Postmodern Openings
ISSN: 2068-0236 | e-ISSN: 2069-9387
Covered in: Web of Science (WOS); EBSCO; ERIH+; Google Scholar; Index Copernicus; Ideas RePeC; Econpapers; Socionet; CEEOL; Ulrich ProQuest; Cabell, Journalseek; Scipio; Philpapers; SHERPA/RoMEO repositories; KVK; WorldCat; CrossRef; CrossCheck

2021, Volume 12, Issue 4, pages: 141-152 | https://doi.org/10.18662/po/12.4/365

The Impact of Innovative Development on the Competitiveness of Enterprises

Nataliia HURZHYI[1],
Tetiana MISHUSTINA[2],
Tetiana KULINICH[3],
Iryna DASHKO[4],
Larysa HARMIDER[5],
Iryna TARANENKO[6]

[1] Zaporizhzhia National University, Zaporizhzhia, Ukraine, madlen2020@ukr.net, https://orcid.org/0000-0002-4955-9548
[2] Alfred Nobel University, Dnipro, Ukraine, dh.market@duan.edu.ua, https://orcid.org/0000-0003-1295-3303
[3] Lviv Polytechnic National University, Lviv, Ukraine, tetiana.v.kulinich@lpnu.ua, http://orcid.org/0000-0003-0110-7080
[4] Zaporizhzhia National University, Zaporizhzhia, Ukraine, irina.znu@i.ua, http://orcid.org/0000-0001-5784-4237
[5] SHEI Ukrainian State University of Chemical Technology, Dnipro, Ukraine, garm@ukr.net, https://orcid.org/0000-0001-7837-2734
[6] Alfred Nobel University, Dnipro, Ukraine, taranenko@duan.edu.ua, https://orcid.org/0000-0002-2697-786X

Abstract: This article examines the impact of innovative development on the competitiveness of enterprises. The current trend of globalization and the spread of innovation has a comprehensive effect on the economic environment. Businesses that are the driving force of the economy must take into account the current conditions of post-industrial society to maintain their position in the market. With the openness of the domestic market, enterprises operate in terms of inclusion in a single economic, information and communication space, which leads to increased competition and the need to ensure adequate to the new reality of approaches to the activities of enterprises.
The factors of competitiveness of enterprises that will ensure high efficiency of their work, competitiveness, stable market position and the possibility of development in accordance with the objectives are analyzed. In a competitive environment, stable positions are occupied by enterprises that are able to form a balanced development program, effectively maneuvering the internal factors of competitiveness and adapting to the conditions of external factors. It is noted that innovative development affects both external and internal factors of competitiveness.
External factors of competitiveness under the influence of innovative development tend to improve the conditions for entrepreneurs. The application of innovation to the internal factors of innovation competitiveness is an important element of competitive strength.

Keywords: *globalization of society, post-industrial society, competitiveness of enterprises, factors of competitiveness of enterprises, external factors, internal factors.*

How to cite: Hurzhyi, N., Mishustina, T., Kulinich, T., Dashko, I., Harmider, L., & Taranenko, I. (2021). The Impact of Innovative Development on the Competitiveness of Enterprises. *Postmodern Openings, 12*(4), 141-152. https://doi.org/10.18662/po/12.4/365

1. Introduction

Contemporary phenomena of globalization and informatization of society have led to profound changes in social and economic order and the widespread of the principles of post-industrial economy. Information and knowledge are emerging as an important economic factor. The new model of economic development is characterized by the comprehensive use of advanced technologies and the transition to the production of high-tech products, intellectualization of economic activity, the application of innovations in the field of managerial decisions and progressive management.

The driving force of the economy has always been and is an enterprise that carries out production activities and provides services, invests and creates jobs (Kholodenko et al., 2016). As a result of globalization, with the opening of the internal market, enterprises operate in terms of inclusion in a single economic, information and communication space, which leads to increased competition. The complexity of contemporary open socio-economic systems is changing the market environment in which companies are trying to take a stable position.

