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КЛЮЧОВІ ВИМОГИ ДО СИНТЕЗУ СИСТЕМИ УПРАВЛІННЯ МІЖНАРОДНОЮ КОНКУРЕНТОСПРОМОЖНІСТЮ ПІДПРИЄМСТВА

Анотація. Розглянуто особливості синтезу системи управління конкурентоспроможністю підприємства, який повинен враховувати закони системоутворення та мати ієрархічну структуру із гнучким модулем взаємодії блоків державного регулювання, блоку адаптації та мікроекономічного (корпоративного) блоку. Блок державного регулювання (макроекономічний*)* є найвищим рівнем організації системи управління конкурентоспроможністю підприємства, що підтверджується сучасною практикою розвинених країн. Проаналізовано позиції України в міжнародних рейтингах та з'ясовано, що дисфункціональна роль держави ускладнює управління міжнародною конкурентоспроможністю підприємства, призводить до подальшого погіршення промислової структури економіки, втрати конкурентних позицій та посилення сировинної орієнтації.

Ключові слова: підприємство, конкурентоспроможність, макроекономічний (інституційний) блок системи управління конкурентоспроможністю, виробнича конкурентоспроможність, індекс легкості ведення бізнесу, готовність країн до четвертої технологічної революції.

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KEY REQUIREMENTS FOR THE SYNTHESIS OF THE ENTERPRISE COMPETITIVENESS MANAGEMENT SYSTEM

Abstract. The peculiarities of the synthesis of the enterprise competitiveness management system are considered. This synthesis should take into account the laws of system formation and have a hierarchical structure with a flexible module of interaction between the blocks of state

regulation, the block of adaptation and the microeconomic (corporate) block. The block of state regulation (macroeconomic) is the highest level of organization of the enterprise competitiveness management system, which is confirmed by the modern practice of developed countries. The article analyzes the position of Ukraine in international ratings and finds that the dysfunctional role of the state complicates the management of the enterprise international competitiveness, leads to further deterioration of the economy industrial structure, the loss of competitive positions and the strengthening of raw orientation.

Key words: enterprise, competitiveness, macroeconomic (institutional) block of competitiveness control system, industrial competitiveness, index of ease of doing business, readiness of countries for the fourth technological revolution.

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КЛЮЧЕВЫЕ ТРЕБОВАНИЯ К СИНТЕЗУ СИСТЕМЫ УПРАВЛЕНИЯ МЕЖДУНАРОДНОЙ КОНКУРЕНТОСПОСОБНОСТЬЮ ПРЕДПРИЯТИЯ

Аннотация. Рассмотрены особенности синтеза системы управления конкурентоспособностью предприятия, который должен учитывать законы системообразования и иметь иерархическую структуру с гибким модулем взаимодействия блоков государственного регулирования, блока адаптации и микроэкономического (корпоративного) блока. Блок государственного регулирования (макроэкономический) является самым высоким уровнем организации системы управления конкурентоспособностью предприятия, что подтверждается современной практикой развитых стран. Проанализированы позиции Украины в международных рейтингах и выяснено, что дисфункциональная роль государства усложняет управление международной конкурентоспособностью предприятия, приводит к дальнейшему ухудшению промышленной структуры экономики, потери конкурентных позиций и усиления сырьевой ориентации.

Ключевые слова: предприятие, конкурентоспособность, макроэкономический (институциональный) блок системы управления конкурентоспособностью, производственная конкурентоспособность, индекс легкости ведения бизнеса, готовность стран к четвертой технологической революции.

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One of the constant trends of today is the awareness of many countries of the science development as a key factor in an effective economy, as the report "UNESCO's Science Report towards 2030" highlights. This conclusion is confirmed by an increase in research and development (R & D) and construction and development (C & D) expenditures by 30.7% over the period from 2007 to 2013, ahead of global GDP growth, which grew by 20% over the same period [1] .

The purpose of the article is to identify the synthesis features of the competitiveness management system and to substantiate the primary role of the institutional factor in ensuring the production competitiveness of domestic enterprises and the readiness of the country for mutually beneficial participation in modern international economic relations that are changing under the influence of the fourth technological revolution.

