

## **INTRODUCTION OF BREAKTHROUGH INNOVATIONS AS A SIGNIFICANT FACTOR OF FORMING A HIGHLY COMPETITIVE COMPANY'S POSITION**

Special attention at the present stage of economic development is given to technical progress, innovations, know-how. Countries compete with each other at the level of development of new innovative and breakthrough technologies.

Breakthrough innovations are, in essence, the creation of new types of products (services) or business models that can significantly affect the market and generate considerable value for their consumers. If according to the traditional strategy of development enterprise focuses its activity on step-by-step innovations, the subject of economic activity is engaged in search of ideas of radically new products and their realization in the strategy of implementation of breakthrough innovations. The idea of breakthrough (subversive) innovation was first formulated by K. Christensen in the book "Dilemma of Innovator", which, by the way, was a favorite book by S. Jobs, founder of the corporation "Apple Inc." [1]. Subversive innovation cardinally changes the power scales on the market: even yesterday, successful products are becoming irrelevant for their consumers. It is worth pointing out that this type of innovation can often be realized as subversion through the output of products in the lower price segment, when a company launches cheaper, but worse-than-analogue, consumer-oriented product that does not satisfy the excessive complexity and high price of existing on the supply market. A more marketing-oriented approach to the implementation of subversive innovations is through the formation of a new market. The offer of the product of business innovation is so cheap and easy to use that a significant number of consumers, who before its release on the market did not buy the product of this category, will become its users [2].

Subversive innovation is the most attractive among other types of innovations for investing. A typical example of innovation in the «subversion» category is a desktop 3D printer that embodies fundamental technological changes that enable consumers who have never used this type of printer to receive much cheaper, more affordable, but imperfect printed images [3]. In the field of service provision, for example, a new service can be used for agricultural enterprises that direct seed of oil crops to elevators: by mobile communications, customers have the opportunity to receive not only information about the time of arrival of the car for unloading, but also data of the express analysis of the composition of the seed (variety name,

seed moisture content, oleicity, acidity, oleic acid content that are the most important indicators characterizing the quality of the seeds and its suitability for further storage and processing) [4].

The first industrial revolution used the power of water and steam to mechanize production. The second industrial revolution used electricity for conveyor production. The third used automated production with the help of electronics and information technologies. The fourth industrial revolution relies on the third – since the middle of the last century, a digital revolution is continuing in all spheres of life. Technologies merge, and the boundaries of material, digital and biological worlds are erased. “Soon the foundation of economic growth will not be capital or natural resources, but innovation and human ingenuity”, said Klaus Schwab, the founder of the World Economic Forum, in one of his articles. His approach turned attention to innovation and the fourth industrial revolution. Weighting in the direction of rational use of resources has a completely understandable reason. Innovations enable higher quality products, stimulate the creation and expansion of economic sectors, market development and education, provide cost savings, economy and the use of alternative raw materials instead of limited natural resources.

Heads of companies express the same idea: innovations that appear with incredible speed violate any forecasts and business plans. Technologies generated by the fourth industrial revolution are increasingly affecting the business world. More and more young, smart companies are emerging, which, thanks to access to the global network, are ahead of business veterans in research, development, marketing, sales and production. Young competitors suddenly become faster, provide better services at a lower price than their predecessors. Consequently, four main effects of the fourth industrial revolution affecting the business can be distinguished: the growth of consumer expectations, the improvement of the quality of goods, breakthrough innovations and the emergence of new forms of organization.

A global survey of company executives in 2017 showed that half of companies believe that innovation efforts have a significant impact on their income increase through sales growth. Every fifth innovation leader company expects a 15% increase in profits in the next five years [6]. Innovation of the company is also a significant factor in the influx or outflow of talent. Company “Deloitte” (audit, consulting services) found that two thirds of young people in the world are going to change their place of work in the next three years [7]. Companies “Dell” and “Intel” came to the conclusion that two out of five employees will go through low tech in companies [8].

