

Directions of the Activation of the Development of a Small Innovative Enterprise

Nadiia Antypenko¹, Wang Dongcheng², Zhanna Lysenko³, Olena Krasnonosova⁴, Liudmyla Grynevych²

¹National Aviation University (NAU), Kyiv, Ukraine

²Simon Kuznets Kharkiv National University of Economics, Kharkiv, Ukraine

³Yuriy Fedkovych Chernivtsi National University, Chernivtsi, Ukraine

⁴Research Center for Industrial Development Problems of the National Academy of Sciences of Ukraine, Kharkiv, Ukraine

Abstract

The study is devoted to substantiation of directions of intensification of development of small innovative enterprise, which has a significant impact on the overall innovation activity of the country and promotes innovative development, transition to more advanced technological systems. The outlined role of small business in innovative development in the direction of intensifying innovation in the economy, improving organization and production, as well as in the form of direct participation in the innovation process, production of science-intensive products, stimulating demand for innovation. A group of factors hindering the development of small innovative entrepreneurship was identified, including: financial aspects of the activity, shortcomings of organizational and communicative nature, underdeveloped technology market, information plan problems, internal production problems of small business, market problems. The directions of intensification of the development of small innovative entrepreneurship are substantiated, namely: financial and credit support of small innovative entrepreneurship; introduction of tax incentives; material and technical support; nationwide intensification of innovation activity; information support; development of innovation infrastructure. The involvement of the outlined directions of intensification of small innovative entrepreneurship will help to obtain a synergistic effect of innovative development of both small innovative business structures and the economy as a whole.

Key words:

ground innovative entrepreneurship, intensification of development, innovations.

1. Introduction

It is generally accepted that entrepreneurship distinguishes between its subjects in terms of production, distribution, appropriation of goods and services. Entrepreneurship has its specific functions that are not inherent in other relationships that arise between businesses. Such functions include:

firstly, innovative, ie provides the generation of new ideas in the organizational, technical, innovative, production areas of operation, promotes research and development, production of new goods and services;

secondly, organizational, which involves the introduction of new forms and methods of organization of production, a combination of classical and innovative forms of remuneration within the established legal and institutional canons, a combination of forms of division of labor to maximize effect, introduction of basic elements of the productive forces;

thirdly, economic, which provides for the most rational and efficient use of financial, material, labor, intellectual, knowledge, information and other resources;

fourthly, social, on a macro scale - in accordance with the basic economic laws of production of goods and services needed by society to meet needs, on a local scale - providing benefits, social protection, assistance to workers and their families, improving working and leisure conditions, creating favorable psychological climate in the team;

fifthly, personal, is an incentive to engage in entrepreneurship, provided by achieving the entrepreneur's own goal, self-realization, job satisfaction and a certain wealth, provides the opportunity to obtain personal freedom, including through the successful disposal of their knowledge, information, abilities, creative thinking, etc.

The role of small business in innovative development is multifaceted and significant, because, on the one hand, it provides intensification of innovation in the economy, contributes to the improvement of organization and production. On the other hand, being a direct participant in the innovation process, the production of science-intensive products creates a demand for innovation, thereby encouraging innovative development. Small innovative entrepreneurship encourages faster technological development, provides dynamic commercialization of new technologies and innovative developments, responds more quickly to innovative societal demands, and thus has great advantages over corporations.

Promoting the development of small innovative enterprises is of great importance not only for various spheres of production, but also for the state as a whole. As small innovative entrepreneurship provides the speed of technological change, the implementation of innovation and investment development throughout the country and

corresponds to the direction of inclusive and socially oriented development.

In this study, the main goal is to determine areas for enhancing the development of small innovative businesses. This was facilitated by the solution of the following tasks for the authors, namely:

- clarification of specific functions of entrepreneurship;
- highlighting the benefits of small innovative entrepreneurship;
- development of the direction of intensification of development of small innovative business.