The realities of globalization processes and the constant intensification of competition have necessitated the provision of new approaches and the updating of business strategies. The impact of informatization of society and the spread of innovative development of the macroenvironment leads to the need for each individual enterprise to adapt and meet contemporary requirements. Judd (1997) argues that the current and future computer technologies create new possibilities for theoretical analysis, and that by resolving these issues we will create an intellectual atmosphere in which computational methods can make substantial contributions to economic analysis.

Only innovative enterprises in contemporary market development can be competitive and, consequently, successful. That is why the innovative filling of the competitive potential of enterprises is a necessary condition for the functioning of the organization. The formation of sustainable competitive advantages in the market of industrial goods and services will help companies to take the desired competitive position, ensure effective business in the long run and achieve maximum effect from this activity in a competitive market (Nizhnik, 2013, p. 9).

The constant competition of enterprises contributes to their transformations in the direction of sustainable development in an information economy. However, the changes require investments, the

implementation of which must be based on payback, profitability and prospects for enterprise development, (Bischi et al., 2004; Byczkowska et al., 2020; Gerasymova et al., 2019; Kadyrus, 2014; Kobets & Poltoratskiy, 2014; Krasnyak & Mytsyk, 2019; Palamarchuk et al., 2020; Pozniak, 2015).

It is essential that the subordination of the surrounding changes to enterprises leads to the emergence of various kinds of contradictions, requires a deeper study of the problems of the influence of innovative development on their activities. Therefore, the purpose of this article is to clarify the nature of the impact of innovative development on the competitiveness of enterprises.

2. Factors of enterprise competitiveness

In a competitive environment, any business entity must assess its level of competitiveness in order to function effectively and outlook its future prospects. Possessing information about their own competitive positions, industrial enterprises have the opportunity to determine their advantages, choose the right strategy and tactics of behavior, adequate to the realities of contemporary market processes (Krasnyak & Mytsyk, 2019).

Ensuring the stable position of enterprises in a competitive environment is a dynamic phenomenon that is influenced by a range of factors. Creating competitive advantages and maintaining them requires the company to develop and adhere to a balanced strategy that will take into account the impact of this set of factors.

Hromova (2020, p. 104) notes that in the framework of competition, enterprises rely on factors that ensure their competitiveness. Management of enterprise competitiveness in the framework of competition is implemented at three levels: operational, tactical and strategic. The operational level is more focused on using the potential of competitiveness of enterprise services, tactical relies on the potential of the general condition of the enterprise, and strategic operates with investment indicators, ie the future competitiveness of the enterprise.

Today, the basis for increasing competitiveness is the use of a systems approach that allows to use the full set of strategic opportunities for the priority development of certain units of the enterprise in accordance with the goals (Kravchenko et al., 2019). The development of enterprises depends on their internal real and potential capabilities, as well as on the environment in which they operate. Thus, the competitiveness of enterprises is influenced by external and internal factors, the analysis of the impact of which makes it possible to maintain a competitive position and increase market share owned by the enterprise (Kadyrus, 2014).

External factors do not depend directly on the activities of the enterprise and are a set of economic, social and natural conditions, national and interstate structures, as well as other external conditions that operate in the global environment and affect business activities. The company is able to independently influence the internal factors, as they depend on the company itself and are under its control.

Radchenko and Vyhoniailo (2018) highlight a number of measures that ensure enterprises achieve competitive advantages, including reducing the cost of production; increasing its priority; changes in the quality and technical parameters of products; identification of defects in competitor's products; introduction of innovations; identification of the advantages of own products in comparison with substitutes; the use of price factors to increase competition; impact on the consumer through advertising; loan provision; search for new areas of product use.

