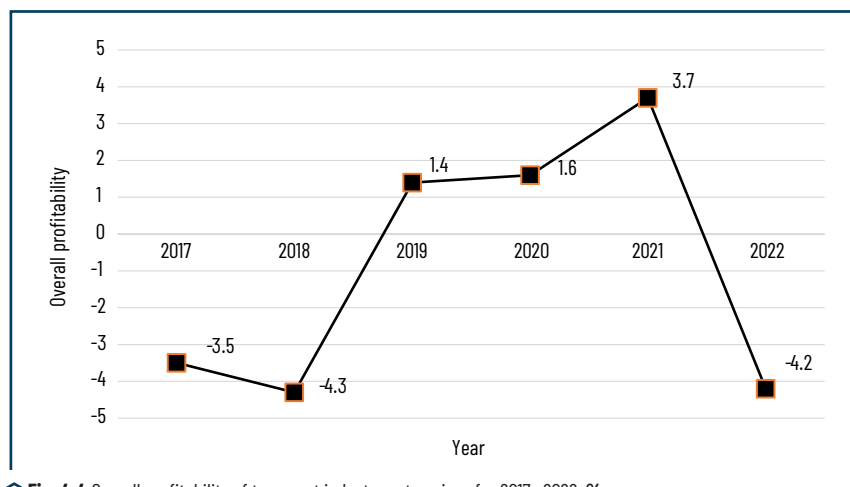
## 4. Level of profitability of enterprises.

This indicator indicates how effectively transport enterprises use their resources to generate profit. The overall level of profitability of transport enterprises in Ukraine has always been low, however, in 2022 [1] the industry suffered large-scale losses (**Table 4.1, Fig. 4.4**) due to reduced demand, increased costs, currency fluctuations, etc.

● **Table 4.1** Profitability of transport enterprises in Ukraine in 2017–2022 by their size, %

Year	Overall profitability	Large enterprises	Medium enterprises	Small enterprises	Micro-enterprises
2017	−3.5	−6.7	2.3	−5.2	−14.0
2018	−4.3	−9.3	1.3	2.2	1.3
2019	1.4	−2.2	6.4	2.9	1.7
2020	1.6	2.4	1.9	−0.9	0.6
2021	3.7	4.5	3.6	2.0	2.1
2022	−4.2	−4.1	−5.5	−2.6	−11.9

Source: developed based on data [1]

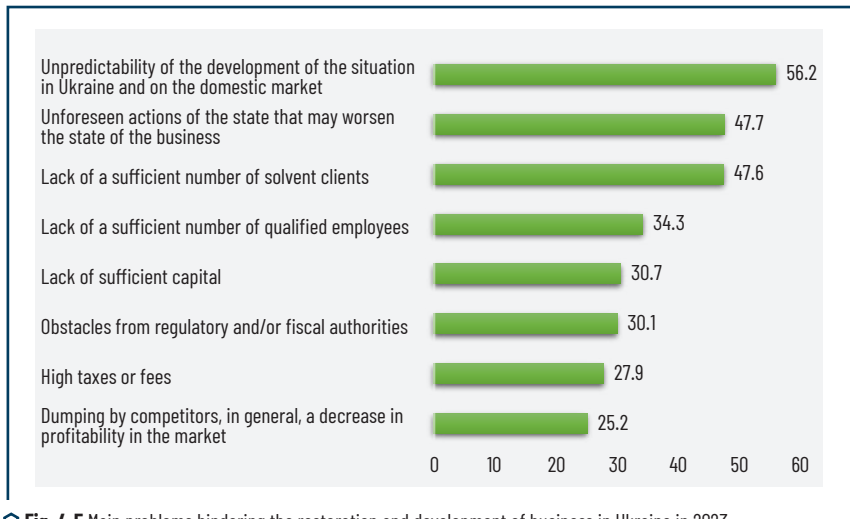


○ **Fig. 4.4** Overall profitability of transport industry enterprises for 2017–2022, %

Source: [1]

The latest survey conducted by Advanter Group [2] at the end of 2023 on general problems that prevent the restoration and development of business shows: the biggest problem of enterprises is

uncertainty (unpredictability of the development of the situation in Ukraine and on the domestic market – 56.2 %), followed by unpredictable actions of the state that can worsen the state of the business (47.7 %), lack of a sufficient number of solvent customers (47.6 %), lack of a sufficient number of qualified employees (34.3 %), lack of sufficient capital (30.7 %), obstacles from regulatory and/or fiscal authorities (30.1 %), high taxes and fees (27.9 %), dumping by competitors, and overall decrease in profitability in the market (25.2 %) (Fig. 4.5).



