

ANTI-CRISIS MANAGEMENT MECHANISM IN THE DIGITAL AGE

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Abstract: *This paper conducts a comprehensive theoretical exploration of the anti-crisis management mechanism within the context of local governance, with a specific focus on the integration of digital solutions. Theoretical underpinnings of "crisis" and "anti-crisis management" are expounded upon and synthesized, defining "crisis" as a transformative process that marks a pivotal juncture in system development, entailing irreversible changes. "Anti-crisis management" is considered a multifaceted concept encompassing systemic, process-oriented, and mechanistic dimensions. The examination of local-level crisis phenomena underscores the imperative for effective anti-crisis management aimed at stabilizing regional conditions and devising strategies to mitigate crisis risks. In this context, local-level anti-crisis management is characterized as "a comprehensive system of measures for diagnosing, preventing, neutralizing, and surmounting regional crises". To inform strategic decision-making for anti-crisis management, an in-depth analysis of local budget revenues and expenditures is conducted, serving as the foundation for judicious tool selection in crisis mitigation. Emphasizing a critical assessment of core concepts and the intricacies of anti-crisis management mechanisms, the paper delineates key objectives for its implementation at the regional level. With regional development as the focal point of anti-crisis management, this paper explores the applicability of digital tools for crisis regulation. However, these findings underscore the paramount importance of tailoring these mechanisms to the unique characteristics and latent potential of each region. The paper concludes with a comprehensive assessment of the efficacy of city budget fund utilization and proposes an approach to optimize the allocation and structure of local budget expenditures by incorporating digital elements to enhance decision-making and crisis response.*

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1. Introduction. The balanced development of territorial communities in Ukraine is a key objective outlined in the Strategy of Sustainable Development of Ukraine until 2030. However, the path to achieving this balance is fraught with numerous crises that cities must address. These crises manifest in various forms, including insufficient financing of territorial communities, ecological challenges, and demographic crises and are characterized by a significant emigration of local residents seeking opportunities abroad. In alignment with the Sustainable Development Strategy of Ukraine until 2030, addressing these crises necessitates pursuing goals such as poverty reduction, developing agriculture, promoting quality education, creating decent job opportunities, and fostering economic growth (Pudryk et al., 2023; Kharazishvili et al., 2020; Semenenko et al. 2022; Moskalenko et al., 2022).

In the current landscape of Ukraine's decentralization reform, the overarching objective is to establish effective local self-government and a well-structured territorial organization of power. This endeavor aims to create and uphold a holistic living environment for citizens, ensuring the delivery of high-quality and easily accessible public services while also instituting mechanisms for direct citizen participation in governance (Lehenchuk et al., 2023; Galiński, 2023; Moskalenko et al. 2021). This multifaceted approach seeks to harmonize the interests of the state with those of territorial communities. Given the ongoing regional decentralization processes in Ukraine, there is an urgent need to enhance existing strategies for anti-crisis management within territories. This enhancement is crucial for strengthening economic potential, boosting self-sufficiency, enhancing competitiveness, and fortifying the overall sustainability of cities and communities. In this context, the integration of digital aspects and technologies emerges as a pivotal component for achieving these goals (Rahmanov et al., 2023).

Digitalization can play a transformative role in anti-crisis management at the local level (Bilan et al., 2023). Harnessing the power of data analytics, artificial intelligence, and information and communication technologies can provide decision makers with real-time insights into the dynamics of crises. It can enable more effective resource allocation, pinpoint areas in need of immediate attention, and facilitate agile responses to emerging challenges. For instance, digital platforms can be used to track and address demographic shifts, enabling local authorities to develop strategies for retaining residents and attracting new residents. Moreover, digital solutions can streamline the delivery of public services, making them more efficient and accessible to citizens. Online platforms for accessing government services, e-learning initiatives for quality education, and digital job marketplaces for matching job seekers with opportunities are just a few examples of how technology can address specific aspects of the crises facing cities.

However, the factors mentioned above, along with the limited adoption of the latest approaches to enhancing anti-crisis management in regional development, underscore the continued relevance of this research. Consequently, the objective of this study is to delve into the theoretical foundations and offer practical recommendations for the establishment of anti-crisis management mechanisms at the regional (local) level.

2. Literature Review. The issue of anti-crisis management within territorial contexts has been thoroughly examined by various scholars. Researchers Rahnama et al. (2012) have explored the pivotal role of municipalities in anti-crisis management and emphasized the critical significance of crisis management in facilitating sustainable territorial development (Maleki et al., 2018). On the other hand, Ukrainian scholars have focused their attention on defining trends and fundamental principles for implementing modern anti-crisis public management mechanisms within territories (Alkhemeri, 2018).

