

REPORT

State Scientific Institution ‘Institute of Educational Analytics’

On the implementation of the tasks of the block of the WP3 ‘Assessment of the national labour market by analysing the matching of the demand and supply of qualified labour force in the countries of origin compared to the countries of destination and transition countries’, prepared within the framework of the Project 101132435 — SKILLS4JUSTICE Topic: HORIZON-CL2-2023- TRANSFORMATIONS-01-03 ‘SKILL PARTNERSHIPS FOR SUSTAINABLE AND JUST MIGRATION PATTERNS’



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Introduction

The issue of matching the volumes and branches of personnel training in accordance with demand and supply in the international, national, regional and local labour markets, the impact of the scales and flows of labour migrants on them was, is and will be a complex and troublesome issue for a long time to come, that requires significant joint efforts and resources for its solution. For Ukraine, in this context, there were additional difficulties to the consequences of the pandemic, and previous unresolved problems with qualifications, including the lack of profile statistics and forecasts for the demand for qualifications for medium and long-term periods, overproduction by educational institutions of personnel, and often a low level of their training due to a lack of skills and competences and/or of the effective system of their independent evaluation, the Soviet heritage in the field of labour utilization and evaluation, from which the country will not completely get rid of, unjustified branching of the network of professional, professional pre-higher and higher education institutions, strict regulatory policy and resistance of many stakeholders to innovative approaches, etc. They encompass new, incomparably more difficult and cruel challenges due to the military aggression of the neighbouring dictatorial regime. Among such challenges and tests for the area of rational personnel training and effective use is the fact that during the war period, the country's economy and its population lost gross domestic product, labour force, jobs, living standards in the amount of a third to a half of their pre-war level. Such global shifts and upheavals have caused, among other things, problems for the functioning and effectiveness of educational service providers. In this context, conducting research was conditioned by the lack of official statistical data, both due to the impossibility of their collection and aggregation for security reasons,





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and due to the secrecy of many positions. Therefore, the analysis of the state of the labour market and the qualifications market was carried out during the war period on the basis of available sources of information, international, foreign and domestic publications of the relevant areas, calculations of demand and supply in a professional-qualification and regional breakout according to operational data of the State Employment Service using the author's methodology, conducting in-depth sociological survey and interviewing according to standard questionnaires among the country's leading employers, representatives of educational service providers, central and regional authorities, social partners at the national and regional levels, etc. The obtained results of the study will be useful to the participants of the Project Consortium when comparing individual indicators of the labour market and the market of educational services, first of all, with the countries that accepted the largest share of refugees from Ukraine, that is, Germany and Poland. In addition, it will be important for everyone to familiarize themselves with the experience of Ukraine regarding the operational and effective transformation of the employment sphere, the labour market, the market of educational services and qualifications in difficult conditions, which, in addition to military aggression, can also be natural or man-made disasters, etc.





1.1. Analysis of the state of development of the system of qualifications in Ukraine. Review of specialized literature

The process of creation of the national qualifications system in general and the National Qualifications Framework (NQF), in particular, began in 2003, when Ukraine submitted an application to join the Bologna process. In 2004-2005, methodological recommendations for the implementation of the European Credit Transfer and Accumulation System (ECTS) in Ukrainian institutions of higher education (HEIs) were developed as part of the Tempus program. HEIs developed course catalogues where learning outcomes for each discipline were formulated. Since 2009, ECTS has been mandatory for all HEIs (Ministry of Education and Science of Ukraine, 2010).

In 2010-2011, there were extensive discussions on the development of the Ukrainian National Qualifications Framework (NQF), similar to the European Qualifications Framework (EQF), first of all, in terms of covering all levels of education and training, as well as emphasizing lifelong learning. The first edition of the Ukrainian NQF was approved by the government in 2011 (the final edition was adopted in June 2020) (Cabinet of Ministers of Ukraine, 2011), later the plan for its implementation was also approved.

After the Revolution of Dignity, the Association Agreement with the EU was signed in 2014, which strengthened political and economic ties between Ukraine and the European Union. The agreement and its road map — the Association Agenda — commit both parties, among other things, to support the development of a functional NQF based on European practices. The



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Association Agreement entered into force in 2017, and since then the EU has become Ukraine's most important trade partner.

In 2014, the Law of Ukraine on Higher Education (Verkhovna Rada of Ukraine, 2014), was also adopted, which implemented the main features of the European Higher Education Area. The most significant among them are the autonomy of educational institutions, four levels of higher education, the abolition of Soviet degrees (for example, specialist and junior specialist diplomas), implementation of Doctor of Philosophy/Doctor of Arts educational levels, etc. Based on the European Standards and Guidelines (ESG), a new quality assurance system for higher education was put into practice. In particular, in 2015, the National Agency for Higher Education Quality Assurance (Cabinet of Ministers of Ukraine, 2015) was established to carry out external quality assurance with the involvement of representatives of stakeholder groups.

Since 2019, a modern system of external quality assurance of higher education based on ESG has been fully implemented in the country. Today, every standard of higher education must be based on a competency-oriented approach. A new list of specialties has been developed that meets international standards, and previous, particularly outdated, specialties have been integrated there by defining common learning outcomes. In 2013, new state standards of professional (vocational and technical) education and training for specific trade jobs were implemented. However, the transition to the competency-based standards at the level of the whole system took place only in 2021, after the adoption and implementation in practice of the State Standard of Professional (Vocational-Technical) Education (Cabinet of Ministers of Ukraine, 2021) and Methodical Recommendations for the Development of Professional (Vocational-Technical) Education Standards (Ministry of Education and Science of Ukraine, 2021).





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After the adoption of the Law ‘On Education’ (Verkhovna Rada of Ukraine, 2017) in 2017 and the implementation of the ‘New Ukrainian School’ reform, the transition to 12-year education and the implementation of a competency-based approach were initiated, thanks to which the number of subjects was reduced and emphasis was placed on key competencies.

At the end of 2018, the National Qualifications Agency (NQA) was created as an institution responsible, among other things, for the support of the National Qualifications Framework, including for the purpose of harmonizing it with similar international documents, information support of the National Qualifications System, etc. in the country (Cabinet of Ministers of Ukraine, 2018).

The implementation of these and many other reforms has now progressed quite far. The Law of Ukraine ‘On Education’ regulates educational and professional qualifications: educational qualifications confirm the results of formal education, and professional qualifications determine results in specific types of labour/professional activity. Professional qualifications are based on professional standards.

Since 2018, professional standards have been the basis for the development of relevant educational and educational-professional programs based on the competence approach. As of the beginning of 2024, more than 320 modern professional standards have been developed, and this work continues unceasingly (National Qualifications Agency, 2018).

Since 2022, the first qualification centres began to function in the country, which assign professional qualifications, in particular, by confirming the results of non-formal and informal education. By the beginning of 2024, there were almost 50 such independent institutions in the country (National Qualifications Agency, 2022).





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It is important that since 2020, the National Qualifications Framework of Ukraine (NQF) fully (in terms of the number of levels, structure and content of descriptors) began to correspond to the structure and content of the European Qualifications Framework.

Thus, only 13 years after the adoption of the NQF, it has become an effective tool for moving public policies on education, vocational training and lifelong learning towards a national qualifications system based on learning outcomes and competences. But the new changes have not yet been applied to the entire National Qualifications Framework and have not fully reached end users. To achieve results, more stakeholders and institutions should be involved in the reforms. In particular, it is necessary to more actively involve teachers, staff of HEIs, trainers, evaluators, methodologists, quality assurance experts and career guidance consultants, in particular in the State Employment Service. This will require increased capacity, experimentation and leadership, particularly if reforms coincide with greater autonomy for education providers. The NQF register must be filled with education standards and all available professional and educational qualifications in the country. New qualifications can facilitate the transition to modular curricula and new forms of learning that focus on active learning.

Today, there is a special need in the country to develop professional qualifications to support adult education and the education of all those interested outside of formal education. Analysts and policy-makers need to assess the country's use of vocational and educational qualifications in relation to lifelong learning and adult learning opportunities more carefully, including pathways from vocational to educational qualifications and vice versa, as well as the possibility of using partial qualifications to accumulate learning experiences that support horizontal or vertical progression.





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Recognition of the results of non-formal and informal learning in Ukraine remains extremely limited, but this experience is very important. Partial qualifications need to be given more attention by education providers and employers as they can form the basis for lifelong learning and individual learning trajectories, especially in the war and post-war periods. In this sense, there is a need to consider the place of micro-certificates in the NQF and the NQF registry.

Career guidance and counselling and lifelong learning opportunities will need to be integrated with the national qualifications system. The compatibility of the database of the Register of qualifications with other databases in the country (including the Unified State Electronic Database on Education (USEDE) and international databases) is also an important task to create the opportunity for interested parties to take advantage of the new systems in full and efficiently.

It should also be noted that in accordance with the established regulations and procedures, Ukraine prepared a self-certification report on the compliance of the National Qualifications Framework with the criteria and procedures of the Qualifications Framework of the European Higher Education Area (Ministry of Education and Science of Ukraine, 2020). During 2022, a Report on the comparison of the European Qualifications Framework and the domestic National Qualifications Framework was prepared. It was published in 2023. This document was prepared for the European Commission by the participants of the comparative analysis with the support of the European Education Fund (European Commission, 2023b).

Russia's armed aggression against Ukraine has become the largest tragedy on the European continent since World War II. Therefore, the war in Ukraine, and the problems of labour migration in particular, became the focus of scientists and analysts from all over the world.





Analysis of the labour market and system of qualifications of Ukraine in the conditions of war constantly requires a comprehensive approach to solving existing problems, which in particular involves a review of specialized literature on this issue.

Among the publications dedicated to issues of the domestic labour market and the national system of qualifications, it is worth highlighting an analysis that, on the one hand, focuses on the problems of Ukraine, and on the other hand, evaluates the impact of migrants from Ukraine on European countries, as well as outlines directions for improving the EU migration policy.

It should be noted that the lion's share of the results of systematic and large-scale profile studies that were carried out in Ukraine in the pre-war period with the assistance of the World Bank, the European Education Fund (EEF), the International Labour Organization (ILO), UNDP, UNESCO and many others (especially in 2012 - 2021), have lost most of their relevance and significance today. The war brought global and often catastrophic changes, problems and challenges with which the country will have to work for more than one decade. Therefore, in the situation of constant and irreversible events in the field of personnel training and adaptation of the system of qualifications in the war and post-war periods, publications of the results of adapted studies and recommendations become significant. Among the recent achievements of the relevant approach, we should note the information resources posted on the platforms of the EEF, ILO, Institute of Professional Qualifications, National Qualifications Agency (NQA), SSI 'Institute of Educational Analytics', etc. Important for making managerial decisions in the field of regulating the labour market and the National Qualifications System (NQS) are the results of such scientific surveys as, for example, the nationwide sample survey of the socio-economic status of households in Ukraine, conducted in the second half of the current year by specialists of the Institute of



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Demography and Quality of Life Problems of the National Academy of Sciences of Ukraine with the assistance of a wide range of international partners; Reports on the quality of higher education in Ukraine, its compliance with the tasks of sustainable innovative development of society in 2022 and 2023, prepared by the National Agency for Higher Education Quality Assurance (NAQA); Platform ‘Big data for analysis of the labour market in Ukraine’, which functions with the support of the EEF and its partners, etc.

Among the publications dedicated to issues of national and regional labour markets in war conditions, first of all, the post ‘Human resources for regional development in Ukraine: A roadmap for forecasting and determining a regional training request’ (Hrynkevych et al., 2023), should be singled out, which contains an analysis and forecasting of the needs of the Ukrainian labour market, substantiation of the regional request for training, etc. The results of the study provide regional managers with a basis for making decisions about financing training, taking into account the powers of regional authorities and the specifics of analytics and forecasts on the labour market in Ukraine. The editors of BusinessUA in the article ‘Employers will lay off Ukrainians en masse’ (BusinessUA, 2024) also present a short-term forecast of the labour market in Ukraine during the war period, which predicts that the lion's share of enterprises of most types of economic activity are focused on preserving the labour potential, and among those who will carry out layoffs, the representatives of the field of construction and industry will dominate, which is natural in the conditions of constant threats and examples of the destruction of infrastructure and buildings.

The State Employment Service of Ukraine annually, in particular in 2022 and 2023, prepared information on the state of the labour market in Ukraine based on statistical reports of employers (State Employment Service, 2024). In particular, during 2023, employers informed the





employment centres that the most sought out personnel in the sector were representatives of labour professions and technical workers of enterprises of the processing industry, wholesale and retail trade; spheres of education and agriculture.

Analysts also pay considerable attention to the review of legal and institutional changes in the labour market and in the qualifications system of Ukraine, caused by the armed aggression of the Russian Federation. Thus, Susan Meller Nielsen's article (Nielsen, 2023) notes that Russian aggression undermined the Ukrainian labour market, exacerbating already existing problems. There was a significant demand for skilled workers, especially for such labour-intensive professions as locksmiths, electricians, drivers, tractor drivers, salesmen, cooks, janitors, cleaners, accountants, educators and nurses. At the same time, there is competition in the financial and insurance sectors, where 24 specialists apply for one vacancy. The analytical article 'The labor market in Ukraine: Rebuild better' (Giacomo, 2023) concludes, that the reconstruction of Ukraine will require extraordinary measures aimed at eliminating the consequences of the war, as well as structural reforms that will solve existing political and economic problems. This compilation proposes a four-pronged strategy for restructuring the nation's labour market, consisting of (1) remedial education for students deprived of years of education and retraining for adults who have lost their jobs; (2) increasing the participation of women and youth in the labour force; (3) protection of vulnerable groups (veterans, elderly workers and disabled); and (4) promoting the return of ideas, if not people, by keeping migrants who remain abroad in contact with their home country.

The ILO publication 'The impact of the Ukraine crisis on the world of work: Initial assessments' (ILO, 2022) also contains an analysis (initial assessments) of the impact of the



military crisis in Ukraine on the labour market. The ILO estimates that in the current situation in Ukraine, about 30% of employment has been lost compared to the pre-war period. This amounts to 4.8 million lost jobs. Under the scenario of further military escalation, job losses will continue to grow, reaching 7 million people, or 43.5%.

The report of the European Commission (2023a) ‘Ukraine 2023 Report’ describes the general socio-economic state of development of Ukraine, in particular migration policy and the labour market. The article ‘Labour Markets During War: Evidence from Online Job Ads’ (Pham, 2023a) examines the short- and medium-term effects of the ongoing Russian-Ukrainian war on the labour market of Ukrainian workers. It is noted that since February 2022, the demand for soft and analytical skills has increased in Ukraine. The article ‘Rebuilding Ukraine: Principles and Policies’ (Giacomo et al., 2022) contains an analysis of the impact of the war on the Ukrainian labour market and proposals for the concept of its recovery.

A large number of studies and publications are dedicated to the assessment of the impact of forced migration from Ukraine on the labour market of European countries and directions for improving the EU migration policy. According to official statistics, Germany and Poland accepted the most refugees from Ukraine (1.3 and 0.9 million people, respectively), so the topic of the impact of migrants from Ukraine on the labour market of these countries became relevant for scientists. The analytical report ‘War and migration: recent influx of migrants from Ukraine to Poland and possible scenarios for the future’ (Duszczuk and Kaczmarczyk, 2022) was one of the first attempts to estimate the possible future number of forced migrants from Ukraine in Poland. An assessment of various scenarios of the development of events and the influence of various factors on the demographic structure of refugees from Ukraine to Poland was carried out.



The article ‘Refugees from Ukraine on the Polish labour market: an attempt to assess the integration and impact of the influx of refugees in the short-term perspective’ (Gromadzki and Lewandowski, 2023) examines the spatial distribution of Ukrainian refugees, the factors that determine their decision on the place of settlement, their professional situation after arriving in Poland and, finally, the short-term consequences of the migration wave on the Polish labour market. The study covered the period between February and April 2022, that is, the very beginning of the active phase of military aggression and the most difficult period in the reception and social protection of large spontaneous masses of refugees from the war.

The authors of the article ‘Labor markets during war time: Evidence from online job advertisements’ (Pham et al., 2023b) studied changes in labour demand for forced migrants and those who remain in Poland. The analysed data made it possible to compare the difference in labour demand and wages of Ukrainian workers in Poland until February 2022, and Ukrainian refugees after February 2022. The short- and medium-term consequences of the ongoing Russian-Ukrainian war on the employment of Ukrainian workers abroad are considered. The article ‘Economic Migration and the European Labor Market’ (Harris, 2023) draws a number of conclusions regarding the problem of illegal migration. The authors believe that the most obvious way to solve the problems of the current system is to accept the inevitable integration of Europe into the global labour market and move towards free migration and open borders.

In the article by Polish researchers ‘Wojna w Ukrainie zmieniła rynek pracy’ (Kucharczyk, 2023) the problems of Ukrainian refugees in the Polish labour market are outlined.

The article ‘Comparing prewar and forced Ukrainian migrants in Poland: Challenges for the labour market and prospects for integration’ (Kubiciel–Lodzińska, 2024) analyses data from



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the 2022 survey of both forced migrants and pre-war Ukrainian migrants to determine what measures are needed to assist refugees in the economic integration and substantiates the measures necessary to improve the economic integration of Ukrainian migrants in Poland. The article analyses data from the 2022 survey of both forcibly displaced and pre-war Ukrainian migrants. Although 66 percent of respondents had complete higher education, only 30 percent of them spoke Polish. The study recommends strategies for providing language education along with solutions that will enable this group to take a place in the labour market and otherwise support their integration.

The article ‘The contribution of immigration from Ukraine to the economic growth of Poland’ (Strzelecki, 2022) estimates the actual number of migrants, as well as survey data on the characteristics of migrants collected in four Polish cities, to estimate the effective labour supply of Ukrainian immigrants in terms of hours worked adjusted for labour productivity.

