

# WAR IMPACT ASSESSMENT ON THE STATE OF REGIONAL LABOUR MARKETS IN UKRAINE

Lidiia Horoshkova<sup>1</sup>, Viktoriia Sydorenko<sup>2</sup>, Yuliia Herasymenko<sup>3</sup>

**Abstract.** The *aim of the article* is to assess the impact of the war on regional labour markets. *Methodology.* The theoretical and methodological basis of the study are the works of classical and modern economic science on the development of the labour market, employment and unemployment, including in the context of the crisis. The monographic method was used to highlight the views of scholars on the problem under study. In the course of the research, the authors used general scientific (analysis and synthesis, induction and deduction, analytical grouping) and special (abstraction, modelling, benchmarking studies, etc.) methods of studying economic phenomena and processes. Data from the State Statistics Service of the Regions of Ukraine for 2021-2023 were used for the assessment. *Results.* The article provides a comparative analysis of the situation on the labour market for people with higher education in two oblasts of Ukraine – Zaporizhzhia and Khmelnytskyi. The main characteristics studied were the number of vacancies, unemployed, their share in the overall structure of employment and unemployment in the region, and the level of remuneration. The paper establishes that the full-scale aggression of the Russian Federation against Ukraine has had a negative impact on the functioning of the labour market of Ukraine in general and its regional segments in particular. However, this impact was not catastrophic, as evidenced by the situation on the labour market in Zaporizhzhia Oblast, which is mostly occupied. In Khmelnytskyi Oblast, the war resulted in changes in the supply and demand for specialists with higher education, and a reduction in their salaries. This can be explained both by the displacement of relevant specialists and by businesses that contributed to the improvement of the employment situation in the region. The analysis has shown that there is potential to overcome labour market imbalances in the context of people with higher education. *Practical significance.* The findings have practical and political implications. The results of the analysis can be used to develop the main directions of the state regional policy to overcome the negative impact on the labour market of people with higher education in the conditions of war and taking into account the needs of post-war recovery of the country. *Value / Originality.* The distinctive feature of this study is its comparative analysis of the impact of the war on the labour market of individuals with higher education in regions that have experienced markedly disparate circumstances since the onset of the full-scale invasion. These include Zaporizhzhia Oblast, which is situated along the frontline and has been partially occupied, and Khmelnytskyi Oblast, which is situated at a considerable distance from the contact line. The analysis has shown that there is a potential to overcome labour market imbalances in the context of people with higher education both during the war and at the stage of post-war reconstruction.

**Keywords:** labour market, employment, unemployment, remuneration, people with higher education, disparities, impact of the war.

**JEL Classification:** C23, E13, O11, O13

## 1. Introduction

The war has had a significant impact on the labour market in Ukraine, causing significant fluctuations and changes. The uncertainty of the war, reduced

employment opportunities, structural and qualitative transformations, as well as large flows of internally displaced persons and mobilisation have exacerbated employment problems.

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The consequences of Russia's military aggression in Ukraine have weakened the potential of the labour market: barriers to the free movement of production factors, including labour, have emerged; production facilities and infrastructure have been lost; and forced migration has led to negative trends in employment and income. The structure of the labour market has changed significantly: there is an imbalance between labour supply and demand, and regional imbalances in the concentration of labour resources have deepened. Despite the gradual adaptation of the economy to the new conditions, the unemployment rate in the country remains high. Therefore, there is a need to monitor the situation on the labour market in order to formulate scenarios for its development in the interests of Ukraine's post-war recovery.

## 2. Theoretical Framework and Related Studies

The problem of the development of the situation on the labour market in Ukraine in the pre-war period has been studied in a large number of works. Among them, it would be desirable to highlight the works of such national scholars as Libanova E. M. (2016), Cherniavska O. V. (2013), Kolot A. M., Daniuk V. M., Herasymenko O. O. (Kolot, Daniuk, Herasymenko et al., 2017).

With the outbreak of a full-scale war, domestic scholars focused their attention on the impact of the war on the labour market and the prospects for its development during the post-war recovery phase. A large number of publications appeared in 2022.

The current problems of the labour market are discussed in the articles by Lyubomudrova N., Hoichuk V. (2022), Mantur-Chubata O. S., Vaganova L. V. (2022) and others.

The study by Cheromukhina O., Chaliuk Y. (2022) focuses on the impact of war on the labour market, namely the consequences of military conflict for the economy and employment, emphasising the importance of adapting employment policy to new realities. In her article, Shtunder I. (2022) analyses the labour market under martial law and possible options for adaptation and survival of businesses and employees. The article by Azmuk N. (2022) examines the transformations of the national labour market as a result of the war, changes in supply and demand, reproduction of labour force, and determination of the directions of post-war recovery.

The publication of Novikova O. F., Khandii O. O., Shamileva L. L. (2022) is devoted to the study of imbalances in the country's labour and educational potential caused by the war. The article by Vasylytsiv T., Levytska O., Rudkovsky O. (2022) is focused on the analysis of regional labour market imbalances

in the context of war. The paper by Heyets V., Blyzniuk V., Nykyforuk O. (2022) stresses the policy of social quality in the post-war period.

Cheromukhina O. (2022) studies the process of labour market transformation during the war years; the impact of external and internal migration on the labour market; and provides recommendations for stabilising the labour market in the post-war period. The problems of employment and unemployment are the subject of publications by Mantur-Chubata O. S., Vaganova L. V. (2022), Novak I. M. (2022).

Today, the problem of the impact of war is still relevant. The article by Shytikova L. V., Kutidze L. S., Zmykalo O. S. (2023) focuses on the stabilisation of the labour market in Ukraine during the war. The paper by Petrenko V. S., Melnykova K. V., Petrenko D. O. (2023) is devoted to a comprehensive study of the dynamics of the main labour market indicators in the context of martial law. The study by Atamaniuk (2024) examines changes in the structure of employment, unemployment rates, migration processes, and analyses the qualification and skills requirements that have changed under martial law. The publication by Kundytskyy O. (2024) examine the nature and peculiarities of the labour market functioning both in general and during the war in Ukraine.

An analysis of recent studies and publications shows that the issue of forced migration and its impact on the labour market is relevant. For example, the research by Bannikova K. B. (2023) examines the peculiarities of migration processes that occurred in connection with the full-scale invasion of Ukraine.

This issue was also studied by Komarnytska H. O., Yastremska N. M., Pavlenko N. V. (2022) and Cheromukhina O., Chaliuk Y. (2022).

Vasylytsiv T., Levytska O., Rudkovsky O. (2022) focused on the disproportion and imbalance of the labour market in the regions of the Carpathian region of Ukraine.

Today, the problems of the labour market in times of war are highlighted in analytical reviews by international organisations, domestic research centres and monographs (Sudakov, Lisohor, 2023; Pyshchulina, Makarevych, 2022; The impact of the Ukraine crisis on the world of work: Initial assessments. ILO, 2022; Cherenko, Poliakova, Shyshkin, 2023).

This problem is also of interest to foreign scholars. For example, a study by Tho Pham, O. Talavera, Zhuangchen Wu (2023) examines the short- and medium-term effects of the ongoing Russian-Ukrainian war on the labour market of Ukrainian workers.

Foreign scholars have already tried to analyse the effects of wars on the labour market. Among such works, attention should be paid to the publication by F. Kondylis (2010), which is devoted to the study of the labour market in Bosnia and Herzegovina in

the post-war period and contains the results of the analysis of the labour trajectory of displaced persons. A. Fakh, M. Ibrahim, C. Bahcekapili, B. Cetin studied the impact of Syrian refugees on the labour markets of neighbouring countries (Fakh, Ibrahim, 2016; Bahcekapili, Cetin, 2015). A study by Braun and Mahmoud (2014) examines the effects of migration on the labour market in host countries.

Wars and forced migration can have a negative impact on a country's labour market due to a shortage of human capital (Akbulut-Yuksel and Yuksel, 2015; Huber et al., 2021).

Despite the large number of publications, it would be advisable to conduct a comparative analysis of the impact of the war on regional labour markets in Ukraine, namely to compare the situation in the dynamics of the frontline regions (partially occupied) and those far from the contact line.

### 3. Methodology

Ukraine's rapid post-war recovery is possible only if it has the appropriate human capital. And this capital is formed primarily by specialists with higher education. This is why it is expedient to analyse the impact of the war on the labour market in this particular segment. The authors have identified three groups of professions: "Legislators, senior civil servants, executives, managers (administrators)"; "Professionals"; "Specialists" in accordance with the current Classification of Professions of Ukraine (AK 003:2010), approved by Order of the State Committee of Ukraine for Consumer Protection and Food Safety No. 327 on 28.07.2010 as of 16.01.2024 (<https://zakon.rada.gov.ua/rada/show/va327609-10#Text>).

For comparison, two oblasts were chosen – Zaporizhzhia and Khmelnytskyi.

The interest in analysing the situation on the labour market in Zaporizhzhia Oblast during the war is due to the fact that it is a frontline region, most of which is currently occupied. Before the outbreak of the full-scale war, the territory of the region was 27.2 thousand km<sup>2</sup> (4.5% of the territory of Ukraine). In 2020, a new administrative-territorial structure was formed, with 5 raions in Zaporizhzhia Oblast: Berdiansk, Vasylivka, Zaporizhzhia, Melitopol and Polohy with their respective administrative centres. The regional centre is the city of Zaporizhzhia with a population of 710.052 thousand inhabitants. As of 01.01.2022, the total population of the Zaporizhzhia Oblast amounted to 1638.5 thousand people, of which the urban population was 1269.9 thousand people and the rural population was 368.6 thousand people. Before the war, the region's industrial and agricultural potential was actively used to produce helicopters and aircraft engines, cranes and crane equipment,

transformers, steel and cast iron, graphitised electrodes, titanium sponge, refractory products, ferroalloys, coke, and chemical products. The Zaporizhzhia region is one of the largest producers of agricultural products and food products in Ukraine. Before the war, Zaporizhzhia Oblast had a powerful energy complex represented by nuclear, thermal and hydroelectric power plants, and alternative energy. As of today, more than half of Zaporizhzhia Oblast has been occupied since the spring of 2022 (71.83%). The following areas remain temporarily uncontrolled: Berdiansk Raion, Melitopol Raion, Vasylivka Raion, Polohy Raion (except for Orikhiv and Huliaipole) (<https://mepr.gov.ua/wp-content/uploads/2022/10/Regionalna-dopovid-Zaporizka-ODA-2021.pdf>).

