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# Competitiveness of regional labour markets in the Ukrainian-Polish borderland: A comparative analysis

**Abstract:** New challenges of world economic development affect the functioning of labour markets at the international, national and regional levels. The article presents the results of the analysis of the competitiveness of the labour markets in the adjacent border regions of Ukraine and Poland at the national level and in the cross-border dimension. Based on the RCI 2.0 calculation methodology, the effectiveness of the development of labour markets in the Ukrainian-Polish borderland was assessed. Relying on the results of the survey conducted in the form of in-depth interviews, the main trends in the formation of demand and supply for labour force in the border regions of Ukraine were determined. The article examines the impact of the war in Ukraine on the structure of job seekers and the dynamics of migration processes to neighboring EU countries, including Poland as one of the main recipient countries of refugees from Ukraine. The results of the study make it possible to assess the prospects for the development of the labour markets and are of practical importance for the development of effective tools for regulating the labour markets of both countries.

**Key words:** labour markets, competitiveness, border regions, Ukrainian-Polish borderland

**JEL Classification:** J60, R10, O57

## Introduction

The global economy continues to recover slowly in the conditions of geopolitical fragmentation, post-pandemic realities, and the cost-of-living crisis (IMF 2023). Despite some intensification of regionalisation processes since the beginning of 2020, according to the latest study (DHL 2022), international flows of trade, capital, information, and people show no signs of a long-term decline. In con-

trast, international trade in goods was 10% higher than before the pandemic in mid-2022. International education and migration were slowed by the pandemic but the effects were much less severe for these flows than for travel. The war in Ukraine has caused a large increase in the number of refugees and internally displaced persons (IDPs).

Currently, the main trends in the development of the global labour market are (ILOSTAT 2023):

- Global unemployment remains above pre-pandemic level and is projected to edge up slightly in both 2023 and 2024.
- Post pandemic Covid-19 economic recovery has caused a slight increase in the incidence of informality worldwide.
- Labour productivity is on the downward growth trend, from an average annual rate of 1.8 percent between 2000–14 to 1.4 per cent between 2015–22.
- The COVID-19 pandemic exacerbated a trend of increasing the number of youth who are not in education, employment, or training (NEET). In 2022, their share reached 23.5 percent.
- The process of achieving Gender parity in managerial positions is very slow, with an increase of only 0.9 percentage points since 2015.
- There is still a significant gap in the wages of women and men.

On top of the COVID-19 pandemic, new challenges have emerged that are also having detrimental effects on the world of work, including sharp rises in inflation, supply chain disruptions and the war in Ukraine (ILOSTAT 2023). These multiple challenges are affecting prospects for the development of labour markets at the international, national and regional levels. In recent years, an important factor in strengthening European integration has been the development of cross-border labour markets, which cover the labour markets of border regions of neighboring countries (Parenti 2021).

The regional labour markets in the border regions are affected by the peculiarities of the development of the labour markets in the adjacent regions of the neighboring countries. Their development depends on a number of factors, such as wage differences, job opportunities, transport connections, language, cultural differences, social security and taxation systems (The Chambers of Commerce Euregio Meuse-Rhine). In the conditions of globalisation, limited resources and strengthening of cross-border mobility processes, an important characteristic of the development of labour markets is their competitiveness.

The aim of this article is to study the competitiveness of regional labour markets in the Ukrainian-Polish borderland. The following goals were established in order to achieve this purpose:

- To analyse the competitiveness of the labour markets of adjacent border regions of Poland and Ukraine at the national level.
- To assess their effectiveness in the cross-border dimension in the period up to 2022.
- To study the impact of the war in Ukraine on their development.

## Literature review

Over the past decades, labour markets around the world have become increasingly integrated due to the removal of restrictions on trade and capital flows, and rapid technological progress. The increasing globalisation of labour raises important challenges for policymakers. They must develop new tools and policy mechanisms to ensure that domestic economies are sufficiently flexible to be able to adjust and respond to the pressures of globalisation (IMF Working paper 2007, p. 19).

The unprecedented challenges to the world's labour markets have influenced a sharp increase in the unemployment rate, a decrease in the employment opportunities for jobseekers and mismatching between jobs (vacancies) and workers. The European Training Foundation carried out a study devoted to the assessment of the effectiveness of ALMPs (Active Labour Market Policies) in crisis and post-crisis situations with the aim of developing innovative solutions in response to the impact of current challenges (ETF 2022).

The development of efficient labour markets ensures match workers with the employment according to their skill-set (Welch 2018, Cahuc 2001). As a result, the productivity of the workforce boosts up, making them more efficient. The labour market motivates the employee to give more incentives. The policy aimed at promoting training and boosting skills up helps to retain and utilize the talent at its complete potential. It also affects labour productivity. The labour markets that are flexible tend to efficiently reallocate the resources as per the emerging requirements (Gordon 2023). An important role in improving labour market efficiency plays immigration (Münz 2007).

The development of labour markets in border regions is influenced by the level of cross-border interaction and, accordingly, the level of population mobility, which largely depends on the influence of external and internal factors (van der Velde 1998). An important role in building transnational links and cohesion in border regions can be played by trade unions (Thomas 2020).