A significant contribution into the study of enterprise competitiveness management and the role of the institutional factor has been made in the scientific works of such eminent economists as Schumpeter J. A. [2], Solou P.M. [3], Amosha, I. [4], Geyets VM [5], Kizim M.O. [6], Kindzersky Yu.V. [7], Fedulova L. I. [8], Bubenko P T. [9], Buleyev I.P. [10]. However, the issues of the synthesis of such a system of enterprise competitiveness management, which would take into account the laws of system formation and promote the entry of domestic enterprises into the markets of products with a high share of added value, remain inadequately developed.

The use of modern technologies reduces the attraction of all kinds of resources in material production. Therefore, the GDP structure of developed countries is gradually reducing the share of material production and simultaneously increasing the share of services, especially its social component (education, science, culture, health care, etc.). Nevertheless, the structural policy of most countries in Western Europe and the United States is aimed at supporting the domination in material production of machine building as the most technologically high-value added value industry.

Competitiveness ensuring at the level of companies and countries with the integration of digital and physical areas of industrial production becomes impossible without the continuous introduction of advanced technologies. To reflect these processes, the US Competitiveness Council and Deloitte Touche Tohmatsu Limited produced the Global Manufacturing Competitiveness Index (GMCI) 2016 report. The report has made it possible to assess different countries in terms of current and expected level of industrial competitiveness (40 countries were included in the rating).

The countries with the best indices in the field of industrial production have showed high results in a wide range of parameters of the production process. Their highly efficient activities reflect the strong relationship between the competitiveness of production and the introduction of innovations. In the study for 2016 a considerable attention was paid to six countries: the USA, China, Japan, Germany and India. These countries account for 60% of the world's industrial GDP, which determines their significant influence on the development of the global manufacturing industry (Table 1).

Table 1

2016 Global Manufacturing Competitiveness Index rankings by country [*)]

2016 (Current)			2020 (Projected)			
Country	Rank	Index score (100=High) (10 = Low)	Country	Rank	Index score (100=High) (10 = Low)	2016 vs. 2020
China	1	100.0	China	2	93.5	(-1)
United States	2	99.5	United States	1	100.0	(+1)
Germany	3	93.9	Germany	3	90.8	-
Japan	4	80.4	Japan	4	78.0	-
India	11	67.2	India	5	77.5	(+6)
Poland	15	59.1	Poland	16	61.9	(-1)
Czech Republic	23	55.3	Czech Republic	20	57.4	(+3)
Brazil	29	46.2	Brazil	23	52.9	(+6)
Russia	32	43.9	Russia	32	43.6	(0)

[*)] Source: compiled according to statistical reporting [11]

China has the most competitive production and has taken the leading position among the most competitive countries in terms of industrial production in 2016, but, according to the forecasts of world manufacturing companies, it will be forced to move to the second place. The US will take the leading position until the end of the current decade, while in the same period Germany will consistently be among the top three. Positive shifts in the near future will be shown by India, the Czech Republic, Brazil, and others.

The use of advanced production technologies opens up new sources of competitiveness for enterprises in the future. With the integration of digital and physical areas of industrial production the advanced technologies are particularly important in increasing production competitiveness. As industrial and advanced products and processes, technologies and materials spread among the companies in the industrial sector, the traditional industrial giants of the 20th century (the USA, Germany, Japan and the United Kingdom) returned to the leading positions in the top ten most competitive manufacturing powers in 2016. High-tech industries form a global production landscape in most countries with advanced economies and open up prospects for achieving industrial competitiveness.

The key factors of production competitiveness were also singled out in the report:

1) human resources are considered to be the most significant factors of ensuring industrial competitiveness.

2) price competitiveness

3) production efficiency

4) development of the supplier network

5) under the conditions of slow economic growth, cost reduction and increase in productivity for the purpose of increasing profitability remain the most important factors for industrial enterprises

6) the protection of intellectual property has become the main competitive advantage of the US and European enterprises

In contrast to the development of the leading world countries, one of the Ukrainian economy problems in the period from 1990 to 2016 is a catastrophic decline in the share of machine building in the structure of industry and a sharp deterioration of the competitive positions of domestic enterprises in this sector (Table 2).

Table 2

The structure of industry of developed countries, the world and Ukraine,% *)

Industry	World in general, 2010p.	Developed countries, 2010p.	Ukraine, 1990p.	Ukraine, 2010p.	Ukraine, 2016p.
Food	10,9	10,7	18,6	18,0	21,6
Light industry	5,5	4,1	10,8	0,8	1
Chemical	13,2	13,3	5,5	5,9	7,1
Metallurgical	5,8	4,2	11	18,8	17,1
Engineering	35,9	45,3	30,5	10,9	6,6

*) Source: compiled and calculated according to statistical reporting [7, p.110, 123]

These tables indicate significant disparities in the development of Ukrainian industry and its peculiarities compared to the developed countries: the share of machine building has decreased five times during the period from 1990 to 2016, and is critically low. That is why Ukraine did not enter the list of countries surveyed in the “World Indicator of Industrial Competitiveness for 2016” report.