The situation in Khmelnytskyi Oblast is significantly different, as it is far from the contact line; secondly, it is one of the regions where IDPs and businesses began to move to since the beginning of the war; and thirdly, before the war, the labour market situation in the region was significantly different from the southern oblasts, including Zaporizhzhia.

The research uses general scientific (analysis and synthesis, induction and deduction, analytical grouping) and special (abstraction, modelling, benchmarking, etc.) methods of studying economic phenomena and processes.

## 4. Results and Discussion

### 4.1. Analysis of Changes in the Labour Market of Zaporizhzhia Oblast Under the Influence of War

The analysis of the situation on the labour market in Zaporizhzhia Oblast in 2021-2023 showed that both the number of vacancies and the number of jobs decreased during these years compared to the pre-war level. Thus, in 2022, the number of vacancies decreased by almost 3 times, while in 2023, the reduction was 2 times. As for the number of unemployed, the decline was about 30% in 2022, and almost 50% in 2023 (Figure 1).

The difference in quantitative indicators of change can be explained as follows. The faster decline in vacancies than in the number of unemployed can be explained by the fact that since the outbreak of the war, some enterprises have ceased or suspended their operations, thus reducing the need for labour. The reduction in the number of unemployed was caused by the fact that some of the job seekers found work. In addition, the total number of unemployed since the beginning of the war has included internally displaced persons (IDPs), but there are some who have left the region, so the total number of unemployed has decreased by this amount.

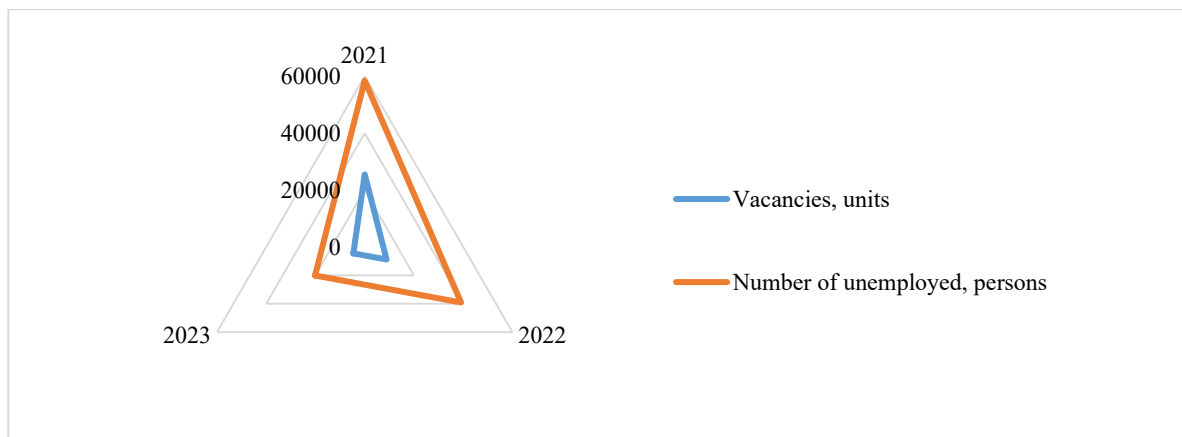


Figure 1. Number of vacancies and unemployed in Zaporizhzhia Oblast in 2021-2023 in total

The trends in the number of vacancies in 2023 can be explained by the fact that over the two years of war, enterprises have adapted to the new business environment, some have resumed operations, and some have relocated to the non-occupied part of the region from the occupied part. However, the proximity of the contact line and shelling of the region's territory led to the relocation of some businesses to safer areas (other oblasts of Ukraine), which reduced the need for labour. As for the trends in the context of a significant reduction in the number of unemployed, it is likely that those who were job seekers before the war started or in the first year had certain requirements for working conditions, remuneration, etc. With the outbreak of the war, as in any crisis, job seekers are ready to lower their requirements for the workplace, and therefore accept jobs that would not have fully satisfied them in a stable situation. This also contributed to a reduction in the number of unemployed.

Consider the trends in the number of vacancies and unemployed for the main groups of people with higher education, namely executives, managers and employees; professionals and specialists (Figures 2-4).

As can be seen, the situation in the context of these groups of workers fully coincides with the general trends in the labour market situation in Zaporizhzhia Oblast described above. This can be explained by the fact that in the structure of the unemployed in the above years, people with higher education accounted for almost half of all unemployed: 43.7, 43.9 and 41.5% respectively. In general, the share of these categories is on average 31% of the unemployed in the Oblast.

Here is an analysis of the quantitative data on registered unemployed, vacancies and applicants for one vacancy as of January 1 of the next year among managers, executives and employees (Figure 5), professionals (Figure 6) and specialists (Figure 7).

The number of vacancies for this group of workers has been declining over the years. At the same time,

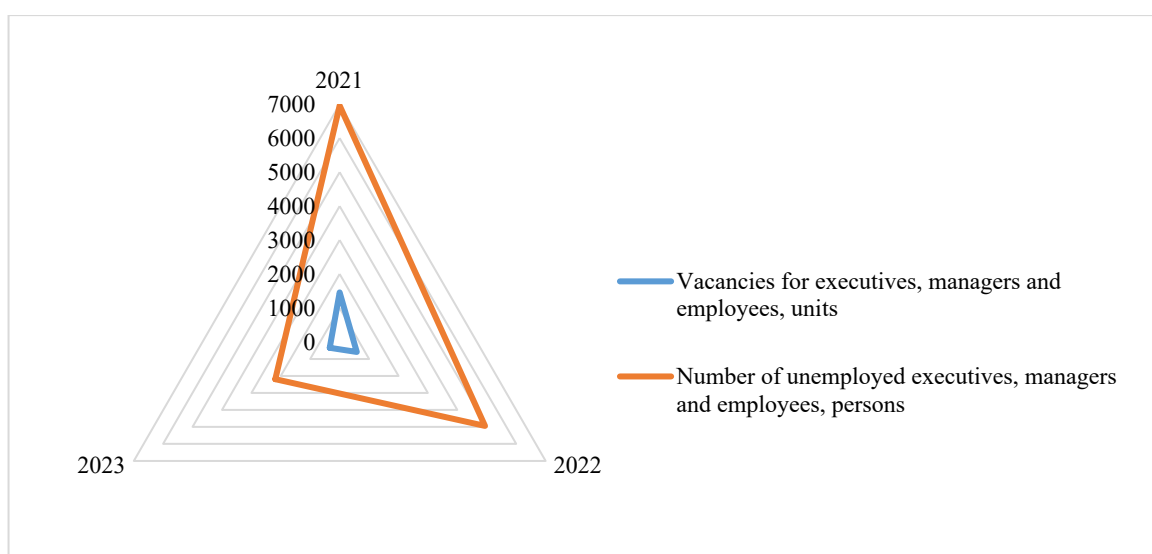


Figure 2. Number of vacancies and unemployed in Zaporizhzhia region in 2021-2023 among executives, managers and employees

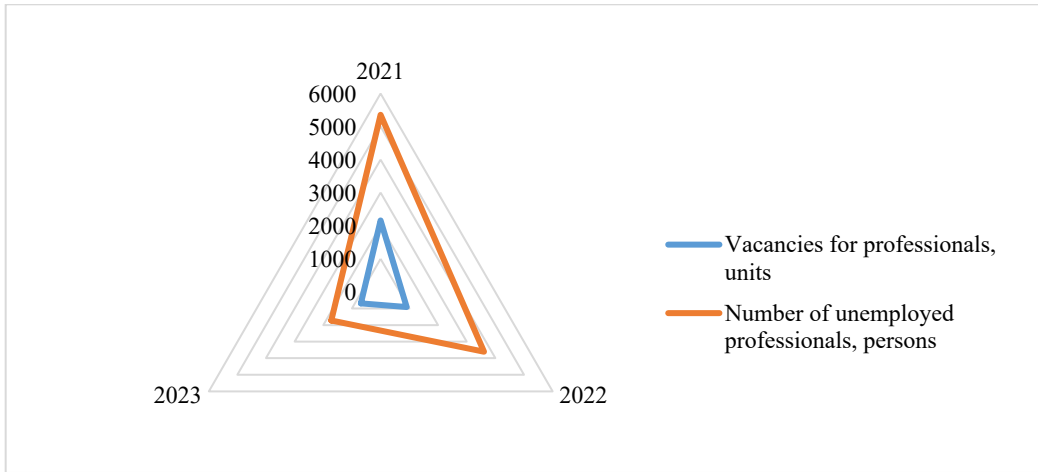


Figure 3. Number of vacancies and unemployed in Zaporizhzhia Oblast in 2021-2023 among professionals

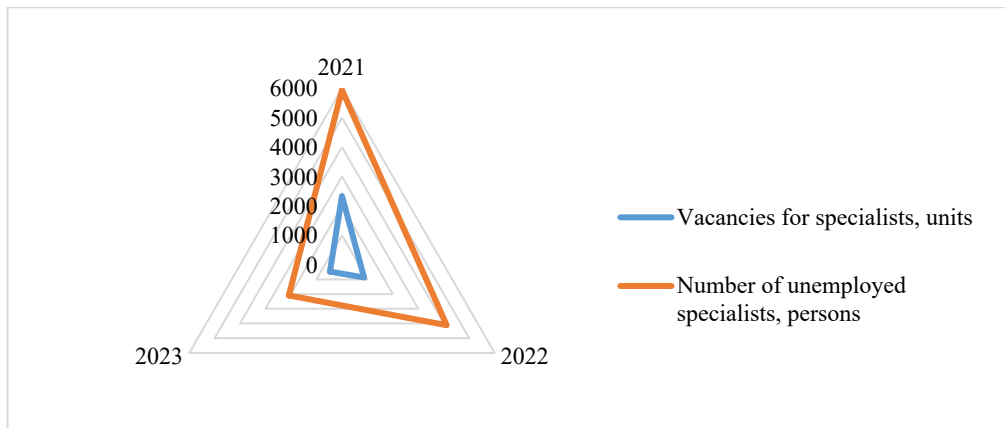


Figure 4. Number of vacancies and unemployed in Zaporizhzhia Oblast in 2021-2023 among specialists