Niebuhr (2004, p. 17) notes, that on average, border regions in the EU are characterised by a lower degree of labour market integration with neighbouring regions than non-border areas due to significant border impediments that hamper equilibrating forces between labour markets on both sides of national frontiers. On average unemployment and per capita income differ more among adjacent foreign regions than between neighbouring regional labour markets in the same member state.

The International Labour Organization database includes statistics on labour productivity, labour cost, and consumer prices among the indicators of competitiveness (ILO 2023). In a statement delivered at the Institute of International and European Affairs, ILO Director-general Guy Ryder emphasized that the long-term competitiveness will not come from indefinite downward pressure on wages and living standards (ILO 2015).

Scharle (2003, p. 3–4) understands competitiveness to mean growth potential. Therefore, it is important to examine the size and efficiency of use of re-

sources. In case of labour as a resource, the utilisation of resources available to the economy is characterised by the size of the labour supply, the flexibility of the labour market and the qualification of the labour force. Ostoj (2015, p. 84–88) examines the mechanisms with which help the labour market efficiency influences the level of economy's productivity and therefore its competitiveness.

Vasyltsiv et al. (2023, p. 680) determine the labour market competitiveness as the ability of the labour market, as a complex system of social relations and connections, to compete for the internal and external human resources of the state (region) due to a high-quality competitive environment that shapes the labour market and efficient state regulation. It is important to note that a competitive labour market should ensure migration security and economic growth capacity.

The competitiveness of the national labour market is determined by the synergistic interaction of a number of factors and properties that create more attractive working conditions for highly qualified employees, and a more favorable investment environment for employers (Marshavin et al. 2022, p. 7).

Russia's large-scale invasion of Ukraine triggered one of the biggest humanitarian crises in Europe since World War II. As a result of the war, there was a large-scale forced migration of tens of millions of Ukrainians who changed their place of residence, of which 5,826,700 recorded in Europe as of 22 October 2023 (UNHCR 2023). Beyond the humanitarian costs of the aggression against Ukraine, its impact on economic and labour market conditions in the country has been severe. The damage to infrastructure and enterprises and a considerably reduced labour force have greatly curtailed the productive capacity of the country. In the report of the National Bank of Ukraine for July 2023, it is noted that the economy of Ukraine will remain below its potential level for a long time due to disruptions in logistics and slow recovery of the labour market. Unemployment will exceed the pre-war level, as the change in the structure of the economy will lead to disparities in the labour market (NBU 2023).

The labour market outlook in Ukraine remains highly uncertain. In addition to these employment effects, the ILO estimates that approximately 1.7 million refugees, overwhelmingly women, were employed in Ukraine before they fled the country (mostly for Western Europe). These previously employed refugees accounted for 11 percent of the country's total workforce before the conflict (ILO 2023). As of 1 October 2023, nearly one million refugees from Ukraine are currently recorded in Poland, the majority women, and children, representing some 2.5 percent of the total population in Poland (UNHCR Poland Factsheet 2023).

The REACH survey at the Polish border showed that the main factors influencing the choice of destination country by Ukrainian refugees were: family or friends at the place of arrival (39%), proximity to Ukraine (31%) and advice received at reception centers (17%). However, macroeconomic and labour market conditions are likely to play a more important role in migrants' choice of countries over time (NBU 2022).

Current researches on labour markets' development pay less attention to the issues of regional labour markets in border regions. Refugees and IDPs have significantly changed both the structure of supply and the structure of demand

in the border labour markets of the Ukrainian-Polish borderland. This article is dedicated to the study of modern features of the development of regional labour markets in the Ukrainian-Polish borderland.

## **Methodology**

### **Data collection**

Quantitative and qualitative data were used. These include the statistics provided by the State Statistical Service of Ukraine in general and across its regions and European Commission. In March–May 2023, in-depth interviews were conducted with representatives of the Employment Services of Ukraine at the level of raions (the second-level administrative division in Ukraine).

### **Assessment of the effectiveness of the development of regional labour markets in the Ukrainian-Polish borderland**

The analysis of competitiveness of the regional labour markets at the national level was carried out on the basis of the EU Regional Competitiveness Index (RCI) and the Competitiveness Index of the regions of Ukraine. Efficient and flexible labour markets contribute to the efficient allocation of resources (Schwab, Porter 2007) and are an important component of regional competitiveness.

The EU Regional Competitiveness Index has been calculated since 2010 and is a composite measure, building on 68 underlying indicators, of which 48 are at the regional level. The underlying 68 indicators are grouped into 11 different pillars and 3 sub-indices gradually moving from enabling factors of competitiveness to cutting edge ones. Efficiency subindex consists of three pillars: Higher education, Labour Market efficiency and Market size (EU Regional Competitiveness Index 2.0 2023).

