

UDC 338.054.23

JEL Classification: B41 + D24 + M21 + M38

Shashyna M. V., Kostyunik O. V., Dergaliuk M. O., Solosich O. S., Ocheretiana O.V.

INTERRELATIONSHIP BETWEEN PROCESSES OF ECONOMIC SECURITY INTELLECTUALIZATION AND ENSURING SUSTAINABLE DEVELOPMENT OF THE ENTERPRISE IN THE CONDITIONS OF MACROECONOMIC SYSTEMS TRANSFORMATION

National Technical University of Ukraine “Igor Sikorsky Kyiv Polytechnic Institute”, Kyiv, Ukraine

This article is devoted to the systematization of the theoretical and applied aspects of the qualitative relationship between the processes of economic security intellectualization and ensuring the sustainable development of entrepreneurial entities, the integration of the conceptual provisions of these theories into the system of organizational and economic support for the activities of enterprises under the influence of active transformations of modern macroeconomic systems. The authors analysed in detail the applied features of the intellectualized approach implementation to the formation of economic security policy for business structures. The system provisions of the implementation for the conceptual foundations of sustainable development theory in the economic processes of the enterprises functioning are singled out. The fundamental principles of qualitative integration of the processes of economic security intellectualization and ensuring the sustainable development for entrepreneurial entities are formulated, in particular the principle of purposefulness, the principle of innovation, the principle of humanism, the principle of responsibility, the principle of balancing, the principle of synergy, the principle of participativeness, the principle of transparency, the principle of knowledge preservation. The proposed logical-structural diagram of the interconnection between functional aspects of the economic security intellectualization processes and ensuring sustainable development at the enterprise level, which qualitatively coordinates the relevant functional processes (financial, personnel, technical and technological, informational, etc.), which reflect the practical manifestations of the intellectualized approach implementation in economic security and direct sustainable development of the enterprise. The component-by-component integration of the system processes of economic security intellectualization and ensuring sustainable development is presented, which reflects the relationship of benchmark elements on each of the concepts within the management structure of economic entities. A component-by-component analysis of instrumental support was carried out in terms of specific management practices of an intellectualized approach to ensure the enterprise economic security within the system elements of the sustainable development theory based on a three-unit approach (economic component, social component and environmental component).

Keywords: economic security, sustainable development, intellectualization, intellectualized approach, enterprise economic security, enterprise sustainable development.

DOI: 10.32434/2415-3974-2024-19-1-143-153

© Shashyna M. V., Kostyunik O. V., Dergaliuk M. O., Solosich O. S., Ocheretiana O.V., 2024



This article is licensed under Creative Commons Attribution 4.0 International License (CC-BY)

Interrelationship between processes of economic security intellectualization and ensuring sustainable development of the enterprise in the conditions of macroeconomic systems transformation

Introduction and formulation of the problem

One of the defining characteristics of macroeconomic systems, as primarily entities of the economic type, is the presence of complex and multifunctional interrelationships both in terms of endogenous aspects of the system functioning, which cover all market actors and accordingly affect the specifics of their activities within national borders, as well as in measure of exogenous influence, which determines the position of the macroeconomic system in the context of international economic interactions. It should be noted that one of the current trends is the intensification of the transformational processes in the development of macroeconomic systems, which occurs under the destructive factors of the global environment (geopolitical tension, high price volatility of resource markets, climate changes, foreign trade conflicts, etc.), which is only deepened by the existing structural deformations of the global economy in terms of resource and income distribution, heterogeneity of access to capital and general heterogeneity of the economic environment. The specified processes directly affect the state of macroeconomic systems, contributing to the deterioration of the national business environment cultivated by them. At the same time, taking into account the uncontrollable nature of the macroeconomic environment factors influences on the activities of business entities, the issue of building safety-resistant management systems for economic processes is becoming relevant for the latter. Achieving such a state of functioning into the management structure encourages entrepreneurial formations to implement modern intellectually-oriented practices, which allow, due to the use of intangible resources, to significantly reduce the cost needs of material resources, thereby mobilizing reserves for increasing the economic potential of the organization. At the same time, the implementation of the sustainable development theory provisions as the main prerequisite for achieving the balance of internal and external interactions of the enterprise based on the functional trinity of economic, social and environmental components of activity is an equally relevant direction of organizational development for business entities. The theory of sustainable development makes it possible to cultivate people-centeredness and ecological neutrality as basic imperatives for the responsible functioning of an entrepreneurial entity in modern conditions. Based on the above, it can be stated that nowadays, the issue of identifying the qualitative interrelationships between the processes of economic security intellectualization and ensuring the enterprises sustainable development in the conditions of transformation of macroeconomic systems with

the aim of their further integration into modern economic and management practices is gaining special relevance.

Analysis and research of publications

The actualization of the problems of the economic systems functioning under the influence of the intensification of global threats and the stabilization of economic processes in the conditions of a war economy qualitatively transformed the national academic discourse in the part of research into the problems of economic security towards the consideration of issues of anti-crisis management practices, the formation of applied systems of planning and forecasting of activities in conditions of increased external entropy and in general, the development of universal business practices for countering permanent physical and economic threats in the functioning of the enterprise. The theoretical basis of the key provisions of the organizational regulation of ensuring economic security processes, their instrumental and personnel support was formed within the scientific works of such research scientists as B. Andrushkiv, O. Aref'eva, T. Ivanyuta, O. Ilyashenko, M. Kamlyk, A. Kiriyyenko, G. Kozachenko, S. Mishchenko, E. Oleynikova, V. Ponomaryova, V. Tambovets, T. Tkachenko, S. Tulchynska, O. Lyashenko, V. Franchuk.

