PUBLISHED BY VOPROSY EKONOMIKI N. P.

Russian Journal of Economics 9 (2023) 351–370 DOI 10.32609/j.ruje.9.112008 Publication date: 20 December 2023 *Russian* Journal of Economics

www.rujec.org

Rural employment in Russia: Present conditions and prospects for agricultural and non-agricultural sectors

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Abstract

Contributing to a discussion on rural employment forecast in Russia, this paper systematizes the challenges for the rural labor market: population outflow, weak impulses to develop non-agricultural employment and rural entrepreneurship, changing labor needs in agriculture and a decline in the number of labor migrants. The results of the regional differentiation research show that the response strategies of Russian regions to stabilize employment differ significantly and include active intra-Russian labor migration or reliance on high agricultural state support, development of self-employment and jobs preservation in labor-intensive, low-productivity sectors of agricultural production. The article discusses rural development prospects associated with the return migration of urban residents to rural areas, which creates a new basis for rural employment growth. A theoretical implication of the rural employment perspectives discussion is the proposed concept of "out-of-urban employment" that actualizes the traditional approach of seeking employment only for indigenous rural people who have lost their jobs in agriculture, and includes new types and forms of employment for urban dwellers. Analysis of the current state support for rural employment in Russia shows that it is poorly aligned with the existing challenges. The scale of both financing and the number of potential participants is small; direct support measures are limited to the agricultural sector, while indirect ones-through support for rural infrastructure-create mainly public sector employment. The practical implications of the outcomes are some proposed ways of developing measures to support rural employment, taking into account non-agricultural rural economy needs.

Keywords: employment structural transformation, rural development, rural employment, agricultural policy, Russia. *JEL classification:* E24, O18, Q18.

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1. Introduction

Russia faces a number of socio-economic development challenges, one of which is the depopulation of rural areas. Rural areas of Russia have always lagged behind urban areas in their development in terms of demographic, economic and infrastructural characteristics (Serova et al., 2020; Saraykin et al., 2023). Additionally, protracted urbanization and the current paradigm of agriculture in the form of large agro-industrial complexes have led to a deepening spatial polarization of rural development (Nefedova, 2022). At the same time, despite the chronic nature of rural development lagging behind urban development (Wegren, 2016), policymakers in Russia have traditionally viewed rural development as a secondary goal to agricultural production (Serova et al., 2020). This is vividly illustrated by the structure of the agrarian budget, in which expenditure on rural development accounted for 4%–5% (Shik, 2023). The State Programme on Integrated Development of Rural Territories (IDRT), which has been implemented since 2020, has, for the first time, designated rural areas as an individual object of state management. Secondly, it set quantitative aims to stabilize the share of rural population, eliminate the infrastructure and income gap, and created the momentum for some increase in budget expenditures on rural development. And, finally, it created a field for a practical discussion of what rural development strategies beyond the paradigm of "rural areas as an environment for agricultural production" are relevant for Russia, what elements and by what measures should be supported in the first place. This paper focuses on rural employment as a key component of rural development.

The rural areas' features that affect employment and justify the attention of researchers and the state are quite common for all countries. These are the education gap, aging and overall population decline, and pockets of poverty. Also, quite common in the global context is the challenge of rural employment—the shrink-ing role of agriculture as a major employer and the growing need for job creation in non-agricultural sectors.

However, rural employment in Russia has some specific characteristics that differ from those in developed countries. Firstly, it is a heterogeneous structure of agriculture, which includes agricultural enterprises, farmers and household plots. This makes the concept of farmer level diversification, as implemented, for example, in the USA and the EU, weakly applicable.¹ In the Russian case, it is not quite clear how it can be realized for managers and hired staff of agricultural enterprises, as well as for those who are involuntarily working in household plots because of lack of other employment alternatives.

Secondly, there is the presence of a significant number of people working in the informal sector, i.e., in agricultural production for personal consumption. Almost half of those involved in the informal sector report that it is their only occupation. In terms of full-time equivalents (FTE), such shadow agricultural producers more than double the number of people involved in the industry.² And this situation has not changed significantly over the past 15 years.

¹ Includes four types of diversification: on-farm agricultural diversification, on-farm business structure diversification, off-farm own business, and off-farm employee (Ilbery et al., 1997).

² In FTE, agricultural employment (individual and corporate farms) as a main occupation amounted to 3.9 million people in 2021 and 5.5 million people working in the industry informally; in 2007—5.8 million and 7.8 million people respectively (Rosstat data, compendium "Labor force, employment and unemployment in Russia").

Thirdly, the targeted rural employment policy in Russia has only relatively recently been actively implemented, i.e., with a dedicated budget and indicators. At the federal level this only started in 2020 with the State Programme on IDRT (OECD, 2020). Therefore, rural employment in Russia developed mostly spontaneously.

Finally, the reliance on urban growth and nearby dense economies, factors that have shown high relevance for rural employment, both in densely populated countries like the Netherlands (Koster et al., 2020) and in spatially dispersed ones like the United States and Brazil (Blandford, 2019; Jonasson and Helfand, 2010), may be poorly realized in some peripherally located Russian areas—up to entire regions.

