

ГУЦАЛЮК О.М.

кандидат економічних наук, доцент,

Приватний заклад вищої освіти «Міжнародний європейський університет»

Київ, Україна,

E-mail: alex-g.88@ukr.net

ORCID: 0000-0002-6541-4912

НАВОЛОКИНА А.С.

кандидат економічних наук, доцент,

Приватний заклад вищої освіти «Міжнародний європейський університет»

Київ, Україна,

E-mail: allanavolokina@gmail.com

ORCID: 0000-0003-1711-6202

ДОСЛІДЖЕННЯ ЕКОНОМІЧНОЇ ВЗАЄМОДІЇ РИНКУ ПРАЦІ ТА КАДРОВОГО ЗАБЕЗПЕЧЕННЯ СФЕРИ ОХОРОНИ ЗДОРОВ'Я УКРАЇНИ

Актуальність. Актуальність дослідження економічної взаємодії ринку праці та кадрового забезпечення сфери охорони здоров'я на сьогодні зростає так як необхідно залучити всі зацікавлені сторони до ефективної взаємодії, забезпечити гнучкість систем вищої та професійної освіти за рахунок наближення підготовки робочої сили до потреб роботодавців.

Мета та завдання. Метою дослідження є аналіз взаємодії ринків праці й освіти, визначення основних недоліків цієї взаємодії та розробка пропозицій щодо підвищення її продуктивності в розрізі задоволення потреб та інтересів суб'єктів зазначених ринків.

Результати. Під взаємодією ринків праці та освітніх послуг можна вважати узгоджену поведінку суб'єктів, що здійснюють господарську діяльність на зазначених ринках, з метою збалансування попиту та пропозиції на кваліфіковану робочу силу, створення умов для соціально-економічного зростання національної економіки шляхом відтворення людського капіталу та підвищення конкурентноздатності робочої сили. Проаналізовано економічну взаємодію ринку праці та кадрового забезпечення сфери охорони здоров'я України. Проведено оцінювання конкурентоспроможності галузі вищої медичної освіти та її закладів у контексті економічної взаємодії. Визначено рівень економічної взаємодії ринку освітніх послуг і ринку праці. Досліджено процес гармонізації ринку праці країн ЄС та України. Виявлено основні причини і недоліки виникнення економічної взаємодії ринків освітніх послуг та праці. Запропоновано напрями вдосконалення процесу прогнозування розвитку ринку праці як заходи з підвищення продуктивності досліджуваних процесів. Розглянуто підхід до визначення конкурентної позиції закладу вищої медичної освіти з використанням кваліметричного підходу, де як параметри обрано навчальну та виховну роботу, кадри, наукову роботу й міжнародну діяльність. Основним фактором за параметром навчальна та виховна робота визначено лікувальну роботу, яка включає такі критерії оцінювання: кількість університетських клінік, консультативна та хірургічна активність співробітників протягом року, участь у створенні клінічних протоколів, наявність у викладачів лікарської кваліфікаційної категорії, технології набуття практичних навичок. За результатами оцінювання конкурентоспроможності закладів вищої освіти запропоновано визначати такі рівні: критичний (низький); достатній (середній); високий (вищий від середнього); відмінний (дуже високий).

Висновки. Результати проведеного дослідження свідчать про незадовільний рівень економічної взаємодії ринку праці та кадрового забезпечення сфери охорони здоров'я України, що виявляється в незбалансованості попиту й пропозиції на фахівців відповідних спеціальностей, низькому відсотку працевлаштованих випускників ЗВО, високій частці безробітних з вищою освітою, відсутності прямого зв'язку між сумою витрат на освіту та якістю освітніх послуг, недосконалої системи інформаційного забезпечення й незадовільному стані процесів прогнозування основних показників функціонування та розвитку ринку праці.

Ключові слова: ринок освітніх послуг, заклади вищої освіти, роботодавці, ринок праці, попит і пропозиція робочої сили, прогнозування ринку праці, науково-методичне забезпечення прогнозування.

HUTSALIUK O.M.

Phd (Economics), associate professor,
PHEI «International European University»,
Kyiv, Ukraine
E-mail: alex-g.88@ukr.net
ORCID: 0000-0002-6541-4912

NAVOLOKINA A.S.

Phd (Economics), associate professor,
PHEI «International European University»,
Kyiv, Ukraine
E-mail: allanavolokina@gmail.com
ORCID: 0000-0003-1711-6202

RESEARCH ON THE ECONOMIC INTERACTION OF THE LABOR MARKET AND HUMAN RESOURCES IN THE HEALTHCARE SECTOR IN UKRAINE

Topicality The relevance of the research of the economic interaction of the labor market and human resources in the healthcare sector is growing today, as it is necessary to involve all interested parties to effective interaction, to ensure the flexibility of higher and vocational education system by adjustment of labor training to the needs of employers.

Aim and tasks. The goal of the study is to analyze the interaction of labor markets and education, identify the main disadvantages of this interaction and develop proposals to increase its productivity in the context of meeting the needs and interests of the subjects of these markets.

Research results. The interaction of labor markets and educational services can be considered as coordinated behavior of entities engaged in economic activity in these markets in order to balance the supply and demand for skilled labor, create conditions for socio-economic growth of the national economy through the reproduction of human capital and increasing the competitiveness of the workforce. The economic interaction of the labor market and the human resources in the healthcare sector of Ukraine has been analyzed. An assessment of the competitiveness of the field of higher medical education and its institutions in the context of the economic interaction has been carried out. The level of the economic interaction of the educational services market and the labor market has been determined. The process of harmonization of the labor market of EU countries and Ukraine has been investigated. The main causes and disadvantages of the economic interaction of the educational services and the labor markets have been identified. The directions of improvement of the forecasting process of the labor market development as measures of improving the productivity of the studied processes are suggested. The approach to determining the competitive position of a higher medical education institution using a qualimetric approach has been considered, where educational and pedagogical work, personnel, scientific work and international activity are chosen as parameters. The main factor by the parameter of educational and pedagogical work is the medical work, which includes the following evaluation criteria: the number of university clinics, consultative and surgical activity of employees during the year, participation in the creation of clinical protocols, the availability of medical qualification among the teachers, technology acquisition of practical skills. According to the results of competitiveness assessment of higher education institutions, it is proposed to determine the following levels: critical (low); sufficient (average); high (higher than average); excellent (very high).

Conclusion. The results of the study indicate an unsatisfactory level of the economic interaction of the labor market and the human resources in the healthcare sector in Ukraine, which is manifested in an imbalance in supply and demand for specialists in the relevant specialties, the low percentage of employed graduates of HEI, the high share of unemployed with higher education and the absence of direct connection between the amount of expenses on the education and the quality of educational services, the imperfection in the information support system and the poor state of forecasting processes in the main indicators of functioning and development of the labor market.

Key words: market of educational services, institutions of higher education, employers, labor market, supply and demand of labor force, forecasting of the labor market, scientific and methodological provision of forecasting.