At the same time, active scientific interest within the national research environment remains in the problem of harmonization of the enterprises functioning and the national economy as a whole with the regulated principles of the sustainable development concept in terms of the development an effective organizational and economic mechanisms for the implementation of relevant provisions, principles, methods and tools for stimulating these processes at all hierarchical levels of economic systems. An important theoretical and methodological development in the field of national research on the integration of the sustainable development provisions as a principle in the organization of economic interactions was made by such scientists as A. Burda, V. Gerasimchuk, B. Dergalyuk, L. Didkivska, S. Kozlovskiy, O. Mnykh, M. Pilyugina, P. Skrypchuk, V. Stepanov, I. Tarasenko, O. Chabanyuk, A. Chernykh, Z. Shershnyova, O. Shubravska, O. Yastremska.

However, despite the presence of a powerful fundamental basis in the form of scientific developments in the field of economic security issues and the implementation the conceptual provisions of the sustainable development theory, at the moment, the issue of systematizing the qualitative relationship between theories of economic security and sustainable

development of enterprises based on an intellectualized approach remains insufficiently researched, as well as relevant applied aspects of such a relationship in the conditions of macroeconomic systems transformation.

Purpose of the article

The purpose of this article is to systematize the qualitative interrelationship between the processes of economic security intellectualization and ensuring the sustainable development of business structures in the conditions of active macroeconomic systems transformation, integration of relevant conceptual provisions in the applied dimension of the enterprises functioning.

Presentation of the main material

One of the basic components of the management structure functioning among entrepreneurial entities is the regulation of the adopted goal-setting system provisions, which highlights the main tasks of the enterprise as an economic entity, as well as determines the appropriate time, resource framework and ways to achieve the relevant priorities. At the same time, the specified aspects of the main activity prioritization should appropriately coincide with the current security situation represented by the current and prospective spectrum of threats and risks that arise in the changing external environment of functioning. In today's conditions, one of the most effective directions for the implementation of the company's security policy is the use of an intellectualized approach based on the intensification of the business processes through the involvement of intellectual resources in appropriate instrumental and methodical forms. At the same time, an equally important aspect is the influence of the involved instrumental support and the corresponding performance indicators of the organization's activity on the exogenous environment of the latter's functioning. In this case, the sustainable development theory serves as the conceptual basis for building a balanced enterprise management structure with the aim of eliminating negative external effects (which in the applied dimension constitute a set of threats to the economic security of the enterprise).

According to B.V. Derhalyuk, sustainable economic development is ensured precisely by the active use of intellectual capital and high technologies [1, p. 86], which becomes relevant in the conditions of the incremental dynamics of the external entropy growth and the intensification of already existing threats and risks of economic activity.

Next, we offer a more thorough consideration of the previously mentioned management approaches, highlighting the system-forming features of their implementation at the level of business structures. To begin with, we identify the relevant features of the

implementation of an intellectualized approach in the security management system of economic entities:

- the dominance of the intellectual component as a key part of the management system, which involves ensuring the objectivity and validity of approaches to management decision-making, stimulating the development of the individual intellectual potential of employees and hiring based on appropriate criteria, determining intangible resources as a key resource for generating added value;

- the implementation of active economic system informatization, which covers the digitalization of key business processes in horizontal and vertical dimensions, overcoming the phenomenon of the digital division among company employees, active educational work in the context of the information hygiene cultivation and a systematic approach to the prevention of current information threats (physical, virtual, human, interface, competitive, etc.) [2, p. 57];

- a proactive approach in matters of increasing the organization knowledge potential, which can be implemented, on the one hand, by organizing or financing educational events aimed at improving the qualification level (seminars, courses, lectures, etc.), and on the other hand, in the framework of establishing cooperative relations with scientific and educational institutions, which will allow integrating modern theoretical and methodological developments into the production process, enriching the intellectual potential of employees and forming an additional personnel reserve of employees;

- implementation of the policy of creation of production-technical and organizational-administrative activity within the entrepreneurial structure, which involves the creation of a clear and objective system of stimulating the achievement of individual results of labour activity, promoting the development of labour initiative in the direction of involving all hierarchical levels of the organization in the formation of proposals for organizational economic improvements, cultivation of a favourable psycho-emotional climate for the realization of the individual professional potential of the personnel;

- the implementation of the key fundamental provisions of the inclusive economy theory, which involves, on the one hand, providing equal conditions for the labour potential realization among employees regardless of their physical, mental, gender, racial, sexual characteristics, and on the other hand, ensuring the inclusive nature of manufactured products as an opportunity to its consumption by the widest range of consumers, regardless of the above-mentioned features;

- the innovative orientation of the enterprise's organizational and management system, which provides

for the ensuring of synergistic interaction between the main resource components of an intellectually-oriented approach (intellectualization, informatization, creativity, inclusion) to the implementation of production and administrative functions with the aim of generating innovative approaches to solving management tasks, modernization of technical and technological potential, search for ways of appropriate innovative investment and knowledge cooperation.

