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ANTI-CRISIS MANAGEMENT OF ECONOMIC SECURITY OF ENTERPRISES IN THE CONDITIONS OF DIGITAL TRANSFORMATION OF THE ECONOMY

Summary

The basis of digital transformation, regardless of the level of its implementation, are changes provoked by the increasingly intensive and constant penetration of digital technologies into absolutely all spheres of social activity. Digital transformation acts as a criterion and tool for competitive struggle. Ukraine is experiencing a certain technological lag, due to the complex transition process from a planned to a market economy and the subsequent escalation of hostilities. Post-war reconstruction will be characterized by rapid technological progress, driven by the experience gained in the application of digital technologies in the development and active use of new weapons. The functionality and development of enterprises directly depend on the adaptability of their economic security systems. The need to follow the rapid digital transformation of the national economy requires considering the importance of applying anti-crisis management of the economic security of the enterprise. It is justified that such management is relevant in conditions of stabilization of the situation with a high level of imbalance in activity and in the need for rapid implementation of changes, i.e. digital transformation. The necessary methodological support for anti-crisis management of the economic security of the enterprise in conditions of digital transformation of the economy has been developed.

Introduction

The ongoing pandemic caused by COVID-19 and the subsequent phase of large-scale aggression by the Russian Federation define the business conditions for Ukrainian enterprises as those characterized by critically high dynamics, instability in the weight of influence and the list of main factors, and uncertainty that limits the formation of not only a development strategy, but also tactics. This can be illustrated by official statistics on the share of unprofitable enterprises in 2018-2023: 2018 – 26.1%; 2019 – 26.4%; 2020 – 29.0%; 2021 – 27.1%; 2022 – 34.2%; 2023 – 29.3%. The main reason for the decrease in the efficiency of enterprises was both the lack of experience in operating under the dominance of the above factors, and the inability to quickly adapt, in particular by generating new knowledge. An in-depth examination allows us to point out not only the consequences, but also

the primary causes that caused such a crisis not only in relation to a significant part of enterprises, but also to the national economy as a whole.

In a relatively short period of time, under the pressure of transformation processes at the macro level, business representatives in Ukraine have realized the importance of ensuring security through their own efforts. That is, the state remains a guarantor of the functionality of external security actors, in particular law enforcement agencies, but is limited in its actions due to the freedom of entrepreneurial activity. Therefore, it became practically mandatory to create a different version of the economic security system in the conditions of each enterprise. Variability manifested itself from additional functional responsibilities of one of the deputy directors to a large security service capable of performing competitive intelligence and counterintelligence tasks. One thing was common – staticity by analogy with the prescribed responsibilities of a certain line manager or the organization of the work of a unit. The pandemic and a new round of military aggression have shown the fallacy of this approach. Ensuring economic security must be flexible and anticipate all changes that will take place in the conditions of the enterprise and in the environment of its activities. The digital transformation of the economy, albeit less intensively, but over a longer period, must be taken into account in security activities at the micro level. Such basic principles determined the direction of the research, which consists in consistently deepening the understanding of the economic security of the enterprise, anti-crisis management and digital transformation of the economy in order to further form methodological principles for the implementation of anti-crisis management of economic security in the conditions of digital transformation of the economy, which is and will be relevant for application in Ukraine.

Chapter 1. Modern perception of the meaning of the concept of "economic security of an enterprise"

Consideration of existing views and modernization of the understanding of the concept of "economic security of an enterprise" is proposed to be carried out starting from the content of such a basic category as "security". Without rejecting the fact that the issue of security has been relevant since the early historical stages of human development, we will focus on its modern perception, which is as close as possible to the conditions of functioning of business structures. We have identified the dominance of three positions. The first is based on the primary human need for protection, i.e. from everything that could be deadly or limit the possibility of existence. The modernized version is considered by A. Kuzmenko as "...a specific category aimed at protecting and promoting the vital interests of a person, society, and the state" [13, p. 85]. In fact, there is an attempt to substantiate the important point that security is a necessary basis for a better satisfaction of a wide range of interests, and therefore it acts as a fundamental goal, the achievement of which makes the existence and evolution of any system possible. If the first position is characterized by certain static characteristics, then the second is already determined by dynamism. Thus, V. Tretyak proposes to consider security as "...a state in which one can determine the ways and forms of one's economic development" [20, p. 7].

Therefore, not only existence, but also the transition to the next level of development is determined by the effectiveness of actions to achieve and maintain the required level of security. The third position is different in that security is seen [15, p. 49] as a necessary basis for preserving the current state of a certain system, that is, its integrity despite any changes in the operating environment and the dynamics of internal processes. Given that we considered modern signs of security with an orientation towards the functioning of enterprises, we obtained a multi-faceted characteristic (Figure 1).

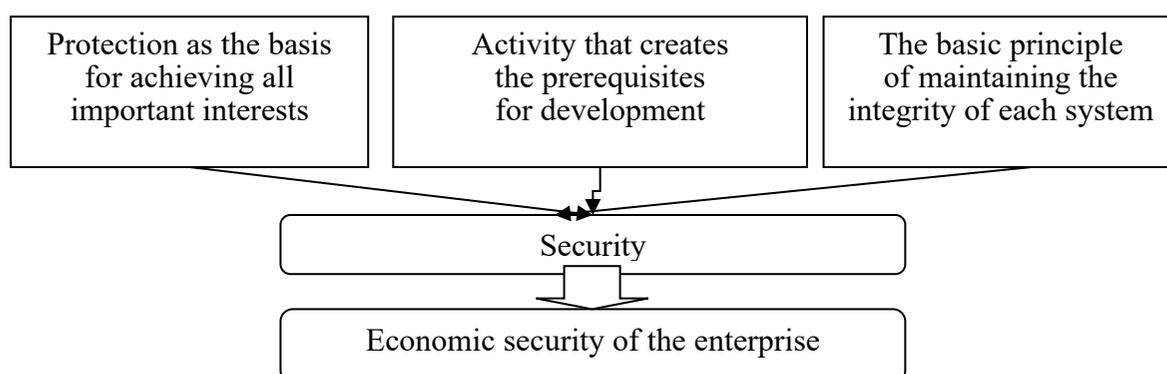


Figure 1. Modern variation of security perception

Source: formed by the author

We graphically demonstrate that all the defined and characterized positions regarding the perception of security are also relevant regarding the concept of "economic security of the enterprise" as a fact of implementing progress in security science. It is important that since the beginning of the 90s, processes of revising the perception and vision of the possibility of ensuring security have generally taken place in Ukraine, which were caused by political, social and economic transformations in the country. The previous vision of security as an exclusively state priority was changed to a multi-level process (state, region, industry, enterprise, and individual) with a gradual clarification of key goals.