Sustainable development of all brunches, not only of industry, but of the economy as a whole, is impossible without the development of mechanical engineering, which provides them with equipment and apparatus. Otherwise, it causes extraordinary import dependence, rising costs, lagging behind in technological development, and as a result the raw material orientation of the economy. This is confirmed by the data characterizing the export-import activity of Ukrainian enterprises. In 2016 the export of goods amounted to 36.4 billion of US dollars, while import was at the level of 39, 2 billion dollars. Compared to 2015 exports have decreased by 4.6% (by 1764.3 million dollars), imports have increased by 4.6% (by 1732.2 million dollars). The negative balance was 2.9 billion dollars (in 2015, positive - 610.7 million dollars). The share of machine building in export revenues (only 10% of exports) also continued to decrease, and its share in imports grew (20.1% of imports) [12].

The overcoming of these trends requires the immediate intervention of the state and the implementation of sound structural policies, an integral part of which should be the management of the competitiveness of domestic enterprises. It is the competitiveness management that will allow us to determine Ukraine's place in the international division of labor, to distinguish the competitive advantages of domestic

enterprises (including the machine-building industry) and to significantly increase the efficiency of their activities both on the national and international markets. The synthesis of the enterprise competitiveness management system must take into account the laws of system formation and have a hierarchical structure with a flexible module for the interaction of three blocks: the state regulation block, the adaptation block and the microeconomic (corporate) block [13, p.271].

The block of state regulation of competitiveness should have a program-target structure that reflects the goal of the national competitiveness enhancement program and its organizational and economic mechanism of implementation. At this level, the priority sectors and industries that have the potential to reach the world level of competitiveness and need state assistance and support, as well as "unpromising" productions, which at this stage have no prospects of development, are determined., The business environment is being also formed at the state level, thus affecting the level of individual enterprises competitiveness.

The indicators characterizing the business environment of Ukrainian enterprises in 2013 and 2017 are given in table 3 (according to the world rating Doing Business 2013 and 2017 [14].

Table 3

The indicators of Ukraine in the rating of Doing Business in 2013 and 2017*)

Rating by Category	Rating Doing Business 2013	Rating Doing Business 2017	Change in rating
Ease of Doing Business Rank	137	76	61
Starting a Business	50	52	-2
Dealing with construction permits	183	35	148
Getting electricity	166	128	38
Registering property	149	64	85
Getting credit	23	29	-6
Protecting minority investors	117	81	36
Paying taxes	165	43	122
Trading across borders	145	119	26
Enforcing contracts	42	82	-40
Resolving insolvency	157	149	8

*) Source: compiled and calculated according to statistical reporting [14]

The analysis of the indicators dynamics shows significant positive changes, primarily related to the ongoing reforms at the state level, which made it possible to radically change the situation in the field of taxation (from 165 to 43), obtaining construction permits (from 183 to 35), property registration (from 149 to 64). In three categories, Ukraine worsened its positions, where the indicator "Enforcing contracts" became the most unfavorable, its decrease amounted to 40 points (from 42 to 82), the figures "Getting credit" (by 6 points) and "Starting a Business" (by 2 points) reduced a little.

In three categories, Ukraine worsened its positions, where the indicator "Enforcing contracts" became the most unfavorable, its decrease was 40 points (from 42 to 82), the figures "Getting credit" (by 6 points) and "Starting a Business" (by 2 points). Out of 190 countries around the world, Ukraine has risen from 137 in 2013 to 76 in 2017, but from the Central and Eastern Europe region, one place ahead of

Kyrgyzstan, Ukraine ranks the last but one in the ranking. This shows the absence of possibility to solve a sufficient number of problems at the macro level [14].

The adaptation block specifies the set of uncertainties by means of analytical processing of observations, analysis of experience and external sources of information on possible types of uncertainties and their origin. The ultimate goal of this control unit block is to simplify the decision-making model in the microeconomic block. In developed countries, the functioning of the adaptation and choice block in practice is represented through the extensive network of state structures of the regional (local) level, which comprehensively promote the competitiveness of local business entities providing them with information, marketing, technological and other services.