**Fig. 4.5** Main problems hindering the restoration and development of business in Ukraine in 2023

Source: [2]

Thus, the general state of the transport industry in Ukraine has declined since 2022. This was undoubtedly a consequence of military aggression against Ukraine. Thus, in particular, the aviation industry suffers the most due to the run ban. However, as can be seen in previous years, most of the analyzed indicators were at a fairly low level. This is due to a number of problems of transport enterprises.

Firstly, this is outdated equipment and infrastructure. A large number of transport enterprises, especially municipally owned, have outdated buses, trams, trolleybuses and other transport, which leads to an increase in maintenance and repair costs, and also reduces the quality of such services.

Secondly, there is a lack of funding and investment in this industry. Many enterprises have limited financial resources, investors have no incentive to invest in the transport sector due to low profitability, and government support is almost non-existent.

Thirdly, high prices for fuel and other resources. Fuel is the main component of costs for many transport enterprises, especially in road transport. The increase in prices for petroleum products, which is especially observed during the war, leads to a significant increase in the cost of refueling cars, buses, minibuses,

taxis and other vehicles. Because of this, the transport business has to increase tariffs, for example, for travel, or the prices of its services to compensate for costs, which can lead to a decrease in demand from consumers.

All these problems lead to the emergence of crises and crisis phenomena in the activities of transport enterprises.

According to scientists, solving the problems of transport enterprises can be achieved through the following measures [3]:

- reducing the tax burden or partial compensation for the costs of resource provision for enterprises engaged in international freight transportation;
- lobbying by the state to increase the quota for issuing permits for international transportation for Ukraine;
- carrying out high-quality reconstruction of transport routes to increase the transit attractiveness of Ukraine and reduce the costs of domestic enterprises for the repair of vehicles;
- introducing an anti-crisis management system to effectively counteract the impact of external and internal threats.

Thus, the prerequisites for the emergence of crisis phenomena in transport enterprises of Ukraine are associated with the peculiarities of the functioning of the domestic transport industry and the cumulative effect of a number of negative macroeconomic factors that have accumulated over a long time and whose influence intensified during the period of the full-scale invasion of Ukraine.

That is, the entire set of factors that can lead an enterprise to a crisis can be divided into two groups:

- external – on which the enterprise is unable to influence or its influence is limited;
- internal – arise as a result of the activities of the enterprise itself.

The prerequisites for the emergence of crisis phenomena in the activities of transport enterprises (**Fig. 4.6**) are:

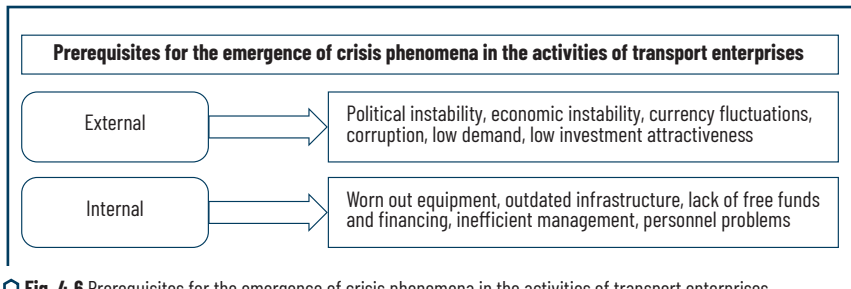
External:

- political instability – low trust in government institutions, uncertainty of the political course, instability of legislation, unpredictable actions of the state, obstacles from regulators;
- economic instability – economic or financial crises, rising inflation, budget deficit, devaluation of the hryvnia, credit restrictions, rising unemployment, high level of taxes;
- currency fluctuations – increasing cost of imported raw materials, materials, equipment;
- low level of demand – decrease in sales volume, necessity of reducing activities, increase in inventories of goods;
- low level of investment attractiveness – limited access to capital, lack of innovation, high level of risk.

