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EMPLOYMENT OF THE RURAL POPULATION IN UKRAINE: STRUCTURAL AND DYNAMIC TRANSFORMATIONS AND REDUCTION OF LABOUR FORCE UNEMPLOYMENT

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SUMMARY

The role and place of various forms of employment and types of economic activity in providing work for the population of rural areas during the pre-war and wartime periods, taking into account prospective changes, have been analysed. Between 2015 and 2021, the number of people employed in rural areas fell by 0.3 million (to 4.83 million); the total number of unemployed, according to ILO methodology, stood at 1.49–1.71 million people, of whom 490–580 thousand were from the rural population, depending on the phase of the economic cycle; during the wartime period of 2022–2025 – 187–94 thousand people. The paper outlines directions for reducing unemployment in the rural labour market after the end of the war: the revival of livestock farming and non-agricultural economic activities, financial and insurance activities, the expansion of professional, scientific and technical activities, etc.

Key words: rural employment, rural areas, unemployed, skilled workers.

Statement of the problem. At the present stage, the war has become the key factor behind the deterioration in the supply of labour to businesses and entrepreneurs, due to the increase in the scale of internal and international migration, which has been accompanied by a growing strain on local labour markets. This has led to the intensification and diversification of a whole range of diverse problems. Ukrainian researchers who studied the issue of labour supply at the start of the war noted the following: war increases risk and uncertainty, creates obstacles to the free movement of factors of production, including the labour force, and leads to the breakdown of labour market institutions and their effective functioning. Economic problems, coupled with significant internal mobility and the movement of refugees, lead to mass job and income losses. Rising unemployment, social alienation, gender inequality, workplace discrimination, including against young people, and the spread of one of the main negative social consequences of the war – poverty [1, p. 2]. In the labour market, even six months after the start of the war, there was demand for transport and logistics workers, skilled tradespeople, marketers, PR and advertising professionals, construction workers and agricultural workers [2]. It is clear that as military operations unfolded and the territories where they were

conducted expanded, the situation became more complicated, intensified and, in some places, deteriorated.

A number of domestic researchers paid significant attention to addressing the challenges of regulating the rural labour market in the pre-war years and during the period of martial law, as well as to diversifying employment sectors and stabilising employment among the rural population, including: Boyarchuk L.V., Germaniuk N.V., Markevych K.M., N.I. Patyka, A.A. Pivtorak, O.M. Pishchulina, A.V. Kholodnytska, A.O. Shumilin [1–7] and others. It has been established that a significant imbalance between labour supply and demand emerged. Demand for labour has fallen sharply due to the impossibility of working in combat zones, a decline in demand for goods and services, logistical problems and uncertainty about the future. Furthermore, there is significant informalisation of the labour market in the country – many vacancies are offered without formal registration, as casual work, etc. [1, p. 2].

Consequently, changes in employment trends among the rural population during the war and in the post-war period represent a key issue for academic research, given the profound transformation of economic relations within society and the influence of intensifying integration

processes with the EU. The rapid pace at which these changes are occurring results in a certain delay in the recommendations and proposals put forward by researchers; consequently, their predictive nature must be strengthened.

Materials and methods. This research utilised statistical data for the period 2014–2025 concerning population movements and employment sectors in rural areas, as well as shifts during the war in the structure of economic entities across key sectors: primary production and the food industry. Particular attention was paid to analysing the problems and dynamics of informal employment among the rural population, taking into account trends that have emerged in regions around the world. Using statistical data on the construction sector, forward-looking recommendations were formulated to revitalise the rural labour market.

Results and discussion. The analysis of the rural labour market over time shows a very clear division: from 1 January 2000 – the creation of an agrarian market economy – up to 2021, and from the start of 2022 and subsequent years (linked to the Russian Federation’s aggression from 24 February 2022). During the years of Russian aggression, the statistical data is incomplete compared to the previous period and highly dynamic due to significant changes in the extent of the occupied/de-occupied parts of Ukraine’s territory, internal and external population migration, and the closure and relocation of operating enterprises. In this context, it is important both to identify the driving forces behind these

transformations and the prospects for potential changes to expand capacity, and to develop measures to minimise the consequences of negative processes and boost employment among the rural population.

In statistical terms, the employed rural population includes formally and informally employed workers in the formal and informal sectors of the economy aged 15 and over, whilst the rural labour force additionally encompasses the unemployed for a specific period of time. Formal employment is legally established (formalised by a company order appointing the individual to the post) and economically protected by the state (the employee is provided with a social package), whereas informal employment takes place without legal formalities, is not regulated or monitored by the state, and therefore those employed in this sector are in a vulnerable and unprotected position, and their labour rights are not safeguarded.

To analyse shifts in the rural labour market, it is appropriate to cover the period between the two Russian aggressions – 2014 and 2022 (table 1). The KVED-2010 classification comprises 21 sections, but to simplify the calculations, five sections (**A; F; G; H; I**) *have been given identical names*, four industrial sections (**B, C, D, E**) have been grouped under ‘industry’, and the remaining 12 sections (**J, K, L, M, N, O, P, Q, R, S, T, U**) have been combined into a single group, ‘*provision of various types of services*’. This will allow for a clear summary of trends across economic activities and in rural areas as a whole over the 7-year study period.

Table 1. Trends in the employed population of rural areas of Ukraine aged 15–70 by type of economic activity in 2014–2021*.