In the absence of experience, the first stage in the evolution of views on the content of the concept of "economic security of an enterprise" determined the need to protect the information field of a particular enterprise, in particular its commercial secrets. The explanation for this can be found in the fact that during the times of the command-administrative economy, innovative developments were carried out by separate institutes and design bureaus, followed by simultaneous mass production of products at several enterprises in accordance with the plan approved by the ruling party. The independence gained by enterprises provoked the emergence and intensification of competition, which primarily affected the need to protect technological developments. It is undeniable that considering economic security only from the perspective of information protection is limited, but it should be borne in mind that existing security systems were generally focused exclusively on the physical protection of property and territory, and therefore such a change in tasks required certain transformations.

The second stage of the evolution of the concept under study was based on a rethinking of the principles of entrepreneurial activity, in particular in the part where the threat was posed by the actions of state bodies in terms of increasing tax pressure. For this reason, the definition of D. Kovalev and T. Sukhorukova, who proposed perceiving the economic security of an enterprise as "... the protection of its activities from negative influences of the external environment, as well as the ability to quickly eliminate various threats or adapt to existing conditions that do not negatively affect its activities" [9, p. 48]. This change in tasks for security actors indicates progress, but considering and building defensive redoubts exclusively against external threats cannot be considered a full-fledged approach, but rather one that allows for situational responses to preserve the business.

The transition to the third stage was due to increased competition, including from foreign manufacturers, whose products differed significantly in terms of price-quality ratio, and the key was represented by the widest possible range. Therefore, subsequent changes in the list of tasks for security entities included performing competitive intelligence to find options for improving competitive positions, including borrowing and adapting best practices for attracting and maintaining consumer interest.

The fourth stage is mostly associated with the spread of the so-called resource-functional approach, a careful consideration of which will be given attention in the future. In the context of considering evolution, an important change is the actual destruction of the previously limited field of activity of security subjects. The issue of security began to dominate all business processes, and therefore no decision could be made without seeing the risks and threats not only those that prompt its adoption, but also those that will accompany its implementation and arise as a result. This stage is also interesting for the structuring of the economic security of the enterprise, that is, the allocation of functional components with the development of appropriate methodological support, which contributed to a more thorough identification of threats and higher efficiency in the application of tools for their elimination. It is thanks to structuring that the activity of security entities has spread to all areas of the financial and economic activities of the enterprise, with the subsequent awareness of the need for constant implementation of security activities with the maximum involvement of all employees and increased interaction with external security entities.

The current – fifth – stage is characterized by further detailing of aspects of ensuring personnel security based on the need to take into account the scale and specifics of the activity. The previously formed theoretical developments were difficult to apply in practice, since a large security service cannot be created in the conditions of small enterprises. Similar reservations arose regarding the structuring of the economic security of the enterprise, when it became appropriate to vary both in the number of functional components and in the priority of the resource base for the implementation of security measures. The critically high dynamics of changes in the list of factors that had a decisive impact on the activities of the enterprise became the basis for abandoning the rigid organizational structure of the security system in favor of a flexible functional combination of all line departments with the transfer

of some tasks to outsourcing, in particular in terms of physical protection and countering cybercrime.

The established sequence of events over the past thirty years proves systematic progress, the circumstances and pace of which were determined by the practice of business protection. Therefore, changing conditions, including during the dominance of COVID-19 and military aggression, provided another impetus for the development of security systems in the conditions of Ukrainian enterprises. At the same time, it is necessary to take into account the fact that such a short period of time has formed a constant combination and further relevance of all known positions on the content of the concept of "economic security of an enterprise." That is, there is a search for a better option without rejecting previously formed positions. This can be illustrated by considering the vision of the economic security of the enterprise in scientific publications.

The growing relevance of effective implementation of security activities has led to increased activity of scientists in the issues of substantiation of individual positions, which have collectively increased the amount of information that requires systematization, that is, the allocation of key approaches with a critical consideration of the main aspects to find the optimal option that corresponds to the current security situation and can serve as the basis for further developments and practical implementation. To this end, we will consider those positions that have the greatest level of variation and have found support in scientific and business circles.

Within the first of the identified approaches, the economic security of an enterprise is considered as security in various forms of its manifestation. This is the protection that makes it possible to maintain the integrity of the system, including by strengthening internal connections between all components. Another perspective of the mentioned security is considered by L. Schwab, indicating that it means "... security from the negative impact of the external environment, as well as the ability to quickly eliminate emerging threats or adapt to existing conditions that negatively affect its activities" [22, p. 538]. We can agree that this approach is based on the results of developments that were formed in the first stages of the evolution discussed above. The perception of economic security of enterprises as a conditional shield that should protect against enemy attacks is debatable. The question arises because internal threats also significantly affect the activities of the enterprise, and therefore this concept of a shield requires rethinking. Further investigation indicates that the functions of internal security subjects are performed by people whose behavior is influenced by family, group and other circumstances, and therefore they can be a source of threats. Therefore, security must be constant and cannot be presented as a means of protecting the enterprise exclusively from external threats, rather it is a system that is able to respond to any manifestations that already constitute or may in the future significantly affect the activities of the enterprise. Our position is precisely to focus not only on threats, but on any shifts that go beyond the limits of dynamic equilibrium.

By analogy with the first, the second approach is based on the legacy of one of the stages of the evolution considered above, that is, it is about the state of corporate resources, and the approach itself was called resource-functional. Among the

scientists who laid the foundation for this approach was S. Pokropivny, who insisted on the content of the economic security of the enterprise as "... the state of corporate resources and entrepreneurial opportunities, which guarantees their most effective use for the stable functioning and dynamic development of the enterprise, prevention of internal and external threats" [19, p. 76]. Critics believe that the activities of security actors cannot be focused exclusively on issues of resource efficiency. At the same time, the perception of the aspect highlighted by S. Pokropivny can be interpreted not as a functional direction, but as an expected result. One can agree with this vision, given the significant impact of the availability and use of a resource base on the functioning of each enterprise. Further considerations allow us to assert that corporate resources form the necessary resource basis of security activities, that is, within the framework of this approach, they determine the conditions that ensure the functioning of the enterprise's economic security system. Today, the practice of financing the security service based on the ability to eliminate the consequences of threats is widespread, which limits the effectiveness of security actors' actions due to the impossibility of implementing preventive measures. A conditional vicious circle is formed: limited funding allows only liquidation measures to be carried out, while the company's losses are greater compared to the possible costs of implementing preventive procedures in relation to threats that demonstrate the highest dynamics of increasing impact and are likely to be implemented in the short term. The considered approach creates the necessary basis for reviewing the principles of security activities, giving priority to proactive actions.