The article ‘Refugees from Ukraine in Poland - a year after the Russian aggression. Socio-economic consequences and challenges’ (Duszczyk, 2023) contains an analysis of the situation of Ukrainian refugees living in Poland and related challenges.

In the article ‘Displacement, integration, and return: What remote work possibilities for Ukrainians?’ (Katsiaticas et al., 2023) the authors note that as the war continues, integration becomes more of a challenge for host countries. Given the desire of many Ukrainians to return home, the desire of the Ukrainian government for them to do so, and the temporary nature of most current protection schemes, ‘dual intent’ approaches are being promoted to support both the integration of those who remain outside Ukraine and the reintegration of those who wish to return. Remote work can support such dual intentions. Host countries can support Ukrainian teleworkers



by including telework in migration and integration policies and recognizing the transnational nature of such employment (through, for example, facilitating transfer of benefits and effective double taxation rules and working to reduce isolation). Much uncertainty remains, and remote work can provide valuable flexibility for individual refugees.

The publication ‘Why the West needs Ukraine and its IT companies’ (Schnitzer, 2023) notes that there is a huge shortage of IT specialists in Europe. According to a survey by digital association Bitkom, 137,000 IT jobs could not be filled in 2022 in Germany alone. Therefore, many companies increasingly rely on cooperation with Ukrainian IT providers, either directly with Ukrainian IT companies or indirectly through Ukrainian IT service providers. The Ukrainian IT industry has great potential. A major role in this is played by the Ukrainian education system, which produces many highly qualified specialists. Mathematics education at universities is excellent and many students are interested in working in the IT industry due to the lack of other interesting job prospects. Before the start of the war, the number of IT specialists in Ukraine grew steadily, reaching 285,000 IT specialists. Despite the war and internal difficulties, the IT sector of Ukraine continues to develop and maintain its competitiveness. It is important to support Ukrainian IT specialists and start-ups, as they can not only ensure the economic development of Ukraine, but also be important for the security and economic development of other countries.

In the analytical material of the ILO (ILO, 2022) an initial assessment of the impact of the crisis in Ukraine on the labour market in the world and on the country itself was made. A specific methodology for assessing the labour force in Ukraine, assessing the economic situation in Ukraine, as well as the impact of the crisis on the labour market has been developed. According to ILO estimates, in the current situation of the active phase of the war, 4.8 million jobs have been



lost compared to the pre-war situation, which amounts to a 30% reduction. According to experts' estimates, there are 5.23 million refugees from Ukraine who have moved to neighbouring countries. Approximately 1.2 million of the total number of refugees were working before the start of the aggression. Two-thirds of them have higher education, and 49% were employed in highly skilled professions. Most of the refugees are women with children.

Another ILO analytical report (ILO, 2023) focuses on Ukrainian respondents of working age who intend to settle or have already settled in European countries. Their high economic activity is noted: refugees from Ukraine who intend to stay in the country of relocation and are of working age (18-64 years old), on average, demonstrate a high level of economic activity (66%), which is only slightly lower than the level of activity which they had in Ukraine before the relocation (70%).

The article 'A long-term view of refugee flows from Ukraine: war, danger and migration' (Teke Lloyd and Sirkeci, 2022) examines the departure of migrants from Ukraine in the context of the Russian invasion, using a conflict model of migration.

The article 'The War in Ukraine: Implications for the Management of Refugee Migration and Integration' (Brücker, 2022) examines important aspects of the challenges of the war in Ukraine for the management of refugee migration and their integration in Germany. It noted that the overall scale of refugee migration to Europe is unprecedented since the Second World War, the existing high level of uncertainty about the outcome of the war and the possibility of return migration creates barriers to investment in integration, and the extremely high proportion of women engaged in child care may also worsen chances of integration.



The study ‘The Russian-Ukrainian War: Short-Term Effects of the Energy Crisis on Production and the Labor Market’ (Hutter and Weber, 2022) also examines the impact of the war in Ukraine on German production and the labour market.

The analytical report ‘Refugees from Ukraine in Lithuania and the Lithuanian labour market: a preliminary assessment’ (Deimantas and Şanlıtürk, 2023) is dedicated to the impact of the arrival of refugees from Ukraine on the labour market in Lithuania. The picture of the influx of refugees to Lithuania is described, the first consequences for the Lithuanian labour market are analysed using official data on refugees from Ukraine in Lithuania, and what the future may bring for the Lithuanian labour market.

The analytical report ‘What we know about the skills and first results in the labour market of refugees from Ukraine’ (OECD, 2023) contains an analysis of the behaviour of Ukrainian refugees in the labour market of host countries, in particular, it is noted that the integration of Ukrainian refugees into the labour market occurred faster compared to other groups of refugees. However, despite a relatively quick entry to the labour market, the current employment pattern of newly arrived migrants from Ukraine at least partially reflects the networks available to them, rather than their actual skill profiles. Because much of the first employment was concentrated in low-skilled jobs, skills mismatches in this environment are widespread. Part-time employment is also more likely for Ukrainian refugees due to childcare responsibilities. Given the high formal level of qualifications, the issues of skills transfer and foreign assessment of qualifications are particularly relevant. Several countries have improved their recognition systems, including through better outreach and awareness. Countries have also facilitated access to regulated professions by



simplifying recognition procedures or removing specific professional requirements, particularly in the health sector.

The analytical report ‘Impact of the Inflow of Ukrainian Refugees on the Labor Force in the Eurozone’ (Botelho, 2022) contains predictions of the long-term impact of Ukrainian refugees on the filling of jobs. Under all assumptions, closed calculations indicate an average increase in the Eurozone labour force in the medium term by 0.2%-0.8%. This corresponds to an increase in the labour force in the Eurozone by 0.3-1.3 million people due to the refugee crisis in Ukraine. The analytical report ‘Potential contribution of Ukrainian refugees to the formation of the workforce in European host countries’ (OECD, 2022), examines the distribution of Ukrainian refugees in European countries and their demographic characteristics.

Thus, a brief review of domestic and foreign specialized literature gives grounds for making the following general conclusions:

- domestic and foreign scientists and analysts in general pay a lot of attention to the study of the development of the Ukrainian and European labour markets in the conditions of military aggression and the problems of employment for refugees from the war;
- along with this, the lack of reliable practice of statistical observations of the Ukrainian labour market, the volumes and directions of domestic labour migrants even in the pre-war period, do not allow to carry out operational and objective studies of these issues in the conditions of martial law, when the collection of most data and their publication became practically rolled up;
- in general, the National Qualifications System (NQS) of the country under the current conditions has preserved its institutional, legislative and regulatory and material base, and



in certain directions it is being quite actively formed or reformed (development of professional standards, creation of qualification centres, simplification of assessment procedures, recognition and assignment of professional qualifications, etc.);

- the NQS suffered the greatest losses from the war in the field of on-the-job training, where about a third of large enterprises partially or completely closed down their activities, were relocated or repurposed, which led to a significant reduction in the field of on-the-job training;

- institutions of the formal education sector also lost their potential (due to the outflow of potential applicants and staff). So, for example, in 2024 (08/01/2024), the number of people willing to get higher education in Ukraine decreased by almost a third compared to the previous post-war year;

- one of the reasons for the decline in the quantitative and qualitative indicators of the activity of educational institutions, in particular, in relation to the training of personnel for the labour market according to professional qualifications, is the loss of a part of them of the material and technical base, contingent and pedagogical/scientific-pedagogical workers due to the war. Thus, as of August 1, 2024, 94 colleges, 29 universities (taking into account the first wave of relocation starting from mid-2014), 2 institutes of postgraduate pedagogical education and 64 of their separate structural divisions were relocated due to military aggression. During the period of the active war phase, 365 educational institutions were destroyed and 3428 were damaged, of which 10 of the destroyed were professional (vocational and technical) institutions, 7 were vocational pre-higher education institutions, 1 was higher education institution, and among the damaged were 161 professional (professional-technical), 162 – institutions of professional pre-higher education and 112 institutions of higher education (Ministry of Education and Science of Ukraine, 2024)





2. The general characteristics of the socio-economic development of the country, in particular, under the martial law

2.1. Demography. Refugees and displaced persons during the war period

Negative demographic changes in the population of Ukraine were outlined as early as the early 1990s of the 20th century. According to the State Statistics Service of Ukraine, the population of Ukraine decreased by more than 10 million from 51,838.5 in 1990 to 41,588.4 in 2021. The large-scale military aggression of the Russian Federation against Ukraine only deepened the demographic crisis. The real losses of the population of Ukraine have not yet been calculated, but they are colossal and may reach a quarter compared to 2021 (with the non-return of more than half of the refugees and occupied territories).

It should also be noted that the outflow of qualified labour abroad has also been going on since the beginning of the 1990s (the collapse of the USSR). This indicator increased significantly after 2014 (the beginning of the hybrid war with the Russian Federation) and with the introduction of a visa-free regime with EU countries in 2017. With the beginning of large-scale military operations on February 24, 2022, the mass migration of the population began. Thus, according to the International Organization for Migration, 3.7 million Ukrainians are internally displaced, and 6.5 million people are abroad, mainly as refugees. According to the European Statistical Service, as of January 2024, the largest number of Ukrainian refugees in Europe are in Germany (30.0%) and Poland (22.0%) (EuroStat. 2024).





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At the start of a full-scale war in 2022, there has been a rapid increase in unemployment due to the physical destruction and large-scale displacement of the population from the territories where active hostilities are taking place. In 2022, Ukraine's economy was practically paralyzed. However, in 2023, a revival of economic activity was already observed. Along with the activation of business, unemployment in Ukraine acquired structural features, increasing disparities in the labour market. That is, the qualifications offered by employees largely do not meet the needs of employers. For example, if the workers of metallurgical plants moved to the west of Ukraine, they cannot find a job there, because there is simply no such production there.

The war had a significant impact on the domestic labour market, where significant fluctuations and changes took place. Challenges such as the uncertainty of war, the narrowing of employment, structural and qualitative changes, forced migration, and large-scale mobilization movements deepen employment problems.

Due to Russia's invasion of Ukraine, the country's economy suffered catastrophic losses. The Ministry of Economy of Ukraine estimated the drop in GDP by 29.2% only in 2022. Such sectors of the economy as metallurgy, agriculture, energy, etc. suffered great losses. Along with this, starting from 2023, the economy of Ukraine began to readjust and adapt to the conditions of the war. According to the results of 2023, GDP growth was recorded at the level of 5%. GDP growth is expected in 2024 as well. Although the economy is gradually adapting to new operating conditions, unemployment in Ukraine remains high. As of January 1, 2024, the total number of unemployed persons registered with the State Employment Service (SES) was 96,100 (more than 40% of them have a higher education), vacancies were 40,200 (State Employment Service, n.d.).



As the imbalance that has formed in the labour market deepens, the problem of the use of labour force becomes more and more urgent. Thus, an important aspect of the integration of IDPs is to ensure access to retraining and professional development programs. This will allow IDPs to adapt their skills and abilities to the needs of the labour market and find new employment opportunities. The integration of IDPs into work force will contribute to the development of the regions where they have moved. This requires investment in local infrastructure and the creation of new jobs, which will also have a positive impact on the economy of these regions as a whole.

Ukraine, like many other countries, faces challenges in the field of skills development and qualifications system, as well as the matching between supply and demand for skills in the labour market. This can be a challenge due to rapid changes in the economy, technological innovation and other factors. Currently, the Ukrainian economy is increasingly taking on the characteristics of a wartime economy, during which there are qualitative changes, reflected by structural shifts, and quantitative changes, which indicate the adjustment of business and the transition to the phase of restorative growth. It also requires a flexible and quick response of educational providers to provide applicants with tested professional qualifications, transition to retraining of the adult population based on partial qualifications and micro-qualifications, etc.

2.2. Labour migration

The aggressor's military invasion of Ukraine had a significant impact on the processes of labour migration both within the country and beyond. In the period of 2022-2024, the number of Ukrainians who went abroad increased sharply, in particular to EU countries (Poland, Germany,

the Czech Republic, Italy, Spain, etc.). A certain share of citizens emigrated to the aggressor country for various reasons. Many EU countries adopted special programs to support Ukrainian refugees, which facilitated access to the labour market.

The majority of Ukrainian migrant workers are employed in sectors such as construction, agriculture, services, health care, and elderly care. In many countries, Ukrainians were allowed to work without the need to obtain additional permits, which significantly increased their employment rate.

In general, Ukrainians who received the status of temporary protection in the EU usually have free access to the labour market of most countries. However, in fact, each state sets its own requirements for future employees. According to a study by the Institute for Research on the Labour Market and Professions in Nuremberg, only 27.0% of refugees from Ukraine had a job in Germany as of the beginning of 2024. In terms of the level of employment of Ukrainian refugees, Lithuania is currently leading with an indicator of 57.0%, Denmark (53.0%) and Poland (48.0%). These countries show high employment rates due to the high demand for low-skilled labour, where language and other requirements are less stringent. Finland, Norway, Romania and Spain have the lowest rates of employment of Ukrainian refugees — less than 20.0%. However, as noted by experts, this may be due to a more difficult economic situation and a high level of unemployment in these countries, which complicates the integration of newcomers into the labour market (Visit Ukraine Today, n.d.).

Analysts also note that the inflow of labour from Ukraine to the EU countries is a positive thing and a means of easing the tension observed in the labour market of the Eurozone countries. However, the high level of uncertainty surrounding the future course of the war complicates a more



accurate quantitative and qualitative assessment and the final impact of labour migrants from Ukraine on the EU labour market.

Internal migration acquired global volumes and directions during the war period. The highest concentration of IDPs is characteristic of Dnipropetrovsk and Kyiv regions and the city of Kyiv. The largest number of refugees from the war left Kharkiv, Donetsk, and Zaporizhzhia regions, and about 30.0% of IDPs changed their place of residence within their native regions.

According to the International Organization for Migration, about 40.0% of IDPs of working age are currently employed or have their own business, and 14.0% are unemployed and actively looking for work. The highest level of employment among IDPs is in the city of Kyiv (58.0%), and the lowest is in Chernivtsi (24.0%) and Zhytomyr regions (27.0%).

The main challenges in the employment of IDPs are: mismatch of skills to the needs of local employers (most IDPs have moved from eastern, industrially developed regions to territories where there are mostly no industries that would meet their qualifications and experience); demotivating factors in job search (possibility of receiving social benefits and free housing for a long time); prejudiced attitude of employers (job seekers sometimes face the reluctance of employers to hire IDPs, in particular due to fear of quick dismissal in connection with repeated relocation or return to their native region); lack of necessary documents (while fleeing shelling or occupation, not all IDPs were able to collect documents) and other problems that need to be solved by the state.

Today, state policy measures during the period of military aggression are aimed at creating flexibility in the labour sphere and ensuring employment, which was manifested in gradual positive changes. Thus, in 2023, the compensation mechanism for employers for hiring unemployed IDPs



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and creating new jobs for them in small and micro-enterprises was improved. During the year, 5,000 unemployed people were employed under the compensation program. By the end of 2023, employers were compensated for the labour costs of employing 14,000 IDPs. As part of the 'eRobota' project, a grant program was introduced in April 2023 for the creation or development of their own business for participants in hostilities, persons with disabilities as a result of the war, and their family members. In 2023, positive decisions were made regarding the grants to 226 recipients, which provide for the creation of 463 new jobs, etc.

2.3. Education and training

Educational institutions play a key role in the acquisition of relevant skills by future employees. The level of training in vocational education and training and higher education institutions, matching the skills acquired by graduates with the requirements of the labour market, are of great importance for ensuring the growth of employment and economic development in general. In modern conditions, the Ukrainian education system is undergoing significant changes, which are reflected in the structure of the offer of graduates by the levels of education and qualifications. The analysis of trends in the development of education in Ukraine in recent years makes it possible to single out certain trends:

Popularity of higher education. Ukraine continues to demonstrate a high level of interest in higher education, resulting in a significant number of graduates with bachelor's and master's degrees. This is explained both by the traditionally high social significance of higher education and by the increase in the number of educational programs offered by universities.





Stable demand for professional (vocational and technical) education. This is due to the need of the labour market for representatives of working professions, especially in such branches of the economy as agriculture, construction and industry.

The growth and development of distance and online education. Distance and online learning have become an integral part of the educational process in Ukraine due to the development of technology and events such as the COVID-19 pandemic and martial law. This allows pupils/students from different regions to get access to quality education even now. The use of digital educational platforms, such as Moodle, Google Classroom, and other tools, contributes to the flexibility of teaching and increasing its effectiveness.

Reorientation to STEM education. A significant shortage of specialists in engineering specialties led to an increase in attention to STEM education (science, technology, engineering, mathematics). Graduates of these programs are in high demand in the labour market due to the growing role of technology in most sectors of the economy.

Decrease in the number of graduates of humanitarian specialties. Compared to previous years, the number of graduates from humanitarian specialties is decreasing. This is due to the fact that the labour market is less in need of specialists in this field, which encourages applicants to choose access to more popular types of professional activity.

Carrier guidance and program flexibility. The modern labour market requires flexible skills, the ability to quickly adapt to new conditions and quickly learn new professions. This prompts educational institutions to adapt training/educational programs and introduce courses that are aimed at developing critical thinking, creativity and digital literacy. More and more educational



institutions are introducing entrepreneurship courses and programs to encourage students to create their own startups and projects.

Strengthening cooperation with employers. Both HEIs and VET institutions cooperate more actively with companies to provide apprentices/students with internships, industrial practice and real work experience. This contributes to increasing the level of readiness of graduates to enter the labour market. Employers are increasingly involved in the development of training programs, which allows creating courses that exactly meet the real needs of the labour market.

Strengthening academic mobility and deepening international cooperation. The number of international exchange programs is increasing in Ukrainian higher education institutions, which allows students to gain study experience abroad and increase their competitiveness in the international labour market. An important aspect is the increase in the number of foreign students in Ukraine and the international partnership between Ukrainian and foreign universities.

