INFORMATION AND ECONOMIC SECURITY AS A FACTOR OF STABLE DEVELOPMENT OF THE STATE

Abstract. The article reveals the essence of the concept of ‘information and economic security’ and its role in ensuring the stable development of the state.

The economy of the information society (or information economy) is focused on the rapid growth of information resources, and can not develop without the widespread use of information and communication technologies. The subjects of a market economy carry out their activities in an environment where information, information relations, and in general, all the main components of the informatization process are becoming increasingly important. Therefore, comprehensive information security is the key to economic security. They organically complement each other and are inextricably linked not only from a practical point of view, but also in conceptual terms.
It is proposed to consider the information component of economic security and the economic aspect of information security as a single area of activity that provides security in administration, energy, financial, technical and production, technological and other areas that have a significant impact on the national security and ensure sustainable development of the state.

The definition of information and economic security is given: a comprehensive system that protects the vital interests of the citizens, society and the state in the economic sphere from internal and external information threats. The latter in this definition acquire the status of information and economic threats — a set of conditions, factors and events that determine the effectiveness of internal and external destructive information influences on the economic condition of the country, thereby endangering the economically important interests of the individual, society and the state.

It is proposed to form a new interdisciplinary field of scientific knowledge, the main purpose of which will be to develop ways and means of using the information environment to solve problems of economic security. The theory of information and economic security should cover not only the description of information relations in the economy, but also their relationship with the national security.

**Keywords:** information security, economic security, information and economic security.

ІНФОРМАЦІЙНО-ЕКОНОМІЧНА БЕЗПЕКА ЯК ФАКТОР СТАБІЛЬНОГО РОЗВИТКУ ДЕРЖАВИ

Анотація. Розкрито сутність поняття “інформаційно-економічна безпека” та її роль у забезпеченні стабільного розвитку держави.

Економіка інформаційного суспільства (або інформаційна економіка) орієнтована на стрімке зростання інформаційних ресурсів, і не може розвиватися без широкого використання інформаційно-комунікаційних технологій. Суб’єкти ринкової економіки здійснюють свою діяльність в умовах, коли інформація, інформаційні взаємовідносини, таї взагалі, всі основні складові процесу інформатизації набувають все більшої значущості. Тому комплексна інформаційна безпека виступає запорукою забезпечення економічної безпеки. Вони органічно доповнюють одна одну і нерозривно пов’язані не тільки з практичної точки зору, але і в понятійному відношенні.

Запропоновано розглядати в комплексі інформаційну компоненту економічної безпеки й економічний аспект інформаційної безпеки в якості єдиної сфери діяльності, що забезпечує безпеку в управлінській, енергетичній, фінансовій, техніко-виробничій, технологічній та інших областях, що мають істотний вплив на національну безпеку та забезпечують стабільний розвиток держави.

Приведене визначення інформаційно-економічної безпеки: комплексна система, що забезпечує захист життєво важливих інтересів громадян, суспільства та держави в економічній сфері від внутрішніх і зовнішніх інформаційних загроз. Останні в такому визначенні набувають статусу інформа-
ційно-економічних загроз — суккупності умов, факторів і подій, що визначає ефективність внутрішніх і зовнішніх деструктивних інформаційних впливів на економічний стан країни, тим самим створюючи небезпеку економічно важливим інтересам особистості, суспільства і держави.

Запропоновано сформувати нову міждисциплінарну галузь наукових знань, основним призначенням якої буде розробка шляхів і способів використання інформаційного середовища для вирішення завдань економічної безпеки. Теорія інформаційно-економічної безпеки має охоплювати не тільки опис інформаційних взаємовідносин в економіці, а й їх взаємозв’язок із національною безпекою.

Ключові слова: інформаційна безпека, економічна безпека, інформаційно-економічна безпека.

ИНФОРМАЦИОННО-ЭКОНОМИЧЕСКАЯ БЕЗОПАСНОСТЬ КАК ФАКТОР СТАБИЛЬНОГО РАЗВИТИЯ ГОСУДАРСТВА

Аннотация. Раскрыта сущность понятия “информационно-экономическая безопасность” и ее роль в обеспечении стабильного развития государства.

Экономика информационного общества (или информационная экономика) ориентирована на стремительный рост информационных ресурсов, и не может развиваться без широкого использования информационно-коммуникационных технологий. Субъекты рыночной экономики осуществляют свою деятельность в условиях, когда информация, информационные взаимоотношения, да вообще, все основные составляющие процесса информатизации приобретают все большую значимость. Поэтому комплексная информационная безопасность выступает залогом обеспечения экономической безопасности. Они органично дополняют друг друга и неразрывно связаны не только с практической точки зрения, но и в понятийном отношении.