According to Kryvitska and Zianko (2020), enterprises need to pay special attention to the marketing factor of competitiveness, because the effective use of marketing measures makes it possible to increase the competitiveness of an enterprise without changing production technologies or providing services. In the work of Racela (2014) discusses the valuable role that customer focus can play in the development of innovative competencies and further organizational results.

Beltyukov and Tkachuk (2020) consider the development of their strategy, especially innovative, which should be aimed at restoring and improving all internal processes, an unconditional guarantee of increasing the competitiveness of enterprises. Hudz (2015) believes that successful innovative development strategies become the key to the competitive advantage of an enterprise.

The study by Hermundsdotti and Aspelund (2021) is a systematic review of the literature, which includes 100 peer-reviewed publications and confirms the existence of a positive relationship between sustainability innovations and the competitiveness of the firm. Kuncoro and Suriani (2018) in their study show that product innovation significantly affects sustainable competitive advantage. In today's post-industrial society, the technological paradigm is changing, which expands the sphere of influence of innovations that penetrate into all economic processes at all levels. Innovative development affects all components of enterprise competitiveness, which is schematically shown in Fig. 1.

In a competitive environment, stable positions are occupied by enterprises that are able to form a balanced development program, effectively maneuvering the internal factors of competitiveness and adapting

to the conditions of external factors. The realities of the current stage of economic development encourage companies to take an innovative approach to all components of their activities.

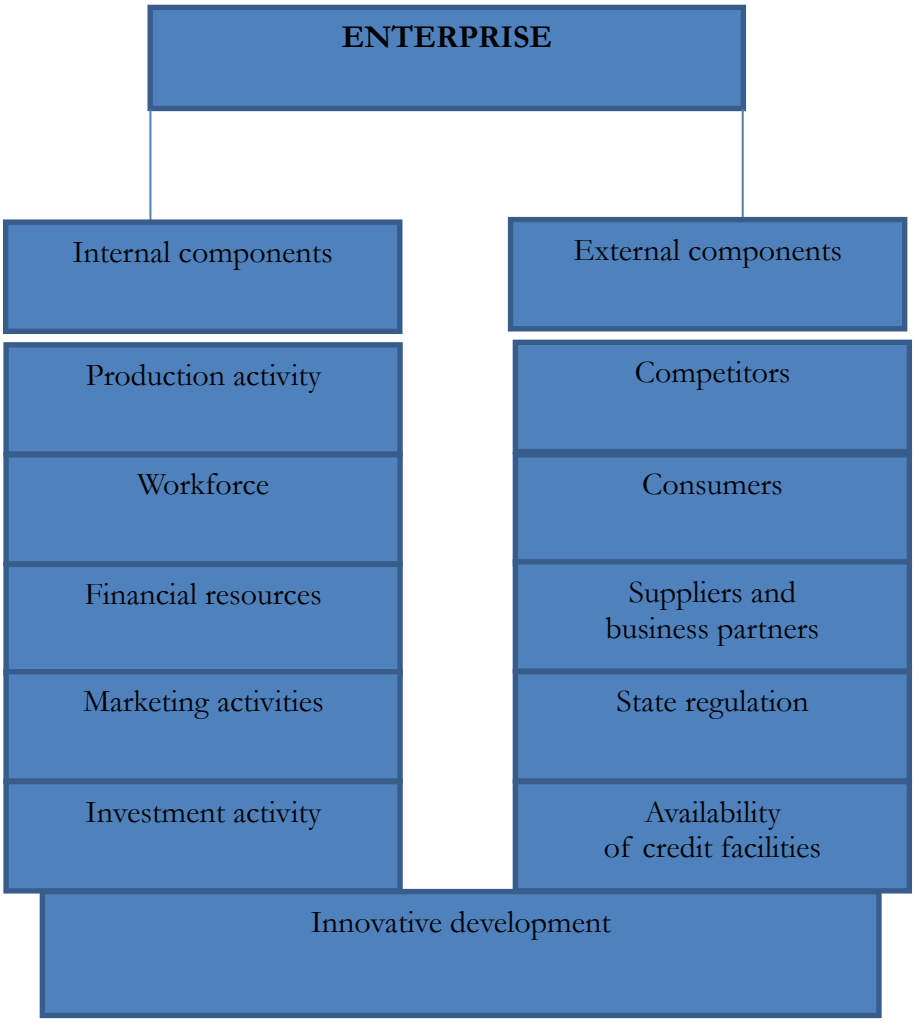


Fig. 1. Components of the impact on the competitiveness of enterprises
Source: Author's own conception