Based on the analytical results of the conceptual provisions features for the implementation of sustainable development theory, we propose to single out the most significant aspects of the implementation of the relevant approaches within the entrepreneurial structure:

- ensuring systematicity and comprehensiveness in the adoption of management decisions in the relevant multifunctional dimension (economic, social, environmental), i.e. specific decisions should take into account not only the effective aspect, but also the corresponding value basis embodied in the social and ecological consequences of its implementation;

- interdependence of the structural components of sustainable development – economic, social, environmental, which implies the impossibility of realizing certain priorities of the goal-setting system due to the dysfunctionalization of one of the previously mentioned components;

- ensuring a humane and people-centered personnel policy, which involves, on the one hand, the creation of a stable climate of interpersonal interactions within the work team, and on the other hand, the cultivation of the most comfortable conditions for realizing the labour potential of employees;

- taking into account the quantitative and qualitative parameters of the social impact of the business structure on the social environment outside the enterprise in terms of possible dysfunctional manifestations (employment, quality of life, social infrastructure, criminogenic situation)

- implementation of a proactive policy of greening technical and technological processes in the direction of resource optimization and differentiation, which can be implemented on the basis of low-waste concepts, frugal or zero-waste production, finding ways to reduce energy consumption, etc.;

- a comprehensive audit of external environmental effects, both in terms of relevant economic impacts on the functioning effectiveness of the economic structure (fines, sanctions), and a conscious attitude to the state of the natural environment [3, p. 162];

- organization of social measures to improve

the natural and ecological state of the environment (greening, beautification of the territory, educational measures to increase environmental awareness, intra-organizational measures to ensure resource saving, energy saving, waste sorting, etc.);

- implementation of the basic principles of socially responsible business policy, which involves taking into account value aspects in the process of forming management policy in all its functional manifestations, observing corporate culture and positioning the enterprise as a responsible market entity;

- compliance with the gender balance of the management and functional personnel of the economic entity, the formation of preventive mechanisms for the appearance of negative gender-related antisocial phenomena – “glass ceiling”, “leaky pipe”, “sticky floor”, etc.;

- initiation of introduction of non-financial reporting forms into the standard practice of accounting and management activities in accordance with modern standardized forms of its implementation (GRI, ESG, etc.) [4, p. 49];

- the formation of mechanisms of productive communication between the main stakeholders of the entrepreneurial entity, in particular the state and the public sector, with the aim of identifying the actual needs of the local community development, the role of the entrepreneurial entity in solving them and, in general, the organization of a sustainable feedback system.

Thus, the analysis presented above of the key features for the implementation of the basic provisions of the sustainable development theory and the basic elements of the intellectualized approach implementation in managing the economic security of business structures allows us to assert the existence of an essential connection between the relevant theoretical concepts.

Moreover, as T. Demyanenko notes in his scientific work [5, p. 186], the implementation of the system principles of the sustainable development theory can be restrained by the destructive factors of the external environment embodied in a number of threats of a social, economic and ecological nature, which limit the managerial possibilities for dynamic and sustainable transformation of the enterprise. This fact additionally emphasizes the importance of applying an intellectualized approach to economic security in order to ensure the minimization of the impact of negative exogenous factors on the processes of sustainable restructuring of the business structure.

That is why, further on, we offer a detailed analysis of the relationship and opportunities for their qualitative integration, systematizing it in the form of

a description of the main functional aspects in the implementation of these theories (technical-technological, personnel, financial, informational, political-legal, marketing and environmental aspects). The importance of considering this issue based on the structural-functional approach lies in the possibility of in-depth analysis, specification and development of understanding the substantive roles in the processes of economic security intellectualization and ensuring sustainable development in the horizontal structure of organizational management.

On the basis of the above analysis, the functional aspects in the implementation of the processes of economic security intellectualization and sustainable development, an integrated approach was developed, which involves the coordination of the key principles of each of the considered theories for each functional aspect. The logical-structural scheme for the integrated approach to managing the processes of economic security intellectualization and ensuring the sustainable development of business structures is presented below in Fig. 1.