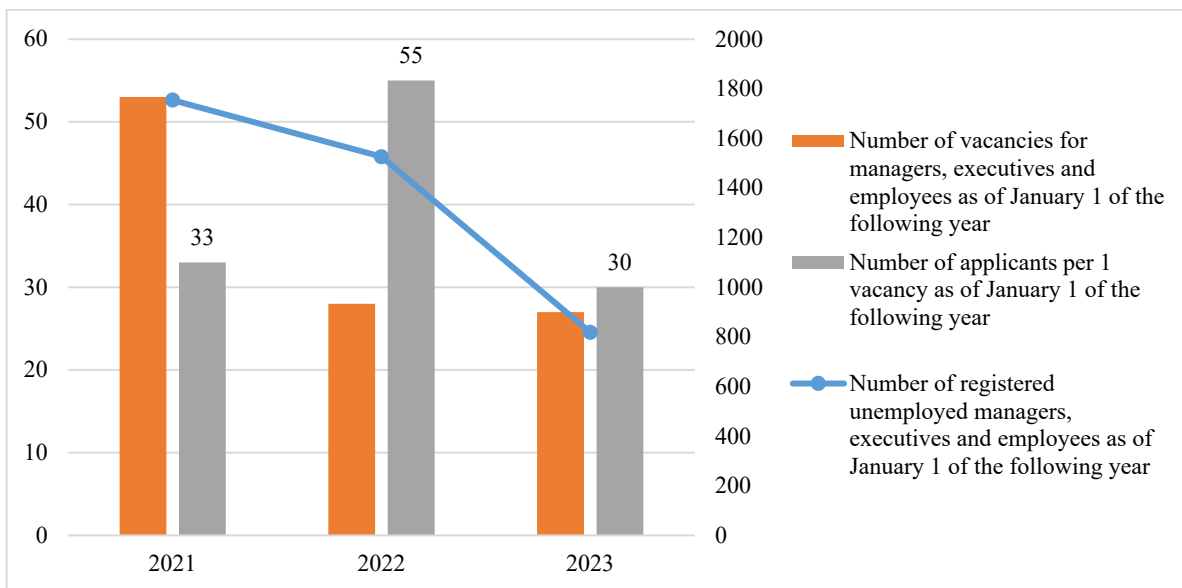


Figure 5. Number of unemployed, vacancies and applicants per 1 vacancy for managers, executives and employees in 2021-2023

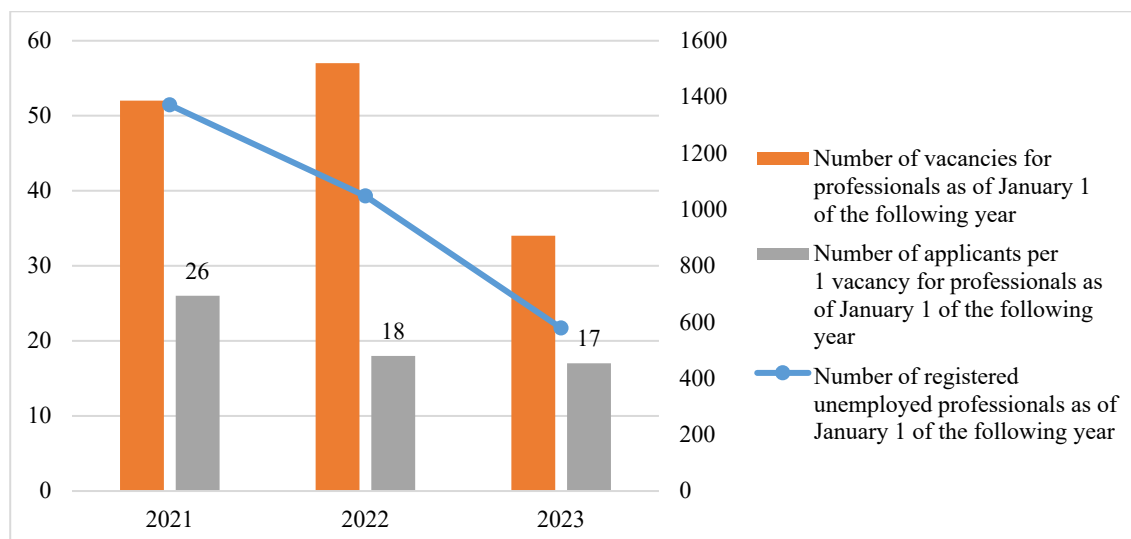


Figure 6. Number of unemployed, vacancies and applicants per 1 vacancy for professionals in 2021-2023

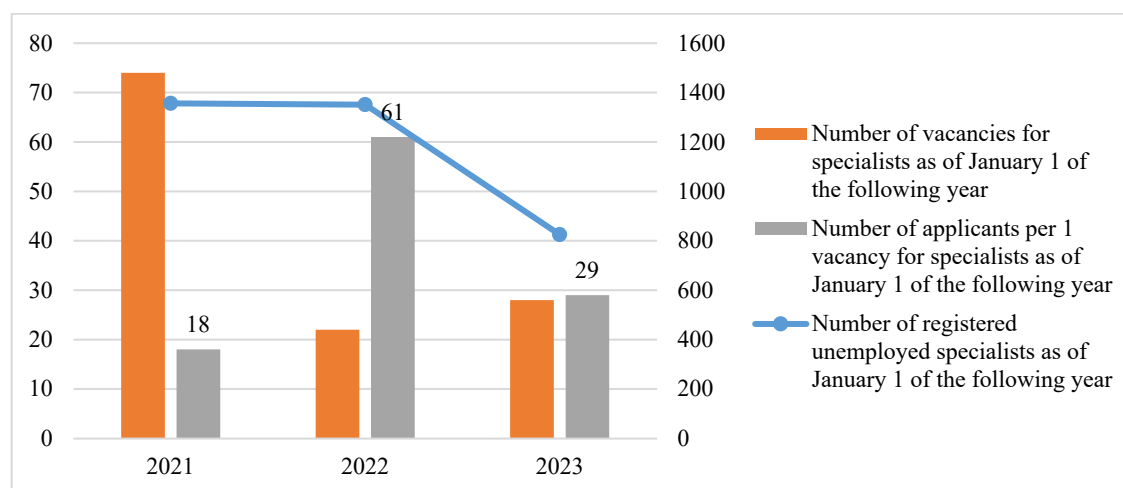


Figure 7. Number of unemployed, vacancies and applicants for 1 vacancy for specialists in 2021-2023

the number of registered unemployed was also decreasing. As of January 1, 2023 (during the first year of the war), both the number of vacancies and the number of registered unemployed decreased, but the workload per vacancy increased significantly from 33 to 55 people (almost 2 times).

These trends can be explained by the fact that during the first year of the war, the number of internally displaced persons (IDPs) of this category increased in Zaporizhzhia Oblast as a result of the displacement of the population from the occupied territories (other oblasts and other raions of the Oblast).

At the same time, a certain number of working-age people left the city and the region with the outbreak of war. Approximately 30% left Zaporizhzhia, which had about 700,000 inhabitants before the war, while approximately the same proportion (30%) moved to the city from the south of the region and villages (occupied territories of the Oblast).

In addition, the suspension or termination of business operations led to a reduction in the supply of vacancies.

During the second year of the war (as of January 1, 2024), the number of vacancies decreased slightly, while the workload per vacancy decreased to the pre-war level (up to 30 people).

As can be seen, the number of vacancies for this group of workers remained virtually unchanged during the first year of the war (from 51 to 57). At the same time, the number of registered unemployed decreased. The reason for the reduction is explained above. Most likely, it was professionals who "gave in" to their job requirements, stopped looking for work and found employment. As a result, as of January 1, 2023 (during the first year of the war), the workload per vacancy decreased from 26 to 18 people.

These trends can be explained by the fact that during the first year of the war, the number of internally

displaced persons (IDPs) in Zaporizhzhia Oblast increased, but not in the above category. Alternatively, it was the working-age population of the professional level that left the city and the region at the beginning of the war.

During the second year of the war (as of January 1, 2024), the number of vacancies decreased with a simultaneous decrease in the number of unemployed professionals with a virtually unchanged workload per vacancy (below the pre-war level).

The number of vacancies for this group of workers during the first year of the war, unlike for professionals, decreased significantly, while the number of unemployed professionals remained unchanged. As a result, as of January 1, 2023 (during the first year of the war), the workload per vacancy increased significantly – from 18 to 61 people (almost 3 times). The reason for the reduction is most likely the termination or suspension of the functioning of enterprises in the city and region and the inability to find any job under such conditions, unlike professionals, for whom such offers did exist, but not the best ones.

Judging by the almost unchanged number of registered unemployed, IDPs were mostly people of the unspecified category. Either that, or the working-age population of the specialist level left the city and the region with the outbreak of war.

During the second year of the war (as of January 1, 2024), the number of vacancies increased slightly, which led to a twofold decrease (to 29) in the workload per vacancy, but not to the pre-war level of 18 people.

In order to confirm these conclusions, there is a need to analyse the impact of labour migration on the labour market in Zaporizhzhia Oblast.

According to official data, as of December 2023, more than 232,000 internally displaced persons were registered in Zaporizhzhia Oblast. Of these, approximately 120,000 are able-bodied IDPs.

As of 2024, 228,500 internally displaced persons were registered in Zaporizhzhia Oblast. These are mainly IDPs from Donetsk, including Mariupol, Kherson and Kharkiv oblasts. More than 80 per cent of them are IDPs who moved from the interior of Zaporizhzhia Oblast. There are 5,000 registered from Kherson Oblast, 1,700 from Kharkiv Oblast, and 23,400 from Donetsk Oblast, including 5,900 from Mariupol.

The number of unemployed people in Zaporizhzhia Oblast as of January 1, 2022 was 136 (1% of the total number of unemployed). According to the data as of January 1, 2023 (the first year of the war), there were 889 unemployed IDPs, which is 6.4% of all unemployed in the Oblast. As of January 1, 2024, their number decreased by almost 2 times to 456 people, accounting for 5.3% of the total number of unemployed. As of 24.06.2024, the number of unemployed IDPs stood at 1,126, which is an increase compared to the beginning of the year.

According to the regional employment centre, a total of 773 IDPs were employed in 2023.

Between January and March 2024, more than 2,500 IDPs in Zaporizhzhia used the services of the Employment Service, including 1,456 who were unemployed. During this period, 232 IDPs were employed.

To some extent, this is facilitated by the state's policy towards IDPs, as employers who hire such persons receive compensation.

Thus, there is reason to believe that among IDPs there were more of those who had a more significant impact on the labour market for managers, executives and employees in the first year of the war than on the market for specialists. While the situation for professionals has hardly changed.