Предложено рассматривать в комплексе информационную компоненту экономической безопасности и экономический аспект информационной безопасности в качестве единой сферы деятельности, обеспечивающей безопасность в управленческой, энергетической, финансовой, технико-производственной, технологической и других областях, оказывающих существенное влияние на национальную безопасность и обеспечивающих стабильное развитие государства.

Приведено определение информационно-экономической безопасности: комплексная система, обеспечивающая защиту жизненно важных интересов граждан, общества и государства в экономической сфере от внутренних и внешних информационных угроз. Последние в таком определении приобретают статус информационно-экономических угроз — совокупности условий, факторов и событий, которая определяет эффективность внутренних и внешних деструктивных информационных воздействий на экономическое состояние страны, тем самым создавая опасность экономически важным интересам личности, общества и государства. Предложено сформировать
новую междисциплинарную область научных знаний, основным назначением которой будет разработка путей и способов использования информационной среды для решения задач экономической безопасности. Теория информационно-экономической безопасности должна охватывать не только описание информационных взаимоотношений в экономике, но и их взаимосвязь с национальной безопасностью.

Ключевые слова: информационная безопасность, экономическая безопасность, информационно-экономическая безопасность.

**Formulation of the problem.** In modern conditions, the process of successful functioning and economic development of the state depends on the adoption of quality and timely administration decisions, which are formed on the basis of careful and comprehensive analysis of information coming from both internal and external environment. The economy of the information society (or information economy) formulates new rules of management in the processes of production, distribution and consumption of public goods. It is focused on the rapid growth of information resources, the constant change of the external environment, is mobile and can not develop without the widespread use of information and communication technologies.

Information has become one of the important administration resources, along with human, financial and material ones. With the increasing role of information, an information environment has been formed that requires protection from unauthorized or unintentional influence at the level of the state, region, and even individual enterprises. With the development of the information society in which the subjects of the market economy, information, information relations, and in general, all the main components of the informatization process are becoming increasingly important. Therefore, comprehensive information security is the key to economic security. They organically complement each other and are inextricably linked not only from a practical point of view, but also in conceptual terms. In the scientific and practical literature these concepts are mainly considered separately, which in our view, in an ‘information boom’ is ineffective for the analysis, planning and ensuring the process of successful functioning and economic development of the state.

**Analysis of recent research and publications.** Information security, problems of protection of the national information space were studied in the works of O. Panchenko [1–3], U. Ilnytska [4], Yu. Lisovska [5], Yu. Muravskka [6], A. Marushchak [7] and others. Many works are devoted to the study of economic security, including the works of such scientists as P. Drucker, K. McConnell, J. Schumpeter, and others. Economic security is also studied in the works of domestic scientists, such as O. Baranovsky, A. Halehynsky, T. Klebanova, O. Malynovskaya, A. Mokiy, V. Shlemko and others. There are relatively few studies examining the relationship between infor-
formation and economic security. We can distinguish such authors as R. Tymaev [8], M. Kolbanev [9], T. Mykytenko [10], V. Nekhay [11]. However, their research is either focused on a very narrow topic, or does not reach the required completeness for this study.

Formulation of the purposes (goal) of the article. To reveal the essence of the concept of ‘information and economic security’ and its role in ensuring the stable development of the state.

Presentation of the main material. Both information and economic security can be analyzed based on the basic concept of ‘security’. In life safety theory the axiom of potential danger is well known: ‘All human actions and all components of the environment, especially technical means and technologies, in addition to positive properties and results, have the ability to generate traumatic and harmful factors. In this case, any new positive action or result is inevitably accompanied by the emergence of new negative factors’. [12]. In the era of turbulence, studied in detail by O. A. Panchenko, this principle is legitimate to use to assess not only technical but also social, economic, political systems. Uncertainty of the environment in which human life takes place (including informational), the instability of the social and natural processes makes us consider this environment as a potential source of various dangers, threats, risk factors, and take precautionary measures.

N. Luhmann identifies security with preservation and understands it as the absence of losses due to individual calculation of risks, successful construction of the situation [13]. A similar interpretation is offered by A. I. Pozd-

nyakov [14], where security is defined as the protection of the values of the subject (the state, society, individual) from the damage that is not indifferent to this subject.