Microeconomic block of the competitiveness management system, obtaining possible options, principles and models of solution of the problem from the regulatory block, specifies and deepens the algorithm of developing an optimal management solution. Different approaches and principles of construction (functional-technological, organizational, etc.) are used to develop this algorithm, but in any case it should be defined as a functional representation of the global goal solution of the national program for enhancing competitiveness.

The block of state regulation is the highest level of organization of the enterprise competitiveness management system. At this level, decisions of political and strategic nature are taken, which reflect the strategy and algorithm of the country's economy integration into the world economy.

As the Fourth Industrial Revolution gathers momentum, decision-makers from the public and private sectors are confronted with a new set of uncertainties regarding the future of production. Further, recent changes put the competitiveness paradigm of low-cost manufacturing exports as a means for growth and development at risk. Countries need to decide how to best respond in this new production paradigm vis-à-vis their national strategies and their ambition to leverage production as a national capability. The World Economic Forum prepared a report «The data-driven Readiness for the Future of Production Assessment 2018» and analyses how well positioned countries are today to shape and benefit from the changing nature of production in the future. Readiness is generally regarded as the ability to capitalize on future production opportunities, mitigate risks and challenges, and be resilient and agile in responding to unknown future shocks. The assessment is made up of two main components: Structure of Production, or a country’s current baseline of production, and Drivers of Production, or the key enablers that position a country to capitalize on the Fourth Industrial Revolution to transform production systems.

The most important drivers of future readiness are Technology & Innovation, Human Capital, Institutional Framework and Global Trade & Investment. These drivers have the strongest correlation with economic complexity. The needs within each driver will evolve as we shift from current to future production paradigms, but the overall drivers will remain significant. Scale is not a prerequisite for future readiness. Economic complexity is more important than scale for readiness for the future of production. The ability to gather, combine and use knowledge embedded in

people and technology to create a range of unique products will become an increasingly important competitive advantage.

The 100 countries and economies included in the assessment are assigned to one of four archetypes based on their performance in the Drivers of Production and Structure of Production. The assessment is comprised of 59 indicators across the Drivers of Production and Structure of Production components and reveals that all countries can do more to prepare for and shape future production paradigms (Table 4).

Table 4

Readiness for the Future of Production Assessment for Ukraine and some countries, 2018 *)

Country	Structure of Production		Drivers of Production	
	Score	Rank	Score	Rank
Ukraine	5.2	43	4.5	67
Czech Republic	7.9	6	6.0	26
Germany	8.7	3	7.6	6
China	8.2	5	6.1	25
Poland	6.8	19	5.8	31
Japan	9.0	1	6.8	16
United States	7.8	7	8.2	1
India	6.0	30	5.2	44
Russian Federation	5.7	35	5.3	43
Brazil	5.2	41	5.0	47
Georgia	3.6	79	4.9	54

*) Source: compiled according to statistical reporting [15]

Of the 100 countries there are 25 Leading countries, 10 Legacy countries, 7 High-Potential countries/economies and 58 Nascent countries.

Japan has the strongest Structure of Production score (8.99), and the United States has the strongest weighted average Drivers of Production score (8.16) across all six drivers. Furthermore, approximately 70% of robot sales take place in China, Germany, Japan and the United States. Germany, Japan and the United States dominate the landscape of high-value industrial robots, while China serves as the most rapidly growing market. While there are early leaders to learn from—including China, Germany, Japan, the United States and others—these countries are also still navigating the early stages of transformation. Approximately 90% of the countries from Latin America (Brazil), Middle East, Africa and Eurasia (Ukraine, Georgia) included in the assessment are classified as Nascent countries, or the group least ready for the future of production (Figure 1).

It will be important for each country to differentiate itself, capitalize on competitive advantages and make wise trade-offs in forming its own unique strategy for the future of production and its broader economy.

New and innovative approaches to public-private collaboration are needed to accelerate transformation. Every country faces challenges that cannot be solved by the private sector or public sector alone. Legacy and Nascent countries, in particular, can accelerate readiness and transformation by utilizing the private sector more actively in tackling macro level challenges.