A study of PwC Innovation Benchmark (consulting services) shows that companies that invest more in innovation will focus on breakthrough technologies rather than on a gradual improvement. Of those who reinvest more than 15% of revenues, most are engaged in breakthrough innovations, with more than 40% of them focus only on this [6].

It should be noted that in spite of the significant economic attractiveness of subversive innovations, supporting innovations dominate at the market. P. Doyle also points out the following: if all innovations are accepted for 100%, then fundamentally new ones are only 10% [9]. In addition, he notes, that the most successful are not essentially new products, but new ways of marketing activities. Numerous studies of success in the market for innovative products indicate that about 80% of products originated from ideas generated by the market. Representatives of Hewlett-Packard emphasize that understanding market needs is a key factor in product success [10]. The strategy of supporting innovation is more suitable for market-leading companies, which can consolidate their benefits by gradually improving their own products. It is difficult to compete with a leader supporting innovations even for large companies. For example, we may mention the attempts by “Kodak” to push “Xerox” into a photocopier market. The withdrawal into the market of subversive innovations is more suitable for young ambitious companies that are called “early stage”. For example, “Xerox” company was defeated by “Canon”, precisely because of subversive innovation of portable copiers.

If managers of the company will be forced to try to adapt the subversive technology to the needs of existing consumers (examples – hard drives, electric cars), they are actually doomed to failure. The experience of successful business representatives in the commodity market shows that an approach is effective when an entity finds a new market that will appreciate the existing parameters of subversive technology. Thus, blasting technology can be seen as marketing rather than technological challenge. An innovation strategy based on analyzing the market needs with the subsequent transition to a lab is more effective than a strategy with a reverse trajectory. D. Moore proposed the technology of marketing innovative high-tech products – marketing of high-tech products. In his opinion, high-tech product is not only a high technology, which itself is the first market innovative product and the beginning of the market of innovations, as well as its application in the form of radical innovative products and corresponding services, which form the basis of innovations market. In general terms, this is a radical innovation product that requires radical innovation marketing (high-tech marketing) [11]. The success of innovation is determined by a carefully designed strategy. About 80% of leading innovation companies have

a well-formulated strategy, while among business entities that have an outdated production and sales policy, such strategy is available in less than half of enterprises.

In the case when the sale of subversive innovations reduces overall production (the new segment of resource utilization is much smaller than the segment that has become irrelevant), it is about closing technologies. For example, the phone replaced the telegraph, digital cameras replaced the film, e-mail reduced the value of ordinary mail. Wal-Mart Corporation, using information technology to manage the supply chain logistics and studying consumer demand, received significant profits and was able to offer consumers lower prices.

As far as future innovations are concerned, numerous studies are being conducted on the development of alternative fuels. The construction and functioning of e-democracy (the form of social relations in which citizens and organizations are involved in state-building and public administration, as well as local self-government through the widespread use of information and communication technologies), if this concept succeeds, can also serve as a good example of the possibility of implementing subversive innovations.

In 2015, Ukraine ranked 45th in the rating of the most creative countries in the possible 139 positions. The index of creativity estimates the country in three indices: technology, talent and tolerance [12]. In the ranking, particular attention is paid to investing in research and development, the number of researchers and patents per capita. In 2017, Ukraine entered the TOP-50 countries in the Global Indicator of Innovation (Figure 1). Despite the sufficient positions in the rating, individual positions of Ukrainian business are very low (innovative relationships, technological assimilation, creative products and services, influence of knowledge).

The risk factor for the impossibility of innovations implementation in a company is the professional limitations of corporate specialists when innovations are considered only in the focus of IT equipment. The leader of such way in Ukraine is “Privatbank”. Its decision to automate the business process “Corezoid” became the first East European startup, presented in the Amazon web store services [14].