Compliance of educational programs with the requirements of the labour market in Ukraine is a complex issue that depends on many factors. In general, the situation can be characterized by certain positive changes, which is confirmed by the renewal of educational/training programs, increased cooperation with business, the growing role of IT and digital technologies, integration into the European education area, etc. Among the negative trends is the presence of outdated educational programs that do not always meet the modern requirements of the labour market; lack of practical skills; regional imbalance and others. In general, although there are positive changes in the adaptation of educational programs to the requirements of the labour market in Ukraine, there is considerable room for improvement.



The key strategies of vocational education and training and higher education institutions related to meeting skills needs in labour markets include the following.

1. Strategy of adaptation of educational programs to the needs of the labour market.

Adaptation of educational programs of HEIs and VET institutions to the needs of the labour market is an important element of ensuring the quality of education and competitiveness of graduates.

The strategy of adaptation of educational programs includes the following key elements: 1) Analysis of the labour market, which includes monitoring and analysis of labour market needs; regular collection of data on employers' requirements; study of trends in the development of industries and forecasting of changes in the labour market; establishing partnerships with employers to obtain up-to-date information on requirements for specialists; the use of analytical tools, in particular the use of the Big Data Platform to analyse the demand for specific professions, etc.; 2) Cooperation with employers and other stakeholders, which includes the formation of advisory councils from representatives of business, industry, social organizations, and state institutions for regular review of educational programs; organization of internships and practices at enterprises; joint development of educational programs and courses with employers; 3) Adaptation of educational programs, which involves updating curricula; making changes to curricula taking into account modern requirements for professional competencies; development of new disciplines and courses that meet the demands of the labour market; use of modern educational technologies; introduction of online courses, modular training, simulations and interactive training methods; involvement of practitioners to conduct lectures and master classes; continuous professional development of teachers; organization of professional development courses for



teachers with the aim of mastering new technologies and teaching methods; exchange of practices between educational institutions; 4) Implementation of the education quality system, which provides for regular accreditation of educational programs; implementation of the student competency certification system; conducting surveys of graduates and employers regarding the quality of specialist training; using feedback to improve educational programs; 5) Flexibility of educational programs, which includes the introduction of the modular principle of building programs, which allows students to choose individual modules according to their professional interests; increasing the number of optional subjects; development of individual study plans for students; supporting students in forming their own educational trajectories.

2. Strategy for stimulating dual education

The dual education system combines theoretical learning with practical training at the workplace. This approach allows pupils/students to gain real work experience, which increases their competitiveness in the labour market.

The strategy for stimulating dual education includes the following key elements: 1) Partnership with business, in particular, the implementation of practical modules developed together with employers; involvement of pupils/students in real enterprise projects; 2) Close cooperation and support from the state and local self-government bodies, in particular institutional and legal support; initiating appropriate changes to the legislation to promote the development of dual education; provision of tax benefits to enterprises participating in dual programs; introduction of grants and subsidies for HEIs, VET institutions, and enterprises implementing dual programs; 3) Development of educational programs and curricula in accordance with the needs of the development of dual education; cooperation with employers to update training programs in



accordance with modern requirements of the labour market; involvement of specialized managers, professionals and other company employees in teaching; implementation of a modular training system that allows combining theoretical and practical training; 4) Improving the qualifications of teachers, in particular through the organization of internships for teachers at partner enterprises; conducting trainings and seminars on the latest technologies and teaching methods; provision of additional incentives for teachers who actively implement elements of dual education; recognition and awarding of best practices; 5) Informational and promotional campaign, which involves conducting informational campaigns about the advantages of dual education among pupils, students, parents and employers; use of social networks, media and other communication channels; organization of educational forums, exhibitions and career days to demonstrate successful examples of dual education; 6) Monitoring and evaluation of effectiveness, which involves regular monitoring and evaluation of the effectiveness of dual programs; using feedback from students and employers to adjust programs; conducting labour market research to determine the most in-demand professions and qualifications, etc.

3. Strategy for the development of life-long education and professional development.

Life-long education and professional development programs help employees adapt to changing labour market conditions and technological innovations. Developing a strategy for the development of life-long education and professional development is important for adapting to rapid changes in the modern world. Such a strategy should cover various aspects: from legislative initiatives and financial support to the development of infrastructure and the implementation of innovative teaching methods. Below are the key directions of the strategy for the development of life-long education and professional development.



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The strategy for the development of life-long education and professional development includes the following key elements: 1) Development of infrastructure and technologies, which involves investing in the creation of modern educational centres and laboratories; providing access to the Internet and digital resources in remote areas; implementation of online platforms and mobile applications for distance learning; the use of artificial intelligence and big data to personalize training programs; 2) Professional development of teachers, which involves constant improvement of teachers' qualifications; organization of trainings and seminars for teachers on the latest teaching methods and technologies; internship of teachers in leading companies and educational institutions; introduction of a system of incentives and awards for teachers who achieve high results in education; supporting the professional development of teachers through participation in conferences and publication of scientific works; 3) Awareness raising and popularization, which primarily consists of conducting information campaigns to raise awareness of the importance of life-long education and professional development; involvement of business and public organizations in the promotion of life-long education; conducting joint events, conferences and forums for sharing best practices; cooperation with international organizations and educational institutions to exchange best practices; participation in international projects and programs of continuous education.

4. Strategy for supporting entrepreneurship and innovation.

The strategy for supporting entrepreneurship and innovation in the HEIs and VET institutions should be based on several key components. These components include the development of infrastructure, education, financing, specialized partnerships and policies, in particular: the creation of business incubators and accelerators to support pupils/students and





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graduates seeking to develop their entrepreneurial ideas; opening of specialized laboratories and co-working spaces where students can work on their projects and startups; providing access to modern technological equipment and software; development and implementation of courses and programs on entrepreneurship and innovation; organization of regular workshops, seminars and trainings on entrepreneurship, startup management, financial planning, etc.; inviting successful entrepreneurs and specialists to mentor students and provide them with practical advice; organization of meetings with potential investors, venture capitalists and business angels; creation of special funds for investing in student projects in the early stages; establishment of partnership relations with business to provide internships, practice and implementation of joint projects; participation in international programs and competitions to exchange best practices and attract foreign investments; support of student associations and entrepreneurs' clubs to form communities and share experiences, etc.

2.4. On-the-job Training

In Ukraine, on-the-job training of personnel takes place primarily considering the needs of business entities. After all, today educational institutions (primarily VET institutions) do not meet the needs of employers regarding the training of personnel with the appropriate competencies. In particular, the Ministry of Social Policy in the letter dated May 25, 2017 No. 421/0/126-17 noted that the issue of organizing professional training of employees is decided by employers taking into account the needs of their own economic or other activities in accordance with the requirements of the law. In particular, approaches to the on-the-job training of personnel are regulated by a number





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of legal acts, including the joint order of the Ministry of Social Affairs and Labour and the Ministry of Education and Culture of March 26, 2001 No. 127/151 ‘On the approval of the Regulation on vocational on-the-job training of workers’ and the resolution of the CMU of March 24, 2023 No. 264 ‘On approval of the Procedure for professional training, retraining and advanced training of the registered unemployed’. This Procedure defines the mechanism of organization of professional training, retraining and advanced training of registered unemployed by regional/interregional employment centres, branches of regional/interregional employment centres, as well as regional, Kyiv city, city, district, city-district employment centres (before their termination).

The Law of Ukraine ‘On Professional Development of Employees’ (Verkhovna Rada of Ukraine, 2012) defines professional training of employees. Among other things, it can be carried out on a contractual basis in professional (vocational and technical) educational institutions, enterprises, institutions or organizations and directly at the employer.

During the war, most employers are forced to update their personnel or ‘grow’ qualified high-quality employees in their workforce, in particular to replace those who migrated or were mobilized.

Also, during this difficult period, there was a change in training priorities (the need for re-profiling employees and improving their qualifications). Many enterprises have been forced to adapt their activities to new conditions, which requires the re-profiling of employees. For example, some enterprises that previously engaged in manufacturing civilian products have switched to the production of military or strategically important products, which requires new skills and knowledge from employees. In the conditions of war, the need to improve the qualifications of workers has



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increased, especially in areas that are critical to national security, such as defence industry, logistics, IT, and energy.

It should be noted that for enterprises that continue to work under current conditions, it has become important to organize training directly at workplaces. This makes it possible to quickly adapt new employees and improve the qualifications of existing personnel in conditions of limited access to traditional educational resources. There is rapid adaptation of business entities in Ukraine to the new conditions of martial law, in particular: implementation of short-term training programs (due to the need for rapid training of new personnel, many enterprises focused on the implementation of short-term training programs focused on specific practical skills); development of innovative approaches (some enterprises implement innovative approaches to training, using simulators, training aids and virtual reality to train employees in conditions as close as possible to real ones).

In the conditions of the war in Ukraine, many enterprises faced the need to adapt their production processes and train personnel for new realities. On-the-job training has become an important element in maintaining business efficiency, as well as ensuring worker safety. Enterprises engaged in the production of weapons, military equipment and other defence materials are actively training their employees in new skills necessary to adapt to military conditions. For example, Ukroboronprom and other similar structures constantly conduct training on security issues, working with new technologies, etc.

Companies that ensure the functioning of energy, transport and communication infrastructure are also actively engaged in training their employees. For example, Ukrenergo,





Ukrzaliznytsia and other enterprises adapt their employees to work in conditions of threat or after infrastructure damage.

In the conditions of war, agriculture remains an important industry for providing the country with food. Enterprises of the agrarian sector, such as Myronivskyi Hliboproduct and other agricultural holdings, organize training of employees, in particular regarding safety, management of modern equipment, as well as adaptation of production processes in conditions of war.

The IT sector remains one of the most resilient in the face of war, and many companies provide training for workers in new technologies, cyber security and crisis project management. EPAM, SoftServe, GlobalLogic and others are actively investing in the development of personnel, ensuring continuous operation in the conditions of war.

The on-the-job training of personnel takes place primarily through social partnership, which is a system of relations between employers, their organizations and associations and employees, trade union organizations and their associations and executive bodies, which are formed in the process of cooperation, search for compromises and preparation by them agreed decisions on issues of social and labour relations (Romanova and Melnyk, 2017).

Social partners such as the government, employers, and trade unions play a key role in ensuring the sustainable development of the labour market and improving working conditions. Therefore, it can be argued that the implementation of the strategy of social partners regarding the formation of skills allows solving the issue of matching the supply and demand for skills in the labour market and the qualifications market. Among these strategies, it is worth highlighting:

1. Government strategies.



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Legislative initiatives (establishment of the minimum wage, regulation of working hours and working conditions, as well as ensuring the rights of workers through labour legislation).

Social protection (development of the social protection system, including pensions, health insurance and unemployment benefits).

Regional support programs (encouragement of investments in less developed regions, creation of new jobs and development of infrastructure).

Decentralization (devolution of powers to the local level for better management of resources and solving local problems).

Government strategies that have the greatest impact on skills formation and the matching of skills supply and demand include education reforms and investment in training (investment in education and vocational training, adaptation of education/training programs to the needs of the labour market, and support for retraining programs for adults).

Government investment in vocational education and training to train skilled workers in line with market needs, for example, the creation of dual education programs where theoretical learning is combined with practical work at enterprises, helps to improve the level of professional skills of graduates.

Development and implementation of educational programs that meet the modern requirements of the labour market, including courses in IT, engineering and other in-demand specialties.

The government provides funding for retraining programs, especially for adult workers who want to change careers or upgrade their skills. This helps to adapt the workforce to changes in the labour market and reduce unemployment.



Conducting information campaigns to increase public awareness of training and retraining opportunities, which contributes to greater employee involvement in these programs.

2. Strategies of employers.

Improving the quality of workplaces meaning investments in infrastructure and working conditions (improving the working environment, ensuring occupational safety and developing corporate social responsibility).

Improving the qualifications of employees (organization of trainings and professional development programs for employees, as well as cooperation with educational institutions for the training of future specialists). Employers organize internal training and development programs for their employees, which allows them to improve their skills and meet the requirements of modern production. This includes both technical training and soft skills development. Partnering with universities and vocational schools to develop programs that meet the needs of specific industries helps ensure a skilled workforce ready for work immediately after graduation.

Innovation, automation and digitalization (implementation of modern technologies to increase productivity and competitiveness). The introduction of new technologies and automation of production processes requires new skills. Employers invest resources in training employees to work with new technologies, which helps to maintain competitiveness in the market.

Flexible forms of employment (introduction of flexible work schedules, remote work and other forms of employment that take into account the needs of employees).

3. Trade union strategies.

Protection of workers' rights through collective agreements, negotiations with employers to improve working conditions, raise wages and provide social guarantees. Unions engage in



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collective bargaining with employers and the government regarding working conditions, wages and career development opportunities. This helps to create conditions under which employees can improve their skills and adapt to changes in the labour market.

Provision of legal support for employees in case of violation of their rights. Providing legal support to employees in matters of education and professional development, including protection of rights to access training programs and retraining.

Professional development, which primarily consists of the organization and implementation of educational programs, seminars and trainings for improving the qualifications of employees. In particular, trade unions organize and support educational programs, seminars and trainings for their members, helping them improve their qualifications and acquire new skills.

Conducting information campaigns regarding the rights of employees and opportunities for their development. Trade unions also conduct information campaigns to raise employees' awareness of their rights and opportunities for professional development, which promotes more active participation in training and retraining programs.

Ensuring effective interaction of social partners is an important issue. Effective interaction between the government, employers and trade unions is the key to sustainable labour market development and improved working conditions. Cooperation may include regular meetings and negotiations between the government, employers and trade unions to discuss important issues and make joint decisions; joint programs and projects aimed at solving specific problems of the labour market, such as personnel retraining, infrastructure development and social protection support, etc. The successful implementation of these strategies will help ensure the match between supply and





demand in the labour market, improve the quality of employment and contribute to the sustainable economic development of Ukraine.

2.5. New trends under the martial law

In recent years, the Ukrainian labour market has undergone significant transformations under the influence of globalization, technological progress, and socio-economic changes. The COVID-19 pandemic and a full-scale Russian invasion in 2022 have only exacerbated these trends, causing massive economic and social upheavals and challenges.

According to the results of a general analysis of demographic, statistical and analytical information, the following main problems relevant to the labour market of Ukraine today were identified: mass migration of labour resources abroad and within the state in connection with the war, which causes a ‘brain drain’ and Ukraine's loss of competitive population; closure and relocation of business from the territories of the eastern and southern parts of Ukraine to relatively safe territories of Ukraine (central and western regions); reduction of jobs and salaries in the labour market leads to a high level of unemployment in Ukraine and retraining of the working population; low level of supply relative to demand for labour and technical specialties (lack of prestige of technical specialties); the lack of safety of pupils/students while studying in educational institutions during hostilities leads to the transformation of educational formats, a decrease in the quality of education, and the choice of foreign educational institutions by applicants instead of Ukrainian ones; adaptation of military veterans, as well as psychological support of the population in war conditions, require special attention; the difficulty of finding and obtaining a job in the absence of



professional expertise; reduction of programs for acquiring the first practical experience of professional activities of young people; the need for employers to actively support the mental health of their employees.

The conducted analysis demonstrated changes in the structure of employment by qualification and education levels in Ukraine, changes in the number of unemployed. In particular, as of June 1, 2022, on average across Ukraine, 12 unemployed people applied for one job vacancy (as of June 1, 2021 – 5 people).

At the same time, many unemployed went abroad, removing themselves from the register of employment centres, some signed contracts with the Armed Forces of Ukraine. Complicating the situation are internally displaced persons, whose statistics change daily.

The labour market in Ukraine is undergoing significant changes under the influence of military operations. Military recruiting has become an absolutely new mass phenomenon for Ukraine. Work.ua noted an increase in activity: in April 2024, 599 units had at least one vacancy on work.ua/zsu/, which is 18% more than in March of this year. The number of job offers has increased by almost a quarter and amounts to 4,170 vacancies. As in March, in April, the most vacancies from the Defence Forces were in the categories of protection/security, transport/auto business, telecommunications and communications, medicine/pharmaceuticals, working professions, primarily in industry (Interfax-Ukraine, 2024).

Also, today in Ukraine, along with an excess supply of labour, there is also an unsatisfied demand for vacant jobs, one of the reasons for which is the inconsistency of the proposed requirements with the professions and skill level actually available to employees. Changes in the structure of labour demand significantly affect the requirements for the level of qualifications and



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education of employees in various sectors of the economy. On the one hand, the demand for highly qualified personnel is growing, especially in such fields as information technology, engineering, medicine and biotechnology. These fields require specialists with deep theoretical knowledge and practical skills, able to innovate and quickly adapt to new conditions. On the other hand, in conditions of economic instability, the need for workers of the middle level of qualification in construction, agriculture, service and telecommunications is growing. The migration of the population, especially the departure of highly qualified workers abroad, also has a significant impact on the labour market, which creates a shortage of personnel in certain industries. At the same time, internal migration leads to oversaturation of the labour market in relatively safe regions, which requires new approaches to employment and vocational training.

Thus, during 2020-2023, the number of vacancies registered in the State Employment Service decreased by 60.3% (from 829,653 units in 2020 to 329,436 units in 2023). The biggest decrease was observed in such branches and types of economic activity as: "Agriculture, forestry and fisheries" (77.7%), "Construction" (76.3%), "Information and telecommunications" (71.6%). In general, the number of vacancies in these three segments decreased by more than 130,000 units.

In absolute terms, the number of vacancies in the following types of economic activity has significantly decreased: "Agriculture, forestry and fishing" (by almost 103 thousand units), "Manufacturing industry" (by 85 thousand units), "Wholesale and retail trade; repair of motor vehicles and motorcycles" (almost 75 thousand units). In the "Manufacturing industry" there is a significant reduction in the food industry (by 21,638 vacancies), the industry for the production of other non-metallic mineral products (by 8,790 vacancies) and in the wood processing industry (by 6,245 vacancies).