As of the beginning of 2023, the city's enterprises resumed operations to some extent, which resulted in a reduction in the number of unemployed (they returned to work) and, at the same time, IDPs were employed. For example, according to the press centre of Zaporizhstal, almost 400 IDPs from frontline and temporarily occupied cities were employed by the company. Those who had a specialised profession and work experience at industrial enterprises were offered jobs in their field of expertise. Those who did not have such experience were given the opportunity to learn another profession.

The result is a reduction in both vacancies and unemployment.

Consider the share of vacancies, unemployed and the level of employment of managers, executives and employees (Figure 8), professionals (Figure 9) and specialists (Figure 10) in the overall structure of the labour market in Zaporizhzhia Oblast.

As can be observed, the share of vacancies for managers, executives and employees has remained virtually unchanged over the years. In the first year of the war, the share of the unemployed also increased, but in 2023 it decreased. As for the employment rate, it also fluctuated slightly. Thus, there is every reason to believe that there was no significant redistribution of the labour market share of this category compared to others.

The share of vacancies for professionals has been growing over the years, with a significant increase in 2023. Hence, this confirms the conclusion that large enterprises in Zaporizhzhia have intensified their activities, which has increased the supply of vacancies for professionals, which they have taken advantage of and found jobs. This was more active than among other categories of workers.

As for the share of vacancies, unemployed and the employment rate of specialists in the overall structure of the labour market, it has remained virtually unchanged. This confirms the conclusion that labour migration did not significantly affect this segment of

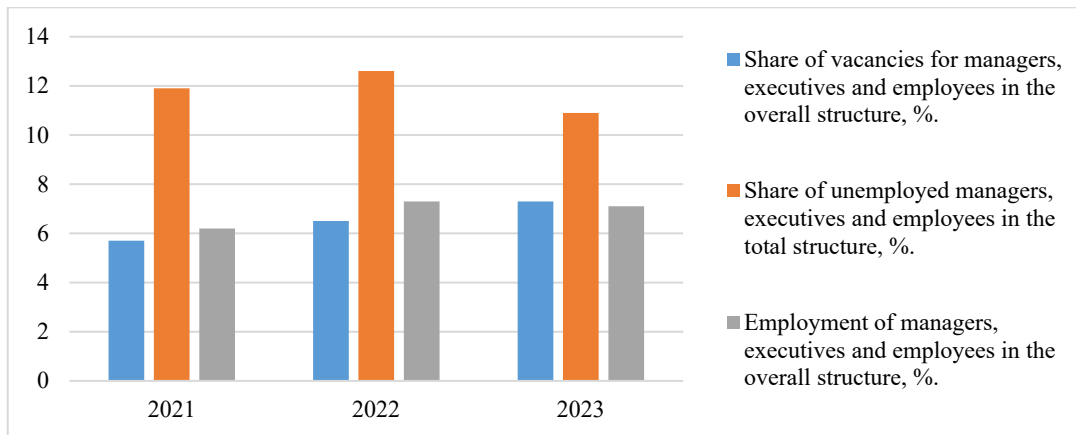


Figure 8. Shares of vacancies, unemployed and employment rate of managers, executives and employees in the overall structure of the labour market in Zaporizhzhia Oblast in 2021-2023

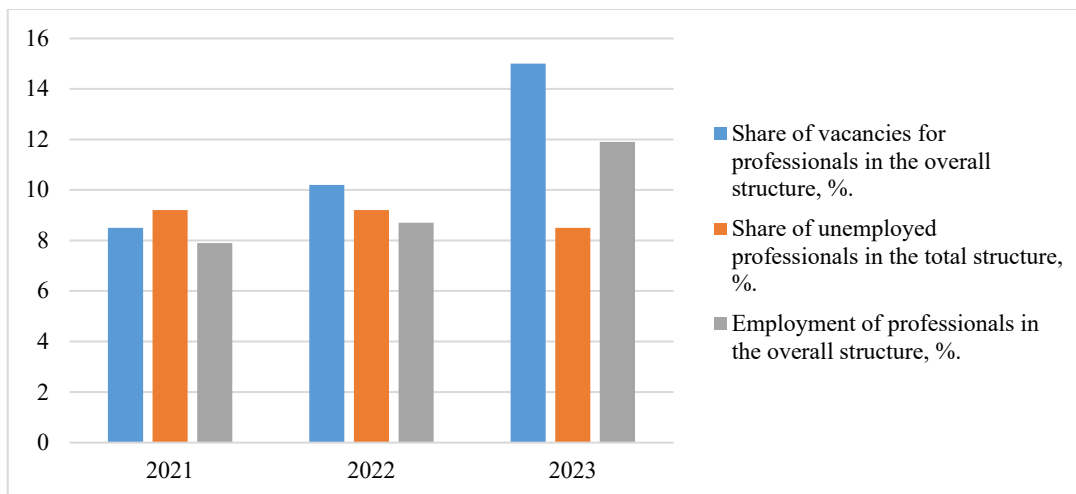


Figure 9. Shares of vacancies, unemployed and employment rate of professionals in the overall structure of the labour market in Zaporizhzhia Oblast in 2021-2023

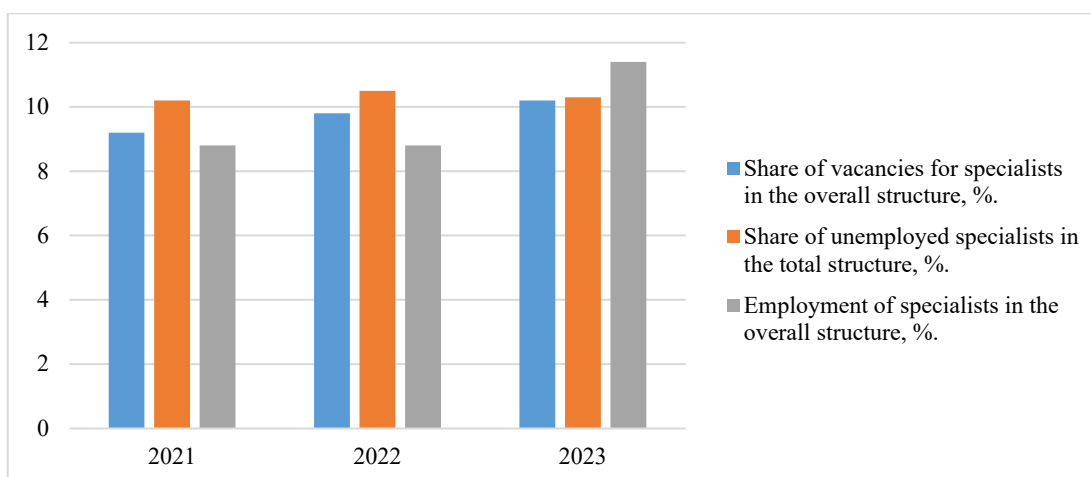


Figure 10. Shares of vacancies, unemployed and employment rate of specialists in the overall structure of the labour market in Zaporizhzhia Oblast in 2021-2023



the labour market for specialists with higher education compared to other categories. The resumption of enterprise operations had positive consequences.

Consider a comparison of the proportion of unemployed people in each category in the overall structure. Over the years, for managers, executives and employees, it increased and then decreased – 11.9, 12.6 and 10.9%, respectively. As for professionals, it decreased to some extent and amounted to 9.2, 9.2, and 8.5%, respectively. As for specialists, it remained virtually unchanged – 10.2, 10.5 and 10.3%, respectively.

A comparison of vacancy rates for each category in the overall structure is in order. Over the years, the share of managers, executives, and employees grew by 5.7, 6.5, and 7.3%, respectively. As for professionals, it increased and amounted to 8.2, 10.2 and 15%, respectively. As for specialists, it remained virtually unchanged – 9.2, 9.8, and 10.2%, respectively.

Consider a comparison of the share of employees in each category in the overall structure. Over the years, the share of managers, executives, and employees grew – 6.2, 7.3, and 7.1%, respectively. For professionals, it increased and amounted to 7.9, 8.7 and 11.9%, respectively. As for specialists, it increased to 8.8, 8.8 and 11.4%, respectively.

Thus, the situation on the labour market in Zaporizhzhia Oblast has had a different impact on different categories of people with higher education.

The following figures show the trends in the number of vacancies and unemployed for the main groups of people with higher education, namely executives, managers and employees; professionals and specialists in 2021-2023 (Figures 11-12).

The trends for professionals and specialists are similar, but in 2023, employment opportunities for professionals and specialists increased. Trends are similar for all categories of people with higher education.

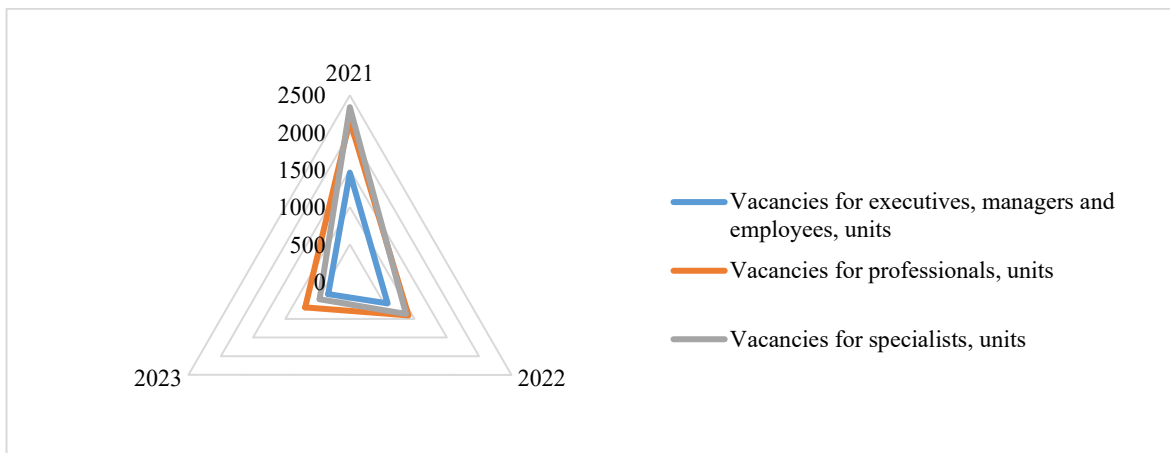


Figure 11. The number of vacancies for the main groups of people with higher education, namely executives, managers and employees; professionals and specialists in 2021-2023

