UDC 330.341:378.3

УДК 330.341:378.3

D. O. Pawliszczy, Candidate of Economic Sciences,P. Yu. Kurmaiev, Doctor of Economics,

Associate Professor

П. Ю. Курмаєв, д. е. н., доцент

**Д. О. Павліщий,** к. е. н.,

# DEVELOPMENT OF THE SPHERE OF HIGHER EDUCATION: ORGANIZATIONAL

Urgency of the research. The 21st century is an era of radical transformations of social and, in particular, economic relations. Their driving force is knowledge. The creation of new knowledge occurs as a result of the exchange of information between the subjects of this process. Educational institutions, in particular higher education ones, are an important element of the system of production and transfer of new knowledge.

AND FINANCIAL ASPECTS

**Target setting.** Qualitative characteristics of the functioning of higher education significantly depend on the degree of effectiveness of the management system, which includes organizational and financial components.

Actual scientific researches and issues analysis. The issues of improving the functioning of the sphere of higher education are considered in scientific works of scientists as S. Slaughter, P. Temple, J.B.G. Tilak.

Uninvestigated parts of general matters defining. The problem of organizational and financial prerequisites formation for the development of the domestic sphere of higher education needs some additional research.

The research objective. The purpose of the article is to analyze the functioning of the sphere of higher education in Ukraine and to formulate proposals for improving its organizational and financial support.

The statement of basic materials. The present situation in the system of higher education of Ukraine in the context of student contingent indicators, funding volumes is analyzed. The proposals, which implementation is aimed at improving the financial condition of higher education institutions and creating the prerequisites for increasing student contingent are substantiated.

**Conclusions.** The development of the domestic sphere of higher education is one of the priorities of national economic policy. Formation of favorable conditions for the functioning of the sphere of higher education of Ukraine will provide financial, social and reputational effects.

**Keywords:** higher education; finances; regulation; information economy.

**DOI:** 10.25140/2410-9576-2019-1(17)-85-92

#### РОЗВИТОК СФЕРИ ВИЩОЇ ОСВІТИ: ОРГАНІЗАЦІЙНИЙ ТА ФІНАНСОВИЙ АСПЕКТИ

Актуальність теми дослідження. XXI століття є епохою докорінних трансформацій суспільних й, зокрема, економічних відносин. Їх рушійною силою є знання. Створення нових знань відбувається у результаті обміну інформацією між суб'єктами даного процесу. Важливим елементом системи продукування та трансферу нових знань являються освітні заклади, зокрема, вищої освіти.

Постановка проблеми. Якісні характеристики функціонування вищої освіти суттево залежать від ступеня ефективності системи управління, яка включає організаційну та фінансову компоненти.

**Аналіз останніх досліджень і публікацій.** Питання підвищення ефективності функціонування сфери вищої освіти розглядаються у наукових працях вчених: С. Слаутера, П. Темпла, Д. Тілейка.

Виділення недосліджених частин загальної проблеми. Проблематика формування організаційнофінансових передумов розвитку вітчизняної сфери вищої освіти потребує додаткового дослідження.

Постановка завдання. Метою статті є аналіз функціонування сфери вищої освіти в Україні та формування пропозицій щодо покращення її організаційного та фінансового забезпечення.

Виклад основного матеріалу. Проаналізовано сучасну ситуацію в системі вищої освіти України в контексті показників контингенту студентів, обсягів фінансування. Обгрунтовано пропозиції, реалізація яких спрямована на покращення фінансового стану закладів вищої освіти та створення передумов збільшення контингенту студентів.

Висновки. Розвиток вітчизняної сфери вищої освіти є одним із пріоритетів національної економічної політики. Формування сприятливих передумов функціонування сфери вищої освіти України забезпечить фінансовий, соціальний та репутаційний ефекти.

**Ключові слова:** вища освіта; фінанси; регулювання; інформаційна економіка.

**Urgency of the research.** The XXI century is an era of radical transformations of social and, in particular, economic relations. Their driving force is knowledge. The creation of new knowledge occurs as a result of the information exchange between the subjects of this process. Educational institutions, in particular higher education, are an important element of the system of production and transfer of new knowledge.

An efficiently functioning higher education system determines, to a large extent, the competitiveness of the national economy, the vector and pace of economic development, and the level of perception of change.