Internal:

- equipment wear and tear – increase in maintenance costs, decrease in productivity, risks of accidents and downtime, limited opportunities for development;
- outdated infrastructure – low productivity, increased maintenance and repair costs, limited opportunities for development;

- lack of free funds and financing – risk of insolvency, delayed project development, reduced liquidity, loss of investment opportunities;
- ineffective management – inability to adapt, inability to make quick decisions, loss of potential opportunities, low level of staff motivation;
- personnel problems – low qualifications and skills of employees, lack of motivation, outflow of qualified employees, conflicts in the team, ineffective distribution of duties and responsibilities.



**Fig. 4.6** Prerequisites for the emergence of crisis phenomena in the activities of transport enterprises

Source: author's development

## 4.2 THE SYSTEM OF ANTI-CRISIS MANAGEMENT OF TRANSPORT ENTERPRISES AND ITS COMPONENTS

The development of transport enterprises in Ukraine occurs under the influence of many negative internal and external factors, therefore, predicting and avoiding crisis phenomena and minimizing their consequences is one of the priority tasks.

Overcoming the crisis state of the enterprise requires the comprehensive application of anti-crisis management, the implementation of which will be carried out throughout the entire period of operation of the enterprise, because the possibility of a crisis occurs at all stages of its development. Elimination of crisis phenomena in the transport industry is possible through the formation and application of the system of anti-crisis management of transport enterprises.

Such a system can be represented by four main stages: diagnostics of the state of the enterprise, formation of an anti-crisis strategy and program, application of anti-crisis methods and measures, assessment of the effectiveness of the proposed methods and measures (**Fig. 4.7**).

Successful problem solving should be preceded by a thorough analysis of the situation. The basis of the anti-crisis management system of the enterprise should be conducting research and identifying weaknesses in the functioning of the enterprise. In order to identify crisis phenomena at the enterprise and prevent bankruptcy in the future, a permanent system of monitoring and diagnostics of the enterprise is necessary. The basis for assessing the factors of the crisis situation is the analysis of the external and internal environment.

<b>Stage I</b>	<i>Diagnostics</i>
	Comprehensive analysis of financial and economic condition (liquidity, solvency, profitability indicators); analysis of revenue growth rate, sales profitability, availability of own working capital; analysis of models for assessing the probability of bankruptcy, etc.
<b>Stage II</b>	<i>Formation of an anti-crisis strategy and program</i>
	Growth strategies (concentration, integration, diversification), marketing strategy, production strategy, cost minimization strategy, stabilization strategy, financial strategy, restructuring strategy, offensive strategy, harvesting strategy, etc.
<b>Stage III</b>	<i>Application of anti-crisis methods and measures</i>
	<i>Methods:</i> autosourcing, benchmarking, regularization, downsizing, restructuring, rehabilitation, etc. <i>Measures:</i> cost reduction, marketing activities to increase sales, tax optimization, stopping secondary production, etc.
<b>Stage IV</b>	<i>Assessment of the effectiveness of the proposed methods and measures</i>
	Assessment methods: <i>Economic analysis</i> – analysis of key financial and economic indicators <i>Expert assessments</i> – qualitative or quantitative assessment of expert opinions <i>Comparisons</i> – comparison of crisis indicators with actual ones

 **Fig. 4.7** Anti-crisis management system of the enterprise

Source: author's development

The process of anti-crisis diagnostics of the state of enterprises (**Stage I**) includes various methods and tools. First of all, the main performance indicators should be analyzed, such as the growth rate of revenue, profitability of sales, availability of working capital. Factor analysis can be used to study the impact of various factors on financial results. These indicators allow to track key aspects of the enterprise's activities. Thus, a decline in revenue or a decrease in profitability may indicate problems in management or ineffective sales strategies.

For a comprehensive assessment of the financial and economic condition, indicators should be used that cover various aspects of the enterprise's activities, such as property status, liquidity, profitability, solvency, business activity, logistics, etc. This provides an overall assessment of various aspects of the activities of transport enterprises, which allows identifying problems in the financial sphere of the enterprise.

In addition, enterprises can use various models of assessing the probability of bankruptcy to predict crisis situations in order to prevent possible problems and take timely measures. Such a comprehensive approach to diagnosing the enterprise's activities helps to effectively manage its activities and make informed decisions to ensure sustainable development.

It is worth noting that anti-crisis diagnostics of an enterprise can cover not only the analysis of financial indicators. It should also include checking other important aspects of the enterprise's functioning, such



as business processes, organizational structure or HR direction, which will also allow identifying possible weaknesses in the management and functioning of the enterprise.