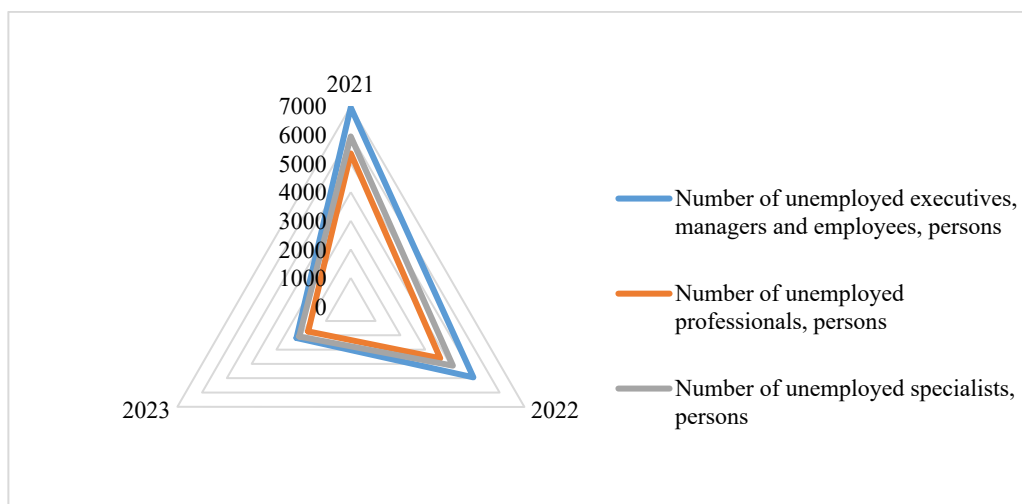


Figure 12. Number of unemployed persons with higher education, namely executives, managers and employees; professionals and specialists in 2021-2023

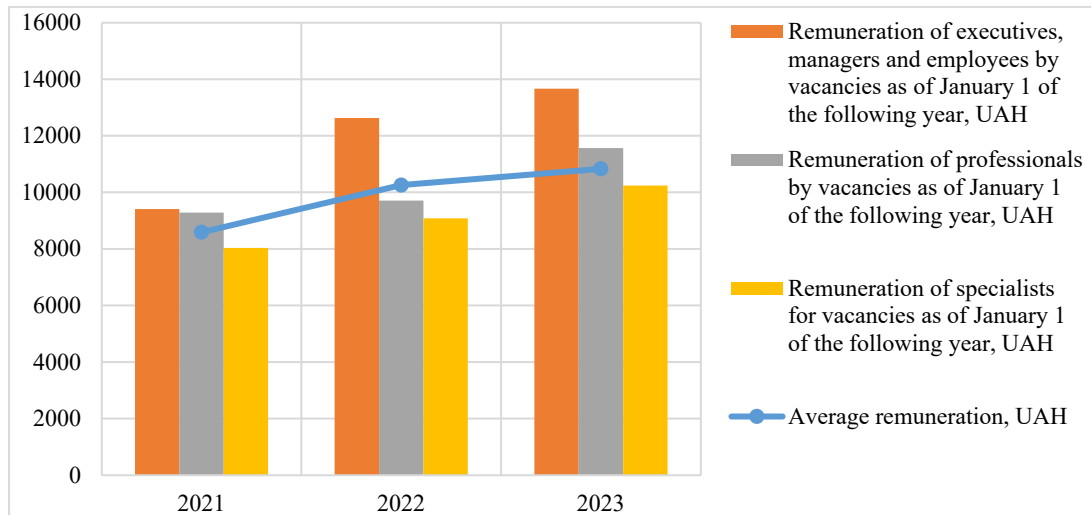


Figure 13. Remuneration of specialists with higher education in 2021-2023

In addition, the situation for executives, managers, and employees has improved in the context of a decline in unemployment.

Before the war, the remuneration of executives, managers and employees, as well as professionals, was above average. With the outbreak of war (the first year), the situation changed, salaries of professionals decreased, salaries of executives, managers and employees, as well as professionals, became higher than the average level more significantly. In the second year of the war, the salaries of professionals in their ratio to the average level returned to the pre-war level, and the salaries of executives, managers and employees became even higher than the average level.

#### 4.2. Analysis of the Impact of the War on the Labour Market in Khmelnytskyi Oblast

The analysis showed that during the years under study, both the number of vacancies and the number of workplaces in Khmelnytskyi Oblast decreased compared to the pre-war level. Thus, in 2022, the

number of vacancies decreased by almost 1.5 times, while in 2023 the reduction was much smaller – by 20%. As for the number of unemployed, the decline was about 30% in 2022, and almost 2 times as much in 2023 (Figure 14).

The reduction in vacancies can be explained by the fact that since the beginning of the war, part of the population from the occupied territories, the south, east and north of Ukraine moved to the west of Ukraine. The reduction in the number of unemployed was due to the fact that displaced persons (job seekers) found work.

The trends in 2023 of a significant reduction in the number of unemployed can be explained by the fact that during the war, job seekers were more active in seeking employment and accepted jobs that they were not satisfied with before the war. In addition, many companies relocated their business to the West of Ukraine, including the Khmelnytskyi Oblast, after the outbreak of the war, which resulted in a certain additional number of jobs. A significant reduction in

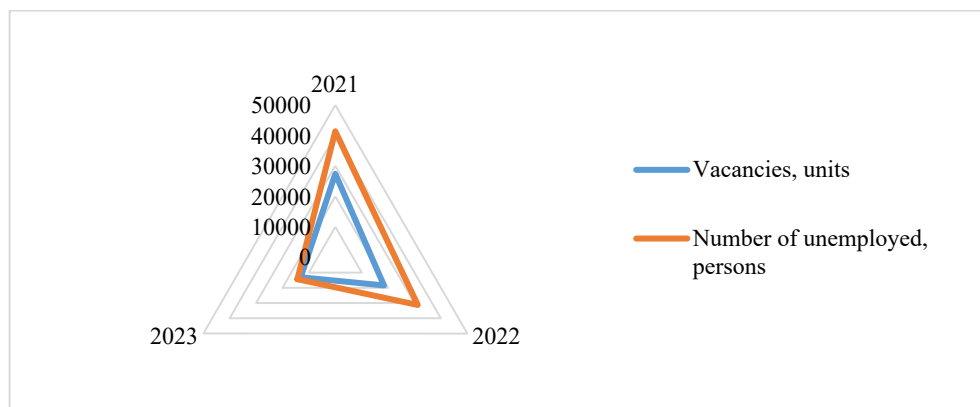


Figure 14. Number of vacancies and unemployed in Khmelnytskyi Oblast in 2021-2023 in total

the number of unemployed in 2023 occurred because it took time for businesses to relocate and resume operations in the new location.

Consider the trends in the number of vacancies and unemployed for the main groups of people with higher education, namely executives, managers and employees; professionals and specialists (Figures 15-17).

As can be seen, the general trends in the context of these groups of workers fully coincide with the

general trends in the situation on the labour market in Khmelnytskyi Oblast described above. But in the context of executives, managers and employees, there is a significant difference in terms of quantitative indicators. The number of vacancies for them in the first year of the war decreased by almost 2 times. In 2023, it further decreased by 30%. The number of unemployed decreased by 30% in 2022 and almost halved in 2023. These trends can be explained by the

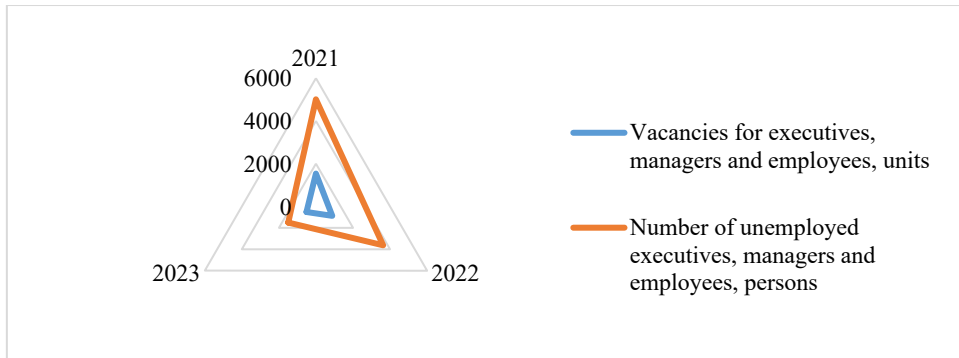


Figure 15. Number of vacancies and unemployed in Khmelnytskyi Oblast in 2021-2023 among executives, managers and employees

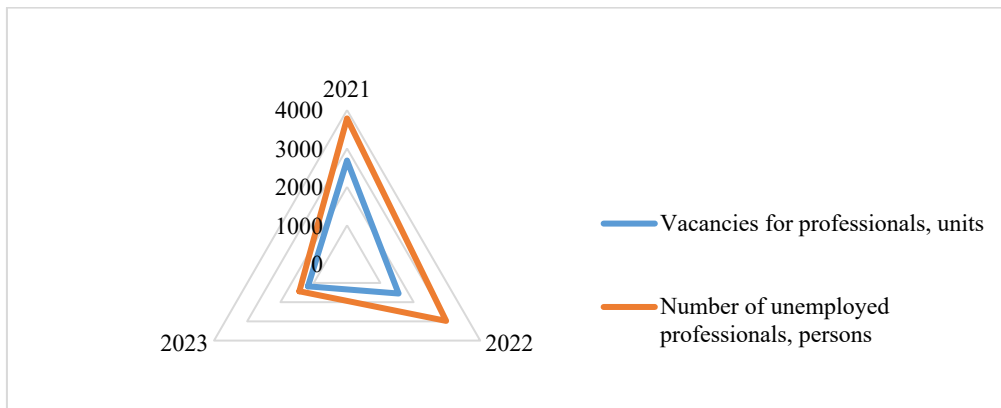


Figure 16. Number of vacancies and unemployed in Khmelnytskyi Oblast in 2021-2023 among professionals

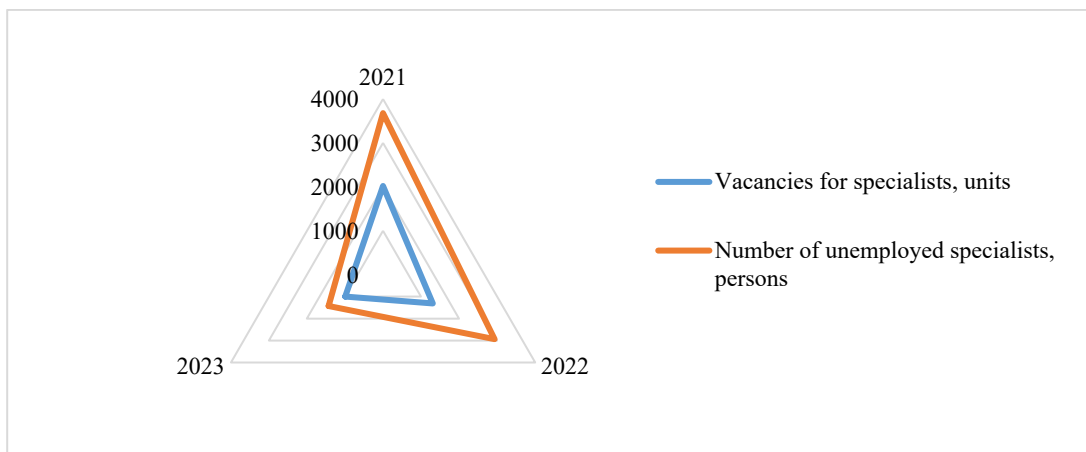


Figure 17. Number of vacancies and unemployed in Khmelnytskyi Oblast in 2021-2023 among specialists

fact that the unemployed residents of Khmelnytskyi Oblast are likely to have become more active in their employment, as IDPs have already moved to the territory, thus increasing the number of labour force that could fill these vacancies. Being afraid of not having a job, they took up employment.