3. Factors of enterprise competitiveness under the influence of innovative development

The contemporary era of digital globalization creates new conditions for the economic environment, and therefore transforms the external factors

of the competitiveness of enterprises. When carrying out a competitive struggle, enterprises have a common market environment, general conditions for stability and bifurcations of the economic system, and a general level of social welfare. Enterprises also have the same goal, which is to maximize profits. However, the success in achieving this general goal is different for each enterprise and depends on which way of adaptation to these general external conditions they choose and implement.

Rumyantsev and Miroshnychenko (2011) note that the principles of economic activity of the world's leading countries require a radical overhaul and change in the strategy of doing business to preserve exhaustible resources. This leads to the search for new priorities for efficiency, the main task of which is to ensure sustainable development and economic stability in a competitive environment in the long run. Neffati (2015) analyzes the spread of information and computer technologies and states their growing role in all areas and sectors of the economy, which leads to the development of productivity. The author notes the need to promote innovation as a key indicator of the overall competitiveness of the country.

Considering the external factors of competitiveness of enterprises, it is necessary to distinguish the overall competitiveness of the national economy, which has a direct and indirect impact on the competitiveness of each enterprise in the country. According to the methodology of the World Economic Forum, the index of global competitiveness of countries is calculated, which indicates the quality and simplicity of business regulation in the country and takes into account various indicators, including the level of technological development and innovation potential. According to the ranking of the index of ease of doing business in 2020, Ukraine ranks 64th among 190 countries, 1st place is occupied by New Zealand, such highly developed countries as the United States and the United Kingdom rank 6th and 8th respectively, Doing Business database (2020). The state of development of the national economy is clearly illustrated by the annual ranking of countries for their ability and success in innovation Global Innovation Index, in which Ukraine ranks 45th. According to the ranking of the Global Innovation Index 1st place is occupied by Switzerland, USA occupies 3rd place, 4th place is occupied by the UK, Cornell University, INSEAD, and WIPO (2020).

According to Cornell University, INSEAD, and WIPO (2020), innovation has been thriving and growing faster than global GDP growth. The study showed that the trend of innovative development was observed not only in highly developed countries but also in developing ones. Informatization of society and the economic environment requires

enterprises to innovate in order to meet new conditions and not lose their position in the market.

External factors of competitiveness under the influence of innovative development tend to improve conditions for entrepreneurs. Electronic reporting is widely disseminated. E-Government is implemented on the basis of contemporary information and communication technologies, which increases the efficiency and transparency of interaction with the government, improving the conditions for doing business. In cooperation with suppliers, it should be noted that in the field of logistics are actively integrated solutions for the implementation of artificial intelligence, including intelligent transportation, route planning and demand. Shippers and carriers, suppliers and consumers will benefit from these trends in the development of logistics technologies. Warehouse operations have undergone significant changes, where the introduction of warehouse robotics is developing rapidly.

Li et al. (2019) consider the problem of the ratio of green technological capabilities of the enterprise to increase its competitiveness. The authors' conclusions show that in general, the ability of green technological innovations of the enterprise, energy saving and environmental protection of enterprises has a significant positive impact on their competitiveness. The application of green technological innovations is widely associated with waste recycling, the use of solar and wind energy and contributes to the conservation of limited resources. Thus, the competitive advantages will be given to the enterprise that will not only use the resources needed for production, but will also carry out the cycle of waste processing, optimizing the technological process.

