DOI: https://doi.org/10.30525/2661-5150/2022-1-18

THEORETICAL APPROACHES TO CRISIS MANAGEMENT DURING THE INFORMATION WAR

Yelyzaveta Mykhailova¹, Stanislav Mykhailov²

Abstract. The study is devoted to crisis management in information warfare. Modern society, transformed into an information society, together with access to information and knowledge has received new threats to personal and national security. Information and communication are realized in the information space, which is a social or geographical space within which typical communication processes take place. Its subjects are individuals, social groups and organizations, and its objects are information or those who receive this information. The field of information warfare is constantly expanding, but its main part remains the media and the Internet. The purpose of the research is to describe and analyze the methods of crisis management of any organization in conditions of information warfare. Methodology. Since crisis management is seen as a process of interrelated functions, at the pre-crisis stage of its formation it is necessary to find out the factors that can prevent a crisis situation, to develop strategic business marketing plans, control risk factors to avoid possible losses and negative consequences. When developing strategies and management methods that prevent a crisis situation (pre-crisis management), preference is given to factors and tools that can activate the exit from the crisis (crisis management), and then to strategies aimed at renewal and post-crisis management systems. Results. Considering that information warfare is universal and can be implemented in all spheres of life, including economic, it affects the efficiency of the enterprise. In such a situation anti-crisis management is used, the purpose of which determines its stages: planning of strategies and programs; organization of optimal structure; motivation of personnel; control of timely changes. In accordance with the purpose of crisis management, its positive results can be observed in: restoring the financial equilibrium of the enterprise; alignment of imbalances of internal and external parameters of the enterprise; ensuring the financial stabilization of enterprises; ensuring and maintaining the viability of the enterprise. Another aspect of crisis management is public administration, which is implemented in the creation of a system of interaction between the state and the market economy, with the ability to overcome macro- and microeconomic crises, provided through financial and legislative regulation, industrial policy and income redistribution.

Key words: crises, anti-crises management, informational war, informational society, public administration.

JEL Classification: 120, 121, 122, 125, 126

1. Introduction

As modern society has been transformed into an information society, with access to an infinite amount of information and knowledge, there are new threats to individual and national security. In a society where information has become global, there is a need for a new decision-making mechanism for dispute resolution and coordination.

However, in the information society, where any process takes place in the information space, where economic, political, cultural and even psychological impact occurs through information, a new phenomenon of "information warfare" has emerged. The works of such scientists as E. Aronson (2007), S. Grinyaev (2001), H. Kissinger (2017), O. Kurban (2016), M. Libicki (2007), E. Toffler (2000) were devoted to the problem of information wars.

A striking example of the modern development of information warfare technology, marked by the emergence of specialized strategies, methods and tools, was the war in Iraq (2003). During this armed conflict, separate military units were created to conduct psychological operations (PSYOPS), which specialized in influencing emotions, motives and objective



This is an Open Access article, distributed under the terms of the Creative Commons Attribution CC BY 4.0

Corresponding author:

¹ National University of Water and Environmental Engineering, Ukraine E-mail: e.v.mikhailova@nuwm.edu.ua

ORCID: https://orcid.org/0000-0002-1539-1548

² National University of Water and Environmental Engineering, Ukraine E-mail: s.v.mykhailov@nuwm.edu.ua

E-mail: s.v.myknailov(*w*nuwm.edu.ua

ORCID: https://orcid.org/0000-0003-4120-4686

thoughts through the use of certain information, and since 2010 it has been called "Military Information Support Operation" (MISO).

At the present stage, and especially in the information society, there are problematic crisis processes and phenomena, which are associated with the movement of information in the economic system of the country and in a particular economic sphere. The consequences of external and internal information influences lead to the destruction of the functioning system, which, in turn, requires the improvement of anti-crisis management mechanisms.

