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ORGANIZATIONAL AND LEGAL CONTEXTS OF DIGITAL- SECURITY TOOLS OF ECONOMIC AGENTS

The article examines the organizational and legal apparatus «digitalization» and the algorithm of the digitalization process of economic agents in the context of security conditions. A practical toolkit of methods and algorithms (SADT, IDEF, UML, BPMN) that provide automation of work flow management using web technologies is substantiated. As a result of scientific research, the main vectors of ensuring the safety of economic agents in modern conditions of digitalization of economic processes have been identified. On the basis of which, the organizational and legal foundations of the implementation of digital processes on the state and development possibilities of strengthening the security of economic agents are characterized. The peculiarities of providing the appropriate security components in the conditions of active processes of digitalization of economic and legal relations have been studied.

Keywords: digitalization, security of economic agents, ensuring the security of economic agents, synergistic effect, digitalization of economic processes.

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Організаційно-правові контексти діджитал-інструментів безпеки економічних агентів

Досліджено організаційно-правовий апарат «діджиталізація» та алгоритм процесу діджиталізації економічних агентів у контексті безпекознавчих умов. Обґрунтовано практичний інструментарій методик і алгоритмів (SADT, IDEF, UML, BPMN), які забезпечують автоматизацію управління потоками робіт із використання web-технологій. У результаті наукових досліджень ідентифіковано основні вектори гарантування безпеки економічних агентів у сучасних умовах цифровізації економічних процесів. На основі цього охарактеризовано організаційно-правові засади реалізації цифрових процесів на стан та можливості розвитку зміцнення безпеки економічних агентів. Досліджено особливості забезпечення відповідних безпекових компонент в умовах активних процесів цифровізації економіко-правових відносин.

Ключові слова: діджиталізація, безпека економічних агентів, забезпечення безпеки економічних агентів, синергетичний ефект, цифровізації економічних процесів.

Introduction. In modern conditions of turbulent economic processes, the urgency of digitalization in the security system of economic agents is steadily increasing. This topic is becoming especially relevant in the context of the COVID-19 pandemic, when the resources of business structures may change in the focus of applied aspects and focus more on projects to develop internal efficiency and provide a non-knowledge component. Based on research, it has been established that digital tools for strengthening the security of economic agencies create new risks and challenges, including threats to cybersecurity, facilitation of illegal economic activities and more.

In fact, digitalization is a key factor which provides significant benefits for development in this direction. Economic growth and digital transformation are happening due to spread of convenient digital technologies. Thus, rapid changes in the development and competitiveness of economic agents towards the use of digital transformation are inevitable. Research suggests that digitalization is a catalyst of innovative development, technological change has led to different opportunities such as flexibility, reactivity and individualization of products, but at the same

time there are new challenges and threats such as rapid technological transformation, high level of complexity, changing customer preferences and legal requirements.

Analysis of recent research and publications. Researches of current security of economic agents in the context of digitalization are covered by the following leading scholars: B. Andrushkiv, Z. Varnalii, O. Vivchar, A. Baranovskiy, V. Boiko, V. Heiets, O. Hoichuk, B. Hubskeyi, M. Koretskyi, O. Kyrychenko, T. Kovalchuk, O. Korystin, B. Paskhaver, Yu. Pakhomov, P. Sabluk, O. Skydan, V. Shlemko, L. Yaremko, ta zarubizhnykh naukovtsiv: A. Altukhova, K. Barreta, I. Bohdanova, S. Hlaziieva, A. Horodetskoho, Yu. Oduma, H. Stoliarova, N. Fursa ta inshykh.

Objectives. The main objective of the article is to substantiate meaning of «digitalization» term as well as to study the impact of digitalization processes of economic agents and organizational and legal instruments on economic security.

Presentation of the main material of the research. Research points to the fact that digitalization from the standpoint of economic determinant is the formulation of the definition of this concept, which is a set of processes of innovative development, which is reflected in relevant technical and technological innovations focused on digitization of key economic processes and phenomena (their maximum automation and taking the human factor out of the management focus in order to reduce the need for research controllability of such processes and avoid the errors created by this factor), which in their content usually represent a set of repetitive iterations, within which human resources become mechanical, deprived of the intellectual component of the process, creating an additional reserve for productivity growth.

Digitalization creates important benefits for enterprises in terms of implementing the chosen strategy, strengthening their economic security, achieving business transparency [3, c. 71].

It is undeniable that the intensification of digitalization processes has a positive impact on the financial performance of economic agents involved in the use of certain tools and the innovative potential of the nation as a whole. However, equal in importance to the effectiveness of such processes is the issue of ensuring the security aspects of the functioning of both economic entities and state institutional and legal infrastructure in the context of exacerbation of information protection, cyberterrorism, complete uncontrollability of certain information zones of the global network (and illegal activities which are happening within their limits), etc.

