Наукові записки НаУКМА
Економічні науки, 9(1) (2024), 16–23

Scientific Papers NaUKMA
Economics, 9(1) (2024), 16–23

СТАТТІ **ARTICLES**

DOI: 10.18523/2519-4739.2024.9.1.16-23
UDC 330.3:338.1,338.4:331.2

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THE ECONOMY STRUCTURE – FOCUS FOR EDUCATION/SCIENCE REFORMS IN UKRAINE

Abstract

The article is about the reasoning importance and necessity of harmonizing the goals and methods of development and reform of education/science in Ukraine with development of priority economic sectors in Ukraine, including fixing the education and science (as an element of the knowledge economy) as priorities sectors in the structure of the Ukrainian economy.

The author characterized indicators of Ukrainian economics development by type of: economics activity, capital investments, turnover of industrial enterprises, employment of population. All these characteristics show that in the last decades, the scientific and technical sectors of industry, according to most characteristics, occupied the smallest share in the structure of the Ukrainian economy. However, the sectors of wholesale and retail trade, the agricultural sector and the raw material sectors of industry had actively developed in Ukraine.

Also, the author pays attention to the problems in education and science in Ukraine: to respect and demand for these professions in the Ukrainian society and to financing support.

Reforms and support of education/science must be harmonized with the economic structure of Ukraine. They must be fixed on priority sectors for economic development. The education/science must be fixed as priority sectors like elements of the knowledge economy. The goals and objectives, the internal reforms and development in education/science must be oriented to the needs of the structure of the Ukrainian economy.

Implementation of these steps will help improve the quality of educational and scientific activities, the effect of their impact on economic development in Ukraine, and the competitiveness of the Ukrainian state like knowledge economy will grow.

Keywords: economic reforms, economic structure, economic activities, industry, manufacture, education, science, finance.

JEL classification: E20, G35, H52, O10

Introduction and research problem. Now in Ukraine various concepts about the country's activities during the war, the country's development on the path to the EU, the country's development in the post-war period, post-war reconstruction, etc., have been debated. Changes and reforms in education and science were also announced. The focus is on the changes in the numbers of educational institutions, the numbers of entrants and graduates, the system of entrance and the system of financing the universities, the formats of learning, the list of professions more or less priority for the state financing, etc. A request that the country needs more teachers, doctors and engineers is announced.

We have no reasons to support such reforms. However, it is worth paying attention to more global and concept guidelines for reforms in education/science.

Any reforms are starting and connecting with the structure of the country's economy. That paradigm and logic must be maintained in Ukrainian practice also. Before the start of educational and science reforms, it is worth determining the key question – what structure of the economy will be in Ukraine

now and in the future, which sectors must be fixed as strategic and important for the long term. And then, reforms, changes and long-term guidelines in education/science must be connected to the development priorities of the economic sectors in Ukraine. Obviously, knowledge-intensive industry/manufacturing, sectors of science and technology and other sectors like this must have more priority in the Ukrainian economy than raw materials sectors or the sphere of services.

Recent publications analysis. Scientists and practitioners, educators and government officials are debating questions about digitization in education, international educational and scientific cooperation, about forms of education and dual education, about challenges for education in wartime, about post-war restoration and reforming of education and science, etc. These questions are in the works of S. Londar, A. Lytvynchuk, O. Kostyuk, P. Vernivskyi, etc. These questions research government officials in documents such as the Strategy for the Development of Higher Education in Ukraine for 2022-2032 (Cabinet of Ministers of Ukraine, 2022; Kostyuk, 2022, 2023; Vernivskyi, 2024).

Unsolved part of the problem. Despite the research and proposals for the development of education and science in Ukraine, education/science is mostly considered as a separate block in the economy. The connection of educational and scientific activities with the strategy of the economic development of Ukraine, with the long-term focuses of such development, with the fixings priorities sectors in the Ukrainian for which education and science should work to increase the competitiveness of Ukrainian economy, researched not enough.