Global changes in the wartime period took place in the professional breakdown of labour demand. On average, for 2020-2023, the structure of the number of job vacancies in terms of professions changed by 35.5%. Thus, "Workers in the maintenance, operation and monitoring of the operation of technological equipment, assembly of equipment and machines" lost their specific weight by 21.8%, "Qualified workers in agriculture and forestry, fish farming and fishing" by 12.6%, "Skilled workers with tools" by 7.2%, etc.

Under the current conditions, internal labour migration also has a significant impact on the labour market. Relocation of businesses and population migration to safer regions of Ukraine led to an uneven distribution of jobs and changes in the demand for qualifications in different regions. For example, the number of vacancies in the professional group "Workers for maintenance, operation and monitoring of the work of technological equipment, assembly of equipment and machines" in 2023 was 18.4% of the total number of vacancies, which is a decrease compared to the peak value of 24.9% in in 2022. At the same time, the professional group "Qualified workers of agriculture and forestry, fishery and fishing" shows a consistently low specific weight of the number of vacancies, which is 2.9% on average.

Summarizing what has been said, it can be stated that the market of qualifications in Ukraine during the martial law is undergoing significant changes, which are reflected in new development trends. The war affected the structure of the labour market, the demand for certain occupations and skills, and approaches to training and retraining. The main trends include:

1. Growing demand for specific qualifications inherent in the martial law economy. First of all, these are professions in the field of defence, weapons production, new types of security, military



medicine (military, military technology engineers, cyber security specialists, surgeons, traumatologists, psychological care specialists, nurses, etc.).

2. Reorientation of the economy and the emergence/development of new branches/types of economic activity. It can be argued that the Ukrainian industry is rapidly reorienting itself to the production of defence products, which creates new opportunities for workers with technical qualifications, designers and engineers, specialized scientists. The demand for specialists of a new type has increased in agriculture due to the need to provide the country with food in conditions of war. This applies to both agronomists, bioengineers, and engineers of the latest agricultural technologies.

3. Increasing attention to retraining and advanced training of the adult population. Thus, due to the mass displacement of IDPs, many of them were forced to change professions or adapt their skills to new conditions. This also affects, first of all, war veterans.

4. Deepening European integration and international cooperation. Ukraine receives aid from international partners, which contributes to the implementation of new standards and practices in the training of workers in key economic activities, such as the military sphere, medicine, logistics, the defence industry, etc. Joint programs with foreign educational institutions are being actively implemented.

The trends outlined above indicate that the qualifications market in Ukraine is changing quickly and flexibly, responding to the challenges of war, and requires employers, employees and educational institutions to constantly adapt and innovate an approach to training and development of professional skills.

3. Analysis of demand and supply for qualifications on the national and regional labour markets

First of all, it should be noted that in accordance with the provisions of the Law of Ukraine ‘On the Protection of the Interests of Subjects of Submission of Reports and Other Documents During the Period of Martial Law or State of War’ in connection with Russia's armed aggression against Ukraine, starting from February 2022, state statistics authorities do not conduct random surveys of the population (households), as a result of which users currently do not have the opportunity to receive reliable information, in particular in the field of employment and economic activity of the population, etc. Based on this, statistical and current operational data on the state of the labour market in the country, the situation on the domestic qualification market, etc. were taken from available sources of information, were obtained by calculation and/or through interviewing an agreed circle of stakeholders.

3.1. General description of the state of the labour market and employment in war-time Ukraine

Regarding the employment features of the country's population in the current conditions, it should be noted that according to estimates from various foreign sources, the approximate actual number of the population in Ukraine is about 30 million people. Of them, the economically active population is 12 million. Among them, only 9.5 million citizens have official jobs. After deducting



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the "budget workers", there are only 6-7 million who work in the real sector of the economy and support all the others who remain in Ukraine. In comparison with 2010, the number of employed persons decreased by 2.0 times, with 2015 – by 1.7 times, with the pre-war year 2021 – by 40.0%.

That is, in recent years, the Ukrainian labour market has undergone significant transformations under the influence of globalization, technological progress, and socio-economic changes. The COVID-19 pandemic and a full-scale Russian invasion in 2022 have only exacerbated these trends, causing massive economic and social challenges.

Regarding the question of matching the demand and supply of labour force in Ukraine, it should be noted that there are significant disproportions between the demand and supply of labour force in the country, which affects the efficiency of the labour market. According to the estimates of the research agency 'Info Sapiens', in January 2024, the unemployment rate in Ukraine was 17.0%. The problems of the use of the labour force are becoming more acute in the conditions of deepening of the formed imbalance in the labour market. As of January 1, 2024, the total number of unemployed persons registered with the State Employment Service (SES) was 96,100 (among them, more than 40.0% have a higher education) with 40,200 vacancies. In 2023, 483,200 people had the status of unemployed, compared to 867,600 people in 2022, of which 160,100 people were employed in 2023 and 32,900 people received vocational training, in 2022, respectively – 248.8 thousand people and 46.6 thousand people. The official statistics of the State Employment Service show that there is a discrepancy between the quantitative and qualitative characteristics of labour supply and demand in the regions and regional differences in the depth of such disparities. As of January 1, 2023, the largest number of registered unemployed was in the Zaporizhia, Dnipropetrovsk, and Sumy regions. Lviv, Dnipropetrovsk, and Kyiv oblasts are the leaders in the





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offer of vacant jobs. From 1 to 20 unemployed people accounted for 1 vacancy. In 2023, the Lviv region was the only one in the country where the number of vacancies exceeded the number of officially registered unemployed. There are also regional disproportions of supply and demand on the labour market. Most of the jobs are concentrated in big cities such as Kyiv, Kharkiv, Lviv and Odesa. This causes oversaturation of the labour market in these regions and labour shortages in rural areas and small towns.

According to ‘Work.ua’, as of January 2024, the number of employment opportunities on the labour market has recovered by 93% compared to February 2022. But the recovery was uneven across regions. Compared to the pre-war indicators, the number of vacancies increased the most in the following regions: Zakarpattia (155%), Ivano-Frankivsk (146%), Khmelnytskyi (125%), Lviv (123%), Vinnytsia (120%), Rivne (118%) and Chernivtsi (116%) regions. In terms of the absolute number of vacancies, the following remain the leaders: Kyiv city (30,913 vacancies), Lviv (8,473), Dnipropetrovsk (8,452), Odesa (5,752) and Kharkiv (3,347) regions. However, 63% of vacancies are concentrated in Western and partially Central Ukraine (Work.UA, 2024).

Changes in the structure of labour demand significantly affect the requirements for the level of qualifications and education of employees in various sectors of the economy. On the one hand, the demand for highly qualified personnel is growing, especially in such fields as information technology, engineering, medicine and biotechnology. These fields require specialists with deep theoretical knowledge and practical skills, able to innovate and quickly adapt to new conditions. On the other hand, in conditions of economic instability, the need for workers of medium level of qualification (levels 3-4 of the National Qualifications Framework (NQF)) in construction, agriculture, service and telecommunications is increasing. The international labour migration of

the population has a decisive negative impact on the domestic labour market, and under the current conditions meaning the departure of refugees, among whom the majority are women with NQF qualification levels above 5. An additional problem for the regional labour markets of the capital and more "calm" regions of Western Ukraine is the problem of employment of forcibly displaced persons. These regions were not ready for quick and prompt response to the formation of demand for workers, their short-term retraining and requalification.

Note that during 2020-2023, the number of vacancies registered in the State Employment Service decreased by 60.29% (from 829.6 thousand in 2020 to 329.4 thousand jobs in 2023). The largest reduction was observed in such industries as ‘Agriculture, forestry and fisheries’ (by 77.7%), ‘Construction’ (by 76.3%), ‘Information and telecommunications’ (by 71.6%) in total for these three the number of vacancies decreased by more than 130 thousand units (Fig. 3.1).

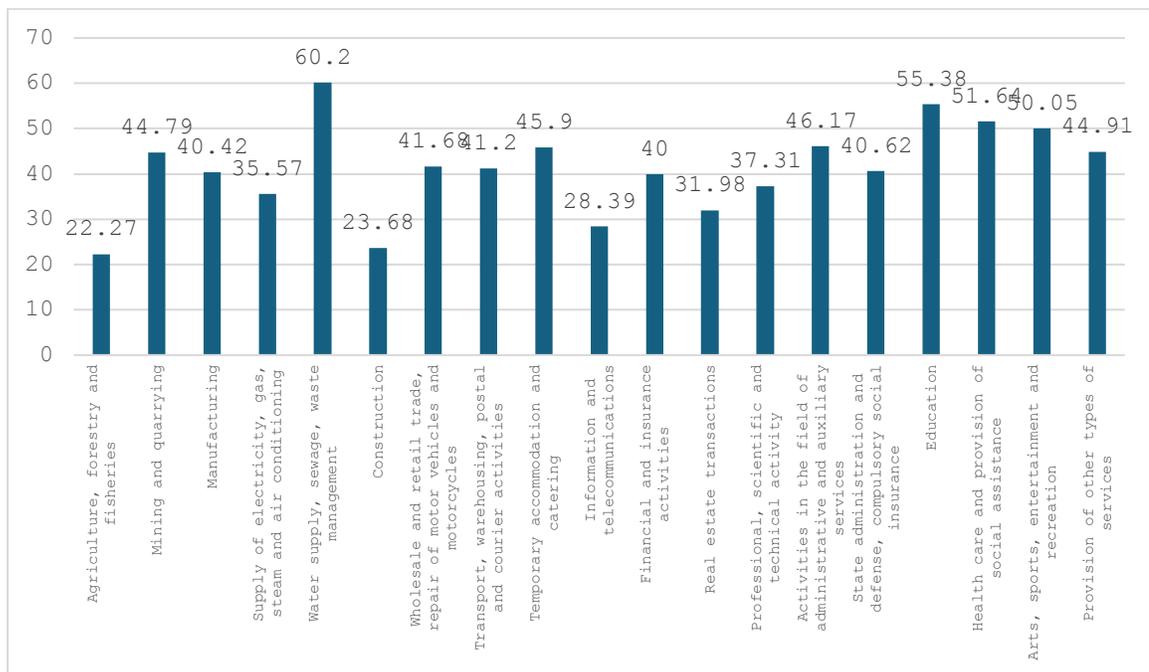


Fig. 3.1. The ratio of the number of vacancies registered in the State Employment

Service in 2023 to the indicators of 2020, %

Calculated according to the data of the State Employment Service:

<https://old.dcz.gov.ua/analytics/68>

There have also been significant changes in the division of groups of professions. On average, from 2020 to 2023, this indicator changed by 35.5%. The largest reduction of vacancies by the professions breakdown concerned such sections of the National Classifier of Ukraine DK 003 ‘Profession Classifier’ (PC), as: ‘Workers for maintenance, operation and monitoring of the work of technological equipment, assembly of equipment and machines’; ‘Qualified workers of agriculture and forestry, fishery and fishing’; ‘Skilled workers with a tool’ and ‘The simplest professions’ (see Fig. 3.2).

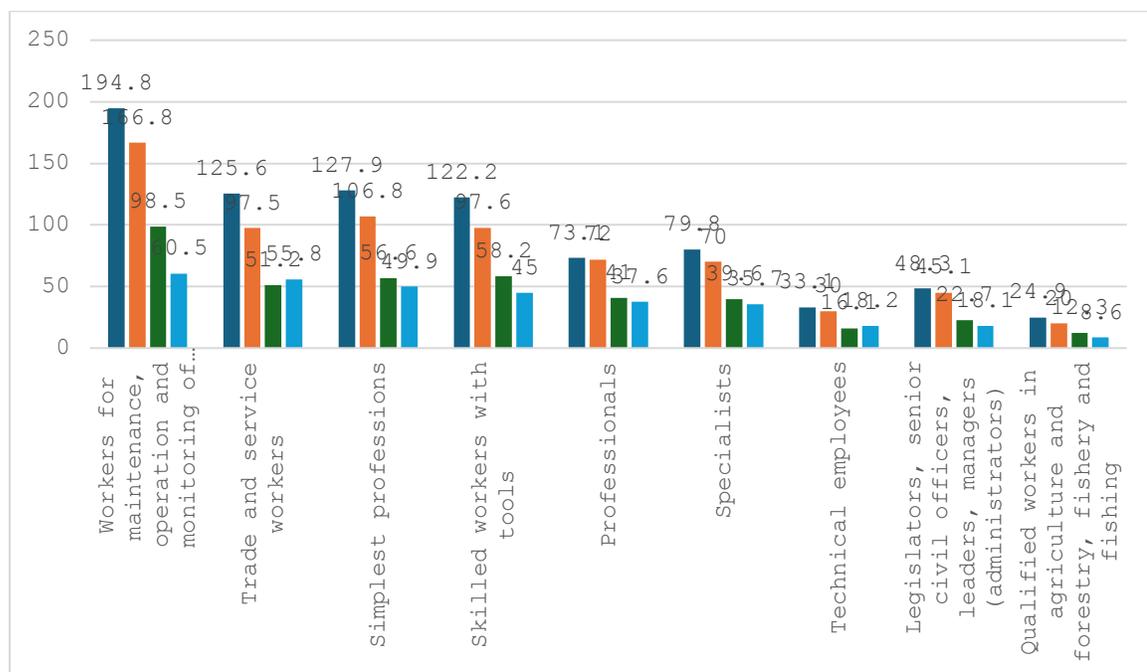


Fig. 3.2 Number of vacancies registered in the State Employment Service (by professional groups) for 2020-2023

Calculated according to the data of the State Employment Service:

<https://old.dcz.gov.ua/analytics/68>

The movement of forced migrants of working age had a rather problematic and ‘unexpected’ impact on individual regional labour markets throughout the war period. The relocation of businesses and population migration to safer regions of Ukraine has led to a dangerously uneven redistribution of jobs and changes in the demand for qualifications. For example, the number of vacancies/vacancies in the occupational group ‘Workers for the maintenance, operation and monitoring of the operation of process equipment, assembly of equipment and machines’ in 2023 is 18.4% of the total number of vacancies, which is a decrease compared to its peak value of 24.9% in 2022.

Despite the significant reduction in employment in the country as a whole, the highest demand for professional groups in 2023 was observed for professions of such sections of the work force as: ‘Legislators, senior civil servants, administrators, managers’ (sales managers, chief accountants); ‘Professionals’ (teachers of general secondary education institutions, civil service specialists (local self-government), economists); ‘Specialists’ (accountants, medical nurses), ‘Technical employees’ (trading hall cashiers, administrators, postal operators); ‘Employees of trade and services sectors’ (food sellers, cooks); ‘Qualified workers for agriculture, forestry, fishery and fishing’ (workers in complex maintenance of agricultural production, workers in silvicultural



(forestry) works, workers in farming); ‘Qualified workers with tools’ (seamstresses, fitters-repairmen, electricians in the repair and maintenance of electrical equipment); ‘Workers in the maintenance, operation and control of the work of technological equipment, assembly of equipment and machines’ (drivers of motor vehicles, tractor-drivers of agricultural (forestry) production, boiler plant operators); ‘The simplest professions’ (support workers, cleaners of office premises, loaders).

3.2. Analysis of supply and demand for labour force by industry and profession

For a more objective study of the state and prospects for the development of the national and regional labour markets in the conditions of martial law, the author's methodical approaches to determining the volume of the region's need for labour in the short-term perspective were partially used.

Those calculations made it possible to determine 5 sectors of the economy and/or types of economic activity with the highest demand for labour, taking into account such factors as personnel turnover, creation of new jobs, outflow of personnel outside settlements/regions, etc. These sectors in Ukraine include:

- Manufacturing/Clothing production;
- Construction;
- Transport, warehousing, postal and courier activities;
- Supply of electricity, gas, steam and air conditioning;
- Education.





Among the 5 types of economic activity, which require qualified personnel most of all during the war period in the country, the following should be highlighted: clothing production; specialized construction works; land and pipeline transport; scientific research and development; education.

The main reasons for the current shortage of personnel in these types of economic activity of the country are as follows:

- many qualified workers go abroad as refugees from the war, mobilize to the ranks of the Armed Forces of Ukraine, and previously migrated in search of higher wages and better working conditions;
- introduction of new technologies and automation of production processes require new knowledge and skills from employees, which are often lacking;
- there is a significant imbalance between the volumes and directions of personnel training and the real demand for them from employers. In order to solve this problem, employers, especially before the start of military aggression, were forced to independently train, and first of all, retrain graduates of educational institutions at their workplaces;
- for many types of economic activity, for our sample, in the field of education and in scientific research and development, employment conditions are traditionally quite difficult, and the remuneration for highly qualified work does not meet expectations and is significantly lower than in many sectors of the economy;
- working professions in the country have not gained prestige among young people, despite the rather attractive employment conditions and the level of remuneration.





According to the breakdown by professions, for these types of economic activity, the highest deficit can be identified for such professions/positions as: clothing production - cutter and seamstress; specialized construction work – a roofer of roll roofs and roofs made of artificial materials and a bulldozer driver (construction work); ground and pipeline transport – tram driver and mechanic repairing wheeled vehicles; scientific research and development – professor of a higher education institution and research associate (statistics); education – speech therapist teacher and assistant teacher of a preschool education institution (Table 3.1).

Table 3.1.