Methodological approaches to anti-crisis management in the context of decentralization at the regional level have been extensively explored in the works of Antonyuk (2018) and Zhelyuk (2017). Furthermore, Krykun (2010) delved into the unique aspects of anti-crisis management within local self-government structures, and the research of Pakhomova & Khramtsova (2019) has made notable contributions in this domain. Chernyavsky (2006), in his studies, outlined key characteristics of anti-crisis management, highlighting the use of specialized (often unconventional and challenging under normal conditions) management tools; resource limitations, primarily tied to the difficulty of acquiring additional resources, especially financial ones; and the need for swift decision-making due to potential aggressive actions by creditors. Additionally, he has emphasized the heightened risk associated with management decisions in the face of a highly unstable economic system. Chernyavsky's research underscores the growing importance of information and analytical support for decision-making, including a significant reliance on analytical calculations and predictive procedures. Moreover, his work underscores the primary objective of minimizing losses for all stakeholders, encompassing owners, employees, creditors, and the state. Authors such as Balabanov (2002) and Kovalev (2006) have predominantly examined anti-crisis management from the perspective of financial challenges at the micro level. In contrast, the majority of other authors have sought to

address a complex array of problems that extend beyond crises within specific regions to encompass crises in public finances and the broader economy. Korobov (2000), for instance, has placed particular emphasis on bankruptcy procedures.

When studying crisis phenomena, it is important to acknowledge that in the scientific literature, this category is viewed as a traditional and inevitable aspect of the economy, especially in market-based systems. Consequently, proactive measures are essential to prepare for crises in advance, mitigating their destructive impacts rather than reacting to economic, social, and political shocks when they manifest. By examining the perspectives of contemporary domestic scholars concerning the interpretation of the "crisis" category, it is evident that they align closely with the viewpoints of their foreign counterparts. In essence, a crisis represents a transformative process that guides the optimization of any system, necessitating the abandonment of outdated production techniques and conventional labor practices and paving the way for the integration of cutting-edge innovations. Focusing on select approaches to interpreting the "crisis" concept, Chernyavskiy (2002) perceives it as "a turning point in the functioning of any system, triggered either from external or internal influences, demanding a qualitatively new response". This interpretation underscores the inherent transformation brought about by objective factors stemming from internal and external environments.

Vasylenko's (2005) perspective slightly adjusts this notion, where a crisis is deemed "an extreme exacerbation of contradictions within the socioeconomic system, posing a threat to its viability in the given context". The root of these contradictions lies in the incongruity between prevailing production and consumption patterns or between the existing political system and society's demands. Examining N.M. Tkachev's perspectives, it is evident that this scholar regards a crisis as "a moment in the system's development when there exists an opportunity for it to leap into a new dimension, and this opportunity arises when the system's contradictions reach a certain degree of maturity and intensity" (Vasylytsiv, 2016). It is important to note that while this interpretation holds merit, crises do not invariably lead to the system's transition to a higher level. Throughout human history, crises have often resulted in the demise of certain industries (such as kerosene lighting or steam engines) or even entire civilizations. In summarizing the aforementioned interpretations of crises and the perspectives mentioned above, the most prevalent interpretation of the "crisis" category is as follows: it is a process that instigates transformative changes in activities, marking a rupture in the system's development, during which irreversible alterations occur. In reviewing the existing approaches to interpreting the "anti-crisis management" category, it is apparent that scholars approach it from three primary standpoints: as a system, as a process, and as a mechanism (as shown in Table 1). In essence, the anti-crisis management of regional development can be defined through various differentiated interpretations. Nevertheless, it is imperative to initially establish the relationships between these concepts, their interplay, and the potential for synergy in addressing crises.