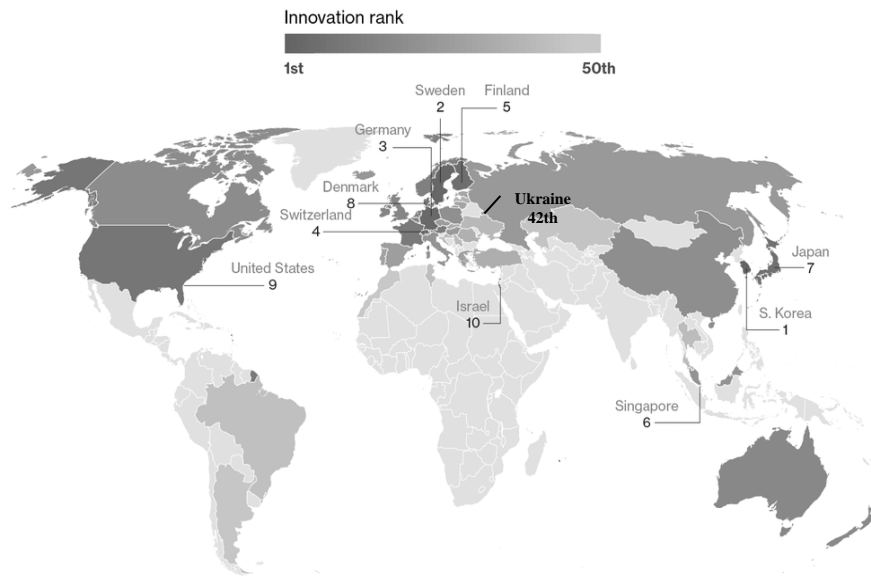


Figure 1 – TOP-50 most innovative countries in the world according to the rating of Bloomberg in 2017<sup>1</sup> [13]

<sup>1</sup>Note: gray (from dark to light) highlighted countries located in the first 50th rating

In recent years, technological parks and innovative business associations have begun to appear in Ukraine. Their goal is to integrate technology into the work of companies from various fields. Among such projects is the opening of the first Ukrainian innovation park “Unit City” with the total area of approximately 27 hectares on the territory of the old Kiev motor-plant, which can accommodate more than a hundred technological companies [15]. This is an important step for the Ukrainian economy, because according to the Nobel Prize winner in the field of economics Robert Lucas, the factors which influence the innovations implementation that can not always be measured are the following: passionarity (internal aspiration of responsible persons for renewal and development), entrepreneurial activity, spontaneous “Clustering of talents” in one place and at one time. The emergence of a critical mass of people with unique abilities and skills generates an impulse that “feeds economic progress” and stimulates technological development in particular. The McKinsey consulting company refers to the following components of the innovation process: tune in to a large, choose a direction, study trends, understand how to evolve, organizationally be able to innovate, correctly scale the changed aspect of business, maximize collaboration, and mobilize company employees to innovate [16].

By the nature of the interaction among themselves, innovative products in the field of subversive technologies can be divided into twin goods (satisfying the same need, but they differ by name, marketing promotion); derivative products (similar products to their

predecessors, but satisfy the existing consumer needs more efficiently or more fully); goods that fit into existing products on the market (mostly for the service sector, when the proposed innovative product in its real reflection satisfies the aggregate needs of its predecessor goods); goods that completely eliminate their predecessors from the market (as a rule, such products arise in the market as a necessity caused by state programs, damage caused by previous products to the environment, etc.); goods complementing the product line of the manufacturer (in this way the product differentiation of the enterprise manifests itself – the already existing and presented on the market products from the range of the company is supplemented by a new one). If the first two points from the listed classification are sufficiently studied, then the emergence of other components of the classification is caused by the current conditions in which there is a market. Thus, an example of products that fit into existing production is the entry into the market of fundamentally new integrated service companies for servicing cars – TIR parks, which are not so much in Ukraine. They accommodate customary services for car wash, tire service, parking lots, etc. An example of products that lead to almost complete withdrawal from the market of their predecessors is LED lamp. This, in particular, is facilitated by state programs for the transition to energy efficient lighting, aimed at the complete phasing out of incandescent lamps. In this perspective, it is also worth considering whether truly innovative on-line approaches to learning (for example, mass open online courses) make favorable changes to the higher education system of Ukraine, as they pose a threat to existing models of studying in the system education, actually destroy the traditional educational system.

