# **Impact of the War on Socioeconomic Dynamics and Labour Market in Ukraine**

The case of Southern regions (Mykolaivska and Odeska oblasts)

February 2022 — February 2025



# **KEY MESSAGES**

- Despite some improvements since 2022—including signs of industrial recovery, positive macroeconomic trends (lower inflation, GDP growth), and increases in the subsistence minimum and average salary—significant challenges remain. Job seekers report lower incomes, greater dependence on unstable income sources, and increased barriers to employment. Businesses face a growing economic and tax burden, as well as a worsening shortage of qualified workers.
- Economic resilience amid structural shocks: Despite major damage to ports and industry, businesses continue to operate, especially in Odesa. However, Mykolaiv remains deeply affected by occupation, flooding, and blocked exports. Meanwhile, the share of Odessa's total exports doubled, reflecting shifting trade patterns.
- Unemployment data highlights the heightened vulnerability of women, internally displaced persons (IDPs), and rural residents. These groups report lower incomes, fewer job opportunities, childcare barriers, and higher exposure to unofficial or informal employment.
- Mismatch in labour market and limited training uptake: Job seekers are willing to reskill, but lack of access to
  affordable and localized training opportunities persists. Employers struggle to fill vacancies due to emigration
  and workforce mobilization. As a result, more than one-third of surveyed entrepreneurs find long-term business
  planning difficult.
- Low engagement with local authorities and limited state support: Despite the availability of grants and Diia. Business tools, the majority of entrepreneurs have limited or no interaction with public recovery efforts.

## **RATIONALE**

Russia's full-scale invasion of Ukraine, now in its fourth year, has severely disrupted the economy, business environment, and labor market. The war has caused widespread destruction of infrastructure, property, and the energy sector, along with port blockades, landmined farmland, and major demographic shifts—including mass evacuation of women, internal displacement, and increased mortality. While most businesses have resumed operations, they continue to face financial strain, production losses, and labor shortages. The labor market has undergone drastic shifts, particularly affecting women and vulnerable groups such as IDPs, single parents, persons with disabilities, and veterans. These changes demand a better understanding of macroeconomic trends to inform targeted interventions that enhance resilience and economic recovery.

With support from Global Affairs Canada, REACH has conducted socioeconomic assessments to aid ACTED's Securing Women's Economic Empowerment for Recovery and Development (SEED) project. In 2023-2024, REACH assessed economic conditions in Odesa, Mykolaiv, Vinnytsia, and Chernihiv oblasts, identifying vulnerable groups, local planning strategies, and available support. These findings have guided assistance programs for women-led businesses and informed market-based recovery efforts. In 2024, REACH expanded its focus to labor market recovery, workforce trends, and employment barriers. This report examines how war-driven economic shifts have impacted business stability and workforce composition, with a particular emphasis on Odesa and Mykolaiv, where economic and military disruptions have been most severe.







# DYNAMICS OF SOCIO-ECONOMIC CHANGES IN UKRAINE

#### **OVERALL CONTEXT**

A rapid escalation of hostilities between the Russian Federation (RF) and Ukraine in February 2022 has had important consequences for Ukraine's economy. From February through March 2022, Russian Forces advanced into areas of Eastern, Southern and Northern Ukraine, causing damage and destruction to civilian infrastructure. From March into April 2022, RF advances were brought to a partial halt in the North, with RF being subsequently made to withdraw from Kyivska, Chernihivska and Sumska. More territory occupied by RF was liberated in Kharkivska and Mykolaivska in September and November 2022 respectively. Between 2023 and 2024, however, the situation changed. In 2024, Ukraine lost control of more than 3,600 square kilometers of territory. The largest losses of territory occurred in Donetsk and Kharkiv regions. At the same time, the pace of the occupiers' offensive increased during the second half of 2024 and gradually continued in 2025.



Map 1. Areas beyond/not under the control of the GovUkr, 2014-2025.

#### **DEMOGRAPHIC SHIFTS**

The full-scale invasion had a great impact on the sociodemographic structure of Ukraine's population. The sociodemographic shifts had a significant impact on the country's economy, changed the configuration of the labour market, and affected the resilience of the business environment.

A massive outflow of Ukrainians abroad took place in the first weeks of the war, especially in March 2022 (2.5 million people). In the spring of 2022, the outflow slowed down, and from May to September, more people returned than left. In the fall of 2022 and winter of 2023, the outflow increased again due to Russian attacks on the energy sector<sup>1</sup>. In 2024, the net outflow of Ukrainians abroad continued. According to the State Border Guard Service, the number of people who left Ukraine exceeded the number of people who entered by 443 thousand. This is 3.3 times more than in 2023<sup>2</sup>.

As of September 2024, more than 6 million Ukrainians had temporary protection in European countries, as reported by the UN<sup>3</sup>. According to IOM data, as of October 2024<sup>4</sup>, 3.7 million people remain internally displaced, while 4.4 million people who were displaced have returned to places of origin.

The IMPACT Initiative's Longitudinal study on monitoring the situation of Ukrainian refugees as of August 2024<sup>5</sup> showed that during the three years of war, many of the surveyed refugees returned to Ukraine, some of whom settled in the frontline areas. Among the interviewed persons who returned to Ukraine, 27% settled in the frontline areas, mostly in the settlements where they lived before the full-scale invasion or within the same region. The employment rate among respondents who returned to the frontline areas was 62%, and it was an important factor that encouraged them to stay, as many of them returned to the jobs they had before displacement.

Overall, the shifts in the socio-demographic structure in Ukraine that arose as a result of the war are due to external migration

(massive departure of women abroad), internal displacement (both women and men), mobilization of men into the army, as well as by general demographic trends in population decline (birth rates, mortality). All this leads to restructuring of the labour market both in terms of available labour resources and the configuration of available vacancies, structural shifts in the regional context, and actualization of educational and professional imbalances and current economic demands.

#### **ENERGY / HEATING**

Air attacks from missiles and unmanned aerial vehicles since February 2022 have result in the damage and destruction of social and economic infrastructure; namely, the national power grid, land transport routes, shipping ports, industrial enterprises, educational facilities, residential buildings, and other public and private property.

Since the start of the war, a large part of Ukraine's energy assets were occupied, damaged, or destroyed. Throughout 2024, Russian strikes against Ukraine's energy infrastructure further strained its ability to supply electricity to citizens and businesses, with over 9 GW of electricity generation capacity destroyed. Ukraine avoided the collapse of its electricity grid through stabilising power cuts. The lack of electricity had adverse effects on economic recovery.

Electricity prices surged after attacks on energy infrastructure in March 2024<sup>7</sup>, and by April businesses began facing electricity cuts. This impacted businesses in many ways, including decreasing productivity, increasing costs<sup>8</sup>. Electricity prices for households increased by 64% in June<sup>9</sup>. The electricity situation led to an increase net outflow of migrants, exacerbating the labour shortage while reducing consumer demand and the tax base<sup>10</sup>. Despite headwinds, Ukraine's economy and businesses displayed resilience. GDP grew by about 3.5% in 2024, while key industries (including energy-intensive industries like steel production) managed to outperform their 2023 output<sup>11</sup>.