In contrast to the well-researched aspects of rural employment based on developed countries' data, the issue in Russia is under-researched. Some consequences of institutional and structural changes in Russian agriculture for agrarian employment are reflected in (Bogdanovskii, 2005; Uzun and Shagajda, 2019). The authors highlight the sharp employment decline in public agricultural enterprises after the reforms of the 1990s, and the general decline in agricultural employment, which is attributed to productivity growth and expansion of agricultural holdings. Lerman et al. (2008), using a rural survey of two Russian regions, shows that rural families aim to diversify their sources of income and employment. In a number of researches rural (agrarian) employment is considered with reference to certain elements of state policy. Kalugina (2014) argues that the Russian agrarian policy of the 2000s led to a sharp increase in rural unemployment and informal employment. Studying a measure such as the ban on western food import, Kotyrlo et al. (2021) found that it had only a short-term positive effect on stabilizing agricultural employment. In terms of empirical analysis, Svetlov et al. (2019) investigated the impact of agrarian subsidies on the agricultural enterprises revenue. The authors revealed a negative effect on agricultural employment in some regions because of labor reduction following the state support receipt.

The present paper tries to fill the gap in the study of the current conditions of rural employment in Russia, analyze the existing measures of state support, and discuss prospects in the context of agricultural and non-agricultural employment. The objective of this paper is to explore relevant approaches to rural employment development aimed at overcoming the paradigm of "rural areas as an environment for agricultural production."

2. Material and methods

The information base of the study consists of official Russian statistics (Rosstat) for 2010–2022 (primarily the compendia "Labor force survey," "Regions of Russia. Socio-economic indicators"; All-Russian Population Census), supplemented by data, including qualitative data, of the Ministry of Agriculture of the Russian Federation, including data from the direct request on the outcomes of the State Programme on IDRT, industry unions, representatives of agrarian business, as well as data from FAO, OECD, USDA for cross-country comparisons. In the section on regional differences in rural employment, the units of analysis are administrative entities—regions, which are united into federal districts (hereinafter referred to as districts). This dataset covers

79 regions³ and 8 federal districts. Statistical methods, particularly the descriptive analysis and grouping method, as well as monographic methods, are applied in the paper. Employment structure transformation, i.e., the declining role of agriculture, is seen as one of the key challenges for rural employment. Therefore, where it seemed appropriate, paper sections were structured in two blocks, relating to agricultural and non-agricultural employment. The analysis of existing rural employment support focuses on measures of the State Programme on IDRT and the State Program for Agricultural Development and does not include nationwide employment programs. Several preliminary assumptions are investigated in the paper: (1) chronic problems of rural employment are supplemented by new challenges; (2) agricultural and non-agricultural regions carry out different strategies to support rural employment; (3) new approaches to the development and state support of rural employment are needed. The results obtained, in particular, which identified challenges for rural employment, analysis of current state support and proposed ways to adjust it, were validated by the HSE Expert Council as part of the work on the project "Measures to support rural employment taking into account regional specifics."

3. Results and discussion

3.1. Present situation and challenges for rural employment

The main indicators of rural employment in Russia behave rather inertly, the annual dynamics is insignificant and follows the trends of the previous 5–10-year periods or more. The rural labor force is shrinking (Fig. 1), the employment rate is consistently below urban ones and this gap is not closing, which requires special attention to the rural labor market.

The main challenges for rural employment in Russia are related to the underdeveloped non-agrarian sector, demographic issues, income levels, labor migration, and changing staffing needs of the agrarian sector:

(a) Lack of resources for non-agricultural employment development. Changes in the agrarian structure, the introduction of innovations and growth in labor productivity have led to agriculture losing its role as the main source of employment and income for rural dwellers in Russia. This is associated with the presence of significant hidden and registered unemployment in rural areas.⁴ In terms of agrarian employment decline rate, Russia, along with developed countries, is in the group with a more than doubled decline over the past 30 years (Naumov et al., 2022). Although employment of the rural population in agriculture still accounts for almost 20% (Table 1), this share will decrease. Trade and the budget sector (education, health care, public utilities, etc.) are increasing their share in the employment structure. The budget sector occupies more than 40%, which, along with the upward trend, speaks more to the shrinking rural labor market.

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³ All regions in Russia as of 2021 with the exception of federal cities (Moscow, St. Petersburg) and autonomous districts that are part of regions.

⁴ Rural unemployment is consistently more than one-and-a-half times higher than it is in urban areas. In 2022, rural unemployment was 5.5% and urban unemployment was 3.5%. There is a big imbalance in the unemployment distribution, namely 32% of the unemployed in 2022 are concentrated in rural areas with a rural population share of 25%.

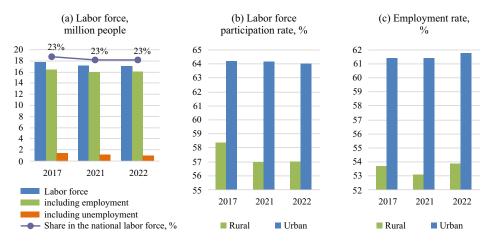


Fig. 1. Key indicators of the rural labor market in Russia, ages 15+.

Source: Rosstat.

Table 1

Structure of rural employment in Russia (%).

Economic activity	2010	2015	2022	2022 by 2010, p.p.
Agriculture	26.1	22.1	18.7	-7.4
Public sector	36.9	36.6	41.6	4.7
Trade	13.0	14.5	14.8	1.8
Manufacturing	8.8	9.1	10.0	1.2
Construction	6.3	7.6	6.8	0.5
Mining	1.7	1.9	2.3	0.6
Others	7.2	8.2	5.8	-1.3

Note: Employment as the main occupation is considered. *Source:* Rosstat.

At the same time, within agricultural employment, the reduction occurs unequally by producer type. In agricultural enterprises the rate is much higher: -49%for 2006–2016 (Uzun and Shagaida, 2019). While in household plots it is only -7% for the same period. Together with informal employment, in FTE exceeding agricultural employment as the main occupation, this leads to the conservation of jobs in the low-productivity and low-income agricultural sector, complicating the inevitable structural transformation.