2. Literature review

Innovative development is a characteristic feature of small business development. Small business acts as a catalyst for innovation and accelerates the formation of competitive advantages. The issue of intensification of innovative activity of small business is devoted to the research of the following scientists: Abramova A. (2021) [1]; Akhmetshin E.M. (2018) [2]; Arefieva O. (2021) [3]; Butko M. (2019) [4]; Danylkiv K. (2021) [5]; Derhaliuk M. (2021) [6]; Dubyna M. (2021) [7]; Fedyshyn M. (2019) [8]; Grigoraş-Ichim C.E. (2018) [9]; Ivanova N. (2016) [10]; Kholiavko N. (2021) [11]; Zhavoronok A. (2021) [12]; Korneeva E. (2021) [13]; Kosach I. (2019) [14]; Panov A. (2019) [15]; Parasotskaya N. (2021) [16]; Pohrebniak A. (2021) [17]; Tkachenko T. (2021) [18]; Popelo O. (2021) [19]; Kychko I. (2021) [20]; Tulchynckiy R. (2021) [21]; Preethi Priya Malar A. (2020) [22]; Rakhimova S. (2021) [23]; Zhuk O. (2020) [24]; Shkarlet S. (2017) [25]; Tarasenko A. (2017) [26]; Kostunuk O. (2021) [27]; Tulchynska S. (2021) [28]; Vovk O. (2021) [29]; Verchenko Y. (2021) [30]; Tkachenko T. (2021) [31]; Wicha S. (2018) [32]; Yushkova V. (2020) [33]; Zaverza E. (2019) [34] and others.

The aim of the article [5] is to study the features, role and importance of small business in a market economy. The authors use the approach of ABC-XYZ-analysis and matrix modeling in order to study the innovative activities of small businesses. Based on the results of calculations, scientists have drawn conclusions and provided recommendations for the management of innovation in small enterprises of Lviv region.

The authors of the article [15] investigate the issue of social entrepreneurship as a key tool for solving social problems in society. Researchers analyzed the mechanism of changing the concept of social policy at the state and regional levels. According to the results of the study, it is proved that the development of social entrepreneurship helps to smooth out the urgent problems of society and accelerates their solution.

The article by scientists [22] is devoted to the study of innovative ideas in entrepreneurship, as well as a lot of attention to women entrepreneurs. The authors believe that women have all the opportunities to demonstrate multifaceted talents and skills to start their own business. As a result of the study, the authors claim that most women think every day that they do not want to look for work, but want to start their own business and offer work to others.

The article [34] analyzes the programs to support small innovative entrepreneurship. The authors highlighted certain shortcomings in the development of administrative and production infrastructure of innovation, including the inefficiency of business incubators and most technology parks at universities, limited resources for the successful launch of mass and mass specialized production of competitive innovative products.

Research [32] shows that handicrafts are key to sustainable development in the Thai local community. The authors explore the features of the design of traditional handicrafts with the technological sphere. The authors believe that the results of the research can be further implemented by product developers in order to improve their functionality and develop functional platforms with greater added value of the product for the local artisan.

The authors' scientific achievements [33] identify the factors that hinder the harmonious development of small and medium-sized businesses. The authors analyzed the causes of asymmetry in the number of small and medium enterprises in rural and urban areas. The authors investigated the areas of activity and proposed the creation of appropriate conditions that will promote the development of small and medium enterprises in rural areas.

The authors of the article [2] devoted their research to the study of the specifics of the functioning of small enterprises in housing and communal services. Scientists have developed a set of measures to create more favorable conditions for small businesses. Scholars argue that the practical implementation of the proposed areas of business support should be coordinated at all levels of government.

According to scientists [16], small and medium enterprises are characterized by flexibility and ability to adapt, as well as quickly reorganize them in a rapidly changing trend. The study proves that it is the basis and key to accelerated socio-economic growth, as well as strengthens various economic, political, cultural and other relations between countries and regions.

Within the framework of scientific work [30] of scientists the directions of strategies of development of small enterprises of confectionery industry are investigated. The authors formed and tested a systematic approach to the assessment of strategic development on the example of one of the enterprises. The study identified significant shortcomings in the organization of management and

outlined ways to support and enhance the activities of small businesses.

The authors of the study [23] analyze the role of small business in sustainable development through its actions, public and social consciousness and responsibility. In the study, researchers argue that small and medium-sized enterprises can make a significant contribution to supporting the Sustainable Development Goals.

3. Results

The structures of small innovative entrepreneurship include diverse enterprises, organizations, associations, societies that implement innovative ideas in specific projects, which ultimately leads to financial results as a result of innovation and economic activity.