Along with quantitative methods of financial analysis, it is advisable to use qualitative methods, such as PEST and SWOT analysis. These methods allow to take into account external and internal factors that can affect the activities of the enterprise, and identify opportunities, threats, strengths and weaknesses. The results of these methods can also help in developing strategies, which will only increase the quality of anti-crisis decisions taken.

If deviations are detected during diagnostics that can lead to a crisis state of the enterprise, the next stage is the development of an anti-crisis strategy and program (**Stage II**). This strategy is a set of actions aimed at overcoming crisis phenomena and strengthening the enterprise's position in the market.

An anti-crisis strategy is a specially developed action plan for managing crisis situations in order to overcome crisis phenomena and prevent bankruptcy. The main goals of the anti-crisis strategy should be focused on eliminating the main causes of the crisis by reducing the impact of relevant factors, taking into account the existing limitations of the enterprise. The main goal is to restore financial stability and ensure the stable functioning of the business.

The development of an enterprise's anti-crisis strategy consists of the following stages: analysis of the crisis situation at the enterprise; review of the mission and system of goals; analysis of alternatives and selection of an anti-crisis strategy [4].

The entire set of possible strategies from the point of view of anti-crisis management can be divided into two groups:

- 1) strategies for ensuring crisis prevention within the framework of preventive anti-crisis management;
- 2) strategies for ensuring survival in crisis situations and minimizing possible losses.

Strategies for ensuring crisis prevention within the framework of preventive anti-crisis management should be applied at the stage of identifying minor deviations in the enterprise's activities or in the case of preventive actions to prevent future crisis phenomena. Strategies for ensuring survival in crisis situations are applied already during an ongoing crisis at the enterprise.

**Table 4.2** lists possible anti-crisis strategies that can be used to overcome a crisis at a certain stage [4–6]. Their diversity allows the enterprise to choose the one that is most appropriate at a certain stage of the organization's development and corresponds to the formed general strategy of the enterprise.

The means of implementing an anti-crisis strategy is the development and implementation of an anti-crisis program. An anti-crisis program is a document that defines the main measures to overcome crisis phenomena at an enterprise. Within one anti-crisis strategy, there may be several anti-crisis programs that include a set of measures to achieve goals. This document may be developed at the level of the entire enterprise or have subprograms for individual divisions and functional services.

The structure of the anti-crisis program should include the following components: a list of planned measures; determination of start and end dates; resources required for implementation; expected results from implementation; responsible persons and executors for each measure.

After the strategy and anti-crisis program are developed, the next step is the direct implementation of anti-crisis methods and measures (**Stage III**). This stage includes the implementation of specific actions

aimed at overcoming crisis situations and restoring the stability of the enterprise. The set of anti-crisis measures is unique for each enterprise, as it must take into account various factors, such as the stage of the crisis process, the specifics of the industry, the size of the enterprise, etc.

● **Table 4.2** Anti-crisis strategies according to the crisis stage of the enterprise

Stages of crisis	Signs of manifestation	Anti-crisis strategies
Strategic crisis	Lack or insufficient development of the strategic management system, shortcomings in marketing activities, decrease in the market value of the enterprise	Organizational, personnel, marketing, investment, crisis prevention, anticipation, cost reduction
Structural crisis	Deterioration of the financial condition of the enterprise, decrease in sources and potential for development, reduction in activity volumes, loss of market share, decrease in the number of personnel	Marketing, production, cost minimization, turnaround, stabilization, diversification, innovation, cost leadership, counteraction, anticipation, concentration, cost reduction
Operational crisis	Decrease in the most important economic indicators, loss of profit of the enterprise	Marketing, cost minimization, turnaround, stabilization, offensive, defense, defensive, counteraction, restructuring, transformation
Liquidity crisis	Increase in the enterprise's debt to creditors, deterioration in the indicators of liquidity and solvency of the enterprise	Financial, cost minimization, restructuring, reduction, harvesting, growth
Insolvency (threat of bankruptcy)	Deficit of liquid funds for the fulfillment of external financial obligations (repayment of debts), production is constrained by a shortage of materials, the period for repayment of receivables increases	Financial, merger, liquidation, reduction, restructuring, exit, survival
Bankruptcy	Initiation of bankruptcy proceedings, excess of obligations over the enterprise's own capital	Liquidation, exit, merger, reorganization

Source: author's development based on [4–6]

Measures (which are specified in the anti-crisis program) are formed in the form of specific tasks that must be taken. It is worth remembering that for the successful implementation of these measures, it is necessary to determine not only responsible persons, but also specific deadlines, necessary resources and expected results from each measure. Such an approach will help the enterprise effectively achieve its goals.