Innovation is based on the process of improvement, discovery of new, ie on the effective assimilation and implementation of innovations aimed at updating technologies, equipment, organization of production and development of new products, and social innovations aimed at effectively changing staff behavior to achieve planned results. The combination of all components allows the system not only to survive in the face of intensifying competition, but also to achieve the required level of competitiveness (Pozniak, 2015, p. 3). Gündüz and Semercišz (2012) tries to identify the impact of competitive tensions on strategic innovation decisions and their implementation. As a result of the quantitative research used, it was found that competitive tensions directly affect not only the attack on the opponent, but also the decision to innovate. Akis (2015) attempted to reveal the relationship between innovation and competitiveness and found that the

innovation factor represented by research and patents has become an important element of competitiveness.

Under the influence of innovative development, the involvement of labor resources is transformed, the demand for highly skilled labor is growing, while low-skilled labor is being automated and replaced by industrial work. Contemporary workers are becoming more flexible and mobile, because remote work gives access to professionals from around the world. Changing the level of digital skills and knowledge of employees leads to an overall increase in productivity. As a result of the application of innovative development in entrepreneurial activity, the proportions in the shares of the use of capital and labor change with a constant increase in their quality and productivity.

Byczkowska et al. (2020) note that the number of small and medium-sized enterprises that successfully compete with large enterprises is growing in the economy, while the entrepreneurial economy is associated with the spread of innovation and the initiation of innovative projects. Businesses that operate in a highly competitive environment and cannot influence prices must find technological and innovative ways to maximize their profits.

4. Conclusions

In an environment in which new knowledge is constantly being formed, the requirements for all business entities are dynamically changing. The innovative development of the contemporary post-industrial stage of the economy necessitates the emphasis on constant improvement of enterprises in order to maintain a stable position in the markets.

The realities of globalization and informatization of society intensify the competition between enterprises and require them to develop effective development strategies to overcome high competitive barriers. Openness and ease of access to international markets, on the one hand, opens new opportunities for enterprises, on the other hand, raises standards for the quality of products and services, and requires the creation of mechanisms to increase their competitiveness.

Ensuring a stable position of enterprises in a competitive environment is a dynamic phenomenon that is influenced by a whole range of factors. Economic, social, natural conditions that surround enterprises and have a direct and indirect impact on them and which the enterprises themselves are not able to influence belong to the external factors of enterprise competitiveness. The components of activities on which enterprises have a direct, independent influence and which characterize the

enterprise, belong to the internal factors of competitiveness of enterprises.In the conditions of a contemporary post-industrial society, the technological paradigm is changing, the sphere of influence of innovations is expanding, which penetrate into all economic processes, including into external and internal factors of the competitiveness of enterprises.

It is the systematic combination of all components of competitiveness and the effective application of innovative solutions that allows companies not only to survive in conditions of intensifying competition, but also to achieve the required level of competitiveness.

Acknowledgement

The authors have equally contributed to the article under their specialization. Iryna Dashko proposed work concept and was responsible for the critical review. Nataliia Hurzhyi and Larysa Harmider collected and analyzed theoretical material related to the multifaceted process of developing a competitive strategy of the enterprises. Tetiana Mishustina studied the affect of innovative development on the components of enterprise competitiveness in the contemporary era of post-industrial society. The contribution to this paper of Tetiana Kulinich was in data gathering and analysis. Iryna Taranenko was responsible for the final text version of the article and translation.