Problem statement and its connection with important scientific and practical tasks. The functioning of the Ukrainian economic system is characterized by low labor productivity, a labor market imbalance between labor supply and demand, and a mismatch between the quality of graduates' initial knowledge and skills requirements and expectations of employers. All this leads to an increase in the share of the unemployed with higher and vocational education, not a return on investment in training, labor migration. In order to provide high quality human resources for the economy, it is necessary to involve all

stakeholders in effective interaction, to ensure the flexibility of higher education and vocational education systems by bringing the workforce closer to the needs of employers.

Analysis of recent publications on the problem. Important contribution to the theory and methodology of regulation of labor markets and education has been made by such scientists as: O. Ambrazhei, E. Libanova, L. Ilyin, M. Karpenko, L. Lavrynenko, O. Martyakova, O. Chumak, T. Shestakovska and some others. However, more attention should be paid to the process of forecasting labor market parameters, given that the performance of educational institutions is delayed over time.

Allocation of previously unsolved parts of the general problem. However, more attention should be paid to the process of forecasting labor market parameters, given that the performance of educational institutions is delayed over time.

Formulation of research objectives (problem statement). The purpose of the article is to analyze the interaction of labor markets and education, identify the main disadvantages of this interaction and develop proposals to improve its productivity in the context of meeting the needs and interests of the subjects of these markets.

An outline of the main results and their justification. According to the definition given in the Ukrainian Soviet Encyclopedia, interaction is «one of the common forms of interconnection between phenomena, the essence of which is to reverse the action of one object or phenomenon to another» [1]. Interaction is a form of movement, development that determines the existence and structural organization of any system. In the narrow sense, «interaction» is «interrelated, concerted activity of different entities» [2, c. 39].

Thus, the interaction of labor markets and educational services can be considered coordinated behavior of entities engaged in economic activity in these markets, with the aim of balancing the demand and supply of skilled labor, creating the conditions for socio-economic growth of the national economy through the reproduction of human capital and improving the competitiveness of the workforce.

The subjects of the educational services market are the state, educational institutions, entrants and graduates. The subjects of the labor market are employers, public and private intermediaries, graduates. The mechanism of interaction of all these subjects is shown in Fig.1.

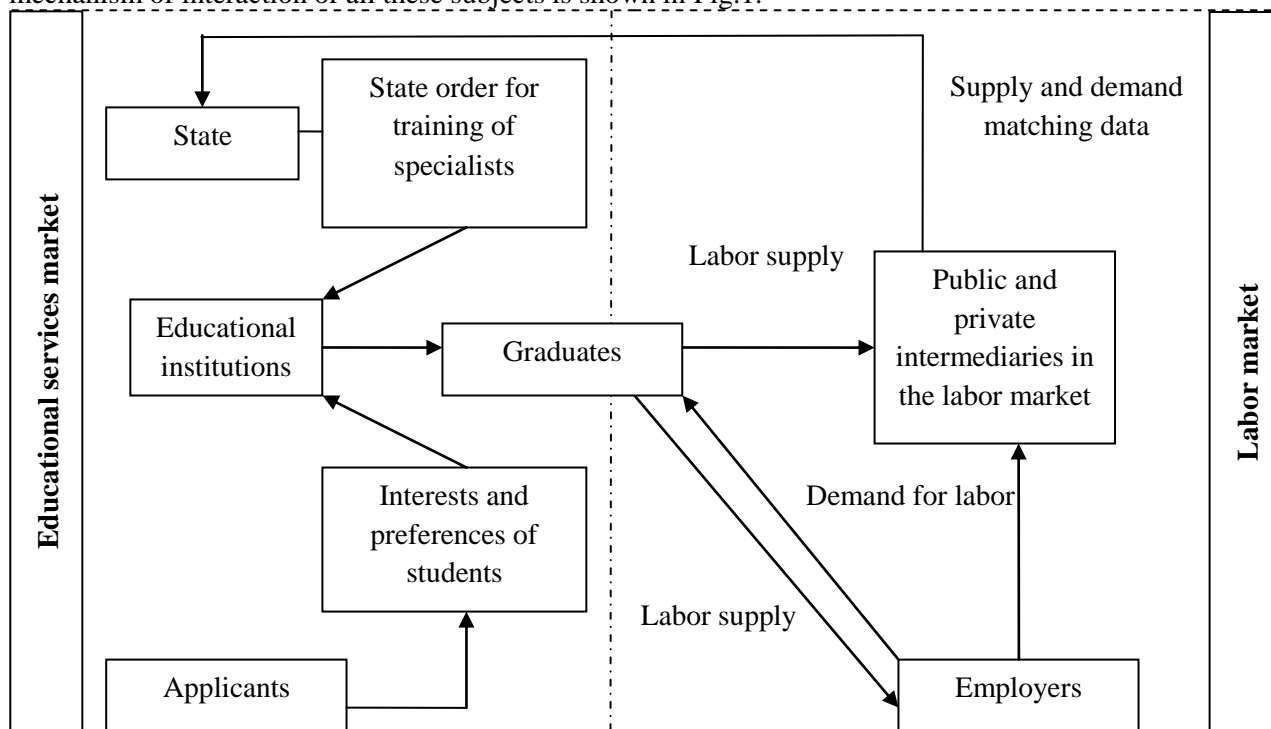


Fig. 1. The mechanism of interaction of subjects of the market of educational services and the labor market
Note: compiled by the author

Therefore, the educational services market creates intangible benefits in the form of knowledge, skills and abilities of graduates of educational institutions. The choice of specialties is influenced by many factors, including the possibility to study at the state budget, the cost of education, personal preferences of students and their parents, fashion (prestige) for certain specialties and more.

In the labor market, graduates of educational institutions form a definite supply of human capital, and employers provide a demand function for this capital. In order to satisfy supply and demand, direct connections between graduates and employers are possible, as well as indirect ones through a system of public and private intermediaries.

The lever of interaction between the markets of educational services and labor is feedback in the form of information on the balance of supply and demand of labor, which should be further taken into account when forming a state order for the training of specialists in certain specialties.

However, this is in theory, and in practice, throughout the entire period of independence in the Ukrainian labor market, there is an imbalance in the supply and demand of labor. So, for the period 2014-2018, the ratio of the number of university graduates and the number of available vacancies in the labor market ranged from 8 to 17 people per vacancy (Table 1). Note that the overwhelming number of professions providing for higher education was characterized by a shortage of vacancies. The situation on the labor market to balance the supply and demand of labor on the labor market does not change significantly, despite the fact that over the past decade, more than half of the students studied at the expense of state and local budgets.

With regard to the market of medical educational services, the following should be noted: the Ministry of Health of Ukraine, as the main state customer for the training of medical and pharmaceutical personnel, is subordinate to seventeen state higher educational institutions of the III-IV level of accreditation (in particular, twelve medical universities and academies, a pharmaceutical university, a dental academy, three academies of postgraduate education), in which about 65 thousand students are educated, of which 25 thousand are in state at the order.