2. Trends and trends in information warfare

Crises in any organization, especially in a state organization, in the face of information challenges can arise systematically and suddenly, in the form of growing conflicts that lead to disintegration. The obsolescence of the technologies used and the loss of competitive advantages, a significant outflow of resources are also signals of a growing crisis. In addition, in addition to external influences, any acute disputes arising within the organization are in one way or another related to its financial and economic activities. That is why crisis management is aimed at eliminating and preventing gaps in the allocation of resources and optimization of economic activity.

In a time of information warfare that is unfolding within the information space, where information is exchanged through the media, the media is a major tool for shaping human thinking. Therefore, the current Ukrainian situation, in which the main subject of the information and psychological impact is the media, is more relevant than ever (Samokrutova, 2017). Because of its ability to create reality, the media becomes an arena of struggle and propaganda.

By creating different kinds of tactics that play on prejudice and emotion, modern propagandists exploit two basic human tendencies: the desire to exploit mental stereotypes and the rationalization of behavior. Modern propaganda p refers to "workarounds" of persuasion and aims to benefit at the expense of most people's limited cognitive ability to process information. Today's information environment, saturated with messages, advertisements, etc., minimizes the opportunity for in-depth understanding of important problems and solutions (Bogush, 2007).

Typical information warfare strategies include:

1) the ability of a self-learning information system to purposefully reprogram another similar system;

2) the need to reprogram the system to search the outside world or create an information system that would be similar;

3) the ability of the information system to "look at the world through the eyes of others;

4) the usage effective areas, such as culture, art, religion for the rapid and mass reprogramming;

5) the ruination the most important basic elements for preliminary chaos (Samokrutova, 2017, p. 100).

3. Anti-crisis management in information warfare

System analysis of specific signals allows us to identify a number of parameters that serve as indicators of crisis phenomena in the conditions of information warfare. But it is worse to emphasize that this methodology is effective at the stages of early diagnosis of crises, when the goal is to prevent their occurrence, to prevent further deterioration of indicators:

1. Falling demand for the organization's goods, decreasing purchasing power of the population, increasing demand for competitors' goods.

2. Deterioration of the parameters of production factors, such as a reduction in the supply of raw materials, an increase in the price of raw materials and equipment, an increase in the cost of licenses.

3. Reduction of production in related industries, stagnation of their scientific, technical and economic potential, growth of prices for infrastructure services.

4. The proximity of competition when the competitive status of the organization, the active "switching" of customers to substitute products, price wars.

5. Adverse changes in the activities of state and governmental structures: an increase in tax rates and the introduction of new taxes, adverse changes in exchange rates, customs duties, changes in civil and commercial legislation, state control over price fluctuations.

6. Random events: location of the organization in a region prone to natural disasters; instability of foreign policies of foreign business partners, demographic shocks; unexpected scientific and technological breakthroughs presented by competitors.

7. Deterioration of technical resources of the organization: wear and tear of technological equipment, use of outdated service stations.

8. Worsening parameters of technological resources: lack of opportunities for systematic scientific research; use of technology that does not allow to effectively change the generation of products within a single life cycle.

9. Reduction of human resources: employees are focused on the use of command and administrative methods of management, performance of traditional types of work due to the stability of technology; ensuring technical, social and environmental safety is not of paramount importance.

10. Lack of flexibility in the organizational structure: its stagnation and focus on functions, bureaucratization.

11. Financial policy is characterized by the systematic attraction of borrowed funds (Avdoshina, 2018).

Vol. 3 No. 1, 2022

The main features of anti-crisis management in the conditions of information warfare, which are observed in the process of withdrawal of the company from the crisis, are based on the implementation of programs to improve competitiveness and financial recovery. In addition, the main distinction of this type of management is the company's ability to respond constructively and quickly to changes and threats arising from the information impact. Moreover, the ability to develop optimal ways out of the crisis, to determine the priority values of the enterprise during the information war, to promote effective work in extreme conditions should predict and prevent the insolvency of the enterprise in advance (Kovalevsjka, 2016).