Small innovative entrepreneurship has a significant impact on the overall innovation activities of the country and promotes innovative development, the transition to more advanced technological systems. Small business is inherently innovative, as small business is able to respond quickly to environmental challenges and adapt to new conditions. This is facilitated by:

firstly, the production flexibility that is attractive to small businesses, which provides a response to changes in market conditions and helps meet the needs of consumers;

secondly, in-depth specialization, which allows small businesses to respond more quickly to change;

thirdly, organizational and technological flexibility.

The unconditional advantages of small innovative entrepreneurship are (Fig. 1):

- adaptability to the challenges of restructuring of technological processes and modernization of production under the influence of growing needs or changes in demand of users of products, products and services. This is facilitated by production in small batches and the ability to make changes in production in a shorter period of time in relation to large enterprises;

- creating the most optimal and favorable conditions for creativity, creativity, which in themselves have an individual personality;

- the ability to play the role of an experimental link in a large industry with the reliance on small innovative entrepreneurship risks of pilot development of innovations, as the emergence of innovative products at the initial stage does not always become the beginning of widespread demand for these innovative products in the future;

- ability to quickly introduce new products, disseminate innovative ideas, quickly cooperate with big business and contact with consumers, adapt certain new features of innovative products and services to possible innovative needs;

- the opportunity to be a link between the industry, the public research sector, universities and other participants in the innovation process;

- because the inventor, scientist, owner, manager can act in one person, ensures the minimization of possible contradictions that arise when interacting in corporate structures;

- the ability to accelerate scientific and technological progress and production of innovative products by meeting the needs of large enterprises in the production of certain parts and components, thereby increasing the efficiency of large enterprises;

- acts as a basis for the formation of the middle class, which reduces social differentiation through income that is higher than the average wage in the economy;

- production activities of small innovative enterprises are distinguished by a narrow subject specialization, which in turn becomes the focus of attention, concentration, finance both in the first, initial stages of creation and in the final stages of production and dissemination of innovations. That is, there is a reduction in time in the chain from scientific activities to industrial production, starting scientific-innovative and technological activities, moving to the production process;

- the emergence of new organizational creative, innovative ideas and approaches to solving problems due to limited staffing, which does not allow to involve specialists from other fields, inventive groups of small businesses often have to work in areas where researchers are not professionals because limited staffing of small businesses, which in turn affects the competence of employees;

- able to ensure the development of the economy on the basis of sustainable development, to reduce the use of raw materials and energy, the introduction of environmentally friendly technologies, use the principles of circular economy to reduce production waste and further processing;

- digitalization and new information technologies help to improve the conditions of small business and expand their capabilities.