Global reaches today are crowd-borne platforms (such as Kickstarter, ICO, etc.) to attract start-up investments, electronic platforms for trade in innovative technologies and services, and open innovation platforms that enable companies to deploy a software environment for their own innovative communities involved in development. All this is combined with global innovation communities with consulting companies. In Ukraine, this approach is represented by the platform Reactor.ua (search for technological innovations and scouting of innovations).

In 2016, Forbes published the first rating of innovative companies in Ukraine [17]. Leaders of the rating became already mentioned “Privatbank”; SC “PA “Southern Machine-Building Plant named after. O.M. Makarov” and the DB “Pivdenne” named after M.K. Yangel (“Pivdenmash”), which created four generations of strategic missile complexes, more than 400 spacecraft of various modifications, rocket carriers of the Zenit, Kosmos, and Cyclone family. Design Bureau “Pivdenne” has created unique intercontinental ballistic missile R-36M

“Satan” (today it is the only possessor of technology for modernization and extension of its resource). In addition, the DB “Pivdenne” participates in the development of the anti-astringent protection system of the Earth (the creation of modules for the interception of asteroids at a distance of up to 100 million km); “New Post” company, which introduced a number of innovations in the field of logistics, such as: subscribers of this postal operator can transfer funds through their mobile account, transferring them to cash in the company’s offices, customers have the opportunity to track the way of their order on-line, the company uses a push-message based on a mobile application (which today has 1,5 million users) to report delivery arrival. “New Post” increases the scope of business expansion: currently offers delivery to more than 200 countries, while also focusing on the “depth” of domestic supply, developing mini post offices. The purpose of the company’s owners is to turn it into a brand of “love mark” type. In particular, with this purpose, “New Post” is involved in a number of charity partnerships (for example, in 2017 the company supports the Darina Zholdak Foundation with the “100 000 New Children’s Books” campaign).

Currently, the activities of Ukrainian companies in the field of innovation implementation are inherent to newly created companies with foreign capital in particular. The number of innovations introduced by domestic enterprises is shown in Table 1.

Table 1 – Dynamics of innovations implementation by industrial enterprises of Ukraine  
(formed according to data [18])

Year	Introduced new technological processes, units	Implemented production of new types of products, names
2010	2043	2408
2011	2510	3238
2012	2188	3403
2013	1576	3138
2014	1743	3661
2015	1217	3136
2016	3489	4139

Total costs for innovation activities are shown in Figure 2.

Ukraine has the potential to develop new technologies and produce innovative products based on them. For example, the country has always been one of the first to apply new technologies in the metallurgy industry. In particular, the first installation of pulverized fuel injection on an industrial scale was introduced in the 70’s of the twentieth century. Also, the first continuous casting machine was built in Ukraine [19].