Table 1. Divergent views on the definition of 'anti-crisis management

Author	Definition
Vasylenko (2005)	anti-crisis management is a management in which the danger of the crisis, the analysis of its symptoms, measures to reduce the negative consequences of the crisis and the use of its factors for positive development are foreseen.
Ivanyuta (2017)	anti-crisis management is a set of management measures that ensure monitoring, diagnosis, prevention, neutralization and overcoming of crisis phenomena at all levels of the economy
Sytnyk (2009)	anti-crisis management is a type of management focused on timely reform of the economy, assessment, forecast, diagnosis processes in the activity of the enterprise, industry, region, state.
Filatova (2009)	anti-crisis management- these are conscious and purposeful actions of the state (and to a certain extent, powerful corporations and supranational bodies) to prevent or reduce the depth of economic crises, stabilize the economic situation and increase the rate of economic growth
Shpachuk (2011)	anti-crisis management is a management system based on strategic principles and aimed at maintaining a stable state socioeconomic system capable of quickly adapting to the conditions of a changing market environment.
Shabatura et al. (2013)	anti-crisis management is a set of principles, laws and procedures that ensure the process of making managerial decisions necessary to mitigate the consequences of crisis phenomena and prevent the emergence of crises.
Furdychko & Zhovtanetska (2012)	anti-crisis management- is a process in which the subject of anti-crisis management restores effective functioning with the help of a system of methods, measures and tools in conditions of significant resource limitations and increased risk.
Prishchepa (2016)	anti-crisis management is a management process under the pressure of circumstances, which allows you to perform management functions, quickly making optimal decisions on urgent problems.

Table 1 Continued

Author	Definition
Kulchii (2016)	anti-crisis management is the process of preventing or overcoming a crisis, which combines two components: prevention, if a crisis has not occurred, and overcoming it in the postcrisis period.
Chikarenko (2011)	anti-crisis management (state) is a process that is characterized by complexity and multiplanning, includes a system of measures for diagnosing crisis phenomena (monitoring, analysis, evaluation, control), planning (forecasting, developing scenarios, modelling, programming), neutralizing and overcoming the crisis (making management decisions, implementation of strategies, projects, plans for preventive and emergency measures, in particular, for the mobilization of resources).
Mostenska & Yurii (2019)	anti-crisis management is a management activity that is a component of managing the economic security of the enterprise and consists in predicting the possibility of a crisis situation, implemented through the preparation and implementation of appropriate management decisions, assuming responsibility and control over the implementation of planned measures, quick response in the event of a crisis situation to withdraw the enterprise from a state of crisis.
Sulkin (2019)	anti-crisis management is a certain sequence of management efforts, which should be carried out in the form of stages and procedures that have direct and feedback.

Sources: developed by the authors.

Anti-crisis management of regional development should be regarded as a comprehensive system that leverages all available contemporary management resources to combat detrimental occurrences within the region, with the ultimate goal of restoring it to a stable state. At the core of "anti-crisis management" lies the process of averting or addressing a crisis, encompassing two fundamental facets: prevention, when efforts are directed towards forestalling a crisis from materializing, and intervention to overcome it once it occurs. Furthermore, it is noteworthy that modern methods of financial management within the region extend beyond reliance solely on internal resources; territorial communities now possess a multitude of mechanisms to attract not only state funds but also foreign resources. Additionally, the arsenal of tools for regional anti-crisis management should encompass actions not only directed at businesses but also spanning all aspects of regional economic, social, political, and ecological development (Gavkalova & Kyrychenko, 2023). The timing of the application of anti-crisis management is of paramount importance; contrary to some scholars, we advocate for the establishment of an enduring system of preventive measures rather than solely relying on anti-crisis management tools during a crisis, even if a preestablished plan for their application exists. The imperative to enhance anti-crisis management within regions stems from the intensification of the decentralization process and the consolidation of territorial communities following their amalgamation. Compared with national authorities, regional authorities are better suited to serving as anti-crisis managers, as they are in closer proximity to all regional entities. Their current level of autonomy equips them with effective management of this process (Bezena, 2020). Consequently, implementing anti-crisis management is crucial for countering the likelihood of crises of economic, social, political, and other natures and preventing their occurrence. It also ensures an efficient response to political, socioeconomic, environmental, and other changes transpiring at the regional level, facilitating comprehensive sustainable development within the region, reducing the adverse impact of crises, minimizing destructive consequences, and attaining positive outcomes. The considerations outlined above indicate that anti-crisis management at the regional level should be closely linked with both the imperative necessity during periods of instability and the inherent characteristics that define it. These characteristics encompass the objective, which may vary across different levels of management, resource potential and the time horizon for implementation; the range of available management tools; and the level of potentially existing innovations, among other factors (Novikova, 2020; Bocharova & Tupytska, 2023; Haupt, 2021). The core concept within anti-crisis management at the regional level is risk. Risk often serves as the primary impediment to achieving regional development objectives and triggering crises. Identifying the type and nuances of risk, along with methods to mitigate it, constitutes a preventive function within anti-crisis management. In the examination of anti-crisis management in a regional context, three distinct types of risk can be delineated: permissible risk, characterized by a deterioration in the results of economic agents' activities. Typically, this risk can be minimized through internal efforts within the region without external intervention; critical risk, marked by a situation in which economic agents within the region face such dire circumstances that the destruction of the system is imminent unless there is active state intervention; catastrophic risk, identifiable by an ongoing crisis leading to the collapse of economic, managerial, political, and other systems. Given that regions are typically not in a state of balance, addressing the second and third types of risk in anti-crisis management entails two distinct phases: crisis neutralization and crisis resolution.