The procedure for calculating the Competitiveness Index of the regions of Ukraine was approved by the Resolution of the Cabinet of Ministers of Ukraine dated December 20, 2017 No. 1029 “Some issues of improving the system of monitoring and evaluating the effectiveness of the implementation of state regional policy” (Resolution of the CMU 2017). As of today, the effect of the Resolution is suspended for the period of the implementation of the experimental project regarding the monitoring of damage and destruction caused by the regions of Ukraine as a result of the armed aggression of the Russian Federation based on the geo-information system in accordance with Resolution of the CMU No. 726 dated 24.06.2022.

The calculation of the competitiveness index of the regions of Ukraine was carried out only once in 2018 at the initiative of the Lviv Regional State Administration (LRSA, 2018). The methodology for calculating the index is close to the methodology for calculating the EU Regional Competitiveness Index. It is

based on 54 indicators grouped into three groups: basic requirements, efficiency enhancers, and innovation potential. Weighting coefficients between blocks are set based on the level of development of the region. One of the sub-indices is the “labour market efficiency” index.

A comparative analysis of the efficiency of regional labour markets in the Ukrainian-Polish borderland was carried out on the basis of the methodology for calculating the sub-index “labour market efficiency” of the RCI 2.0, 2022. All variables and their sources are depicted in Table 1.

Table 1. Variables and their sources

Variables	Sources
Employment rate (excluding agriculture)	European Commission, EU Regional Competitiveness Index 2.0 – 2022 edition; State Statistics Service of Ukraine
Long-term unemployment	
Unemployment rate	
Labour productivity	European Commission, EU Regional Competitiveness Index 2.0 – 2022 edition; State Statistics Service of Ukraine; Statistical Office in Rzeszów; Statistical Office in Lublin
Gender balance unemployment	European Commission, EU Regional Competitiveness Index 2.0 – 2022 edition; State Statistics Service of Ukraine
Gender balance employment	
NEET	
Labour market slack	
Temporary employment	

Sources: developed by the authors.

## **In-depth interviews with representatives of Employment Services of Ukraine**

In order to assess the current situation, identify key problems, challenges and prospects for development in the labour market in the border regions of Ukraine, adjacent to the border regions of Poland, in-depth interviews were conducted with Heads and Deputy Heads of Departments and Branches of the Lviv and Volyn Regional Employment Services. In total, 15 representatives from 9 raions of the border regions of Ukraine participated in the research.

The use of a qualitative research method is justified by the scale of modern migration processes in Ukraine, the turbulence and transformation of the regional and national labour markets of Ukraine as a result of Russia’s military aggression against Ukraine. The use of quantitative methods is, firstly, limited due to the peculiarities of keeping statistical records in Ukraine during the period of martial law and, accordingly, the lack of operational statistical information in public access, and secondly, the nature of the occurrence, the main characteristics of the imbalance of labour markets and its structural deformations require a deeper understanding and research.

The type of in-depth interviews is semi-structured based on a developed questionnaire. In total, the questionnaire included 25 questions of open, closed and semi-open types.

The algorithm for organizing and analyzing the results of the interviews is presented in Annex A (Table A.1).

The final version of the questionnaire was formed based on the results of the analysis of the research questions listed in Table A.2.

## Conducting research and results

### Competitiveness of the labour markets of adjacent border regions of Poland and Ukraine at the national level

The factor of human resources plays one of the leading roles in the system of competitiveness, and preserving its potential is a priority issue for the state. The strengthening of competitiveness is directly related to the improvement of the functioning of the national labour markets (Zhovniir, Bilichenko 2018, p. 304).

The analysis of the development of the regional labour markets of the border regions of Poland with Ukraine in 2022 based on the “Labour market efficiency” index demonstrates a low level of their competitiveness. The efficiency of the labour markets of the Lubelskie and Podkarpackie Voivodeships was the lowest at the national level due to relatively lower employment rates, higher rates of un-

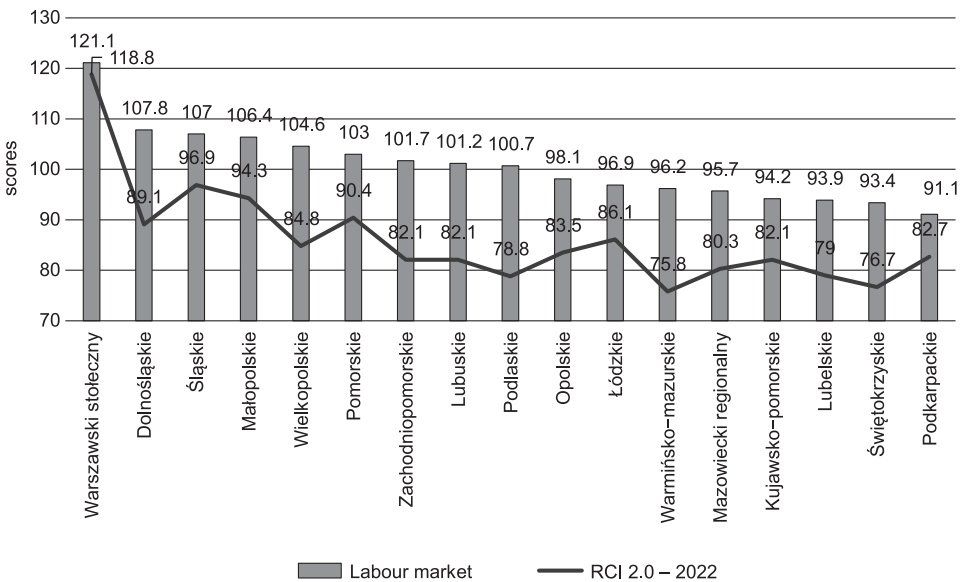


Fig. 1. Rating of Polish regions according to RCI 2.0 – 2022 and sub-index calculated for the Labour market pillar