Research goals and questions. The reasoning importance and necessity of harmonizing the goals and methods of development and reform of education/science in Ukraine with development of priority economic sectors in Ukraine include fixing the education and science (as an element of the knowledge economy) as priorities sectors in the

Table 1. **Structure of gross value added by type of economic activity in Ukraine, 2010-2022, %**

	2010	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Agriculture, forestry and fishing	8.42	9.49	9.05	10.03	11.65	14.19	13.82	12.06	11.96	10.42	10.84	12.57	9.71
Mining and quarrying	6.65	7.56	6.73	6.33	5.72	5.63	6.51	7.03	7.10	6.49	5.32	7.5	4.97
Manufacturing	14.95	13.78	14.34	12.86	14.03	14.01	14.41	14.19	13.61	12.54	11.76	11.96	8.61
Electricity, gas, steam and air conditioning supply	3.17	3.56	3.59	3.30	3.24	3.16	3.65	3.42	3.71	3.65	3.29	3.86	4.97
Water supply; sewerage, waste management and remediation activities	0.81	0.65	0.55	0.51	0.52	0.47	0.42	0.39	0.38	0.42	0.45	0.41	0.35
Construction	3.71	3.53	3.22	2.87	2.67	2.30	2.35	2.56	2.69	3.14	3.29	3.21	1.50
Wholesale and retail trade; repair of motor vehicles and motorcycles	16.24	17.22	16.55	16.52	16.30	16.22	15.72	16.26	15.63	15.37	16.22	15.84	13.95
Transportation and storage	8.70	9.19	8.15	8.14	7.30	7.99	7.75	7.58	7.53	7.74	7.24	6.30	4.90
Accommodation and food service activities	0.94	0.91	0.83	0.79	0.72	0.71	0.77	0.74	0.83	1.03	0.85	1.05	0.65
Information and communication	3.46	3.42	3.58	3.77	3.81	4.30	4.41	4.38	4.60	5.34	5.77	5.46	4.47
Financial and insurance activities	6.42	5.19	5.03	5.16	5.11	4.00	3.23	3.31	3.28	3.37	3.64	3.46	3.38
Real estate activities	6.05	6.15	6.88	7.42	7.17	7.28	7.22	6.82	6.83	7.06	7.42	6.72	5.10
Professional, scientific and technical activities	2.86	2.71	3.46	3.72	3.41	3.30	3.38	3.44	3.76	4.14	3.78	3.36	2.15
Administrative and support service activities	1.24	1.27	1.33	1.38	1.31	1.28	1.46	1.41	1.61	1.82	1.65	1.45	1.16
Public administration; compulsory social security	5.22	4.76	4.93	5.31	5.69	5.63	6.08	6.51	7.05	7.79	8.45	7.18	24.58
Education	5.60	5.29	5.92	6.07	5.50	4.90	4.40	5.29	5.26	5.05	5.13	5.02	4.82
Human health and social work activities	4.04	3.73	4.06	3.76	3.34	3.05	2.91	3.03	2.56	2.79	3.13	2.88	3.25
Arts, entertainment and recreation	0.64	0.64	0.8	0.99	0.89	0.73	0.67	0.69	0.68	0.70	0.67	0.68	0.56
Other service activities	0.90	0.94	1.01	1.07	1.00	0.85	0.84	0.89	0.96	1.14	0.99	1.00	0.92

Source: calculation by the author based on State Statistics Service of Ukraine (2022b)