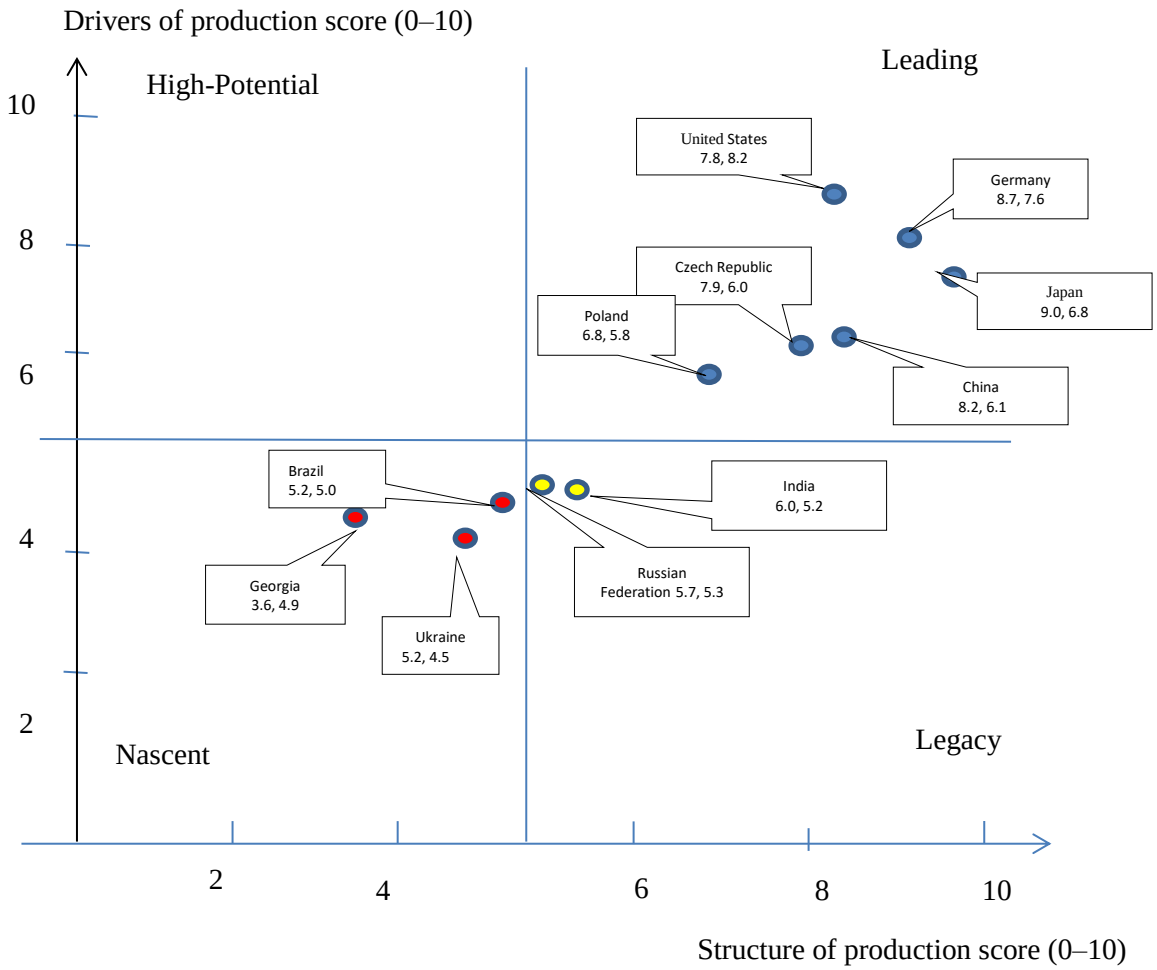

Figure 1: Map of Readiness Assessment Results for Ukraine and some[*)]

[*)] Source: compiled by the author according to statistical reporting [15]

Leading countries, such as Germany and Japan, also involve the private sector in the development and implementation of strategies, such as Industry 4.03 and Society 5.04 strategies. Traditional public private partnerships have historically had varying levels of success. However, new approaches to public-private collaboration that complement traditional models can help governments effectively and quickly partner with industry, academia and society to unlock new value.

Analysis of Ukrainian Drivers of Production and Structure of Production shows that the most problematic component is Institutional Framework (Table 5).