Types of economic activity with the highest shortage of personnel on the domestic labour market in 2021-2023

Type of economic activity, sector or section (KVED)	Code of KVED section	Profession code (positions) according to the Professions Classifier (PC)	Name of profession (position)	The number of vacancies, units (NV)	Number of unemployed, persons (NU)	NU/NV ratio, Ind
C - Processing industry/ Clothing production	14	7435	cutter	268	145	0.541
		7436	seamstress	6282	3686	0.587
		7437	furniture upholsterer	136	83	0.610
		8262	operator of knitting and sewing equipment	41	30	0.732
		8263	embroiderer	49	29	0.592
F – Construction/ Specialized	43	7131	roofer of roll roofs and roofs made of	138	52	0.377



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construction works			artificial materials			
		7136	plumber	1626	760	0.467
		7139	construction roofer	144	83	0.576
		8332	bulldozer driver (construction work)	152	65	0.428
		8332	truck crane operator	147	97	0.660
H - Transport, warehousing, postal and courier activities/ Ground and pipeline transport	49	2145.2	an engineer for the operation of the machine and tractor park	31	27	0.871
		7231	locksmith repairing wheeled vehicles	1308	733	0.560
		8322	motor vehicle driver	12455	11595	0.931
		8323	tram driver	125	33	0.264
		8323	trolleybus driver	171	81	0.474
D - Supply of electricity, gas, steam and conditioned air/ Electricity production	35	7241	electrician for repair and maintenance of electrical equipment	2295	1077	0,468
		7241	electrician for the operation of distribution networks	202	124	0,614
		7241	fitter-electrician repairing	703	195	0,277



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			electrical equipment			
		3113	energy engineer	131	88	0,672
		3113	workshop electrician	191	60	0,314
		1222.1	chief energy engineer	126	68	0,54
P – Education/ Education	85	2320	teacher of general secondary education institution	5038	3811	0.756
		2340	speech therapist teacher	193	76	0.394
		2340	social teacher	318	234	0.736
		3330	teacher's assistant at a preschool education institution	741	293	0.395
		3330	teacher's assistant	1892	1076	0.569

Calculated according to the data of the State Employment Service:

<https://old.dcz.gov.ua/analytics>

Among the 5 types of economic activity, which are characterized by the highest surplus of labour force during the war period by professions, the following should be highlighted: activities of the main departments (head offices); activities in the field of radio broadcasting and television broadcasting; insurance, reinsurance and non-state pension provision, except for mandatory social insurance; advertising activities and market research; administrative and support office activities, other support commercial services.



The main reasons for such a surplus of personnel in the specified types of economic activity are:

- curtailment of activities due to a decrease in consumer demand from consumers of services during the war period;
- a significant decrease in the standard of living and income of the population during the war period, which encourages the latter to save on such services as, for example, insurance or commercial services;
- continuation by many educational institutions, first of all, institutions of higher education, of the practice of training personnel without orientation to the real needs of the national and regional labour markets;
- reduction in the number of jobs due to the war, which as of August 1, 2024 amounted to about 3.5 million units, i.e. the country's entire labour market shrank by a third (Dyachkina, 2024).

The key component of the formation of a surplus of personnel on the labour market in Ukraine by qualifications is nevertheless the inefficient activities of educational institutions oriented to earnings from students who study on a commercial basis, first of all, institutions of higher education, among which the excess training of personnel in such professions: economists, lawyers, teachers (in some, primarily, rural, mountain and frontline regions of the country), managers and administrators.

According to the breakdown by professions, among the 5 types of economic activity, which are characterized by the highest surplus of labour in the wartime period, the following should be distinguished: the activities of the main departments (head offices) - the manager (administrator) in the field of information provision and the manager (administrator) for public relations; activities



in the field of radio broadcasting and television broadcasting - television director and electrician of linear structures of telecommunications and wire broadcasting; insurance, reinsurance and non-state pension provision, except mandatory social insurance - office employee (insurance) and insurance agent; advertising activity and research of the market situation - advertiser and advertising agent; administrative and auxiliary office activities, other auxiliary commercial services – operator of information and communication networks and office clerk (accounting) (Table 3.2).

Table 3. 2

Types of economic activity by the highest surplus of personnel on the domestic labour market in 2021-2023

Type of economic activity, sector or section (KVED)	Code of KVED section	Profession code (positions) according to the Professions Classifier (PC)	Name of profession (position)	The number of vacancies, units (NV)	Number of unemployed, persons (NU)	NU/NV ratio, Ind
M - Professional, scientific and technical activities/ Activities of the main departments (head offices)	70	1473	manager (administrator) in the field of information provision	25	247	9.880
		1475.4	public relations manager	16	82	5.125



J - Information and telecommunications/ Activities in the field of radio broadcasting and television broadcasting	60	1475.4	manager for administrative activities	134	445	3.321
		1475.4	logistics manager	193	514	2.663
		1475.4	sales manager	1758	3337	1.898
		2455.2	director	18	37	2.056
		2455.2	television director	1	15	15.000
		3131	video operator	42	100	2.381
		7243	radio mechanic for maintenance and repair of radio and television equipment	3	16	5.333
		7244	electrician of linear structures of telecommunications and wire broadcasting	10	109	10.900
K - Financial and insurance activities/ Insurance, reinsurance and non-state pension provision, except for mandatory social insurance	65	1465	insurance manager	4	93	23.250
		2412.2	occupational health and safety insurance expert	1	25	25.000
		3412	insurance agent	10	205	20.500
		3417	expert insurance consultant	4	17	4.250
		3432	office clerk (insurance)	1	36	36.000
M - Professional, scientific and technical activity/ Advertising	73	1476.1	advertising manager	79	243	3.076
		1475.4	marketing manager	92	261	2.837



activity and market research		2419.2	advertising expert	5	48	9.600
		3429	advertising agent	6	73	12.167
N - Activities in the field of administrative and auxiliary services/ Administrative and auxiliary office activities, other auxiliary commercial services	82	1477.1	HR manager	222	706	3.180
		3419	trade expert	213	720	3.380
		4112	operator of information and communication networks	59	327	5.542
		4112	computer typing operator	590	1889	3.202
		4121	office clerk (accounting)	12	101	8.417

Calculated according to the data of the State Employment Service.

<https://old.dcz.gov.ua/analytics>

3.3. Trends in overqualification and underutilization of the skills of the domestic labour force

In today's Ukraine, along with an excess supply of labour force, there is also an unsatisfied demand for vacant jobs, one of the reasons for which is the inconsistency of the proposed requirements with the professions and qualifications actually possessed by employees. In this context, internal and external factors formed by military aggression and its consequences are particularly relevant for the country, which is reflected in socio-economic instability, increasing social tension in society against the background of a decrease in the standard of living, worsening



employment conditions, territorial and professional qualification disparities between demand and supply on the labour market, worsening of the situation on local labour markets, overproduction of personnel by educational institutions, low quality of educational services, in particular, due to their remoteness, etc. (Table 3.3)

Table 3.3

The highest number of vacancies and the corresponding number of unemployed people in Ukraine by profession in 2023 (the table is formed according to the principle of decreasing numbers)

Name of profession (position)	Number of vacancies, units	The number of unemployed, persons	Remaining vacancies at the end of the year, units
Seller of food products	14 354	25 838	960
Motor vehicle driver	12 455	11 595	1 365
Cook	8 441	11 771	905
Accountant	7 515	11 068	641
Seamstress	6 282	3 686	1 115
Teacher of general secondary education institution	5 038	3 811	216
Security guard	4 346	7 947	330
Nurse	4 297	4 672	413

Civil service (local government) specialist	3 068	4 796	325
tractor-machinist of agricultural (forestry) production	2 615	3 592	93
a worker in complex maintenance and repair of buildings	1 950	1 982	196

Calculated according to the data of the State Employment Service.

<https://old.dcz.gov.ua/analytics>, 2023.

Analysing the data in the table, it can be concluded that in many professions, primarily workers, there is a discrepancy between the qualifications of the unemployed and the qualification requirements put forward by employers for vacancies. The analysis of individual requirements for the competences of future employees and their non-personalized resumes posted on specialized websites gives reason to cite typical examples of such inconsistency, namely:

- lack of practical skills after graduating from an educational institution;
- lack of knowledge about modern innovative methods of production;
- insufficient language and communication skills;
- fairly abstract knowledge of the "green" economy, responsible consumption, efficiency of energy use in practice, etc.



3.4. Social and educational initiatives related to development and adaptation to new challenges in the field of qualifications

Important in today's conditions are the areas of retraining and socialization of the able-bodied population, especially those affected by hostilities, veterans, people with disabilities and other categories in need of social protection. In particular, additional education programs help meet employers' demand for new skills and integrate these groups into the economy.

The problem of inclusiveness is a separate challenge for employers. Work with vulnerable categories and veterans requires additional efforts. According to the survey "Labour market barometer 2023. Forecasts 2024", 37.0% of companies are not yet working on solving this problem. 36.0% employ people with disabilities. 36.0% provide support to workers from de-occupied territories. 35.0% implement employment opportunities for forcibly displaced persons.

The next challenge for the national labour market is that a large number of workers were mobilized to the Armed Forces of Ukraine, which further aggravated the shortage of personnel. This is particularly true in sectors that require specialized technical skills.

Also, the structure of the labour market during the period of martial law changed significantly due to the needs of the military-industrial complex (MIC) and the Ministry of Defence of Ukraine, which is interested in recruiting drivers, mechanics, operators of all types of weapons, service gunners for service/work in the rear/front areas, UAV operators, combat medics, etc. In addition, there are a large number of vacancies in the army, which are related to logistics, maintenance and repair, there are vacancies for staff positions, etc.



4. Digitization and online training on-the-job during the Covid-19 pandemic and war.

Interview results

To study the reaction of Ukrainian society to the challenges of the war and the pandemic, 35 respondents were offered a Questionnaire for employees of enterprises, institutions and organizations of various types of economic activity that use digital devices, technologies and communication tools in their work. By industry affiliation, the vast majority of respondents represented educational activities and the service sector. According to the level of education, three-quarters of the respondents had a master's degree, and according to the gender-age structure, women (85.7%) and representatives of the age groups from 35 to 44 and from 55 to 64 years old prevailed among them (34.3 and 25.7% in accordance). Professionally, 26 people (74.3%) are specialists, and 4 (11.4%) are professionals.

To the question "Compared to the situation before the Covid-19 pandemic and the war, do you use digital technologies more often to perform some of your work tasks?" almost all respondents indicated that due to the pandemic and the war, they are learning much more online and using digital technologies to a greater extent than before.

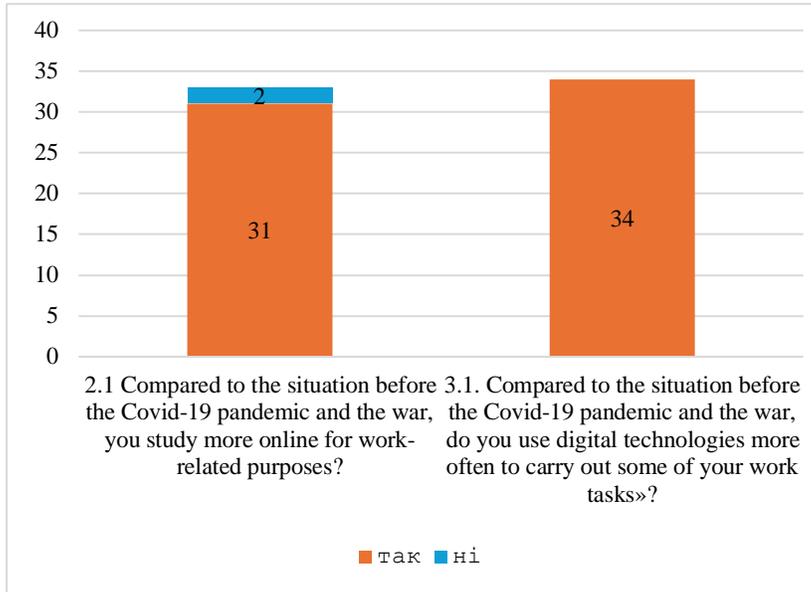


Fig. 4.1. Distribution of answers to the question ‘Compared to the situation before the Covid-19 pandemic and the war, do you use digital technologies more often to perform some of your work tasks’

To the question ‘For what specific tasks do you use digital devices at work?’ the vast majority of respondents noted that they primarily: use electronic spreadsheets (88.6%); use powerpoint (82.9%); use search words (48.6%).

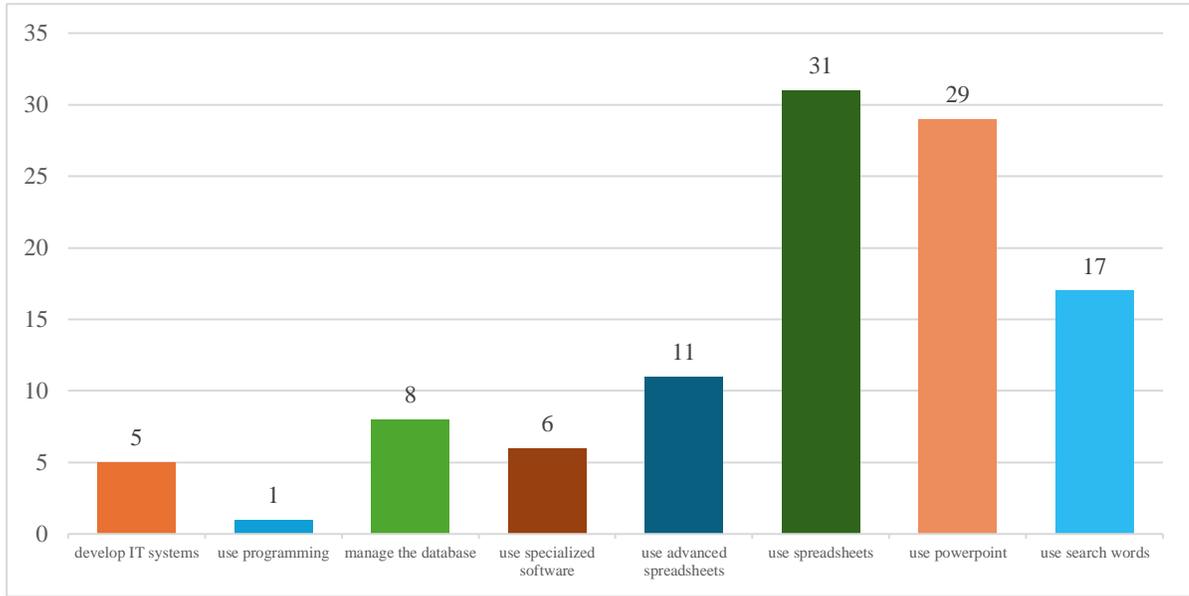


Fig. 4.2 Distribution of answers to the question ‘For what specific tasks do you use digital devices at work?’

On average, 68.1% of respondents positively assessed the impact of using digital or computer technologies in work and education.

The positive answers of the interviewees to detailed and expanded questions regarding the positives from the use of IT tools at work and during education in the conditions of a pandemic and war were distributed by rating as follows (above the level of 50.0%):

- To what extent do you agree with the following statement regarding the use of digital or computer technology at work? They are comfortable to use at work (97.1%);



- To what extent do you agree with the following statements regarding the use of digital or computer technology at work? They are useful for on-the-job training (97.1%);

- Have you learned to use any new computer programs or software in the past 12 months or since (if less than a year) you started your main job? (82.9%);

- Have you learned how to use new digital technologies (digital software and machines) to do your main job? (80.0%);

- To what extent do you agree with the following statements regarding the use of digital or computer technology at work? They are useful for on-the-job training (74.3%);

- To what extent do you agree with the statement regarding the use of digital or computer technologies at work? As a rule, they increase labour productivity and production at work (71.4%);

- Have your work tasks changed as a result of new computer programs or software/new computerized equipment that you have learned at your main job in the past 12 months? Now you perform several other or new tasks (60.0%);

- Have you learned to use any new computerized equipment for your main job within the last 12 months or since (if less than a year) you started your main job? (57.1%).

Thus, the conducted interview makes it possible to draw the following general conclusions:

- the pandemic in Ukraine led to a rather productive transition of employees to the use of digitization tools in their work. This significantly facilitated the implementation of work tasks in wartime conditions;

- in this difficult period, employees began to more widely and effectively use and learn new digital devices, equipment, software, information technologies, etc.;



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- in the conditions of military aggression, online learning and distance work have gained global distribution in all spheres of life and employment;

- active and effective informatization of many work and educational areas is observed in the country, first of all, in the field of document management, financial and banking activities, online educational platforms and programs, assessment on simulators, etc.



5. Results of a sociological survey/interview of key stakeholders regarding the state of the field of use and training of personnel under martial law

5.1. Opinions of employers and their associations

A total of 22 employers from 5 regions of the country (Kyiv, Donetsk, Dnipropetrovsk, Kirovohrad and Sumy regions) were interviewed. The regional selection was not random, as these regions, on the one hand, represent regions where the pressure of war on production activity and the outflow of refugees/displaced persons is observed, and on the other hand, relatively calm regions where citizens from the frontline areas are partially relocated. It should be noted that almost half of the employers (10 out of 22) head large (more than a thousand employees) enterprises. Entrepreneurs represented 12 types of economic activity, most of which involved manufacturing; construction; transport, electricity supply and the field of education. The average age of operation of the covered companies was 36 years, although 10 of them were created in the last decade. To the question: ‘Do you consider your company strategically important for the industry/sector at the national level?’ 14 respondents gave an affirmative answer.

Employers were asked to answer 11 specialized questions. To the question ‘How do you assess the level of provision in your company with labour force of appropriate qualifications?’ more than half of employers (54.5%) indicated a sufficient level, which is a rather positive trend under the current circumstances (Fig. 5.1).