Source: EU Regional Competitiveness Index 2.0 (2023).

employment and long-term unemployment, and the share of youth who are not in education, employment, or training (NEET indicator) (see Fig. 1).

A study of the development of regional labour markets in Poland in retrospective (2013–19) shows that the labour markets of regions bordering Ukraine are characterized by either slight progress (Podkarpackie Voivodeship) or a decrease in the value of the index (Lubelskie Voivodeship) (see Fig. 2).

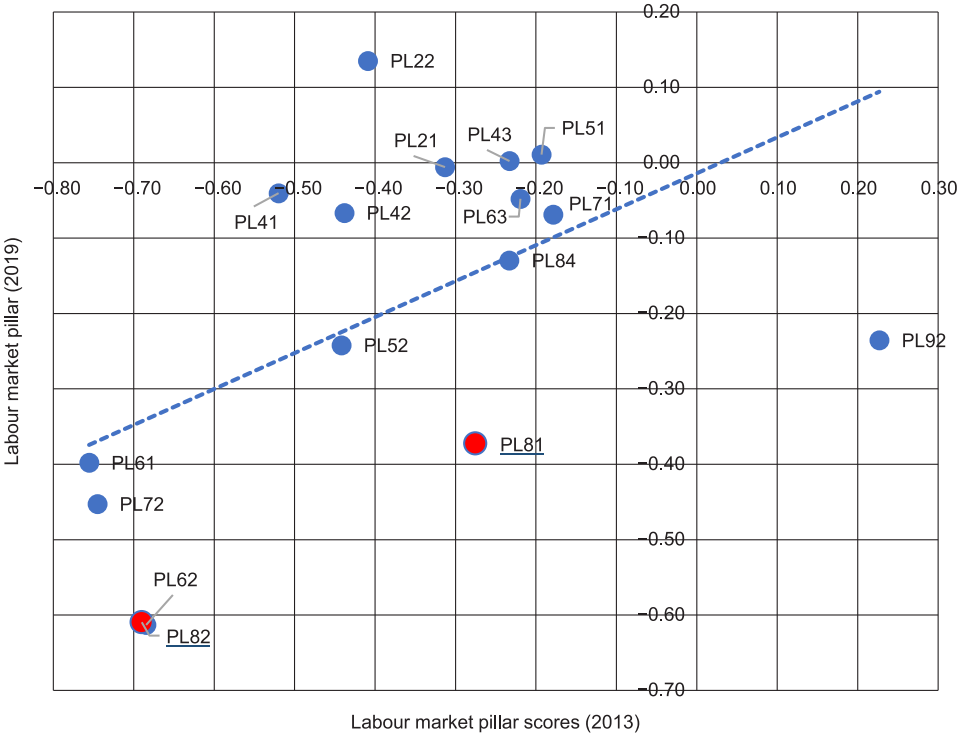


Fig. 2. Labour market pillar scores of Polish regions in 2013–19 (EU28 = 0)  
Sources: EU Regional Competitiveness Index: RCI 2013 (2013), European Regional Competitiveness Index (2019).

\*NUTS PL81 – Lubelskie Voivodeship; PL82 – Podkarpackie Voivodeship

The labour markets of the Śląskie, Wielkopolskie and Zachodniopomorskie Voivodeships show the greatest progress during 2013–19, improving their positions from  $-0.409$  to  $0.14$ , from  $-0.520$  to  $-0.04$  and from  $-0.438$  to  $-0.07$ , respectively. The labour markets of the Śląskie, Dolnośląskie and Lubuskie Voivodeships, which border Slovakia, the Czech Republic and Germany, are characterized by higher or equal European average levels of efficiency.

The calculation of the Competitiveness Index of the Regions of Ukraine in general and by the Labour market pillar as of 2018 is shown in Figure 3.