Based on the extrapolation of the above definitions of security to the information plane and the achievements of other researchers, we can identify three components of the semantic content of the generalized concept of information security.

The first component is to meet the information needs of the entities that are included in the information environment. The information security of the subject cannot be ensured without the availability of the necessary information. The information needs of different actors are not the same, but in any case, the lack of necessary information can have and usually has negative consequences. These consequences can be of different nature, their severity depends on the composition of the missing information.

To meet the information needs, the information must meet certain requirements. Firstly, the information must be relatively complete. Due to the fact that no subject can have absolutely complete information. The completeness of information is characterized by its sufficiency for making the right decisions. Secondly, the information must be reliable, because distorted information leads to wrong decisions. Thirdly, information must be timely, because the necessary decisions are effective only when they are made in a timely manner.

The requirements for completeness, reliability and timeliness of information relate not only to its original sta-
tus. These requirements are valid for the entire circulation of information, because their violation at the stage of further use of information can also lead to incorrect decisions or in general to the impossibility of decision-making, as well as violation of confidentiality can devalue information. Therefore, information should be protected from actions that violate its status. And this applies to the field of information security. Therefore, providing security of the information should be the second component of information security.

Wrong decisions can lead not only to the lack of necessary information, but also the presence of harmful, dangerous to the subject of information, which is often purposefully imposed. This requires ensuring the protection of the subjects of information relations from negative information action, and this should be the third component of information security.

Given these three components, we can formulate the following definition: information security — the state of the information environment that meets the information needs of the subjects of information relations, information security and protection of subjects from negative information action.

Based on the above definition, information security threats can be divided into: a) violation of information security, i.e. threat to the objective component; b) violation of the security of the object/subject of protection due to non-satisfaction of its information needs or destructive information actions, i.e. threat to the subjective component.

In the context of the national security, information security can be considered, on the one hand, as its independent element, and on the other — as an integrated component of any other security: military, economic, political, etc. In this regard, a more complete definition of information security can be considered as follows (U. Ilnytska): ‘information security is a state of protection of the vital interests of the individual, society and the state, which minimizes the task of harm due to incompleteness, timeliness and unreliability of information, negative information impact, negative consequences of information technology, as well as unauthorized dissemination of information’. But this definition does not reveal the essence of the concept, because it is given in static categories. The most appropriate is a dynamic approach, which shows actions to ensure the proper condition of the subject. Relevant in this regard is the definition of A. D. Ursul, T.(F). N. Tsyrdya [15]: information security — ‘the ability of the state, society, social group, individual, firstly, to provide with a certain probability sufficient and protected social intelligence and information resource, optimal social entropy and information environment to maintain vitality and viability, sustainable functioning and development of the society; secondly, to resist information dangers and threats, negative information influences on individual and social consciousness and psyche of the people, and also on computer networks and other technical sources of information; thirdly, to develop personal and group skills and abilities of safe behaviour; fourthly, to maintain constant readiness for adequate measures in the information confrontation, no matter who imposes it; fifthly, constantly and consistently ‘embed’ artificial intel-
ligence in the public environment according to a certain safe program'.

As for the modern interpretation of the concept of ‘economic security’, it is quite ambiguous, and this suggests that there is no single approach to its definition, as the essence of this category depends on many circumstances that characterize the socio-economic system. Like information, economic security can be interpreted both statically and dynamically. Thus, Mykytenko T. V. provides the following definition: ‘Economic security — the state of the national economy, which allows to maintain resilience to internal and external threats, which contributes to the creation of a reliable and provided with all necessary means of the state, the protection of national and state interests in the economy’. Abalkin L. I. considers economic security as ‘a set of conditions and factors that ensure the independence of the national economy, its stability and sustainability, the ability to continuous recovery and self-improvement’ [16]. Sak T. V. believes that economic security is a kind of long-term provision of such systems of indicators as [17]:

- economic independence (financial, raw materials, innovation, etc.);
- economic stability (level of development that guarantees a sense of security today and in the future);
- economic development (innovation and investment activity, restructuring, financial recovery).

This approach to the interpretation of the essence of economic security (country, region, enterprise), according to the author, reflects its main functional significance: maintaining economic independence and the achieved level, as well as increasing competitiveness and expanding opportunities for further development. That is why economic security should be considered not only as a state of protection of the national interests, but also the availability and possibility of using tools to influence economic processes to ensure well-being in the long run.