At the same time, the problem of rural poverty persists. The average per capita resources of rural households were lower than urban ones by a third during 2017–2022. Living in rural areas is one of three risk factors for falling into chronic low-wage employment in Russia (Gimpelson et al., 2018). Lower incomes in rural areas compared to urban areas are associated with the sectoral structure of the economy and employment, without significant changes in which it is impossible to achieve positive changes.

(b) Growing population outflow from rural areas and marginalization of rural labor market. Intra-Russian migration from rural areas, which has a direct impact on the size of the labor force, remains persistently negative, i.e., more people leave the village than arrive. The migration balance was –82,000 people annually on average for 2017–2021. And traditionally in the structure of migration outflow,

Area type / Population group	Share of	entrepreneurs		Including	g with hired e	mployees
	2002	2010	2021	2002	2010	2021
Urban	5.5	5.9	9.0	1.7	2.3	N.a.
Rural, including	4.4	5.7	13.3	0.9	1.5	N.a.
men	5.1	6.8	14.9	1.1	1.8	N.a.
women	3.5	4.3	11.5	0.7	1.1	N.a.
youth, ages 15-29	3.4	3.7	13.0	0.5	0.7	N.a.

 Table 2

 Share of entrepreneurs (% of employed).

Source: Authors' calculations based on the data of the All-Russian Population Census 2002, 2010, 2020.

the main part is made up of people of working age and younger than working age. Additionally, labor migration became widespread in rural areas and was a response to the lack of sources of income in the place of residence and the differences in wage levels between urban and rural areas. The first official data on the scale of rural labor migration is contained in the 2020 All-Russian Population Census. According to this data, in 2021 more than 4 million rural employees or 30%⁵ worked outside their locality, including 6% in another region. For reference, the similar figures for urban employment are 5% and 3% respectively. Labor migration on a daily basis in rural areas accounted for 47% of those working outside their locality. Large-scale labor migration of rural dwellers, in addition to negative social consequences at the level of individuals and their families, carries risks of labor precarization.

(c) Low level and involuntary nature of rural entrepreneurship. The majority of the rural population (as well as the urban one) in Russia is oriented towards wage employment. The share of entrepreneurs in rural areas was habitually lower than in urban ones. However, in 2021, according to the results of the latest All-Russian Population Census, this ratio changed in favor of the rural areas for the first time (Table 2). One explanation for this phenomenon may be the inclusion of *samozanyatost* (self-employment)—a new registration form including for household plots—in the group of entrepreneurs' structure amounted to 32%, and in rural areas—46%.

Another reason may be the development of the so-called "involuntary" rural entrepreneurship because of employment opportunities reduction in local labor markets. The indicator used to identify involuntary entrepreneurs is the poor use of hired labor, the level of which is indeed lower among rural entrepreneurs. In 2021, the hired labor is not captured in the census, but the regional differentiation also indirectly confirms the involuntary nature of rural entrepreneurship. Thus, the biggest share of rural entrepreneurs in 2021 was recorded in the North Caucasus Federal District—region with the lowest rural employment.

(*d*) Systematic shortage of qualified staff for the agricultural sector. Despite the existing absolute surplus of workers in rural areas, many employers in agriculture complain of a shortage of qualified workers and especially young specialists (Bednaříková et al., 2016; Kvartiuk et al., 2020). The problem of the deficit is

⁵ Which matched the researcher's estimates. Thus, according to Nefedova et al. (2015), the share of rural men of working age involved in return labor migration ranged from 5% to 30%. Plusnin et al. (2015) estimate that at least one-third of all households (10–15 million households) in the province lived through return labor migration.

acute not only for new professions such as geneticists, bio-informaticians, etc., but also for quite traditional ones—agronomists, veterinarians, and zoo technicians (Orlova et al., 2021). Private initiatives to attract qualified personnel and invest in the acquisition of human capital have only been available to large farms and agricultural holdings. In addition, the rural labor market ceases to be a source of not only qualified but also working staff. In these conditions, there are high risks of shifting to the rotation-based work in agriculture and spreading out-staffing, both of which have negative consequences for rural areas.

(e) Reduction of labor migrants. Part of the labor force in rural areas consists of migrant workers, primarily from Central Asia and the Caucasus. The agricultural sector has already reacted sharply to the restrictions imposed on migrant workers in 2020 because of the pandemic. Reduced economic incentives for migrant workers to work in Russia caused by the ruble depreciation in 2022–2023 may again lead to a shortage in the labor force. This is especially crucial for seasonal work in fruit, berry and vegetable production, as well as for the food industry. In addition, there is growing competition for foreign labor in construction, trade, and the service sector, primarily delivery services, where both demand and wages for unskilled workers have increased significantly.

(f) Consequences of mobilization. Military mobilization has both short-term and long-term implications for Russia's labor market. Given the disparity in recruiting—the bulk of enrollment comes from small towns and rural areas the impact on rural economies will be even more pronounced. Empirical research confirms that, in the long run, mobilization leads to a fall in productivity and hence wage and income losses (Angrist, 1990). The cause of these losses is related to lost skills and/or undertraining, damaged health, post-traumatic stress disorder, etc. The emigration of a large number of the working-age population also has additional consequences.