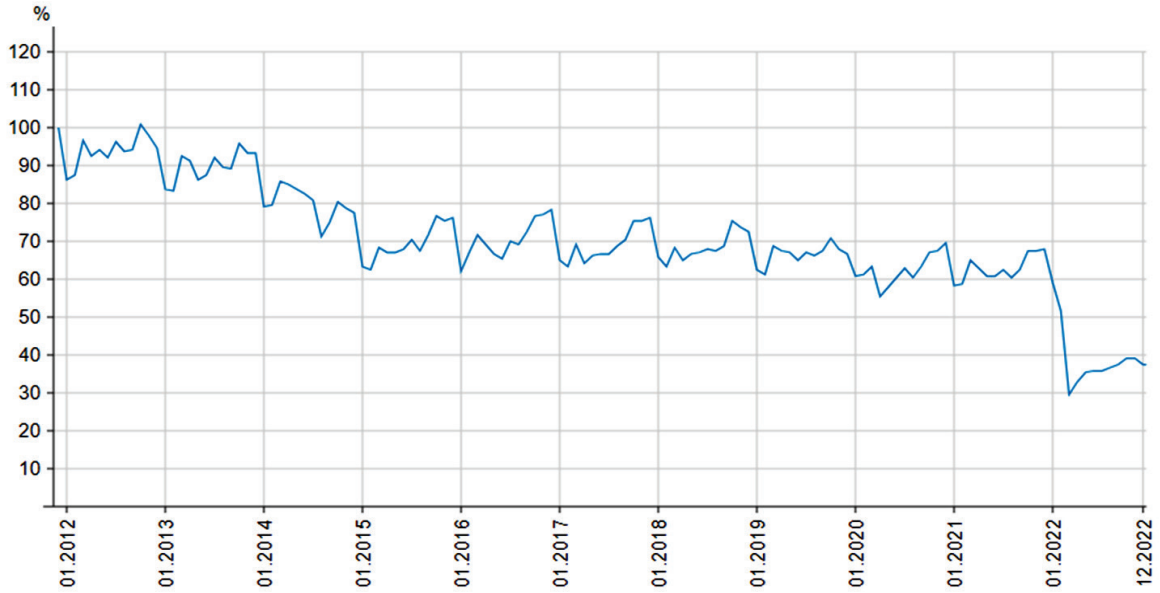

Fig. 1. Changes index of the industrial production in Ukraine, 2012-2022
Source: Ministry of Finance of Ukraine (2023)

structure of the Ukrainian economy, is the purpose of the article. This approach is helpful so that the quality of educational and scientific activities, the effect of their impact on economic development in Ukraine, and the competitiveness of the Ukrainian knowledge economy will grow.

Main findings. We will analyze the state, trends and some characteristics in the structure of the Ukrainian economy and in education/science.

Firstly, a statistical assessment of the structure of the Ukrainian economy over the past decades shows the following trends.

The dynamics and structure creation of gross value added by type of economic activity in Ukraine in 2010-2022 shows about such (Table 1):

– wholesale and retail trade were leading sector in the economy for last ten years and had share in the economics structure from 16.24 % in 2010 to 13.95 % in 2022;

– manufacturing was the second in the rating, but its share in the structure decreased, from 14.95 % in 2010 to 8.61 % in 2022;

– professional, scientific and technical activity had one of the smallest levels in the economics structure, on about 2–3 %: from 2.86 % in 2010 to 2.15 % in 2022;

– the index of industrial production had been declined in recent years (Fig. 1).

In the **structure of capital investments by types of economic activity of Ukrainian industry** it can be seen that science-intensive manufacture (*manufacture of computer, electronic and optical products; manufacture of electrical equipment; manufacture of machinery and equipment n.e.c.*) had the smallest share in the total volume of investments, and the dynamics of this share were decreasing. However, raw materials (mining and quarrying) occupied the largest share and the dynamics of this share was stable or growing (Table 2).

Also, negative trends can be seen at the **structure of turnover of industrial enterprises by type of economic activity** in Ukraine.

For the period 2010-2022 (Table 3):

– manufacture of basic metals and manufacture of food products had the leading parts in the structure of turnover of industrial enterprises. The share of metallurgical production in the volume of sold products ranged from 19.1 % in 2010 to 14.5 % in 2021. The share manufacture of food products was on level 18 % throughout this period;

– such activities as the manufacture of computer, electronic and optical products; the manufacture of electrical equipment; the manufacture of machinery and equipment had a law level at the structure of turnover of industrial enterprises for the last ten years. The volume of turnover of industrial products in the manufacture of computer, electronic and optical products ranged from 0.7 % in 2010 to 0.5 % in 2022; in the electrical equipment manufacture – from 1.5 % in 2010 to 0.9 % in 2022; in the manufacture of machinery and equipment – from 2.9 % in 2010 to 1.5 % in 2022.