**Target setting.** Future social development and integration of national economies within Industrial 4.0 will require highly qualified specialists, including higher education institutions.

Qualitative characteristics of the higher education functioning significantly depend on the degree of effectiveness of the management system, which includes organizational and financial components.

Actual scientific researches and issues analysis. The author's group of fundamental labor [1] details the various aspects of the activities of modern universities in the Knowledge Economy. Research results represent the author's approach to determining the role and place of universities in the system of production and dissemination of knowledge, identification and characteristics of their interactions with other producers of knowledge and subjects of the informal economy of knowledge.

From similar positions the role of higher education in the activation of social development is considered in [2]. Thus, the author substantiates the advantages of functioning of the higher education system to ensure positive economic dynamics, increase the level of socialization of individuals, accelerate the transfer of knowledge.

A similar problem is devoted to scientific work [3]. The authors focus on the knowledge that produces institutions of higher education not from the point of view of the public good, but as a product, the realization of which brings profit. Researchers complement the theory of academic capitalism, noting that increasing the efficiency of university management leads to an increase in their competitiveness, and improved control over internal business processes.

The researches devoted to regional peculiarities of the functioning of institutions of higher education and the system of management / regulation of their activities are quite interesting from a scientific point of view.

In particular, [4] discusses a wide range of issues in the development of the education system in China: from inequality of access and gender perspectives to the problems of reforming the education system.

**Uninvestigated parts of general matters defining.** The problem of formation of organizational and financial prerequisites for the development of the domestic sphere of higher education needs some additional research.

The research objective. The purpose of the article is to analyze the functioning of the sphere of higher education in Ukraine and to formulate the proposals for improving its organizational and financial support.

The statement of basic materials. The modern system of higher education in Ukraine consists of four main groups of subjects. They include: institutions of higher education, consumers of educational services, intermediaries, regulatory bodies.

During 2013-2018, the number of higher education institutions in Ukraine decreased by 20 units (by 6.5%) [5, p. 16]. At the same time, the rate of reduction of the number of higher education institutions of private ownership was significantly higher compared to state-owned enterprises, respectively 15.4% and 2.7%. This was due to a number of objective circumstances: the decrease in the number of applicants, the military conflict in the East of Ukraine, the complication of the economic and political situation in the country and, accordingly, the growth of economic risks.

In general, the situation on the market of educational services, where higher education institutions function, can be characterized as monopolistic competition. The clusterization of the regions of Ukraine by the number of institutions of higher education allowed them to be grouped into three clusters.

Analysis of the data depicted in Fig. 1 indicates significant inter-cluster differences. Thus, institutions of higher education are concentrated in the regions of Ukraine with the largest population - the first and second clusters, which correspond to world trends. The exceptions are Zaporizhzhya, Donetsk and Luhansk regions. In general, the share of education institutions in the regions of the first and second clusters is 59.5% of the total.

During 2013-2018, there is a tendency to reduce the contingent of students in domestic higher education institutions. During this period, the number of students decreased by 33.2%. The pace of decline was significantly higher compared to the countries of Central and Eastern Europe. For example, for the given period, the number of students in Poland decreased by 12%, in the Czech Republic by 18.6%.

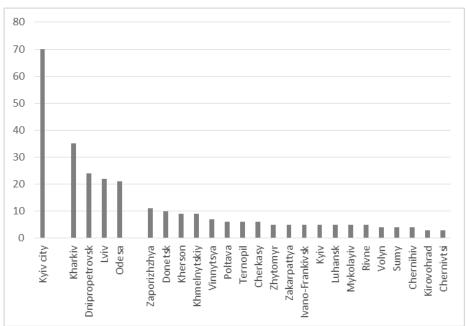


Fig. 1. Clusterization of the regions of Ukraine by the number of higher education institutions Source: [5, p. 31]

The number of students essentially depends on the demographic situation in the country, namely, on the population size. The correlation coefficient that we had calculated is 0.93, which means that there is a close connection between the number of students and the population.

Other reasons that negatively affected the number of contingent students in higher education institutions in Ukraine were the following: a decrease in the standard of the population living, the transformation of living standards, an active recruiting campaign of higher education foreign institutions.