Anti-crisis methods are approaches to crisis management. They include a wide range of measures. In particular, the methods include: autosourcing, benchmarking, regularization, downsizing, restructuring, rehabilitation, etc. [4].

Anti-crisis measures are actions and steps to overcome the crisis. Measures, in turn, can also be specified in tasks and objectives. All measures should be divided into two categories: measures when symptoms or a "mild" crisis occur; measures in case of acute crisis [4].

When symptoms or a “mild” crisis occur, the following options for anti-crisis measures can be used: reducing or optimizing costs, optimizing the capital structure, improving the quality and competitiveness of products, increasing marketing efficiency, reducing the share of obsolete equipment, optimizing the credit policy of the enterprise, etc.

In case of acute crisis, the following measures can be used: modernization or stopping unprofitable secondary production, implementation of non-production facilities, strict control of all types of alternative costs, reviewing the organizational structure to eliminate unnecessary levels of management, measures to release funds for product improvement, etc.

The final stage of the anti-crisis management system is an assessment of the effectiveness of the implementation of the implemented measures (**Stage IV**). The effectiveness of anti-crisis management of an enterprise consists in the ability to achieve the optimal effect from the implementation of relevant anti-crisis programs while preserving all preferences as much as possible with minimal expenditure of funds and resources.

The criteria for assessing the effectiveness of anti-crisis measures include [7]:

1. *Has a change been achieved in the most important indicators of economic and financial activity and the financial condition of the enterprise during the period of anti-crisis management?* This criterion measures what changes have occurred in the financial indicators of the enterprise after the implementation of anti-crisis measures compared to the initial values.

2. *What is the speed of obtaining positive changes per unit of time?* Measures how quickly positive changes have occurred in the activities of the enterprise after the implementation of anti-crisis measures.

3. *What is the cost-effectiveness of obtaining a positive effect?* This criterion is the ratio between the achieved increase in the results of economic and financial activity and the amount of costs associated with achieving this result.

4. *What is the sufficiency of changes to restore the viability parameters of the enterprise?* This criterion determines how much the achieved changes are sufficient to restore the viability of the enterprise and compares the actually achieved indicators with reference values.

If the measures to overcome the crisis were ineffective, and the crisis continues to develop or the measures taken have not had an adequate effect, the enterprise should return to the starting point of searching for the causes and developing a new program or strategy for overcoming the crisis.

Thus, the general process of anti-crisis management of the enterprise, taking into account the stage of the crisis, can be presented as follows (**Table 4.3**) [4–6].

● **Table 4.3** Anti-crisis management according to each stage of the crisis at the enterprise

Crisis stage	Diagnostic methods, tools	Recommended anti-crisis management
1	2	3
Strategic crisis	Analysis of the strategic and marketing activities of the enterprise	Review of strategy, restructuring, increase in market value of the enterprise

● Continuation of Table 4.3

1	2	3
Structural crisis	Analysis of the production and economic indicators of the enterprise	Normalization of the enterprise's activities: reducing costs, increasing productivity, increasing the economic added value of the enterprise
Operational crisis	Balance sheet analysis, express analysis of the financial condition of the enterprise	Eliminating the causes of the crisis: minimizing losses, increasing the profitability of the enterprise's capital
Liquidity crisis	Analysis of the liquidity, financial stability and solvency of the enterprise	Preventing the development (deepening) of the crisis: finding funds to continue financing activities, directing part of the working capital to repay losses
Insolvency (threat of bankruptcy)	Comprehensive assessment of the enterprise's activities, analysis of equity and solvency	Preventing the initiation of bankruptcy proceedings (settlement): finding liquid funds to fulfill immediate financial obligations, attracting new external financial capital, obtaining a temporary deferral or prolongation of previously received loans
Bankruptcy	Determination of supercritical solvency, analysis of debt security with real assets, assessment of business activity and investment attractiveness of the enterprise	Removing the enterprise from bankruptcy (rehabilitation): partial mobilization of available assets to settle obligations, going through the bankruptcy procedure with minimal losses for the owners of the enterprise

Source: author's development based on [4–6]

Thus, the proposed anti-crisis management system will allow transport enterprises to respond in a timely manner to changes in the economic environment, will help ensure financial stability, and also increase their competitiveness in the transport services market.