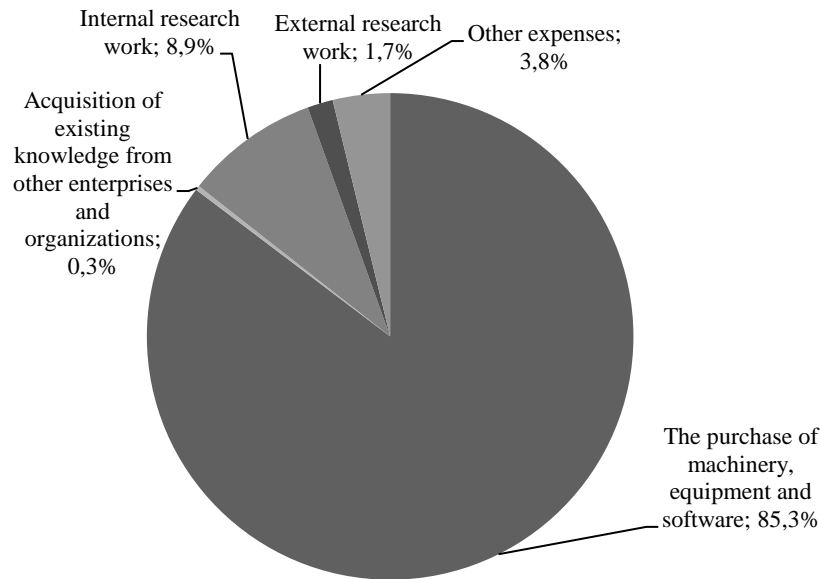


Figure 2 – Distribution of total expenditures of domestic enterprises in the directions of innovation activity in 2016 (constructed according to data [18])

1. Навольнева І. Розмір має значення: 7 порад з улюбленої книги Стіва Джобса «Дилема інноватора» [Електронний ресурс]. – Режим доступу: <https://kfund-media.com/rozmir-maye-znachennya-7-porad-z-ulyublenoyi-knygy-stiva-dzhobsa/>.

2. Зарва О. Підривні інновації як ключовий елемент «Формули успіху» у сучасному бізнес-середовищі / О. Зарва // Економічний аналіз. – 2012. – Вип. 10, Ч. 4. – С. 108-111.

3. Thompson N. Taylor. What markets do and don't get about innovation [Електронний ресурс]. – Режим доступу: <https://hbr.org/2013/09/what-markets-do-and-dont-get-about-innovation>.

4. «Солнечные продукты» внедряют инновационные методы работы с партнерами [Електронний ресурс]. – Режим доступу: [http://solpro.ru/pressroom/news/solnechnye\\_produkty\\_vnedryayut\\_innovatsionnye\\_metody\\_raboty\\_s\\_partnerami/](http://solpro.ru/pressroom/news/solnechnye_produkty_vnedryayut_innovatsionnye_metody_raboty_s_partnerami/).

5. Schwab K. What it means and how to respond / К. Schwab [Електронний ресурс]. – Режим доступу: <https://www.foreignaffairs.com/articles/2015-12-12/fourth-industrial-revolution>.

6. Reinventing innovation. Five findings to guide strategy through execution [Електронний ресурс]. – Режим доступу: <https://www.pwc.com/us/en/advisory-services/business-innovation/assets/2017-innovation-benchmark-findings.pdf>.

7. Индекс социального розвитку. Звіт [Електронний ресурс]. – Режим доступу: <https://www2.deloitte.com/ua/uk/footerlinks/newsroom/deloitte-research/social-progress-index.html>.

8. Dell and Intel future workforce study provides key insights into technology trends shaping the modern global workplace [Електронний ресурс]. – Режим доступу: <http://www.dell.com/learn/us/en/uscorp1/press-releases/2016-07-18-future-workforce-study-provides-key-insights>.