3.2. Regional differences

3.2.1. Non-agricultural employment

According to the combination of "employment and unemployment rate" the Central, Volga and Ural districts are the most favorable in terms of the rural labor market (Table 3). In the Central and Volga districts, rural dwellers have more opportunities for labor migration, given the highly dense settlement networks. Thus, in these districts the highest share of rural residents is working outside their living areas, namely 39.2% and 35.5%, respectively, including in the territory of another region-10.9% and 7.7%. Similarly, due to labor migration, rural employment issues are solved in part of the Northwestern district due to the proximity to the second largest national metropolis—St. Petersburg. In addition, the Central and Volga districts are actively involved in the State Program on IDRT, which includes two measures to support employment. Namely, co-financing of the agricultural producers' and processors' costs for (1) interns-students and (2) training specialists. Thus, almost half of the students involved in work in rural areas are in the Central district, and 60% of trained specialists are in the Volga district. The Ural district can be called favorable in terms of rural employment only conditionally, since good employment and

Table 3Regional differentiation of rural employment parameters in Russia, ages 15–72.	iation of rura	al emp	loyment	paramet	ters in Russi	a, ages 15–	72.											
Federal	Rural		Rural		Share of	Including	Share of	Share of	Rural		Share of		Agricultural		Agricultural	ıral	IDRT state program	rogram
districts	employment rate, %		unemployment rural rate, % emplo work outsion place living	yment	oyed ing le of s, %	those leaving for work in another region, %	rural entrepre- neurs, % of employed	rural platform work, %of employed	population ratio, %		agriculture in regional employment, %	ıt,	employment, thousand people		subsidies level, %		Share of training specialists, %	Share of interns- students, %
	2021 +	+/- to 2010	2021	+/- to 2010	2021	2021	2021	2022	2021	+/- to 2010	2021	+ / - to 2010	2021	+ / - to 2010	2020	+/- to 2010	sum 2020– 2022	sum 2020– 2022
Central	61.4	1.1	4.7	-2.3	39.2	10.9	5.7	3.1	25.2	-1.3	6.9	-2.3	846	-28.6	3.2	-5.5	16.9	47.5
Northwestern	57.8	-3.0	5.7	-4.7	34.8	9.4	5.7	3.6	24.5	-1.2	5.9	-2.5	229	-37.2	6.5	-2.4	1.3	2.6
Southern	59.5	1.7	6.1	-3.3	21.8	3.7	10.2	4.0	38.0	0.4	10.3	-3.5	757	-15.3	2.2	-2.0	0.8	2.9
North Caucasian	54.8	3.0	14.2	-5.9	19.0	3.5	23.8	4.7	49.6	-1.2	16.9	-2.2	648	-7.0	3.5	-2.7	2.3	0.7
Volga	59.4	-0.2	4.7	4.5	35.5	7.7	6.5	2.3	27.6	-1.6	7.0	-2.8	941 -	-34.4	4.1	-10.1	60.2	24.0
Ural	59.0	0.2	4.7	-5.9	28.3	3.3	5.5	1.9	18.1	-1.9	3.6	-1.4	230	-29.0	4.7	-4.9	1.2	2.7
Siberian	54.5	4.2	8.1	-3.0	25.2	3.1	7.7	1.9	25.6	-1.2	7.0	-2.9	541 -	-32.4	4.4	-1.2	14.6	15.0
Far Eastern	55.4	0.8	9.3	4.3	20.8	1.9	6.7	1.5	26.8	-1.4	6.6	-1.2	259	-19.0	14.0	-0.1	2.7	4.7
Russia	58.3	0.1	6.9	-3.9	29.8	6.3	8.9	3.0	25.2	-1.0	6.3	-2.1	- 4491	-25.8	4.1	-5.1	100.0	100.0
Sources: Rosstat; Ministry of Agriculture of the Russian Federation.	Ministry of /	Agricu	lture of t	he Russ.	ian Federati	on.												

unemployment rates have been achieved with the active contraction of rural areas themselves.

The situation with rural employment is least favorable in the Asian part of the country and in the North Caucasian district. The Siberian and the Far Eastern districts have not yet found answers to the challenges of rural employment. The Far East is partly maintained by agricultural state support, with the highest subsidy rate (14%) and relatively low agricultural employment decline (-19% over 2010–2021). High state support of producers in marginal regions from the point of view of competitive agriculture is one of the features of Russian agrarian policy (Shik, 2020). As for the Siberian district, it is a notable participant in the State Program on IDRT. It accounts for 15% of participants in both employment support measures.

The North Caucasian and the Southern districts are characterized by a still high dependence of the rural economy on agriculture. This is evident in the high agricultural share in the region's GRP (16% and 12% respectively in 2021), in the total employment structure (17% and 10%), and in the lowest agricultural employment decline (-7% and -15% for 2010-2021). It also has the highest share of rural population (50% and 38%) and relatively low labor migration (19% and 22%), which limits employment opportunities in cities and/or neighboring settlements. Population responded to rural unemployment by devoting to entrepreneurship (self-employment) as well as to platform work. Thus, the North Caucasian and the Southern districts have the highest share of rural entrepreneurs at 24% and 10% in 2021. Probably a significant part of rural entrepreneurs there are people employed in family farms and household plots. In the total sample, the highest correlation of "entrepreneurs' share" is with the indicators of rural unemployment, agricultural employment and rural population share.⁶ That is, the fewer employment opportunities there are in the non-agricultural sector, the more rural entrepreneurship or self-employment develops, but apparently in agriculture. This indirectly confirms the mostly involuntary nature of rural entrepreneurship.

Thus, there are no common strategies for rural employment stabilization or development for different federal districts. Rural employment, depending on regional specifics, can be maintained through labor migration, high agrarian state support, development of entrepreneurship (self-employment), conservation of jobs in labor-intensive, low-productivity sectors of agriculture.