The third approach was singled out by us on the basis of a significant number of supporters of the vision of economic security of the enterprise as the basis for maintaining the stability of the enterprise. For example, we will cite the definition of V. Muntyan, in which he insists on the need to interpret the studied concept as "... the state of legal, production and organizational relations, material and intellectual resources, which ensures the stability of its functioning, financial and commercial success, progressive scientific, technical and social development" [17, p. 24]. Stability is associated with the strength and integrity of the system, which should determine the viability of the enterprise. At the same time, stability does not contribute to flexibility, and therefore the ability to quickly adapt to changing operating conditions. The national economy is generally characterized by dynamism and the difficulty of predicting scenarios for the development of events in the short term, and therefore stability can be both an advantage and a disadvantage, in particular in terms of leadership in using new opportunities. For this reason, it is advisable to consider the economic security of an enterprise as the implementation of a set of measures aimed at maintaining a dynamic balance, in which it is possible to flexibly respond to changes in the operating environment and adjust the development strategy.

The fourth approach is focused on the coordination of interests, the reason for which is the emergence of a threat in the event of contradictions. The basic definition was G. Kozachenko, in which she considers the economic security of the enterprise as "... the degree of harmonization in time and space of the economic interests of the enterprise with the interests of related subjects of the external environment operating

outside the enterprise” [10, p. 87]. Agreeing with the basis for the existence and development of such an approach, we consider it inappropriate to limit the coordination of actions exclusively to external entities. Practice shows that conflicts between owners, management and employees are the basis for the emergence of a significant number of internal threats that destabilize the financial and economic activities of the enterprise. These circumstances are the basis for a thorough study of the individual and group interests of internal and external participants in the interaction with the subsequent options for their coordination to reduce the likelihood of threats.

The four approaches discussed above can be considered basic. Today, the practice of combining them is becoming widespread, that is, combining them in order to eliminate gaps and modernize the content of the concept of "economic security of the enterprise." Such actions, despite the common focus, differ in results. For example, V. Garkusha considers "...a state free from threats to the economic interests of the enterprise” [4], which contradicts the basic principles of not only security science, but also the systemic approach, since the enterprise as an open socio-economic system is characterized by the dynamism of internal processes and interaction with external entities, which determine the emergence of threats. Another option for attempting to combine basic approaches was proposed by T. Vasylytsiv, who considers the economic security of an enterprise as "...a state of functioning in which the enterprise and its products are competitive in the market and at the same time guarantee: the most efficient use of resources, intellectual and human potential; stability of functioning, sustainability and progressiveness of development; the ability to counteract the negative impacts of the external and internal environment of its functioning.” [3, p. 74]. There is a clear attempt to reconcile the positions of each of the basic approaches considered above, but the key target direction is outlined through improving competitiveness. Thus, economic security is interpreted from the position of the necessary basis, base and means of enterprise development. It is impressive that there is a departure from the conventional "firefighter" who eliminates the consequences in favor of innovatively oriented targeted activity to get ahead.

We have graphically summarized the review conducted regarding the change in the perception of the essence of the concept of "economic security of an enterprise" and the aspects that dominate the approaches common today (Figure 2).

We consider it necessary to emphasize the point that the initial vision of the economic security of an enterprise was formed not only from the perspective of each individual in terms of personal security, but also of the economic security of the state, which was determined by the vital necessity for Ukraine to maintain economic independence in the early 1990s.

The author's version of the definition of the concept under study is formed in the key of a combinational approach, that is, based on borrowing best practices. The difference lies in the vision of the importance of implementing measures that are aimed both at protection and at creating the necessary basis for development.