And even amid power shortages, businesses' expectations for their near-term performance were only slightly lower than 2023. However, less electricity at higher prices will continue to impact Ukraine's economic recovery.

REACH's District Heating Assessment<sup>12</sup>, which was focused on the needs of 146 district heating companies also confirmed the information that district heating companies across Ukraine have been heavily affected since the start of the full-scale invasion. District heating companies have faced several challenges to service provision, including lack of facilities / equipment for water treatment, lack of reagents for water treatment, damages to heat distribution networks, and heat loss in heat distribution networks.

#### **ENVIRONMENT AND NATURAL RESOURCES**

Russian aggression also has caused strong damage to the Ukrainian environment and natural resources. The Ukrainian authorities estimate that the damage was worth \$59.7 billion as of 2023. As reported by RDNA4 (2024)<sup>13</sup>, total damage in the agriculture sector amounts to \$11.2 billion, while losses amount to \$72.7 billion. These include the following: loss of farm income (due to lower or forgone production); lower farm gate prices (due to export logistic disruptions); higher farm production costs (due to higher prices of fertilizers and fuel); the cost of land recultivation after mine-related surveying, clearance, and land release operations; the halt of fishing operations; and the cost of debris removal from damaged and destroyed agricultural storage facilities.

Ukraine possesses a quarter of the world's fertile black soil reserves, and due to the full-scale war, it has lost up to 20% of its crops<sup>14</sup>. More than 5 million hectares of agricultural land in Ukraine have been contaminated. The air in Ukraine is heavily polluted due to the hostilities. Emissions from military equipment, forest fires, oil products and industrial facilities pose long-term risks to public health and the environment.

The Flood Risks Assessment (2024)<sup>15</sup> emphasizes that about 27% of Ukraine's territory is vulnerable to flood risks. As of December 2023, it is estimated that the damage to the irrigation and water management sector amounted to USD 1.46 billion. Given the ongoing ground fighting, especially in the East and South, combined with constant air strikes and the threat of man-made disasters, including the breach of the Kakhovka reservoir dam, the likelihood of flooding and damage remains high. The large-scale damage to the housing stock that led to the humanitarian crisis has further increased the potential impact of natural hazards.

According to REACH's Hazardous Events Monitoring<sup>16</sup>, shelling of buildings, military vehicles, infrastructure and industrial facilities result in the release of airborne pollutants. The presence of illegal landfills, exacerbated by the war, contributes to air pollution, with waste and building debris burning releasing harmful substances. Many hazardous industrial facilities are in direct proximity to the river and its anabranch. The availability of drinking water has been impacted by damage to water infrastructure, surface water pollution and groundwater pollution. These factors collectively

contribute to disruptions to water supply for households and businesses, reduced access to productive natural assets which has a direct and indirect impact on economic stability.

# MACROECONOMIC INDICATORS AND ECONOMIC ATTITUDE

As of July 2024 according to the data from Kyiv School of Economics (KSE), the largest indirect losses in terms of revenue relate to productive sectors, including trade (\$450.5 billion), industry including construction and services (\$409.9 billion), and agriculture (\$83.1 billion). Important infrastructure sectors also suffered significant losses, including energy (\$43.1 billion) and transport (\$38.8 billion)<sup>17</sup>.

As the MSNA 2023<sup>18</sup> data showed, despite some changes since 2022, including apparent industrial recovery and income growth, difficulties persist. Households living along the frontline or Russian border were found to have economic challenges across all indicators. These households reported lower incomes, greater reliance on unstable income sources, lower levels of agricultural activity, greater barriers to employment. And according to the MSNA 2024<sup>19</sup> data, 81% of households across Ukraine are in need, as 29% of households are in extreme need. Needs remain widespread across Ukraine, with one-third in extreme need. 44% of households reported challenges obtaining money to meet needs. The crisis remains severe, with Livelihoods, Protection, and Health emerging as the most pressing needs across assessed regions.

At the same time, Joint Market Monitoring Initiative (JMMI) for December 2024<sup>20</sup> showed that the median cost of the full JMMI basket rose by 15% over the year, with the highest value in December recorded in the North (see Figure 1). The food component of the JMMI basket experienced the sharpest price increases, rising by 23%. Nationwide, rising prices have severely impacted access to goods, with 70% of customer KIs citing higher prices as their primary financial barrier.

1300
1200
1100
1000
1062
900
800
700
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
2022 2023 2024

Figure 1: Monthly evolution of the JMMI basket price (in UAH), nationally

In order to understand that what may seem like a discrepancy between the growth of macroeconomic indicators in the country and, conversely, the increase in the number of people in need and negatively assessing their own economic situation, it is reasonable to analyze the dynamics of inflation and the level of the subsistence minimum in the pre-war period and in the last three years (see Figure 2).



Inflation peaked in 2022 and declined significantly in the following years, although in 2024 the inflation rate again showed an increase. Meanwhile, it seems interesting and important to note that if consider how the basic indicators that can demonstrate the level of economic capacity at the individual level have changed, have been noted that despite a moderate increase in the hryvnia equivalent of the minimum and average wages, as well as the minimum subsistence level for the working population, in the dollar equivalent (which is more revealing), these indicators have not reached the prewar level of 2021.

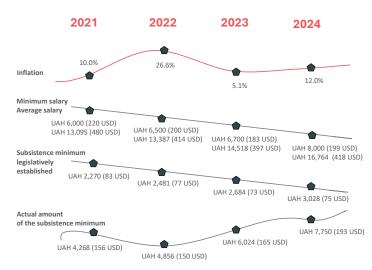
Also, when assessing the real subsistence level, it noted that the cost of living is rising both in hryvnia and dollar equivalent, considerably compared to pre-war levels. The dynamics of these indicators showed that despite the positive dynamics of macroeconomic indicators, welfare at the individual level is declining, purchasing power is decreasing, and the economic burden is increasing.

#### **BUSINESS ENVIRONMENT**

Based on KSE estimates for 2023, more than 400 large and medium-sized enterprises, and tens of thousands of small private enterprises, have been damaged or destroyed since the start of the full-scale war. Some of them have destroyed by accident or «along» with shelling of military units and settlements. Some was destroyed intentionally as part of targeted strategic missile strikes. Unlike the first group, which is concentrated in the frontline regions, the second group is evenly distributed throughout Ukraine. The total losses to enterprises' assets are estimated at \$51.5 billion.<sup>21</sup>Losses include the loss of income of destroyed or damaged businesses, as well as losses at the national level of certain sectors which operations have been hampered.