Indicators	2014	2015	2019	2020	2021	2021 compared to 2014, %
1	2	3	4	5	6	7
Rural population aged 15–70, thousands	9,439.6	9,412.3	9,236.0	9,143.42	9,062.7	96.0
Number of employed rural population aged 15–70, thousands	5,292.4	5,134.2	5,163.5	4,931.6	4,835.5	91.4
- proportion of the rural population in employment, %	56.1	54.6	55.9	53.9	53.4	-2.7
<i>including by economic activity, thousands of people</i>						
agriculture, forestry and fishing (section A)	2,249.3	2,115.3	1,926.0	1,874.0	1,837.5	81.7
industry (comprising 4 sections: B, C, D, E)	571.6	539.1	604.1	572.1	607.1	106.2
construction (section F)	328.1	328.6	392.4	384.7	386.8	117.9
wholesale and retail trade; repair of motor vehicles and motorcycles (section G)	492.2	508.3	583.5	537.5	541.6	110.0
transport, warehousing, postal and courier activities (section H)	259.3	261.8	237.5	236.7	227.3	87.7

temporary accommodation and catering (<i>Section I</i>)	63.5	77.0	98.1	88.8	77.4	121.9
provision of various types of services (includes 12 sections: J, K, L, M, N, O, P, Q, R, S, T, U)	1,328.4	1,304.1	1321.9	1,237.8	1170.2	88.1
<i>including by type of economic activity, as a percentage of the total</i>						
agriculture, forestry and fisheries	42.5	41.2	37.3	38.0	38.0	-4.5
industry (<i>includes 4 sections</i>)	10.8	10.5	11.7	11.6	12.3	1.5
construction	6.2	6.4	7.6	7.8	8.0	1.8
wholesale and retail trade; repair of motor vehicles and motorcycles	9.3	9.9	11.3	10.9	11.2	1.9
transport, warehousing, postal and courier services	4.9	5.1	4.6	4.8	4.7	-0.2
temporary accommodation and catering	1.2	1.5	1.9	1.8	1.6	0.4
provision of various types of services (<i>12 sections</i>)	25.1	25.4	25.6	25.1	24.2	-0.9

**Systematised and supplemented from:* [7, p. 31; 8]

An analysis of trends in the scale of labour force employment in rural areas, as shown in Table 1, allows us to draw a number of important conclusions, in particular:

- there is a permanent decline, with the exception of 2019, in the size of the labour force aged 15–70 and the employed rural population (by 376,900 and 456,900 people) by 4.0% and 8.6% respectively, that is, the decline in the number of employed persons occurred at twice the rate of the labour force, due to a number of factors, including: a decrease in the number of employed rural residents due to migration and depopulation, a decline in employment in primary production, a significant reduction in the number of social sector workers, across various sectors of economic activity, services and service provision, etc., whilst the proportion of the employed rural population fell by 2.7%, i.e. to 53.4%;

- when broken down by sector, a distinction can be observed between sectors *experiencing a decline (type 1)* and *those experiencing growth (type 2)*; that is, there was a reduction in the scale of employment in the former case, whilst trends of both absolute and relative growth in the labour force were evident in the latter. As for *Type I*, this includes the following sectors: **A** – agriculture, forestry and fisheries (a decline of -4.5% and a reduction in employment of 411,800 people); **H** – transport, storage, postal and courier activities (a decrease of -0.2% and a reduction in the number of employed persons by 32,000); **a group of 12 sectors** (**J** – information and telecommunications, **K** – financial and insurance activities, **L** – real estate activities, **M** – professional, scientific and technical activities, **N** – administrative and support service activities, **O** – public administration and defence; compulsory social security, **P** – education, **Q** –

health care and social work, **R** – arts, sports, entertainment and recreation, **S** – other service activities, **T** – activities of households, **U** – activities of extraterritorial organisations and bodies), (a decrease of 0.9% and a loss of 158,200 jobs). Thus, *across the three type I groups*, there was an overall reduction in the number of employed persons by 602,000. At the same time, this *multi-sectoral group* includes sectors with varying scales of employment, but the largest number of people worked in the social sector in rural areas in 2021: in the rural education sector **P** (school education – around 180,000 people, pre-school education – 35,443 people = a total of over 215,000 people) or 18.38% (out of 1,170,000 employed across 12 sections). At the same time, rural healthcare **Q** (doctors – 7,370 people (5% of 147,400 doctors across Ukraine), and nursing staff – 38,823 people (12% of 273,500 nursing staff across Ukraine) = a total of 40,193 people (40,200) or 3.44% of those employed across 12 sectors. It should be emphasised that this refers to qualified specialists (professionals with higher or secondary specialised education). At the same time, official statistics do not provide actual figures for those employed in the cultural sector **R** (only a portion of those employed have formalised employment contracts, whilst temporary, part-time or project-based employment predominates; the remaining workers: without formalised employment contracts, self-employed and those in hidden employment relationships), so they cannot be taken into account. Thus, in rural education and healthcare, there are over 255,200 employees (21.8% of the total of 1,170,200 employed across 12 sections) or 5.28% of the total number of people employed in rural areas. Consequently, the remaining 10 sectors *of the multi-sector group* account for 915,000 workers (1,170,200 – 255,200), which represents 18.92% (24.2% – 5.28%) of the total

workforce of 4,835,500 employed in rural areas, i.e. on average less than 2% of employed workers per sector;