9. Дойль П. Маркетинг-менеджмент и стратегии / П. Дойль. – 2007. – Издательство «Питер». – 4-е изд. – 544 с.
10. Головчук О.В. Обґрунтування доцільності використання принципів TQM в управлінні інноваційною діяльністю промислового підприємства / О.В. Головчук // Науковий вісник Ужгородського університету. Серія: Економіка. – 2017. – Том 1, № 1(49). – С. 136-142.
11. Баранчеев В.П. Управление инновациями : учебник для вузов / В.П. Баранчеев, Н.П. Масленникова, В.М. Мишин. – М. : Издательство Юрайт, 2011. – 711 с.
12. Опубліковано рейтинг найкреативніших країн світу [Електронний ресурс]. – Режим доступу: <http://nv.ua/ukr/lifestyle/life/opublikovano-rejting-samih-kreativnih-krajin-svitu-74163.html>.
13. Jamrisko Michelle. These are the world's most innovative economies / Michelle Jamrisko, Wei Lu [Електронний ресурс]. – Режим доступу: <https://www.bloomberg.com/news/articles/2017-01-17/sweden-gains-south-korea-reigns-as-world-s-most-innovative-economies>.
14. Найбільшим корпоративним клієнтом Corezoid є ПриватБанк, де в хмарі працюють близько 30 000 процесів [Електронний ресурс]. – Режим доступу: <https://tsn.ua/ukrayina/corezoid-stav-pershim-startapom-shidnoyi-yevropi-dostupnim-na-amazon-marketplace-469414.html>.
15. Яровая М. Как выглядит первый в Украине инновационный городок / М. Яровая [Електронний ресурс]. – Режим доступу: <https://ain.ua/2017/04/07/kak-vyglyadit-pervyj-v-ukraine-innovacionnyj-gorodok-fotoreportazh-iz-unit-city>.
16. Jong de Marc. The eight essentials of innovation / Marc de Jong, Nathan Marston, Erik Roth [Електронний ресурс]. – Режим доступу: <https://www.mckinsey.com/business-functions/strategy-and-corporate-finance/our-insights/the-eight-essentials-of-innovation>.
17. Врятувати майбутнє: перший рейтинг інноваційних компаній України [Електронний ресурс]. – Режим доступу: <http://forbes.net.ua/ua/magazine/forbes/1416757-vryatuvati-majbutne-pershij-rejting-innovacijnih-kompanij-ukrayini>.
18. Офіційний сайт Державної служби статистики України [Електронний ресурс]. – Режим доступу: <http://www.ukrstat.gov.ua/>.
19. Україна однією з перших застосувала інновації у металургії – голова «Метінвесту» [Електронний ресурс]. – Режим доступу: <https://www.5.ua/novyny-kompaniy/ukraina-odniieiu-z-pershykh-zastosovuvala-innovatsii-u-metalurhii-holova-metinvestu-156348.html>.

1. Navolnieva, I. (n.d.). Rozmir maie znachennia: 7 porad z uljublanoi knyhy Stiva Dzhobsa “Dylema innovatora” [Size matters: 7 tips from your favorite book by Steve Jobs “The Dilemma of Innovator”]. *kfund-media.com*. Retrieved from <https://kfund-media.com/rozmir-maye-znachennya-7-porad-z-ulyublenoyi-knygy-stiva-dzhobsa/> [in Ukrainian].

2. Zarva, O. (2012). Pidryvni innovatsii yak kliuchovi element “Formuly uspikhu” u suchasnomu biznes-seredovyshchi [Subversive innovation as a key element of the “Formula of Success” in the modern business environment]. *Ekonomichnyi analiz – Economic Analysis, 10(4)*, 108-111 [in Ukrainian].