Table 1

The ratio of training volumes of specialists to the needs of enterprises in the employees for the period 2014-2018 (at the beginning of the school year, thousand people)

Years	Number of persons released from HEI		Total	Number of vacancies at the end of the reporting period	Load per vacancy, persons
	I-II accreditation levels	III - IV levels of accreditation			
2014	79,1	405,4	484,5	35,3	14
2015	73,4	374,0	447,4	25,9	17
2016	68,0	318,7	386,7	36,0	11
2017	61,2	359,9	421,1	50,4	8
2018	55,5	357,4	412,9	58,4	6

Note: compiled by the author according to the data [3, 4]

In 100 medical (pharmaceutical) educational institutions of I-II levels of accreditation, the training of junior specialists (junior bachelors) with medical and pharmaceutical education, bachelors of nursing, pharmacy, laboratory diagnostics and masters of nursing, in which more than 56 thousand students study. About 20 thousand specialists graduate annually from institutions (Table 2).

The training of medical personnel is also carried out in 11 educational institutions of a non-state form of ownership (4 institutions of the III-IV levels of accreditation and 7 institutions of the III levels of accreditation). The Armed Forces of Ukraine today have their own system of medical education, which is divided into levels with the corresponding volumes and tasks.

The characteristics of the health care labor market are as follows: at the end of 2018, 191 905 full-time medical posts were registered. The staffing of full-time medical posts by individuals by doctors as a whole amounted to 81.7%, as in 2017. The staffing levels of doctors (individuals) in medical institutions amounted to 78.0% (2017 - 78.2%). In some types of establishments, staffing with individuals amounted to: in regional hospitals - 85.7%, city hospitals - 78.9%, CDH - 75.7%, district hospitals - 72.9%; in rural medical dispensaries - 67.6%.

Table 2

**Number of students, admission and graduation from institutions of higher medical education
I-II and III-IV levels of accreditation (thousand persons)**

Indicators	Years					Deviations from 2018 to 2014,%
	2014	2015	2016	2017	2018	
Higher Medical Education Institutions III-IV accreditation levels for training doctors and pharmacists						
Students admitted to the first year	11,7	12,8	12,3	12,2	10,4	-10,7
in particular from the state budget	4,4	4,9	4,6	4,3	3,9	-10,3
Specialists have been released	9,1	10,2	10,3	10,3	11,5	+26,1
in particular from the state budget	2,9	3,2	3,4	3,6	3,6	+25,4
Studying students	61,3	65,7	67,4	67,6	64,9	+5,9
in particular from the state budget	21,4	24,3	24,9	25,4	25,0	+17,1
Institutions of higher medical education of I-II levels of accreditation						
Total accepted	21,6	20,1	18,4	17,2	15,0	-30,6
Total studying	75,6	70,4	64,7	61,2	56,8	-24,9
Total released	21,5	22,2	21,0	19,0	17,7	-17,6

Note: compiled by the author according to the data [5, 6]

The gap between full-time and occupied posts (i.e. the number of vacant posts) amounted to 23 644 units. (Table 3).

Table 3

Data on medical personnel of the Ministry of Health of Ukraine system

Indicators	Years					Deviations from 2018 to 2014,%
	2014	2015	2016	2017	2018	
Full-time medical positions, total, thousand people	194,9	196,8	195,7	195,3	191,9	-1,5
Provision of full-time posts, per 10,000 population	45,6	46,2	46,1	46,26	45,71	+0,2
Employed medical positions, total, thousand people	174,2	175,1	173,8	172,7	168,3	-3,4
The number of physical doctors, thousand people	159,9	161,6	160,9	159,6	156,9	-1,9
The gap between full-time and occupied posts, thousand people	20,7	21,7	21,8	22,6	23,6	+14,3
The gap between positions and physical doctors, thousand. People	34,9	35,2	34,8	35,7	35,0	+0,3
% of staffing, taking into account part-time jobs	89,4	88,9	88,8	88,4	87,7	-1,7
% of staffing by individuals	82,1	82,1	82,2	81,7	81,7	-0,4
Provision of doctors per 10,000 population	37,4	37,9	37,9	37,8	37,4	0,0

Note: compiled by the author according to the data [5, 6]

The provision of junior specialists with medical education in Ukraine is 74.7 per 10,000 population (2017 - 78.3). Below average indicators in the Nikolaev area - 68.8, in Kiev - 69.6, Odessa region - 69.8. The staffing of medical posts in clinics of the Ministry of Health of Ukraine as of 2018 amounted to 74%, while the downward trend over the past five years was the provision of polyclinics with district therapists and pediatricians (Table 4).

Table 4

**The staffing of medical posts in clinics
(system of the Ministry of Health of Ukraine),%**

Indicators	On 31.12.2014	On 31.12.2015	On 31.12.2016	On 31.12.2017	On 31.12.2018	Deviations from 2018 to 2014,%
Therapists	73,5	74,3	74,0	74,2	73,5	0,0
including district therapists	74,9	75,4	75,4	74,9	73,9	-1,3
Teenage therapists	69,9	70,2	71,6	73,5	73,7	+5,4
Pediatricians	75,2	75,4	74,8	74,8	75,4	+0,3

Continuation of Table 4

including district pediatricians	80,8	81,3	80,5	79,8	80,5	-0,4
General practitioners are family doctors	73,1	73,8	73,2	72,1	73,7	+0,8
Total	73,6	74,2	73,7	73,1	74,0	+0,5

Note: compiled by the author according to the data [5, 6]

The share of people of retirement age among doctors in 2018 was 24.6% or 38 566 doctors (2017 - 24.5%). The number of persons of retirement age among junior specialists with a medical education was 397 99 or 12.7% (2017 - 12.9%).

The number of doctors in medical institutions (without managers and their deputies, dentists, statisticians, methodologists) in 2018 amounted to 103,783 people or 24.7 per 10,000 population (2017 - 24.9) (Fig. 2). Indicators of availability of medical doctors-cough above the average in Kiev - 33.9, Ivano-Frankivsk region - 33.7, Lviv - 31.8, Chernivtsi - 31.7. Low indicators of security in the areas of: Nikolaev - 20.8, Kherson - 22.2, Kirovograd - 24.1. According to the WHO Regional Office for Europe, the supply of doctors per 10,000 people in the European Region is 32.2 (2014).

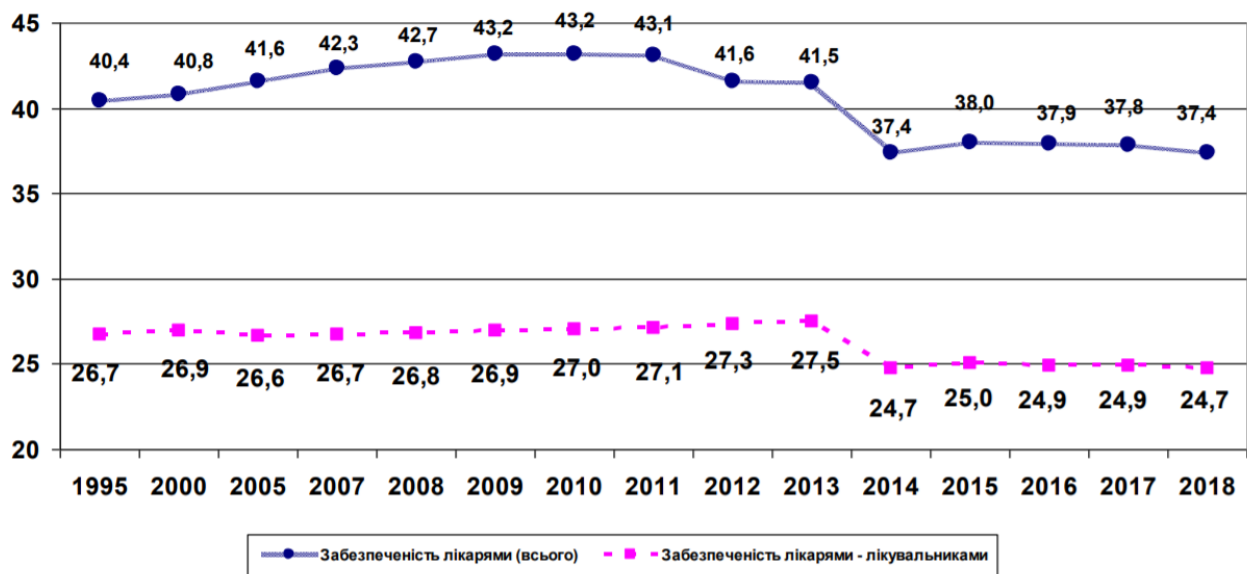


Fig. 2. Provision of doctors per 10 thousand. Population [5]