3.2.2. Agricultural employment

In terms of agricultural employment regional specifics, we were interested in: (1) how regions with different rates of employment reduction (growth) differ, (2) how the agricultural employment reduction affects the general indicators of rural employment. In the absolute majority of Russian regions, agrarian employment declined over the study period (Table 4). The small group of regions with stable or increased agricultural employment is extremely heterogeneous. It consists of a couple of regions of the Far North (Chukotka Autonomous Okrug and Kamchatka Krai), where employment in the sector declined at a high rate back in the early 2000s, and three regions of the Northern Caucasus (Adygea Republic,

⁶ Correlation coefficients of 0.60, 0.66 and 0.73 respectively in 2021.

Agricultural	Amount	Amount Share of	fc	Share of	f	Rural		Agricultural		IDRT state program Ratio of	e program	Ratio (f	Rural	ч	Rural		GRP,	Population
employment dynamics for 2010–2021, %	of regions, units	of agriculture in agricultu regions, the region's regional units GRP, % employm %	lture in ;ion's %	agriculture in agriculture in population the region's regional ratio, % GRP, % employment, %	ture in il ment,	populatio, %	%	subsidies level, %		Share of training specialists, %	Share of interns- students, %	wages in agriculture to the economy average, %	-	employ- ment rate, %		unemploy- ment rate, %	rural employed working outside their place of living, %	0	thousand density, rubles person/ per sq km capita
		2021	+/- to 2010	2021	+/- to 2010	2021	+/- to 2010	2020	+/- to 2010	sum 2020– 2022	sum 2020– 2022	2021 +/- to 2010	+/- to 2010	2021 + tu 2	+/- 2 to 2010	2021 +/- to 2010	- 2021	2021	2021
40–60% reduction	11	4.3	-0.6	-0.6 5.0	-3.9	25.1	-2.0	4.6	-5.0	30.3	18.3	54	7.4	56.8	-1.6	5.8 -4.2	.2 33.8	590.6	12.6
20-40% reduction 42	42	5.4	-0.2	7.2	-2.6	27.6	-1.1	3.8	4.9	54.4	56.0	59	11.1	58.3	-1.2	6.7 -3.0	.0 29.3	766.6	7.8
0-20% reduction	20	11.0	1.4	9.8	-1.0	30.5	-1.4	3.8	-5.1	14.8	25.5	64	15.6	59.8	2.7	6.4 -3.7	.7 32.0	561.7	5.7
0% or increase	5	17.1	2.5	17.3	2.9	52.2	-3.3	7.5	-8.1	0.5	0.1	46	5.5	54.7	14.2	16.0 -21.9	.9 14.4	346.7	2.4
Russia	78	4.5	0.0	6.3	-2.1	25.2	-1.0	4.1	-5.1	-5.1 100.0	100.0	62	12.9	58.3	0.1	6.9 -3.9	.9 29.9	830.8	8.5
Sources: Rosstat: Ministry of Agriculture of the Russian	dinistry of	A original	f to off	tha Duce		Endometion													

Sources: Rosstat; Ministry of Agriculture of the Russian Federation.

Table 4

Ingushetia Republic, Chechen Republic), where employment in small-scale, lowproductivity agriculture is often forced by extremely high rural unemployment. In the latter regions, agrarian employment acts as a safety net, but at the same time leads to the conservation of poverty. Thus, the lowest rates of pulling up wages in agriculture to the average for the economy are noted here. As a result, the reduction in the wage gap amounted to only 5.5 p.p. over 2010–2021 for this entire group. The lowest per capita GRP, as an indicator of regional economic opportunities, fixes the available alternatives—unemployment or employment in the low-income sector of agriculture.

During the study period the polarization of regions has increased, i.e., agrarian regions are becoming more and more specialized in agricultural production, which requires, among other things, personnel, relevant salaries level, and development of related industries, that has a favorable impact on the overall rural employment indicators. Thus, in the group of regions with a moderate agricultural employment reduction (up to 20%), the share of agriculture in GRP increased (to 11% in 2021, while the national average is 4.5%); the portion of agricultural employment is 9.8% (while the national average is 6.3%); the rural population ratio in them also remains relatively high, and the level of sectoral wages is the highest (64% to the economy average). At the same time, the subsidies level, as well as targeted employment support measures are poorly correlated with the dynamics of agricultural employment.

In the remaining two groups of regions with agricultural employment reduction from 20% to 60%, rural employment and unemployment parameters are somewhat poorer relative to the group with "controlled" reduction (up to 20%), but not critically so. It is notable that the higher the population density, and thus the economy "density," the more actively rural dwellers move from the agricultural sector of employment to the non-agricultural one.

3.3. Rural employment prospects

3.3.1. Non-agricultural employment

Traditionally considered as alternatives to agriculture, the activities of rural population are rural tourism, handy crafts, bio-industries (forestry, wild plants harvesting and processing, small-scale power generation), agricultural products processing, etc. However, this approach is in some ways outdated as it involves finding employment for indigenous rural dwellers who have lost their jobs in agriculture. The concept of "non-agricultural rural employment" should be expanded to so-called "out-of-urban employment," which takes into account new types and forms of employment for urban dwellers seeking to leave the city to improve their quality of life.

The division into "urban and out-of-urban" employment and territory, as opposed to the traditional for agrarian economies division into "urban and rural," is associated with a new lens for considering spatial development practices. In particular, the process of counter-urbanization, which includes cottage and *dacha* (summer houses) settlements around cities, distant settlements of urban dwellers in environmentally clean areas, and so on (Nefedova et al., 2015; Pokrovsky et al., 2019).