3. Thompson, N. Taylor. (n.d.). What markets do and don't get about innovation. *hbr.org*. Retrieved from <https://hbr.org/2013/09/what-markets-do-and-dont-get-about-innovation> [in English].
4. “Solnechnye produkty” vnedriaiut innovatsionnye metody raboty s partnerami [“Solar products” introduce innovative methods of working with partners]. (n.d.). *solpro.ru*. Retrieved from [http://solpro.ru/pressroom/news/solnechnye\\_produkty\\_vnedryayut\\_innovatsionnye\\_metody\\_raboty\\_s\\_partnerami/](http://solpro.ru/pressroom/news/solnechnye_produkty_vnedryayut_innovatsionnye_metody_raboty_s_partnerami/) [in Russian].
5. Schwab, K. (n.d.). What it means and how to respond. *foreignaffairs.com*. Retrieved from <https://www.foreignaffairs.com/articles/2015-12-12/fourth-industrial-revolution> [in English].
6. Reinventing innovation. Five findings to guide strategy through execution (n.d.). *pwc.com*. Retrieved from <https://www.pwc.com/us/en/advisory-services/business-innovation/assets/2017-innovation-benchmark-findings.pdf> [in English].
7. Indeks sotsialnoho rozvytku. Zvit [Social development index. Report]. *www2.deloitte.com*. Retrieved from <https://www2.deloitte.com/ua/uk/footerlinks/newsroom/deloitte-research/social-progress-index.html> [in Ukrainian].
8. Dell and Intel future workforce study provides key insights into technology trends shaping the modern global workplace (n.d.). *www.dell.com*. Retrieved from <http://www.dell.com/learn/us/en/uscorp1/press-releases/2016-07-18-future-workforce-study-provides-key-insights> [in English].
9. Doil, P. (2007). *Marketinh-menedzhment i stratehii [Marketing management and strategies]*. Izd-vo “Piter” [in Russian].
10. Holovchuk, O.V. (2017). Obhruntuvannia dotsilnosti vykorystannia pryntsyviv TQM v upravlinni innovatsiinoiu diialnistiu promyslovoho pidpriemstva [Justification of the feasibility of using the principles of TQM in the management of innovation activity of industrial enterprise]. *Naukovyi visnyk Uzhhorodskoho universytetu. Serii: Ekonomika – Scientific Bulletin of the Uzhhorod University. Economics Series, 1(49)*, 136-142 [in Ukrainian].
11. Baranchev, V.P., Maslennikova N.P., & Mishin, B.M. (2011). *Upravlenie innovatsiiami [Innovations management]*. Moscow: Izdatelstvo Yurait [in Russian].
12. Opublikovano reitynh naikreatyvnyshykh krain svity [Rating of the most creative countries of the world was published]. *nv.ua*. Retrieved from <http://nv.ua/ukr/lifestyle/life/opublikovano-rejting-samih-kreativnih-krajin-svitu-74163.html> [in Ukrainian].
13. Jamrisco Michelle. These are the world's most innovative economies / Michelle Jamrisco, Wei Lu [Електронний ресурс]. – Режим доступу: <https://www.bloomberg.com/news/articles/2017-01-17/sweden-gains-south-korea-reigns-as-world-s-most-innovative-economies>.
14. Найбільшим корпоративним клієнтом Corezoid є ПриватБанк, де в хмарі працюють близько 30 000 процесів [Електронний ресурс]. – Режим доступу: <https://tsn.ua/ukrayina/corezoid-stav-pershim-startapom-shidnoyi-yevropi-dostupnim-na-amazon-marketplace-469414.html>.
15. Яровая М. Как выглядит первый в Украине инновационный городок / М. Яровая [Електронний ресурс]. – Режим доступу: <https://ain.ua/2017/04/07/kak-vyglyadit-pervyj-v-ukraine-innovacionnyj-gorodok-fotoreportazh-iz-unit-city>.

16. Jong de Marc. The eight essentials of innovation / Marc de Jong, Nathan Marston, Erik Roth [Електронний ресурс]. – Режим доступу: <https://www.mckinsey.com/business-functions/strategy-and-corporate-finance/our-insights/the-eight-essentials-of-innovation>.

17. Врятувати майбутнє: перший рейтинг інноваційних компаній України [Електронний ресурс]. – Режим доступу: <http://forbes.net.ua/ua/magazine/forbes/1416757-vryatuvati-majbutne-pershij-rejting-innovacijnih-kompanij-ukrayini>.

18. Офіційний сайт Державної служби статистики України [Електронний ресурс]. – Режим доступу: <http://www.ukrstat.gov.ua/>.