Thus, it can be summarized that the annual graduation of specialists of higher education institutions of the Ministry of Health of Ukraine of the I-IV level of accreditation in the last five years exceeded the needs of the labor market by 23.7-47.8%. In 2018, the labor supply decreased by 4.6% compared to 2014, the number of vacancies increased by 14%, which led to a 24.1% decrease in demand over demand (Table 5). However, the balance was not reached.

Table 5

The correlation of supply and demand in the health care labor market

Indicators	Years					Deviations from 2018 to 2014, %
	2014	2015	2016	2017	2018	
Labor supply, thousand people	30,6	32,4	31,3	29,3	29,2	-4,6
Number of vacancies, thousand units	20,7	21,7	21,8	22,6	23,6	+14,0
Labor supply and demand ratio, %	147,8	149,3	143,6	129,6	123,7	-24,1

Note: compiled by the author

Thus, despite the large volume of training of medical specialists, the staffing of medical institutions remains incomplete. One of the ways to solve this problem is to reduce the number of hospital beds per 100 thousand population from 78.5 (2014) to 60, according to the order of the Ministry of Health of Ukraine dated 01.02.2016 No. 51 [5]. Since the staff of doctors is determined by the number of hospital beds [6], this leads to a reduction in the staffing of hospital facilities, which means a reduction in vacancies and even the

release of doctors are already working. With the reduction of experienced doctors, the employment of university graduates in a specialty becomes very problematic, which leads to an increase in the number of unemployed, non-specialty employment or the departure of specialists abroad.

Balancing the demand and supply of labor on the labor market is possible due to the placement of a state order to train a certain number of specialists in each of the areas of knowledge. However, despite the fact that over half of the students studied at the expense of state and local budgets over the past decade, the situation on the labor market has not changed significantly. Even among graduates who received higher education for budgetary funds, the percentage of employed health professionals amounted to 31.5% in 2017, which is insufficient (Table 6).

Table 6

The number of graduates who received a job referral in 2018 in the field of management of ministries (departments) in which universities are located [6]

Names of Ministries and Departments	Number of graduates who received a job placement		They were trained at the expense of the budget, people	
	total, people	as a % of the total number of graduates	state	local
Ministry of Agrarian Policy and Food of Ukraine	1723	22,0	1516	–
Ministry of Education and Science of Ukraine	35989	12,6	32035	504
Ministry of Defence Ukraine	866	56,6	866	–
State Agency of Forest Resources of Ukraine	33	63,5	32	–
Ministry of Culture of Ukraine	325	5,9	14	283
Ukrainian State Construction Corporation «UKRBUD»	482	63,2	478	–
Ministry of Health of Ukraine	5059	31,5	3151	1550
Ministry of Infrastructure of Ukraine	95	28,3	95	–
Ministry of Internal Affairs of Ukraine	3375	24,5	2948	–
Private higher education institutions	1356	3,2	–	–

As of 01.01.2019, the number of unemployed with higher education was 49%, with vocational education - 34% of the total number of registered persons in the State Employment Service. At the same time 32% were persons under 35 years, 1% - graduates of educational institutions. According to the State Employment Service of Ukraine, in 2018, the highest demand was for professions that do not need higher education.

The analysis of information posted on the job search sites Work.ua, Jobs.ua, Staff portals, Rabota.ua, Head Hunter, HR-provider, Smart Solutions, consulting company Ernst & Young in Ukraine, the international exchange of freelance Proffstore, shows that the demand will grow for narrow specialty physicians [7].

Thus, the estimates of the State Employment Service and non-governmental recruitment agencies and intermediaries on the most in-demand specialists differ significantly, which indicates that the information system for the forecasting of the main indicators of functioning and development of the labor market is imperfect.

The economic feasibility of the functioning of any system is characterized by a comparison of costs and results. Considering that a certain amount of education expenditures should ensure the appropriate quality of knowledge and skills acquired during training, which in turn provide a certain level of labor productivity, in order to evaluate the effectiveness of the interaction between the educational services and the labor market as benchmarks you can use the amount of education and labor costs of workers. Labor productivity is defined as the ratio of gross domestic product to the number of employed population (Table 7).

The economic feasibility of the functioning of any system is characterized by a comparison of costs

and results. Taking into account the fact that a certain amount of expenses on education should ensure the appropriate quality of knowledge and skills acquired during training, which, in turn, provide a certain level of labor productivity, we can use indicators for comparison to compare the effectiveness of the educational services market and the labor market the amount of expenses for education and labor productivity of workers. Labor productivity is defined as the ratio of the volume of gross domestic product to the number of employed population (table. 7).

The data in Table 7 indicate a 34% reduction in consolidated higher education budget expenditures in 2018 compared to 2014. Labor productivity growth over the same period is 27%. The reason for this growth is a reduction in the number of employees by 11%, with GDP growing at constant prices by 13%. Thus, reducing spending on higher education did not affect labor productivity. That is, these two indicators are in no way related to the lack of a direct link between the amount of education costs and the quality of educational services. Increasing or decreasing costs is associated with increasing or decreasing the number of budget places in national universities.

Table 7

Expenditures on education and labor productivity for the period 2014-2018

Indicators	Years					Deviation 2018/2014,%
	2014	2015	2016	2017	2018	
Consolidated budget expenditures for higher education, mln UAH	28 341	30 982	35 234	38 681	37 000	+30,6
Consolidated budget expenditures for higher education in 2010 prices, mln UAH	19 038	15 038	14 531	13 064	12 497	-34,4
Population engaged in economic activity, thousand people	18 073	16 443	16 277	16 156	16 035	-11,3
Gross Domestic Product:						
- in actual prices, million UAH	1 586 915	1 979 458	2 383 182	2 982 920	3 558 706	+124,3
- in 2010 prices, million UAH	1 066 001	960 789	982 887	1 007 459	1 201 926	+12,8
Labor productivity (one employee):						
- in actual prices, million UAH / person	87,8	120,4	146,4	184,6	221,9	+152,8
- in 2010 prices, million UAH / person	58,9	58,4	60,4	62,4	74,9	+27,1

Note: Compiled by the author using the data [6, 13]

The discrepancy between the quality of education received and the requirements and expectations of employers is a significant factor in unemployment among graduates of educational institutions. The issues of improving the quality of higher education have been repeatedly raised in the publications of domestic scientists. In the context of reforming the educational system of Ukraine, the creation of the National Agency for the Quality Assurance of Higher Education (NAQAHE) was envisaged.