References

Akis, E. (2015). Innovation and competitive power. *Procedia - Social and Behavioral Sciences, 195*, 1311-1320 https://doi.org/10.1016/j.sbspro.2015.06.304

Beltyukov, Y., & Tkachuk, T. (2020). Teoretichni osnovy formuvannya strategiji innovacijnogo rozvytku promyslovogo pidpriemstva [Theoretical bases of formation of strategy of innovative development of the industrial enterprise]. *Bulletin of Khmelnytsky National University Series: Economic Sciences, 4*(1), 36-40 http://journals.khnu.km.ua/vestnik/?p=3435

Bischi, G. I., Lamantia, F., & Sbragia, L. (2004). Competition and cooperation in natural resources exploitation: an evolutionary game approach. Game practice and the Environment, 187-211. http://ndl.ethernet.edu.et/bitstream/123456789/2310/1/3.pdf.pdf#page=196

Byczkowska, M., Poplavska, Z., Komarynets, S., Stukalina, Y., Majzel, A., & Zięba, K. (2020). Entrepreneurship today: Selected aspects. https://mostwiedzy.pl/pl/publication/entrepreneurship-today-selected-aspects,154353-1

Cornell University, INSEAD, & WIPO. (2020). The Global Innovation Index 2020: Who will finance innovation? Ithaca, Fontainebleau, and Geneva. https://www.wipo.int/global_innovation_index/en/2020/

Doing Business Database. (2020). https://www.doingbusiness.org/en/rankings

Gerasymova, I., Maksymchuk, B., Bilozerova, M., Chernetska, Yu., Matviichuk, T., Solovyov, V., & Maksymchuk, I. (2019). Forming professional mobility in future agricultural specialists: the sociohistorical context. *Revista Romaneasca pentru Educatie Multidimensionala, 11*(4), 345-361. https://doi.org/10.18662/rrem/195

Gündüz, E., & Semercišz, F. (2012). The relation between competitive tension and strategic innovation. *Procedia - Social and Behavioral Sciences, 58*, 29 – 39 https://doi.org/10.1016/j.sbspro.2012.09.975

Hermundsdotti, F., & Aspelund, A. (2021). Sustainability innovations and firm competitiveness: A review. *Journal of Cleaner Production, 280*(1), 124715 https://doi.org/10.1016/j.jclepro.2020.124715

Hromova, O. (2020). Konkurentospromozhnist pidpriemstva v konteksti yii marketingovogo zabezpechennya [The competitiveness of the enterprise in the context of its marketing support]. *Business Navigator, 1*(57), 100–104. https://doi.org/10.32847/business-navigator.57-17

Hudz, O. (2015). Rol innovacij shchodo zabezpechennya konkurentospromozhnosti ta efektyvnosti pidpriemstva [The role of innovations in ensuring competitiveness and efficiency of the enterprise]. *Bulletin of the Kharkiv National Technical University of Agriculture named after Petro Vasylenko, 161*, 3-11. http://nbuv.gov.ua/UJRN/Vkhdtusg_2015_161_3

Judd, K. L. (1997). Computational economics and economic theory: Substitutes or complements? *Journal of Economic Dynamics and Control, 21*(6), 907– 942. https://doi.org/10.1016/S0165-1889(97)00010-9

Kadyrus, I. (2014). Konkurentospromozhnist pidpriemstva ta faktory, shcho na neji vplyvayut [Competitiveness of enterprises and factors making effects on this]. *Efektyvna ekonomika, 5*. http://www.economy.nayka.com.ua/?op=1&z=3390

Kholodenko, A., Stepanok, N., & Oliynykova, N. (2016). Rivnovaga makroekonomichnoyii systemy firm ta domogospodarstv [Equilibrium of the macroeconomic system of firms and households]. *Bulletin of Khmelnytsky National University. Economic Sciences, 5*(2), 276-280 http://www.irbis-nbuv.gov.ua/cgi-bin/irbis_nbuv/cgiirbis_64.exe?C21COM=2&I21DBN=UJRN&P21DBN=UJRN&IMAGE_FILE_DOWNLOAD=1&Image_file_name=PDF/Vchnu_ekon_2016_5(2)__56.pdf

Kobets, V., & Poltoratskiy, M. (2014). *Forming an evolutionarily stable firm strategy under cournot competition using social preferences*. Springer Verlag.