Rural areas and rural employment will be developed not only by those who have stayed there, but rather by urban dwellers who will come there, even if only on a temporary or seasonal basis. It has already happened to the Moscow Oblast adjacent to the national capital. According to the experience of developed countries, 20–30% of the population would like to live in rural areas. And, as empirical studies show, as the level of economic development increases, rural areas approach or surpass urban areas in the level of people's perception of life satisfaction (Burger et al., 2020; Easterlin et al., 2011). From our point of view, this is also a long-term Russian perspective. The potential for out-of-urban employment in Russia is set by the following trends: (1) the development of spatial mobility and counter-urbanization process; (2) the spread of new forms of work and jobs.

Spatial mobility and counter-urbanization process. Urbanization in Russia is still the dominant trend. However, some citizens already have the idea and financial opportunities to move to the countryside without losing quality of life. In 2015–2021, an average of more than 800,000 citizens moved permanently to rural areas each year,⁷ almost twice as many as in the early 2000s. That is, parallel to the urbanization process, the process of counter-urbanization is also developing, which differs in activity depending on population groups and territories. It can include both suburban sprawl and migration to rural areas with a complete or partial change in lifestyle. The number of dachas alone in Russia was 17-20 million, and the number of dacha users was 50-60 million people (Nefedova et al., 2015). That's half or more of urban families in Russia. The phenomenon of "distributed lifestyle" formed in Russia (Averkieva et al., 2016) and the erosion of "place of living" concept are becoming a significant source for rural socio-economic development (Molyarenko, 2013; Ovchintseva, 2021).⁸ In addition, "urban to rural" migration in Russia is supported by the State Program on IDRT and, in particular, by preferential rural mortgages. It has become the most demanded measure of this program according to the results of 2020-2022. The pandemic also contributed to the counter-urbanization development, when in 2020 several million people left Moscow and St. Petersburg alone (Nikolaeva and Rusanov, 2020). Not all of them will make the decision to move to rural areas. However, this mass countryside testing may have long-term positive implications for "urban to rural" migration.

Spread of new forms of work and jobs. In parallel with the erosion of the "place of living" concept, the concept of "workplace" is also changing. It becomes possible to work anywhere. The expansion of new jobs and forms of work (remote work, freelance, platform work, etc.) creates opportunities for some urban residents with suitable employment to move to rural areas, as well as employment options for rural dwellers in urban companies.

The number of freelancers in Russia has steadily grown from 2.5 million people in 2014 to 14 million people in 2020.⁹ 3.7 million people were working remotely¹⁰ at the end of 2020, compared to only 0.03 million in 2019. Of course, the pandemic in 2020 contributed to the explosive growth of remote workers. And after the pandemic ended, a part of the workforce returned to offices or kept the hybrid working format. However, this shows the potential of remote

⁷ Rosstat data.

⁸ While there are some pessimistic assessments regarding the "urban to rural" migration (Zvyagintsev and Neuvazhaeva, 2015).

⁹ PwC data.

¹⁰ Ministry of Labor and Social Protection of the Russian Federation data.

employment in general. There is no data on how many rural residents work remotely or freelance. The first official data on platform work scale in Russia was published for 2022. According to Rosstat, platform work is the main occupation for 3.5 million people, including 0.5 million rural dwellers (or 3% of employed). However, these figures are significantly lower than the estimates received by researchers (Sinyavskaya et al., 2022).

Thus, counter-urbanization, relocation of urban businesses to rural areas, and the spread of remote work and relevant professions may become the principal new drivers for rural development, including rural employment in Russia. And the processes have already started to develop. However, the circumstances of 2022–2023 (decreased economic growth, military mobilization and emigration, increased general unpredictability) have slowed them down considerably, if not blocked them for any extended period. Another alternative is, in fact, inertial development within the framework of agrarian policy and rural development programs, the analysis of the current version of which is presented in Section 3.4.

3.3.2. Agricultural employment

Long-term trends in the agricultural employment development are seen to us as follows:

Inevitable further reduction of employment against the background of labor productivity growth. Modernization, digitalization and related productivity growth and employment reduction remain long-term trends for Russian agriculture. Despite the progress made over the last fifteen years in total factor productivity (USDA, 2022), Russian agriculture still lags behind the world leaders in labor productivity (at times).¹¹ Therefore, agricultural employment and its share in total employment will continue to decline. And, first of all, this is due to the active outflow of low-qualified workers (while the deficit of specialists remains). In 2000–2012, agriculture became the main driver of "bad" jobs (the least skilled and least paid) reduction in the Russian economy (Gimpelson and Kapeliushnikov, 2016). This trend is set to continue.

Staffing needs transformation in the agricultural sector. Decrease in the number (and share) of agricultural employment does not mean a reduced need for qualified specialists. Transition to Agriculture 4.0 leads to the expansion and increasing role of new technologies and innovative solutions in the agricultural sector of Russia (Orlova and Nikolaev 2022), which poses new challenges for labor market. Namely, it is the increase in demand for specialists in both narrow industry profile and digital solutions, deepening division of labor, emergence of new specialties, acceleration of wage growth rates. However, the starting position of agricultural sector in this staff transformation is not the most favorable. As of 2020, Russia's agriculture was characterized by the lowest provision of digital specialists, as well as the lowest share of enterprises using broadband Internet, relative to other economy sectors (Abdrahmanova et al., 2022). The problems of agrarian education related to the inertia of agrarian specialties formation and low level of teaching programs' customization, directly affecting the future labor market, are described in detail in the paper (Orlova et al., 2021).