According to the law "On Higher Education" [13], NAQAHE was supposed to start its activities in September 2015. The mandate of this body for quality control of higher education involves the accreditation of independent non-governmental organizations (institutions, agencies, bureaus, etc.) for evaluating educational programs, learning outcomes and / or higher education institutions (their structural units), with a view to developing recommendations and providing assistance to educational institutions. . The participation of a higher education institution in carrying out the evaluation procedure by an independent institution is voluntary [13, Art. 24]. However, the law does not specify which organizations may act as independent higher education quality assessment institutions, how employers can be involved in the assessment processes, what criteria will be used for such evaluation. In addition, the activities of the NAQAHE itself have not yet been started.

Currently, one of the alternatives to improving the quality of graduates' knowledge and skills is considering the introduction of dual education, which involves taking a certain amount of time to train a student in the workplace with the performance of official duties in accordance with an employment contract [14].

This form of education can solve most of the problems associated with the elimination of discrepancies between acquired knowledge, skills of graduates and the expectations of employers.

However, its implementation implies significant changes to the legislation, creation of every university of enterprises that will agree to participate in such educational programs, as well as conducting reengineering of business processes of national universities. All this takes some time, so the creation of dual education clusters on the basis of powerful educational institutions and stakeholders, in accordance with the Concept, is envisaged in 2020-2023.

One of the main reasons for the inefficient interaction of the education services market and the labor market is the imbalance of labor supply and demand, which testifies to the poor state of forecasting of labor market parameters. Ensuring a certain quality of such forecasts requires many factors to be taken into account (Fig. 3).

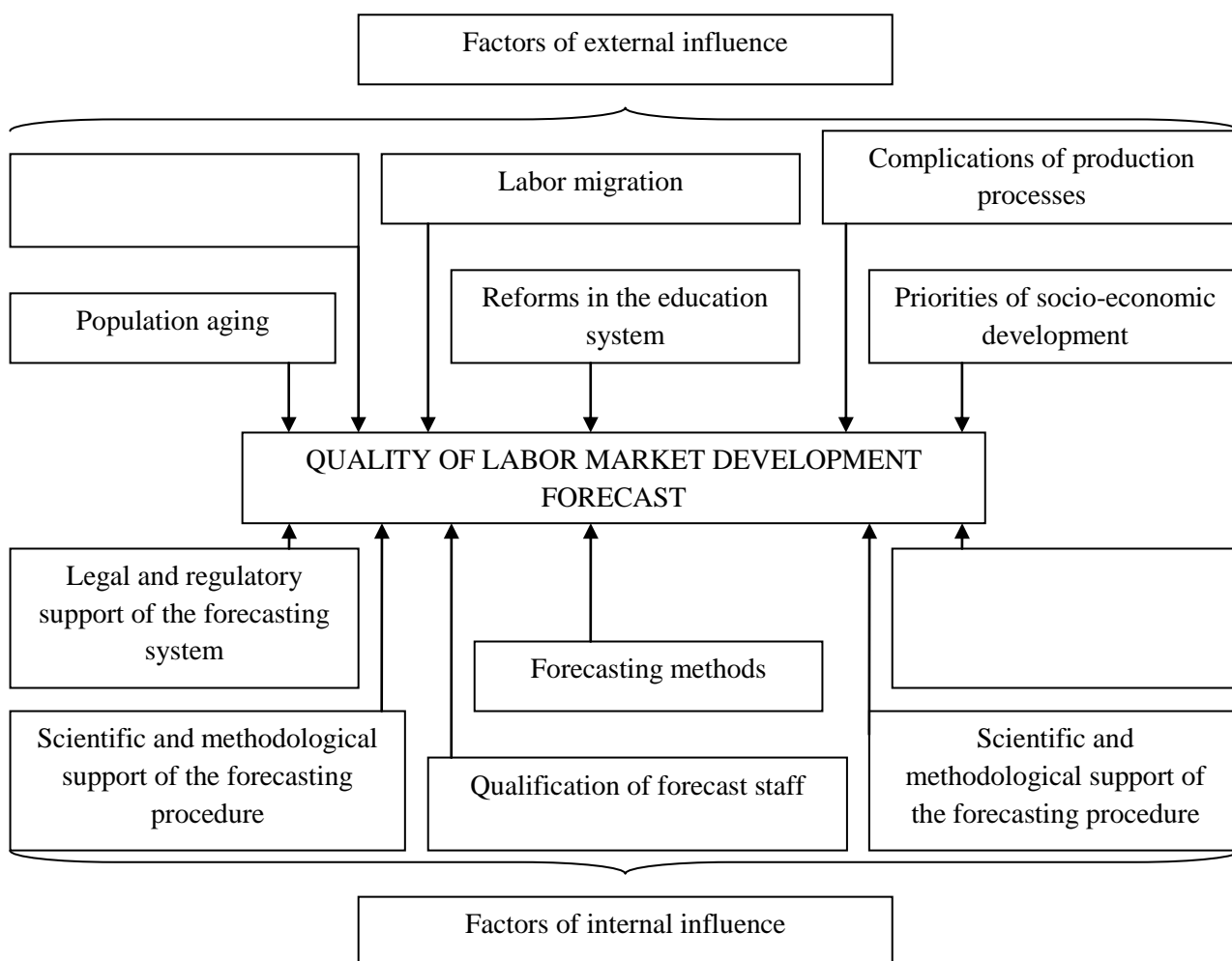


Fig. 3. Factors affecting the quality of labor market forecasts

Note: compiled by the author

In recent years, several regulations have been adopted in Ukraine that regulate the processes of forecasting labor supply and demand. These include: The Verkhovna Rada of Ukraine Resolution “On the Program of Activities of the Cabinet of Ministers of Ukraine” [8], the Government Priority Action Plan for 2017, and the Government Mid-Term Priority Action Plan for 2020 [9], the National Qualifications Framework Implementation Action Plan for the years 2016-2020 [10]. In addition, the Laws of Ukraine and the Decree of the Cabinet of Ministers of Ukraine governing the activity of the Ministry of Economic

Development and Trade of Ukraine, the Ministry of Social Policy of Ukraine, the Ministry of Education and Science of Ukraine, which are state institutions responsible for the development of the forecasting system in the Ukrainian labor market, have been adopted.

Despite this, 80% of the experts who participated in the study of the problems of forecasting the labor market [12] consider the legal support of the forecasting and planning system unsatisfactory.

The use of individual indicators or parts of forecasts, unsatisfactory methodological support of forecasting procedure, lack of coordination between data collecting authorities and their processing units, low staff qualification, poor quality of software and computer hardware, low quality (reliability) of statistical data - all this indicates the practical absence of a system of forecasting the labor market. Despite the fact that the study was conducted in 2013, its results remain relevant to this day.