As reported by state portal DIIA<sup>22</sup> almost 210,000 individual enterprises (FOPs) were closed in 2024, which was the highest number in the last 5 years. The increase in closures compared to 2023 was more than 32%. The largest number of FOPs were closed in October, which seems to be due to the increased tax burden from December 1 (increase in the military tax from 1.5% to 5%). Against the background of an increase in the termination of sole proprietorships, the registration of new entities decreased by 5% compared to 2023. The agriculture sector saw the largest increase in the share of business closures, rising from 15.4% to 17.4% in 2024. An unprecedented record was set in January 2025: after a break of almost a month of non-working registers, 61,455 FOPs were closed in a few weeks. By comparison, only 21,358 entrepreneurs started their own business<sup>23</sup>. Meanwhile, women opened more FOPs than men: more than 61% of new FOPs belong to women, and 39% were registered by men<sup>24</sup>. This figure has increased compared to 2023, when the number of newly opened sole proprietorships by women was almost 58%. At the same time, in 2024, men closed more sole proprietorships - almost 51% (106,200) of closed ones belonged to men, and another 49% (103,600) to women.

Figure 2: Dynamics of socio-economic indicators, 2021-2025



Estimates based on data from the National Bank of Ukraine<sup>27</sup>, the Ministry of Social Policy, and the Ministry of Finance<sup>282930</sup>.

In terms of sectoral dynamics, most often, entrepreneurs who started their business after the full-scale invasion began chose retail as field of activity (28.1%). The top three also included IT (9.1%) and wholesale (7.2%). Compared to the pre-war period, the number of new businesses in the postal and courier sectors increased by 3 times, in education increased by 2.6 times, and in the field of finance by 2.5 times. In 2024 the following sectors registered the most new companies: wholesale trade, transport and logistics, real estate, construction, and agriculture<sup>25</sup>.

According to the National Bank of Ukraine's Business Activity Index 2024 survey<sup>26</sup>, businesses as of the end of 2024 improved their business activity estimates for the next 12 months, maintained positive forecasts for attracting investment, and continued to expect moderate inflation and exchange rate growth. Military actions remain the most important pro-inflationary factor, devaluation expectations have increased, and assessments of the current financial and economic condition of enterprises remained negative The highest expectations were expressed by enterprises in energy and water supply, other activities, mining, and agriculture. On the other hand, trade enterprises expect a decrease in foreign investment over the next 12 months. Reducing the number of employees has become one of the main expected consequences of the negative economic outlook. Businesses, especially in the construction sector, expect a significant reduction in their workforce. However, in some other industries, particularly in the service sector, the forecasts for staff reductions are less pessimistic. The respondents to the NBU survey noted that the main difficulties they face are related to the persistent shortage of skilled workers and high labor costs. This, in turn, leads to the need to reduce the number of employees in order to maintain the economic stability of companies.



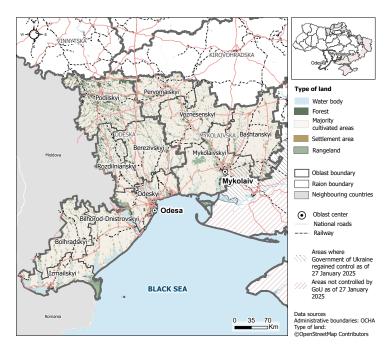
# **FOCUS ON THE SOUTH**

# **ODESKA & MYKOLAIVSKA OBLASTS**

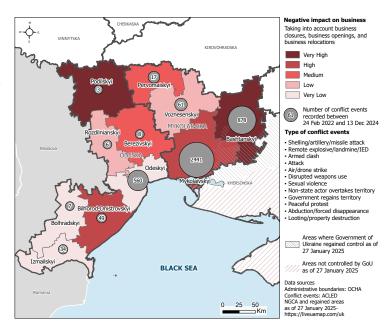
#### IMPACT ON KEY SECTORS OF THE ECONOMY

Odeska oblast was the main import/export hub of the country, import/export and related services, such as transport and storage, were the main drivers of the local economy<sup>31</sup>. Odesa region accordingly suffers extensive losses due to the destruction of port infrastructure and storage facilities, as well as the blocking of export traffic. Since the last day of the Grain Corridor's operation, July 18, 2023, almost 200 port infrastructure facilities have been damaged due to attacks on region seaports. According to REA's results in 2023, retail trade was the sector worst affected by business closures, with wholesale trade, transport and storage, education, crops production, and arts, entertainment and recreation also adversely affected<sup>32</sup>. Indirect financial losses, changes in economic flows as a result of a full-scale invasion, according to KSE estimates for Odeska oblast as of 2024, amount to \$11.8 billion, direct financial losses to infrastructure amount to \$1.4 billion. Massive attacks on seaport infrastructure damaged or partially destroyed grain elevators, warehouses for storing grain, oil and oil products, pipelines, administrative and other buildings, transport, and cargo, including grain.

Partial occupation of Mykolaivska oblast in 2022, and its continued proximity to the frontline, has led to business closures across important sectors of the economy such as manufacturing, agriculture, and trade. The raions of Mykolaivskyi and Bashtanskiy have experienced the most conflict-related incidents, have seen the largest displacements of the local population, and, in the case of some settlements in Bashtanskiy, have been impacted by flooding following the breach of the Kakhovka dam. The combination of persistent industrial pollution and recent war-related damage to industrial facilities in Mykolaiv pose significant risks to human health, local livelihoods, and the ecological balance of the Dnipro River and the Black Sea<sup>33</sup>. The direct environmental damage caused by the floods in Mykolaiv region was estimated at USD 1.4 million. Among the main problems recorded were: interruptions in water supply for households and businesses, restricted access to productive natural assets due to the presence of mines and unexploded ordnance (agricultural land and forests, drinking water, recreation areas, reservoirs and beaches, river banks), constant artillery shelling causing air and soil pollution, which affects agricultural land. The agricultural land of the region covers more than 2 million hectares, which is 5% of Ukraine's arable land. The main sectors of agriculture are crop production (winter wheat, barley, corn, sunflower, sugar beet, vegetables, and gourds) and livestock34.



Map 2: Natural areas of Odeska and Mykolaivska oblast



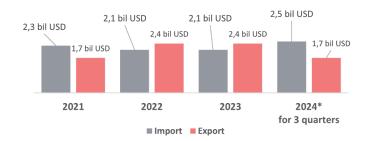
Map 3: Number of conflict events in Odeska and Mykolaivska oblasts recorded between 24 Feb 2022 and 13 Dec 2024



#### **EXPORT/IMPORT**

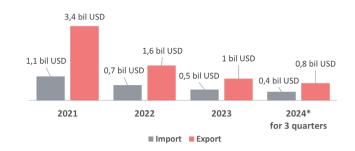
Odeska oblast. After the creation of the international Grain Initiative (an agreement between the UN, Turkey, Ukraine and the Russian Federation on maritime corridors for the export of Ukrainian grain) in July 2022 and despite the termination of its existence in July 2023, the ports of Great Odesa (Chornomorsk, Pivdenyi, Odesa ports) carried out the transportation of about 60 million tons of cargo in 2023, primarily consisting of agricultural products export<sup>35</sup>. The Grain Corridor, initiated after the completion of the Grain Initiative, is now operating effectively. For almost nine months of operation of the humanitarian corridor from August 2023 to April 2024, 45 million tons of goods were exported to 44 countries through the Black Sea from the ports of Odesa. Since the beginning of 2024, the ports of Reni, Izmail, and Ust-Dunaisk have processed more than 5.5 million tons of cargo, of which 4 million tons were exported<sup>36</sup>. Odeska oblast accounted for 4.9% of all goods exported from Ukraine in 2023, ranking fifth overall nationwide and considerably increasing from its pre-war share of 2.5% in 2021<sup>37</sup> (see Figure 3). The basis of the Odeska oblast's exports in 2023 were vegetable products, fats and oils, ready-made food products, and low-value metals. In the first half of 2022, Odesa's industry operated at 55-60% of its pre-war level. By the first half of 2023, this figure had increased to 70-80%<sup>38</sup>. But attacks by drones and missiles on the port and industrial infrastructure of the Odesa region continued during 2023-2024.