The **dynamics and structure of employed population by economic activities in Ukraine** in 2012-2021, % shows about such (Table 4):

– employed population for last ten years was concentrated the most in the wholesale and retail trade, – its had share from 21.6 % in 2010 to 23.1 % in 2021;

– industry was the third in the rating of employed population, but its share decreased, from 16.8 % in 2010 to 14.8 % in 2021;

– employed population at the professional, scientific and technical activities had one of the smallest levels, – about 2–3 %: from 2.62 % in 2010 to 2.7 % in 2021.

All these characteristics show that in the last decades, the scientific and technical sectors of industry, according to most characteristics, occupied the smallest share in the structure of the Ukrainian economy. However, the sectors of wholesale and retail trade, the agricultural sector and the raw material sectors of industry had actively developed in Ukraine.

Secondly, let us **describe education and science characteristics in Ukraine**.

The first and important point is the social prestige of the profession of educator and scientist. Such prestige can be estimated through the indicator "ratio of salary to GDP per capita of the country's population." In Ukraine, this indicator for a teacher is at the level of 0.75 to 1. For comparison, this indicator in Congo is at the level of 1.5 to 1; in Liberia – from 3.1 to 1; in Gambia – from 2 to 1; in Malawi – from 4 to 1; in Niger – from 5.1 to 1; in Nigeria – from 0.9 to 1; in Senegal – from 4.6 to 1; in Ghana – from 2 to 1; in Tanzania – from 4.8 to 1;

Table 2. **Structure of capital investments by types of economic activity of industry in Ukraine, 2010-2022, %**

Industry	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Mining and quarrying	*27.55*	*28.07*	*24.34*	*22.16*	*23.20*	*21.07*	*19.15*	*24.81*	*27.01*	*26.96*	*27.88*	*25.24*	*20.14*
Manufacturing	*54.44*	*53.55*	*46.15*	*45.83*	*49.25*	*52.73*	*52.84*	*51.56*	*50.46*	*41.65*	*46.75*	*46.63*	*47.94*
Manufacture of food products, beverages and tobacco products	15.37	15.32	14.50	15.31	15.64	15.46	18.08	13.21	15.11	12.54	15.99	11.59	13.86
Manufacture of textiles, apparel, leather and related products	0.87	0.69	0.41	0.49	0.72	1.13	1.52	1.31	0.92	0.59	0.67	0.81	1.09
Manufacture of wood and paper products, and printing	2.50	4.57	2.47	2.49	2.33	4.60	4.21	4.77	3.77	3.93	3.43	7.72	8.41
Manufacture of coke and refined petroleum products	2.56	2.04	1.35	0.69	0.62	0.66	0.64	0.68	0.75	0.72	1.10	1.40	0.32
Manufacture of chemicals and chemical products	4.41	3.52	3.75	2.72	2.52	1.92	1.45	2.08	1.40	0.98	1.38	1.21	1.48
Manufacture of basic pharmaceutical products and pharmaceutical preparations	1.02	1.02	0.90	1.10	1.64	1.85	1.36	1.31	1.22	0.95	1.61	1.36	1.72
Manufacture of rubber and plastics products, and other non-metallic mineral products	6.86	5.39	4.14	4.34	4.63	4.36	5.31	7.29	6.57	4.28	5.11	4.50	4.47
Manufacture of basic metals and fabricated metal products, except machinery and equipment	12.09	12.43	10.07	11.15	13.72	14.23	12.45	12.44	13.19	12.23	11.08	11.23	8.05
Manufacture of computer, electronic and optical products	0.42	0.52	0.55	0.20	0.26	0.48	0.46	0.53	0.48	0.26	0.34	0.35	0.48
Manufacture of electrical equipment	1.20	0.80	0.74	1.03	0.70	0.67	1.19	1.04	0.95	0.69	0.80	0.97	1.01
Manufacture of machinery and equipment n.e.c.	2.86	2.75	3.04	2.19	2.34	2.22	1.97	2.30	2.03	1.25	1.76	1.62	1.82
Manufacture of transport equipment	3.03	3.08	3.07	3.20	3.05	3.80	2.88	3.34	2.79	2.11	2.20	2.01	2.81
Other manufacturing, and repair and installation of machinery and equipment	1.26	1.44	1.18	0.93	1.08	1.37	1.32	1.27	1.28	1.11	1.29	1.86	2.42
Electricity, gas, steam and air conditioning supply	*16.76*	*17.12*	*27.71*	*30.04*	*26.55*	*24.35*	*26.10*	*21.65*	*20.90*	*29.75*	*23.34*	*26.07*	*28.36*
Water supply; sewerage, waste management and remediation activities	*1.25*	*1.26*	*1.80*	*1.97*	*1.00*	*1.85*	*1.91*	*1.98*	*1.63*	*1.65*	*2.02*	*2.06*	*3.56*