Krasnyak, O., & Mytsyk, V. (2019). Konkurentospromozhnist i konkurentni perevagi pidpryemstva v suchasnyh rynkovyh umovah [Competitiveness and competitive advantages of the enterprise in contemporary market conditions]. *Efektyvna ekonomika, 11*. 10.32702/2307-2105-2019.11.40

Kravchenko, O., Leshchenko, M., Marushchak, D., & Vdovychenko, Y. (2019). Digitalization as a global trend and growth factor of the modern economy. In *CEUR Workshop Proceedings, 2422*, 434–443. https://doi.org/10.1051/shsconf/20196507004

Kryvitska, V., & Zianko, V. (2020). Mekhanizm upravlinnya konkurentospromozhnistyu pidpriemstva v umovah nestabilnosti [Mechanism of management the competitiveness of enterprise in the conditions of instability]. *Efektyvna Ekonomika, 8*. 10.32702/2307-2105-2020.8.151

Kuncoro, W., & Suriani, W. O. (2018). Achieving sustainable competitive advantage through product innovation and market driving. *Asia Pacific Management Review, 23*(3), 186-192 . https://doi.org/10.1016/j.apmrv.2017.07.006

Li G., Wang, X., Su, S., & Su, Y. (2019). How green technological innovation ability influences enterprise competitiveness. *Technology in Society, 59*, 101136. https://doi.org/10.1016/j.techsoc.2019.04.012

Neffati, M. (2015). The implications of ICT-development and innovation on competitiveness: Case of Euro-Mediterranean countries. *International Journal of Development Research, 5*(2), 3482-3488. https://www.researchgate.net/publication/323797102_The_implications_of_ICT-development_and_innovation_on_competitiveness_Case_of_euro-Mediterranean_countries

Nizhnik, V. (2013). Mekhanizmy pidvyshchennya konkurentnogo potencialu promyslovyh pidpriemstv za umov poglyblennya mizhnarodnoji konkurenciji [Mechanisms to improve the competitive potential of industrial enterprises for the deepening of international competition]. *Bulletin of Khmelnytsky National University. Economic sciences, 3*(3), 7–11. http://elar.khnu.km.ua/jspui/handle/123456789/1084

Palamarchuk, O., Gurevych, R., Maksymchuk, B., Gerasymova, I., Fushtey, O., Logutina, N., Kalashnik, N., Kylivnyk, A., Haba, I., Matviichuk, T., Solovyov, V., & Maksymchuk, I. (2020). Studying innovation as the factor in professional self-development of specialists in physical education and sport. *Revista Romaneasca Pentru Educatie Multidimensionala*, *12*(4), 118-136. https://doi.org/10.18662/rrem/12.4/337

Pozniak, *S*. (2015). Innovaciyi yak faktor pidvyshchennya konkurentospromozhnosti pidpryemstv [Innovation as a factor of

competitiveness enterprises]. *Efektyvna Ekonomika, 10*. http://www.economy.nayka.com.ua/?op=1&z=4614

Racela, O. C. (2014). Customer orientation, innovation competencies, and firm performance: A proposed conceptual model. *Procedia - Social and Behavioral Sciences, 148*, 16 – 23. DOI:10.1016/j.sbspro.2014.07.010

Radchenko, O., & Vyhoniailo, A. (2018). Upravlinnya konkurentospromozhnistyu pidpriemstva v rynkovyh umovah [Managing the competitiveness of an enterprise in a market environment]. *Efektyvna Ekonomika*, *6*. http://www.economy.nayka.com.ua/?op=1&z=6396

Rumyantsev, A., & Miroshnychenko, V. (2011) Theoretical aspects of competition analysis and competitiveness of enterprises in modern market conditions. *Efektyvna Ekonomika, 5*. http://www.economy.nayka.com.ua/?op=1&z=564