Figure 3: Import/Export dynamics in Odeska oblast, 2021-2024



Mykolaivska oblast. The industry of the Mykolaivska oblast provided up to 50% of the output of the country's shipbuilding industry, more than 90% of the production of gas turbines, and 80% of the output of alumina extraction. Such industries as shipbuilding and power engineering, which were affected by the consequences of the war, stood out in particular. A large part of agricultural and industrial products transit through the ports of Mykolaivska oblast. In 2021, the port of Mykolaiv handled 29.87 million tons of cargo (including grain, processed metals, and vegetable oils), which is 19.5% of the total volume in Ukraine<sup>39</sup>, and all ports in the region collectively provided 30-40% of the region's budget revenues. However, the ports are currently not operating for security reasons, as the left bank of the Dnipro Estuary, through which these ports access the Black Sea, is occupied by Russia. The ports of Mykolaiv have been blocked since the beginning of the full-scale war. Previously, they generated 30-40% of the region's economy. For example, a third of Ukrainian grain exports passed through Mykolaiv. Pre-war, the city's largest company, the agricultural enterprise "Nibulon", had its own fleet of 82 ships, more than 76,000 hectares of arable land and 6,000 employees. Now 68% of Nibulon's business is not working. In 2023, the export of goods from the Mykolaiv region decreased by 39% compared to 2022 (see Figure 4)<sup>40</sup>. Imports in 2023 also decreased by 25.8%. In particular, the import of fuel, oil, and petroleum products decreased significantly — by almost 65%.

Figure 4: Import/Export dynamics in Mykolaivska oblast, 2021-2024



Considering the **dynamics of import-export operations**<sup>41</sup>, it should be emphasized that **Mykolaivska oblast was more negatively affected** by the war. Pre-war, Mykolaivska had a larger share in the country's exports than Odeska oblast, but as a result of military activities, the volume of Mykolaiv region's exports decreased, while the share in total exports of Odeska doubled. In terms of imports, Mykolaivska oblast also decreased, while Odeska showed an increasing trend (see Figure 5,6).

Figure 5: The share of import of Odeska and Mykolaivska oblasts in the total import in Ukraine, 2021-2024

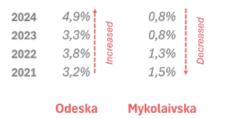


Figure 6: The share of export of Odeska and Mykolaivska oblasts in the total export in Ukraine, 2021-2024

2024 5,5% 2,6% 2023 6,6% 2,8% 2022 5,4% 3,6% 2021 2,5% 5,0%	Decreased
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Odeska

Mykolaivska



#### **BUSINESS ENVIRONMENT**

Almost 19,000 Ukrainian businesses have changed their region of registration since the war escalation in February 2022. Of these, 7.5% have relocated to Odeska oblast. This is one of the highest numbers for any oblast in the country, ranking 5th overall. And only about 2.5% relocated to Mykolaivska oblast. Meanwhile, Mykolaivska became ranking 9th region from which the most businesses left. The number of female entrepreneurs has increased (compared to the prewar period and the first year of the war) most noticeably since the beginning of autumn 2023, and by the end of 2024 women account for 63% of new entrepreneurs in the Odeska oblast, as well as 62% in Mykolaivska oblast.

As of November 1, 2024, the number of active enterprises headed by women amounted to almost 236 thousand, or 36.2% of the total number of active enterprises. The State Statistics Service includes in its statistics enterprises of all organizational and legal forms of business. This includes, for example, kindergartens, where in 99% of cases the head is a woman. Almost all libraries (93%) are also run by women. Women managers predominate in consumer cooperative enterprises (58.6% of all enterprises in this sector), in state authorities (56.2%), local authorities (52%), utility companies (79%), trade unions (62%), and credit unions (54%).

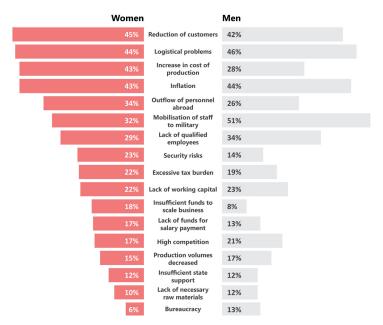
Inflation growth, population reduction in community and complicated logistics were reported by entrepreneurs as the three most urgent socioeconomic problems in the Odeska oblast (hereinafter, according to the REACH's Socioeconomic Assessment of Micro, Small and Medium Enterprises in Odeska<sup>42</sup> and Mykolaivska<sup>43</sup> oblasts (SA-MSME)). This correlates with the main reported barriers faced by business in Odeska oblast: decrease in the client base, logistical problems of delivering materials and goods, inflation and an increase in the cost of production, lack of labour force due to emigration personnel abroad and mobilization of men to the army. 30% of KI entrepreneurs noted that they were having increased difficulty accessing specific goods or services, in particular due to logistics barriers. These include complicated customs procedures, the blockade of ports, the blockade of borders with the European market.

Notably, for businesses operating in Odeska oblast, both in rural and urban areas, the main challenges in doing business were quite similar, however, it should be emphasized that rural businesses operating faced a slightly more acute problem of logistics, mobilization of men to the army, and lack of working capital. Whereas businesses in urban areas were more acutely affected by the problem of fewer customers, inflation, and high competition than entrepreneurs in rural areas.

This is also evident for businesses operating in Mykolaivska oblast (see Figure 7). Among the surveyed businesses that export goods, 64% had additional problems with exporting products after the onset of the invasion, as well as with the

final link of the supply chain: the surveyed businesses also noted a decrease in demand (often due to customers leaving the region and/or having less available funds). According to key informants, due to the drop in sales combined with rising costs (e.g., higher energy, transportation, and raw materials), some businesses lacked the funds to expand their business activities or take advantage of market conditions.

Figure 7: The main barriers faced by KI businesses in Odeska and Mykolaivska oblasts after the outbreak war (multiple choices, N=312)



According to JMMI data for December 2024, main difficulties faced by retailer businesses in Mykolaivska oblast in keeping their store operational and well-stocked were storage of goods during the absence of electricity, price increase charged by suppliers, movement restrictions. The estimated percentage of operating retailers compared to the pre-war level ranged between 50% and 75%. Retailers maintained a positive stock balance (the difference between median days of stock available and days required to restock).