Source: calculated by the author based on State Statistics Service of Ukraine (2022a)

Table 3. **Structure of turnover of industrial enterprises by type of economic activity in Ukraine, 2010-2022, %**

Industry	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Mining and quarrying	10.0	11.0	10.5	11.5	10.8	10.8	11.1	12.3	12.8	13.3	11.2	12.8	11.1
Manufacturing	67.4	65.3	63.7	61.8	63.3	64.1	60.8	62.0	61.9	60.6	58.0	55.9	48.0
Manufacture of food products, beverages and tobacco products	18.0	16.6	18.0	19.2	21.2	22.4	21.4	20.9	19.4	20.4	21.0	18.0	18.7
Manufacture of textiles, apparel, leather and related products	0.8	0.7	0.7	0.7	0.8	1.0	0.9	1.0	1.0	1.0	1.0	0.9	1.1
Manufacture of wood and paper products, and printing	2.6	2.4	2.5	2.7	3.1	3.4	3.4	3.2	3.4	3.3	3.1	3.0	3.3
Manufacture of coke, and refined petroleum products	7.2	6.0	4.6	3.7	3.3	3.4	3.2	3.9	3.8	2.8	2.2	2.6	1.5
Manufacture of chemicals and chemical products	3.1	4.0	4.1	3.7	3.5	3.8	2.8	2.5	2.6	2.7	2.5	2.6	2.0
Manufacture of pharmaceuticals, medicinal chemical and botanical products	0.7	0.7	0.8	0.9	1.0	1.1	1.2	1.1	1.1	1.2	1.3	1.1	1.1
Manufacture of rubber and plastics products, and other non-metallic mineral products	4.4	4.2	4.3	4.4	4.5	4.8	5.0	5.1	5.3	5.4	6.1	5.8	4.3
Manufacture of basic metals and fabricated metal products, except machinery and equipment	19.1	18.5	16.3	15.7	16.6	15.7	14.8	15.7	16.2	14.0	12.3	14.5	8.8
machine-building	9.3	10.1	10.3	8.6	7.1	6.5	6.1	6.4	6.9	7.2	6.1	5.2	5.2
Manufacture of computer, electronic and optical products	0.7	0.9	0.6	0.6	0.6	0.5	0.6	0.5	0.6	0.6	0.5	0.4	0.5
Manufacture of electrical equipment	1.5	1.3	1.6	1.6	1.5	1.3	1.2	1.2	1.4	1.4	1.1	1.0	0.9
Manufacture of machinery and equipment n.e.c.	2.9	2.9	2.8	2.6	2.3	2.4	2.3	2.3	2.3	2.4	2.2	2.0	1.5
Manufacture of transport equipment	4.2	5.0	5.3	3.8	2.7	2.3	2.0	2.4	2.6	2.8	2.3	1.8	2.3
Other manufacturing, and repair and installation of machinery and equipment	2.2	2.1	2.1	2.2	2.2	2.0	2.0	2.2	2.2	2.6	2.4	2.2	2.0
Electricity, gas, steam and air-conditioning supply	20.8	22.2	24.4	25.2	24.6	23.9	26.9	24.6	24.2	24.8	29.5	30.2	39.7
Water supply, sewerage, waste management and remediation	1.8	1.5	1.4	1.5	1.3	1.2	1.2	1.1	1.1	1.3	1.3	1.1	1.2