- an increase *in* employment *in type II sectors* was observed across four groups, namely: **industry** (four sectors: **B** – mining and quarrying, **C** – manufacturing, **D** – electricity, gas, steam and air conditioning supply, **E** – water supply; sewage and waste management), (growth of 6.2% and an increase in employment of 35,500 people); **E** – construction (growth of 17.9% and an increase in employment of 58,700 people); **G** – wholesale and retail trade; repair of motor vehicles and motorcycles (growth of 10.0% and an increase in employment of 49,400 people); **I** – accommodation and food service activities (growth of 21.9% and an increase in employment of 13,900 people). The increase in employment across *the* seven *sectors* amounted to 157,500 people. This is explained by positive trends: the recovery of industrial production following localised downturns in 2015 and 2020 and upturns in 2019 and 2021; an increase in demand for construction workers as the scale of contract work expanded in 2019–2021; an increase in trade volumes and the expansion of vehicle repair services by almost 19% up to and including 2019, and efforts to maintain the results achieved (a 7% decrease occurred) in subsequent years; a one-and-a-half-

fold increase in the number of people employed in the accommodation and food services sector up to and including 2019, followed by a 21% decrease up to and including 2021. Increases in employment alternate with periods of decline, but the overall trend for these sections *is upward*.

Overall, the increase *in* employment *in type II sectors* over the period under review amounted to 157,500 people, whilst the decrease *in type I sectors* was 602,000 people: there was an overall decrease in the number of employed persons of 444,500 (8.6%). However, alongside the formal component, the structure of the employed rural population also includes an informal sector, which we will analyse below.

Informal employment [9], unlike formal employment, is predominantly concentrated in the shadow economy, lacks legal formalisation and is not protected by the state. It includes casual work, work without a contract, seasonal employment, unregistered rudimentary and diverse self-employment without any legal guarantees. For an objective analysis of informal employment in Ukraine, we will first refer to statistics on this phenomenon at the global and European levels (table 2).

Table 2. Level of informal employment worldwide in 2016* (by region, sector and levels of economic development), % of total employment in the economy (extract)

Region	Level of economic development	Overall level of informal employment, %	including by sector:		
			agriculture	industry	services
1		2	3	4	5
World total		61.2	93.6	57.2	47.2
Europe and Central Asia, including:		25.1	71.6	21.9	20.2
Northern, Southern and Western Europe		14.3	47.5	10.1	14.2
Eastern Europe		31.5	64.5	30.2	26.9
Developing countries and emerging markets**		69.6	94.3	67.2	55.5
Europe and Central Asia		36.8	76.5	33.5	27.8
Developed countries**		18.3	58.7	15.8	17.5
Europe and Central Asia		15.6	52.5	11.5	15.3

* Compiled using data from 119 countries worldwide, which together account for 90% of the global workforce.

** The ILO's classification of countries by level of economic development is based on the World Bank's 2018 classification by income level (GNI per capita) and defines: developing countries as those with a low income level of US\$1,005 or less; countries with lower-middle income levels – from US\$1,006 to US\$3,955 – as well as countries with upper-middle income levels – from US\$3,956 to US\$12,235 – are classified as emerging market economies; developed countries include those with high income levels – US\$12,236 and above [10, p. 12; 11, pp. 23–26, 40–41, 76].

Per capita GDP in Ukraine stood at US\$2,185 in 2016 and US\$5,389.5 in 2024. Thus, **Ukraine belongs to the group of developing countries and countries with emerging markets** (with a lower-middle income level – from US\$1,006 to US\$3,955, and an upper-middle income level – from US\$3,956 to US\$12,235). The informal employment figures for Ukraine are taken from the «Europe and Central Asia» row.

The estimates of informal employment in rural areas are presented in table 3. It should be noted that, both in absolute and relative terms, there was a 7.1% reduction in employment in the informal sector during the period under review (from 42.6% to 35.5%), by 470,000 people (9.1%), of whom almost half were in primary production – 231,100 people. The remainder of the reduction was in construction – 35,000 people, trade and repairs – 98,900 people, industry – 25,400 people, other services – 44,900 people, transport and other activities – 20,400 people, and accommodation and food services – 13,000 people. Taken together, the first three sectors (primary production, construction, trade) account for 90.5% of those who left the workforce, i.e. 365,000 people. And what changes in employment are associated with such a significant reduction in the number of informally employed people?

The informal employment sector is largely a mirror image of the formal sector of the economy, but differs in terms of poorer provision of means of production and the composition of the workforce, the absence of formal contractual relationships and state social guarantees, the use of predominantly unskilled labour and the lack of prospects for professional growth, the unattractiveness of the work and its low pay, and so on. However, in the context of constant social progress, ‘urban’ types of activity are penetrating rural areas, leading to the creation of jobs in the sector providing domestic, service, transport, utility and repair, and financial and credit services, as well as in the hotel and restaurant business,

and the organization of small-scale production (the manufacture of folk crafts and items for personal use, furniture, clothing and leather goods, alcoholic beverages, local long-life products and home-made food products), etc. As agriculture is the main place of work, the majority of informally employed workers are actively involved in the cultivation, harvesting, resale and processing of private household farm produce, and also organise various small-scale trading, construction work, maintenance of private transport, etc. on their own initiative. Remuneration for work performed is based on verbal agreements and without recording the scope of work carried out; if workers are dissatisfied with working conditions or pay, dismissal takes place without any legal grounds. Consequently, there is a very high staff turnover. This is very clearly evident when comparing statistical data across different sectors. In particular, the rural working population fell by 298,700 people (5.82%) over six years (2015–2021), including a decrease of 469,700 people (9.15%) in informal employment, of whom 231,100 (4.50%) were in primary production (table 3). Consequently, due to a more pronounced decline in the number of informally employed workers compared to the reduction in the total number of rural workers, there was an increase in the proportion of formally employed workers; that is, there was a positive trend in the composition of the workforce – a rise in the proportion of workers in the formal sector alongside an absolute decrease in their total numbers.