Considering the difficult security situation and economic challenges, more than a third of the surveyed (SA-MSME) entrepreneurs (both in Odeska and Mykolaivska oblasts) reported that it was difficult for them to plan business activities for the coming months in 2024 and that they did not have clear business plans, but at the same time were considering hiring new employees, as the staff shortage was considerable.

According to the Ministry of Economy<sup>44</sup>, in 2024, 10,000 business owners received grant support to develop their businesses, and the state has invested almost UAH 2.5 billion in the development of small and medium-sized businesses through grants. Since mid-2022, a total of 24,000 businesses have received grants to start or develop their businesses under the government's eRobota program (UAH 11 billion). Most often, entrepreneurs received funds



for business in the areas of wholesale and retail trade, car and motorcycle repair, temporary accommodation and catering, processing industry, healthcare and social assistance.

At the same time, the data from the survey of micro and small businesses indicated that there was a lack of interaction on the regional and local levels between businesses and local authorities in Odeska and Mykolaivska oblasts. More than half of the surveyed entrepreneurs did not interact with local authorities at all since starting their business (60% of surveyed entrepreneurs in Odeska and 76% in Mykolaivska), and more than three-quarters of the KI did not have detailed information about government plans for recovery and development in their area, nor did they use any form of government business support in 2023. Instead, the approach of direct communication between entrepreneurs to solve their problems prevailed. This was mainly due to distrust in the effectiveness of the authorities, doubts about the relevance of their work, concerns about the level of corruption, or their own negative/unproductive experience of interaction.

Meanwhile, according to the survey (SA-MSME), businesses continued to benefit from tax breaks, compensation for employing IDPs, and state loans. Some of the surveyed businesses also used the services of the Diia.Business portal, including receiving free business advice, finding information on business support programs, applying for financing, watching educational series, applying for licenses, and registering as a sole proprietor. However, 77% of surveyed entrepreneurs in Odeska and Mykolaivska oblasts did not use any form of state business support in 2023. Only 8% of the surveyed enterprises in Odesa region had experience in contracting with government agencies, donors /INGOs, or national/ multinational companies.

Although there is a modest level of engagement with existing business support programs, the interviewed businesses in Mykolaivska oblast expressed interest in a particular (possibly enhanced or more accessible) form of state support: 18% of entrepreneurs considered limited state support during the war to be a challenge, and the vast majority of respondents (70%) indicated that government business support programs would help restore and develop women's entrepreneurship.

#### **GENDER DISCRIMINATION & CHILDCARE**

Overall, women entrepreneurs assessed gender discrimination as low, but during individual interviews they also reported quite frequent cases of gender bias. Women have encountered with such forms of gender discrimination as distrust of a woman's managerial skills, judgments about a female professional based on her appearance, discrimination in terms of childcare and maternity leave, and sexual harassment. More than half of the surveyed businesswomen (SA-MSME) in both assessment regions stated that nothing prevents women from holding managerial positions. However, some of them mentioned obstacles such as

lack of desire on the part of women themselves, childcare responsibilities, lack of qualifications, lack of time to devote to business due to household responsibilities, as well as gender bias against women executives.

Although many of the business challenges in both Mykolaivska and Odeska oblasts were related to economic factors caused by the war rather than the gender of the manager, women-owned businesses were more likely to report financial problems, and women entrepreneurs themselves found it difficult to provide childcare and other household responsibilities. They noted that kindergartens were closed due to security risks, schools were operating online, and schools lacked shelters, all of which limited their operations. The most difficult situation was observed by survyed business-owners in Mykolaivska oblast: 82% of the surveyed women entrepreneurs mentioned the closure of kindergartens (compared to only 21% in Odesa), 90% noted that schools work online (31% in Odesa).

Also, our survey of the working-age population in 2024 (Labour Force Capacity assessment) found that this situation is still observed. The war decreased the availability of childcare facilities in Mykolaivska on a much larger scale than in the other three assessment regions. The stark figures for the oblast were largely driven by the situation in Mykolaivskyi and Bashtanskyi raions (see Table 1), which experienced the most conflict events and are closer to ongoing hostilities. Meanwhile, 54% of respondents reported that their employer did not offer additional accommodating options to support their employees' childcare, such as paid sick leave for childcare or allowing employees to work on a flexible schedule.

Table 1: Impact of the war on the availability of childcare facilities in Mykolaivska oblast, by raion (multiple choices, N=904)

	Mykolaivskyi	Bashtanskyi	Pervomaiskyi	Voznesenskyi
Schools work online	83%	71%	7%	20%
Lack of shelters in school	56%	43%	15%	18%
Kindergartens closed due to security risks	54%	60%	13%	20%
Reduced capacity at out-of-school education	16%	10%	13%	6%
No changes occured	6%	14%	50%	42%

Representatives of employers in the region also noted the difficulty of the childcare situation during individual interviews.

'Flexible scheduling is possible. You have a certain number of hours, but it is convenient for you to work at such and such hours, and [...] the manager meets the employee halfway. Or everyone goes to the office, but it's more convenient for you to work from home, you have all the conditions for this. [...] As for the legislation, parents with two or more children are given additional leave, I know. [...] There are no children's rooms unfortunately, that would be great'. – HR, large business in Mykolaiv



#### LABOUR MARKET

#### SUPPLY/DEMAND IN THE LABOUR MARKET

Entrepreneurs in MSME assessment noted that the lack of skilled workers due to the ongoing war is one of the biggest challenges they faced. With a large share of the workforce relocated abroad or mobilized into the army, entrepreneurs were forced to change their hiring strategies. The changes included lowering the requirements for job candidates and hiring people who were considered less qualified or suitable for the vacancies. As a result, about half of the entrepreneurs emphasized the need for additional retraining programs. To assess the situation on the labour market in 2024, a Socioeconomic assessment of Labour Force Capacity was conducted by REACH in 4 regions, including Mykolaivska and Odeska oblasts.

Since 2022, the number of jobseekers in Mykolaivska oblast has far exceeded the number of available vacancies. In January 2024, employers informed employment centers about the availability of 1,815 vacancies, which is 2.2 times more than in January 2022. In the total number of registered unemployed as of February 2024, men made up 1,004 persons (or 20%), women - 3,922 persons (or 80%). 20% of the registered unemployed had higher education; 50% – professional and technical; 30% - secondary education. On average in the region, 4 unemployed persons applied for one vacant workplace in 2024. According to the State Employment Service, in 2024 the number of unemployed in Mykolaiv increased by 11% compared to 2023<sup>45</sup>.

Simultaneously, there was also an imbalance in labour supply and demand in the Odeska oblast, in its professional and educational components. For the year 2023, among those employed with the assistance of state employment services, 39% were men. Among those employed by private employment agencies in Ukraine, women predominated (89%), while mostly men (99%) officially worked abroad. 85% of those employed by private employment agencies were residents of cities, while 56% were employed by the employment service. 34% of those employed by the state employment service had general secondary education and 26% had vocational and technical education, while 62% of those employed by private employment agencies had higher education<sup>46</sup>.