Source: State Statistics Service of Ukraine (2022c)

Table 4. **Structure of employed population by economic activities in Ukraine, 2012-2021, %**

	2012	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**
Agriculture, forestry and fishing	17.18	17.5	17.1	17.4	17.6	17.7	18.0	18.2	17.1	17.2
Industry	16.8	16.4	16.0	15.7	15.3	15.1	14.8	14.8	14.8	14.8
Construction	4.34	4.4	4.1	3.9	4.0	4.0	4.1	4.2	4.2	4.4
Wholesale and retail trade; repair of motor vehicles and motorcycles	21.6	22.1	21.9	21.4	21.6	21.8	22.3	22.9	22.9	23.1
Transportation and storage	5.98	6.0	6.2	6.1	6.1	6.1	6.1	6.0	6.1	6.2
Accommodation and food service activities	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.8
Information and communication	1.55	1.6	1.6	1.7	1.7	1.7	1.7	1.7	1.8	1.9
Financial and insurance activities	1.64	1.6	1.6	1.5	1.4	1.3	1.3	1.3	1.3	1.3
Real estate activities	1.67	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
Professional, scientific and technical activities	2.62	2.6	2.5	2.6	2.6	2.6	2.7	2.5	2.6	2.7
Administrative and support service activities	1.79	1.8	1.8	1.8	1.9	1.8	1.9	1.9	1.9	2.0
Public administration and defence, compulsory social security	5.21	5.0	5.3	5.9	6.0	6.1	5.7	5.3	5.7	5.6
Education	8.48	8.3	8.8	9.1	8.9	8.8	8.7	8.4	8.8	8.0
Human health and social work activities	6.13	6.1	6.4	6.3	6.3	6.3	6.1	5.9	5.9	5.9
Arts, entertainment and recreation	1.17	1.2	1.2	1.3	1.2	1.2	1.2	1.2	1.2	1.1
Other types of economic activity	2.15	2.2	2.1	2.1	2.1	2.1	2.2	2.2	2.3	2.3

Source: State Statistics Service of Ukraine (2021)

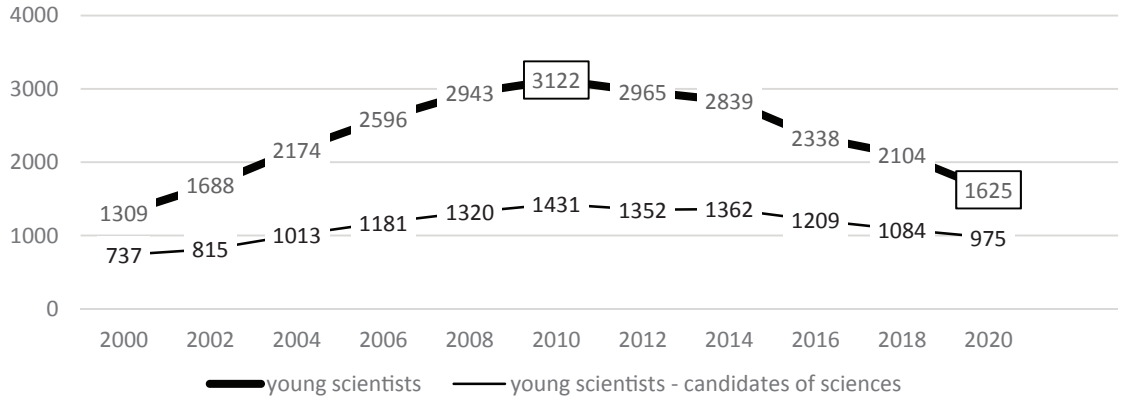

Fig. 2. Dynamics of the number of scientists in Ukraine (Kostyuk, 2022)