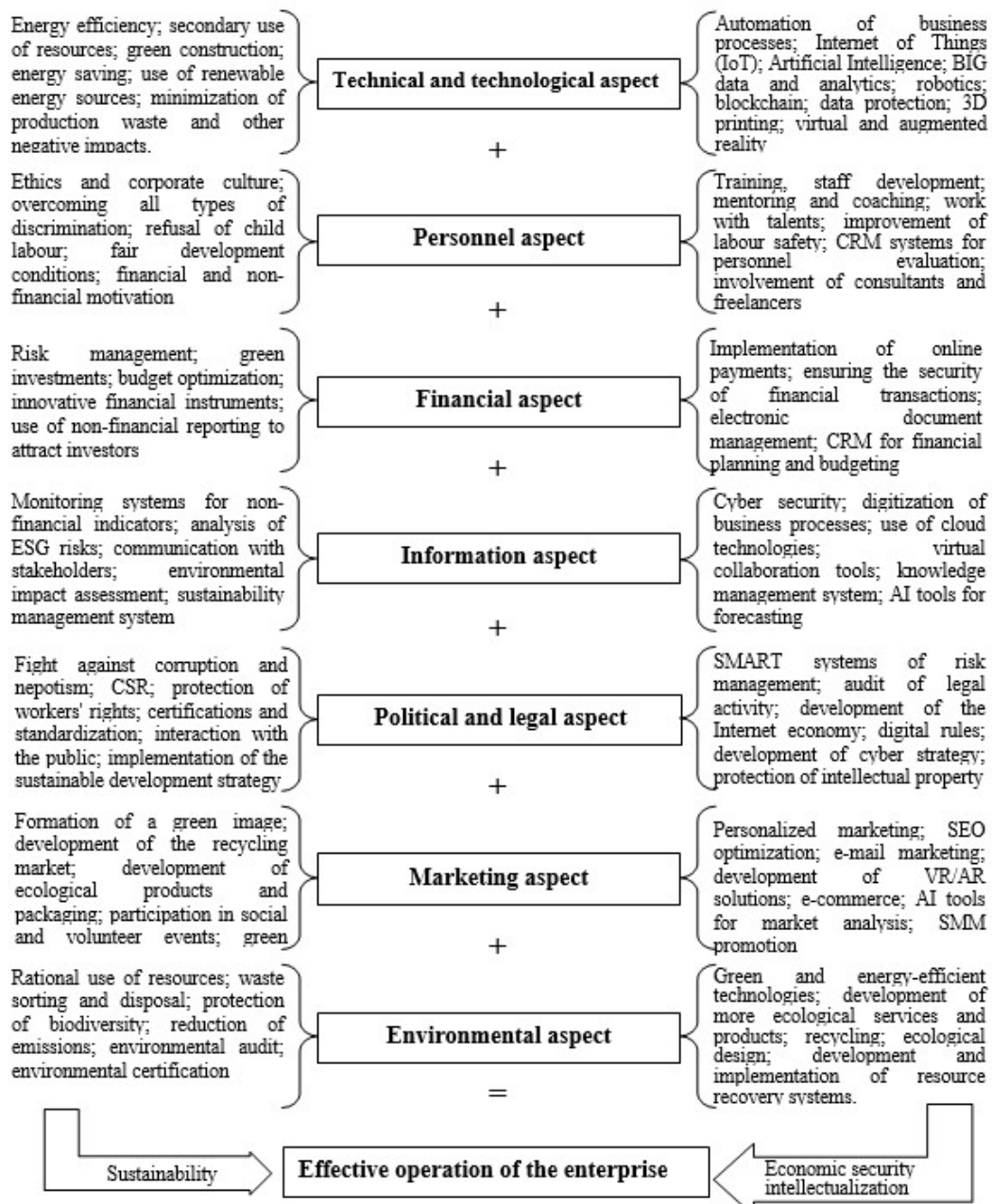


Fig. 1. Logical-structural diagram for the interconnection between functional aspects of the processes of economic security intellectualization and ensuring the enterprise sustainable development

Source: authors' development

Interrelationship between processes of economic security intellectualization and ensuring sustainable development of the enterprise in the conditions of macroeconomic systems transformation

Taking into account the differences between the economic security intellectualization and sustainable development, as independent processes, it is appropriate to form a list of defining provisions (principles) that should be guided by the integration of the sustainable development theory and economic security intellectualization in the field of enterprise activity:

– the principle of purposefulness. The integration of the economic security intellectualization and sustainable development should take place in accordance with the established strategy and defined action plan, with the justification of each planned measure at the strategic and tactical levels. The management should regularly check the level of achievement the set goals and, if necessary, adjust the company's strategy;

– the principle of innovation. The company actively uses the latest achievements of science and best practices to achieve sustainable goals, increase the efficiency of operations, and create competitive advantages. The team develops a culture of innovation, thanks to which employees are interested in researching and learning new technologies, offering ideas to managers;

– the principle of humanism. The management of the company not only takes into account the needs of employees, but also prioritizes them highly; decent conditions for work and life have been created at the enterprise, and human values are part of the corporate culture;

– the principle of responsibility. The enterprise bears full responsibility for its actions and their impact on society, market conditions or the environment. The enterprise legitimately uses the scientific achievements of other subjects, is guided by intellectual property rights and protects the results of its own scientific and technical activities;

– the principle of balancing. Since intellectualization is a dynamic process that requires constant updating of the company's knowledge base, characterized by the accumulation of information resources and the improvement of the quality of human capital, sustainability of development, on the contrary, although it does not mean stopping or slowing down economic growth, but implies a rational and balanced use of resources, managers one must be able to balance between the pursuit of the latest technologies and the intelligent use of available resources;

– the principle of synergy. At the basic level, the integration of the economic security intellectualization and sustainable development involves combining organizational and executive approaches to maximize the benefit for the enterprise. Also, this principle can be interpreted as a constant search for

opportunities for cooperation with stakeholders to exchange knowledge, generate new ideas or implement joint projects to achieve the sustainable development goals;

– the principle of participation. All employees are involved in the process of integrating the sustainable development theory and intellectually oriented safety policy at the enterprise, regardless of their status, experience, education and all other parameters. Employees are given the opportunity to propose their ideas, form cross-functional creative teams, study analytical data of the enterprise, monitor individual processes, communicate with all levels of management, etc. Thanks to this, a sense of ownership is created, motivation increases and the intellectual development of employees is stimulated;

– the principle of transparency. The company's activities are transparent and open, stakeholders receive only true information and can easily verify it. It is forbidden to use dark resources of DarkNet in digitization processes. The enterprise publicly reports on all functional aspects for the intellectualization processes implementation and ensuring sustainable development of the enterprise in non-financial reports;

– the principle of knowledge preservation. The theory of sustainable development is based on the assumption that the current generation should preserve resources for the future. The essence of the economic security intellectualization lies in the effective use of existing knowledge and the generation of new ones for effective countermeasures against threats. Thus, a logical unifying thought is the principle of knowledge preservation, which consists in cementing existing knowledge, documenting and preserving new ones, spreading valuable knowledge and protecting information that can be used in an illegal way.

Scientists O. Arefieva and Z. Poberezhna consider the business processes intellectualization on the enterprise in terms of five components: integrated, internal, marketing, socially responsible component and the economic potential of the enterprise [6]. Such segmentation allows the enterprise to create additional value due to the unify implementation of the economic security intellectualization in work processes. In this approach, the components are selected according to key groups of traditional enterprise stakeholders.

Our research also uses a holistic method. However, in terms of the integration of sustainable development and the intellectualized approach to economic security, the key components can be determined in two ways: based on the primacy of intellectualization or the primacy of the theory of sustainable development (Fig. 2).