In January 2024, employers in Odeska oblast informed employment centers about the availability of 3.9 thousand vacancies. As of February 1, 2024, 4.8 thousand registered unemployed received the services of the Odesa Regional Employment Service. In the total number of registered unemployed, men made up 0.9 thousand people (or 19.0%), women - 3.9 thousand people (or 81.0%). According to the Odesa State Employment Service<sup>47</sup>, as of the beginning of 2025, the number of jobseekers was three times higher than the number of available vacancies.

#### **INCOME & ECONOMIC WELL-BEING**

According to the REACH Labour Force Capacity assessment (hereinafter), 71% of respondents in Odeska oblast and 65% in Mykolaivska reported a decrease in their income over the past year. The decrease in income had the greatest impact on men, age groups 26-65 with a peak decrease in the 46-50 age group, the unemployed and entrepreneurs/ self-employed, and had an equal impact on IDPs and locals. Assessing their current economic situation and purchasing power/savings, more than half of the respondents in both regions indicated that they have enough money for food, but it is already difficult to buy clothes. Both women and men, as well as IDPs and local residents, experienced financial problems almost equally. However, rural residents experienced financial difficulties to a greater extent (see Figure 8). Difficulty buying clothes or even food generally increased with the respondent's age, while the ability to afford basics and even certain expensive items generally declined with the respondent's age. For example in Mykolaivska oblast, among respondents who self-identified as unemployed, those aged 18-30 reported not having enough money for food (5% of surveyed women, 3% of surveyed men) substantially less than those aged 45-60 (20% of surveyed women, 22% of surveyed men).

Figure 8: The share of respondents reporting an increase or decrease in their income in Mykolaivska and Odeska oblasts

Mykolaivs	ka Overall	Rural	Urban	Odeska Overall	Rural	Urban
Increased	26%	21%	33%	21%	14%	28%
Decreased	<b>65</b> %	<b>69</b> %	<b>59</b> %	71%	<b>76</b> %	64%
No change	5%	5%	4%	4%	5%	3%

Respondents in both Odeska and Mykolaivska oblasts noted the prevalence of almost the same sources of income: regular employment, pension (age and military), loans, debts, support from community, friends, family. However, there were some differences: in Mykolaivska, income from irregular employment was slightly more frequently reported (12% to 7% in Odeska), while in Odeska oblast, income from own business or commerce was more frequently reported (12% and about 7% in Mykolaivska). However, there were some differences in income sources among categories of vulnerable groups compared to the overall results.

Table 2: Income sources among vulnerable groups in Mykolaivska oblast (multiple choices, N=496)

	Persons with many children	Single parents	Pensioners	People with disabilities	Veterans
State social benefits	33%	43%	9%	40%	3%
Pension (age and military)	3%	0%	86%	43%	42%
Regular employment	30%	26%	17%	26%	55%
Irregular employment	18%	17%	6%	9%	3%



#### **EMPLOYMENT / UNEMPLOYMENT**

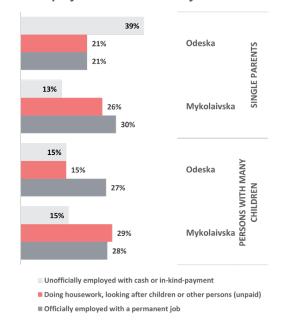
In total, 31% in Odeska and 34% in Mykolaivska oblast were unemployed at the time of the survey (including respondents who self-identified as unemployed, doing housework, looking after children or other persons (unpaid), permanently sick or disabled, retired not working, student not working, and working for free/volunteering).

If taking a look at the category of self-identified as unemployed, there was evidence that women, IDPs and rural residents were slightly more vulnerable. As with most other employment statuses, except for unofficial employment, which was more common among men than women in all assessment oblasts. 16% of respondents in Mykolaivska oblast and 16% in Odeska were unofficially employed. While unofficial employment was notably more prevalent among men, it was equally prevalent among both locals and IDPs, and almost the same in both urban and rural areas (see Figure 10).

Age also appeared to be a factor: As example in Mykolaivska oblast for respondents aged 18-25, 26% reported being officially employed with a permanent job and 24% reported being unofficial employed, while for respondents aged 51-55, the respective figures were 55% and 9%. After the age of 55, both figures decline as more workers move into retirement.

It is worth noting that among the category of respondents with many children and single parents, unpaid household work was represented along with official full-time employment, and unofficial employment is quite common (with a peak value among single parents in the Odeska oblast) (see Figure 9).

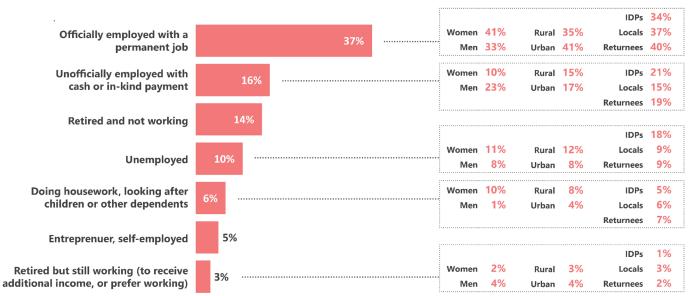
Figure 9: Employment status of KI, by vulnerable category



Among the employed respondents, permanent full-time employment dominates (67% in Mykolaivska and 72% in Odeska oblasts). Also quite widespread were temporary employment (13% in Mykolaivska, 10% in Odeska) and permanent part-time employment (12% in both oblasts).

For respondents who self-identified as unemployed, the period of unemployment varies by different characteristics of the informants (for both oblasts). For example, IDPs more often had a shorter period of unemployment, from less than a year to 1-3 years, which may indicate that the reason for unemployment was displacement. Also, the length of unemployment, which coincides with the period of full-scale war, is more typical for residents of urban settlements than for residents of rural areas.



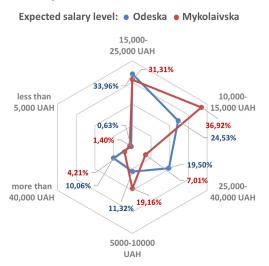




#### **JOB SEARCH INTENTIONS**

Both women and men had plans to change jobs equally. IDPs were 3 times more likely to think about changing jobs than local residents. People aged 18-25 were 2 times more likely than others to plan to change jobs. For the vast majority of respondents (more than 4/5) in both Mykolaivska and Odeska oblasts, the most important criterion in choosing a job is the desired level of salary. However, the expected level of salary differs depending on the region of residence.

Figure 11: Expected salary level of KI in Mykolaivska and Odeska oblasts



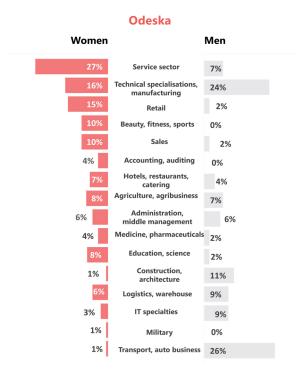
In Mykolaivska oblast, more people were willing to accept a lower salary level, in particular, 36.92% are looking for a job in the range of UAH 10-15,000 (which is lower than the level of the average salary, which amounted to UAH 18,400 in Mykolaiv in the 3rd quarter of 2024, in Odesa - UAH 24 830), while in Odeska this figure is 24.53% (see Figure 11).