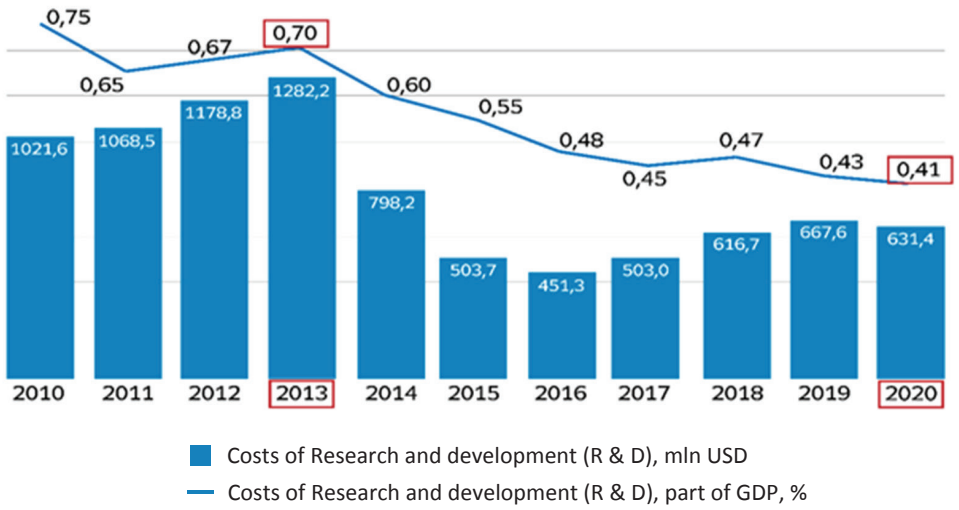

Fig. 3. Research and development (R & D) in Ukraine, 2010-2020 (Kostyuk, 2022)

in Zambia – from 5.2 to 1; in Namibia – from 4.2 to 1 (Kostyuk, 2023). That is, the social prestige of the teaching profession in Ukraine is lower than in African countries. A negative trend of reducing the number of scientists has also been in Ukraine. The number of young scientists in Ukraine decreased from 3122 to 1625 people during 2010-2020, that is almost twice (Fig. 2). This trend also confirms the loss of prestige of the profession of a scientist (Kostyuk, 2022).

The next point is the financing of education and science and the level of salaries in the profession.

Funding of science before the war in Ukraine had a downward trend. Costs on scientific research and development in 2013-2020 was halved: from 1.282 million dollars in 2013 to 631 million dollars in 2020. The indicator of costs on science in part of GDP also decreased in this period: from 0.7 to 0.41 % of GDP (Fig. 3). However, the developed countries have been spending up to 2 % of GDP on science (Kostyuk, 2022).

The salary of scientists in Ukraine is lower than the average salary in the country (14300 UAH) by 30–40 %. However, in developed countries, for example, in Canada, the salary of a university professor is more than twice the average salary. The situation is similar in many other countries of the world.

The nominal salary of a teacher in Ukraine is at the level of 250–350 USD, and on the purchasing power parity it is about 700 USD. For comparison, the monthly salary of a school teacher in African countries (on the purchasing power parity): Congo – 100 USD, Liberia – 220 USD, Gambia – 265 USD, Malawi – 331 USD, Niger – 401 USD, Nigeria – 460 USD, Senegal – 618 USD, Ghana – 656 USD, Tanzania – 806 USD, Zambia – 1,639 USD, Namibia – 2,306 USD. Unfortunately, Ukrainian teachers are at the level of Senegal and Ghana, behind such African countries as Tanzania, Zambia and Namibia (Kostyuk, 2023).

It should be noted that the low prestige and salary level in education and science is also confirmed by the rating of average salaries announced in Ukraine. Education and science are in 14th place out of 26 positions of the ranking of salaries in Ukraine by activity in 2023 (Bondarenko, 2023).

These and other (Cabinet of Ministers of Ukraine, 2022) characteristics of education and science confirm that the reform and development of education and science are important and priority tasks for Ukraine.