19. Україна однією з перших застосувала інновації у металургії – голова «Метінвесту» [Електронний ресурс]. – Режим доступу: <https://www.5.ua/novyny-kompaniy/ukraina-odnieiu-z-pershykh-zastosovuvala-innovatsii-u-metalurhii-holova-metinvestu-156348.html>.

1. Dilovi ochikuvannia pidpriemstv Ukrainy [Business expectations of Ukrainian enterprises]. (n.d.). *bank.gov.ua*. Retrieved from <https://bank.gov.ua/doccatalog/document?id=37944604> [in Ukrainian].

2. Skibitska, L.I., Matvieiev V.V., Shchelkunov, V.I., & Podrieza S.M. (2014). *Antykryzovy menedzhment [Anticrisis management]*. Kyiv: Tsentр uchbovoi literatury [in Ukrainian].

3. Model peremen Kurta Levina [Model of changes of Kurt Lewin]. (n.d.). *newrealgoal.com.ua*. Retrieved from <http://newrealgoal.com.ua/model-peremen-kurta-levina.html> [in Russian].

4. Doroshuk, H.A., & Savchenko, H.O. (2014). Kadrove zabezpechennia upravlinnia zminamy [Staffing change management. *Ekonomika: realii chasu – Economics: realities of time*, 3(13), 50-56 [in Ukrainian].

5. Menedzhment orhanizatsii ta administruvannia [Organizational management and administration]. (n.d.). *pidruchniki.com*. Retrieved from [http://pidruchniki.com/74963/menedzhment/menedzhment\\_organizatsiy\\_i\\_administruvannya](http://pidruchniki.com/74963/menedzhment/menedzhment_organizatsiy_i_administruvannya) [in Ukrainian].

6. The essence of ADKAR: a model for individual change management (n.d.). *www.change-management.com*. Retrieved from <http://www.change-management.com/The-Essence-of-ADKAR.pdf> [in English].

7. Stetsiv, S.R. (n.d.). Sutnist ta etapy upravlinnia zminamy na pidpriemstvi [The essence and stages of change management at the enterprise]. Retrieved from [http://ena.lp.edu.ua:8080/bitstream/ntb/13291/1/026\\_Sutn%D1%96st%20ta%20etapi%20up\\_155\\_161\\_714.pdf](http://ena.lp.edu.ua:8080/bitstream/ntb/13291/1/026_Sutn%D1%96st%20ta%20etapi%20up_155_161_714.pdf) [in Ukrainian].

8. Model upravlinnia zminamy Dzhona Kotter [Change management model by John Kotter]. (n.d.). *um.co.ua*. Retrieved from <http://um.co.ua/14/14-1/14-1638.html> [in Ukrainian].

9. Ladonko, L.S., & Hanzha, I.V. (2015). Sutnist ta modeli upravlinnia zminamy na pidpriemstvi [Essence and model change management at the enterprise]. *Naukovyi visnyk Polissia – Scientific Bulletin of Polissia*, 2(2), 101-108 [in Ukrainian].

10. Hron, O.V. (2013). Instrumentarii upravlinnia stratehichnymy zminamy pidpriemstva [Tool management of strategic changes of an enterprise]. *Extended abstract of candidate's thesis*. Kharkiv [in Ukrainian].

11. Nazarov, N.K. (n.d.). Adaptovanyi biopidkhid do upravlinnia personalom pidpriemstva [Adapted biological approach to personnel management of the enterprise]. *eprints.kname.edu.ua*. Retrieved from <http://eprints.kname.edu.ua/35483/1/226-231Назаров%20HK.pdf> [in Ukrainian].

12. Ulchenko, D.O. (2016). Reinzhyrnykh biznes-protsesiv v konteksti rozvytku protsesu restrukturyzatsii pidpriemstva [Business process reengineering in the context of restructuring enterprises]. *Naukovyi visnyk Polissia – Scientific Bulletin of Polissia*, 2(6), 174-181 [in Ukrainian].

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