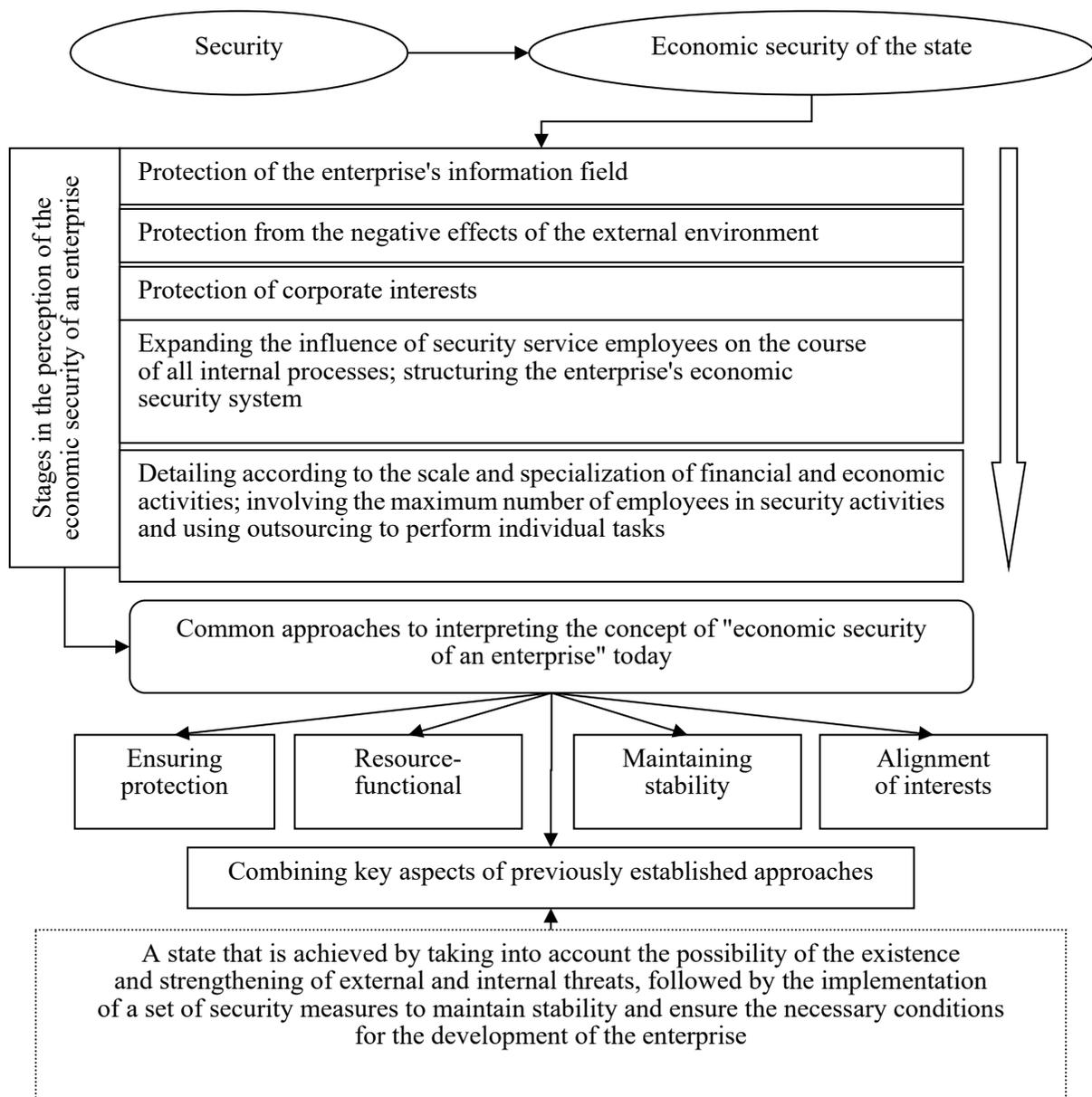


Figure 2. Theoretical foundations of ensuring the economic security of an enterprise

Source: formed by the author

Chapter 2. Principles of implementing anti-crisis management of the economic security of an enterprise

The problem of ensuring economic security is extremely acute for every Ukrainian enterprise, but the issue of managing this process is not given due attention. That is, today the dominant position is that it is necessary to create a system of economic security for the enterprise and its presence will provide the necessary level of protection against all existing threats. The fallacy of this approach can be proven based on several points: first, the activities of each enterprise are dynamic, as is the unstable environment in which it operates, therefore the security system cannot be stable, but rather as flexible as possible; Secondly, in conditions of constant resource

constraints, carrying out security activities only at the expense of security service employees does not give the expected result; it is important to involve all employees with different levels of intensity in performing narrowly focused tasks; thirdly, the implementation of security measures requires planning, coordination and control, which is possible through the separation of subjects and objects of management.

In general, all the above points prove the importance of focusing on issues of managing the economic security of the enterprise, which we will do by creating the necessary theoretical basis. Considering that the current conditions for doing business in Ukraine are difficult to characterize as “favorable”, the formation of such a basis will involve substantiating the feasibility of applying anti-crisis management as one that is capable of maintaining the efficiency of the enterprise in conditions of critically high uncertainty and rapid change in the security situation.

Existing developments provide for the consideration of the enterprise economic security management system as a combined two subsystems, i.e. the managing and managed. The connection is carried out at the expense of management decisions and information on their implementation. In the publication of I. Shtuler, the defined basic principles are supplemented with a list of components of the management subsystem, which include "...the goal, objectives and management process" [23, p. 69]. In general, there is a clear attempt to ensure the development of security science at the micro level through the use of best practices in enterprise management as a whole. According to the systemic approach, such a step is absolutely justified, but in this way it is possible to create a basis for the need for further more significant consideration of the specifics of security activities. It is this circumstance that prompted us to consider anti-crisis management, since it, as already noted, in the most general sense is suitable in the most unstable environment of activity. Another circumstance is the understanding of the crisis, which reflects the maximum result of the impact of the combination of internal and external threats, thereby making it necessary to consider anti-crisis management of the economic security of the enterprise. We do not consider this type of management to be the only option, but in the current conditions its application has a special priority.

Since the term "crisis management" is based on the concept of "crisis", initially this type of management was considered as one that was activated when there were signs of a crisis in the activities of a certain enterprise. Therefore, first of all, let's clarify the essence of the crisis. According to the common perception, we are talking about events that have, or will have negative consequences in the future. This is the position taken by S. Ivanyuta, because we are talking about "... situations marked by high danger, a state of uncertainty, a sense of urgency" [8, p. 46]. We are impressed that this definition mentions danger, that is, in the pair "safety–danger" the crisis determines the minimum value of safety. This moment is another evidence of the correctness of the reasoning regarding the expediency of considering anti-crisis management of economic security due to the presence of cause-and-effect relationships.

A fairly significant number of scientists are supporters of considering the crisis at the micro level as an important stage in the existence of each system. It is appropriate to recall the life cycle of an enterprise, where the crisis indicates the decline and

cessation of existence. A. Chernyavsky additionally indicates the reasons for the transition to this stage, that is, "...actions from outside or inside, which require a qualitatively new response from it" [21, p. 39]. It is significant not only to mention the circumstances of the crisis, which are based on the influence of internal and external factors, but also that such a state may not be final, but exclusively one that requires changes, that is, the application of measures to identify the causes and find optimal options for eliminating the consequences.

P. Green emphasizes the clarification of the circumstances that determine the crisis of the enterprise, that is, it is about "...loss of control over the situation" [24, p. 44]. Other publications also mention the loss of solvency, increasing losses, high staff turnover, inability to restore the trust of counterparties, etc. Such detailing is the basis for considering enterprise crises according to the stages of development, that is, the initial crisis phenomenon is one that determines negative changes in one of the parameters of the enterprise's financial and economic activities. Under conditions of passive attitude towards negative trends, there is a transition to a crisis situation, which already covers most of the activities of the business entity. The crisis state is considered the third stage of crisis development at the micro level. Therefore, anti-crisis management is relevant within each stage, but the measures differ both in terms of resource base and intensity of implementation.

All the identified approaches are united by the negative consequences of the crisis for the enterprise. Therefore, at the beginning, anti-crisis management was perceived by analogy with the treatment of a patient at a late stage of the disease through surgical intervention. That is, it was about eliminating the consequences, stabilizing the situation and preventing the occurrence of a crisis in the future. This initial vision was criticized due to low effectiveness, because both the losses due to the destabilization of the enterprise's functioning and the costs of liquidation measures and returning to normal operation were significant. Crisis prevention became important, that is, the implementation of preventive protective measures, which was carried out in the form of deepening the understanding of anti-crisis management with the justification of its functionally different types, which will be paid attention to in the future.