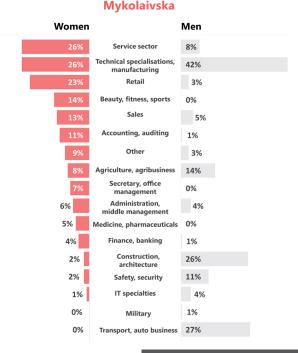
And almost twice as many respondents from Mykolaiv region were ready to work for a salary of UAH 5-10,000 (19.16% in Mykolaivska vs. 11.32% in Odeska).

An interesting aspect was to see which professions and specializations were prioritized by jobseekers in the southern regions of the country. The situation was quite similar in terms of gender breakdown in the direction of searching for vacancies in the desired specialization. In both Mykolaivska and Odeska oblasts, women were mostly focused on finding jobs in the service sector, sales and retail, and the beauty industry. Meanwhile, it is worth noting that in Mykolaivska oblast a slightly higher percentage of women were looking for work in technical specializations and manufacturing (which ranks 2nd in terms of priorities). Also in Mykolaivska oblast, job searches in the education sector were not even in the top 17 requests, while in Odeska they were on the 7th position for women. This might be caused by a more challenging situation in the educational sphere in Mykolaiv region, a greater impact of the war on the educational process, a reduction in the number of operating educational institutions, the prevailing online education, etc. Regarding men's priorities in terms of preferred job specializations, it is worth highlighting that in Mykolaivska oblast, men were almost twice as likely to seek employment in technical specializations, construction, and agriculture compared to Odeska (see Figure 12).

'First of all, I will say of course, these are primarily specialists in production [in demand]. All types of production: these are line operators, these are operators, these are drivers of vehicles, electric forklifts, trucks, washing machines, technical, special, and of course, these are IT specialists. [...] Well, technicians, men's technical processes are adjusters. These are designers, well, technical, highly specialized, technical professions'.- HR, Mykolaiv

Figure 12: Specializations in which KI were looking for a job in Odeska and Mykolaivska oblasts, by gender







#### **SPECIALIZATIONS IN DEMAND**

For the same period (June 2024), data from the Work.ua portal showed that offers from employers by sector looked like this: most vacancies were available in the retail, manufacturing, wholesale and export sectors, as well as in hotel and restaurant business (see Figure 13). It is also worth noting that the total number of available vacancies in Odeska oblast was almost 6 times higher than the offer in Mykolavska (6372 vs. 1193). It should be noted that according to the surveyed recruiting agencies and HR specialists, the following positions are currently in the greatest demand on the labour market from employers: working specialties, construction and engineering specialties, welders, sales managers, seamstresses, specialists in the energy sector, specialists in the agricultural sector, mid-level and top managers, logisticians and drivers of special vehicles, sewing equipment mechanics, marketers, accountants and financiers (listed in no particular order).



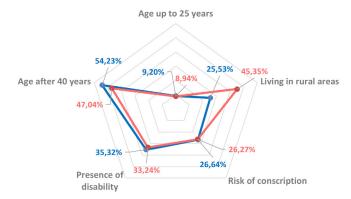
Figure 13: Number of available vacancies by sector in Mykolaivska and Odeska oblasts, June 2024

#### **BARRIERS FOR EMPLOYMENT**

Unsatisfactory salary level and work schedule, lack of suitable vacancies by specialization or in place of residence, high competition on the labour market dominated among the main obstacles faced by the respondents when looking for a job in both Odeska and Mykolaivska oblasts.

At the same time, regional differences were noted, so for residents of Odeska oblast, age discrimination was a more acute challenge (15,6% vs 8%), while for respondents from Mykolaivska, the problem of lack of vacancies in their place of residence was twice as urgent as for Odeska (25,5% vs 12,9%). For the majority of respondents, the main characteristics that can complicate the job search are age over 40, the presence of a disability, the risks of mobilization and living in a rural area (it is worth noting that this characteristic was almost twice as actual for jobseekers in the Mykolaivska oblast than for respondents from the Odeska - 45% vs 25%) (see Figure 14).

Figure 14: Characteristics that complicate job search, Mykolaivska and Odeska oblast (multiple choices, N=2780)



It is worth noting that the level of vulnerability of different socio-demographic groups in job search was uneven both regionally and depending on the various obstacles faced by job seekers. Thus, in the Odeska oblast age discrimination was a more serious challenge for urban residents, the lack of vacancies in the place of residence was more important for rural residents, the lack of vacancies in the job seeker's specialization had a greater impact on IDPs, unsatisfactory working conditions were an obstacle more for women than for men, and the mismatch of the level of skills required by the employer was more relevant for IDPs and youth aged 18-25 than for other age groups.

Figure 15: The main obstacles faced by KIs in the job search (multiple choices, N=2780)

Odeska		Mykolaivska
30%	Unsuitable salary level	32%
21%	Did not try to find a job	20%
16%	Age discrimination	8%
14%	Unsatisfactory work schedule	13%
13%	Lack of vacancies in my area	26%
13%	Lack of vacancies in my specialisation	19%
9%	Competition in labour market	10%
8%	Health problems	7%
7%	Unsatisfactory work conditions	11%
7%	Insufficient level of required skills	6%
7%	Lack of work experience	8%



#### **REQUALIFICATION AND TRAINING**

Since job searching can be complicated by many factors that we mentioned in the previous section, it is worth considering what job search strategies informants employ to adapt to the labour market conditions. In particular, we identify the following strategies: inertial-stable, proactive adaptive, and passive adaptive.

Inertial-stable job search strategy. Thus, it is worth noting that a third of informants in the Odeska oblast were quite firm in their positions and basic requirements for the job in demand and were not ready to change their requirements. At the same time, only women were strongly ready to adhere to their requirements, no man in Odeska oblast chosed this option. This can probably be explained by the fact that for women important criteria when looking for a job, in addition to the level of salary, were additional childcare opportunities, the possibility of receiving paid sick leave, which may be related to the necessity of childcare. It may also depend on the configuration of the labour market in the region, since male respondents in Mykolaivska oblast, in contrast to Odeska, indicated that they were not ready to change their requirements, while women were half as likely in Mykolaivska oblast to be principled in this regard.

Passive adaptive job search strategy. It is necessary to emphasize that a part of job seekers considered lowering their own requirements for the needed job and using negative scenarios of adaptation to employers' requirements as a strategy of adaptation to new labour market conditions. In particular, some job seekers were ready to agree to informal employment (14% in Odeska and 19% in Mykolaivska), change their requirements for work schedules (14% in both oblasts), and work overtime (14% and 13% respectively).

Proactive adaptive job search strategy. However, it is worth noting that the dominant strategy of adaptation to the conditions of the modern labour market is the setting of professional development/retraining. In particular, 34% of jobseekers in Odeska oblast and 42% in Mykolaiv region were ready to take such steps to meet the requirements of employers as attending advanced training courses. About 15% in Odeska, and twice as many in Mykolaivska oblast (30%) were ready to completely change their specialization, which may indicate reduced job offers in Mykolaiv region. And 36% in Odeska oblast and 40% in Mykolaivska were ready to consider the possibility of looking for a job in another locality. It is worth noting that young people aged 18-30, residents of rural settlements, as well as men compared to women were more flexible in looking for a job in another place.