Among the three border regions of Ukraine, Lvivska Oblast is one of the most developed and ranks third in the overall competitiveness rating of regions and



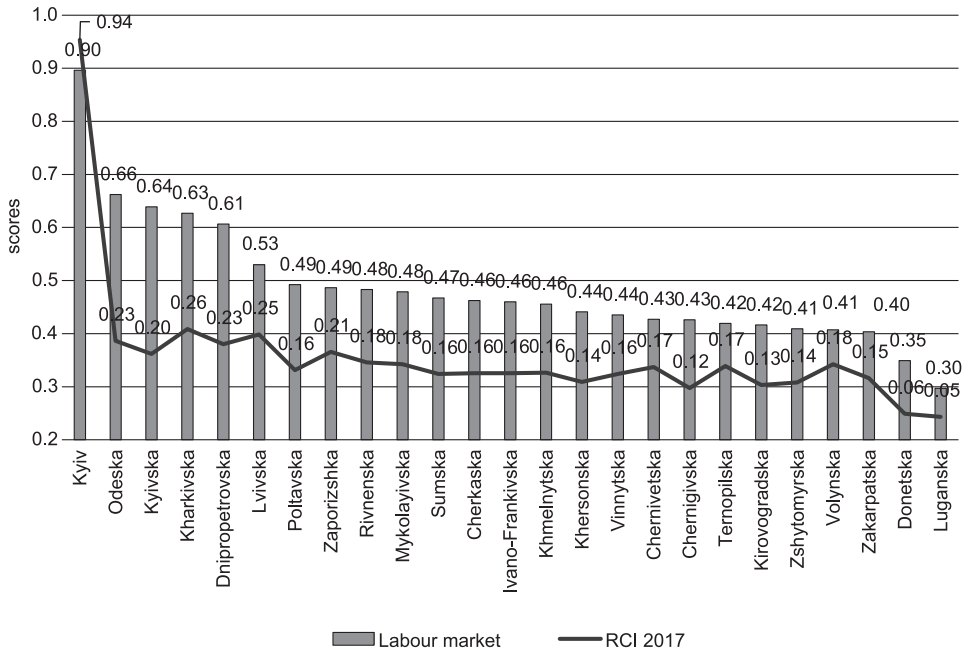


Fig. 3. Rating of Ukrainian regions according to RCI of Ukraine and sub-index calculated for the Labour market pillar, 2018  
Source: built based on LRSA (2018).

sixth in terms of the Labour Market Efficiency sub-index. The Volynska Oblast, whose economy is agrarian-oriented, and the Zakarpatska Oblast, which mostly produces products on the basis of tolling raw materials for its further export, were characterized by the lowest level of labour market development. The Volynska Oblast is characterized by high unemployment rates and low employment rates. The Zakarpatska Oblast shows one of the lowest indicators of labour productivity. Donetska and Luhanska Oblasts close the rating, on the territory of which active hostilities have been taking place since 2014 after the invasion of their territory by Russian troops.

According to Porter (Porter 1990), competitiveness in the international market is determined by competitiveness in the national market. Over the past 10 years, the border regions of Poland have been characterized by low efficiency of labour markets. At the same time, compared to the Volynska and Zakarpatska Oblasts, the Lvivska Oblast is one of the most efficient economies of Ukraine in terms of competitiveness. Therefore, it cannot be unequivocally stated that border regions are a priori less developed due to their distance from economically developed central regions and centers of concentration of investment resources.

## Comparative analysis of the efficiency of the development of labour markets in the adjacent border regions of Poland and Ukraine

A comparative assessment of the development of the labour markets of the border regions of Ukraine and Poland is carried out on the basis of the methodology for assessing the efficiency of labour markets, which is used in the EU (RCI 2.0 2022).

Indicators of labour market efficiency pillar of regional labour markets of border regions in the Ukrainian-Polish borderland are given in Table 2.

Table 2. Labour market efficiency in Ukrainian-Polish Borderland

Indicator name	Polish border regions		Ukrainian border regions		
	Lubelskie Voivodeship	Podkarpackie Voivodeship	Volynska Oblast	Lvivska Oblast	Zakarpatska Oblast
Employment rate (excluding agriculture)	54.69	59.14	38.5	46.45	38.35
Long-term unemployment	1.94	1.42	0.8	2	0.0
Unemployment rate*	5.16	4.84	12.7	7.7	11.1
Labour productivity	47.75** 27.71***	52.15** 27.76***	– 14.82***	– 16.95***	– 8.20***
Gender balance unemployment	0.57	1.32	5.8	–1.3	7.3
Gender balance employment	11	18.20	–10.9	–9	–22
NEET	11.46	11.91		14.3****	
Labour market slack	9.30	7.20		10.7****	
Temporary employment*****	8.58	9.93	1.37	2.13	1.71

Sources: EU Regional Competitiveness Index 2.0 (2023), Statistical Yearbook of Podkarpackie Voivodeship 2022 (2023), Statistical Yearbook of Lubelskie Voivodeship 2022 (2023), State Statistics Service of Ukraine.

\* Indicator description for RCI 2.0, 2022 edition – Share of unemployed persons aged 15–74 as a percentage of the labour force.

Description of the relevant (corresponding) indicator of the official statistics of Ukraine – Share of unemployed persons aged 15–70 as a percentage of the labour force.

\*\* Indicator description for RCI 2.0, 2022 edition – GDP (in terms of PPS) relative to the number of hours worked.

\*\*\* GDP (at constant prices) per worker.

\*\*\*\* In Ukraine, this indicator is calculated only at the national level.

\*\*\*\*\* Indicator description for RCI 2.0, 2022 edition – Temporary employees as a percentage of the total number of employees aged 20–64; In Ukraine, this indicator is calculated as a percentage of the total number of all employees.