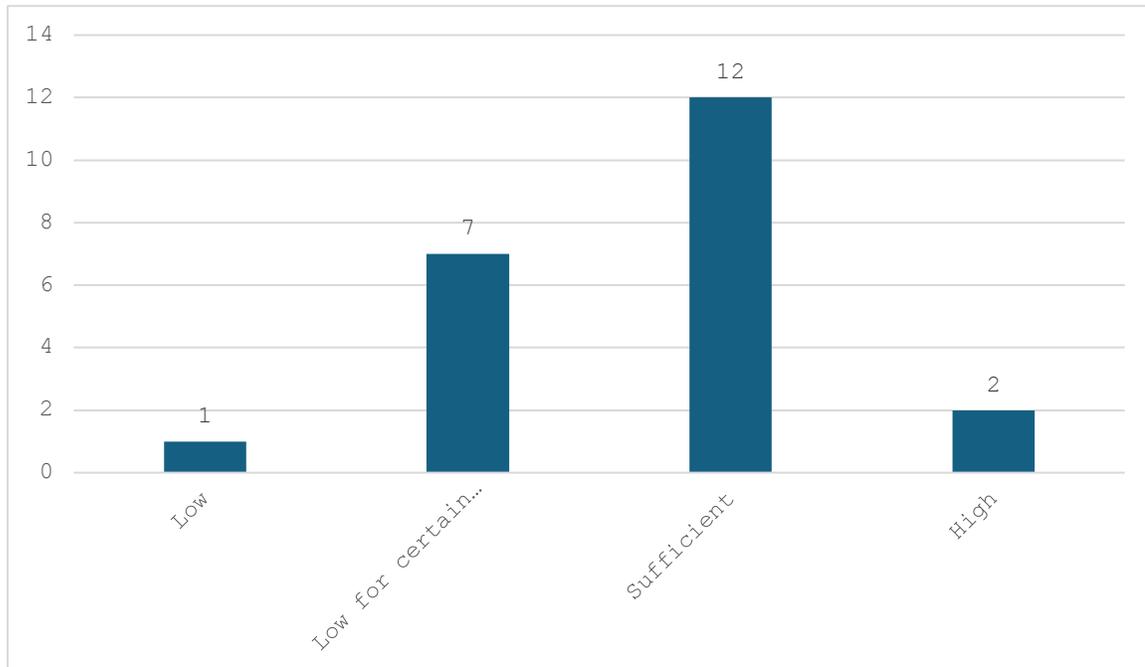


Fig. 5.1 How do you assess the level of provision in your company with a labour force of appropriate qualifications?

In response to the open question regarding shortages in specific professions, experts indicated 53 positions, most of them in labour professions (53.2%), both specialized (for the mining industry, engineering and agriculture), and professions of a broad profile or end-to-end application (gas welder, electrician, driver, machinist, etc.). Among managers, professionals and specialists, employers are in the greatest demand for engineers, mechanics, dispatchers, managers, IT workers, accountants, lawyers and financiers. It should be noted that the majority of employers believe that such a shortage of personnel by profession is typical for the entire industry/type of economic activity (63.6%).



Among the main reasons for the shortage of qualified personnel (interviewees could give several answers), the respondents identified: ‘Martial law: voluntary dismissal of employees and their relocation to other regions of the country (forcefully displaced persons (IDPs) or outside its borders (refugees)’ (38.5%); ‘Insufficient pay and other employment conditions’ (20.5%) and ‘Martial law: suspension of production, severance of relations with suppliers, partners and customers/consumers of goods or services, relocation of production, which leads to a reduction in the number of employees and the difficulties of their return during the recovery/increase of production’ (12.8%). Thus, half of the answers indicate, first of all, the reasons directly related to the war in Ukraine.

To the open question ‘Which 5 qualifications/occupations suitable for your company are easiest to find in the regional/local labour market?’ exactly half of the experts noted that there are none.

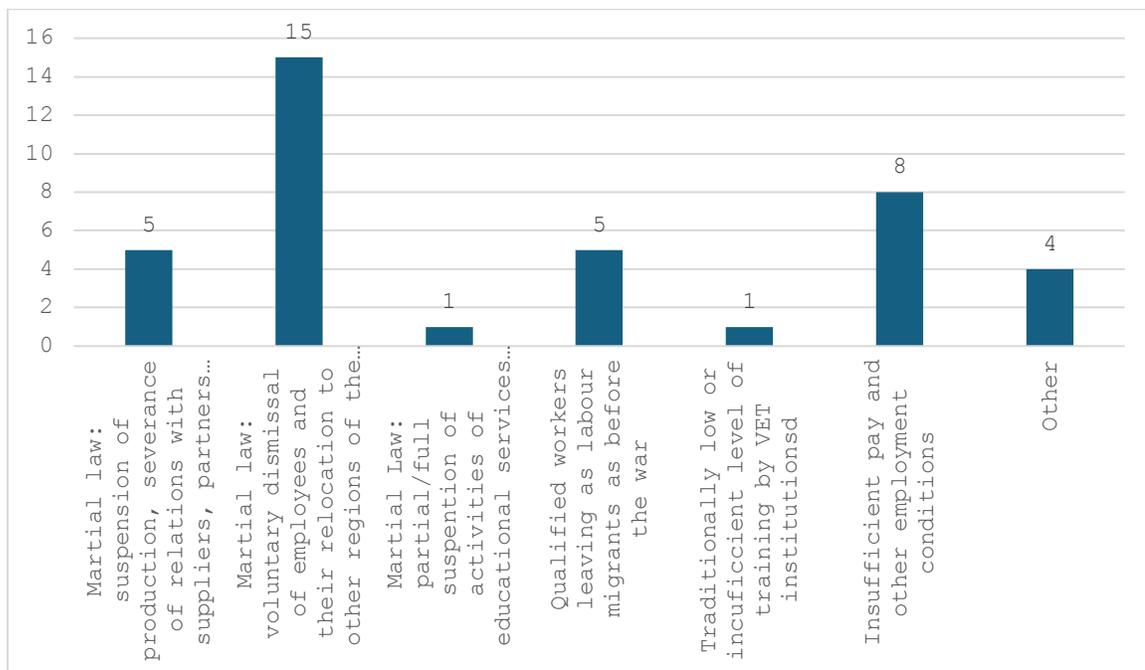


Fig. 5.2. What are the main reasons for the shortage of qualified personnel

The rest of the interviewees singled out lawyers and porters among the most available professions for filling vacancies.

To the question ‘Are there any new professions/qualifications (that were not needed before) that have become in demand in your company and industry/sector in the last 5-10 years?’ only 8 respondents (36.4%) answered affirmatively. Among the new professions, those related to the development of new technologies should be highlighted, namely: SMM manager, BIM technology manager, drone operator, debugger of automation with artificial intelligence, cloud computing engineer/architect; blockchain developer.

To the question ‘How effective is the field of education and training in responding to changes in the demand for skills and qualifications?’ employers' assessments were quite variable in nature. Some respondents note that the education system in certain regions responded effectively to changes before the war, but due to hostilities and the evacuation of specialized educational institutions, this effectiveness significantly decreased. Others point to a long-standing domestic problem, namely that there is a dire need to update training/educational programs and work more closely with employers. At the same time, part of the interviewees considers the field of education quite effective thanks to flexible programs and cooperation with external educational institutions, but recognize the need for a faster response to technological changes and taking into account the needs of the labour market.

Among the most important problems and challenges in this field, the interviewees single out today: mass departure of young workers and graduates abroad, which causes a shortage of



personnel; martial law, hostilities, and evacuation of the population, which complicate education, especially face-to-face classes; outdated training programs and insufficient cooperation with employers, which limits opportunities for retraining and upskilling. Mobilization, frequent alarms, power outages, lack of analysis of the real needs of the labour market, insufficient funding and lack of popularization of labour professions are also important challenges.

The surveyed companies actively cooperate with educational institutions to meet the changing demand for skills and qualifications. The main directions of this activity include: concluding contracts with educational institutions for the training of employees, providing places for training practice, participating in the development of training programs and organizing seminars for professional development. Some enterprises implement dual training programs, support the development of dual training and participate in educational projects, such as, for example, competitions of professional skills, where cooperation contributes to the improvement of the qualifications of teachers and the integration of students into the working environment.

To the question ‘Is it difficult for your company to attract and retain qualified employees with professional (professional-technical) and higher education? Why?’ most experts noted that this is a rather serious challenge today. They face difficulties in attracting and retaining personnel due to the effects of war, economic instability, inflation and mobilization measures. The depletion of the labour market, caused by the departure of qualified workers abroad and internal migration, further complicates the situation. Low wages and payment delays also contribute to the outflow of personnel, especially in war zones. Despite the general labour shortage, some companies (especially in the energy and mining sectors) are successful in retaining employees through effective motivation and welfare programs.



The vast majority of respondents do not consider immigration (import of foreign labour) to be an effective solution for attracting and retaining qualified workers in Ukraine. The main arguments against immigration include the ongoing hostilities, the availability of a sufficient number of skilled personnel in Ukraine with a better understanding of local conditions, and the fact that the expected immigration may attract a largely unskilled labour force. Some respondents allow for the possibility of using foreign labour in the future, but currently do not see it as a practical solution. 13 employers (59.1%) indicated the presence of employees who were former refugees from the war. But due to the fact that their percentage is insignificant, they do not have a significant impact on the company.

Among the directions for solving the problem of staff shortages, the answers of employers (the respondents could give several answers) were distributed almost equally, with a slight preference for such components as: ‘Increasing wages and improving employment conditions’ (26.9%); ‘Development of one's own system of training, retraining, upgrading of employees' qualifications, first of all, through short-term training for micro-qualifications’ (25.0%) and ‘Cooperation with providers of educational services to prepare their graduates for future work according to the profile (organization of practical training, training at work and apprenticeship, evaluation of competences, as a way to career growth)’ (19.2%) (Fig. 5.3).

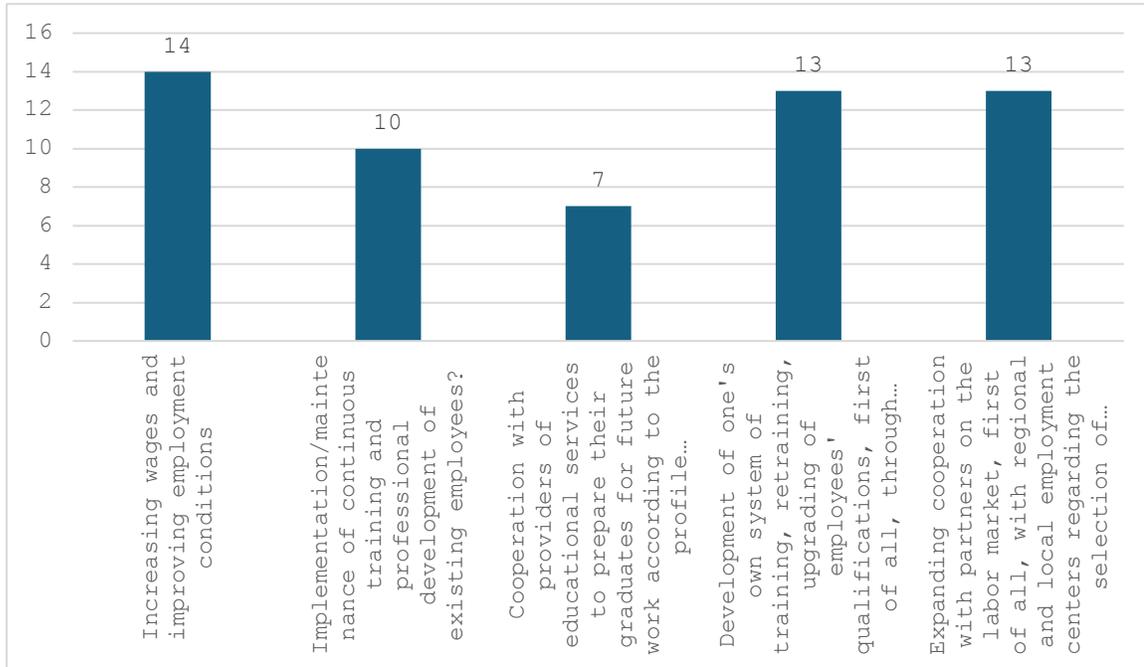


Fig. 5.3. To what extent do you solve the problem of the lack of workers, in particular, by

It should be noted that most companies have developed effective strategies to combat the loss of skilled labour due to labour migration and the outflow of refugees. Key elements of these strategies include maximizing retention of existing employees, improving working conditions, corporate training, team building and staff motivation. Some companies also implement social benefit programs and provide employee reservations. At the same time, the emphasis is on strengthening corporate values, such as professionalism, teamwork and customer orientation.

Among the ways of overcoming the problems of the lack of qualified personnel during the war period (it was possible to specify no more than 3 positions)? employers highlighted the following (Fig. 5.4): ‘Adoption at the national level of a more balanced and fair mobilization policy

from the standpoint of maintaining production volumes’ (38.1%); ‘Transition during the war period to a strict and effective state policy in the field of personnel training, in particular through the formation of state and regional orders for personnel training exclusively at the request of employers’ (19.0%) and ‘Optimization of the network of VET institutions, professional training institutions and HEIs, directed exclusively to meet the needs of the national, regional and local labour markets, in particular by introducing temporary placement of graduates in jobs/positions (former status of young specialists)’ (19.0%).

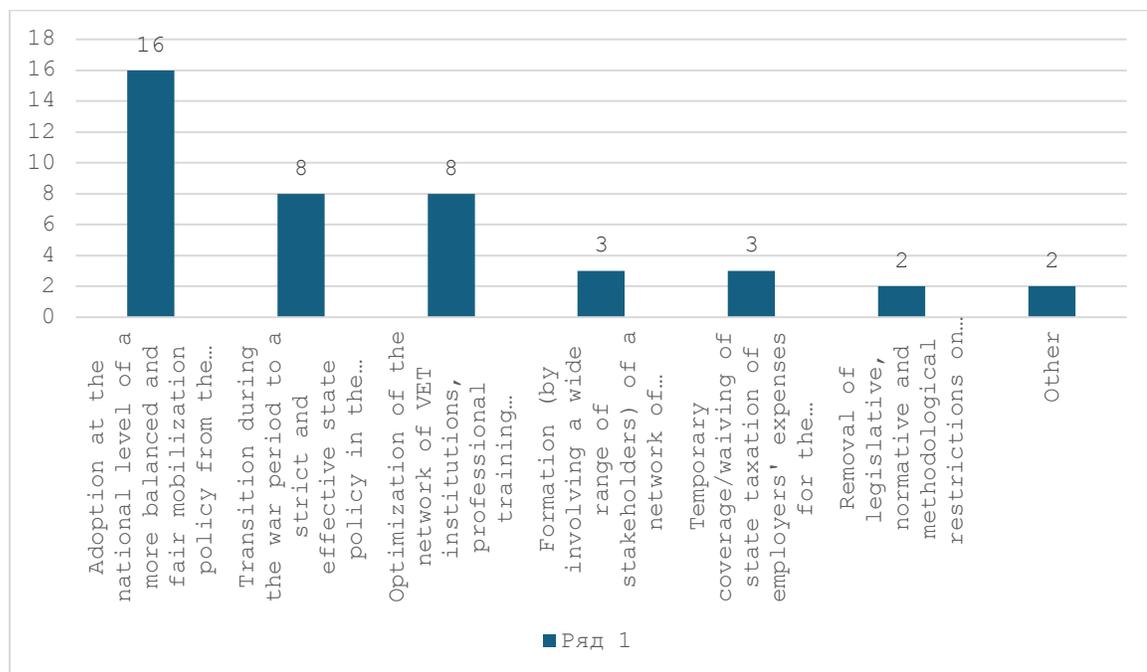


Fig. 5.4. What areas of overcoming the problems of the lack of qualified personnel in the war period do you consider to be the most effective?

5.2. Opinions of providers of educational services



A total of 12 educational service providers were interviewed, among which 4 represented VET institutions, 2 – professional pre-higher education institutions and 6 - HEIs. They covered 8 regions of the country. Most of these educational service providers are engaged in training personnel for such industries/types of economic activity as: manufacturing; construction; transport, electricity supply and education. The average age of functioning of the covered educational institutions was 56 years. The number of educational programs (specialties/qualifications/professions) currently offered by these educational institutions ranged from 6 to 184. The approximate number of students/pupils/listeners at these educational institutions ranged from 125 to 9,100 people. It is important that representatives of IDPs study in these educational institutions, primarily from Donetsk, Kherson, Luhansk and Mykolaiv regions.

Experts were asked to answer more than 30 questions grouped into 7 thematic blocks. According to the block ‘Relevance and compliance of the provided skills and assigned qualifications with the needs of the labour market’, the interviewees assessed the compliance of the provided/assigned qualifications/degrees with the needs of the local/regional, national and international labour markets as ‘moderate’ (57.1%) and ‘high’ (42.9%). They confirm this by the fact that most graduates are successfully employed after completing their studies. Some VET institutions note that 70.0-90.0% of their graduates work by profession, and at some enterprises, for example, Kryvorizka TPP, graduates always find a job. According to other data, 87.0% of graduates are employed, 64.0% of them secured their first job a year after graduation, etc.

Representatives of all educational institutions claim that their educational standards and curricula are regularly updated and adapted in accordance with state requirements, regional needs and changes in the labour market caused by technological, environmental, organizational changes



and martial law. Advanced training courses are being implemented, in particular for partial qualifications, educational programs are being revised taking into account the needs of employers in wartime conditions. Employees of educational institutions participate in the development and discussion of new standards. Educational programs are updated on a scheduled basis once every two years or unscheduled, taking into account the current needs of the labour market and society.

The interviewees also indicate that the main challenges and problems include: the lack of a general indicative educational program for some qualifications/professions, difficulties with passing working practice at enterprises, the state of war, as well as the lack of funding for training for partial qualifications, which complicates practical training and does not provide remuneration for teachers, masters of working training.

Respondents inform that several new educational programs have been developed and implemented in practice over the past two years. Among them: programs for electricians of power networks, tilers, plasterers, as well as short-term certification courses for electricians in the repair and maintenance of electrical equipment. Programs have also been developed for workers in complex maintenance and repair of buildings, cooks and mechanics in the repair of agricultural machines. In addition, certificate programs such as ‘Current geopolitics and problems of international relations’, ‘Social policy for the protection of the population during martial law’, ‘Green energy’, ‘Military social work’, etc. appeared in the field of non-formal education.