We have summarized the developments in the modern understanding of crisis management, which are based on the initial vision, but are also characterized by a certain progress, which makes known practices attractive for wider application. Within the first approach, while maintaining a commitment to preventive measures, crisis management is considered more broadly, that is, one that is capable of transforming the enterprise in accordance with the change in the significance of the impact of external factors. Thus, K. Dokunina argues that crisis management should also ensure "...adaptation ... to the conditions of the external environment using specific methods, means and techniques for stable functioning and prevention of bankruptcy" [5, p. 114]. The adaptive purpose is an interesting point of view, but, in our opinion, a certain contradiction arises: initially, anti-crisis management, regardless of the preventive or reactive nature of the implementation of measures, was considered as something that should stabilize the situation as quickly as possible, when adaptive procedures require long-term implementation. That is, there is a

contrast between short-term targeted action and a long-term process that, with varying degrees of importance, concerns all aspects of the enterprise's activities.

The second approach allows us to perceive anti-crisis management as a conditional "resuscitation" tool. Such principles were laid down by I. Blank, who described it as "...development and implementation of measures aimed at the rapid restoration of a sufficient level of financial stability of the enterprise, which ensures its exit from the crisis financial state" [2, p. 73]. The emphasis on the financial state is due to the fact that it is its level that determines the functionality of the enterprise. At the same time, anti-crisis measures should be carried out for all objects in relation to which negative trends are recorded. Another issue is the use exclusively in cases of signs of bankruptcy. Provided that there is a practice of implementing anticipatory and adaptive management, we believe that this option is acceptable. In the absence of internal regulatory documents and the practice of applying the aforementioned types of management, which are focused on early recognition and elimination of the causes of negative changes in performance indicators, giving priority exclusively to anti-crisis management is a limitation with subsequent irrational use of resources, as emphasized above.

The third approach is characterized by the vision of the constant application of anti-crisis management. Such an understanding was one of the first proposed by L. Ligonenko, proving that such management is "... constantly organized... aimed at promptly identifying signs of a crisis situation and creating appropriate prerequisites for its timely overcoming in order to ensure the restoration of the viability of an individual enterprise, preventing its bankruptcy" [14, p. 57]. This interpretation is determined by the understanding that the development, adoption and implementation of each decision should be carried out based on a vision of possible consequences and not only in relation to the direct object of management, but also indirect ones. There cannot be a situation where the situation improves with respect to one object at the expense of the deterioration of the state of another. A holistic view of all processes, interdependence and forecasting with the development of the most probable scenarios of events form the basis of such a vision of the essence of anti-crisis management, which can be agreed with.

In addition to the current understanding of anti-crisis management, a classification can be adopted, which is carried out according to two criteria. In one case, we are talking about a narrow functional focus, that is, the allocation of anti-crisis management according to the subsystems of marketing, personnel management, innovation activity, investment policy, etc. Another option involves the implementation of pre-crisis, crisis and post-crisis management in accordance with the stages of the crisis life cycle. An important point is that today, anti-crisis management of the economic security of the enterprise is generally not considered, and therefore the implementation of the task is both relevant and one that will be carried out with a minimum initial base.

The results of the generalizations we have made are shown in Figure 3. The author's position is distinguished by several important points: firstly, the moments when the application of anti-crisis management becomes relevant are clearly defined, namely, it is a matter of critically high fluctuation of the main

indicators of the enterprise's activity and/or significant changes in the external environment, which will have a significant impact directly or after a certain period of time; secondly, the priorities in the application of the system of measures are indicated, i.e. stabilization of the situation with the introduction of necessary changes; thirdly, the connection between the crisis and the threat is indirectly determined, when the emergence and development of the second causes the consistent appearance of signs of a crisis phenomenon, with the subsequent transition to the situation and the emergence of a state if there is passivity and/or low effectiveness of security measures.