The border regions of Ukraine are characterized by significantly lower levels of employment due to a higher share of the population employed in agriculture. Despite the tendency to decrease the share of people employed in agriculture, it remains quite high: as of 2021 in Ukraine, about 17% of the employed population worked in agriculture, in the Volynska, Lvivska, and Zakarpatska Oblasts, respectively, 21%, 17%, and 28%. Before the war, about 30% of the population of Ukraine lived in rural areas.

Employment and unemployment rates provide information as to the level of economic activity in regions, while long-term unemployment indicates the presence of structural problems (Eurostat 2008). In the border regions of Poland and Ukraine, the level of long-term unemployment is relatively low and varies between 0–2%. In some regions of Greece, Spain, and Italy, it is significantly higher than 10%.

The level of unemployment in the Volynska and Zakarpatska Oblasts is almost twice as high as the level in the adjacent border regions of Poland due to limited opportunities for employment.

Labour productivity is one of the main factors contributing to a region's competitiveness. High labour productivity attracts economic activity and increases competitiveness. Labour productivity in the border regions of Poland is 1.6–3.4 times higher. This determines the significantly higher level of wages, which makes the labour markets of the border regions of Poland more competitive compared to the Ukrainian ones and is one of the main economic factors for the migration of the working population of the border regions of Ukraine abroad. More competitive regions have higher GDP and can attract more migrants (Schwab, Porter 2007).

The employment gender gap is also an important aspect as economic growth is dependent upon the possibilities of men and women to have a balance between their professional career and family lives (Eurostat 2008, Lechman 2019, Blahová et al. 2023). Smith and Bettio (2008, p. 9) point out that the significant increase in female labour market participation in the EU in recent years has had an important role to play in improving overall EU employment performance in relation to the Lisbon targets. Among the studied regions, the most gender-balanced labour market is in Lubelskie Voivodeship and Lvivska Oblast. The value of Gender balance employment indicator in the Podkarpatckie Voivodeship and Zakarpatska Oblast is quite high and amounts to about 20 units.

An important indicator of labour market competitiveness is NEET. Traditionally, this indicator is quite high in Mediterranean countries. In the regions of Poland, it ranges from 4.13 in Opolskie Voivodship to 11.92 in Mazowiecki regionally. In the border regions of Poland, it is about 12%, compared to its average value in the EU of 10.2%. In Ukraine, its value is slightly higher and is 14.3%.

In the Lubelskie and Podkarpackie Voivodships, the value of the Labour market slack indicator is the highest among Polish regions, while at the same time it is almost twice as low as its average value in the EU, which is 14.16%, and slightly lower than the average in Ukraine. Its lowest value belongs to the Lubuskie voivodeship and is 3.6%.

According to the indicator of Temporary employment, it is difficult to compare the border regions of Ukraine and Poland due to the different age groups of employees, which are taken into account when calculating this indicator.

To sum up, out of 9 indicators that characterize the level of efficiency of labour markets, the border regions of Poland are more competitive in terms of labour productivity, employment rate and unemployment rate. The labour market of the Lvivska Oblast, which is one of the most economically developed regions of

Ukraine, is commensurate with the labour markets of the Polish border regions in terms of gender balance. However, this is not enough to prevent further educational, labour, etc. migration to Poland.

### **The impact of the war in Ukraine on the development of regional labour markets in Ukrainian-Polish borderland: based on survey data analysis**

A significant number of IDPs, refugees abroad, mobilisation, destruction of enterprises, closure and relocation of businesses, etc. led to a significant narrowing of the labour market, imbalance of demand and supply, widening the regional disparities in Ukrainian regional labour markets. Today, the development of regional labour markets in the border regions of Ukraine is characterized by the following trends:

- new categories of jobseekers have emerged: IDPs who have moved due to hostilities and combatants
- the number of people with disabilities is increasing rapidly
- women predominate among the unemployed, in some raions their share reaches 70–80%
- a shortage of male professions. Male vacancies are almost impossible to fill
- personnel turnover
- uncertainty of employers in the prospects of their business development
- the closer to the border, job seekers are willing to receive a lower salary relative to its average level in the region's economy.

In general, the border employment opportunities are extremely limited due to the practically absence of medium-sized and large enterprises, therefore the salary levels are extremely low here. Proximity to large cities and developed transport interchanges lead to a higher level of economic development of the territories, and therefore higher salaries.

Basic requirements (expectations) of job seekers are: looking for a job with higher pay and better working conditions; transport accessibility and matching the level of qualifications and professional experience.

Among the main problems faced by job seekers in the border regions of Ukraine are limited job opportunities for persons with higher education and high qualification requirements; age limits; the discrepancy between the education received and the expectations, especially of young people who have graduated from universities, with the market offer. And this affects the fairly high rate of NEET compared to other EU regions. Job seekers usually choose full-time work, remote work is more likely to be an exception.