Table 3. Informally employed rural population of Ukraine by economic activity in 2015 and 2021*

Indicators	2015			2021			2021 comp ard to 2015, p.p.
	Total	of which not formally employd	share, %	Total	of which not formally employd	share, %	
1	2	3	4	5	6	7	8
Employed population living in rural areas, <i>thousands</i>	5,134. 2	2,185.0	42.6	4,835. 5	1,715.3	35.5	-7.1
<i>including by economic activity, in thousands of people</i>							
agriculture, forestry and fisheries	2,115. 3	1,466.1	69.3	1,837. 5	1,235.0	67.2	-2.1
industry (4 sections)	539.1	94.0	17.4	594.8	68.6	11.5	-5.9
construction	328.6	255.6	77.8	386.8	219.6	56.8	-21.0
wholesale and retail trade; repair of motor vehicles and motorcycles	508.3	196.7	38.7	541.6	97.8	18.1	-20.6
transport, warehousing, postal and courier services	261.8	39.3	15.0	227.3	18.9	8.3	-6.7
temporary accommodation and catering	77.0	28.4	36.9	77.4	15.4	19.9	-17.0
provision of various types of services (12 sections)	1,304. 1	104.9	8.0	1,170. 2	60.0	5.1	-2.9

temporary accommodation and catering	1.5	1.3	-	1.6	0.9	-	-0.4
provision of various types of services (12 sections)	25.4	4.8	-	24.2	3.5	-	-1.3
<i>including by economic activity, as a percentage of the total</i>							Group 6 - Group 3
agriculture, forestry and fisheries	41.2	67.1	-	38.0	72.0	-	4.9
industry (4 sections)	10.5	4.3	-	12.3	4.0	-	-0.3
construction	6.4	11.7	-	8.0	12.8	-	1.1
wholesale and retail trade; repair of motor vehicles and motorcycles	9.9	9.0	-	11.2	5.7	-	-3.3
transport, warehousing, postal and courier services	5.1	1.8	-	4.7	1.1	-	-0.7

**Systematised and supplemented from:* [7, p. 33; 12].

However, to determine Ukraine's position among other European and world countries, it is necessary to convert the statistical data presented in table 3 into the format used in table 2, and for this purpose we adopt the following generalisations: a) agriculture – corresponds to the calculated indicators; b) industry – is calculated as the

aggregate value of two indicators: 4-section industry and construction; c) the service sector – corresponds to the aggregate indicator for the remaining four groups of sections (16 sections in total), which are given in Table 3. The results of the calculations are presented in Table 4

Table 4. Level of informal employment in rural areas of Ukraine in 2015 and 2021* (by sector group), % of total employment in the economy

Level of economic development Years	Overall level of informal employment, %	<i>including by sector:</i>		
		agriculture	industry	services
1	2	3	4	5
2015	42.6	69.3	40.3	17.1
2021	35.5	67.2	29.3	10.0
For reference:				
Developing countries and emerging markets. Europe and Central Asia, 2016	36.8	76.5	33.5	27.8
Ukraine, overall level, 2021	19.3	45.5	6.9	7.4
Developed countries. Europe and Central Asia, 2016	15.6	52.5	11.5	15.3

**Calculated:* based on data from Table 3 and [13, p. 131].

The figures presented in table 4 indicate that, in terms of informal employment, rural areas of Ukraine are very close to the average figures for the overall level across European and Central Asian countries. As for the indicators of the overall level of formal employment, Ukraine is approaching the developed countries of Europe and Central Asia, although it lags significantly behind them in terms of economic development.

At the same time, another group of workers needs to be analysed – the unemployed. The Labour Force Survey (LFS) is based on a sample of households selected across all regions of the country on a scientifically sound basis. The entire population aged 15 and over is classified according to labour force status into the following

categories: 1) employed; 2) unemployed; 3) persons not in the labour force (including those classified as potential labour force). All three of the above categories are mutually exclusive and exhaustive. In the population survey, the employed population is first identified, then the unemployed population, and finally those not in the labour force [13, p. 14]. The size of the unemployed population was determined using two official sources: data from the State Employment Service (SES) (number of registered unemployed) and the results of the Labour Force Survey (LFS) (taking into account the number of unemployed according to the household survey).

The number of unemployed people aged 15 and over and aged 15–70 in 2021 (in accordance with ILO

methodology) stood at over 1.7 million. Among the unemployed, almost two-thirds were urban residents (over 1.13 million people), with the remainder being rural residents (Table 5).

The unemployment rate (according to ILO methodology) is the ratio (in per cent) of the number of unemployed persons aged 15 and over to the labour force

of that age or the relevant socio-demographic group. Among people aged 15–70, this rate was higher among rural residents than among urban residents (10.7% versus 9.5%). It was highest in the 15–24 age group – 18.1%, and lowest among the working-age population aged 30–34 – 7.8% (in the 15–34 age group – 11.7%) [13, pp. 62–63].