Thus, the current state of affairs suggests that this poses a range of challenges related to the need for an analysis of the impact of digitalization processes on the ability of economic agents to maintain a sufficient level of economic security. It should be added that this issue is exacerbated in the context of the general topicality of the safe functionality of economic agents during unstable economic conditions of the post-COVID economy, namely: how these problematic contexts should be reflected in the security of economic agents.

It should be noted that the security system of economic agents, based on its functional purpose, is an organized set of interconnected elements (subjects, objects, functional components, conditions and criteria) of the management infrastructure of the enterprise aimed at achieving the main goal of economic security management business structures, expressed in ensuring the stable and effective development of economic agents, neutralization and elimination of key threats to internal and external sources of origin. It is impossible to ignore the fact that the processes of digitalization have not bypassed this functional area, actively influencing the tools of personnel management and generally increase the economic value of intellectual potential [8].

It is established that the key impacts of digitalization within this improvement of human resources include the following:

- firstly, the emergence of electronic personnel management systems (E-HRM);
- secondly, changes in the labor market situation in the context of intellectualization of requirements for employees and increased competitive interaction, both between employers and employees;
- thirdly, strengthening the influence of relevant social networks and recruitment platforms; transformation of traditional forms of employment towards a combination of offline employment and remote work;
- fourthly, the intensification of intellectual labor, the growth of appropriate forms of workload;
- fifthly, expanding opportunities to use the intellectual potential of the organization;
- sixthly, the actualization of the protection of intellectual property rights [4, p.740].

It is substantiated that the practical toolkit includes methods and algorithms (SADT, IDEF, UML, BPMN), which provide automation of workflow management using web-technologies. It also includes a workflow graphic based on the BPMN specification to visualize models and an automated management software package based on the latest technologies, such as the integration of distributed information systems through web services that enable automation of complex information processes. The use of workflow management systems has helped to

develop the set of software needed to automate complex distributed business processes using human resources and software systems, as well as to ensure interoperability with information-analytical systems and data warehouses.

Researchers note that the introduction of economic agents, which comprehensively carry out all types of accounting, allows for effective administration of operational and strategic management through reliable, objective, complete and timely information. In turn, this opens up the following possibilities: storing accounting information for all processes in one database; creation of any type of reporting in accordance with the needs of management of socio-economic and environmental components of economic activity; optimization of all processes, accounting systems, and increasing the level of control; increasing the efficiency and reducing the cost of administrative and managerial staff; rational use of funds, optimization of operating costs, which in turn ensures the use of financial indicators. The paper provides a sufficient number of facts that confirm: the use of IT, which comprehensively uses all subsystems of accounting, opens to the company innovative and functional prospects. Based on the experience of ERP systems implemented abroad, it is argued that domestic software products are improving every year and increase both the list of their capabilities and the results of their use. This undoubtedly improves the process of managing economic agents at all levels.

It is investigated that in modern conditions the economy of Ukraine has both theoretical, applied, and international basis in order to strengthen its position among the countries of the world. However, its digitalization is still mostly innovative. Therefore, a combination of theoretical research with the current needs and capabilities of stakeholders is a must for the national economy. Thus, in the focus of the challenges of new economic processes, in the face of fierce competition, rapidly aging technologies, professions, ideas, the penetration of the Internet into all parts of the economy, digitalization has reached a new level of importance for business organizations. To maintain the competitiveness of economic agents, it is necessary to use the opportunities of digitalization in all possible areas and forms: customer experience; partnership and collaboration; work with data; introduction of innovations; HR strategy and culture; value management, etc. [7, p. 185].

According to scientific researches, it is established that the concept of digitalization should be considered as a systematic approach to the digital transformation of human resources. It is established that the factors influencing the development of digitalization should be divided into those that are formed under the influence of macro and individual factors. The macro-factors include: improvement of the legal and regulatory framework for the development of digitalization; change in public policy to support and develop certain activities. Particular importance in the formation of a successful trend of digitalization belongs to individual factors, namely: the creation of new values, properties of goods; formation of new needs and demands of consumers (focus on saving time, search and purchase of goods on clear parameters); the emergence of the latest digital technologies. It is proved that the current challenges of human resources in the context of digitalization are formed under the influence of changes in public health, education reform, stagnation of science, social policy, significant impact of migration processes. It is determined that management on the basis of digitalization is based on perfect planning of digital strategy, assessing the feasibility of practical digital initiatives, identifying promising areas of action, choosing an effective model of digitalization, forecasting the expected effect of digitalization, comparing innovative initiatives [2, p. 57].

Thus, from a practical point of view, it is proved that the main directions of development of management systems in digitalization in the context of strengthening the security of economic agents should be: promoting accelerated implementation of innovative initiatives, prognostic monitoring of market environment, priorities and customer experience. At the same time, there should be the formation of human resources, development of culture and competencies of information exchange, modernization of IT systems. These areas become a prerequisite for creating a corporate digital infrastructure and stimulating the company's innovative attractiveness. The development of digitalization in the context of ensuring the security of economic agents requires the application of the experience of foreign countries, focused on optimizing business and ensuring the quality of goods and services. The latest ideas, initiatives and programs should be integrated into the strategy of business structures and increase the innovative attractiveness of business [1, p. 85].