Therefore, it is pertinent to emphasize that the anti-crisis management framework for a region should encompass the following stages (Gavkalovan et al., 2022a):

1. A comprehensive analysis of the crisis situation within the economic activities of economic agents, including an assessment of the probability of a crisis occurring, was performed.
2. The formulation of clear objectives and goals for the implementation of anti-crisis measures must consider the region's financial, social, and political potential, as well as the feasibility and duration of crisis containment.
3. The implementation of measures to develop and deploy anti-crisis tools for managing and mitigating crisis situations in the region, with the identification of specific individuals responsible for their execution.
4. Ongoing assessment of economic development factors and the resource potential of the region.
5. Continuous monitoring and adjustment of the anti-crisis programme's implementation process.
6. The development of a comprehensive set of preventive measures aimed at averting regional crises.

The considered stages are aimed at neutralizing the crisis phenomena that appeared in the region during its development. In addition to determining the stages of anti-crisis management at the regional level, the development of the institutional infrastructure of this process is also relevant. An organization at the regional level of a body or department that coordinates all anti-crisis actions at the regional level and controls the process of their implementation becomes expedient. It should also be noted that in the process of anti-crisis management at the regional level, the set of tools used must take into account the stages of the crisis, namely, precrisis, crisis, and postcrisis. This allows for the judicious use of management levers in time and the optimal distribution of functions between local self-government bodies.

Thus, it is fair to note that anti-crisis management in the regional development management system is an integral part of this system and is implemented in tactical and strategic management. In turn, crisis prevention in the region is based on changing the tactical and strategic goals of activity in accordance with the crisis situation. That is, tactical management must be fully subordinated to strategic management, and its goals must correspond to strategic directions of development. The purpose of anti-crisis management is to ensure the long-term stability of the region and subjects of economic activity in relation to the impact of various types of risk. The situation in which the vector of implementation in strategic and anti-crisis management coincides is optimal from the point of view of local development.

3. Methodology and research methods. To ensure the optimization of local budget expenditures, the establishment of priorities across various levels and the development of an effective anti-crisis management strategy are deemed essential. This approach would create an annual opportunity, funded by investments and economic revitalization, for social expenditures to increase without drawing from existing financial resources. Instead, these augmented social expenditures rely on newly generated funds. It is important to note that the realization of further social benefits necessitates the implementation of a minimum three-year policy aimed at intensifying all aspects of the city's life. Failure to do so would result in financial resources being entirely allocated to consumption without yielding any tangible effects, even of a social nature.

The evaluation of the effectiveness of forming and utilizing city budget funds involves a comparison of the results achieved in the previous period with predetermined objectives, the exploration of alternative approaches to resolving specific tasks, and the conduct of factor analysis to assess the influence of various factors on the outcomes. For the analysis of the formation and utilization of city budget funds, the following key indicators should be considered:

1. The precision level of the current planned justifications for the expenditures incurred;
2. The financial productivity indicator of the budget;
3. The coefficients of economic and social efficiency of the budget;
4. The balance of the local budget.

To calculate these budget efficiency indicators, the following formulas are recommended:

- The level of accuracy of the current planned justifications of the expenditures made for a certain period of time (in %) is calculated as follows:

$$Rpv = 100 - [abs(Vf - Vp) / Vp] \times 100 \quad (1)$$

where Rpv is an indicator of the level of accuracy of the current planned justifications of the expenditures made; Vf is the actual budget expenditures for a certain period of time (UAH); Vp is the planned budget expenditures for a certain period of time (UAH); and abs is the module, the absolute (positive) value of the difference.

- The indicator of financial sustainability of the budget is calculated as the ratio of the volume of the budget's own revenues to the volume of budget expenditures of the previous year and the inflation index:

$$Fsb_i = Dvf / (Vf_{i-1} \times Inf_{i,i-1}) \quad (2)$$

where Fsb_i is an indicator of the financial stability of the local budget; Dvf is the amount of own income for the year and (UAH); Vf_{i-1} is the volume of budget expenditures of the previous year (UAH); and $Inf_{i,i-1}$ is the inflation index for period i-1.