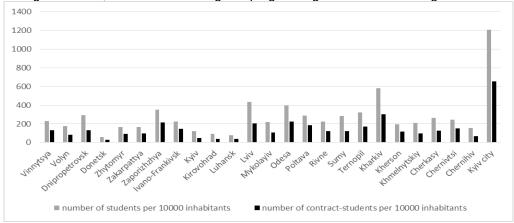


Fig. 2. Distribution of regions by the number of students per 10 thousand permanent residents *Source:* calculated on the basis of [5, p. 33; 6]

Analysis of the information shown in Fig. 2 showed a lack of dependence between the number of students per 10 thousand of population, the number of educational institutions in the region and the number of inhabitants. For example, the Ternopil region, according to the number of higher education institutions, ranked to be the twelfth in Ukraine, by the number of the population it is the twentieth, while by the number of students per 10 thousand of population, it is the sixth. A similar situation is typical for Mykolayiv, Rivne, Sumy and Chernivtsi regions.

In our opinion, the results of the distribution illustrated in Fig. 2 can partly be explained by the effect of two main factors: the conditions of entry (the possibility of applying regional and rural coefficients); cost of study/accommodation.

In this context, the results of surveys of first-year students of different institutions of higher education regarding the motivation of choosing a place of study are rather interesting. So, for students studying in large cities (for example, Kyiv, Kharkiv), the main reason for choosing an educational institution is its prestige [7; 8].

Instead, for other students who are studying in higher education institutions in small cities, other causes are important, among which the cost of education is primary [9].

Globalization of the educational services sector facilitates the movement of entrants between higher education institutions in different countries. Starting from the middle of the XX century, the number of students studying outside their countries is constantly increasing. So, if in 1950 there were about 0.1 million such students, then in 1995 there were 1.35 million people, in 2010 - 2.7 million people, in 2025 it is expected that their number will amount to 8 million people [10, p. 73].

In 2017, the number of students studying outside their countries was 5.08 million. Among the leader countries, the largest number of students studying outside their countries, were: China - 809.3 thousand people, India - 305.9 thousand people, Germany - 119.0 thousand people, Republic of Korea - 105.3 thousand people, France - 90,7 thousand people, Kazakhstan - 89,5 thousand people [11; 12]. Compared to 2013, the highest growth rates were observed in Kazakhstan - 65.2% and India - 60.7%. That means that, for today, the global market for educational services is developing dynamically. Accordingly, more than thirty countries in the world are actively fighting for the attraction of foreign entrants. The most popular countries for studying foreign students were the USA, Great Britain, Australia, France and Germany.

The results of the analysis of the statistics show that the developed educational infrastructure and the low cost of studying and living in Ukraine did not become competitive advantages of attracting foreign applicants.

In 2017, 52,768 foreign students studied in Ukraine, which is 3082 more than in 2013 [11; 12]. The maximum number of foreign students was observed in 2014 (60037 people), and then it started declining every year.

The main factors that negatively influenced the dynamics of foreign students were the following: an unstable military-political situation, reputational losses of Ukrainian higher education institutions and passive recruitment campaigns. In 2017, 70.8% of foreign students in Ukraine studied at higher education institutions in five regions: Kyiv - 21.9%, Kharkiv region - 27.5%, Odesa region - 10.8%, Dnipropetrovsk region - 6.1%, Zaporizhzhya region - 4.5% [5, p.70]. The indicated distribution, in general, repeats the positioning of the regions of Ukraine in the total number of students.

Distribution of foreign students by country of origin has witnessed the existence of two trends. Firstly, there was a gradual decrease in the proportion of students from the countries-former republics of the USSR. Thus, during 2016-2018, their share decreased from 32.9% to 29.4%. Secondly, the number of entrants from countries where the positions of our education were traditionally high due to the termination of recognition of Ukrainian diplomas of certain specialties has decreased.

At the same time, the number of Ukrainian students studying abroad during 2013-2017 increased by 34.6 thousand people. Ukraine is a member of the group of countries with the highest rate of growth of the rate of graduation abroad. The analysis of statistical data [11, 12] showed that Ukraine has a negative balance of student traffic since 2015 (Fig. 3). In our opinion, the problem is that reducing the number of foreign and domestic students in the conditions of the demographic crisis will lead to a reduction in the financial provision of higher education institutions and the termination of the functioning of educational infrastructure in many regions of Ukraine.