Unemployment declined significantly only in 2023, as relocated companies needed time to "turn around" their production facilities at the new location and offer new workplaces.

The situation was similar for professionals, but vacancies were declining, but to a lesser extent. Vacancies for specialists, as well as their unemployment, declined significantly in 2023. The reason for this is the creation of additional jobs by relocated enterprises.

In terms of the structure of the unemployed, over the years, people with higher education accounted for almost half of all unemployed in Khmelnytskyi Oblast: 45, 48 and 47% respectively.

In Khmelnytskyi Oblast, all analysed categories were active in employment since the beginning of the war.

Below is an analysis of quantitative data on registered unemployed, vacancies and applicants for one vacancy as of January 1 of the following year among managers, executives and employees (Figure 18), professionals (Figure 19) and specialists (Figure 20).

As can be found, the number of vacancies for this group of workers decreased in 2022, and significantly so since the start of the war. The number of registered unemployed has been declining over the years. As of January 1, 2023 (during the first year of the war), both the number of vacancies and the number of registered unemployed decreased, but the burden per vacancy decreased from 26 to 13 people.

These trends can be explained by the fact that during the first year of the war in Khmelnytskyi Oblast, managers, executives and employees were active in finding employment. Internally displaced

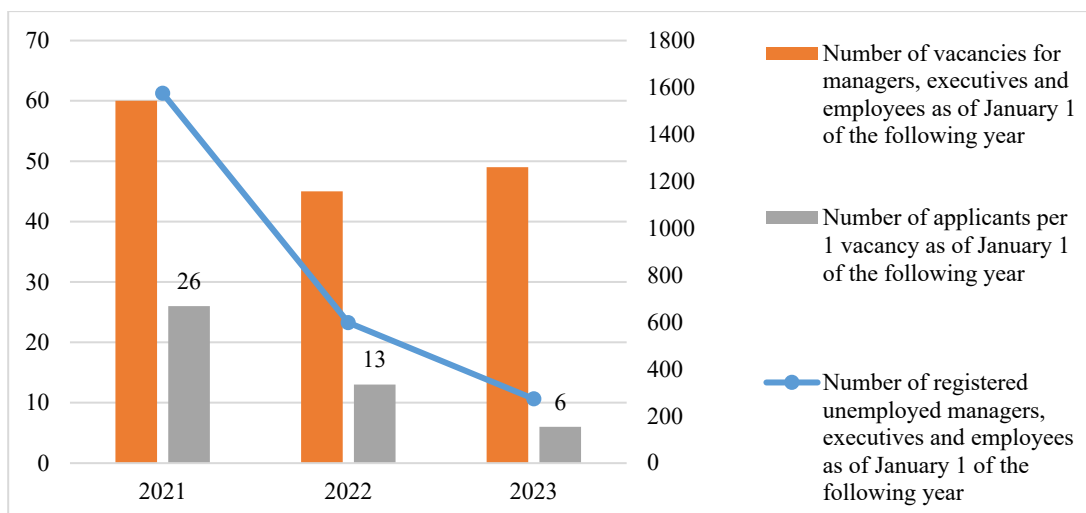


Figure 18. Number of unemployed, vacancies and applicants per 1 vacancy for managers, executives and employees in 2021-2023

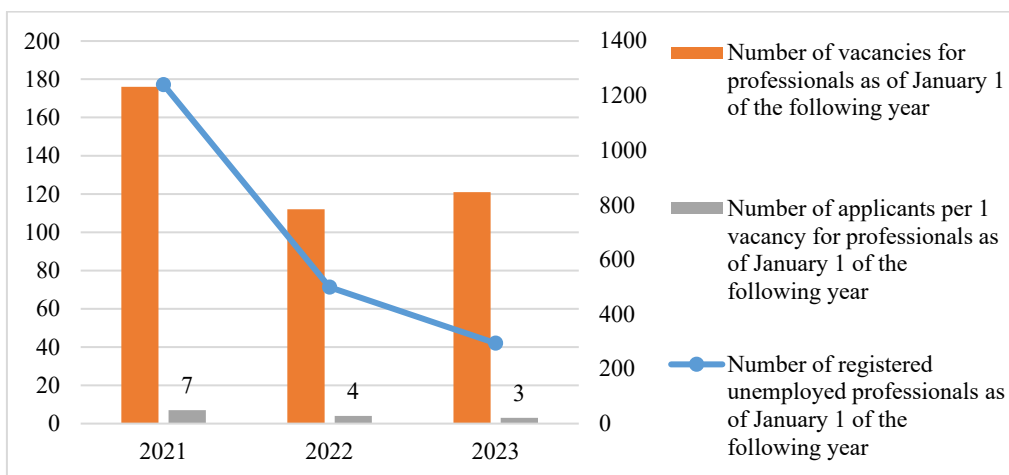


Figure 19. Number of unemployed, vacancies and job seekers for professionals in 2021-2023

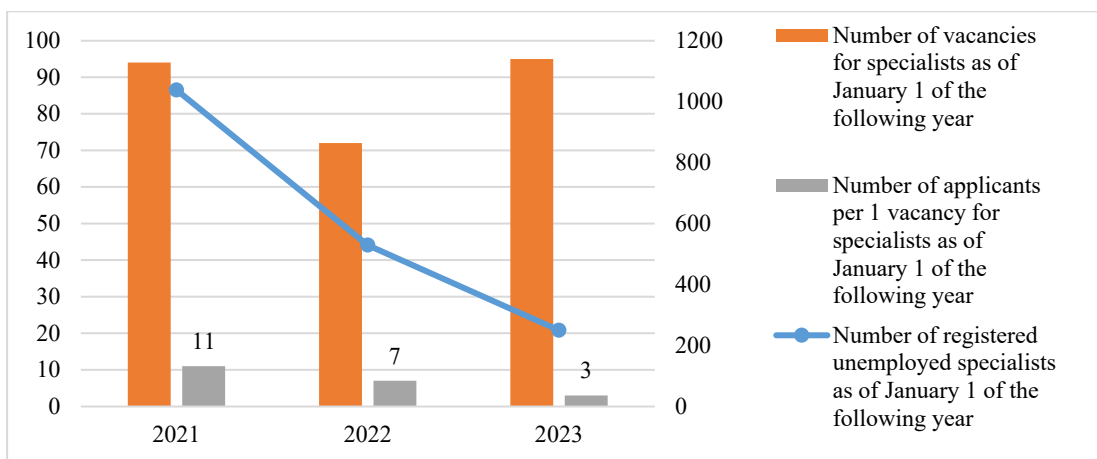


Figure 20. Number of unemployed, vacancies and applicants per 1 vacancy for specialists in 2021-2023

persons (IDPs) in this category were also able to find work. At the same time, a certain number of working-age people left the city and the Oblast with the outbreak of war, most likely to other countries.

During the second year of the war (as of January 1, 2024), the number of vacancies increased, as additional jobs were created by relocated enterprises, and the number of unemployed decreased, while the workload per vacancy decreased to 6 people, which is lower than the pre-war level. Thus, there is every reason to conclude that in the first year of the war, jobs in this category were maximally occupied by both the local population and IDPs. In the second year of the war, the relocation of enterprises created additional jobs for managers, which improved the situation in the region with the employment of this category of workers, as evidenced by the level of workload per vacancy (lower than before the war).

As for professionals, the situation is almost the same as in the case of managers, executives and employees. The difference is that the level of workload per workplace was lower before the war – 7 people, and in 2022-2023 it further decreased to 4 and 3 people, respectively.

The reasons for these trends in the labour market are similar to those described above.

It is evident that the circumstances faced by specialists are largely analogous to those encountered by managers, executives, and professionals. But there is a difference: the number of vacancies created in 2023 for specialists was higher than for other categories of people with higher education. The level of workload per job for specialists decreased from 11 people to 7 and 3 in 2022 and 2023, respectively.

The causes of these trends in the labour market are analogous to those described above.

In order to confirm these conclusions, it is necessary to analyse the impact of labour migration on the labour market in Khmelnytskyi Oblast.

First of all, consider the situation with IDPs.

Khmelnytskyi Oblast remains among the leaders in the number of internally displaced persons (IDPs). As of the beginning of 2023, almost 157,000 people from other regions of Ukraine temporarily resided in the region.

According to the Khmelnytskyi Regional Military Administration, as of May 2024, more than 74,000 people were living in the region as internally displaced persons. At the same time, according to the needs map, 117,272 IDPs are currently registered in Khmelnytskyi Oblast: 31,945 in Kamianets-Podilskyi Raion, 62,521 in Khmelnytskyi Raion and 22,806 in Shepetivka Raion.

The official number of able-bodied internally displaced persons (according to the CHESNO Movement) is about 2.1 million. However, less than 7% have applied to employment centres. And this is despite the fact that unemployment remains one of the key issues for them. Local authorities are partially helping to find jobs, but solving the unemployment problem remains a major challenge for the state. In Khmelnytskyi Oblast, according to the study, the employment service managed to employ every fourth IDP who applied for assistance. In particular, in Khmelnytskyi alone, more than 20 relocated enterprises from other regions resumed operations.