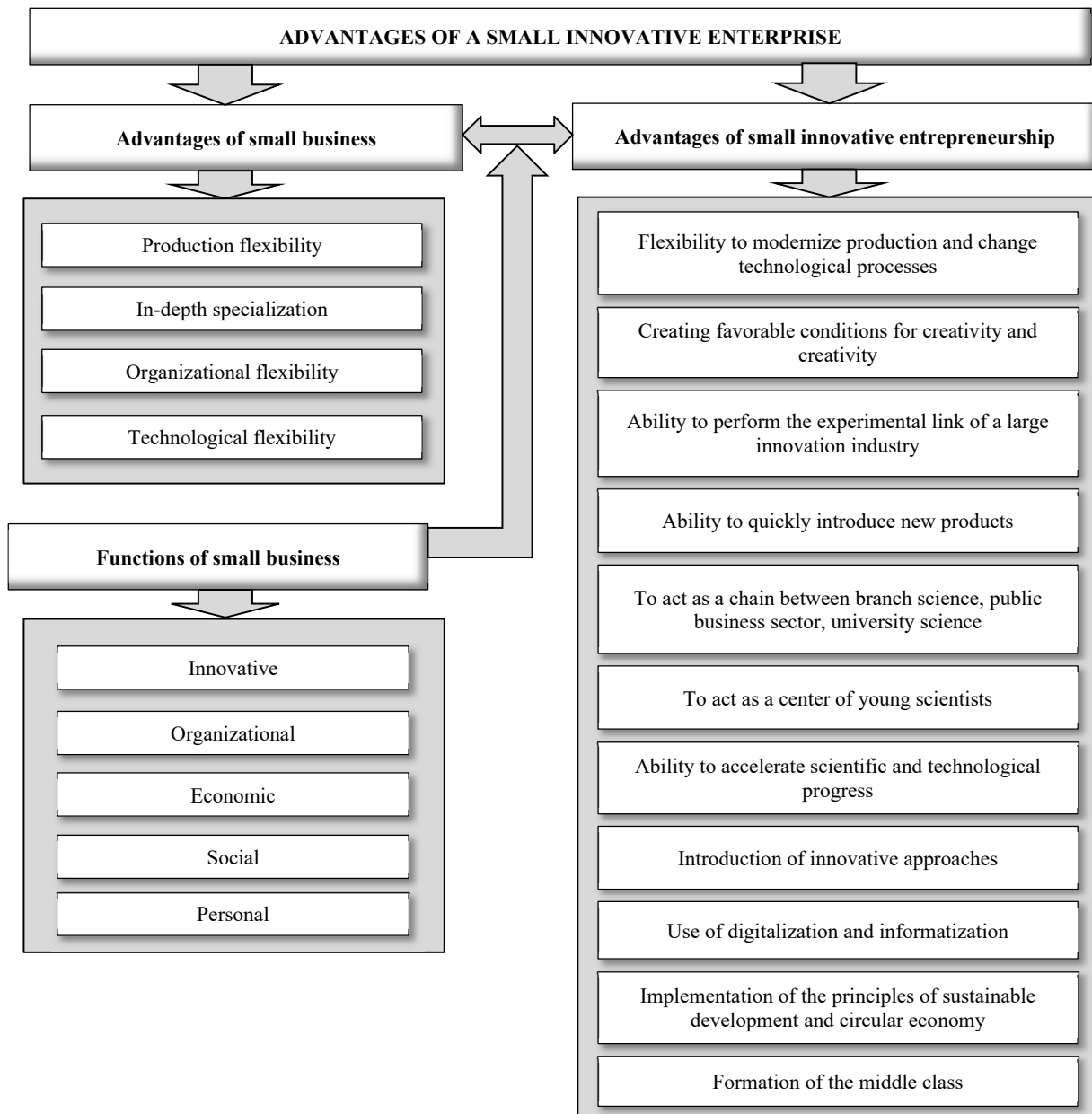


Fig. 1 Advantages of small business and small innovative entrepreneurship

Source: built by the authors.

However, it should be noted that despite the many advantages of small innovative entrepreneurship today we cannot talk about its active development, and vice versa, we can say that the level of activity is too low.

The group of factors hindering the development of small innovative entrepreneurship includes (Fig. 2):

- firstly, the financial aspects of the activity, which is primarily the lack of own financial resources, it should be noted that despite the innovation direction of state support for innovative entrepreneurship is unsatisfactory, for small

innovative entrepreneurship there are general strict conditions for attracting investment resources;

- secondly, shortcomings of organizational and communicative nature, which is the lack of appropriate conditions for establishing close cooperation with other actors in the innovation process due to unsatisfactory development of innovation infrastructure, which is designed to provide information, mediation, legal, expert services;

- thirdly, the underdevelopment of the technology market, which complicates the market relations of the innovation market, inhibits the demand for innovative products, complicates the relationship between small innovative enterprises and consumers of innovative products;

- fourthly, the problems of the information plan, which are insufficient systematization, or even sometimes lack of information about new technologies, supply and demand for innovative products, it makes it difficult to monitor the market of innovative products and services, reduces the commercialization potential of small innovative enterprises;

- fifthly, domestic production problems associated with low innovation potential of small businesses due to the shortage of highly qualified technical and managerial staff, which is also negatively affected by the lack of development of consulting and engineering infrastructure;

- sixthly, market problems, including high cost of innovation, high innovation risk for small innovative enterprises, uncertainty and shortness of the innovation process, long and sometimes indefinite payback period of innovation, low effective demand for innovative products among national actors economy.