- The economic efficiency of the territory's budget is the ratio of the gross regional product of the territory to the product of the volume of budget expenditures of the previous year by the inflation index:

$$Ee_i = VRP_i / (Vf_{i-1} \times Inf_{i,i-1}) \quad (3)$$

where Ee_i is the economic efficiency of the implemented budget of the territory and VRP_i is the gross regional product of year i (UAH).

- The social efficiency of the local budget is the ratio of the monetary income of the population per 1 person to the product of the budget expenditures of the previous period per 1 person by the inflation index for period i-1:

$$Se_i = D_i / (VOf_{i-1} \times Inf_{i,i-1}) \quad (4)$$

where Se_i is the social efficiency of the local budget; D_i is the monetary income of the population per person in the ith year (UAH); and VOf_{i-1} is the volume of budget expenditures of the previous year and 1 per person (UAH).

- The balance of the local budget is the ratio of monetary income and expenditure on the local budget:

$$Colland = Dvfand / Vfand \quad (5)$$

where $Colland$ is the balanced local budget; $Dvfand$ is the volume of income for the year and (UAH); and $Vfand$ is the volume of budget expenditures of the previous year and (UAH).

4. Results. The efficiency of budget fund formation and utilization in Kharkiv from 2018 to 2022 was assessed by employing methodical tools (refer to Figure 1).

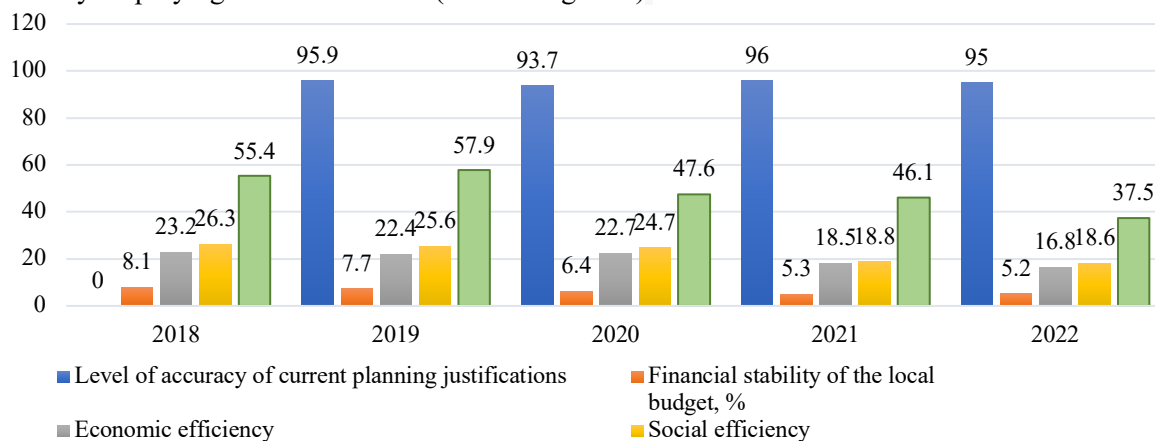


Figure 1. Evaluation of the effectiveness of the formation and use of the budget fund Kharkiv for 2018-2022

Sources: developed by the authors.

As evident from the data presented in Figure 1, the accuracy of planned justifications for expenditure implementation, which indicates how effectively local authorities determine the financial needs to ensure the quality functioning of Kharkiv city's key areas of activity, exhibited a downwards trend from 2018 to 2022. Overall, during this period, this indicator decreased by 4.6%, reaching 94.4% in 2022. This decline suggests imperfect planning due to insufficiently substantiated prioritization in the budget's spending policy. Upon

analysing the budget balance indicator, it becomes evident that from 2018 to 2022, city budget expenditures were only covered by half of the required revenue. A concerning trend during this period was the continued decrease in this indicator, indicating the inefficiency of budget formation and a significant reliance on transfer financing. In conclusion, after assessing the primary indicators of local budget fund management effectiveness, it is apparent that the expenditure policies of local authorities face several challenges. These challenges include a shortage of necessary income to adequately finance critical areas of activity, a low level of economic and social efficiency in Kharkiv city's budget expenditures, which is on a downwards trajectory, and a lack of precision in the current planned justifications for expenditures, indicating errors in determining priority areas for funding. Addressing these issues necessitates exploring strategies to enhance the local budget expenditure system, one of which involves the judicious allocation of financial resources across various spheres of regional activity. Anti-crisis management within the regional development management system is an integral component implemented through both tactical and strategic management. In essence, crisis prevention in the region relies on adapting tactical and strategic goals in response to the crisis situation. Consequently, tactical management should be fully aligned with strategic management, with its objectives aligning with strategic development directions. Ideally, a situation in which the implementation vectors of strategic and anti-crisis management coincide is optimal for local development. However, in the context of modern regional dynamics, such alignment rarely occurs. To establish an optimal mechanism for territorial anti-crisis management, it is imperative to assess the crisis situation within a city, facilitating the identification of an effective strategy for regional development (Fig. 2).