Table 5. Trends in unemployment in Ukraine in 2014–2025*

Years	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
1	2	3	4	5	6	7	8	9	10	11	12	13
Population, million people	42,953.9	42,774.6	42,603.9	42,403.0	42,177.6	41,922.7	41,629.9	41,208.1	41,167.3	33,200	32,800	32,600
Registered unemployed, in thousands	512.2	490.8	390.8	354.4	341.7	338.2	459.2	295.0	186.5	96.1	94.2	94.0
Number of unemployed according to the 2021 Labour Force Survey, thousands												
Total		1,654.7			1,578.6	1,487.7	1,674.2	1,711.6				
- in rural areas		533.3			515.5	492.9	573.2	579.4				
Share, %		32.23			32.66	33.13	34.23	33.85				

***Compiled from:** data from the State Employment Service and [13, pp. 143, 171; 14, p. 51].

The statistical data presented in table 5 indicate that, among registered unemployed persons, the proportion of rural workers was approximately 15–20%, due to the fact that it is very difficult for workers who have lost their jobs to register in rural areas: previously, they had to travel to the territorial offices of the State Employment Service and submit the necessary documents. The State Employment Service now registers the unemployed via its portal dcz.gov.ua and the ‘Diia’ portal (diia.gov.ua), which allows individuals to apply for unemployed status remotely using an electronic signature or BankID. According to the results of a pre-war expert survey, the number of unemployed people in rural areas ranged from 50,000 to 100,000, depending on the total number of registered unemployed and the phase of the economic cycle, whereas during the war, the figure was less than 20,000.

However, the results of the household surveys conducted in 2021 and previous years attract greater attention. They indicate that, according to ILO methodology, between 2015 and 2021 the total number of unemployed stood at approximately 1.49–1.71 million people, of whom in rural areas – between 490,000 and 580,000 people, or 32.2–34.2% of the labour force, who lost their jobs depending on the characteristics of the specific phase of the economic cycle (upward trend (recovery)–peak–downturn (crisis)–stagnation). Thus, in

practice, unemployment is present in every phase of the economic cycle – the figures differ only in the scale of the phenomenon and in sectoral and seasonal characteristics.

Let us now turn to an analysis of the employment situation during the period of military operations. Over the last five years (2020–2024), Ukraine’s total population has decreased by 9.7 million people (by 23.2%), including the rural population by 2.8 million people (by 21.9%), whilst the proportion of rural residents has increased by 0.5%. The population decline is linked to refugees leaving the country and the insurmountable consequences of the war: increased migration to cities and abroad, a falling birth rate and rising mortality rates.

It is important to analyse the changes that have taken place in the rural labour market under martial law in Ukraine and to identify exactly how these changes have manifested themselves. According to the new Law [15], the rural area has expanded and now comprises more than a thousand rural and settlement communities, with a rural population of 41,167,300 (as of 1 January 2022) (accounting for 37.5% of the total population), and consequently, the vast majority of the material and land resources for primary production are located in rural areas. To carry out the relevant calculations and further

analysis, we will use data from the State Employment Service (Table 6).

Table 6. Number of vacancies and persons with unemployed status in agriculture, forestry and fisheries (code A) according to data from the State Employment Service*

Indicators	As of:					
	01/04/20	01.04.21	01.04.22	01.04.23	01.04.24	01.04.25
1	2	3	4	5	6	7
Number of vacancies, units	13,658	18,542	8,234	3,400	3,330	3919
of which:						
- agriculture	12,881	17,487	7,803	3,021	3002	3558
- forestry	726	986	412	350	313	346
- fisheries	51	69	19	29	15	15
Number of people with unemployed status, persons	80,510	79,445	56,423	17,377	12,147	13,237
of which:						
- agriculture	75,689	74,688	51,974	15,748	10,514	11,944
- forestry	4040	3987	3706	1549	1588	1238
- fisheries	781	770	743	80	45	55
Number of applicants per vacancy (under code A), persons	5.9	4.3	6.8	5.1	3.6	3.4
For comparison:						
Skilled workers in agriculture, forestry, fish farming and fishing						
Number of vacancies, units		2,330	1,109	891	984	1175
Number of people with unemployed status		17,725	14,270	6,808	5,842	5,545
Number of applicants per vacancy, persons		7.6	12.9	7.6	5.9	4.7

**Systematised according to:* [16].

The data presented in table 6 show that the number of vacancies in primary production sectors (*agriculture, forestry and fisheries*) fell by more than fivefold during the military conflict (between 2021 and 2023 from 18,542 to 3,400 vacancies), whilst the number of people classified as unemployed fell by 4.6 times (from 79,445 to 17,400 people), and by a further six-fold two years later. As a result, the number of applicants per vacancy fell by almost half, to 3.4 people. Demand for any job in the primary production sectors fell significantly, whilst the number of vacancies declined. This occurred against a backdrop of a decline in the number of small and medium-sized enterprises, but a significant increase in large agricultural producers who were introducing innovative and resource-efficient technologies; it was accompanied by a reduction in employment, a decrease in the area of cultivated land, and a scaling back of operations in the agricultural sector, as well as the retirement of workers, etc.

When analysing the labour force by occupation, i.e. *skilled workers in agriculture, forestry, fish farming and fishing*, we note that the number of vacancies fell by a factor of 2.6 (from 2,330 to 891), and the number of

people with unemployed status fell by the same amount (from 17,725 to 6,808), which led to a halving of the number of applicants per vacancy, to 4.7 people. Consequently, demand for *skilled workers* in primary production has fallen significantly, due to their exemption from military conscription, the migration of the rural population to cities and abroad, retirement, and other factors.