Among the most frequently cited reasons for the low efficiency of the system for forecasting labor market parameters, 34% of experts noted the low reliability of the statistics provided by market entities. The degree of reliability of statistical (reporting) information depends on the level of toning of a particular business. However, in this case we are talking about the fact that the current legislation does not provide a reporting form on the provision of information about the short- and long-term prospective needs of the enterprise in specialists of certain specialties. That is, data on potential volumes of demand for labor are determined on the basis of forecasts of the economic development of the national economy, therefore their reliability is very doubtful.

A significant problem is the division of responsibility for drawing up labor market development forecasts between ministries. Currently, the development of labor market development forecasts is within the competence of the Ministry of Economic Development and Trade of Ukraine (Ministry of Economic Development). The analysis of the labor market is carried out by the Ministry of Education and Science and the Ministry of Social Policy of Ukraine in order to develop proposals for its regulation, and the statistical information is collected by the State Statistics Service of Ukraine (Table 8).

The development of labor market forecasts is carried out by the Department of Economic Strategy and Macroeconomic Forecasting, which is a structural unit of the Ministry of Economic Development of Ukraine; the state order for training specialists at universities is prepared by the Department for Regulation of Public Procurement. The official website of the Ministry of Economic Development contains two types of forecasts: consensus forecasts and forecasts of economic and social development of Ukraine. «The consensus forecast is the average values of the main forecast indicators of economic development of Ukraine, which are calculated as the median based on expert estimates of the survey participants of leading experts in the field of macroanalysis and forecasting» [20].

Table 8

The powers of the central executive bodies to forecast labor market development

Name of the Ministry	Authority
Ministry of Economic Development and Trade of Ukraine	ensuring the formation and implementation of the state order for the training of specialists; implementation of state forecasting of economic and social development of Ukraine and preparation of relevant plans and programs, development of structure of forecast and program documents of economic and social development, methodological recommendations for their preparation, implementation of modern technologies of forecasting socio-economic processes; development of wage and labor market forecasts; formation of the state contract for training of specialists, realization of coordination of works of the state customers on its placement and execution [15]
Ministry of Social Policy of Ukraine	analysis of the state of the labor market, preparation of proposals on labor market regulation and employment; participation in the formation of the state order for training [16]
Ministry of Education and Science of Ukraine	systematic monitoring and analysis of the needs of the domestic labor market, making proposals on the volumes and directions of state support for the training of specialists with higher education; formation of a proposal each year and bringing to the subordinate educational establishments a state contract for the training of specialists, taking into account the

Continuation of Table 8

	medium-term forecast of the need for specialists and workers in the labor market in accordance with the procedure established by law; promoting employment of graduates of higher education institutions [17]
Державна служба статистики України	carries out formation of information base for forecasting and analysis of tendencies and patterns of socio-economic development [18]

Note: compiled by the author

The information base for the development of a consensus forecast is materials provided by experts from the Ministry of Economic Development and Trade of Ukraine, the Ministry of Finance of Ukraine, the National Bank of Ukraine, the State Research Institute for Informatization and Modeling of Economics, SESI "Academy of Financial Management", SI "Institute of Economics and Forecasting NAS of Ukraine", Institute of Evolutionary Economics, Institute of Demography and Social Research named after M.V. Ptukhi of the National Academy of Sciences of Ukraine, Institute for Research in Scientific and Technical Potential and the History of Science named after G.M. Dobrova NAS of Ukraine, Institute for Economic Research and Political Consulting, CASE Ukraine, The Bleyzer Foundation, Dragon Capital. Separately, the document notes that «all the forecast indicators provided by the survey participants are not official forecasts of the institutions, but only expert assessments of specialists» [19]. As for the labor market, only a measure of unemployment is indicated in the consensus forecast.

The drafting of the Economic and Social Development Forecast of Ukraine for 2019-2021 took into account the provisions of the Mid-term Plan of Priority Actions of the Government until 2020, Export Strategy: Road Map of Strategic Trade Development for the Period 2017-2021, Poverty Strategies, Small and Medium Business Development Strategies in Ukraine for the period up to 2020, etc. [20]. In the section "Labor market" there is no information on labor demand in the professional section.

Therefore, expert judgment is mostly used to make forecasts. At the same time, various econometric methods have been developed and successfully used by domestic and foreign scientific organizations to estimate employment elasticity in the short and long term, to manage statistical analysis data, to make variants of forecasting labor market parameters depending on macroeconomic scenarios.

The mechanism and criteria for determining the need for specialists in a particular industry are also not clearly defined. The volumes of the state contract for the training of specialists shall be established on the basis of budgetary allocations approved by the chief spending unit in the state budget for the stated purpose for the respective year. The following circumstances are taken into account: the need to increase the educational potential of Ukraine; balancing the needs of the population in educational services with the state budget resources in the areas of training and specialties in accordance with the resolutions of the Cabinet of Ministers of Ukraine.

Another characteristic feature of the process of forecasting socio-economic development, and in particular of the development of the labor market, is its significant politicization, which is manifested in the fact that senior government officials are interested only in those forecasts that confirm its point of view or political position. Under such circumstances, understanding the essence of forecasting as a technical tool that allows you to develop plans for the development and activity of actors in a particular market is completely distorted.

Thus, it can be concluded that the scientific and methodological support for the procedure of forming forecasts of the development of the labor market does not meet the requirements of today, the information base for the development of forecasts does not contain data on the real need of enterprises in the labor force, the activities of the ministries involved in the development of labor market forecasts, requires coordination, the forecasting process is too politicized.

In order to improve the process of forecasting the parameters of the development of the labor market is necessary:

introduce a separate form of enterprise statistical reporting on the prospective need for specialists in certain specialties and educational levels, with a submission period of three to five years to the institution that is directly involved in forecasting;

to expand scientific and methodological toolkit of forecasting by means of modeling techniques using modern software;

to transfer functions for forming forecasts of labor market parameters from the Ministry of Economic Development to scientific institutions, such as the Institute of Economics and Forecasting of the National Academy of Sciences of Ukraine.

Implementation of the proposed measures will allow:

1) to receive more specific information on the prospective needs of domestic enterprises in the labor force, to avoid formalism in the collection of statistics, to provide information to target users, to involve employers in the labor market forecasting system;

2) make employment forecasts by industry and occupation, obtain quantitative data on the workforce, monitor changes in the specific weight of certain professions over time, which will improve the effectiveness of vocational guidance, take into account the impact of labor force, age and gender composition, labor productivity on employment rates;

3) significantly reduce the politicization of the labor market forecasting process, involve private research companies and educational institutions in the process, use the best international experience in the field of macroeconomic forecasting, significantly increase the realism of forecasts, form an economically feasible amount of government procurement for the training of specialists in certain specialties.

Conclusions and perspectives of further research. The results of the conducted research indicate unsatisfactory level of interaction between the market of medical education services and the labor market of the health care sector in Ukraine, which is manifested in the imbalance of labor supply and demand, low percentage of employed graduates, high share of unemployed with higher education, lack of direct communication between the amount of education costs and the quality of educational services, imperfection of the information support system and unsatisfactory state of the processes of forecasting the main indicators of the function and development of the labor market.

The main disadvantages of the system of forecasting the parameters of the labor market are: inconsistency of scientific and methodological provision of the procedure for forming forecasts of the development of the labor market to the requirements of today, lack of information base for the development of forecasts of data on the real need of enterprises in the labor force, insufficient coordination of the activities of the ministries involved in the development of forecasts labor market, the politicization of the forecasting process.