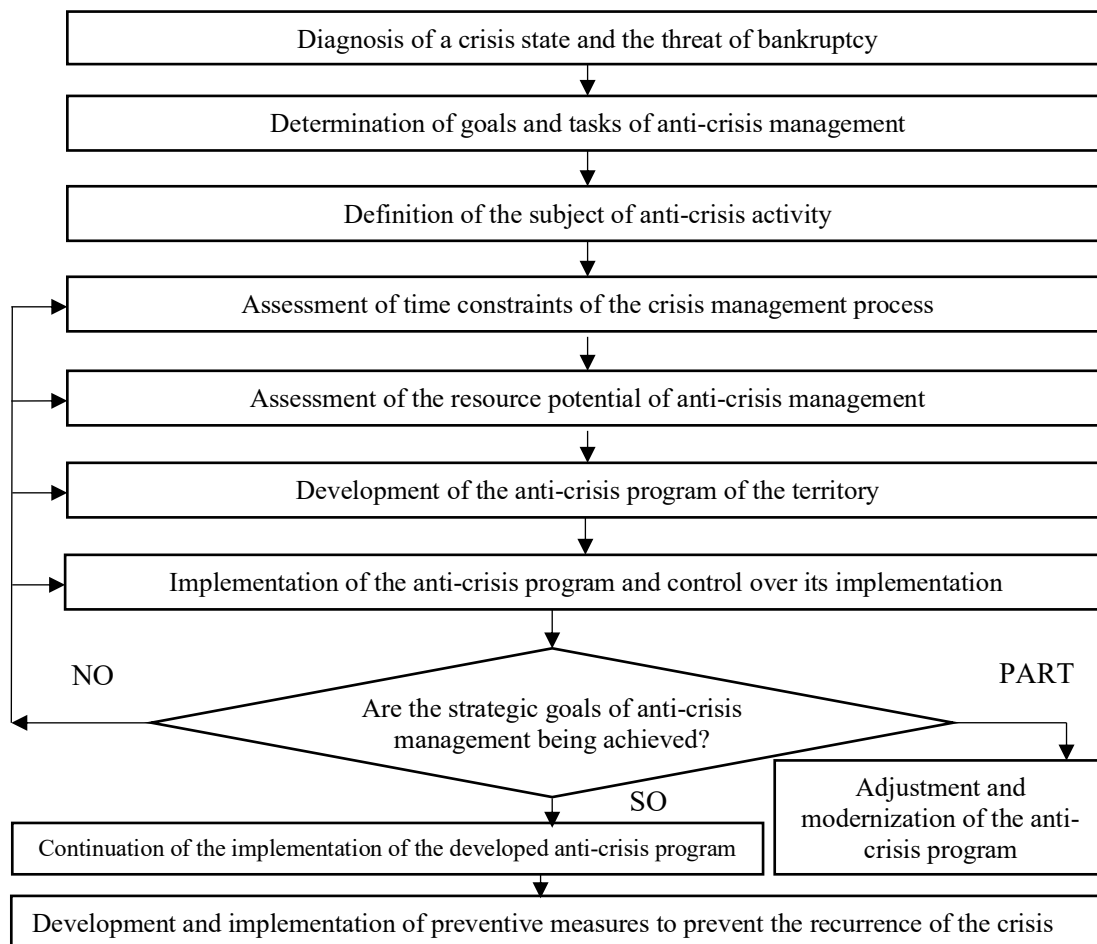


Figure 2. The model of anti-crisis management of territorial development in crisis conditions
 Sources: developed by the authors.