It should be noted that the total number of vacancies for *skilled workers* is three times lower than the number of vacancies for *primary production workers*, whilst the number of unemployed is, accordingly, more than half as many (Table 6). Overall, this is a logical proportion, as *skilled workers* (220,000 people in 2021) form part of the broader category of *primary production workers* (2,692,700 people), which encompasses all occupations and qualifications across the relevant sectors. These findings can also be extrapolated to other types of activity and sectors of the economy in rural areas.

We must also analyse changes in the staffing of the food industry sectors (food, beverages, tobacco products) and their dynamics during the transition to martial law (table 7). This is because industry in rural areas is largely

represented by food industry enterprises, and therefore shifts in food processing capacities can be projected collectively onto non-agricultural sectors.

Table 7. Number of vacancies and persons with unemployed status in the food industry of Ukraine (code C: groups 10+11+12) according to data from the State Employment Service*

Indicators	As of:				
	01.04.21	01.04.22	01.04.23	01.04.24	01.04.25
1	2	3	4	5	6
Number of vacancies, units	2332	1286	1631	2324	3352
of which:					
- food production	2160	1200	1455	2178	3080
- beverage production	168	86	175	145	271
- manufacture of tobacco products	4	0	1	1	1
Number of people with unemployed status, persons	19,034	12,531	6,150	2,922	4,614
of which:					
- food production	17,241	11,385	5,655	2,636	4316
- beverage production	1722	1114	468	274	291
- manufacture of tobacco products	71	32	27	12	7
Number of applicants per vacancy, persons	8.2	9.7	3.8	1.3	1.3

*Systematised according to: [16].

As can be seen from table 7, the lowest number of vacancies – 1,286 – was observed at the end of Q1 2022, i.e. amidst active Russian aggression, the complete shutdown of some enterprises and the relocation of others. However, as production resumed, the number of vacancies increased and peaked at the end of Q1 2025 at 3,352, i.e. 2.6 times higher. At the same time, the number of people with unemployed status fell by 6.5 times between 2021 and 2024 – from 19,000 to 2,900 people – but rose to 4,600 people in Q1 2025, i.e. 1.6 times higher. The pre-war ratio of applicants per vacancy, which stood at 8.2 people, rose to 9.7 people in Q1 2022 and reached

a low of 1.3 people per vacancy in 2024–2025 – a decrease of 6.3–7.5 times. Consequently, food industry enterprises have adapted to wartime conditions and are able to fill all vacancies, whilst the State Employment Service may redirect a certain proportion of the unemployed to meet labour needs in other sectors.

Let us analyse the changes that have taken place in primary production and the food industry under martial law (table 8). As of the end of 2021, these economic activities accounted for around 40% of the rural population's employment at that time.

Table 8. Trends in active economic entities and their workforce by type of economic activity in 2021–2024*

Name of economic activity	Years	Business entities:			Employed population:		
		Total, units	of which sole traders, units	Proportion of sole traders, %	Total, persons	of which in sole traders, persons	% in sole trade rs
1	2	3	4	5	6	7	8
Agriculture, forestry and fisheries (code A), of which:	2021	70803	23,050	32.6	576,093	40,378	7.0
	2022	53,281	20437	38.4	488,555	34,078	7.0
	2023	62,960	22,071	35.1	456,909	34,874	7.6
	2024	58,703	23,156	39.4	486,024	34,122	7.0
	2024: 2021=%	82.9	100.5	+6.8	84.4	84.5	0.0
Agriculture, hunting and related service activities	2021	64,960	18,890	29.1	511,098	30,468	6.0
	2022	48,378	16,638	34.4	433,367	25,382	5.9
	2023	57,768	18,140	31.4	405,997	26,362	6.5
	2024	53,747	19261	35.8	443,430	26,603	6.0
	2024: 2021=%	82.7	102.0	+6.7	86.8	87.3	0.0

Forestry and logging	2021	3211	2326	72.4	58,292	7273	12.5
	2022	2946	2329	79.1	50,595	6783	13.4
	2023	3033	2458	81.0	46,661	6695	14.3
	2024	2973	2460	82.7	38,576	5734	14.9
	2024: 2021=%	95.6	105.8	+10.3	66.2	78.8	+2.4
Fisheries	2021	2632	1834	69.7	6703	2637	39.3
	2022	1957	1470	75.1	4593	1913	41.7
	2023	2159	1473	68.2	4251	1827	43.0
	2024	1983	1435	72.4	4018	1785	44.4
	2024: 2021=%	75.3	78.2	+2.7	59.9	67.7	+5.1
Food industry (C code: groups 10+11+12), of which:	2021	16,206	9,855	60.8	358,945	39,068	10.9
	2022	13,937	9129	65.5	307,623	31,386	10.2
	2023	16,406	10,864	66.2	302,632	35,574	11.8
	2024	17,033	11,559	67.9	300,901	35,734	11.9
	2024: 2021=%	105.1	117.3	+7.1	83.8	91.5	+1.0
Food production	2021	15,109	9,521	63.0	321,814	38,115	11.8
	2022	13,023	8818	66.7	275,009	30,674	11.2
	2023	15,374	10,534	68.5	270,799	34,808	12.9
	2024	16,005	11,223	70.1	269,230	34,999	13.0
	2024: 2021=%	105.9	117.9	+7.1	83.7	91.8	+1.2
Beverage production	2021	1,051	333	31.7	per sec	fps	fps
	2022	876	311	35.5	29,753	712	2.4
	2023	983	330	33.6	29,165	766	2.4
	2024	981	335	34.1	fps	fps	%
	2024: 2021=%	93.3	100.6	+2.4	p.p.	p.p.	p.p.
Manufacture of tobacco products	2021	46	1	2.2	per sec	fps	fps
	2022	39	0	0.0	2861	0	0.0
	2023	49	0	0.0	2668	0	0.0
	2024	47	1	2.1	per second	short film	%
	2024: 2021=%	102.2	100.0	-0.1	p.p.	p.p.	per second