In order to improve the process of forecasting the parameters of the labor market development, it is proposed to: introduce a separate form of statistical reporting of enterprises on the prospective need for specialists in certain specialties and educational levels, with a submission period of three to five years to the institution that is directly engaged in the compilation of forecasts; to expand scientific and methodological tools of forecasting by means of modeling techniques using modern software; to transfer functions for forming forecasts of labor market parameters from the Ministry of Economic Development to scientific institutions, such as the Institute of Economics and Forecasting of the National Academy of Sciences of Ukraine.

The directions of further scientific researches on this subject may be: development of a form of statistical reporting of enterprises regarding the prospective need for specialists in certain specialties and educational levels; selecting the most optimal forecasting method and determining the necessary technical and organizational support for its use; development of normative documents for transferring the function of forming forecasts of labor market parameters from the Ministry of Economic Development to a scientific institution.

ЛІТЕРАТУРА

1. Взаємодія. Українська Радянська Енциклопедія (верф-виг). [електронний ресурс] – режим доступу: <http://leksika.com.ua/17021021/ure/vzayemodiya>.

2. Чижова Л. Механизм взаимодействия рынков труда и образовательных услуг. Методологические подходы. / Чижова Л. // Человек и труд. - 2004. - № 8. - С. 37–40.

3. Демографічна та соціальна статистика. Освіта. Вищі навчальні заклади (1990-2017). [електронний ресурс] – режим доступу: https://ukrstat.org/uk/operativ/operativ2005/osv_rik/osv_u/vuz_u.html.

4. Кількість вакансій за видами економічної діяльності. Архів. [електронний ресурс] – режим доступу: https://ukrstat.org/uk/operativ/operativ2007/tp/sz_br/sz_br_u/arh_pp_g_u.htm.

5. Ситуація на ринку праці. Аналітична та статистична інформація. [електронний ресурс] – режим доступу: <https://www.dcz.gov.ua/analitics/67>.

6. Вища освіта в Україні у 2017 році: статистичний збірник / Відп. за вип. О.О. Кармазіна. Київ: Державна служба статистики України, 2018. 298 с.

7. Перспективна потреба в кадрах – 2018. [електронний ресурс] – режим доступу: <https://www.dcz.gov.ua/analitics/67>.
8. Про Програму діяльності Кабінету Міністрів України: Постанова Верховної Ради України від 14.04.2016 р. №1099-VIII. [електронний ресурс] – режим доступу: <http://zakon.rada.gov.ua/laws/show/1099-19>.
9. Про затвердження середньострокового плану пріоритетних дій Уряду до 2020 року та плану пріоритетних дій Уряду на 2017 рік: Розпорядження Кабінету Міністрів України № 275-р від 03.04.2017. [електронний ресурс] – режим доступу: <http://zakon.rada.gov.ua/laws/show/275-2017-p>.
10. Про затвердження плану заходів із впровадження Національної рамки кваліфікацій на 2016-2020 роки: Розпорядження Кабінету Міністрів України № 1077-р від 14.12.2016 р. [електронний ресурс] – режим доступу: <http://zakon.rada.gov.ua/laws/show/1077-2016-p>.
11. Попит та пропозиція на ринку праці у розрізі професій та видів діяльності. [електронний ресурс] – режим доступу: <https://www.dcz.gov.ua/analitics/68>.
12. Стадник В.К., Зволінський О.В., Любаренко Г.С. Прогнозування ринку праці в контексті проблем молодіжного безробіття. Київ: Фонд суспільної безпеки, Міжнародний фонд «Відродження», 2013.- 111 с.
13. Про вищу освіту: Закон України від 01.07.2014 № 1556-VII (редакція від 25.07.2018). [електронний ресурс] – режим доступу: <http://zakon.rada.gov.ua/laws/show/1556-18>.
14. Концепція підготовки фахівців за дуальною формою здобуття освіти: схвалено рішенням колегії Міністерства освіти і науки України від 26.01.2018 протокол № 1/3-4. [електронний ресурс] – режим доступу: <https://mon.gov.ua/storage/.../kontseptsii-dualnoi-osviti.doc>.
15. Положення про Міністерство економічного розвитку і торгівлі України: Постанова Кабінету Міністрів України від 20 серпня 2014 р. № 459. [електронний ресурс] – режим доступу: <http://zakon.rada.gov.ua/laws/show/459-2014-p>.
16. Положення про Міністерство соціальної політики України: Постанова Кабінету Міністрів України від 17 червня 2015 р. № 423. [електронний ресурс] – режим доступу: <http://zakon2.rada.gov.ua/laws/show/423-2015-p>.
17. Положення про Міністерство освіти і науки України: Постанова Кабінету Міністрів України від 16 жовтня 2014 р. № 630. [електронний ресурс] – Режим доступу: <http://zakon.rada.gov.ua/laws/show/630-2014-p>.
18. Положення про Державну службу статистики України: Постанова Кабінету Міністрів України від 23 вересня 2014 р. № 481. [електронний ресурс] – Режим доступу: <http://zakon.rada.gov.ua/laws/show/481-2014-p>.
19. Україна: перспективи розвитку. Консенсус-прогноз. К.: Міністерство економічного розвитку і торгівлі України, Департамент економічної стратегії та макроекономічного прогнозування, 2018. 36 с. [електронний ресурс] – Режим доступу: <https://www.me.gov.ua/Documents/Detail?lang=uk-UA&id=2b0f2660-f487-4123-baf4-13f0f632d000&title=Vipuskukraina-PerspektiviRozvitku-Konsensusprognoz-gruden2018->
20. Україна: перспективи розвитку. Прогноз економічного і соціального розвитку України на 2019-2021 роки. К.: Міністерство економічного розвитку і торгівлі України, Департамент економічної стратегії та макроекономічного прогнозування, 2018. 148 с. [електронний ресурс] – Режим доступу: <https://www.kmu.gov.ua/ua/npras/pro-shvalennya-prognozu-ekonomichnogo-i-socialnogo-rozvitku-ukrayini-na-20192021-roki>

REFERENCES

1. «Vzayemodiya. Ukrayinska Radyanska Entsiklopediya (verf-vyh)» [Interaction. Ukrainian Soviet Encyclopedia (shipyard)]. – Retrieved from <http://leksika.com.ua/17021021/ure/vzayemodiya>. [in Ukrainian]
2. Chizhova L. (2004). «Mekhanizm vzaimodeystviya rynkov truda i obrazovatel'nykh uslug. Metodologicheskiye podkhody.» [The mechanism of interaction of labor markets and educational services. Methodological approaches] *Man and labor*, 8. pp. 37–40. [in Ukrainian]
3. *Demografichna ta sotsialna statystyka. Osvita. Vyschi navchalni zaklady (1990-2017)*. [Demographic and social statistics. Education. Higher education institutions (1990-2017)]. Retrieved from: https://ukrstat.org/uk/operativ/operativ2005/osv_rik/osv_u/vuz_u.html. [in Ukrainian]