The proposed model of anti-crisis management of the development of territories in crisis conditions is aimed at preventing, controlling and liquidating the crisis, which will ensure the interaction of all considered blocks to preserve the stability of the development of the region. Monitoring all the components of the model allows you to adequately assess the level of anti-crisis management in the territory, identify existing problems in the city, and establish possible directions of development. The constituent elements of the anti-crisis

management model of regional development are divided into five blocks. The main goal of city development is to achieve certain strategic targets that ensure progressive development and allow the city to be competitive in a crisis situation. In the anti-crisis monitoring block, it is necessary to determine the level of risk in the city to adequately assess the real state of the regional economy. Specifically, the level of implementation of the provisions of the sustainable development programme should be determined, and the needs of social groups should be met. The ranking of factors by the level of significance for the economy allows us to develop their classification by taking into account the object of research, namely, positive or negative impact.

The definition of the crisis phase in regional development is also relevant; therefore, according to the rise, peak or reduction phase of the city's life cycle, the crisis phase is formed: prevention, management or liquidation. State management tools aimed at overcoming risks should be adapted to the potential of the region, and local development programmes should be formed based on the results of the analysis of the initial conditions. The main vectors of the activities of local authorities should be the development of measures to neutralize risks and control the implementation of relevant programs (Gavkalova et al., 2022b). A special place and importance in the process of anti-crisis management of territories is occupied by local self-government bodies, which contribute to regional development with the help of developed target programmes to improve the socioeconomic condition of the city. Local authorities should comprehensively investigate the economic activities of economic agents in the region and effectively use the potential and resources of the territorial community to rationalize the financial and production activities of the territories (Gavkalova et al., 2020). Based on the above model of city anti-crisis management, developing a scientific and methodical approach to optimizing the distribution and structure of Kharkiv city budget expenditures is expedient.

Optimum budget spending involves the formation of such a structure for the distribution of budgetary resources, which, under the conditions of limited funds and minimal funding, allows us to maximize the level of socioeconomic development of a particular region of the country and the well-being of the population, as well as to overcome the consequences of crisis phenomena or to form sufficient potential to counter shocks of various kinds. The effectiveness of budgetary fund allocation in the city of Kharkiv should be examined from various perspectives, including the proportions of fund distribution based on the functional breakdown of expenditures and the allocation of resources within each functional area. After analysing the research conducted by both domestic and foreign scholars, two primary categories of optimization measures emerged: structural and organizational. Structural measures primarily entail the development of methods for optimizing budget fund distribution and the provision of general recommendations for this allocation. To reallocate funding from certain functions to others, thus empowering local authorities with additional resources, a methodology for optimizing budget expenditures based on functional classification has been devised. This methodology involves the creation of an economic-mathematical model. To construct this model, it is necessary to define variables and constraints. The variables in our context represent the shares in the local budget allocated to selected indicators (Maris, 2022; Beresecka et al., 2023; Us et al., 2020): national administration – x_1 , education – x_2 , social protection and social security – x_3 , health care – x_4 , spiritual and cultural development (encompassing culture, art, physical culture, sports, and mass media) – x_5 , economic activities (covering expenditures on construction, agriculture, forestry, fisheries, hunting, transport, and other services related to economic activity) – x_6 , and environmental protection – x_7 . It is assumed that the sum of all these shares should equal 100% of the budget:

$$\sum_{i=1}^{10} x_i = 100\% \quad (6)$$

After analysing the volume of expenditures directed from local budgets in Ukraine (with the exception of local budgets in temporarily occupied territories), we recommend using the following restrictions: $0.33 \leq x_1 \leq 3.06$; $19.73 \leq x_2 \leq 40.39$; $4.19 \leq x_3 \leq 37.25$; $16.81 \leq x_4 \leq 49.45$; $4.02 \leq x_5 \leq 10.15$; $2.58 \leq x_6 \leq 30.29$; and $0.01 \leq x_7 \leq 8.3$.

To construct the model, the following indicators were utilized: the achieved level of development of the territory and the level of relative importance of functional components. Thus, as a result of calculations using the existing level of socioeconomic development of the city of Kharkiv, the optimal distribution of territory expenses is presented in Figure 3.