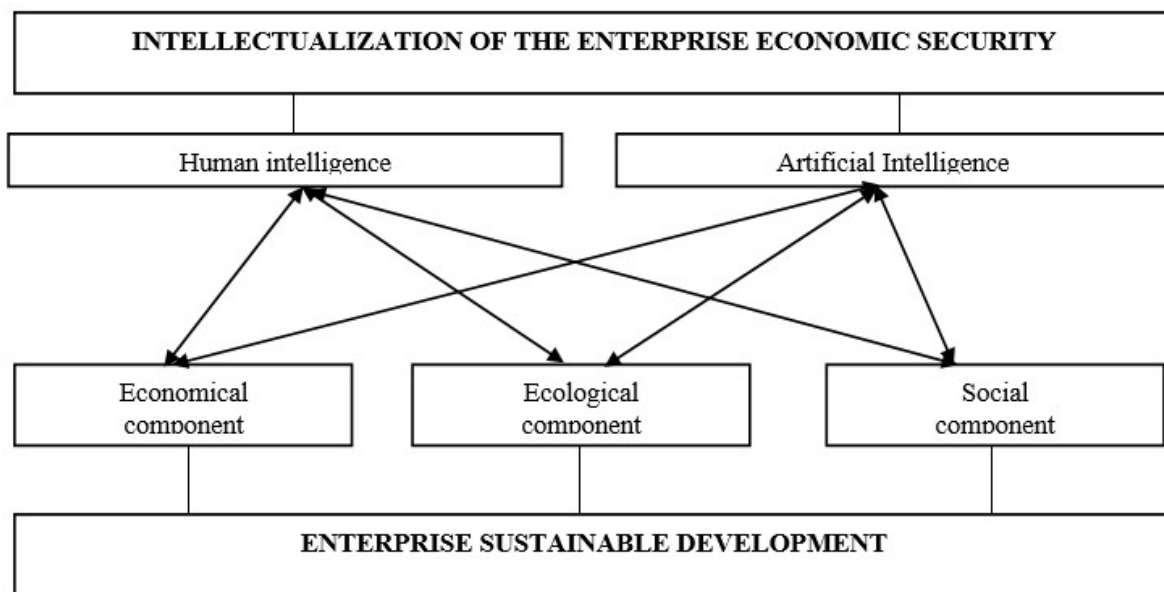


Fig. 2. Visualization of component-by-component integration of processes of economic security intellectualization and ensuring sustainable development of the enterprise

Source: authors' development

Based on the fact that the direct result of intellectualization is a direct increase in the level of intelligence, this process can be considered from two perspectives, namely the formation of human and artificial intelligence [7]. Given the primacy of sustainable development, we start from the components of the triune model: economic, ecological and social components. To successfully implement the integration of the studied processes, it is worth looking for the necessary tools at the intersection of components. For example, as a synergy between artificial intelligence and the environmental component, the enterprise should consider using software for measuring and monitoring environmental indicators in real time with visualization of forecasts and risks.

We propose to take a closer look at the toolkit for integrating the processes of economic security intellectualization and sustainable development of business entities with the help of defined components and taking into account functional aspects.

First. The economic component of the integration economic security intellectualization and sustainable development theory includes measures aimed at increasing the financial result:

- development of an integrated development strategy to accelerate the achievement of the goals of economic security intellectualization and sustainable development;
- optimization of investments for more effective

implementation of the company's plans; attraction green investments; increasing investors' confidence in business;

- creation of strategic alliances with various groups of stakeholders for the purpose of developing joint production strategies, sharing knowledge and ideas, creating innovative products, implementing joint social activities;

- conducting reengineering of business processes with the aim of moving to the next technological level, automating activities, reducing resource costs, minimizing waste and emissions;

- supply chain management to deepen production and technological ties with suppliers, optimize logistics costs and investigate the nature of the raw materials origin and semi-finished products;

- expansion of analytics using modern software and artificial intelligence to increase the accuracy of forecasts, quality of planning, optimization of the all-types resources' costs, accounting for a wide list of parameters and non-financial indicators;

- development of a balanced system of indicators using digital tools to increase the level of management efficiency and control over all types of enterprise activities.

Second. The environmental component assumes that the proposed measures have the greatest importance in reducing the negative environmental impact of the enterprise's activities on the environment, but may

also have other impacts on the enterprise's financial and any other indicators:

- systematic quality management in order to obtain and further confirm compliance with international standards and norms of product quality;
- implementation of a modern energy efficiency management system [8, p. 60];
- conducting an environmental audit of products with the aim of further reducing the consumption of raw materials and packaging materials or replacing them with more ecological and renewable materials;
- analysis of the company's activities in order to identify the possibilities of minimizing the negative impact on the environment and finding ways of technical modernization of the equipment [9, p. 18];
- involvement of all enterprise personnel in the process of greening in order to create a synergistic effect of the use of intellectual capital;
- digitalization of business processes (introduction of online payments, electronic document flow, electronic invoices, etc.) in order to reduce the use of paper, improve data security, and optimize time spent;
- use of SMART systems for accounting, analysis and reporting on non-financial indicators within international standards (GRI, SASB, IIRC, SA 8000, AA1000 AS, ISO 26000 and others).

Third. The social component of integrating the processes of economic security intellectualization and ensuring sustainable development at the enterprise has a people-centered nature and involves the implementation of such measures that will be oriented to the needs of society:

- formation of the general goal and mission of the enterprise, which will help employees identify their belonging to the team and feel responsible for achieving the set goals [10, p. 105];
- creating the training and staff development system (creation of own courses, appointment of mentors among experienced employees, knowledge assessment, online access to the company's knowledge library, talent search, etc.);
- provision of flexible working conditions (irregular work schedule, remote permission) and expansion of the compensation portfolio, which will increase employee satisfaction with their employer and strengthen the level of retention of talented employees at the enterprise;
- checking the production processes safety; improving technologies and replacing equipment with equipment that poses a lower threat to the safety and health of the company's employees;
- involvement of the enterprise in the social life of the city, region or country in order to solve local problems of sustainable development with the

help of the enterprise intellectual capital;

- conducting regular benchmarking in order to find best practices in the industry, which the company can adopt and implement in its activities; search for insights on improving products and services; tracking trends;
- conducting transparent activities, day-by-day reporting and informing about the news of the company with the help of SEO and SMM in the format of storytelling, which will help not only to promote the company, but also to popularize its fundamental principles of work (non-discrimination, equality, fight against corruption, fight against nepotism, corporate social responsibility, green image, labour flexibility, methods of motivating employees, etc.).