### 4.3 FEATURES OF ANTI-CRISIS MANAGEMENT OF TRANSPORT ENTERPRISES DURING WARTIME

A regular (traditional) crisis at an enterprise most often arises due to various factors, such as economic instability, market instability, internal management problems, etc. Such a crisis is usually characterized by a limited time frame and can be completely overcome with the help of the right management anti-crisis solutions.

In the case of a crisis caused by war, the situation becomes much more complicated and unpredictable. War is a complex and unpredictable factor that significantly affects the activities of all enterprises. Signs of war in the context of enterprise activities include:

- reduction in production capacity;
- possible interruptions in the supply of energy, water, and communications;
- increased risks, including security-related;
- reduced demand for products or services;
- loss of suppliers of raw materials, components, finished products;
- increase in resource prices;
- problems with logistics;
- reduced investment and development;
- loss of personnel (mobilization, migration, reduced motivation).

For transport enterprises, signs of war can have a special impact due to their dependence on the functioning of transport infrastructure and transport safety, namely for them it is possible to include: threat to transport safety, obstacles in logistics and supply, reduced demand for transport, loss of vehicles and infrastructure.

Thus, war is an objective factor that can lead to the destruction of infrastructure, interruptions in supplies, reduced consumer demand and a threat to the safety of employees. The main distinguishing feature of such a crisis at the enterprise is that its consequences can be long-lasting and difficult to recover from [8].

The difference between a traditional crisis and a crisis caused by war is as follows (**Table 4.4**) [9].

● **Table 4.4** Differences between a traditional crisis and a crisis caused by war

Symptom	Traditional crisis	Crisis caused by war
Duration	Has a clear beginning and end, lasts from several weeks to several years	May last for years, without a clear end date. Its impact on business can be felt even after the end of the war
Character	Caused by various factors, both internal (management errors) and external (economic recession)	Caused by an external factor – military actions that cannot be predicted or planned
Speed of spread	Localized after identifying the causes	Global chain reaction
Consequences	Leads to financial losses, staff reductions, strategy changes	Carries not only financial losses, but also a threat to people's lives, destruction of infrastructure, loss of assets
Impact on personnel	Can lead to demotivation, fear for the future, staff turnover	Creates a risk to people's lives and health, increases emotional stress, requires additional support from the employer
Possibility of overcoming	Can be completely overcome and emerge from the crisis with minimal losses	It is impossible to completely overcome the consequences of war at the enterprise. It is only possible to adapt to new conditions, minimize the negative impact and look for opportunities for development

Source: own development based on [9]

That is, the differences are primarily related to the severity and duration of the war, which forces enterprises to go beyond the framework of traditional anti-crisis management. The anti-crisis management

system should take into account these challenges and help adjust the functioning of enterprises in martial law conditions [4].

The main goal of anti-crisis management of an enterprise during the war is to minimize the negative economic and social consequences of the enterprise's activities. Given that such a crisis is characterized by an acute shortage of time to respond and a limitation on the terms of overcoming the crisis, the main task of anti-crisis management is to make decisions promptly and with the least risk, which would make it possible to achieve the desired result with minimal additional efforts and minimal negative consequences [9].

At the initial stages of the war, such a desired result is to ensure the uninterrupted operation of the enterprise and its survival in new war conditions. At this time, it is important to respond quickly to changes, ensuring the safety of employees and the stability of production and supply of products. As the war progresses, the priorities of anti-crisis management may change. The task of ensuring the survival of the enterprise turns into adaptation and adjustment of functioning in war conditions.

It is clear that the impact of war on enterprises is different and anti-crisis management requires an individual approach. However, in all cases, the main principles of anti-crisis management in wartime remain efficiency, risk minimization and priority of ensuring the uninterrupted operation of the enterprise.