All educational institutions, without exception, actively cooperate with local companies or employers' organizations to improve the relevance of the provided qualifications to the requirements of employers. The main forms of such cooperation are:



1. Working training and practice, internship: Apprentices/students have the opportunity to practice and consolidate labour techniques and skills at real workplaces.
2. Joint events: Organization and holding of Open Days, joint meetings, round tables, master classes, seminars-workshops for familiarization with modern technologies and their implementation.
3. Participation in projects: Cooperation within the framework of various projects, such as, for example, "New Factory-2" and "New Factory-3", which are implemented at the ArcelorMittal Kryvyi Rih enterprise.
4. Internship of pedagogical and research-pedagogical workers: Teachers undergo internships at production plants to familiarize themselves with new technologies and their introduction to the educational process.
5. Joint webinars and mini-fairs of professions: Conducting webinars on the study of new production technologies and organizing mini-fairs of professions on the basis of professional career centres.
6. Participation of employers in the development of educational programs: Managers, representatives of business and public organizations participate in the development and review of educational programs, discussion of changes and updates. They also teach certain professional disciplines.
7. Organization of joint projects and research: Employers and educational institutions co-organize projects, research, scientific conferences, seminars and round tables.



8. Management of qualification thesis: Employers act as reviewers and manage the writing of qualification thesis of learners, forming in them the skills and competencies needed in the modern labour market.

Respondents also note that such cooperation with employers significantly helps to create opportunities for further employment and professional career of graduates, which positively affects their chances of finding a job. The high level of employability of graduates is achieved due to the fact that they expand their opportunities due to additional competencies acquired during their studies. Educators actively introduce new production technologies into the educational process, adapt work curricula for a deeper study of innovative production technologies. This allows graduates to be better prepared for the requirements of the modern labour market.

Practical training at the stakeholders' enterprises enables learners to demonstrate their skills, knowledge and professionalism, which often attracts the attention of employers. In many cases, after the internship, graduates receive offers of employment in these institutions. In addition, former graduates, who have already become successful professionals, often become stakeholders in the educational programs at which they themselves studied. They value the professional training and skills that are formed during training and have an interest in cooperation or in involving specialists of a certain specialty.

The respondents assessed the general situation with the matching of demand and supply for the qualifications of VET institutions/professional pre-higher education institutions/HEIs in the national, regional and local labour markets as 'moderate' (71.4%) and 'high' (28.6%). Among the main reasons for the existing mismatch of skills, they single out: the military situation in Ukraine; special characteristics of pupils/students; a large variety of equipment at various enterprises, and

the outdated material and technical base of the educational institution, etc. To reduce or eliminate this discrepancy, it is necessary to license and introduce new professions, simplify the licensing procedure, and also update the material and technical base at the expense of financial infusions, primarily from stakeholders.

On the first question from the block ‘Vulnerability of pupils/learners/students’, the majority of experts indicated that among the recipients of educational services there are orphans, IDPs and persons with limited physical and psychological capabilities. The interviewees noted that during the educational process pupils/students are provided with various support, including trainings, psychological classes, consultations with a psychologist and a social pedagogue. Public organizations are involved in providing psychological and relaxation assistance, socio-psychological support, individual help from teachers, as well as the possibility of receiving material assistance and social scholarships. For their adaptation and support, there are clubs, sections and cultural and mass events, as well as a curatorial institute for consulting and mentoring.

Representatives of educational institutions noted that the average dropout rate of pupils/students over the past 5 years was insignificant and ranged from 4.0 to 6.0%. Among the key reasons for dropping out, the following prevail: conscription to the Armed Forces; migration, change of residence; non-fulfilment of educational plans; reluctance to continue studying or get a job based on the obtained qualification or chosen profession; wrongly chosen qualification/profession; violation of contract terms; desire to continue studying at another educational institution, etc.

The following measures are used to reduce the dropout rate and reintegration of dropouts in these educational institutions: educational activities; individual approach to pupils/students and



their parents; mixed form of education; involvement in subject circles; organization of excursions to modern enterprises, etc. There is also the possibility of providing individual plans and deadlines for taking tests and passing practice.

Among the necessary measures in the appropriate direction, the respondents identified the following as: support from the state and other interested parties for the popularization of skilled professions among young people, first of all, electrical engineering and construction; monitoring attendance at classes and working with parents; the opening of professional centres taking into account the needs of the population in the conditions of war and post-war conditions; improvement of learning conditions due to increased funding for the modernization of the material and technical base.

In fact, there were no answers to the questions of the ‘Internationalization of Education’ block due to the fact that in Ukraine, under the martial law, the education of foreigners is extremely limited for security reasons. The representatives of HEIs noted that ensuring the possibility of international academic mobility for students of higher education remains one of the key elements of internationalization. Each academic year, higher education applicants participate in academic mobility programs, but it is complicated now for men. Exchange programs are dominated by such as: Erasmus+ Student Mobility Program, Mitacs Globalink Research Award (GRA), NAWA, ‘Double diplomas’, Summer schools at the University named after Adam Mickiewicz in Poznań. The HEIs has developed a strategy for international cooperation, it is planned to prepare joint study programs with universities of the Republic of Poland, Great Britain, etc. The most important spheres of international cooperation and partnership in the institution are considered to be: exchange of best practices through participation in international conferences; implementation of



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international projects under the Erasmus+ program, such as DigiUni, Academies4Ukraine, and SMART-PL; academic mobility for students and teachers under Erasmus+ programs, Mitacs Globalink Research Award, Visegrad Scholarship Program; receiving charitable assistance and cooperation with the German Society for International Cooperation (GIZ); Registration on the European Funding and Tenders Portal and participation in academic mobility programs.

According to the ‘Migration of graduates’ block, 57.1% of respondents indicated that they have information about the employment of their graduates outside the country. Their share of the total does not exceed 4.0%, and most of them do not work by profession.

According to the block ‘The role of educational institutions in overcoming the lack of skills, in particular, caused by labour migration, the outflow of teachers from the borders of the region or the country’, the interviewees note that educational institutions contribute to overcoming the lack of skills by conducting individual consultations, involving pupils/students to work in technical creativity clubs, participation in master classes and STEM education. Teachers and masters of working training constantly undergo internships at enterprises and improve their qualifications, in particular through participation in international projects and grant programs. Young specialists and other employees of enterprises are also involved in the educational process.

Solving the raised problem is not a difficult technology for experts. Today, they are able to provide scientific and pedagogical workers with internship opportunities both within the state and abroad through advanced training, educational tours, exchange of experience and various areas of cooperation. Educational institutions should have corporate values and aspirations to improve the skills of not only students, but also the teaching segment, which is related to self-study, self-improvement of teachers, increasing their competences by taking into account teaching activities,





innovations, digitization processes, attracting the possibilities of artificial intelligence, modern teaching methods, etc.

According to the block ‘Using comparison tools and the possibility of transferring skills and qualifications’, the majority (71.4%) of the represented educational institutions apply the norms and provisions of the National Qualifications Framework (NQF) in their practical activities. At the same time, only 42.9% of respondents indicated that they use NQF for recognition, comparison and validation of qualifications. In general, 57.0% of respondents give a low or moderate assessment of the potential of the NQF. Most of them note that the NQF does not help in any way in recognizing the educational level of foreign pupils/students who apply for studies. 71.4% of respondents do not use EU tools such as ESCO, Europass, etc. to ensure the visibility and transparency of their qualifications in the national qualifications system and abroad.

According to the last block ‘The need for support of educational institutions for the development of partnerships with other countries’, experts indicate the most urgent need for the provision of quality educational services in the future for such resources as: human (lack of qualified personnel), material (partially outdated material and technical base), and financial. Among the priority components/expenditures that will most require investment and support in the post-war reconstruction period of Ukraine, educational institutions identified: equipment and more opportunities for self-education, for participation in international grant projects; restoration or formation of the institution's infrastructure; training of teachers and development of their new competencies; development of new educational programs.

All respondents are interested in cooperation with providers of educational services from other countries (non-EU members), whose citizens will potentially come to Ukraine during its post-



war reconstruction. They see the priority areas of such cooperation as: exchange of experience; investment attraction; organization and implementation of joint international research projects; development of dual education and adult education; differentiation of the educational process; provision of services for training and retraining of qualified employees.

5.3. Opinions of representatives of central and regional authorities responsible for employment policy and the labour market

To study the opinions of representatives of central and regional authorities responsible for employment policy and the labour market, anonymous interviews were conducted with representatives of the National Qualifications Agency, the Ministry of Energy of Ukraine, and the Ukrainian Union of Industrialists and Entrepreneurs.

To the open question: ‘What problems in the sphere of employment and the labour market are the most difficult and urgent, above all, in the wartime?’ the respondents gave similar answers, which boil down to the following: a shortage of qualified and highly qualified workers who were forced to leave the regions and the country due to active military operations, which directly affects the quality of the performance of assigned tasks and increases the burden on the available personnel; the mobilization of part of the workers to the ranks of the Armed Forces causes a significant shortage of qualified candidates on the labour market, the vast majority of whom are men; increased psychological burnout and fatigue, an increase in diseases against the background of constant stress, physical injuries to people as a result of shelling of the civilian population;





regional redistribution of labour within the country (its concentration in safer regions); reluctance of some men to find official employment.

Among the cause-and-effect relationships of these problems with the supply and demand for skills and qualifications, experts single out the following: the problem of structured unemployment arises, which consists of narrow-profile and specialized qualifications of new candidates applying for vacant positions and jobs (qualifications offered by employees who do not meet the needs of employers), which, in turn, requires employers' resources for re-profiling and training new employees; there is a huge need for the ability to quickly learn and relearn, to acquire new skills in order to acquire new qualifications (full or partial) and occupy a suitable position with a decent salary; the negative impact of the pre-war transfer of the vocational education system to the regional level of management was manifested, due to which displaced enterprises cannot ensure the relocation of workers and resume production due to the lack of personnel in the new territories.

To the question about information support for the formation of profile decisions, conclusions and proposals, the respondents answered as follows: through their own search and the results of other external studies (questionnaires, testing, analytical reports of state and private scientific centres and institutions) on the basis of which a breakdown of the state of the necessary labour market segment is made. In addition, representatives of the organization participate in domestic and foreign trainings and exercises on various issues of the labour market; through the LMI BigData System.

The interviewees see the manifestations of the gender aspect in the labour market and the qualification market in the following way: the impact is present as a result of the outflow of

personnel due to military actions in the state, which affects the increase in the disparity among employees according to gender (the quantitative female part of employees increases).

To the question: ‘Are there certain sectors where gender imbalances contribute to these problems, and what policies are being considered or implemented to address them, especially during wartime?’ respondents note that: such sectors are present in the economy. They felt an increase in negative trends in personnel policy in terms of an increase in gender imbalance among their employees (for example, those enterprises that did not have a mechanism for the reservation of their employees worked out with the state defence sector in the first year of a full-scale invasion for various reasons). Currently, most enterprises and organizations are developing their internal HR policies for training and retraining new employees in order to reduce the gender imbalance. In addition, digital opportunities for cooperation with the defence sector of the state are being developed, which allow you to quickly and efficiently book your employees on legal grounds in order to ensure the strengthening of the state's economy with your activities; the government does not consider these problems on their merits.

Regarding the place and role of social partners in these matters, the opinions of the interviewees were divided. Thus, some of them claim that their respective activities are reduced to the important role of mediators (a kind of bridge) between employers and applicants for vacant positions. For example, organizations that take care of internal transfers of persons, help in finding a job and establish connections with new employers. In addition, state and local authorities play their role in the processes of relocation of enterprises due to active hostilities, where there are also direct processes and issues of the labour market that need to be settled and resolved. Others note that their role in the field of qualifications is quite low. The respondents defined their participation



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in the processes of formation and use of skills among employees as follows: ensuring, on their part, the adoption of management decisions within the limits and in the manner prescribed by regulatory acts aimed at maintaining the balance of demand and supply of skills in the labour market in search of new employees and ensuring (in if necessary) reprofiling of existing employees of the organization; in the creation of qualification centres, etc.

Experts identified the situation with labour migration and refugees from the war as a catastrophic and significant problem for the labour market and employment in Ukraine. Among the challenges and problems arising from this for the country, they single out the following: the shortage of personnel requires the filling of personnel due to the repurposing of existing workers and the unemployed, which requires additional funds and time. In the post-war period, the issue of attracting labour migrants from third countries will arise, who will need training and advanced training for the purpose of professional compliance at their workplaces. Respondents note that possible advantages of the process of labour migration for the country may be the economic side of attracting labour resources from countries with low economic levels; circular/return migrations will be able to play a positive role in rebuilding the national economy during construction boom periods (when the labour market need will be narrowed to specialized industry specialists); thanks to temporary migrants, ties between Ukraine and European countries are strengthened; emigrants influence local communities, which in turn stimulate the governments of their countries to continue helping Ukraine; Ukrainians who return home will have European experience, which they will implement in the Motherland, including in the field of qualifications.

Experts singled out the employment policy aimed at improving the state of the labour market, namely, the focus on the employment of military veterans, which is supported in



organizations and institutions and enterprises, society. But all other employment policies require economic stimulation, which is impossible in full during the period of active hostilities and state budget deficit.

Two respondents praised the current impact of National Qualifications System (NQS) tools (National Qualifications Framework (NQF), vocational and outcome-based education standards, etc.) and their link to international/regional qualifications frameworks (EQF, AQF) to solve the problems of matching the demand and supply for qualifications, and the migration of qualified labour from Ukraine. One respondent gave a low rating.

Government representatives note that the NQS tools play their important role, which is primarily illustrated by their connection with the international/regional framework of qualifications (EQF, AQF), under the conditions of full functioning of the relevant tools in the post-war period, they will be able to take their place in decision-making and regulation of labour market issues. The future potential of the profile measures is that: by comparing the NQF with the EQF, we will be able to indicate the NQF level of professional qualifications in diplomas and certificates, and later EQF in our qualifications and connect our databases or registers of qualifications with the relevant databases and registers of other countries through the EUROPASS platform, which is managed by the European Commission; an official comparison of the NQF with the EQF will make our system of qualifications clearer. This will have a positive impact on the inflow of investments, as investors will better understand the potential of Ukraine in providing qualified workers for their enterprises; comparison will contribute to the recognition of qualifications obtained abroad and, as a result, filling the Ukrainian labour market with qualified workers; the comparison will have a positive impact on the quality of educational and professional qualifications, as compliance with the general



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principles of EQF on quality assurance should be guaranteed; obstacles to the understanding and recognition of qualifications will be overcome by connecting domestic databases and registers of qualifications with relevant databases and registers of other countries through the EUROPASS platform.

To the question: ‘What could be potentially fruitful areas of policy study and cooperation with politicians and institutions of the EU and its member states in the search for sustainable and mutually beneficial ways of labour migration?’ the interviewees gave the following answers: the way to find options for the voluntary return of labour migrants who left due to active military operations after the end of the war to their own countries (ensuring all the necessary conditions and long-term support of the relevant categories of labour migration from the EU). The scope of training of domestic representatives of companies and organizations by EU representatives in overcoming issues of structured unemployment, gender imbalance among employees of enterprises and organizations and other problems of the labour market caused by active hostilities and in the post-war period; the development and formation of the NQS, as a set of mechanisms for legal and institutional regulation of employee qualifications, taking into account the needs of the labour market and the possibilities of the education and training system; comparison of NQF and EQF; development of professional standards; improvement of the Register of qualifications; development of National Europass centers, Euroguidance, EQF NCP.

5.4. Opinions of representatives of central and regional authorities responsible for policy in the field of education, skills and qualifications

To study the opinions of representatives of central and regional authorities responsible for policy in the field of education, skill formation and qualifications, anonymous interviews were conducted with representatives of the National Qualifications Agency, the Ministry of Education and Science of Ukraine, the Ukrainian Union of Industrialists and Entrepreneurs, and the regional body for methodological support of VET institutions.

To the question: ‘What are the most priority tasks related to balancing the demand and supply of skills and qualifications in Ukraine?’ respondents expressed themselves as follows: labour market statistics are necessary in dynamics; it is important for the education system to promptly respond to the needs of employers in terms of qualifications, new skills and abilities; the expediency of defining professional standards by the main developer with the participation of employers' educators, their participation in the development of educational programs, work curricula; rapid transition of Ukraine to professional standards; cooperation and communication of employers and the field of education at the level of a specific subject of educational activity and enterprise, mutual and constant search for counterparties; completeness, openness and availability of information about the needs of the labour market on the one hand, and on the other hand, opportunities in the field of education.

Among the sectors of the economy where the highest discrepancy in the qualifications of employees was identified, the interviewees identified the following: mechanical engineering; electronics; health care. The reasons for this discrepancy are: low quality of educational services;

professional education is removed from technological processes at enterprises due to the absence of legal regulations that would regulate it; knowledge-intensive and technological types of economic activity require large costs over a long period of time, and the result (return, economic effect, opportunities for obtaining profits) is prolonged in time, not always obvious and not always expressed in financial and material dimensions.

The majority of respondents believe that in Ukraine it is obvious that employers and the economy are oriented towards their requirements for qualifications due to the development of professional standards (as of September 1, 2024, 350 are in force and about 400 projects are being developed), qualification centres (as of the specified date – 115), where about 3,000 applicants of professional qualifications underwent independent evaluation, recognition of the results of non-formal and informal education, etc.

With regard to gender disparities in the relevant field, the interviewees agree that the acute shortage of labour force during the war accelerates the blurring of the gender characteristics of certain professions and contributes to the elimination of gender imbalance, where it could be.

Among the sectors of the economy where certain gender problems are most present, individual respondents single out: metallurgy, coal and chemical industry, road construction, humanitarian demining, etc.