As of January 1, 2022, there were already IDPs in the Khmelnytskyi Oblast, and the number of unemployed among them was 28 people (0.2% of the total number of unemployed).

The number of unemployed IDPs as of 01.01.2023 was 655, which is 11.7% of the total number of unemployed.

As of January 1, 2024, the number of unemployed IDPs was 239, which is 9.1% of the total number of unemployed.

In the first three months of 2024, 1601 internally displaced persons applied for

services at the Khmelnytskyi Regional Employment Service. Only 161 people were employed, which means that only one in ten got a job. There are several reasons for such a small number of employed IDPs. First of all, it was the level of remuneration in the eastern regions, which was much higher than in Khmelnytskyi. The second is the specificity of the professions in which people worked there, for example, miners, for whom there is no work in the region. Another is the lack of motivation, meaning that if they have some savings, IDPs are in no hurry to look for work here in the hope of returning home soon.

The analysis showed that people with higher education are still more active in finding employment compared to other IDPs. In addition, there is every reason to believe that their competition for jobs has also "stimulated" the local population to be more active in employment.

In order to facilitate the adaptation of IDPs in the labour market, the state is implementing a programme to support employers.

Thus, there is every reason to believe that the presence of IDPs and the need for their employment has affected the state of the labour market in the region for people with higher education.

The following is an analysis of the share of vacancies, unemployed and the employment rate of managers, executives and employees (Figure 21), professionals (Figure 22) and specialists (Figure 23) in the overall structure of the labour market in Khmelnytskyi Oblast.

According to the data, the share of vacancies, unemployed, and the employment rate of managers, executives, and employees in the overall structure of the Khmelnytskyi Oblast labour market did not change significantly in 2021-2023.

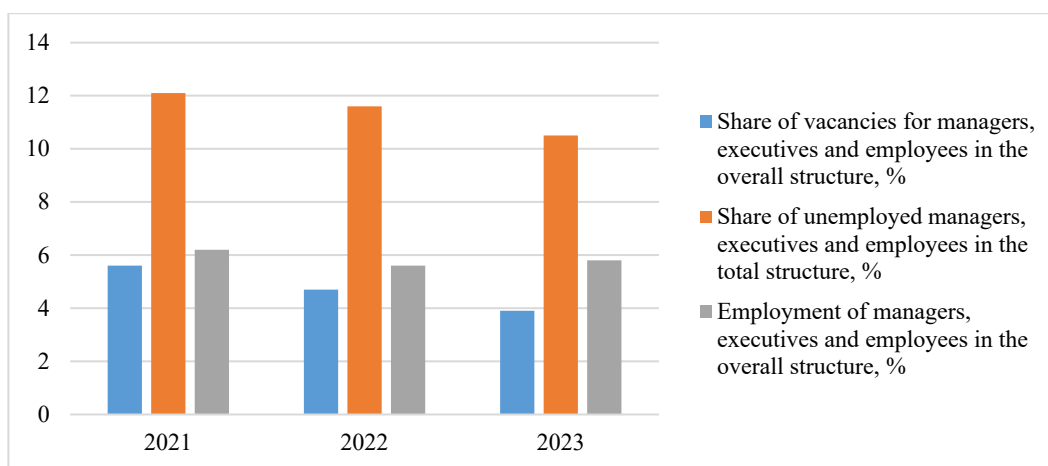


Figure 21. Shares of vacancies, unemployed, and employment rates of managers, executives, and employees in the overall structure of the labour market in Khmelnytskyi Oblast in 2021-2023

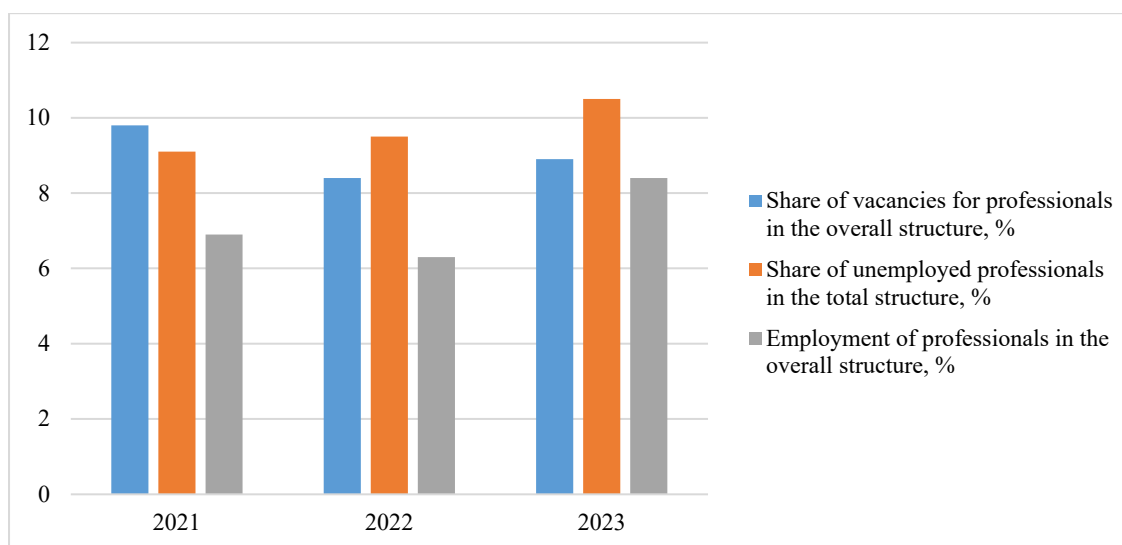
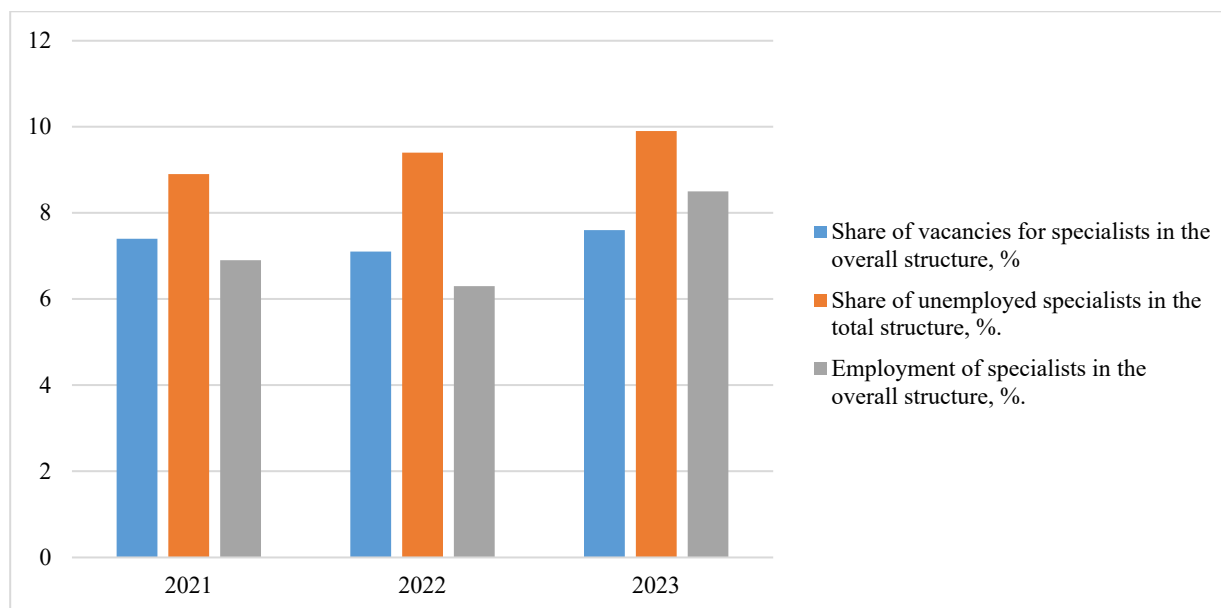


Figure 22. Shares of vacancies, unemployed, and employment rate of professionals in the overall structure of the labour market in Khmelnytskyi Oblast in 2021-2023



**Figure 23. Shares of vacancies, unemployed and employment rate of specialists in the overall structure of the labour market in Khmelnytskyi Oblast in 2021-2023**

The shares of vacancies, unemployed, and the employment rate of professionals in the overall structure of the Khmelnytskyi Oblast labour market changed to some extent in 2021-2023, but also insignificantly.

As for the share of vacancies, unemployed and the employment rate of specialists in the overall structure of the labour market, it differs from the previous categories. There were no significant changes in the labour market for specialists (except for minor changes in 2023).

Consider a comparison of the proportion of unemployed in each category in the overall structure. Over the years, the share of unemployed managers, executives and employees decreased – 12.1, 11.6 and 10.5% respectively. As for professionals, it increased to some extent, but not significantly, and amounted to 9.1, 9.5, and 10.5%, respectively. As for specialists, it grew slightly and amounted to 8.9, 9.4, and 9.9%, respectively.

Below is a comparison of the share of vacancies in each category in the overall structure. Over the years, the vacancy rate for managers, executives, and employees decreased to 5.6, 4.7, and 3.9%, respectively. As for professionals, it also decreased and amounted to 9.8, 8.4, and 8.9%, respectively. As for specialists, it remained virtually unchanged – 7.4, 7.1, and 7.6%, respectively.

A comparison of the shares of employees in each category in the overall structure is in order. Over the years, the share of managers, executives, and employees has changed only slightly – 6.2, 5.6, and 5.8%, respectively. As for professionals, it first decreased and then increased to 6.9, 6.3, and 8.4%,

respectively. As for specialists, it was the same – 6.9, 6.3 and 8.5% respectively.

Thus, the trends in the labour market situation in Khmelnytskyi Oblast for executives, managers and employees, as well as professionals and specialists are different and fully consistent with the above conclusions.

It is important to analyse the trends in the number of vacancies and unemployed for the main groups of people with higher education, namely executives, managers and employees; professionals and specialists in 2021-2023 (Figures 24-25).

As can be seen, the trends for all categories of people with higher education in 2022-2023 (since the beginning of the war) are similar. In addition, the situation has improved in terms of reducing unemployment compared to the pre-war period.

From the analysis of Figure 26 shows that before the war, the salaries of executives, managers and employees and professionals were above the average level, while those of specialists were below the average level.

Since the beginning of the war (the first year), the situation has changed for professionals, their salaries have become significantly higher than the average level. In the second year of the war, the remuneration of only managers, executives and employees became higher than the average level, while professionals and specialists fell below this level.