In this context it should be noted that the transformation of the higher education system towards commercialization has led to significant changes in the understanding of higher education modern institutions. In modern conditions, higher education institutions, both private and public, are increasingly seen as analogues of a commercial enterprise. This is explained by the fact that, in addition to traditional activities related to the production of educational services, institutions of higher education are

engaged in fundraising, recruitment of entrants, market research on the market of educational services, the creation and promotion of new educational products.

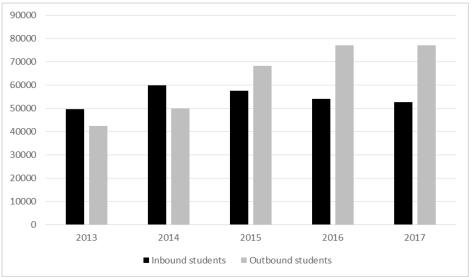


Fig. 3. Dynamics of the international movement of entrants to Ukraine and from the country *Source*: [11, 12]

If in the first post-Soviet years the main task of higher education institutions was the provision of educational services, then, in the future, the search for sources of funding was of great importance.

Ukraine has a rather limited list of funding sources for higher education institutions:

- funds of founders state or private entities;
- fee from students of contract form funds of individuals and legal entities;
- other receipts (for example, funds from patrons, from business activities).

Of the aforementioned sources, in Ukraine, the founders' fees and fees from students of contract form are the most significant.

The volume of funding for state institutions of higher education in absolute terms has a growing dynamic. In 2017, funding increased by 36.4% compared to 2014. At the same time, the share of expenditure on higher education financing in the consolidated budget decreased from 5.4% in 2014 to 3.7% in 2017, and in relation to GDP for the same period - from 1.8% to 1.49 % [5, p. 11; 13, p. 4].

The decrease in the number of private institutions of higher education and separate units indicates the financing of reduction by their founders.

In the 2017-2018 academic years, the proportion of students studying at institutions of higher education at the expense of individuals and legal entities amounted to 53.2%, respectively; the proportion of students studying at the expense of budgets of all levels was 46.8%. Compared with the 2014-2015 school year, the proportion of budget / contract, in fact, remained unchanged.

The proportion of students studying on the contract form in Ukraine is higher, compared to the average indicator for the OECD and EU-22 countries, where 66% and 72% of students respectively study at the expense of the state [14].

The analysis shows that during 2013-2018 the financing of the higher education sector was carried out in violation of the provisions of Article 61 of the Law of Ukraine "On Education" 1060-XII of 4.06.1991 and Article 78 of the Law of Ukraine "On Education" 2145-VIII of 5.09. 2017

The shortage of financial resources has led to an increase in the cost of education, a reduction of the scholarship fund, and the restriction of development expenditures. The above has led to a decrease in the number of domestic and foreign students, a narrowed reproduction of the potential of higher education in Ukraine and reputational losses.

That is why the formation of organizational and financial prerequisites for the development of the domestic sphere of higher education requires the implementation of a set of measures at the national and international levels.

In our opinion, the first priority should be the measures aimed at ensuring the unchangeability of the cost of education, first of all, for the citizens of Ukraine. Provision of unchanged cost of education in the medium term, along with active recruitment activities of higher education institutions, will contribute to the growth of the contingent of students in contractual education.

In turn, the growth of the contingent of students in contractual forms will have a synergistic effect for the functioning of the institution of higher education as a whole.

The implementation of the above measures will require financial resources.

Analysis of the articles of expenditures of institutions of higher education allowed to determine the funds allocated for the payment of utilities as a potential source of additional financial resources. Implementation of the higher education institutions for natural gas at a fixed price, taking into account 10% discount from the price set by household consumers will allow:

- to ensure the continuity of the educational process in the winter period;
- to reduce the cost of utilities by directing the funds released to finance the unchanged cost of education and development programs for the institution of higher education.

The generalization of Prozorro system information on the purchase of natural gas by individual Ukrainian universities during September 2018-February 2019 made it possible to determine the price range for 1 cubic meter - from 8.93 UAH to 9.77 UAH, consequently, discounts will range from UAH 0.89 to UAH 0.97 per 1 cubic meter.

Part of the potential financial losses can be offset by the funds of the state budget of Ukraine "Higher Education, Energy Efficiency and Sustainable Development", which provides 134.4 million UAH.