4. *Kilkist vakansiy za vydamy ekonomichnoyi diyalnosti.*[Number of vacancies by type of economic activity.]. – Retrieved from https://ukrstat.org/uk/operativ/operativ2007/rp/sz_br/sz_br_u/arh_pp_g_u.htm. [in Ukrainian]

5. Sytuatsiya na rynku pratsi. Analitychna ta statystychna informatsiya. [The situation in the labor market. Analytical and statistical information.]. – Retrieved from: <https://www.dcz.gov.ua/analytics/67>. [in Ukrainian]

6. Karmazina O.O. (2018). Vyscha osvita v Ukrayini u 2017 rotsi: statystychnyy zbirnyk [Higher Education in Ukraine in 2017: Statistical Collection] *State Statistics Service of Ukraine*. Kyiv. [in Ukrainian] / Vidp. za vyp. Kyiv: Derzhavna sluzhba statystyky Ukrayiny

7. Perspektyvna potreba v kadrakh – 2018. [Perspective staffing requirement – 2018.]. - Retrieved from : <https://www.dcz.gov.ua/analytics/67>. [in Ukrainian]

8. Pro Prohramu diyalnosti Kabinetu Ministriv Ukrayiny: Postanova Verkhovnoyi Rady Ukrayiny vid 14.04.2016 r. №1099-VIII [On the Program of Activities of the Cabinet of Ministers of Ukraine: Resolution of the Verkhovna Rada of Ukraine dated 14.04.2016 №1099-VIII]. – Retrieved from <http://zakon.rada.gov.ua/laws/show/1099-19>. [in Ukrainian]

9. Pro zatverdzhennya serednostrokovoho planu priorytetnykh diy Uryadu do 2020 roku ta planu priorytetnykh diy Uryadu na 2017 rik: Rozporyadzhennya Kabinetu Ministriv Ukrayiny № 275-r vid 03.04.2017. [On approval of the mid-term plan of priority actions of the Government until 2020 and the plan of priority actions of the Government for 2017: Order of the Cabinet of Ministers of Ukraine No. 275-r dated 03.04.2017.]. - Retrieved from <http://zakon.rada.gov.ua/laws/show/275-2017-p>. [in Ukrainian]

10. Pro zatverdzhennya planu zakhodiv iz vprovadzhennya Natsionalnoyi ramky kvalifikatsiy na 2016-2020 roky: Rozporyadzhennya Kabinetu Ministriv Ukrayiny № 1077-vid 14.12.2016 r. [On approval of the plan of measures for the implementation of the National Qualifications Framework for 2016-2020: Order of the Cabinet of Ministers of Ukraine No. 1077-r of 14.12.2016] – Retrieved from <http://zakon.rada.gov.ua/laws/show/1077-2016-p>. [in Ukrainian]

11. Popyt ta propozyetsiya na rynku pratsi u rozrizi profesiiv ta vydiv diyalnosti. [Demand and supply in the labor market by professions and activities.] – Retrieved from <https://www.dcz.gov.ua/analytics/68>. [in Ukrainian]

12. Stadnik VK, Zvolinsky OV, Lyubarenko GS (2013). Prohnozuvannya rynku pratsi v konteksti problem molodizhnoho bezrobittya [Forecasting the labor market in the context of youth unemployment]. Kyiv: Public Security Fund, International Renaissance Foundation. [in Ukrainian]

13. Pro vyshchu osvitu: Zakon Ukrayiny vid 01.07.2014 № 1556-VII (redaktsiya vid 25.07.2018) [On Higher Education: Law of Ukraine of 01.07.2014 № 1556-VII (as of 25.07.2018).] – Retrieved from: <http://zakon.rada.gov.ua/laws/show/1556-18>. [in Ukrainian]

14. Kontseptsiya pidhotovky fakhivtsiv za dualnoyu formoyu zdobuttya osvity: skhvaleno rishennyam kolehiyi Ministerstva osvity i nauky Ukrayiny vid 26.01.2018 protokol № 1/3-4. [The concept of training specialists in the dual form of education: approved by the decision of the Board of the Ministry of Education and Science of Ukraine from 26.01.2018 protocol № 1 / 3-4.] – Retrieved from: <https://mon.gov.ua/storage/.../kontseptsii-dualnoi-osviti.doc>. [in Ukrainian]

15. Polozhennya pro Ministerstvo ekonomichnoho rozvytku i torhivli Ukrayiny: Postanova Kabinetu Ministriv Ukrayiny vid 20 serpnia 2014 r. № 459. [Regulation on the Ministry of Economic Development and Trade of Ukraine: Resolution of the Cabinet of Ministers of Ukraine of August 20, 2014 No. 459.] – Retrieved from: <http://zakon.rada.gov.ua/laws/show/459-2014-п>. [in Ukrainian]

16. Polozhennya pro Ministerstvo sotsialnoyi polityky Ukrayiny: Postanova Kabinetu Ministriv Ukrayiny vid 17 chervnya 2015 r. № 423. [Regulation on the Ministry of Social Policy of Ukraine: Resolution of the Cabinet of Ministers of Ukraine of June 17, 2015 No. 423.] – Retrieved from: <http://zakon2.rada.gov.ua/laws/show/423-2015-п>. [in Ukrainian]

17. Polozhennya pro Ministerstvo osvity i nauky Ukrayiny: Postanova Kabinetu Ministriv Ukrayiny vid 16 zhovtnya 2014 r. № 630. [Regulation on the Ministry of Education and Science of Ukraine: Resolution of the Cabinet of Ministers of Ukraine of October 16, 2014 No. 630.] – Retrieved from: <http://zakon.rada.gov.ua/laws/show/630-2014-п>. [in Ukrainian]

18. Polozhennya pro Derzhavnu sluzhbu statystyky Ukrayiny: Postanova Kabinetu Ministriv Ukrayiny vid 23 veresnya 2014 r. № 481. [Regulation on the State Statistics Service of Ukraine: Resolution of the Cabinet of Ministers of Ukraine of September 23, 2014 No. 481] – Retrieved from: <http://zakon.rada.gov.ua/laws/show/481-2014-п>. [in Ukrainian]

19. Ukrayina: perspektyvy rozvytku. Konsensus-prohnoz. (2018) [Ukraine: prospects for development. Consensus forecast.]. K. Ministry of Economic Development and Trade of Ukraine, Department of Economic Strategy and Macroeconomic Forecasting – Retrieved from: <https://www.me.gov.ua/Documents/Detail?lang=uk-UA&id=2b0f2660-f487-4123-baf4-13f0f632d000&title=Vipuskukraina-PerspektiviRozvitku-Konsensusprohnoz-gruden2018-> [in Ukrainian]

20. Ukrayina: perspektyvy rozvytku. Prohnoz ekonomichnoho i sotsialnoho rozvytku Ukrayiny na 2019-2021 roky (2018). [Ukraine: prospects for development. Forecast of economic and social development of Ukraine for 2019-2021.] K. Ministry of Economic Development and Trade of Ukraine, Department of Economic Strategy and Macroeconomic Forecasting, – Retrieved from: <https://www.kmu.gov.ua/ua/npas/pro-shvalennya-prohnozu-ekonomichnogo-i-socialnogo-rozvitku-ukrayini-na-20192021-roki> [in Ukrainian].