The obtained results give grounds for conclusions about the expediency of assessing the correspondence between the requirements of employers and the ability to meet them on the part of all categories of people with higher education.

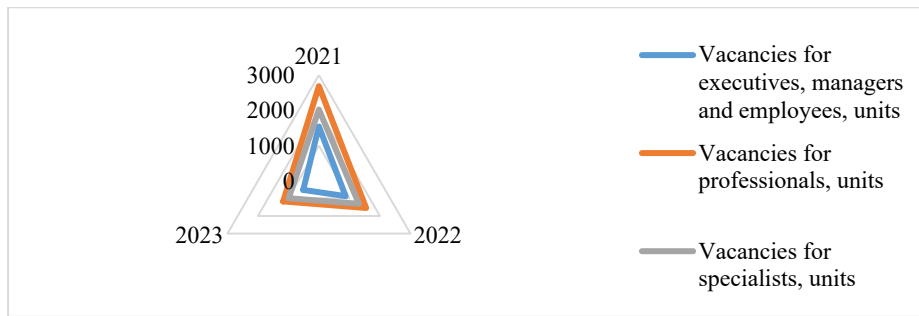


Figure 24. Number of vacancies for the main groups of people with higher education, namely executives, managers and employees; professionals and specialists in 2021-2023

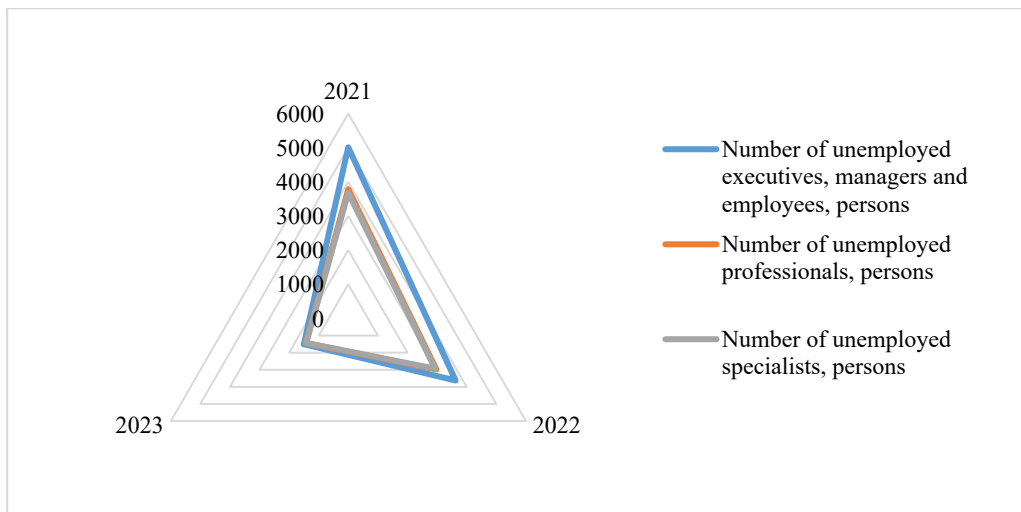


Figure 25. Number of unemployed persons with higher education, namely executives, managers and employees; professionals and specialists in 2021-2023

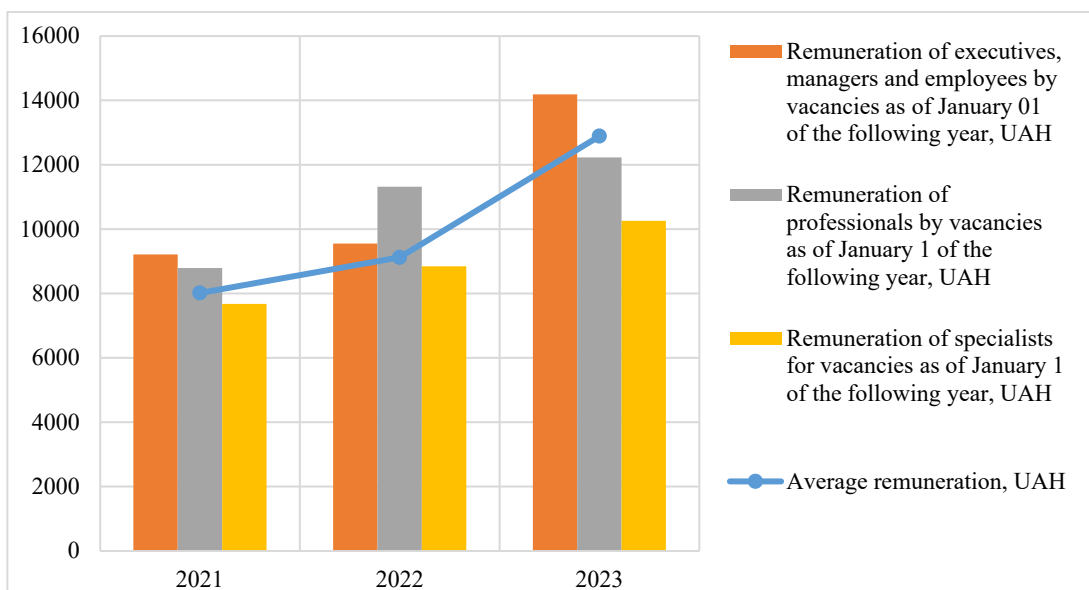


Figure 26. Remuneration of specialists with higher education in 2021-2023



## 5. Conclusions

The analysis shows that the war has had a significant impact on the labour market in general and has certain peculiarities in the context of the country's regions.

The traditional trends of the pre-war period were complemented by those caused by the occupation of the country's territories, namely labour migration, a significant increase in the number of internally displaced persons, mobilisation, etc.

All of this has created additional imbalances in the labour market, which need to be addressed as the war continues.

The country's economy has adapted to the new realities, but the problems of employment and unemployment in the country and its regions remain unresolved. Thus, according to the Info Sapiens research agency, in January 2024, the unemployment rate was 17%. As of January 1, 2024, the total number of unemployed registered with the State Employment Service (SES) was 96.1 thousand people. Among them, more than 40% are people with higher education. The study was dedicated to analysing the situation on the labour market for people with higher education.

The situation was analysed in the context of the following groups: executives, managers and employees; professionals; and specialists. The analysis showed that there are both general trends and differences in the regions under consideration.

An analysis of the overall situation in the labour markets of the surveyed regions showed that the number of vacancies increased in 2023 in both Zaporizhzhia and Khmelnytskyi Oblasts.

In general, the share of unemployed people with higher education was at the level of the national average in both Zaporizhzhia (43%) and Khmelnytskyi Oblasts. In 2021-2023, this share decreased in Zaporizhzhia Oblast, while it increased in Khmelnytskyi Oblast.

As for executives, managers and employees, their share in the overall structure of the unemployed decreased in Zaporizhzhia Oblast during the study period, while in Khmelnytskyi Oblast it increased.

The proportion of unemployed professionals increased slightly in Khmelnytskyi Oblast (at 8-10%), and in Zaporizhzhia Oblast it was 9-10%.

The share of vacancies for executives, managers and employees in the total vacancy structure during the study period was at the level of 5-7% in Zaporizhzhia Oblast and remained virtually unchanged. In Khmelnytskyi Oblast, the share was growing.

The share of vacancies for professionals in Zaporizhzhia Oblast was growing, while in Khmelnytskyi Oblast it was decreasing.

As for specialists, an increase in the share of vacancies in the overall structure was observed in

Zaporizhzhia Oblast, while in Khmelnytskyi Oblast it remained virtually unchanged at around 10%.

The process of employment of executives, managers and employees was characterised by the following indicators: in the first year of the war (2022), their share increased compared to 2021 in Zaporizhzhia Oblast (6-7%), while in Khmelnytskyi Oblast it decreased. In the second year of the war, a decrease in the share of employment was observed in both regions of Ukraine.

In terms of employment of professionals and specialists, the share was 8-11% in Zaporizhzhia Oblast and 6-8% in Khmelnytskyi Oblast.

Comparing the remuneration of the analysed categories of people with higher education revealed the existence of regional peculiarities. For example, the salaries of executives, managers and employees have been increasing over the years in Khmelnytskyi Oblast, while before the war they were below the national average. In Zaporizhzhia Oblast, even before the war, it was higher than the national average.

In 2022, the remuneration of professionals was higher than average in Khmelnytskyi Oblast. In Zaporizhzhia Oblast, it was below average. In 2023, it was above the average level in Zaporizhzhia Oblast and below the average level in Khmelnytskyi Oblast.

Remuneration of specialists was below the average level in both Zaporizhzhia and Khmelnytskyi oblasts.

The main factors affecting the supply and demand for people with higher education in the labour market were as follows.

Since the outbreak of the war, those who had not found a job in line with their requirements but decided to accept such a job when the war started, as they realised there was a real threat of long-term unemployment, have moved from the category of "job seekers" to "employed". This reduced the number of vacancies on the labour market.

Positive effects on the labour market were felt after businesses from the occupied territories or dangerous areas relocated to safe cities. As for Zaporizhzhia Oblast, after the occupation, some businesses relocated to other regions or raions of Zaporizhzhia Oblast (to the non-occupied part of the Oblast).

A significant number of relocated businesses have been located in the western regions, which has increased the likelihood of employment for internally displaced persons and local specialists.

Large-scale forced migration of the working-age population outside the country, mobilisation into the Armed Forces, deepening educational and professional imbalances in the labour market, and uneven recovery in both geographic and sectoral terms have led to a shortage of qualified candidates for employment in regional labour markets.

However, it should be noted that when analysing official statistics, it should be borne in mind that

there is no data on people in the temporarily occupied territories. In addition, some of the unemployed population did not register with employment services.

Thus, Russia's full-scale aggression against Ukraine has had a negative impact on the functioning of the Ukrainian labour market in general and its regional segments in particular. Nevertheless, the impact was not as severe as might have been expected, as evidenced by the situation on the labour market in Zaporizhzhia Oblast, which has been largely unaffected by the conflict. In Khmelnytskyi Oblast,

the war resulted in changes in the supply and demand for specialists with higher education and a reduction in their remuneration. This can be explained both by the relocation of relevant specialists and businesses, which contributed to the improvement of the employment situation in the region. The analysis has shown that there is potential to overcome labour market imbalances in the context of people with higher education. One of these possibilities, in addition to the ones discussed above, is to overcome qualification gaps. This issue requires additional research.

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