**Systematised* according to: [17; 18].

The analysis carried out has enabled the following propositions and conclusions to be drawn:

- the first year of the war resulted in a reduction in the number of economic entities: in primary production (PP) – by 25%, in the food industry (FI) – by 14%. The number of employees fell by 15.2% and 14.3% respectively, or, calculated per enterprise for the whole of 2022: in PP –

8.14 and 9.17 employees (or 11.22 and 13.84 employees excluding sole traders), i.e. an increase in the number of employees by 12.6% (23.3% respectively); per enterprise in the agricultural sector – 22.15 and 22.07 employees (or 50.37 and 58.11 employees excluding sole traders), i.e. no change (or a 15.4% increase in the number of employees);

- during the first year of the war (2022), the reduction in the number of employees in sole proprietorships was half as much – 11.3% in PV and 7.4% in XI respectively, which indicates a more stable position for sole proprietors and exceptional flexibility in the face of a deteriorating economic situation. At the same time, during the first year of the war, the number of people employed by sole traders fell by 15.6% and 9.7% respectively. Per farm, the labour force intensity in PVs stood at 1.75 and 1.67 employees (a decrease of 4.8%),

and per enterprise in HI – 3.96 and

3.44 employees (a decrease of 13.1%). This indicates the family-based nature of labour organisation in PV sole traders and their resilience, and a more extensive one in HI sole traders;

- following a reduction in the number of business entities during the first year of the war, there was a certain recovery of some business entities over the subsequent two years (2023–2024): food production – 105.9% (to 16,005 enterprises), of which sole traders – 117.9% (to 11,223 units), beverage production by sole traders – 100.6% (to 335 units), tobacco product production – up to 47 units. However, agriculture and forestry failed to reach pre-war levels, and following growth in 2023 – a decline occurred in 2024: 82.7% and 95.6% respectively (a decrease to 53,747 and 2,973 units), whilst in the fishing industry the decline affected a quarter of enterprises – 75.3% (to 1,983 units);

- although a certain recovery in capacity was observed in the aforementioned sectors, the number of people employed fell across the board, particularly in the forestry sector (down by a third) and the fishing sector (a 40% reduction).

It is important to assess the role of key sectors in providing employment for the rural population in the

post-war period. The types of economic activity located in rural areas and their role in the structure of the national economy in the pre-war period are shown in Table 9. As regards the period of military operations, this issue has

been partially addressed. However, the main efforts should be directed towards revitalising the labour market in the post-war period.

Table 9. Employed population of Ukraine by type of economic activity and locality in 2021*

Indicators	Employed population:		Col. 3 : Col. 2 = %
	Total	rural	
1	2	3	4
Population aged 15–70, <i>thousands</i>	30,036.8	9,062.7	30.2
Number of employed persons aged 15–70, <i>thousands</i>	15,610.0	4,835.5	31.0
- proportion of the employed population, %	51.2	53.4	-
<i>including by economic activity, thousands of people</i>			
agriculture, forestry and fisheries	2,692.7	1,837.5	68.1
<i>of which skilled workers in agriculture, forestry, fish farming and fishing</i>	220.1	174.6	79.3
Industry (<i>includes 4 sections</i>)	2,313.2	607.1	26.2
<i>of which food industry</i>	278.0	92.0	33.1
construction	690.8	386.8	56.0
wholesale and retail trade; repair of motor vehicles and motorcycles	3,604.7	541.6	15.0
transport, warehousing, postal and courier services	961.0	227.3	23.5
Accommodation and food service activities	285.2	77.4	27.1
provision of various services (<i>12 sections</i>)	5062.4	1,170.2	23.1
<i>including by type of economic activity, as a percentage of the total (for comparison)</i>			
agriculture, forestry and fisheries	17.3	38.0	-
<i>of which skilled workers in agriculture, forestry, fish farming and fishing</i>	1.4	3.6	-
manufacturing (<i>includes 4 sections</i>)	14.8	12.3	-
<i>of which food industry</i>	1.2	1.9	-
construction	4.4	8.0	-
wholesale and retail trade; repair of motor vehicles and motorcycles	23.1	11.2	-
transport, warehousing, postal and courier services	6.2	4.7	-
accommodation and catering	1.8	1.6	-
provision of various services (<i>12 sections</i>)	32.4	24.2	-

***Systematised and calculated according to:** [7, p. 33; 13, pp. 105–111].

The statistical data presented in table 9 indicate that four groups of sectors play a key role in ensuring employment among the rural population: primary production, industry, trade, and vehicle repair and construction – these account for 70% of those in employment. The analysis showed that 77.1% of the total rural workforce is employed in crop production, 11.0% in livestock farming, 10.8% in forestry, and less than 1% in fisheries [7, p. 32]. The share of crop production in Ukraine's agricultural output in 2021 stood at 82.3%, with livestock farming accounting for 17.7%. Meanwhile, in the EU, 57% of agricultural output comes from crop production and 43% from livestock farming,

with a high proportion of dairy products and pig farming [19, p. 4].