Regarding the impact of foreign labour migration on the current practice and policy in the field of education and training, the interviewees note its absence in wartime conditions. But in the future, when the period of post-war reconstruction will come, Ukraine should take into account the practices of EU countries and develop its own strategy when attracting labour from outside.



Among the problems created by the regional movement of IDPs for the Ukrainian system of education and qualifications, the respondents pointed to the following: the quality of training is deteriorating due to the mass false admission to training of persons who avoid service in the Armed Forces; there are no legislative and normative documents that would determine the role and rights of the regional government to use its own resources (financial, material) regarding the continuation of the education of IDPs, the education of citizens from other territories in educational institutions, etc.

According to the respondents, educational service providers respond to challenges related to migration/refugees by: using resources of international projects, donors, grants for the use of modern educational technologies; some of them are focused on the possibility of earning additional funds; more active training of the adult population, in particular at the request of employers, by conducting shortened courses, through dual education, etc.; adapt to new challenges due to changes in the organization of the educational process, requirements for pedagogical and scientific-pedagogical workers, the content of education.

The main policy potential in the field of vocational education and training and the formation of skills for solving problems related to migration/refugees, presented by the central/regional bodies of the executive power, the All-Ukrainian union, according to their representatives, is as follows: the formation of the practice of qualitative assessment and the assignment of professional qualifications; use of the existing VET institutions network, proven forms of training, personnel and material resources; implementation of directions for the development of professional standards, creation and maintenance of the activity of qualification centres, etc.



Three out of 4 experts give a low assessment of the current impact of NQS tools and NQF on solving the problems of the matching of demand and supply for qualifications, and the migration of qualified labour from Ukraine.

To overcome this situation, they see the implementation of the following (sometimes opposite) measures: prevent the assignment of professional qualifications without proper accreditation of business entities; creation of a network of professional education centres with the possibility of providing graduates with the 4-5 level of the NQF; comparison of the NQF with the European Qualifications Framework, which will simplify the recognition of Ukrainian qualifications in EU countries, and European qualifications in Ukraine.

The respondents differed in their assessment of the potential of state financing of the vocational education and training system to improve the quality of education, training and employment of its students, especially during the wartime period. Moderate, high, and low ratings were defined.

To the question: "To what extent and how can increasing/improving investments in education and the training system help to cope with the problems of labour migration and refugees?" respondents gave the following answers: provided the quality is adequate, the impact will be very high; by attracting additional financial and material resources of employers, using various state funds; access to education expands opportunities for self-realization.

Among the potentially fruitful areas of cooperation with politicians and institutions of the EU and its member states in the search for sustainable and mutually beneficial development of education and training for Ukraine and the EU, the interviewees noted the following: to spread the technologies and practice of quality assessment of learning outcomes at all levels; introduce state



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regulation of certain important professions in accordance with the EU requirements; spread international projects, introduce grants to meet the needs of the material base of the educational process for IDPs and migrants; to develop the NQS, in particular, in the matters of comparison of the NQF and the EQF, the development of the Unified Register of Qualifications, the development of professional standards and advisory support for integration into the pan-European qualification space; jointly develop the direction of adult education.

Among the support from the EU, necessary for the development of personnel training and skill formation in war and post-war times, experts highlighted: the introduction of modern learning technologies and evaluation of learning results, first of all for such fields of knowledge as engineering, health care and agronomy; formation of a quality system of accreditation of educational programs and educational institutions; assistance in the development of educational programs in terms of taking into account the requirements of professional standards in the training of specialists; investing in the development of professional standards; financial support for the organization of processes of qualification improvement and re-qualification; renewal of the material base of educational institutions (scientific, technological), taking into account innovative standards for energy efficiency and energy independence.





Conclusions and recommendations

The conducted research makes it possible to draw the following general conclusions:

1. Despite the global and catastrophic loss of the country, its economy and population, starting from 2023, positive trends are observed in the field of employment, the labour market, the market of educational services and qualifications, which indicates that the authorities with the assistance of foreign partners managed to stabilize the situation with the use of labour and personnel training.

2. The key factors of such stabilization were: reducing the load on the domestic labour market due to the outflow of refugees outside the country; the transition of the economy to the "rails" of martial law, which leads to the creation of new jobs and the request for the training of a specialized workforce; removal of many regulatory norms in the field of employment and qualifications, reduction of the volume and terms of training, simplification of its content; a high level of mastering of key and general competencies by domestic workers and youth, which allows them to be more professionally and regionally mobile in local labour markets in extreme conditions, to adapt to new conditions and requirements, in particular outside the border or in the territories of temporary relocation.

3. A number of positive trends are observed in the field of personnel training, namely: the popularity of higher education and the stable demand for professional (vocational and technical) education are maintained; growth and development of distance and online education; reorientation to STEM education; decrease in the number of graduates of humanitarian specialties; carrier



guidance and flexibility of educational programs; strengthening cooperation with employers; strengthening of academic mobility and deepening of international cooperation.

4. During the war period, the following trends are characteristic for the development of the qualifications market: the growth of demand for specific qualifications inherent in the economy of the martial law; reorientation of the economy and the emergence/development of new branches/types of economic activity; increased attention of employers and providers of educational services to retraining and advanced training of the adult population; deepening of European integration and international cooperation.

5. The results of a questionnaire survey/interview of representatives of enterprises, providers of educational services, central and regional authorities and social partners at various levels of representation testify to their understanding of the problems and tasks related to balancing the interests of all key stakeholders in the labour market. It is important that they are almost unanimous in their assessment that the war period forced all of them to cooperate more quickly, efficiently and effectively, especially at the regional level and at the level of interaction between the enterprise and educational institutions.

Among the most generalized proposals, we highlight the following:

1. Harmonization of the NQS with the best analogues in the EU, in particular its reformation and transition to approaches to forecasting, planning, evaluation, distribution and use of qualifications in labour markets.

2. Guideline for multiple consolidation of educational institutions according to the cluster principle and through the creation of corporate universities, hubs and international centres.



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3. Abandonment of outdated and bureaucratic approaches in the formation of the content and methods of education, reorientation (in the war and post-war periods) to a wide range of transformation of the segment of adult education.

4. Creation of a new, independent and transparent system of internal and external evaluation of the quality of educational services, recognition and assignment of professional qualifications.

5. Implementation of the results of this research in the preparation of relevant projects of legislative, normative and methodological direction, holding an information storm among profile implementers of policies, etc.



References

Botelho V (2022) The impact of the influx of Ukrainian refugees on the euro area labour force. *Economic Bulletin Boxes 4*. Available at: https://www.ecb.europa.eu/press/economic-bulletin/focus/2022/html/ecb.ebbox202204_03~c9ddc08308.en.html.

Brücker H (2022) War in the Ukraine: Consequences for the governance of refugee migration and integration. *CESifo Forum* 23(04): 41-48. Available at: <https://www.cesifo.org/DocDL/CESifo-Forum-2022-4-bruecker-ukrainian-refugee-crisis-july.pdf>.

BusinessUA. (2024) Employers will lay off Ukrainians en masse (in Ukrainian). Available at: <https://businessua.com/robota/94091robotodavci-masovo-zvilnyatimut-ukrainciv.html>

Cabinet of Ministers of Ukraine. (2011) Resolution No. 1341 on the approval of the National Qualifications Framework (in Ukrainian). Available at: <https://zakon.rada.gov.ua/laws/show/1341-2011-%D0%BF#Text>.

Cabinet of Ministers of Ukraine. (2015) Resolution No. 244 on the establishment of the National Agency for Higher Education Quality Assurance (in Ukrainian). Available at: <https://zakon.rada.gov.ua/laws/show/244-2015-%D0%BF?lang=en#Text>.

Cabinet of Ministers of Ukraine. (2018) Resolution No. 1029 on some issues of the National Qualifications Agency (in Ukrainian). Available at: <https://zakon.rada.gov.ua/laws/show/1029-2018-%D0%BF?lang=en#Text>.

Cabinet of Ministers of Ukraine. (2021) Resolution No. 1077 on the approval of the State Standard of Professional (Vocational-Technical) Education (in Ukrainian). Available at: <https://zakon.rada.gov.ua/laws/show/1077-2021-%D0%BF#Text>.



Deimantas VJ, and Şanlıtürk AE (2023) Refugees from Ukraine in Lithuania and the Lithuanian labour market: A preliminary assessment. Available at: <https://publications.iom.int/system/files/pdf/PUB2023-030-R-MSR76.pdf>.

Duszczyk M, and Kaczmarczyk P (2022) War and migration: the recent influx from Ukraine into Poland and possible scenarios for the future. CRM Newsletter No. 4 (39), April 2022. Available at: https://www.migracje.uw.edu.pl/wp-content/uploads/2022/04/Spotlight-APRIL-2022.pdf?utm_source=miragenews&utm_medium=miragenews&utm_campaign=news.

Duszczyk M, Górny A, Kaczmarczyk P, and Kubisiak A (2023) War refugees from Ukraine in Poland—one year after the Russian aggression. Socioeconomic consequences and challenges. *Regional Science Policy & Practice* 15(1): 181-200. <https://doi.org/10.1111/rsp3.12642>.

Dyachkina A (2024) According to Shmyhal, Ukraine lost 3.5 million jobs due to the war (in Ukrainian). Available at: <https://www.epravda.com.ua/news/2024/02/21/710203/>.

European Commission. (2023a) COMMISSION STAFF WORKING DOCUMENT Ukraine 2023 Report. Available at: https://neighbourhood-enlargement.ec.europa.eu/system/files/2023-11/SWD_2023_699%20Ukraine%20report.pdf

European Commission. (2023b) Report on the comparison of the European Qualifications Framework and the Ukrainian National Qualifications Framework (in Ukrainian). Available at: <https://europass.europa.eu/system/files/2023-02/Comparison%20report%20final%20rev%2023-02-2023%20UA.pdf>

EuroStat. (2024) Available at: <https://ec.europa.eu/eurostat>.



Giacomo A, Boeri G, Kudlyak TM, and Zholud O (2022) The Labor Market in Ukraine: Rebuild Better. IZA Policy Paper No. 196. Available at: <https://docs.iza.org/pp196.pdf>

Giacomo A, Boeri G, Kudlyak TM, and Zholud O (2023) The Labor Market in Ukraine: Rebuild Better. Available at: <https://cepr.org/voxeu/columns/labour-market-ukraine-rebuild-better>.

Gromadzki J, and Lewandowski P (2023) Refugees from Ukraine on the Polish labour market. *Social Insurance. Theory and Practice* 155(4): 29-40. DOI:10.5604/01.3001.0016.2353

Harris N (2023) Economic Migration and the European Labour Market. EPC Issue Paper. Available at: <https://www.epc.eu/en/Publications/Economic-Migration-and-the-European-Labour-Market~22a718>.

Hrynkevych O, Levytska O, and Baranyak I (2023) Human resources for regional development in Ukraine: A roadmap for forecasting and determining a regional training request. *Regional Science Policy & Practice* 15(1): 95-107. <https://doi.org/10.1111/rsp3.12625>

Hutter C, and Weber E (2022) Russia-Ukraine war: Short-run production and labour market effects of the energy crisis. IAB-Discussion Paper, No. 10/2022, Institut für Arbeitsmarkt- und Berufsforschung (IAB), Nürnberg. <https://doi.org/10.48720/IAB.DP.2210>.

ILO. (2022) The impact of the Ukraine crisis on the world of work: Initial assessments. Available at: https://www.ilo.org/sites/default/files/wcmsp5/groups/public/@europe/@ro-geneva/documents/briefingnote/wcms_844295.pdf

ILO. (2023) Access to Labour Markets and Employment in Europe for Refugees from Ukraine. Available at: <https://dtm.iom.int/reports/ukraine-response-regional-quarterly-overview-access-labour-markets-and-employment-europe>.





Interfax-Ukraine. (2024) The number of vacancies in the labor market has increased to a new record since the beginning of the war (in Ukrainian). Available at: <https://interfax.com.ua/news/economic/985215.html>

Katsiaficas C, Frelak JS, and Castelanelli C (2023) Displacement, integration, and return: What remote work possibilities for Ukrainians?. Available at: <https://reliefweb.int/report/ukraine/displacement-integration-and-return-what-remote-work-possibilities-ukrainians>.

Kubiciel-Lodzińska S, Golebiowska K, Pachocka M, and Dąbrowska A (2024) Comparing pre-war and forced Ukrainian migrants in Poland: Challenges for the labour market and prospects for integration. *International migration* 62(1): 236-251. <https://doi.org/10.1111/imig.13213>

Kucharczyk K (2023) Wojna w Ukrainie zmieniła rynek pracy. Available at: <https://www.rp.pl/analizy-rzeczpospolitej/art38246521-wojna-w-ukrainie-zmienila-rynek-pracy>.

Methodological approaches to determining the volume of the region's need for labor in the short term (in Ukrainian). Available at: <https://smelnikukr.com/wp-admin/post.php?post=93&action=edit>.

Ministry of Education and Science of Ukraine. (2010) The Letter No. 1/9-119 about Methodological recommendations for the implementation of the European Credit Transfer System and its key documents in higher education institutions (in Ukrainian). Available at: https://zakon.rada.gov.ua/rada/show/v_119290-10?lang=en#Text.

Ministry of Education and Science of Ukraine. (2020) National Qualifications Framework (in Ukrainian). Available at: <https://mon.gov.ua/tag/natsionalna-ramka-kvalifikatsiy?&type=all&tag=natsionalna-ramka-kvalifikatsiy>



SKILLS 4 JUSTICE



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Ministry of Education and Science of Ukraine. (2021) The Order No. 216 on the approval of the Methodical Recommendations for the Development of Professional (Vocational-Technical) Education Standards (in Ukrainian). Available at: <https://zakon.rada.gov.ua/rada/show/v0216729-21#Text>.

Ministry of Education and Science of Ukraine. (2024) Map of the damaged and destroyed institutions. Available at: <https://saveschools.in.ua/en/>

National Qualifications Agency. (2018) Register of qualifications. Information on professional standards (in Ukrainian). Available at: <https://register.nqa.gov.ua/profstandarts>

National Qualifications Agency. (2022) Register of qualifications. Information on qualification centres (in Ukrainian). Available at: <https://data.nqa.gov.ua/qualification-centers/>.

Nielsen SM (2023) *KEY POLICY CHANGES IN EDUCATION, TRAINING AND EMPLOYMENT — UKRAINE 2023* (in Ukrainian). Available at: https://www.etf.europa.eu/sites/default/files/2024-01/Country%20Fiche_Ukraine_2023_UKR_web.pdf

OECD. (2022) The potential contribution of Ukrainian refugees to the labour force in European host countries. *OECD Policy Responses on the Impacts of the War in Ukraine*, OECD Publishing, Paris. <https://doi.org/10.1787/e88a6a55-en>.

OECD. (2023) What we know about the skills and early labour market outcomes of refugees from Ukraine. *OECD Policy Responses on the Impacts of the War in Ukraine*, OECD Publishing, Paris. <https://doi.org/10.1787/c7e694aa-en>.





Pham T, Talavera O, and Wu Z (2023a) Labor markets during war time: Evidence from online job advertisements. Available at: <https://voxukraine.org/en/labor-markets-during-war-time-evidence-from-online-job-advertisements>

Pham T, Talavera O, and Wu Z (2023b) Labor markets during war time: Evidence from online job advertisements. *Journal of comparative economics* 51(4): 1316-1333. <https://doi.org/10.1016/j.jce.2023.06.002>

Romanova N, and Melnyk IP (2017) Social partnership: handbook (in Ukrainian). Kiev. Available at: <https://ekmair.ukma.edu.ua/server/api/core/bitstreams/3a7d8b5c-0d3f-4894-85cd-8ca7f025f067/content>.

Schnitzer M (2023) Why the West needs Ukraine and its IT business. Available at: <https://cepr.org/voxeu/columns/why-west-needs-ukraine-and-its-it-business>.

State Employment Service. (2024) Demand and supply on the registered labor market in 2023 (in Ukrainian). Available at: https://old.dcz.gov.ua/sites/default/files/inf/files/popyt_i_propozyciya_na_rynku_praci_12_2023.pdf

State Employment Service. (n.d.) Analytics and Statistics (in Ukrainian). Available at: <https://old.dcz.gov.ua/analytics/view>.

Strzelecki P, Growiec J, and Wyszynski R (2022) The contribution of immigration from Ukraine to economic growth in Poland. *Review of World Economics* 158(2): 365-399. <https://doi.org/10.1007/s10290-021-00437-y>.



Teke Lloyd A, and Sirkeci I (2022) A Long-Term View of Refugee Flows from Ukraine: War, Insecurities, and Migration. *Migration Letters* 19(4): 523–535.
<https://doi.org/10.59670/ml.v19i4.2313>.

Verkhovna Rada of Ukraine. (2012) Law of Ukraine 4312-VI on Professional Development of Employees. Available at: <https://zakon.rada.gov.ua/laws/show/en/4312-17?lang=uk#Text>.

Verkhovna Rada of Ukraine. (2014) Law of Ukraine 1556-VII on Higher Education. Available at: <https://zakon.rada.gov.ua/laws/show/1556-18?lang=en#Text>.

Verkhovna Rada of Ukraine. (2017) Law of Ukraine 2145-VIII on Education. Available at: <https://zakon.rada.gov.ua/laws/show/2145-19?lang=en#Text>.

Visit Ukraine Today. (n.d.) <https://visitukraine.today/uk/blog/4383/which-countries-have-the-highest-number-of-employed-ukrainian-refugees-in-2024#krayini-z-nainizcim-rivnem-pracevlastuvannya>. Available at: <https://visitukraine.today/blog/4383/which-countries-have-the-highest-number-of-employed-ukrainian-refugees-in-2024>.

Work.UA. (2024) The labor market is coming to life: salaries, the number of job seekers, and competition increased in January (in Ukrainian). Available at: <https://www.work.ua/articles/analytics/3234>