In accordance with the definition of the concept and directions of crisis management in the information war, it is possible to identify the following functions:

planning covers the process of defining the organization's goals and their changes, strategies and programs to stabilize the crisis, and resources to achieve them;

- the organization forms the optimal structure and volume of used funds, management personnel and staff for the efficient use of labor, material and financial resources;

- motivation includes a system of incentives and sanctions, which will interest the entire team and each employee in improving the efficiency of the enterprise in order to exit the crisis as soon as possible;

- control is aimed at predicting deviations from set goals in order to make timely operational changes to improve the effectiveness of anti-crisis measures (Ghasanov, 2012, p. 49).

The economic mechanism of crisis management in the information war consists of the following basic elements that make up the system of crisis management: diagnosis and forecasting of financial condition; evaluation of the company's business and its development; evaluation of external and internal marketing environment; development of organizational, industrial and strategic management; personnel management; development of financial management; of anti-crisis investment policy; implementation of measures in crisis business planning, organizational measures for the liquidation of the company (Rodin, 2015, p. 4).

Implementation of crisis management in information warfare at the micro level can be ensured by sequential implementation of the following steps:

Step 1. Creation of a specialized group based on a matrix management structure, consisting of company employees and invited specialists, for the period of a potential or real crisis.

Step 2. Monitoring and evaluation of the feasibility and timeliness of implementation of crisis management measures.

Step 3. Justification of expediency and timeliness of the use of rational methods and techniques of

crisis management and implementation of anti-crisis solutions.

Step 4. Forming a set of measures to resolve conflicts of interest on the part of third parties.

Step 5. Analysis of the implementation of management measures in accordance with the planned and actual indicators in the course of crisis management.

Step 6. Developing measures to anticipate future crises and creating preventive measures (Rodin, 2015, p. 12).

In the system of crisis management, the state plays two roles, which correspond to its two functions in the system of social relations: civil-law and public-law. The public-law role of the state is observed in providing legislative regulation and administrative management, taxation, organization of the financial system of the state, issue of national currency, support of its rate. The role of civil law is manifested in the participation of the state in civil relations (Subachev, 2016, p. 31). The role of the state in the crisis management system is realized in the creation of a system of interaction between the state and the market economy, ensuring the overcoming of macro- and microeconomic crises. At the same time, state regulation of crisis situations is characterized by a significant variety of models and types.

4. Conclusions

Thus, information and communication, which form the basis of information warfare, are realized in the information space, which is a social or geographic space within which there are typical communication processes, the subjects of which are individuals, social groups, (organizations), and the object – the information or those who receive this information. Since information warfare is universal, it can be implemented in all spheres of life, including the economy. Information warfare affects the efficiency of the enterprise, the decline of which is expressed by certain indicators that precede the crisis. In accordance with the purpose of crisis management are defined its functions: planning strategies and programs; organization of the optimal structure; motivation of staff; control of timely changes.

Given the purpose of crisis management, its positive results are manifested in: restoring the financial equilibrium of the enterprise; alignment of imbalances of internal and external parameters of the enterprise; ensuring the financial stabilization of enterprises; ensuring the viability of the enterprise; maintaining the viability of the enterprise.

A separate aspect of crisis management is public administration, which is implemented in the creation of a system of interaction between the state and the market economy, with the ability to overcome macroand microeconomic crises, implemented through financial and legislative regulation, industrial policy and income redistribution.

References:

Aronson, E. (2007). The Social Animal, Palgrave Macmillan.

Avdoshina, Z. A. (2018). Antikrizisnoe upravlenie: sushchnost', diagnostika, metodiki [Anti-crisis management: essence, diagnostics, methods]. Korporativnyy menedzhment [Corporate management]. Available at: https://www.cfin.ru/management/antirecessionary_management.shtml?Printversion (accessed 10 February 2022).