The main shortcoming in considering the essence and content of economic security, in our opinion, is the lack of attention to the information factor — at best, it is seen as an element of economic security in the isolated information sphere. However, if we consider that the object of economic security is the economic system of the state, then in the transition to the information society, information security becomes the most important and independent element of this system. This is determined by the following aspects, closely related to the need to implement various information processes.

Firstly, the state of economic security is assessed by an objective system of parameters, criteria and indicators that determine the threshold values of the economic system. Intentional or unintentional misrepresentation of such information can lead to erroneous administration decisions that can cause significant economic damage.

Secondly, the economic system is exposed to external and internal threats, most of which are based on the use of confidential information of economic and other nature.

Thirdly, economic security creates favourable conditions for the implementation of the state strategy of economic development for the short and long term.
Fourthly, economic security is an element of crisis management of the economy, which eliminates the use of inefficient economic concepts implemented from the outside.

Thus, the intensive informatization of the economic processes has led to the fact that the problems of economic security are increasingly intertwined with information security. In turn, information security acquires a significant economic aspect. This is due to the transformation of information into a commodity and the most important resource for economic development, the dynamic development of the information market, the growth of the share of information and communication sectors of the economy.

In fact, the morphological analysis of interpretations of economic and information security allows us to conclude that both concepts have much in common. By choosing the key components that form the semantic core of both concepts, you can integrate them into one structure. That is, it is proposed to consider the information component of economic security and the economic aspect of information security as a single area of activity that provides security in administration, energy, financial, technical and production, technological and other areas that have a significant impact on national security and ensure stable development of the state.

Taking into account the above, information and economic security is proposed to mean a comprehensive system that protects the vital interests of the citizens, society and the state in the economic sphere from internal and external information threats. The latter in this definition acquire the status of information and economic threats — a set of conditions, factors and events that determine the effectiveness of internal and external destructive information influences on the economic condition of the country, thereby endangering the economically important interests of the individual, society and the state.

The most typical examples of such threats are: theft (modification, distortion, etc.) of economic information; theft of information products that ensure the economic growth of the country; disruption of information and communication systems and destruction of information infrastructure; information attacks on the subjects of economic relations; unpredictable economic problems due to socio-political turbulence; changing the worldview of the country’s leadership and/or key economic structures through informational and psychological influence.

Taking into account the views of researchers in this field, and based on our own experience, it can be argued that the solution of information and economic security should be focused on the most important and acute problems affecting the economic condition of the state:

1. Development of scientifically based views on the interpenetration of economic and information processes at a new stage of development of the society, which will improve the regulatory framework for regulating the use of informatization in the development of the economy.

2. Study of the essence of perspective information and economic threats and risks, which will allow to timely and objectively predict the deterioration of the information and economic
situation and possible losses to the vital interests of the individual, society and the state.

3. Construction of effective concepts of information counteraction in the economic sphere, which will create preconditions for preventing political destabilization in the state due to public dissatisfaction with their economic situation and quality of life.

4. Creation of perspective information products, information technologies and means of automation that eliminates dependence of growth of information economy on foreign manufacturers.

5. The possibility of violation of the functioning of state and public information and communication systems and the destruction of the information infrastructure of the country or its main components.

The solution of these problems requires the formation of a new interdisciplinary field of scientific knowledge, the main purpose of which will be to develop ways and means of using the information environment to solve problems of economic security. The main purpose of the theory of information and economic security should be not just a description of information relations in the economy, but also a justification of their relationship and interdependence with the state of the national security. Among the main tasks of the theory of information and economic security are:

- study of the impact of changes in the information society on the pace of economic development of the country, regions, corporations and individual businesses;
- identification of mechanisms of formation and development of internal and external information and economic threats and methods of information struggle in the field of economy;

- study of patterns of informational influence on the worldview of the country’s economic elite.

Research in this area will require the joint efforts of various specialists (economists, information systems specialists, lawyers, etc.).

**Conclusions and prospects for further research.**

1. Modern development of the society is characterized by the integration of security aspects of economic and information processes, which dictates the need to create a single area of information and economic security — a comprehensive system that protects vital interests of the citizens, society and the state in the economic sphere from internal and external information threats.

2. Taking into account the fact that achieving a certain level of information security guarantees an appropriate level of economic security, it can be concluded that the concept of ‘information and economic security’ combines closely related areas of the state activity that guarantee its stable and progressive development.

3. It is proposed to form a new interdisciplinary field of scientific knowledge, the main purpose of which will be to develop ways and means of using the information environment to solve problems of economic security.

The theory of information and economic security should cover not only the description of information relations in the economy, but also their relationship with the national security.
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