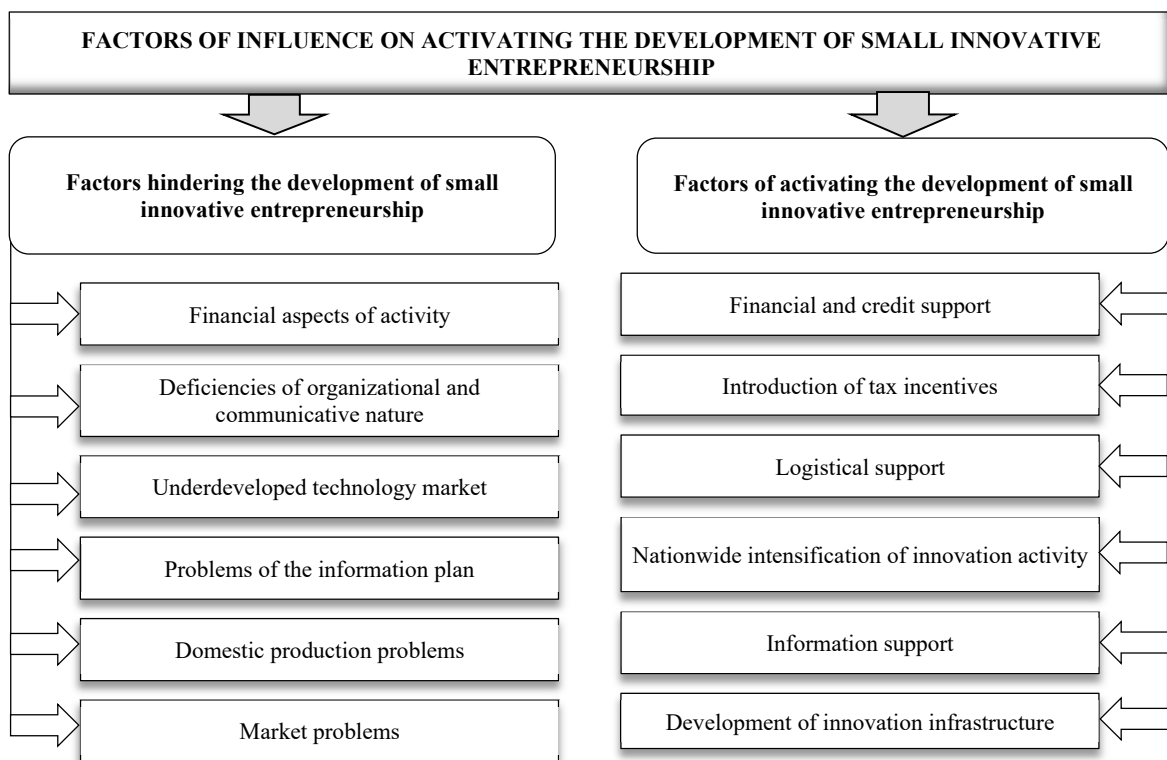


Fig. 2 Factors influencing the intensification of small innovative entrepreneurship

Source: built by the authors.

In the direction of intensifying the development of small innovative entrepreneurship, it is necessary to direct the efforts of the state and other entities in the direction of supporting development, namely:

- financial and credit support for small innovative enterprises, in the direction of direct loan guarantees, targeted subsidies and budget financing, as well as financing from local budgets and the regional development support fund;

- introduction of tax incentives for small innovative enterprises, due to benefits and preferences in taxation;

- material and technical support, through the expansion of opportunities on preferential terms for small innovative businesses for rent or purchase of premises, access to the necessary specific means of production, including scientific equipment;

- nationwide intensification of innovation activity, which will increase the demand for innovative products and become an incentive to intensify the development of small innovative enterprises;

- information support, access to the necessary databases, expanding the use of information networks and

research and innovation and technical libraries, as well as conducting an active campaign to support small innovative businesses;

- development of innovation infrastructure, which makes it possible to ensure: creation of favorable conditions for effective implementation of innovative business activities, reduction of barriers and support in solving problems of small innovative entrepreneurship; access to soft loans and subsidies for small innovative businesses; access to the necessary information flows, simplification of access to the latest, modern innovative technologies; expanding the customer base for the sale of innovative products and services; increasing export capacity and entering the world market of small innovative entrepreneurship.