A number of new programs aimed at job seekers were launched and the list of categories covered by the previous instruments of labour market regulation was expanded. State support is being reoriented from passive programs (payment of aid) to active measures (implementation of government programs «eRobota» on issuing micro-grants for business start-up and development, issuing vouchers

for training/retraining/upgrading the qualifications of the adult population, providing compensation to employers who employ IDPs, persons with disability of other categories of citizens, etc.).

Russian aggression against Ukraine caused a wave of refugees abroad, including from the border areas of Ukraine. The majority of respondents noted that mostly women left, which is why many vacancies remain open. The outflow of refugees abroad has had different effects on labour markets depending on the raion of the border regions. Those areas adjacent to the border have felt more the impact of the outflow of refugees abroad. Almost a third of refugees from Ukraine registered for Temporary Protection in Poland as of 21st of February 2023 (UNHCR 2023). A higher level of wages and better working conditions were the factors that influenced labour migration from the Ukrainian border regions.

In those areas that are closer to the border, there was a pendulum migration both before the war and now. The only difference is that now men cannot leave, so women are involved. According to the majority of respondents, it does not have a significant impact on the labour market, although employment services did not monitor it as such.

According to the majority of respondents, the main challenge for the development of the labour market today is the war in Ukraine and, as a result, the lack of male labour force. Due to the war, a lot of employers have problems with logistics, feel a lack of fuel, which, accordingly, leads to an increase in prices. Accordingly, they offer vacancies with low wages. Low wages are also one of the challenges in the labour market, especially in border areas. People are reluctant to go to the minimum wage, because prices are rising, costs are rising. In 2022, prices increased by an average of 26.6%. People often go into shadow employment. Illegal work and depressed mood of people are significant challenges in the labour market. Employers often send people on unpaid leave. There is also a problem with the structural imbalance between labour supply and demand.

In general, all respondents noted that the number of working populations has decreased. Therefore, it is more difficult to fill existing vacancies. There are more vacancies, and filling them is becoming increasingly difficult.

At the moment and in the future, the need for men will grow, and the structure of both demand and supply in the labour market will change in the future. On the territory of Lvivska and Volynska Oblasts, more relocated enterprises will work, which will affect the structure of labour demand. The economy of the regions will increasingly work to meet the country's military needs. It is expected that the border regions will attract investment resources and new types of employment will be created.

## **Conclusions**

Over the past ten years, the development of labour markets in the border regions of Poland has been accompanied by relatively low employment rates, high unem-

ployment rates, including long-term unemployment. An important indicator of the competitiveness of labour markets is the activity and involvement of young people in economic activity in the regions. In the Lubelskie and Podkarpackie Voivodeships, the NEET value is one of the highest and three times higher than in the Opolskie Voivodeship. Unlike the developed eastern industrial regions of Poland, the Lubelskie Voivodeship remains a region with a high share of low-tech agricultural production. Predominance of medium and small towns makes the region less attractive for investment. Despite the high share of industry in the GVA of the Podkarpackie Voivodeship (about 30%), the region is also characterized by low labour productivity and migration of the working-age population. Less developed transport communications and distance from more economically developed EU countries affected the low level of competitiveness of their labour markets at the national level (Fig. 1).

The structure of population settlement, the structure of the economy, and the border location have also become determining factors in the development of the labour markets of the border regions of Ukraine. If the labour markets of the Volynska and Zakarpatska Oblasts are the least competitive, the labour market of the Lvivska Oblast, whose economic structure is more diversified and on whose territory a large agglomeration centered in Lviv is forming, is quite competitive at the national level (Fig. 3).

A comparative analysis of the efficiency of the labour markets of adjacent border regions in the Ukrainian-Polish border area showed that there are greater opportunities for employment in Polish regions, and therefore the demand matches to a greater extent to the volume and structure of the labour supply. Currently, the Ukrainian border regions could not withstand competition with neighboring border regions of Poland (Table 2).

Before the war, due to the relatively high openness of the economies of the regions of Ukraine, the functioning of the labour market in the Ukrainian border regions was largely influenced by globalisation processes. A significant gap in the levels of socio-economic development and border proximity affects the strengthening of labour and educational migration from Ukraine.

Today, it is the security factor that determines the further development of the labour market in Ukraine. It affects the level of employment, the structure of demand, and the level of salaries. Border regions are safer for living, setting up and doing business.

In the short-term and medium-term periods, it is the supply and the structure of the supply that will determine the demand on the labour market in Ukraine. The general mobilisation in Ukraine, the lack of male personnel, the emergence of new categories of job seekers have radically changed the situation on the labour supply market. Formerly "male" professions will become "female".

Labour shortages due to the large number of migrants who will remain abroad will be a significant risk to the economic recovery. At the same time, qualification and regional disparities in the labour market, that is, the discrepancy between what employers need and what employees can offer, remain significant. Thus, according to surveys on the business expectations of enterprises in the II quarter

of 2023, the respondents indicated that the lack of qualified personnel had an increased negative impact on their activities (NBU 2023).

In the context of prospects for the reconstruction and development of the economy of Ukraine and its regions, human resources are the main priority. In the conditions of large-scale outflow of Ukrainian refugees abroad, uneven distribution of the population due to the relocation of the IDPs to safer regions, losses of citizens in the war – the main task is to develop and enhance the human potential.