Based on the research, it is worth noting the special emphasis on key aspects of logistics development based on the use of information technology. It is noted that the introduction of modern digital technologies in logistics will change the business models of economic agents and strategic plans; improve interaction between all participants in the logistics process; improve productivity, thereby increasing the competitiveness of logistics companies in the market. It is also noted that the digitalization system in the sphere of logistics should be considered in the form of a community enabled through the use of digital platforms and their applications by the developers, providers and users of logistics services, and agents with experience in logistics who possess certain skills gained

through the use of digital information technologies. The necessity of creating a logistics form that combines logistics principles and modern innovative methods of doing business is substantiated. The basis for these changes should be the introduction of digitalization in the system of financial and economic activities in the context of providing a security component. Thus, based on the introduction of digital processes, the company's quality will improve by automating and optimizing work processes, which will make them more competitive in the logistics services market.

According to scientific research, it is necessary to identify the organizational and legal methodology according to which the project of digitalization of economic agents in the context of security conditions is divided into the following stages:

1) study of current business processes and their transformation. At this stage, the selection of some processes, technologies, which, according to the company's management, are considered relevant for their digitization. Next, the weak points are studied and a list of shortcomings and ways to eliminate them during the transformation of the system is formed;

2) introduction of elements of digitalization in the activities of the organization. First of all, the authors pay due attention to the training of staff who will work in this direction, then intensify business processes in the whole structure, form working groups. In the future, there is a need to launch a pilot implementation in one of the structural units or to invite an experienced specialist who will test new digital technologies and resources. Such actions will allow to open new perspective directions of development that will bring practical experience for the company;

3) strategic stage of digitalization. At this stage, strategic directions of digital transformation of both individual business processes and the organization as a whole are formed. The efficiency and productivity of working groups are evaluated. Investments for digitalization of business processes are allocated and distributed, responsible persons are appointed, deadlines and normative level of results are determined;

4) digital convergence. Within this stage, the formed working groups develop strategies and operational models of digital transformation, taking into account the new infrastructure with its roles, business processes, knowledge and models. Priority technologies and models of behavior in the digital space are selected and approved for use, taking into account the specifics of the company's activities;

5) innovation-adaptive stage. It is designed to set the goal of continuous development of the company's potential for the management of the company, which will lead to the emergence of new technologies, their testing in practice and regular modification and modeling of business processes [5, p. 170].

In our opinion, it should be noted that the main vectors of development of electronic communications of economic agents combine a wide range of communication technologies, including e-mail, fax, electronic EDI data exchange and electronic payments EFT, Internet, intranet (corporate Internet), extranet (electronic exchange of information with the outside world), etc.

That is why, among the global trends in their development should be noted the following:

- translation of business information into digital form;
- sharing usage of business information, computerization of office work on the Internet;
- removal of physical restrictions in connection with the use of electronic networks;
- construction of the entire production infrastructure on the use of computers as information devices;
- displacement of the cash method of payment for goods and services, transfer of information about electronic plastic card numbers via telephone networks or e-mail;
- opening and expanding opportunities for a new type of mediation: electronic communication begins to perform analytical functions, providing customers with information about the nature of markets and trades, changes in supply and demand, the emergence of unique or rare goods [6].

It is established that the digital transformation of security of economic agents has become not only one of the key trends, but also a market necessity in the information society. The speed of implementation of digital tools and the use of an integrated approach in the development of digital strategy of business structures is the key to the success of modern business. And only those companies that risk being the first to implement digital innovations can gain a significant competitive advantage. The actualization of the complexity of digitalization, rather than the fragmentary use of digital marketing tools, is associated with the ability to achieve systematization in the process of digital transformation and can provide a synergistic effect.

Conclusions. Summarizing the above, it should be noted that consideration of the impact of digitalization on the security parameters of economic agents should be implemented in the next areas: potential threats posed by the active development of digital technologies and the opportunities they create at the same time. At the same

time, the security of economic agents can be ensured only by balancing these aspects, which finds its practical implementation in building an effective dynamic information security system (from virtual security to image aspects in the field of PR) together with the formation of digital innovation market monitoring system. on the subject of potential efficiency and opportunities for their implementation in the economic practice of business structures.

It is established that the growth of the digital economy contributes to the emergence of many new economic opportunities. Digital data can be used for development as well as to solve social problems. Thus, they can help improve economic and social performance, innovate and increase productivity. Digital platforms simplify operations, networking and information exchange. From the point of view of economic agents, the transformation of all spheres and markets under the influence of digitalization can help improve the quality of goods and services while reducing costs. In addition, digitalization is transforming the value chain in a variety of ways, opening up new opportunities for added value and broader structural change through the mechanism of economic security. Thus, future research in this area has high scientific value. Given the rapid pace of development of IT technologies, models and methods of digitalization projects in the context of ensuring the security of economic agents require further development.

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