Forms of activation of small innovative entrepreneurship can be:

- financial interest of innovators-inventors;
- simplification of registration procedures for small innovative businesses;
- ensuring the priority refund of value added tax;
- reimbursement of expenses for participation in international exhibitions under certain conditions of signing contracts;
- providing soft loans;
- stimulating the work of innovation funds to reduce the risk of small innovative entrepreneurship;
- state financial support of information support of innovative activity of small business;
- simplification of access of small innovative enterprises to participation in tenders;
- introduction of support and funding for various programs to support and encourage young scientists and professionals;
- popularization of innovative social development, innovative activity and development of small innovative entrepreneurship.

4. Conclusions

Thus, an important element in the development of the post-industrial economy is small innovative entrepreneurship because:

- creates a competitive environment and provides flexibility;
- responds quickly to changes in market conditions and new consumer demands;
- provides individual production;
- have the ability to quickly perceive and generate new ideas;
- provides the speed of technological change;
- has the ability to dynamically commercialize the latest technologies and innovative developments to meet the innovative demand of consumers.

Thus, the intensification of small innovative entrepreneurship is an important prerequisite for countries to gain leadership in the global market for innovative development. This leads to the development of mechanisms to intensify small innovative entrepreneurship through the use of a wide range of incentives at various levels. Such areas of activation of small innovative entrepreneurship include: financial and credit support, introduction of tax incentives, logistical and informational support, development of innovation infrastructure.

The scientific novelty of the study is to substantiate the directions of intensification of small innovative enterprises, based on a systematic approach to justify multi-vector activation measures (which include financial and credit, logistical and information support, tax incentives, innovation infrastructure development), which will ensure synergies for the development of small innovative entrepreneurship.

Further research requires substantiation of mechanisms for accelerating innovation development with the participation of small innovative enterprises to achieve increased competitiveness of the national economy.

References

- [1] Abramova, A., Shaposhnykov, K., Zhavoronok, A., Liutikov, P., Skvirskyi, I., & Lukashev, O. (2021). Ecosystem of VAT Administration in E-Commerce: Case of the Eastern Europe Countries. *Estudios de economía aplicada*, 39(5). <http://dx.doi.org/10.25115/eea.v39i5.4909>.
- [2] Akhmetshin, E.M., Solodova, E.P., Selyutina, A.V., Sharafutdinov, R.I., Kulmetev, R.I. (2018). Directions of small business development in housing and communal services of Samara region. *Proceedings of the 31st International Business Information Management Association Conference, IBIMA 2018: Innovation Management and Education Excellence through Vision 2020* (3924-3930).
- [3] Arefieva, O., Tulchynska, S., Popelo, O., Arefiev, S., Tkachenko, T. (2021). The Economic Security System in the Conditions of the Powers Transformation. *IJCSNS International Journal of Computer Science and Network Security*, 21(7), 35-42. <https://doi.org/10.22937/IJCSNS.2021.21.7.4>.
- [4] Butko, M., Popelo, O., Pishenin, I. (2019). Innovations in Human Resources Management in Eurointegration Conditions: Case for Ukrainian Agro-industrial Complex. *Marketing and management of innovations*, 2, 74-82.
- [5] Danylkiv, K.P., Kloba, L.G., Mata, M.N., Martins, J.M., Correia, A.B., Dantas, R.M., Zelenitsa, I., Havran, M. (2021). Diagnostics of Innovative Activity of Small Entrepreneurship Structures in The Lviv Region. *Academy of Entrepreneurship Journal*, 27, 1-14.
- [6] Derhaliuk, M., Popelo, O., Tulchynska, S., Mashnenkov, K., Berezovskyi, D. (2021). State policy of the potential-forming space transformation in the context of the regional development intensification. *CUESTIONES POLÍTICAS*, 39(70), 80-93. DOI: 10.46398/cuestpol.3970.04.
- [7] Dubyna, M., Zhavoronok, A., Nitchenko, K., Sadchykova, I., Chiipesh, N., Murashkovska, I. (2021). Current Trends in