Almost the equival number of respondents in both regions (15% in Odeska and 11% in Mykolaivska) indicated that they had attended trainings/educational courses during the past year. These were mainly trainings on online educational platforms, studying in state educational institutions, trainings conducted by INGOs, and trainings

in technical and vocational schools. 16% of jobseekers in Odeska oblast and 23% in Mykolaivska felt they need additional training/retraining. In particular, foreign languages, trade and commerce, financial literacy, beauty industry, IT specializations were mentioned among the most requested specializations. But there were some regional differences, in the Mykolaivska oblast, the demand for training in agricultural specializations was twice as high as in the Odeska. (see Figure 16).

In the Odeska oblast, there was an almost uniform request from jobseekers for the training format as online, offline, mixed type. And in the Mykolaivska, the situation was slightly different - there was more demand for offline and combined training (38% and 36%, respectively), and slightly fewer people want to start online - only 26%.

Among the main barriers to access to educational opportunities, there was difference between regions. Thus, in Odeska oblast, the high cost of education (46%) and lack of time (36%) dominated. While in Mykolaivska, the main obstacles were the high cost of education (45%), lack of appropriate educational institutions in the area of residence (34%), lack of time (33%), as well as lack of information regarding training opportunities (26%). It is worth noting that in Mykolaivska oblast, the most important barrier for women was lack of time (50%), while for men, the high cost of education (52%) and lack of educational opportunities in the area of residence (52%). In Odeska oblast, the obstacle of high cost of education was equally dominant among both men and women.

Figure 16: Courses in demand by KIs (multiple choices, N=555)

Courses in demand	Mykolaivska	Odeska
Foreign languages	22,99%	22,73%
Trade and commerce	18,81%	15,91%
Financial literacy	14,93%	17,27%
Beauty industry	13,43%	10,91%
IT specializations	12,24%	12,27%
Agricultural specializations	11,94%	5,45%
Technical specializations	11,94%	9,09%
Medical specializations	10,15%	9,55%
Construction specializations	9,85%	2,27%
Hotel and restaurant business	8,66%	5,00%
Business planning	8,06%	4,09%
HR	7,76%	6,36%
Driver training of different levels	6,87%	3,18%
Repair and automobile construction	5,97%	3,64%
Legal literacy	5,67%	10,91%
Logistics	3,88%	4,55%
Marketing	3,88%	4,55%
Banking	2,99%	2,27%
Project management	2,69%	4,55%
Military specializations	1,49%	1,36%
Tester/QA engineer	1,49%	0,45%
Energy specialties	1,19%	0,91%
Anti-crisis management	0,60%	3,64%
Personal branding	0,60%	1,82%



# **METHODOLOGY & LIMITATION**

This report is based on the results of secondary analysis of official statistical and economic data (The State Statistics Service, the State Employment Service, the Ministry of Finance, the Ministry of Social Policy, the Ministry of Economy, the National Bank of Ukraine, and a range of think tanks), secondary analysis of a number of REACH Ukraine assessments, as well as primary data obtained as a result of a series of socio-economic assessments conducted within the Securing Women's Economic Empowerment for Recovery and Development (SEED) project in 2023-2024.

- 1. Rapid economic assessment in Odeska, Mykolaivska, Chernihivska, and Vinnytska oblasts, June 2023. The results of this assessment are derived from primary qualitative and quantitative data: 83 in-depth interviews and 105 structured interviews of key informants (KIs). 7 unique interview guides were developed for in-depth interviews with local authority representatives, business management organisations, civil society organisations, international organisations, vocational training providers, administrative service centres, and banks. One structured KoBo tool was built using a variety of constraints to enable data to be collected from representatives of local authorities, employment centres, and business management organisations. Results of the survey allowed for an indicative quantitative analysis of the socioeconomic impacts of the full-scale war in different localities.
- 2. Socioeconomic assessment of micro, small, and medium enterprises (MSMEs) was conducted using data collected between December 4, 2023, and February 2, 2024. This study gathered both quantitative and qualitative data from 613 representatives of MSMEs across four oblasts (Odeska, Mykolaivska, Chernihivska, and Vinnytska).
- Qualitative data was captured through semi-structured in-depth interviews with 27 representatives of womenled businesses and 13 interviews with leaders of business management associations (BMO), civil society organizations (CSO) that represent the interests of women.
- Scripts were developed in RStudio to scrape resume data from Ukraine's job search portal, Work.ua. Results of the web scraping provided quantitative picture of labour market dynamics, including demographics of jobseekers as well as sectoral trends.

The distribution of informants in sampling depending on the size of enterprises is based on the data of the State Statistics Service and proportionally represents approximately 80% of micro-enterprises (including the self-employed), approximately 15% of small enterprises, and about 5% of medium-sized enterprises. The inclusion of self-employed persons in the sample population is planned at the level of approximately 10% of the total volume of the sample population.

The selection of informants was carried out using the "snowball" method, taking into account the following criteria: conducting activities within a different sector of the economy, and ensuring a balance between officially registered businesses and those not officially registered at the time of the survey. However, accessing informants involved in informal business activities was challenging, resulting in this group being minimally represented at about 2.5% of the surveyed entrepreneurs. One structured KoBo tool was built using a variety of constraints to enable data to be collected from businesses of different sizes, taking into account the gender of the manager.

- 3. Socioeconomic assessment of labour force capacity in Odeska, Mykolaivska, Chernihivska, and Vinnytska oblasts, April May 2024.
- Quantitative data was gathered on a single Kobo tool for structured interviews with 5,385 adult residents of four oblasts.

The sample size was based on population, stratified by urban/rural, at a 97% confidence level with a 5% margin of error. Accurate population data in Ukraine is complicated by the outdatedness of the last census (conducted in 2001) and mass displacement. Sample calculations were conducted using a combination of census data and Oxford Estimate Data from April 2023. At the initial stage of the sampling, areas close to the front line as well as other no-go-areas (within which the security risks of access and stay were potentially increased due to insecurity from military actions and shelling).

A two-stage random sampling approach was applied separately for both urban and rural strata. The only difference was that we employed clustered sampling for rural areas. Two-stage sampling involved two stages: first a primary sampling unit (PSU) was randomly selected with replacement and with the selection based on probability proportional to size (PPS) i.e. probability of selection inverse to the population size of the PSU; and the secondary sampling units (households) were then selected within the randomly sampled PSUs. Randomizing the selection of each HH within the PSU was implemented through GIS-based approach.

- Qualitative data was obtained from 68 individual interviews (IIs) with representatives of educational institutions and human resources (HR) departments in businesses.
- Data on resumes and vacancies published on online job portal Work.ua was scraped using scripts developed in RStudio, providing a quantitative picture of labour market dynamics, including demographics of jobseekers and sectoral trends.



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