The course of the war in Ukraine will determine the migration flows from Ukraine, including to Poland.

Full or some knowledge of the official language of the host country, cultural, mental, historical commonality are the factors that will contribute to the migration processes to Poland and in the future. In the post-war period, this will be further facilitated by increased competition with foreign employers for mobile labour.

### Conflict of interest / authors' input

The authors declare that they have no conflict of interest and assures that the work is the result of their own creation.

The division of work on the article was as follows:

- conceptualisation: KP, EŁ,
- methodology: KP,
- research organisation: EŁ,
- formal analysis: KP,
- writing: EŁ, KP.

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## Konkurencyjność regionalnych rynków pracy na pograniczu ukraińsko-polskim: analiza porównawcza

**Zarys treści:** Globalne wyzwania wpływają na funkcjonowanie rynków pracy na poziomie międzynarodowym, krajowym i regionalnym. Artykuł przedstawia wyniki analizy konkurencyjności rynków pracy w regionach przygranicznych Ukrainy i Polski na poziomie krajowym oraz w wymiarze transgranicznym. Na podstawie wskaźnika RCI 2.0 oceniono efektywność rozwoju rynków pracy na pograniczu ukraińsko-polskim. Opierając się na wynikach badania przeprowadzonego w formie wywiadów pogłębionych, określono główne trendy w kształtowaniu popytu i podaży siły roboczej w regionach przygranicznych Ukrainy. Artykuł prezentuje wpływ wojny na Ukrainie na strukturę osób poszukujących pracy oraz dynamikę procesów migracyjnych do sąsiednich krajów UE, w tym Polski jako jednego z głównych krajów przyjmujących uchodźców z Ukrainy. Wyniki badania umożliwiają ocenę perspektyw rozwoju rynków pracy oraz mają praktyczne znaczenie dla opracowania skutecznych narzędzi regulacji rynków pracy obu krajów.

**Słowa kluczowe:** rynki pracy, konkurencyjność, regiony przygraniczne, pogranicze ukraińsko-polskie

**Annex A**

Table A.1. The in-depth interviews’ analysis process

Stages	Steps	Main characteristics of the research
Planning for Analysis	Targeting the analysis (see Table A.2)	The purpose of the research is to assess the impact of the war in Ukraine on the situation on the labour market in the border regions of Ukraine adjacent to Poland
	Developing the in-depth interview questionnaire	The questionnaire consists of 25 questions of both closed and open types
	Creating preliminary codes	At this stage, the information (from closed question types) was coded by using numbers (question number-number of the answer to it)
	Choosing a recording method	Voice recorder, telephone, computer
Information Collection and Management	Recording and note taking	Recording interviews and taking notes
	Managing the information	Clarifying the wording of some questions
Coding, Organisation, and Description	Coding the information	Open questions were coded by series of letters according to topics and subtopics
	Organizing and displaying the information	Entering all information into the computer
	Describing the information	<ul style="list-style-type: none"> <li>• By interviewee;</li> <li>• By code;</li> <li>• By research topic (subtopic)</li> </ul>
Interpretation and validation the results	Drawing conclusions, making recommendations and validating them by discussing previous results with expert scientists in this field	
	Preparing a Research Results and Dissemination	

Sources: developed by the authors.

Table A.2. Targeting the analysis

Research question	Topics	Subtopics
How the war affected the functioning of the labor market in the border regions of Ukraine adjacent to Poland? How does it affect the labor market situation in the border regions of Poland?	General characteristics of the employment services	Raion (name) Raion size (number of residents) Distance to the nearest border crossing point with Poland (km)
	The current situation on the labor market (problems, peculiarities, etc)	Problems that are most often faced by job seekers Age structure of job seekers Gender structure of job seekers The dominant occupations among job seekers (registered unemployed) The work experience of job seekers Occupations with the most vacancies The type of employment usually chosen by job seekers The average length of a job search Foreign language skills by jobseekers The level of remuneration that job seekers usually expect
	Information framework of labor market development	Information sources on employment issues (websites, social networks...) Conducting own researches by the employment services on the labor market
	Tools used by employment services for labor market regulation	The courses offered for changing/upgrading professional qualifications
	The effects of the war on the functioning of the labor market	Changes in the labor market caused by the influx of IDPs Changes in the labor market caused by the outflow of refugees abroad, in particular to Poland New trends, for example, regarding the unemployment rate, changes in the structure of scarce and surplus occupations Changes in the structure of job seekers The scale of the "pendulum migration" to Poland Special labor market regulation instruments designed and implemented to target jobseekers during wartime
	Modern challenges for the development of the labor market	Challenges for the development of the labor market in the raion/region
	Cooperation of employment services with other institutions on the labor market	The level and type of cooperation with local self-government bodies, employers, etc The level and type of cooperation with Polish labor market institutions, local authorities, employers, etc
	Prospects of labor market development	In what way and to what extent will the war affect the labor market in Ukraine

Sources: developed by the authors.