- the Development of the Credit Services Market of the European Union. *IJCSNS International Journal of Computer Science and Network Security*, 21(10), 59-66. <https://doi.org/10.22937/IJCSNS.2021.21.10.8>.
- [8] Fedyshyn, M.F., Abramova, A.S., Zhavoronok, A.V., Marych, M G. (2019). Management of competitiveness of the banking services. *Financial and credit activity: problems of theory and practice*, 1(28), 64-74. <https://doi.org/10.18371/fcaptp.v1i28.163340>.
- [9] Grigoraş-Ichim, C.E., Cosmulese, C.G., Savchuk. D., Zhavoronok, A. (2018). Shaping the perception and vision of economic operators from the Romania – Ukraine – Moldova border area on interim financial reporting. *Economic Annals-XXI*, 173(9-10), 60-67. <https://doi.org/10.21003/ea.V173-10>.
- [10] Ivanova, N., Butko, M. (2016). The Modern Trends of Infrastructure Development. *Baltic Journal of Economic Studies*, 2(3), 37–41.
- [11] Kholiavko, N., Popelo, O., Bazhenkov, I., Shaposhnykova, I., Sheremet, O. (2021). Information and communication technologies as a tool of strategy for ensuring the higher education adaptation to the digital economy challenge. *IJCSNS International Journal of Computer Science and Network Security*, 21(8), 187-195. <https://doi.org/10.22937/IJCSNS.2021.21.8.25>.
- [12] Kholiavko, N., Zhavoronok, A., Shaposhnykov, K., Krylov, D., Morozova, L., & Babiak, N. (2021). Integrated Model of the Higher Education Financing Under the Quadruple Helix Concept. *International Journal of Computer Science and Network Security*, 21(7), 125-132. <https://doi.org/10.22937/IJCSNS.2021.21.7.16>.
- [13] Korneeva E., Skornichenko N., Oruch T. (2021). Small business and its place in promoting sustainable development. *E3S Web of Conferences*, 250, 06007. DOI: 10.1051/e3sconf/202125006007.
- [14] Kosach, I.A., Zhavoronok, A.V., Fedyshyn, M.F., Abramova, A.S. (2019). Role of commission receipts in formation of the revenue of the commercial bank. *Financial and credit activity: problems of theory and practice*, 4(31), 22-30. <https://doi.org/10.18371/fcaptp.v4i31.190781>.
- [15] Panov, A., Balashova, N., Zubova, O., Dosova, A. (2019). Social entrepreneurship as innovative way of development of small business in the region. *E3S Web of Conferences Omkrybiyū docmyn*, 157(36), 04018. DOI: 10.1051/e3sconf/202015704018.
- [16] Parasotskaya N., Berezyuk V., Prasolov V., Nazarova V., Mezentseva T. (2021). Comparative analysis of small and medium-sized businesses and its impact on the development of tourism. *Journal of Environmental Management and Tourism*, 12(6), 1586-1602. DOI: 10.14505/jemt.v12.6(54).15.
- [17] Pohrebniak, A., Arefieva, O., Boiarynova, K., Arefiev, S., Davydenko, V. (2021). Management of Attracting Investment Resources of Enterprises to Ensure Their Economic Security in Circular Economy. *IJCSNS International Journal of Computer Science and Network Security*, 21(10), 302-309. <https://doi.org/10.22937/IJCSNS.2021.21.10.43>.
- [18] Pohrebniak, A., Tkachenko, T., Arefieva, O., Karpenko, O., Chub, A. (2021). Formation of a Competitive Paradigm of Ensuring Economic Security of Industrial Enterprises in the Conditions of Formation of Circular Economy. *IJCSNS International Journal of Computer Science and Network Security*, 21(9), 118-124. <https://doi.org/10.22937/IJCSNS.2021.21.9.16>.
- [19] Popelo O., Dubyna M., Kholiavko N. (2021). World Experience In The Introduction Of Modern Innovation And Information Technologies In The Functioning Of Financial Institutions. *Baltic Journal of Economic Studies*, 7(2), 188-199. DOI: <https://doi.org/10.30525/2256-0742/2021-7-2-188-199>.
- [20] Popelo, O., Kychko, I., Tulchynska, S., Zhygalkevych, Zh., Treitiak, O. (2021). The Impact of Digitalization on the Forms Change of Employment and the Labor Market in the Context of the Information Economy Development. *IJCSNS International Journal of Computer Science and Network Security*, 21(5), 160-167. DOI: 10.22937/IJCSNS.2021.21.5.23.
- [21] Popelo, O., Tulchynska, S., Tulchynckiy, R., Khanin, S., Hrechko, A. (2021). Modeling and forecasting of the integrated index of innovation activity of regions. *Management Theory and Studies for Rural Business and Infrastructure Development*, 43(2), 307-315. DOI: <https://doi.org/10.15544/mts.2021.27>.
- [22] Preethi Priya Malar, A., Subanginidevi, A. (2020). An empirical study of innovative ideas for women entrepreneurship development in small scale industries at tirupattur district. *Journal of Critical Reviews*, 7(16), 137-145. DOI: 10.31838/jcr.07.16.19.
- [23] Rakhimova, S., Goncharenko, L., Titkov, A., Sybachin, S., Kunanbaeva, K. (2021). Development of an economic mechanism for creating sustainable regional infrastructure for supporting small businesses. *E3S Web of Conferences*, 25820, 06063. DOI: 10.1051/e3sconf/202125806063.
- [24] Shkarlet, S., Ivanova, N., Popelo, O., Dubina, M., Zhuk, O. (2020). Infrastructural and Regional Development: Theoretical Aspects and Practical Issues. *Studies of Applied Economics*, 38(4).
- [25] Shkarlet, S.M., Dubyna, M.V. (2017). Essence and features of information society development. *Scientific bulletin of Polissia*, 1(2(10)), 152-158.
- [26] Shkarlet, S.M., Dubyna, M.V., Tarasenko, A.V. (2017). Basic descriptors of the information economy development. *Scientific bulletin of Polissia*, 1(3(11)), 8-15.
- [27] Tkachenko, T., Tulchynska, S., Kostyunik, O., Vovk, O., Kovalenko, N. (2021). Modernization determinants by ensuring economic security of enterprises in the competitive conditions. *IJCSNS International Journal of Computer Science and Network Security*, 21(8), 119-126.
- [28] Tulchynska, S., Shevchuk, N., Kleshchov, A., Kryshstopa, I., Zaburmekha, Ye. (2021). The Role of Higher Education Institutions in the Development of EcoIndustrial Parks in Terms of Sustainable Development. *IJCSNS International Journal of Computer Science and Network Security*, 21(10), 317-323. <https://doi.org/10.22937/IJCSNS.2021.21.10.45>.
- [29] Tulchynska, S., Vovk, O., Popelo, O., Saloid, S., Kostyunik, O. (2021). Innovation and investment strategies to intensify the potential modernization and to increase the competitiveness of microeconomic systems. *IJCSNS International Journal of Computer Science and Network Security*, 21(6), 161-168. <https://doi.org/10.22937/IJCSNS.2021.21.6.22>.