Summarizing the described measures for integrating the processes of economic security intellectualization and ensuring the sustainable development of economic structures, it should be noted that their list is not fully completed and can be enriched by the development process of the enterprise, the intellectual knowledge of its employees and as a result of globalization processes that will bring humanity closer or further away from achieving sustainable development goals.

Conclusions

As a result of the conducted research, the qualitative interrelationship between the processes of economic security intellectualization and ensuring the sustainable development of entrepreneurial entities was systematized, the applied dimension of the integration of the relevant conceptual provisions in the conditions of active macroeconomic systems transformation was presented. The basic provisions of the intellectualized approach implementation to economic security and the conceptual foundations of ensuring the enterprises sustainable development are analysed. The system-forming principles of combining the principles of integration of the of economic security intellectualization and ensuring sustainable development are identified, namely the principles of purposefulness, innovation, humanism, responsibility, balancing, synergy, participativeness, transparency and the principle of knowledge preservation. The functional dimension of the interrelationship between the studied theories is considered and applied means of component-by-component integration of the intellectualized approach in ensuring economic security into a three-unit system of sustainable functioning components of business structures are proposed.

Prospective directions of scientific research in the theoretical and methodological field determined by this study are the substantiation of the organizational

and economic mechanism of the integration the economic security intellectualization and ensuring the sustainable development of business structures with the specification of managerial aspects for the practical implementation of these processes.

REFERENCES

1. Derhaliuk, B.V. (2019). Strukturni zminy iak vymoha intelektual'no-orientoivanoho rozvytku natsionalnoi ekonomiky [Structural changes as the requirement for intellectual-oriented development of the national economy]. *Naukovyj visnyk Uzhhorods'koho natsionalnogo universytetu. Seriya: Mizhnarodni ekonomichni vidnosyny ta svitove hospodarstvo – Uzhorod National University Herald. Series: International Economic Relations and World Economy*, 25, 85-88 [in Ukrainian].

2. Tulchynska, S.O., Solosich, O.S., & Chornii, V.V. (2021). Vplyv didzhyalizatsii upravlynskykh protsesiv na systemu zabezpechennia ekonomichnoi bezpeky pidpriemstva [The impact of digitization of management processes on the system of ensuring the economic security of the enterprise]. *Investytsii: praktyka ta dosvid – Investments: practice and experience*, 9, 54–58. DOI: <https://doi.org/10.32702/2306-6814.2021.9.54> [in Ukrainian].

3. Marhasova, V., et al. (2022). Environmentalization of Production as a direction of ensuring the sustainability of production activities of enterprises and increasing their economic security. *International Journal of Safety and Security Engineering*, 12 (2), 159-166. DOI: <https://doi.org/10.18280/ijss.120203> [in English]

4. Hrechko, A.V., & Ocheretiana, O.V. (2022). Ekonomichni perevahy implementatsii mekhanizmu upravlinnia stalym rozvytkom na vitchyznianskykh pidpriemstvakh [Economic advantages of implementing the sustainable development management mechanism at domestic enterprises]. *Ekonomichnyi visnyk Natsionalnogo tekhnichnogo universytetu Ukrainy “Kyivskiy politekhnichnyi instytut” – Economic Bulletin of the National Technical University of Ukraine “Kyiv Polytechnic Institute”*, 22, 47–51. DOI: <https://doi.org/10.20535/2307-5651.22.2022.259799> [in Ukrainian].

5. Demianenko, T. I. (2020). Stalyj rozvytok vitchyznianskykh pidpriemstv v suchasnykh ekonomichnykh umovakh [Sustainable development of domestic enterprises in modern economic conditions]. *Vcheni zapysky TNU imeni V. I. Vernadskoho. Seriya: Ekonomika i upravlinnia – Scientific notes of TNU named after V. I. Vernadskyi. Series: Economics and management*, 2, 185-188. DOI: <https://doi.org/10.32838/2523-4803/70-2-30> [in Ukrainian].

6. Arefieva, O.V., & Poberezhna, Z.M. (2019). Intelektualizatsiia upravlinnia kholistychnym rozvytkom biznes-protsesiv pidpriemstva [Management intellectualization in holistic development of company business processes]. *Visnyk Kyivskoho natsional'nogo universytetu tekhnolohij ta dyzajnu. Seriya: Ekonomichni nauky – Bulletin of the Kyiv National University of*

Technologies and Design. Series: Economic sciences, 5(139), 78-92. DOI: <https://doi.org/10.30857/2413-0117.2019.5.8> [in Ukrainian].

7. Briukhovetska, N.Yu., & Bohutska, O.A. (2020). Intelektualizatsiia pidpriemstv: pidkhody, sutnist, struktura [Intellectualization of enterprise: approaches, the concept, a structure]. *Ekonomichnyi visnyk Donbasu – Economic Herald of the Donbas*, 1(59), 92-100. DOI: [https://doi.org/10.12958/1817-3772-2020-1\(59\)-92-100](https://doi.org/10.12958/1817-3772-2020-1(59)-92-100) [in Ukrainian].

8. Cherchuk, L. (2019). Ekolohichna bezpeka v systemi menedzhmentu pidpriemstva [Environmental security in the system management of the enterprise]. *Ekonomichnyi chasopys Skhidnoevropejskoho natsionalnogo universytetu imeni Lesi Ukrainky – Economic journal of Lesya Ukrainka Eastern European National University*, 1, 55-61. DOI: <https://doi.org/10.29038/2411-4014-2019-01-55-61> [in Ukrainian].