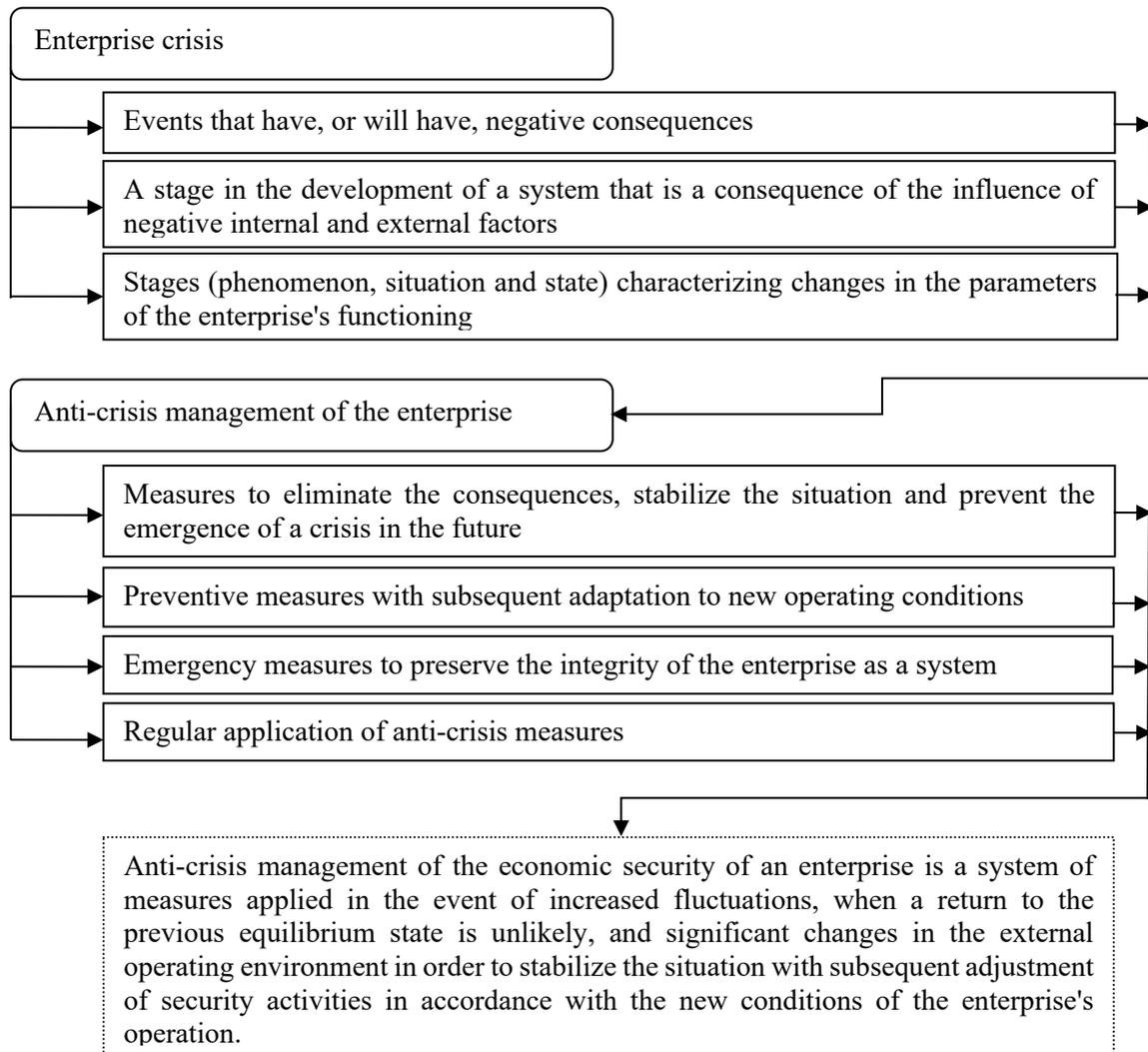


Figure 3. Basic principles of applying anti-crisis management of the economic security of an enterprise

Source: formed by the author

In general, the author's vision does not contradict known developments, but takes into account the peculiarities of both ensuring the economic security of the enterprise and managing this process.

Chapter 3. Digital transformation at the macro and micro levels: new opportunities, challenges and principles of applying anti-crisis management of the economic security of an enterprise

Over the past decade, the digital transformation of the economy has begun to be perceived not only as one of the newest trends in progress, based on the growing importance of unlimited resources, but rather as a mandatory requirement that determines the competitive position of a particular country in global markets. The impetus was given by the development and implementation of a strategy called Industry 4.0, initially in Germany with the subsequent spread of this practice to other countries. The basis of such shifts was the possibility of better meeting the needs of the population, which are increasingly gravitating towards products with a greater intangible share. The national level of implementation of strategic changes is due to the fact that we are talking about mass production of innovative products, the demand and application of which is formed due to the development of digital infrastructure and improvement of digital skills of all consumers. That is, digital transformation should be considered comprehensively at three levels: economy, enterprise and individual. The result of leadership in increasing the share of the digital economy is both progress in all sectors of the economy due to the more active use of information and communication technologies, and increased attractiveness for labor migration of workers as carriers of intelligence and the ability to achieve sustainable development goals due to more rational use of natural resources based on reducing the material and energy intensity of products. The outlined principles prove the diversity of digital transformation, which necessitates the consideration within the framework of this study of only certain aspects, in particular those that are directly or tangentially related to the problem of managing the economic security of an enterprise. Based on this, we will further clarify the modern perception of the digital economy as the ultimate reference point in the course of implementing digital transformation at the macro and micro levels, specifying the opportunities and challenges that accompany it as conditions that determine the principles of anti-crisis management of the economic security of an enterprise.

The concept of “digital economy” was introduced into scientific circulation thanks to the publications of two researchers, namely D. Tapscott and N. Negroponte. The first of the mentioned scientists argued that it was about “...an economy based on the dominant use of digital technologies” [26, p. 197], that is, it was about technological progress, which was implemented in a more active and constant use of machines and constant improvement of software for better satisfaction of consumer needs. His associate specified the individual parameters of this new type of economy, emphasizing that it is about the virtualization of production and use of products with a minimum material component, acceleration of information exchange, optimization of stocks both in production and in relation to individual consumption, thanks to the comprehensive use of chips, which makes it possible to plan and control the consumption of each unit of materials and finished products. In general, the initial perception of the digital economy was based on the vision of the prospects of automation and robotization of all production processes with increased individuality in communication with consumers for the qualitative satisfaction of individual needs.

It is worth mentioning that in parallel with the digital economy there were attempts to use such synonymous terms as "Internet economy", "web economy" and others, which reflects the understanding of the importance of the impact of improving information exchange in the information space of a person, business and the state.

Today, certain shifts in the perception of the digital economy are noticeable, that is, there is a certain specification through the indication of important features and further technological progress is reflected, which is no longer limited to the rapid spread of the Internet. Thus, in the understanding of S. Kolyadenko, we are talking about "... an economy based on the production of electronic goods and services by high-tech business structures and the distribution of these products through electronic commerce" [11, p. 106]. It is interesting to mention electronic goods, the process, distribution and use of which is different from traditional ones, which identifies the features of the digital economy. At the same time, this same interpretation significantly limits the scope of such an economy, presenting it as fragmented. Yes, interest in electronic goods is growing, but primary needs for food, clothing, housing, etc. continue to dominate consumer activity. A radically different view is held by V. Alpakova, who sees the purpose of the digital economy, thanks to the more active use of digital technologies, as "... the most important engine of innovation, competitiveness and economic development of the country" [1, p. 10]. That is, we are talking about the next evolutionary form, which does not change the traditional economy, but determines the directions of further transformation. We are impressed by this vision, based at least on the fact that the previously existing orientation towards the creation of electronic products has today changed to the direction of production of each product based on digital technologies. For example, in agriculture, the process of monitoring soil moisture and other parameters has been automated in order to timely implement irrigation and apply the necessary mineral fertilizers to achieve maximum yield despite possible climate changes that are difficult to track based on traditional weather monitoring. Human participation is limited to certain procedures and the need to make key management decisions.