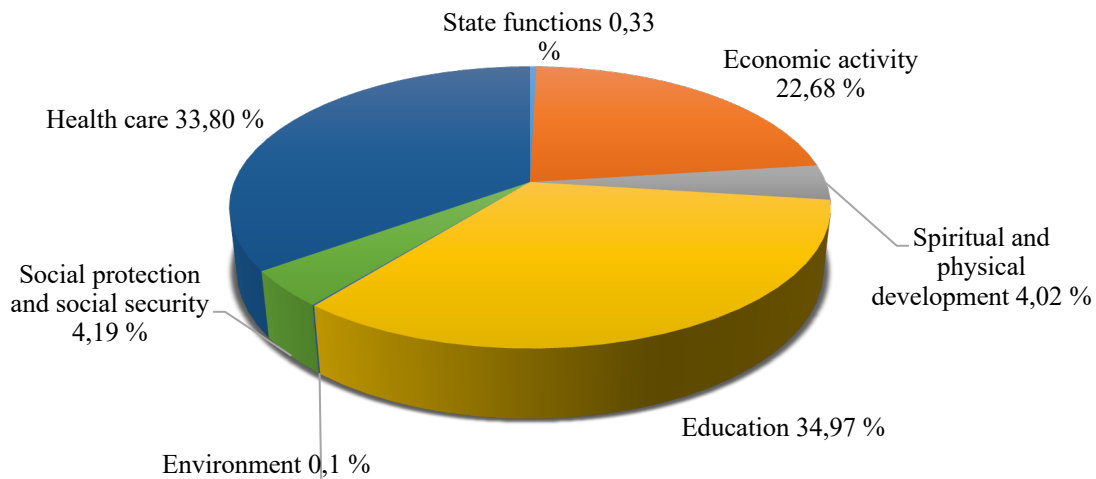


Figure 3. Optimal distribution of budget expenditures in the city of Kharkiv under the conditions of the given parameters

Sources: developed by the authors.

5. Conclusions. The examination of crisis processes at the local level has highlighted the necessity for anti-crisis management aimed at stabilizing the regional situation and formulating measures to mitigate the risks of a crisis. In this context, local-level anti-crisis management is defined as 'a system of managerial measures for diagnosing, preventing, neutralizing, and overcoming crisis phenomena at the regional level.

It has been established that anti-crisis management in the region involves the implementation of measures geared toward achieving planned socioeconomic development goals by employing appropriate management technologies and resources. To ensure effective local-level anti-crisis management, a model for anti-crisis management is proposed. This model combines target, organizational, and functional systems of tools that facilitate the consideration of regional development directions and the execution of functions such as regional development diagnosis, anti-crisis forecasting, and crisis risk planning. Given the constraints of budget resources and the current stage of economic development, a methodology for evaluating the efficiency of budget programs has been developed. This methodology involves the selection of programs for financing that exhibit the highest levels of social and budgetary efficiency with the lowest resource provision. It also encompasses monitoring the implementation of these specified programs within a defined timeframe.

The results obtained underscore the need for ongoing scientific research in the realm of anti-crisis management, particularly in response to regional challenges. This research should focus on understanding the root causes of regional challenges and enhancing the mechanisms for addressing them through anti-crisis management.

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Механізм антикризового управління в епоху цифрових технологій

У статті проведено комплексне теоретичне вивчення механізму антикризового управління в контексті місцевого управління, з особливим акцентом на інтеграцію цифрових рішень. Теоретичні засади "кризи" та "антикризового управління" розкриваються та синтезуються, визначаючи "кризу" як трансформаційний процес, який вказує на ключовий період у розвитку системи, що передбачає необоротні зміни. "Антикризове управління" розглядається як багатогранна концепція, що охоплює системний, процесуальний та механічний виміри. Дослідження явищ кризи на місцевому рівні підкреслює необхідність ефективного антикризового управління, спрямованого на стабілізацію регіональних умов та розробку стратегій зменшення ризиків кризи. У цьому контексті антикризове

управління на місцевому рівні характеризується як "комплексна система заходів для діагностики, запобігання, нейтралізації та подолання регіональних криз". Для підтримки стратегічного прийняття рішень у сфері антикризового управління проводиться глибинний аналіз доходів та видатків місцевого бюджету, який служить основою для обґрунтованого вибору інструментів управління в кризових умовах. Звертаючи увагу на критичний огляд основних концепцій та механізмів антикризового управління, стаття визначає ключові завдання для його впровадження на регіональному рівні. З точки зору розвитку регіонів як центральної точки антикризового управління стаття розглядає можливість використання цифрових інструментів для антикризового менеджменту. Однак результати дослідження підкреслюють важливість адаптації цих механізмів до унікальних характеристик та латентного потенціалу кожного регіону. Стаття завершується комплексною оцінкою ефективності використання коштів міського бюджету та пропонує підхід до оптимізації розподілу та структури видатків місцевого бюджету з використанням цифрових технологій для покращення процесів прийняття рішень та вчасного реагування на кризи.

Ключові слова: антикризове управління; криза; адміністративна діяльність; регіональний розвиток; територіальна громада; бюджет.