In the conditions of the preconditions for the transition of our country to Industrial 4.0, the growth of exports of educational services is one of the priorities of the national economic policy. An increase in the number of foreign students may serve as a motivator for domestic higher education institutions to modernize training programs, introduce innovative educational technologies, and enhance international cooperation.

Another important aspect is the possibility of attracting additional financial resources.

An increase in the contingent of foreign students requires active recruiting campaigns in the importing countries of educational services.

At present, the recruitment of entrants abroad is, as a rule, mediators commissioned by the Ukrainian higher education institutions. Organization of recruiting activities according to the given scheme is not systematic, coverage level of target groups is low.

In its turn, the activity of the state enterprise "Ukrainian State Center for International Education" has only informational and consultative character. In addition, there is actual duplication of the separate functions of the mentioned state structure with the Office of International Cooperation and European Integration of the Ministry of Education and Science of Ukraine.

In our opinion, the issues of organizing international education, including recruiting foreign entrants, need to be concentrated in the state enterprise "Ukrainian State Center for International Education". Organizational aspects of recruiting foreign entrants (the search for mediators, establishing cooperation) are appropriate to put on an education attaché and / or secretaries of embassies. The foregoing will allow the creation of an extensive network of information and recruiting structures in countries with diplomatic representations of Ukraine.

**Conclusions.** The development of the domestic sphere of higher education is one of the priorities of national economic policy.

Functioning of the sphere of higher education of Ukraine is influenced by many multi-vector trends. On the one hand, integration into the world educational space takes place, advanced educational practices are introduced. On the other hand, the contingent of students is decreasing, the potential of the sphere of higher education is gradually lost.

The implementation of the proposed measures will promote the improvement of the financial situation of higher education institutions, which will enable the funds to be allocated to the priority tasks of their development programs.

Formation of favorable conditions for the functioning of the sphere of higher education of Ukraine will provide financial, social and reputational effects.

#### References

- 1. Temple, P. (Eds.). (2014). Universities in the Knowledge Economy: Higher education organisation and global change. London: Routledge [in English].
- 2. Tilak, J.B.G. (2003). Higher Education and Development. International Handbook of Educational Research in the Asia-Pacific Region (pp. 809-826). Dordrecht: Kluwer Academic Publishers [in English].
- 3. Slaughter, S., & Rhoades, G. (2004). *Academic capitalism and the new economy: Markets, state, and higher education.* Baltimore, MD: The Johns Hopkins University Press [in English].
- 4. Postiglione, G. A. (Eds.). (2006). Education and Social Change in China: Inequality in a Market Economy. Armonk, NY: Sharpe [in English].
- 5. Vyshcha osvita v Ukraini u 2017 rotsi [Higher education in Ukraine in 2017]. (2018). Kyiv: State Statistics Service of Ukraine [in Ukrainian].
- 6. Chyselnist postiinoho naselennia po rehionakh (za otsinkoiu) na 1 sichnia 2018 roku [Number of resident population by region (according to estimate) as of January 1, 2018] *ukrstat.gov.ua*. Retrieved from http://www.ukrstat.gov.ua/ [in Ukrainian].
- 7. Universytetske doslidzhennia UNIDOS 13 [University study UNIDOS 13]. (2017). Kyiv: Taras Shevchenko National University of Kyiv [in Ukrainian].
- 8. Rezultaty sotsiolohichnoho doslidzhennia "Abituriient-2015" [Results of sociological research "Applicant 2015"]. (2016). web.kpi.kharkov.ua. Retrieved from http://web.kpi.kharkov.ua/sp/rezultati-doslidzhennya-abituriyent-2015/ [in Ukrainian].
- 9. Rezultaty opytuvannia pershokursnykiv yurydychnoho fakultetu [Results of the first-year students' survey of the Faculty of Law]. (2018). lawfaculty.chnu.edu.ua. Retrieved from http://lawfaculty.chnu.edu.ua/rezultaty-opytuvannia-pershokursnykiv-iurydychnoho-fakultetu/ [in Ukrainian].
- 10. Tilak, J.B.G. (2011). Trade in higher education: The role of the General Agreement on Trade in Services (GATS). Paris: International Institute for Educational Planning [in English].
- 11. Education: Inbound internationally mobile students by continent of origin. (2018). *unesco.org.* Retrieved from http://data.uis.unesco.org/ [in English].
- 12. Education: Outbound internationally mobile students by host region. (2018). *unesco.org.* Retrieved from http://data.uis.unesco.org/ [in English].
- 13. Osnovni pokaznyky diialnosti vyshchykh navchalnykh zakladiv Ukrainy na pochatok 201617 navchalnoho roku [The main indicators of the activity of higher educational i nstitutions of Ukraine at the beginning of the 2016/17 academic year]. (2017). Kyiv: State Statistics Service of Ukraine [in Ukrainian].
- 14. Education at a Glance 2018: OECD Indicators. (2018). Paris: OECD Publishing [in English].