Most of the known interpretations of the digital economy are united by the awareness of the current and prospective impact of digital technologies. The differences lie solely in the correlation of this new type with the traditional economy, including through the gradual expansion of the areas of application of digital technologies. This can be illustrated by the example of a change in the segmentation of the economy. The classic version, the formation of which was contributed to by F. List back in 1841, provided for the allocation of three segments, i.e. "...primary (agriculture), secondary (industry), tertiary (services)" [12, p. 44]. Current changes, including due to the substantiation of the concept of the digital economy, have prompted the consideration of six sectors in the following composition: "...the first and second sectors cover the high-tech and medium-high-tech industries, the fourth and fifth – business services, and the sixth – socially oriented types of service activities that ensure full human development" [25, p. 166]. It is clearly traced not only the preference for those areas that use digital technologies to the greatest extent, but in general such structuring reflects the current tendency to increase information exchange and, on this basis, to satisfy consumer needs. A caveat

should be the moment of understanding the process of change, which cannot be instantaneous, but is long-term with an intensity determined by a significant number of factors. Today, no country, including those belonging to the group with a developed economy, can claim to have completed the transition to a digital economy, which follows at least from the structuring considered above and the constant development of digital technologies. That is, new technologies determine the desired benchmarks that need to be achieved with the subsequent systematic review. Thus, from a separate sector we have moved to a share in each segment, that is, there is also a complexity of the theoretical description of all the parameters of this new type of economy. This circumstance allows us to focus in this study not on the digital economy, but on digital transformation, emphasizing precisely the dynamics of changes in the distribution and practical use of digital technologies at both the macro and micro levels. To substantiate this thesis, we will use the position of I. Malik, according to which it is necessary to distinguish between three stages of digital transformation, that is, we are talking about “digitization, digitalization and direct digital transformation” [16, p. 28]. The first stage involves the transfer of information into digital form, that is, a traditionally published book on paper is transformed into an electronic publication. The second stage is digitalization – the widespread use of digital devices that are connected by a network. Digital transformation is characterized by fundamental changes in the model of business organization, as well as its relations with the state and society. The content of each of the stages is the basis for further focusing on the digital transformation of the economy and enterprise.

The concept of "digital transformation" combines the terms “digital” and "transformation", the basis of the former, as we have already found out, is digital technologies. In turn, the understanding of transformation is determined in a narrow perspective by the vision of any changes, while the broader one is directly tied to the scope of application. For example, in agriculture, this term refers to the process of breeding new species that are more adapted to new or changed conditions of existence. In economics, the perception of transformation is somewhat different in terms of implementation. Thus, we propose to take as a basis for the macro level the definition of S. Mocherny, which refers to “... the process of transforming one economic system into another, accompanied by the extinction of some elements, features, properties and the emergence of others” [6, p. 687]. That is, in the context of digital transformation of the economy, we can talk about changes in interaction with business and society based on digitalization by adjusting the strategy and goals and management tools. It is advisable to specify such a process as follows:

- changing the structure of the economy in favor of creating added value in the field of intangible production, in particular through the creation of digital products and the provision of services;
- developing new types of activities that contribute to the development of the digitalization of the national economy;
- creating information exchange services between the state, business and society.

When considering transformation at the micro level, it is advisable to rely on the position of S. Erokhin, in whose interpretation it is about “...changing the structure of a certain object within the framework of a self-organizing process” [7, p. 37].

In other words, we are talking about transformations that are implemented in relation to part of the components or the entire system, while maintaining integrity with the acquisition of new properties, which allows for continued existence. Therefore, digital transformation is a necessary step, which is conditioned by similar processes on a larger scale. The lack of progress will have consequences in the form of loss of competitive positions. Such shifts are characterized by a high probability of associated threats, and therefore require the use of anti-crisis management, as proven above. Our reasoning is also based on data from the State Statistics Service, which characterize the level of use of digital technologies by Ukrainian enterprises in various aspects.

Digitalization, as the second stage of digital transformation, requires the most reliable connection to the Internet. According to official data, in the period 2018-2023, the share of enterprises that had access to this network was unchanged, i.e. at the level of 88.0%. At the same time, access of enterprise employees was significantly lower, although it demonstrates certain positive dynamics: 2018 – 27.1%, 2019 – 28.4%, 2020 – 28.0%, 2022 – 28.2%, 2023 – 32.8%. These data are important in view of the spread of the practice of organizing remote workplaces, i.e. there are obstacles to the spread of positive experience.

Within 2018-2023, a critically low level of enterprises hiring IT specialists is recorded, in particular, a decline from 22.3% in 2018 to 17.7% in 2023. This can explain the actual passivity of domestic businesses in using social media, because only 29.1% used this digital marketing tool in 2022, which indicates weak communication with consumers and the inability to form and satisfy existing demand. This point is even more important due to the fact that both the recent global pandemic and the current military operations limit the physical contact of the seller with the buyer, and social media is a means of eliminating this problem. An example of the technological lag of Ukrainian enterprises is the fact that in 2022 only 12.3% of them actively used a website, which can be considered an analogue of a typical showcase and a means of exchanging information with consumers, when its absence indicates the absence of a manufacturer or seller on the market in general. The significance of this lag can be seen from data on the share of enterprises using such technology as artificial intelligence. In Ukraine, in 2022, only 5.4% practiced its application. Without a thorough examination of other data, the available data indicate a limited pace of digital transformation at both the macro and micro levels. There is no doubt that military actions since the beginning of 2022 have become an obstacle, but the temporary focus on survival with limited funding for digitalization programs in the face of the activity of foreign competitors exacerbates the problem of further protecting competitive positions in the domestic market of Ukraine. This moment once again proves the importance of considering anti-crisis management of economic security, based on the need for rapid changes in the conditions of the existing or close to crisis conditions of most Ukrainian enterprises.

The question of the feasibility of digital transformation as such no longer arises. It is exacerbated against the background of the forced passivity of Ukrainian enterprises and the dynamism of changes in the implementation of their foreign competitors. Another important point is that this process is accompanied by both the

emergence of new opportunities and challenges that can transform into threats. We consider both related results at the levels: the state and the enterprise. Therefore, at the macro level, new opportunities take on the following meaning:

- strengthening competitive positions in world markets due to the offer of high-tech products with the maximum share of added value created on the basis of creative intellectual work and insignificant material costs;
- a higher level of communication with the population and business representatives, which allows to track public sentiment and quickly respond to them;
- increasing the availability of public services based on the development of special services;
- increasing the controllability of business activities based on tracking transactions with an increase in the amount of tax revenues to local and state budgets.

Determining the benefits of digital transformation in the conditions of each individual enterprise is faced with the difficulty of taking into account both the pace of implementation of intermediate stages and the specifics of financial and economic activity, i.e. the possible level of automation, available digital technologies, as well as the development of digital infrastructure and digital readiness of counterparties, in particular the digital literacy of each individual consumer. Therefore, it is possible to state only in the most general version the emergence of the following new opportunities:

- elimination of geographical restrictions for interaction with consumers and the ability to maintain activity 24 hours a day, 7 days a week;
- competing on an equal footing with large manufacturers through the use of digital marketing tools, including presence in social networks;
- a better information basis for planning and implementing tactical and strategic measures thanks to the receipt of data in real time;
- high flexibility of the production process, which allows responding to the individual needs of each consumer;
- reduction of warehouse stocks and more rational use of production resources;
- higher level of control over internal business processes;
- development of new forms of interaction with employees, in particular based on the organization of a remote workplace.