It is therefore necessary to redress the imbalance in agricultural development by prioritising the livestock sectors: dairy and beef cattle farming, pig farming, sheep farming and goat farming. We must begin by developing a National Programme for the Revival of Livestock Farming with a clear timeline for its implementation. Between 1990 and 2015, the cattle herd fell by 6.2 million head, the pig herd by 12.7 million head, and the sheep and goat herds by 7.7 million head. The cost of constructing a single livestock unit for cattle is between 60,000 and 120,000 UAH, for pigs – 12,000 to 40,000

UAH, and for sheep and goats – 10,000 to 20,000 UAH. If we take half of the lost herd as the basis for recovery, this will require around 300 billion UAH to restore the material and technical base for cattle, 120 billion UAH for pigs, and 60 billion UAH for sheep and goats,

i.e. a total of 480 billion UAH. There will also be costs associated with rebuilding herds of various species and breeds, establishing a feed base, training the necessary personnel, and so on.

In 2024, around 54,000 people were employed in livestock farming (in 2010 – 163,300 people), of whom more than 3,000 were self-employed, and over 800 were engaged in ancillary activities in livestock farming (in 2010 – 4,200 people). In 2024, 387,000 people employed in construction also lived in rural areas.

The total volume of construction and installation works (CIW) carried out in Ukraine in 2024 amounted to 210 billion UAH (in 2021 – 258 billion UAH) [20], of which residential – 13%, non-residential – 29%, and civil engineering – 58%. With regard to rural areas, we assume a quarter of the total volume of completed construction and installation works – 50 billion UAH, a third of which is non-residential construction – 17 billion UAH, of which 10–12 billion UAH is the construction of livestock facilities. We assume that the defined volume of construction and installation works is 480 billion UAH, which must be completed over 10 years, i.e. 48 billion UAH per year, but this will take at least 4 years. Therefore, to implement the programme, it is necessary to significantly increase the volume of completed construction works, expand the workforce in rural construction, increase the area under fodder crops, and so on. In other words, this concerns a programme to restore key sectors of livestock farming and the need to ensure its implementation as a priority.

However, livestock farming is not the only area; the focus is on expanding non-agricultural and other promising sectors. This issue will become acute after the war and is linked to the implementation of a number of initiatives, in particular:

- the restoration of destroyed industrial capacity (in the food industry alone, 877 enterprises (13.8%) were removed from the statistical register over three years, excluding sole traders);
- the restoration of primary production (over the three years of the war, 11,994 farms (25.1%) were removed from the statistical register, excluding sole traders);
- humanitarian demining of areas contaminated with explosive ordnance and the restoration of agricultural production (practically a third of the land suitable for agricultural use);
- the revitalisation of financial and insurance activities;
- expanding professional, scientific and technical activities, etc.

Boosting the development of the above-mentioned types of economic activity during the reconstruction of de-occupied territories and communities will help increase employment among the rural population and contribute to strengthening the resilience of rural areas.

Conclusions. The rural labour market is in constant flux, the main outcome of which for the period 2014–2021 is:

- an increase in the number of employed persons across 7 sectors of economic activity (**industry: B** – mining and quarrying; **C** – manufacturing; **D** – electricity, gas, steam and air conditioning supply; **E** – water supply; sewerage, waste management); **E** – construction; **G** – wholesale and retail trade; repair of motor vehicles and motorcycles; **I** – accommodation and food service activities; the increase in the rural workforce amounted to 157,500 people;

- a reduction in employment across 14 other sectors, of which the two key ones are: **A** – agriculture, forestry and fishing; **H** – transport, storage, postal and courier activities; **a total of 12 sections (J, K, L, M, N, O, P, Q, R, S, T, U)**; a decrease in rural employment of 602,000 people, of which 411,800 people in section A and 32,000 people in section N. The total reduction in the rural workforce according to NACE Rev. 2 is 444,500 people. Despite the decrease in the number of employed persons (by 8.6% to 4,336,000), the proportion of the employed population has fallen: from 56.1% to 53.4%, although the number of rural residents aged 15–70 decreased by only 4% over this period.

Against the backdrop of the war, there was a decrease/increase in the number of businesses and the employed population in manufacturing between 2021 and 2024, specifically:

- in primary production by just 17.1% (from 70,803 to 58,703), but including sole traders, it increased by 0.5% (from 23,050 to 23,156); the employed population fell by 15.6% (from 576,093 people to 486,024 people), of which in private enterprises by 15.5% (from 40,378 people to 34,122 people);

- in the food industry, it increased by a total of 5.1% (from 16,206 to 17,033), including a 17.9% increase in sole traders (from 9,855 to 11,559); the employed population decreased by a total of 16.2% (from 358,945 people to 300,901 people), including a decrease of 8.5% among sole traders (from 39,068 people to 35,734 people).

The asymmetry between different forms of economic activity is deepening; the relative (from 42.6% to 35.5%) and absolute reduction in the number of workers in the informal sector between 2015 and 2021 amounted to 470,000 people (a decrease of 21.5%). Primary production employs 1,235,000 people (72% of the total number of informally employed), which accounts for 67.2% of the sector's workforce as a whole.

There is a decline in the number of officially registered unemployed in Ukraine: 2014 – 512,000 people, 2021 – 295,000, 2025 – 94,000 people, but an increase in the number of rural unemployed (according to the results of the household survey): 2015 – 533,000 people, 2021 – 580,000 people. Reducing the scale of this phenomenon, i.e. decreasing the number of rural unemployed, requires revitalisation of the rural labour market, in particular the revival of livestock farming, non-agricultural economic activities, etc.

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