Table 5

Ukrainian Drivers of Production and Structure of Production [*)]

Drivers of Production				Structure of Production			
Driver	Weighting	Rank	Score /10	Structure	Weighting	Rank	Score /10
Technology & Innovation	20%	74th	3.5	Complexity	60%	41st	6.0
Human Capital	20%	34th	5.8				

Global Trade & Investment	20%	59th	5.1				
Institutional Framework	20%	94th	3.4	Scale	40%	57th	3.9
Sustainable Resources	5%	88th	4.6				
Demand Environment	15%	58th	4.5				

*) Source: compiled by the author according to statistical reporting [15]

So, the modern system for managing the competitiveness of domestic enterprises is characterized by a dysfunctional role of the state, which functions as a coordinator and regulator formally, in a very limited format.[1]

The absence of an effective state industrial strategy and strategy for managing international competitiveness leads to further deterioration of the industrial structure of economy, the loss of competitive positions and the strengthening of raw materials orientation.

The accumulated experience testifies to the impossibility of solving these problems solely at the micro level, without the involvement of institutional support. The locomotive that "draws" domestic enterprises into the markets for medium and high-tech products with a high share of value added is the state and the government. Only under such conditions it is possible for domestic enterprises to participate in international economic relations on mutually beneficial terms and with full utilization of national economic potential.

References

1. UNESCO Science Report: towards 2030 Available at http://unesdoc.unesco.org/images/0023/002354/235406e.pdf

2. Shumpeter Y.A. Teoriya ekonomicheskogo razvitiya [Theory of Economic Development]. – M.: Direkt–Media, 2007. – 400 s.

3. Solou R.M. Teoriya rosta//Panorama ekonomicheskoy myisli kontsa XX stoletiya [Solow R.M. Growth Theory // Panorama of economic thought at the end of the XX century]/ Pod red. D. Grinaueya T.1 – SPb.: Ekonomicheskaya shkola. 2002.

4. Amosha, A. I., Vishnevskiy, V. P., and Zbarazskaya, L. A. “Neoindustrializatsiya i novaya promyshlennaya politika Ukrainy“ [Neoindustrialization and the new industrial policy of Ukraine]. Ekonomika promyshlennosti, no. 1-2 (57-58) (2012): 3-36.

[1] An example of the active work of the state as a coordinator in the system of competitiveness management is the promotion of participation in international industrial exhibitions of national enterprises. But at the annual Hannover Messe exhibition, which is considered "as an entrance ticket to a club of strong, technologically advanced countries" [16], Ukraine is hardly represented. In 2017, only one Ukrainian company was represented by the stand - the Kiev Cube Plant, the manufacturer of cabinets and cases for electrical engineering and communications. For example, Poland presented 200 of its companies from various high-tech segments.

5. Geets, V. M. “Baryery na puti razvitiya promyshlennosti na innovatsionnoyosnove i vozmozhnosti ikh preodoleniya“ [Barriers tothe development of the industry based on innovation and the possibilityof overcoming them]. Ekonomika Ukrainy, no. 1 (2015): 4-25.

6. Kyzym, M. O. Promyslova polityka ta klasteryzatsiia ekonomiky Ukrainy [Industrial policy and clustering of Ukraine's economy]. Kharkiv: INZhEK, 2011.

7. Kindzerskyi, Yu. V. Promyslovist Ukrainy: stratehiia i polityka strukturno-tekhnolohichnoi modernizatsii [Industry of Ukraine: strategy and policy of structural and technological modernization]. Kyiv, 2013.

8. Fedulova, L. I., Mazaraki, A. A., and Androshchuk, H. O. Innovatsiinapolityka [Innovation policy]. Kyiv: Vyd-vo KNTEU, 2012.

9. Bubenko, P. T. “Stratehichne planuvannia ta upravlinnia innovatsiinymrozvytkom: teoriia i praktyka“ [Strategic planning andmanagement of innovative development: Theory and Practice].Biznes Inform, no. 1 (2016): 77-80.

10. Buleyev, I. P. “Opyt strukturirovaniya promyshlennosti razvitykh stran i vozmozhnost ego ispolzovaniya v Ukraine“ [The structured industry of the developed countries and the possibility of its use in Ukraine]. In Stratehiia i mekhanizmy rehuliuvannia promyslovoho rozvytku, 3-29. Donetsk: IEP NAN Ukrainy, 2012.

11. Deloitte Touche Tohmatsu Limited and US Council on Competitiveness, 2016 Global Manufacturing Competitiveness Index. Available at https://www2.deloitte.com /global/en/pages/manufacturing/articles/global-manufacturing-competitiveness-index.html

12. Derzhavna sluzhba statistiki Ukrayini [State Statistics Service of Ukraine]. Available at http://www.ukrstat.gov.ua/ [in Ukrainian].