Thus, in times of war, especially in the first "period of shock", all decisions must be made very quickly, since the situation changes every day and in such a case, untimely response can be costly for the enterprise. In this case, increasing the speed of making anti-crisis decisions in war conditions involves reducing the levels of management, a limit on the approval of decisions, within which decisions can be made without the approval of a senior manager, or decentralization, so that decisions are made not only from the top down, but also on missions, for the rapid resolution of local problems. As one of the managers whose business survived the first stages of the war notes: "It is better to make a mistake quickly than to think long" [8].

The main goal of anti-crisis diagnostics in wartime is to identify the impact of war on the activities of the enterprise: assessing the current situation and identifying the causes of deviations.

Assessment of the current state of the enterprise includes an analysis of financial indicators, resources, personnel and other aspects of the activity. It is also important to assess the current level of risks and opportunities of the enterprise.

In addition to the analysis of standard indicators, as in a traditional crisis, for transport enterprises in wartime it is important to assess: logistics, transportation safety, material and technical base, operational indicators of activity (volume of transportation, use of vehicles, etc.).

The tools of anti-crisis diagnostics in wartime can be: financial analysis, operational analysis, scenario modeling, SWOT analysis, personnel analysis, etc.

Due to the constant change in the situation in wartime, enterprise diagnostics must be carried out as often as possible. The most effective is the implementation of a system of constant monitoring. The more often diagnostics are carried out, the greater the chance of timely identification and overcoming problems that, in the context of a crisis caused by war, can lead to serious consequences.

Anti-crisis diagnostics will allow to identify the reasons for deviations from the normal functioning of the enterprise during the war period. For example, problems in the supply of raw materials, reduced demand

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for products or changes in market conditions. Identifying these reasons will allow the enterprise to develop effective anti-crisis strategies for adapting to war conditions.

Forming a strategy in wartime is a difficult task at the beginning due to high uncertainty. Therefore, at the beginning of the war, in the "shock period", the enterprise should skip this stage and quickly implement anti-crisis measures. After adapting and adjusting its functioning in war conditions, the enterprise can apply various anti-crisis management strategies, in particular, protective, stabilization, survival, cost reduction, marketing, financial, etc. will be effective.

At the beginning of the war or during its exacerbation, the most effective anti-crisis strategy is the survival strategy. This strategy is aimed at helping enterprises survive during the active phase of the war, reduce costs and preserve critical resources. The main measures of this strategy may be to optimize liquidity and current asset management, restore financial stability, restore or increase production volumes. After adapting to wartime conditions, it is worth applying growth strategies that can increase the competitiveness of the enterprise.

Among the important methods that should be used in anti-crisis management in wartime, the following should be highlighted [4]:

- outsourcing – can free the enterprise from processes that do not bring direct income, but require time and human resources. Outsourcing can help ensure uninterrupted operation in the event of the loss of employees (due to layoffs, migration) who were entrusted with certain business processes;
- diversification – expanding the product range, developing new markets. This method can provide the enterprise with growth points if the main directions become irrelevant and unprofitable. In wartime, transport enterprises can expand their geographical coverage, introduce new vehicles, expand the provision of services;
- reorganization – the most effective way can be considered a merger. The merger of several enterprises can help them survive and increase the economic efficiency of their activities;
- downsizing – reducing the size of the enterprise, production facilities, and the number of personnel to increase the level of its functioning, reduce costs and the cost of products. Although reducing activity is an unpleasant step, sometimes in conditions of reduced supplies, reorientation of production, changes in logistics chains, this is the only way to maintain the previous pace of work and its resources and continue operating in the market;
- modernization – updating or improving an object or process. For transport enterprises, modernization is especially important, since most enterprises need to update equipment, modernize the sales system, improve management systems, etc. The importance of this method during wartime is that modernization increases the competitiveness of the business, labor productivity, and ensures the transition to new systems and methods of doing business.

Anti-crisis measures must be taken to successfully adapt to wartime conditions. The measures are individual for each business. Common anti-crisis measures, such as freezing areas of work, closing projects, abandoning development plans and placing employees on unpaid leave, can indeed help at the beginning of the war. However, later these measures can have a negative impact on the further development of the enterprise. After the initial "shock period", it becomes important to create long-term strategies and plans

that will allow the enterprise to adapt to new conditions and resume its activities during the war period. Let's list possible anti-crisis measures [4].