- [30] Verchenko, Y., Bogdanova, I., Kostoglodova, E., Kurinova, Y. (2021). Development of a strategy for the development of small business in the confectionery sector and assessment of the effectiveness of it. *E3S Web of Conferences*, 27322, 08007. DOI: 10.1051/e3sconf/202127308007.
- [31] Vovk, O., Tulchynska, S., Popelo, O., Tulchinskiy, R., & Tkachenko, T. (2021). Economic and Mathematical Modeling of the Integration Impact of Modernization on Increasing the Enterprise Competitiveness. *Management Theory and Studies for Rural Business and Infrastructure Development*, 43(3), 383-389. <https://doi.org/10.15544/mts.2021.35>.
- [32] Wicha, S. (2018). Innovative Design Features Addition for Artisan Traditional Craft with IOT to Promote Local Entrepreneurship; An Empirical Study of Small and Micro Community Enterprise (SMCE) Wood Carving in Chiang Rai, Thailand. *6th Global Wireless Summit, GWS 2018* (pp. 194-198). 8686642. DOI: 10.1109/GWS.2018.8686642.
- [33] Yushkova, V.V., Myazin, N.S., Davydov, V.V., Makeev, S.S., Rud, V.Y., Switala, F. (2020). Problems and main directions of innovative development of small and medium-sized businesses in agriculture of Russia. *IOP Conference Series: Materials Science and Engineering*, 940(17), 012045. DOI: 10.1088/1757-899X/940/1/012045.
- [34] Zaverza, E.V. (2019). Development of small innovative entrepreneurship in the regions of Russia. *IOP Conference Series: Earth and Environmental Science*, 315(223), 022007. DOI: 10.1088/1755-1315/315/2/022007.