#### Література

- 1. Universities in the Knowledge Economy: Higher education organisation and global change/ edited by Paul Temple. London: Routledge, 2014. 264 p.
- 2. Tilak, J.B.G. Higher Education and Development / J.B.G. Tilak // International Handbook of Educational Research in the Asia-Pacific Region/ edited by J. P. Keeves. Dordrecht: Kluwer Academic Publishers, 2003. p. 809-826
- 3. Slaughter, S. Academic capitalism and the new economy: Markets, state, and higher education / S. Slaughter, G. Rhoades. Baltimore, MD: The Johns Hopkins University Press,2004. 384 p.
- 4. Education and Social Change in China: Inequality in a Market Economy/ G. A. Postiglione. Armonk, NY: Sharpe, 2006. 224 p.
- 5. Вища освіта в Україні у 2017 році. К. : Державна служба статистики України, 2018. 298 с.
- 6. Чисельність постійного населення по регіонах (за оцінкою) на 1 січня 2018 року [Електронний ресурс] / Державна служба статистики України. К. : Державна служба статистики України, 2018. Режим доступу : http://www.ukrstat.gov.ua/.
- 7. Університетське дослідження UNÍDOS 13. К. : Київський національний університет імені Тараса Шевченка, 2017. - 34 с.
- 8. Результати соціологічного дослідження "Абітурієнт-2015" [Електронний ресурс]. Режим доступу : http://web.kpi.kharkov.ua/sp/rezultati-doslidzhennya-abituriyent-2015/.
- 9. Результати опитування першокурсників юридичного факультету [Електронний ресурс]. Режим доступу : http://lawfaculty.chnu.edu.ua/rezultaty-opytuvannia-pershokursnykiv-iurydychnoho-fakultetu/.
- 10. Tilak, J.B.G. Trade in higher education: The role of the General Agreement on Trade in Services (GATS) / J.B.G. Tilak. Paris: International Institute for Educational Planning, 2011. p. 73.
- 11. Education: Inbound internationally mobile students by continent of origin [Electronic resource] / UIS Data Dictionary for Education Statistics. Access mode: http://data.uis.unesco.org/.
- 12. Education: Outbound internationally mobile students by host region [Electronic resource] / UIS Data Dictionary for Education Statistics. Access mode : http://data.uis.unesco.org/.
- 13. Основні показники діяльності вищих навчальних закладів України на початок 2016/17 навчального року. К. : Державна служба статистики України, 2017. 208 с.
- 14. Education at a Glance 2018: OECD Indicators. Paris: OECD Publishing, 2018. 460 p.

Received for publication 11.03.2019



#### Бібліографічний опис для цитування :

Pawliszczy, D. O. Development of the sphere of higher education: organizational and financial aspects / D. O. Pawliszczy, P. Y. Kurmaiev // Науковий вісник Полісся. – 2019. – № 1 (17). – С. 85-92.

 Павліщий
 кандидат економічних наук, Польща;

 Даріуш Олесь
 https://orcid.org/0000-0003-1328-7891;

E-mail: pawliszczy@i.ua`

Pawliszczy Candidate of Economic Sciences, Poland; Dariusz Oles https://orcid.org/0000-0003-1328-7891;

E-mail: pawliszczy@i.ua;

Курмаєв доктор економічних наук, доцент, незалежний дослідник;

Петро Юрійович https://orcid.org/0000-0001-9464-0380;

ResearcherID: M-2900-2018;

E-mail: petrol09@i.ua;

**Kurmaiev** Doctor of Economics, Associate Professor, Independent Researcher;

Petro Yuriiovych https://orcid.org/0000-0001-9464-0380;

ResearcherID: M-2900-2018; E-mail: petrol09@i.ua.