Bogush, D. (2007). Budushchee imidzha Ukrainy [The future of Ukraine's image]. Ukrainska Pravda [Ukrainian Truth]. Available at: https://www.pravda.com.ua/rus/articles/2007/11/5/4426894/ (accessed 10 February 2022).

Ghasanov, S. S., Shtanghret, A. M., & Kotljarevsjkyy, Ja. V. (2012). Antykryzove korporatyvne upravlinnja: teoretychni ta prykladni aspekty. [Crisis management: theoretical and applied aspects]. Kyiv: DNNU "Akad. Fin. Upravlinnja". (in Ukrainian)

Ghorbanj, Ju. O. (2015). Informacijna vijna proty Ukrajiny ta zasoby jiji vedennja [Information war against Ukraine and means of its conduct]. *Visnyk Nacionaljnoji akademiji derzhavnogho upravlinnja pry Prezydentovi Ukrajiny* [Bulletin of the National Academy of Public Administration under the President of Ukraine], no. 1, pp. 136–141. Available at: http://nbuv.gov.ua/UJRN/Vnadu_2015_1_21 (accessed 10 February 2022).

Grinyaev, S. (2001). Vzglyady voennykh ekspertov SShA na vedenie informatsionnogo protivoborstva [Views of US military experts on information conflict]. *Zarubezhnoe voennoe obozrenie* [Foreign Military Review], no. 8, pp. 10–12.

Kissinger, H. (2017). Svitovyj porjadok. Rozdumy pro kharaktery nacij v istorychnomu konteksti [World Order. Reflections on the characters of nations in the historical context]. Kyiv: Nash Format. (in Ukranian)

Kovalevsjka, A. V. (2016). Konspekt lekciy z dyscypliny "Antykryzove upravlinnja pidpryjemstvom" [Synopsis of lectures on the subject "Crisis management of the enterprise"]. Kharkiv: KhNUMGh im. O. M. Beketova. (in Ukrainian)

Kurban, O. V. (2016). Suchasni informaciyni viyny v merezhevomu on-layn prostori [Modern information wars in the online network space]. Kyiv: VIKNU. (in Ukrainian)

Libicki, M. (2007). Conquest in cyberspace. National security and information warfare. Cambridge.

Rodin, D. Ya., Glukhikh, L. V., & Omel'chenko, A. V. (2015). Problemy sovremennykh metodov antikrizisnogo upravleniya predpriyatii Krasnodarskogo kraya v usloviyakh globalnoi ekonomiki [Problems of modern methods of anti-crisis management of enterprises of the krasnodar region in conditions of global economics]. *Nauchnyy zhurnal kubgau* [Scientific Journal], vol. 111(07). Available at: http://ej.kubagro.ru/2015/07/pdf/32.pdf (accessed 10 February 2022).

Samokrutova, O. (2017). Manipuljatyvni tekhnologhiji u vysvitlenni zarubizhnymy ZMI sytuaciji v Ukrajini [Manipulative technologies in the coverage of the situation in Ukraine by foreign media]. *Nauk. Pr. Nac. B-ky Ukrajiny im. V. I. Vernadsjkogho: zb. nauk. pr.*, vol. 48. Available at: http://nbuviap.gov.ua/index.php?Option= com_content&view=article&id=3497:manipulyativni-tekhnologiji-u-visvitlenni-zarubizhnimi-zmi-situatsiji-v-ukrajini&catid=81&Itemid=415 (accessed 10 February 2022).

Subachev, A. A., & Karasev, M. A. (2016). Antikrizisnoe upravlenie: ucheb.-metod. posobie [Anti-crisis management: teaching method. manual]. Kostroma: KGU im. N. A. Nekrasova. (in Russian)

Toffler, E. (2000). Tretia khvylia [The third wave] / in Engl. trans Yevsa A., in ed. Shovkun V. Kyiv: Vydavnychyi dim "Vsesvit". (in Ukrainian)