Reforming education and science should not begin with internal organizational reforms. The first basic steps should be:

– connection of the goals and tasks of education and science with the goals and tasks development of priority sectors of the economy of Ukraine,

– fixing education and science as priority sectors in the structure of the Ukrainian knowledge economy.

After that, it is worth concentrating on the measures of internal organizational changes, such as the consolidation of universities, the priority of specialties, the methods of state financing specialties, etc.

Conclusions and further research proposals. In general, negative trends in the functioning and development of scientific and technical sector's of Ukraine's economy and in the education and science sectors have been doing so in recent decades.

First, the announced educational and science reforms must change the above-mentioned trends/characteristics and to make the Ukrainian economy as a knowledge economy, with the development of industry, education, science and technology.

In this context firstly must the fix of priority sectors for the development and measures for the development of selected priority sectors in the long term. Such measures could include prestige and importance in society priority sectors, material and technical base for their infrastructure, human and financial resources, regulatory incentives, etc.

Secondly, the goals and methods of development and reform of education/science in Ukraine must be harmonized with development of priority economic sectors in Ukraine.

Third, education and science (as an element of the knowledge economy) must be fixed as priority sectors in the structure of the Ukrainian economy. This is an investment in the future not for profit, but for the purpose of developing a strategic advantage, increasing the level of the state's competitiveness (Vernivskyi, 2024).

Four. To plan and to implement internal organizational reforms in education and science have to after harmonizing the goals and guidelines of development of education/science with the goals and guidelines of development of priority sectors of the Ukrainian economy.

Five. Reforming education and science have to include a change in the attitude towards the profession of an educator/scientist in society, promotion of the value and importance of such professions, implementation of state policy measures for these sectors and financial support.

We need to pay attention to the fact that the proposed steps should be taken not only for the future, we must do that today, for people who are working in education and science nowaday. These actions will help for saving qualified staff and their interest in personal growth and increase of the work quality; help for making interest of young people look for work in the education and science.

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СТРУКТУРА ЕКОНОМІКИ – ФОКУС ДЛЯ РЕФОРМ ОСВІТИ/НАУКИ В УКРАЇНІ

Мета дослідження. Стаття має за мету обґрунтувати важливість і необхідність узгодження цілей і методів розвитку та реформування освіти/науки в Україні з розвитком пріоритетних секторів української економіки, зокрема необхідність виділення освіти й науки як пріоритетних секторів у структурі української економіки знань. Такий підхід сприятиме зростанню якості в освітній та науковій діяльності, результативності її впливу на економічний розвиток та підвищенню конкурентоспроможності України.

Методи дослідження. У дослідженні використано методи аналізу та синтезу, індукції та дедукції, порівняльного аналізу, комбінування якісних і кількісних методів. З використанням методу аналізу та синтезу охарактеризовано структуру й динаміку розвитку секторів в українській економіці, капітальних вкладень, товарообігу промислових підприємств, зайнятого населення в різних секторах української економіки. На основі методу індукції-дедукції обґрунтовано концептуальні проблеми в галузі освіти та науки, зокрема проблеми популярності й затребуваності цих професій в українському суспільстві, питання матеріального забезпечення тощо. Завдяки поєднанню кількісних та якісних методів обґрунтовано пропозиції щодо пріоритетності й логіки кроків у плануванні та впровадженні реформ у сфері освіти і науки в Україні.

Результати дослідження та висновки. Обґрунтовано, що реформи освіти/науки повинні бути пов'язані зі структурою економіки України. Потрібно визначити пріоритетні сектори/галузі економічного розвитку. Освіта і наука мають стати пріоритетними секторами, оскільки вони є елементом економіки знань. Цілі та завдання, внутрішні реформи та розвиток освіти/науки мають бути орієнтовані на зафіксовану структуру української економіки.

Реалізація цих кроків сприятиме зростанню якості освітньої та наукової діяльності, більш ефективному її впливу на економічний розвиток України та підвищенню конкурентоспроможності нашої держави.

Ключові слова: економічні реформи, структура економіки, сектори промисловості, освіта, наука, фінанси.

Матеріал надійшов 01.04.2024

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