¹¹ FAOSTAT. Agriculture value added per worker, https://www.fao.org/faostat/en/#data/OEA

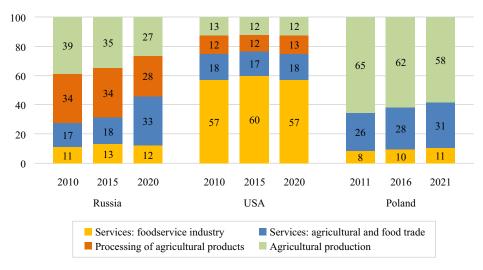


Fig. 2. Employment structure in agriculture and related industries (%). *Sources:* Rosstat; U.S. Bureau of Economic Analysis; Eurostat.

Nevertheless, the formation of the future market of agrarian specialists meeting the relevant requirements has begun in Russia. It includes the development of promising professions, private educational initiatives from agribusiness (agro-classes, scientific, practical and educational centers), and programs for the development of priority agrarian universities. However, because of the current economic conditions in Russia, the risks of slowing down agricultural labor market transformation, reducing the investments of agribusiness and the state in education and science are growing.

Changes in the structure of agricultural employment itself. As the economy develops, the role of agriculture as an employer decreases. But the agrifood system is expanding, and the scope of agricultural job creation extends beyond the farm (Christiaensen et al., 2020; FAO, 2022). The Russian agricultural sector with related industries will follow this trend, namely the growing demand for specialists in processing, marketing, storage, logistics of agricultural products and food. Thus, in developed countries (for example, the USA), the employment structure is already established and the share of related processing and service industries significantly exceeds the share of agricultural production itself (Fig. 2). In emerging market economies, by contrast, (Russia and Poland are examples), the transformation process is in an active phase and, judging by current indicators, will take another 10–15 years to complete.

3.4. State support for rural employment

The main tool of rural development in Russia at present is the State Program on IDTR, which for the first time includes as a separate element the project "Rural Employment Promotion." Undoubtedly, the state's focus on the rural employment problems, setting quantitative targets for rural employment rate and job creation are positive signs. However, the sufficiency and effectiveness of existing measures may be questioned. Analyzing the Programme, two approaches to employment support implemented simultaneously can be outlined: (1) direct Table 5

Financing structure of the State Program on Integrated Development of Rural Territories.

Program elements	Sum 2020–20 (fact)	22	Sum 2023–202 (plan)	25
	billion rubles	%	billion rubles	%
1. Infrastructure development	80.4	67.7	92.5	60.7
including the project "Modern look of rural areas"	44.8	37.7	57.4	37.6
including the project "Transportation infrastructure development"	24.8	20.9	30.7	20.1
2. Development of housing construction	37.4	31.5	58.5	38.3
3. Rural Employment Promotion	0.4	0.4	0.6	0.4
4. Program administration	0.8	0.6	0.9	0.6
Total	118.8	100.0	152.5	100.0

Sources: Treasury of Russia; Ministry of Agriculture of the Russian Federation; Federal Law of 05.12.2022 No. 466-FZ "On the Federal Budget for 2023 and for the planning period of 2024 and 2025."

support provided specifically within the framework of the "Rural Employment Promotion" project, and in this case limited to agricultural sector employment;¹² (2) indirect—involving employment support through co-financing of rural infrastructure projects.

Direct measures to support rural employment account for less than 1% of the IDRT Program budget (Table 5). Almost all of the funding is split between two areas, infrastructure and housing. Moreover, since the direct employment support measures provided do not go beyond the agricultural sector, this part of the Program does not meet the current challenges for the rural economy and employment, namely the need to develop the non-agrarian sector. Besides, the project's measures to promote rural employment affect a relatively small number of participants. Thus, it is planned "to create conditions for attracting 28,100 specialists to work in the agricultural sector in rural areas by 2031," which is 0.17% of the total rural labor force.

In addition to direct support for rural employment, support for infrastructure projects ("Modern look of rural areas," see Table 5) is also expected to create jobs in rural areas. It is about employment in communal services, educational, medical and other social entities. Job creation is an *additional* indicator of the subsidy effectiveness for this project.

As a result, according to the Ministry of Agriculture for 2020–2022, about half of the jobs created under the IDRT Programme were in agriculture, 26%—in agricultural processing, 11%—in social facilities and 8%—in transport infrastructure.

Another indirect impact on rural employment is due to the fact that the IDRT Program includes mechanisms for decentralizing support and is aimed at local initiatives' co-financing. Since most local initiative projects are not directly related to agriculture, additional opportunities are given to initiatives for the development of rural tourism, crafts, bio-industries, services, infrastructure, etc. Accordingly, the non-agricultural rural economy and employment may get further impulses for growth.

In addition to the IDRT Program, the State Program for the Development of Agriculture also includes a measure to support rural employment. It is about grant

¹² Since the project provides compensation only to agricultural producers and processors for their employees' educational contracts costs and the costs associated with wages and accommodation of interns-students.

support for farmers and cooperatives.¹³ The number of jobs created is one of the parameters taken into account in the competitive selection of such projects. It should be noted that the grant support achieved even more ambitious targets for job creation than was planned in the "Rural Employment Promotion" project in the IDRT Program. Namely, over the past three years, for which the data are available (2018–2020), 30,300 jobs were created in grant projects, in total since 2012 (start of this support)—85,500 jobs.¹⁴ In comparison, over the three years of the IDRT Program, 14,100 people were attracted to rural areas through the project's measures to promote rural employment. From the point of view of cost-benefit analysis, the federal budget expenditures per 1 job created due to grant support are significantly higher-on average almost 1 million roubles. Direct support measures, on the other hand, under the "Rural Employment Promotion" project cost a little more than 20,000 rubles per participant per year. However, it can hardly be considered a sufficient benefit to employ a student for a season or train an employee already working in rural areas in the agricultural sector, despite the importance of these measures for individual agricultural enterprises.