13. Piddubna, L.I. (2011). Mizhnarodna konkurentospromozhnist pidpriemstva: teoriya ta mehanizm zabezpechennya [International Competitiveness of Enterprise: Theory and Mechanism of Provision]. Harkiv: VD "INZHEK" [in Ukrainian].

14. Doing Business 2018*:* Reforming to Create Jobs // World Bank Group. Available at http://www.doingbusiness.org /reports/global-reports/doing-business-2018

15. Readiness for the Future of Production Report 2018// World Economic Forum. Available at https://www.weforum.org/ reports/readiness-for-the-future-of-production-report-2018

16. Yurchak, O. Dzerkalo zanepadu ukrayinskoyi promislovosti [The mirror of the decline of Ukrainian industry]. Available at http://biz.nv.ua/ ukr/experts/1193547 [in Ukrainian].

Література

1. UNESCO Science Report: towards 2030 [Electronic resource]. – Access mode: http://unesdoc.unesco.org/images/0023/002354/235406e.pdf

2. Шумпетер Й.А. Теория экономического развития.М.:Директ–Медиа,2007. – 400 с.

3. Солоу Р.М. Теория роста//Панорама экономической мысли конца XX столетия/ Под ред. Д. Гринауэя Т.1 – СПб.: Экономическая школа. 2002. – Т. 1 – 668 с.

4. Амоша А. И. Неоиндустриализация и новая промышленная политика Украины / А. И. Амоша, В. П. Вишневский,Л. А. Збаразская // Экономика промышленности. – 2012. – № 1-2(57-58). – С. 3–36.

5. Геец В. М. Барьеры на пути развития промышленности на инновационной основе и возможности их преодоления /В. М. Геец // Экономика Украины. – 2015. – № 1. – С. 4–25.

6. Кизим М. О. Промислова політика та кластеризація економіки України : монографія / М. О. Кизим. – Х. : ВД «ІНЖЕК»,2011. – 304 с.

7. Кіндзерський Ю. В. Промисловість України: стратегія і політика структурно-технологічної модернізації : монографія / Ю. В. Кіндзерський / НАН України, ДУ «Інститут економіки та прогнозування НАН України». – К., 2013. – 536 с.

8. Федулова Л. І. Інноваційна політика / Федулова Л. І.,Мазаракі А. А., Андрощук Г. О. – К. : Вид. КНТЕУ, 2012. – 604 с.

9. Бубенко П. Т. Стратегічне планування та управління інноваційним розвитком: теорія і практика / П. Т. Бубенко // Бізнес Інформ. – 2016. – № 1. – С. 77–80.

10. Булеев И. П. Опыт структурирования промышленности развитых стран и возможность его использования в Украине / И. П. Булеев // Стратегія і механізми регулювання промислового розвитку : зб. наук. праць. – Донецьк : ІЕП НАН України,2012. – С. 3–29.

11. Deloitte Touche Tohmatsu Limited and US Council on Competitiveness, 2016 Global Manufacturing Competitiveness Index [Електронний ресурс]. – Режим доступу : https://www2.deloitte.com/global/en/pages/manufacturing/articles/global-manufacturing-competitiveness-index.html

12. Державна служба статистики України [Електронний ресурс]. – Режим доступу : http://www.ukrstat.gov.ua/

13. Піддубна Л.І. Міжнародна конкурентоспроможність підприємства: теорія та механізм забезпечення: Монографія / Л.І. Піддубна. – Х: ВД "ІНЖЕК", 2011. – 400 с. (Укр.мов.)

14. Doing Business 2018*:* Reforming to Create Jobs // World Bank Group [Електронний ресурс]. – Режим доступу : http://www.doingbusiness.org /reports/global-reports/doing-business-2018.

15. Readiness for the Future of Production Report 2018// World Economic Forum. [Електронний ресурс]. – Режим доступу : https://www.weforum.org/ reports/readiness-for-the-future-of-production-report-2018

16. Юрчак О. Дзеркало занепаду української промисловості // О. Юрчак. [Електронний ресурс]. – Режим доступу : http://biz.nv.ua/ukr/experts/yurchak _o/hannover-messe-2017-jak-dzerkalo-zanepadu-ukrajinskoji-promislovosti-1193547 .html