9. Kryvda O., et al. (2022). Harmony of Ecological Development in the Conditions of the Circular Economy Formation. *Environment and Ecology Research*, 10(1), 11-20. DOI: <https://doi.org/10.13189/eer.2022.100102> [in English]

10. Liakhovych O. O., & Oplachko I. O. (2021). Ekonomichna bezpeka ta transparentnist pidpriemstv v umovakh tsyfrovizatsii [Economic security and transparency of enterprises in the conditions of digitalization]. *Visnyk Natsional'nogo universytetu vodnogo hospodarstva ta pryrodokorystuvannia – Bulletin National University of Water and Environmental Engineering*, 2, 100-111 [in Ukrainian].

Received 09.04.2024.

Revised 11.04.2024.

Accepted 13.04.2024.

Published 25.06.2024.

ВЗАЄМОЗВ'ЯЗОК ПРОЦЕСІВ ІНТЕЛЕКТУАЛІЗАЦІЇ ЕКОНОМІЧНОЇ БЕЗПЕКИ ТА ЗАБЕЗПЕЧЕННЯ СТАЛОГО РОЗВИТКУ ПІДПРИЄМСТВА В УМОВАХ ТРАНСФОРМАЦІЇ МАКРОЕКОНОМІЧНИХ СИСТЕМ

Шашина М. В., Костюнік О. В., Дергалюк М. О.,
Солосіч О. С., Очеретяна О. В.

Дана стаття присвячена систематизації теоретичних і прикладних аспектів якісного взаємозв'язку процесів інтелектуалізації економічної безпеки та забезпечення сталого розвитку підприємницьких утворень, інтеграції концептуальних положень даних теорій в систему організаційно-економічного забезпечення діяльності підприємств під впливом активних трансформацій макроекономічних систем сучасності. Авторами детально проаналізовано прикладні особливості реалізації інтелектуалізованого підходу до формування політики економічної безпеки підприємницьких структур. Виокремлені системні положення імплементації концептуальних засад теорії сталого розвитку в господарські процеси функціонування підприємств. Сформульовано фундаментальні принципи якісної інтеграції процесів інтелектуалізації економічної безпеки та забезпечення сталого розвитку підприємницьких утворень, зокрема принцип цілеспрямованості, принцип інноваційності, принцип гуманізму, прин-

цип відповідальності, принцип балансування, принцип синергійності, принцип партисипативності, принцип транспарентності, принцип збереження знань. Запропонована логіко-структурна схема взаємозв'язку функціональних аспектів реалізації процесів інтелектуалізації економічної безпеки та забезпечення сталого розвитку на рівні підприємства, якою якісно узгоджуються відповідні функціональні процеси (фінансові, кадрові, техніко-технологічні, інформаційні тощо), які відображають практичні прояви імплементації інтелектуалізованого підходу в економічній безпеці та безпосередньо сталого розвитку підприємства. Надано покомпонентну інтеграцію системних процесів інтелектуалізації економічної безпеки та забезпечення сталого розвитку, яка відображає взаємозв'язок реперних елементів кожної з концепцій у межах управлінської структури господарюючих суб'єктів. Виконано покомпонентний аналіз інструментального забезпечення у розрізі конкретних управлінських практик інтелектуалізованого підходу до забезпечення економічної безпеки підприємства в межах системних елементів теорії сталого розвитку на основі триєдиного підходу (економічний компонент, соціальний компонент та екологічний компонент).

Ключові слова: економічна безпека, сталий розвиток, інтелектуалізація, інтелектуалізований підхід, економічна безпека підприємства, сталий розвиток підприємства.

INTERRELATIONSHIP BETWEEN PROCESSES OF ECONOMIC SECURITY INTELLECTUALIZATION AND ENSURING SUSTAINABLE DEVELOPMENT OF THE ENTERPRISE IN THE CONDITIONS OF MACROECONOMIC SYSTEMS TRANSFORMATION

*Shashyna M. V., Kostyunik O. V., Dergaliuk M. O., Solosich O. S., Ocheretiana O.V.**

National Technical University of Ukraine “Igor Sikorsky Kyiv Polytechnic Institute”, Kyiv, Ukraine

*e-mail: o.ocheretiana@kpi.ua

Shashyna M. V. ORCID: <https://orcid.org/0000-0001-6676-3316>

Kostyunik O. V. ORCID: <https://orcid.org/0000-0003-4138-7646>

Dergaliuk M. O. ORCID: <https://orcid.org/0000-0002-9244-1625>

Solosich O. S. ORCID: <https://orcid.org/0000-0003-0057-463X>

Ocheretiana O.V. ORCID: <https://orcid.org/0000-0002-8443-5997>

This article is devoted to the systematization of the theoretical and applied aspects of the qualitative relationship between the processes of economic security intellectualization and ensuring the sustainable development of entrepreneurial entities, the integration of the conceptual provisions of these theories into the system of organizational and economic support for the activities of enterprises under the influence of active transformations of modern macroeconomic systems. The authors analysed in detail the applied features of the intellectualized approach implementation to the formation of economic security policy for business structures. The system provisions of the implementation for the conceptual foundations of sustainable development theory in the economic processes of the enterprises functioning are singled out. The fundamental principles of qualitative integration of the processes of economic security intellectualization and ensuring the sustainable

development for entrepreneurial entities are formulated, in particular the principle of purposefulness, the principle of innovation, the principle of humanism, the principle of responsibility, the principle of balancing, the principle of synergy, the principle of participativeness, the principle of transparency, the principle of knowledge preservation. The proposed logical-structural diagram of the interconnection between functional aspects of the economic security intellectualization processes and ensuring sustainable development at the enterprise level, which qualitatively coordinates the relevant functional processes (financial, personnel, technical and technological, informational, etc.), which reflect the practical manifestations of the intellectualized approach implementation in economic security and direct sustainable development of the enterprise. The component-by-component integration of the system processes of economic security intellectualization and ensuring sustainable development is presented, which reflects the relationship of benchmark elements on each of the concepts within the management structure of economic entities. A component-by-component analysis of instrumental support was carried out in terms of specific management practices of an intellectualized approach to ensure the enterprise economic security within the system elements of the sustainable development theory based on a three-unit approach (economic component, social component and environmental component).