One of the important measures is communication with staff. Maintaining contact with employees and explaining the current situation to them helps to avoid panic and creates a favorable climate in the team. Regular briefings, dialogue and openness about plans and prospects allow to maintain trust and motivation of employees. Informed employees about the physical condition of the company every day. Some also regularly informed clients about the situation and their current plans. These managers reported that it was important for them to return employees to work after the first days of complete instability in order to create a certain level of normal life.

Retraining employees – allows the company to retain valuable personnel potential. For example, transferring employees to other departments or positions or, if there is not enough money and it is necessary to lay off people, it is possible to reduce everyone's salary, because during the war it is important for employees to have at least some stable income.

It is necessary to pay attention to more careful work with customers – analyze the impact of the war on the client base and respond quickly to changes. For example, in case of problems with logistics, offer new delivery methods, if the problems are financial, then offer postponement, payment in installments or discounts.

Optimization of routes and resources is important especially for transport companies. Given the possible restrictions on movement and logistics during the war, it is necessary to review the optimal routes, it is possible to reduce the number of transport units in operation or introduce the use of alternative delivery routes.

One of the measures is also a reorientation to the most demanded services – expanding geographical coverage, introducing new vehicles, expanding the provision of services that are relevant.

Entering international markets is also an effective means of expanding sales markets and increasing the profitability of the enterprise. With international contracts, it is possible to provide additional sources of income and reduce dependence on the domestic market.

In war conditions, digitalization also becomes a necessity. Automation of processes or the transition to remote work will help reduce business costs and physically protect employees. Also important are technological innovations – the introduction of new technologies, such as cargo tracking systems, remote control, electronic platforms and marketplaces, etc. Thus, artificial intelligence is increasingly used in business to automate tasks, forecast, recognize patterns and obtain insights. It can be used in various industries, including finance, marketing and supply chain management, to increase efficiency, accuracy and reduce costs. Some examples of the application of artificial intelligence in business include fraud detection, stock market forecasting, consumer behavior analysis and risk management. It can be concluded that artificial intelligence plays an important role in almost all areas of human activity [10]:

The effectiveness of anti-crisis management in wartime consists in [4]:

- achieving a change in the most important indicators of the financial and economic activity of the enterprise during the period of anti-crisis management (compared to the beginning of the war or the implementation of anti-crisis measures);
  - speed of obtaining positive changes per unit of time;
  - speed of making management decisions;
-



- stabilization of the enterprise's activities;
- speed of adaptation of the enterprise to the war;
- cost-effectiveness of obtaining positive results;
- survival of the enterprise (at the beginning of the war or in the event that the enterprise is on the front line).

One of the important sectors in the country's economy, which has significant potential, is the transport sector. However, at the present stage, the vast majority of transport enterprises have low efficiency, which indicates the presence of crisis phenomena. Despite the war conditions, most of the reasons for the low efficiency of transport enterprises lie in themselves, which only intensifies the effects of external factors. Thus, reducing the impact of factors on the activity requires the transport sector enterprises to implement effective anti-crisis management.

#### **4.4 DISCUSSION OF THE RESULTS OF THE STUDY OF ANTI-CRISIS MANAGEMENT OF TRANSPORT ENTERPRISES IN MODERN BUSINESS CONDITIONS**

The proposed anti-crisis management system consists of four stages. During the diagnosis, the current state of the enterprise's activities, risks and causes of the emergence of crisis phenomena are analyzed. The formation of an anti-crisis strategy and program involves the development of an action plan and specific measures aimed at reducing the impact of crisis phenomena and maintaining the stability of the enterprise. The stage of applying anti-crisis methods and measures is key, as it involves the direct implementation of measures that can lead the enterprise out of the crisis. The last stage is an assessment of the effectiveness of the proposed methods and measures, which determines the effectiveness of the goals and objectives set, how effective the applied methods and measures are in overcoming the crisis phenomenon. If the crisis is not overcome, the enterprise must return to reviewing the strategy and adjusting it.

A crisis caused by war is a special type of crisis phenomenon. Unlike a traditional crisis, it is systemic, long-term, rapidly spreading with a chain reaction and carries not only financial losses, but also a threat to people's lives, destruction of infrastructure and loss of assets. Accordingly, anti-crisis management must take into account these challenges, in particular through the application of the considered strategies, methods and measures aimed at minimizing the impact of military actions on the activities of enterprises. Such an approach will allow to ensure more effective management in war conditions, minimize risks and maintain the stability of the functioning of transport enterprises.

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