As emphasized above, along with new opportunities, digital transformation also creates challenges that require attention. Thus, at the macro level, such challenges are:

- deepening development in the level of use of digital technologies among different social groups;
- strengthening trends in labor migration due to the vision of the possibility of more complete use of intellectual potential in economically developed countries;
- increasing intensity of the spread of socio-psychological problems, in particular due to the spread of threats of technological unemployment;
- increasing technological dependence in the absence of its own high-tech production.

The operating conditions of each enterprise are different, but the following challenges may be common:

- growth of unmet demand for highly qualified specialists who are able to maintain high rates of software updates;
- continuity of significant investment in technological updates;
- low efficiency of investment in human capital due to high mobility of workers;
- insufficient development of digital infrastructure;
- resistance to changes that require improvement of digital competencies.

It is wrong to consider only those challenges that can be further implemented in the form of a threat. We believe that the intention and real actions to use new opportunities contain risks, and therefore should be an object in the course of managing the economic security of the enterprise. The above data indicate that such changes are radical in nature, that is, with significant fluctuations in the main indicators of the enterprise's activity, and therefore anti-crisis management is relevant.

Our vision of anti-crisis management of an enterprise in the conditions of digital transformation of the economy is different in that the basis of its activation is both passivity with increasing technological lag, which worsens the competitive position, and therefore requires stabilization measures, and the implementation of a rapid digitalization program, which destabilizes activities and requires the implementation of comprehensive adaptation measures. That is, we are not based on the very fact of the crisis, which is traditional, but on the vision of those shifts that occur in the external environment with the passivity of the enterprise and changes in its activities in order to follow the trends in the digital transformation of the economy. It is important to emphasize that anti-crisis management is relevant in the case of significant fluctuations, i.e., significant lag and/or accelerated pace of implementation of digital transformation programs, which requires a radical restructuring of the principles of business operations, including a change in the business model.

Above, we substantiated the author's vision of anti-crisis management of the economic security of an enterprise. To consider its implementation in the conditions of digital transformation of the economy, we will focus on the basic components of such a system, i.e. functions, principles and tasks.

Most scholars agree that traditional functions in the context of crisis management undergo some substantive adjustments, in particular based on the need for timely identification of signs and elimination of the crisis. Our vision is distinguished by its orientation towards the digital transformation of the economy and the necessary changes that need to be made in the context of each enterprise. Therefore, the planning function also involves going beyond the conventional boundaries of the enterprise in order to track changes in its external environment, including technological progress in relation to its direct and potential competitors. That is, there should be a formation of a holistic vision of the pace of digital technology renewal in the competitive environment and in the conditions of the enterprise for at least synchronization, and at best – ahead. The function of the organization is to strengthen the interaction of security subjects with personnel as a security object, which is involved in the implementation of measures for the digital transformation of the enterprise. The function of motivation is important due to the need to overcome resistance to change and convince employees to support the initiative, in particular

through self-motivation to develop digital competencies. The control function determines the systematic implementation of actions to assess the level of key performance indicators for fluctuations in their value, i.e. deviations from internally approved norms. In some publications, the functions are defined as "...pre-crisis, crisis and post-crisis management" [18, p. 282]. From the perspective of one's own vision of the content of anti-crisis management of the economic security of an enterprise, this approach is somewhat general, since there are no universal tools. We believe that this type of management is appropriate for use in situations of maximum fluctuation in performance indicators and in conditions where radical measures need to be taken, which corresponds to the content of the time-limited digital transformation of the enterprise.

The following can be considered as special principles of anti-crisis management: implementation of stabilizing measures in conditions of maximum imbalance of the enterprise's activities; implementation of cardinal changes in a limited period of time; implementation in conditions of little controlled internal processes and significant shifts in the operating environment.

Anti-crisis management of economic security in the context of digital transformation of the economy is aimed at implementing the following measures:

- tracking changes in the significance of the impact of key threats for the purpose of increasing fluctuations in key indicators of the enterprise's performance;
- monitoring the level of technological progress in the industry and major competitors to form a vision of possible changes in the distribution of the market for a particular product;
- developing scenarios for implementing the digital transformation of the enterprise with the allocation of possible risks and associated threats;
- implementing measures to stabilize the situation, in particular overcoming employee resistance and revising strategic and tactical guidelines for development.

Conclusion

The implementation of digital transformation in the conditions of each Ukrainian enterprise will be characterized by differences, determined by a number of circumstances, such as the type of main activity, the scale of operation, etc. Despite this, one thing is common: over the past thirty years, the conditions of the national economy have not been conducive to technological renewal, and therefore there is a lag behind foreign competitors. Military actions over the past three years have exacerbated this gap. That is, the issue of the survival of enterprises in Ukraine lies in the implementation of digital transformation, which requires changes in the management system, in particular, anti-crisis management of economic security will be necessary. The author's vision of this type of management is somewhat different, that is, it is not about focusing on the crisis in any of its manifestations. Significant fluctuations in key indicators, which can lead to the loss of the integrity of the enterprise as a system, and the need to quickly implement radical changes, such as digital transformation, are circumstances that require the use of anti-crisis management.

The expected post-war recovery of the Ukrainian economy will be characterized by a number of related processes: the inflow of foreign investment, the resumption of activity of international trading companies, the revival of demand from the population, the reduction of the influence of the factor of military actions, further migration processes, etc. In addition, it is necessary to mention the acceleration of the digital transformation of the economy, the driver of which may be further integration into the EU and the acquired experience of modern military confrontation with a stronger enemy due to newer technologies. Three years of war have completely changed the way of conducting combat operations. Massive tank attacks have been replaced by the dominance of unmanned systems in the sky, the target of which is every enemy soldier. A drone worth up to one thousand dollars is capable of disabling any armored vehicle regardless of the season and weather conditions. Many other facts indicate that the experience gained by Ukraine will be used as a basis for the development of its own military-industrial complex with further expansion through exports due to the novelty of products and testing in real war conditions.

The question of expedient digital transformation of an individual enterprise practically does not arise, it is updated every moment. The pace of implementation of such changes will not be progressive, but as fast as possible, which proves the importance of developing and applying anti-crisis management technology for economic security to maintain control and achieve the set goals.

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