Keywords: economic security, sustainable development, intellectualization, intellectualized approach, enterprise economic security, enterprise sustainable development.

REFERENCES

- Derhaliuk, B.V. (2019). Strukturni zminy iak vymoha intelektualno-orientovanoho rozvytku natsionalnoi ekonomiky [Structural changes as the requirement for intellectual-oriented development of the national economy]. *Naukovyj visnyk Uzhhorods'koho natsional'noho universytetu. Seriya: Mizhnarodni ekonomichni vidnosyny ta svitove hospodarstvo – Uzhorod National University Herald. Series: International Economic Relations and World Economy*, 25, 85-88 [in Ukrainian].
- Tulchynska, S.O., Solosich, O.S., & Chornii, V.V. (2021). Vplyv didzhitalizatsii upravlinskykh protsesiv na systemu zabezpechennia ekonomichnoi bezpeky pidpriemstva [The impact of digitization of management processes on the system of ensuring the economic security of the enterprise]. *Investytsii: praktyka ta dosvid – Investments: practice and experience*, 9, 54–58. DOI: <https://doi.org/10.32702/2306-6814.2021.9.54> [in Ukrainian].
- Marhasova, V., et al. (2022). Environmentalization of Production as a direction of ensuring the sustainability of production activities of enterprises and increasing their economic security. *International Journal of Safety and Security Engineering*, 12 (2), 159-166. DOI: <https://doi.org/10.18280/ijss.120203> [in English]
- Hrechko, A.V., & Ocheretiana, O.V. (2022). Ekonomichni perevahy implementatsii mekhanizmu upravlinnia stalym rozvytkom na vitchyznianskykh pidpriemstvakh [Economic advantages of implementing the sustainable development management mechanism at domestic enterprises]. *Ekonomichniy visnyk Natsionalnoho tekhnichnoho universytetu Ukrainy “Kyivskiy politekhnichnyi instytut” – Economic Bulletin of the National Technical University of Ukraine “Kyiv Polytechnic Institute”*, 22, 47–51. DOI: <https://doi.org/10.20535/2307-5651.22.2022.259799> [in Ukrainian].

Shashyna M. V., Kostyunik O. V., Dergaliuk M. O., Solosich O. S., Ocheretiana O.V.

5. Demianenko, T. I. (2020). Stalyj rozvytok vitchyznianskykh pidpriemstv v suchasnykh ekonomichnykh umovakh [Sustainable development of domestic enterprises in modern economic conditions]. *Vcheni zapysky TNU imeni V. I. Vernadskoho. Serii: Ekonomika i upravlinnia – Scientific notes of TNU named after V. I. Vernadskyi. Series: Economics and management*, 2, 185-188. DOI: <https://doi.org/10.32838/2523-4803/70-2-30> [in Ukrainian].
6. Arefieva, O.V., & Poberezhna, Z.M. (2019). Intelektualizatsiia upravlinnia kholistychnym rozvytkom biznes-protsesiv pidpriemstva [Management intellectualization in holistic development of company business processes]. *Visnyk Kyivskoho natsional'noho universytetu tekhnolohij ta dyzajnu. Serii: Ekonomichni nauky – Bulletin of the Kyiv National University of Technologies and Design. Series: Economic sciences*, 5(139), 78-92. DOI: <https://doi.org/10.30857/2413-0117.2019.5.8> [in Ukrainian].
7. Briukhovetska, N.Yu., & Bohutska, O.A. (2020) Intelektualizatsiia pidpriemstv: pidkhody, sutnist, struktura [Intellectualization of enterprise: approaches, the concept, a structure]. *Ekonomichnyj visnyk Donbasu – Economic Herald of the Donbas*, 1(59), 92-100. DOI: [https://doi.org/10.12958/1817-3772-2020-1\(59\)-92-100](https://doi.org/10.12958/1817-3772-2020-1(59)-92-100) [in Ukrainian].
8. Cherchuk, L. (2019). Ekolohichna bezpeka v systemi menedzhmentu pidpriemstva [Environmental security in the system management of the enterprise]. *Ekonomichnyj chasopys Skhidnoevropejskoho natsionalnoho universytetu imeni Lesi Ukrainky – Economic journal of Lesya Ukrainka Eastern European National University*, 1, 55-61. DOI: <https://doi.org/10.29038/2411-4014-2019-01-55-61> [in Ukrainian].
9. Kryvda O., et al. (2022). Harmony of Ecological Development in the Conditions of the Circular Economy Formation. *Environment and Ecology Research*, 10(1), 11-20. DOI: <https://doi.org/10.13189/eer.2022.100102> [in English]
10. Liakhovych O. O., & Oplachko I. O. (2021). Ekonomichna bezpeka ta transparentnist pidpriemstv v umovakh tsyfrovizatsii [Economic security and transparency of enterprises in the conditions of digitalization]. *Visnyk Natsional'noho universytetu vodnoho hospodarstva ta pryrodokorystuvannia – Bulletin National University of Water and Environmental Engineering*, 2, 100-111 [in Ukrainian].