Thus, the current measures of the IDRT Program directly aimed at rural employment have limited impact, even for the agricultural sector. In contrast, subsidies for startup or rural business development (grants) have greater potential to support rural employment. Especially on condition of (1) expansion of their possible use, i.e., inclusion of non-agricultural activities, in addition to the currently available agriculture, processing and agro-tourism; (2) inclusion of household plots, private persons and small town businesses in the list of potential participants in projects implemented in rural areas.

4. Conclusions

The issue of rural employment is becoming more and more acute for Russia. The increase over the last five years of the lag between rural and urban labor market indicators leads to accelerated rural areas degradation. A key challenge to rural employment is that agriculture is losing its position as a major employer. Instead, non-agricultural growth is more important for jobs. Despite this, agriculture is still important because it provides certain stability, especially during periods of economic downturns. This may justify the use of agricultural policy to preserve jobs in agricultural production and processing. Russian specifics related to this insurance function of agriculture are heterogeneous agrarian employment, dominated by those employed on household plots rather than in the corporate sector, and a large informal sector. Both of these parameters complicate rural employment transition from agricultural to non-agricultural sector in Russia. Moreover, household plots remain outside of employment support, which could become a resource for their diversification.

The results of regional specifics analysis show that the development of rural employment based on urban growth and "density of neighboring economies" in

¹³ Grants can be used for agricultural production or processing projects, and from 2022—for agro-tourism projects.

¹⁴ Ministry of Agriculture of the Russian Federation data, including direct request and "National report on the progress and results of the State Programme for the Development of Agriculture."

Russia works for two federal districts-the Central and the Volga ones. This approach, which has proven itself in other countries (Koster et al., 2020; Blandford, 2019), in Russia allows only focal development of rural areas. Moreover, the question arises to what extent the reliance on neighboring (urban) economies, which in Russia is essentially implemented exclusively in the form of labor migration, ensures sustainable development of rural areas or only temporarily slows down population outflow. This is an issue that requires further research. In terms of agricultural employment, the obtained results indicate the deepening of agrarian specialization at the regional level. Moreover, in regions with a high role of the agricultural sector in GRP, mainly southern regions of Russia with favorable conditions for agricultural production, agricultural employment is decreasing at a lower rate compared to non-agrarian regions. Since the southern regions are mostly regions with an active presence of agricultural holdings, this to some extent discourses with the finding of Uzun and Shagaida (2019) that the decline in agricultural employment is associated with the expansion of agricultural holdings activities. Analysis at the level of municipalities and rural communities would shed more light on the relationship between the spread of agricultural holdings and rural development in Russia.

The theoretical implication of rural employment prospects discussed in this paper is the concept of "out-of-urban employment," which develops the traditional approach to its definition and state support in Russia. Out-of-urban employment involves employment not only for indigenous rural dwellers who have lost their jobs in agriculture, but also includes new types and work formats for citizens. The consequences of the narrow view of rural employment as employment of the local rural population are (1) the lack of policies to stimulate return migration to rural areas, (2) the design and implementation of measures aimed primarily at those already living in rural areas, rather than those who will arrive.

The current state support for rural employment as part of Russia's agrarian policy rather continues the inertia of previous rural development programs in terms of the focus on infrastructure. For rural employment, this has indirect effects. Direct employment support measures are rather localized, and expectations regarding their effectiveness are probably overestimated. Updating the research (Lerman et al., 2008; Bogdanovskii, 2005) we find that the current measures of the State Program on IDRT still ignore rural non-agrarian employment as well as a large sector of informal agricultural employment, the size of which relative to formal employment in the industry, contrary to initial assumptions, has not decreased over the last 15 years. A growth point for non-agricultural rural employment could be upgrading for grant support, which is already available to farmers and cooperatives for projects in agriculture, processing of agricultural products and agro-tourism. Expanding their use, i.e., grant support to rural and town small businesses in non-agricultural projects in rural areas, as well as admission of household plots to grant, allows to balance the support of agrarian and non-agrarian occupancies, to increase its relevance to current challenges. A practical implication of the proposed concept of out-of-urban employment is the justification for supporting the expansion of urban businesses into rural areas-simplified registration, tax preferences, accelerated distribution of state fund land, as well as simplified registration of small businesses in rural areas. These measures go beyond the scope of agricultural policy, but have a high potential for promoting non-agrarian employment in rural areas. Some of the proposed measures do not involve significant budgetary expenditures, but require mainly political will.

The limitations of the research are related to the specifics of the available statistical data on rural employment. In particular, the Rosstat statistics on rural employment for the period under study represented the data of residents registered in the village as a place of residence (but not necessarily living at the place of registration) and engaged in economic activity (but not necessarily in the village). This probably slightly overestimates the indicators of rural employment in general. In addition, there are still no regional-level statistics on the sectoral structure of rural employment, which would be crucial for improving the relevance of spatial analysis and forecasting of non-agrarian rural economic development. Further studies on rural employment in Russia would be productively directed towards expanding the range of empirical research on the impact of state support for rural (and agriculture) development on rural employment as, for example, done on data from European countries (Rizov et al., 2018; Mack et al., 2021).

Acknowledgments

This study is a part of Strategic Project "National Centre for Science, Technology and Socio-Economic Foresight" of HSE University. On the part of St. Petersburg Federal Research Center, the study was funded by state assignment (project FFZF-2022-0018).

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