

**AGRICULTURAL POLICY: KEY TASKS FOR THE DEVELOPMENT  
OF LABOR POTENTIAL IN RURAL AREAS**

**АГРАРЛЫҚ САЯСАТ-АУЫЛДЫҚ АУМАҚТАРДЫҢ  
ЕҢБЕК ӘЛЕУЕТІН ДАМУДЫҢ НЕГІЗГІ МІНДЕТТЕРІ**

**АГРАРНАЯ ПОЛИТИКА – КЛЮЧЕВЫЕ ЗАДАЧИ ДЛЯ РАЗВИТИЯ  
ТРУДОВОГО ПОТЕНЦИАЛА СЕЛЬСКИХ ТЕРРИТОРИЙ**

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**Abstract.** *The goal* is to determine the role of Kazakhstan's agricultural policy in developing the labor potential of rural territories. *Methods* – systemic and statistical analysis, synthesis, and evaluation of demographic, economic, and educational indicators were used to assess the state and dynamics of the rural labor market and to substantiate the factors affecting labor activity in rural regions. *Results* – the study examined the principles of agrarian reforms in relation to rural human resources; identified key social aspects of demographic policy affecting the socio-economic situation in rural areas and the standard of living of rural residents; explored ways to diversify the rural economy to increase employment; provided recommendations for improving labor market regulation mechanisms in the agricultural sector; emphasized the significance of innovative technologies in enhancing competitiveness in agricultural industries; highlighted the need to modernize educational programs for training qualified personnel in the agro-industrial sector; analyzed trends in the development of the technical and vocational education system aligned with current requirements, the number of students from rural areas, and the impact of digital transformation on agricultural production. *Conclusions* – the authors conclude that addressing demographic issues in rural areas contributes to reducing unemployment and ensuring high social stability. The implementation of digital technologies in the agro-industrial complex increases labor productivity and economic activity among the rural population. Given the real situation, it is essential to explore ways to optimize

**Аннотация.** *Цель* – определить роль аграрной политики Казахстана в развитии трудового потенциала сельских территорий. *Методы* – системного и статистического анализа, обобщения, оценки демографических, экономических и образовательных показателей использовались при исследовании состояния и динамики сельского рынка труда, для обоснования факторов и трудовой активности населения сельских районов. *Результаты* - изучены принципы аграрных преобразований с учетом трудовых ресурсов села; обозначены ключевые социальные аспекты демографической политики, влияющие на социально-экономическую ситуацию в сельской местности, повышение уровня жизни сельских жителей; рассмотрены направления диверсификации сельской экономики, позволяющие увеличить количество рабочих мест; даны рекомендации по совершенствованию механизмов регулирования трудового рынка в аграрном секторе; показаны значимость инновационных технологий в росте конкурентоспособности отраслей сельского хозяйства, необходимость модернизации образовательных программ для подготовки квалифицированных кадров в аграрной сфере; проанализированы тенденции обновления системы технического и профессионального образования, отвечающей современным требованиям, численность студентов из сельских населенных пунктов, роль цифровой трансформации и ее влияние на сельскохозяйственное производство. *Выводы* – авторы констатируют, что решение демографических проблем сельских территорий способствует снижению безработицы и высокой социальной стабильности. Применение цифровых технологий в АПК увеличивает производительность труда, экономическую активность сельского населения. С учетом реальной ситуации следует изыскать возможности для оптимизации деятельности трудоспособных жителей казахстанского села, при этом важно анализировать экономико-технологические запросы хозяйствующих субъектов. Необходима поддержка эффективной занятости в малом и среднем сельхозпредпринимательстве и кооперации, включая крестьянские (фермерские) хозяйства и ЛПХ.

**Түйінді сөздер:** ауылдық аумақтар, аграрлық саясат, еңбек әлеуеті, еңбек нарығы, ауылдық жұмыспен қамту, кәсіптік даярлау, технологиялық жаңғырту, цифрландыру, әлеуметтік инфрақұрылым.

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Also, Balezentis T., Ribasauskiene E., Morkunas M. et al. [4] touches upon this direction in the interrelationship of youth farming, which can positively affect the development of the agrarian sphere. However, Muhammadov M., Nizamov A., Mustafoev G. et al. [5] consider the development of labor resources from the position of socio-economic character as an important priority direction of agrarian policy. Nurzhanova G., Smaqulova Z., Dzhol-

dosheva T. et al. [6] emphasize that green finance in the agrarian sphere can affect the quality of labor potential of rural areas.

The market of agricultural machinery for crop production and the prospects for its development in agricultural policy play an important role in increasing employment in agricultural enterprises is stated in the works of (Navrotskyi Ya., Zakharchuk O., Vyshnevetska O. et al.) [7]. In the scientific works of Hinojosa Pérez J.A., Briceño Avalos H. R., Vargas Salazar I.Y. et al. [8] it is recalled that without the active participation of state-social policy it is impossible to effectively regulate agrarian policy in favor of increasing rural employment.

It is worth noting that an important aspect is the creation of conditions for entrepreneurship in agriculture, especially for young professionals who can implement innovative solutions in production processes.

Oruç E., Çağlar İ. [9] emphasize that in agricultural policy, the assessment of labor potential of rural population should be based on their qualification characteristics. This is necessary to ensure a balanced and healthy labor participation in the agricultural sector and other sectors.

Jarábková J. [10] focuses on the fact that tangible and intangible cultural values of labor potential in the agricultural sector can significantly affect the development of tourism in rural areas, demonstrating an interdisciplinary approach to understanding its impact.

Special attention is paid to the issues of employment, migration and development of labor potential of rural areas. In addition, many researchers emphasize the importance of environmentally sustainable agriculture in the context of climate change. In general, the opinions of scientists show that an integrated approach to agricultural policy makes it possible to achieve sustainable development of rural economy and improve the quality of life of the population.

### Materials and methods

The study is based on the analysis of normative legal acts, state programs and statistical data. The main sources of information are the data of the Committee on Statistics of the Ministry of National Economy of the Republic of Kazakhstan, reports of the Ministry of Agriculture, scientific publications, as well as analytical reports on agrarian policy and rural development. Various methods have been applied within the framework of the research. The method of system analysis was used to identify the relationships between agrarian policy, demographic processes and the development of labor potential.

Statistical methods made it possible to process data on employment and the dynamics of educational direction. Comparative-historical analysis helps to trace the evolution of agrarian policy in Kazakhstan and its impact on the rural economy. In addition, the survey method based on the analysis of scientific publications and other studies in the field of agrarian economy, rural development and public policy was applied.

The study also took into account international practices and recommendations, which made it possible to compare domestic approaches with global trends. The application of an integrated approach provided a comprehensive understanding of the problems and prospects of agrarian policy development. The factors hindering the attraction of young specialists to rural areas were analysed. The obtained results formed the basis for conclusions and practical recommendations for improving agrarian policy and developing labour potential of rural areas.

### Results

The development of labor potential of rural areas is impossible without active state support. One of the main measures should be the creation of favorable conditions for small and medium-sized enterprises in the agrarian sphere. State programs of subsidies, preferential lending and infrastructure development can contribute to the creation of prerequisites for the growth of employment in rural areas.

Also important is the development of social infrastructure in rural areas, including access to quality health care, education and social services. This creates conditions for improving the quality of life in rural areas, which, in turn, contributes to increasing the attractiveness of rural areas for the able-bodied population.

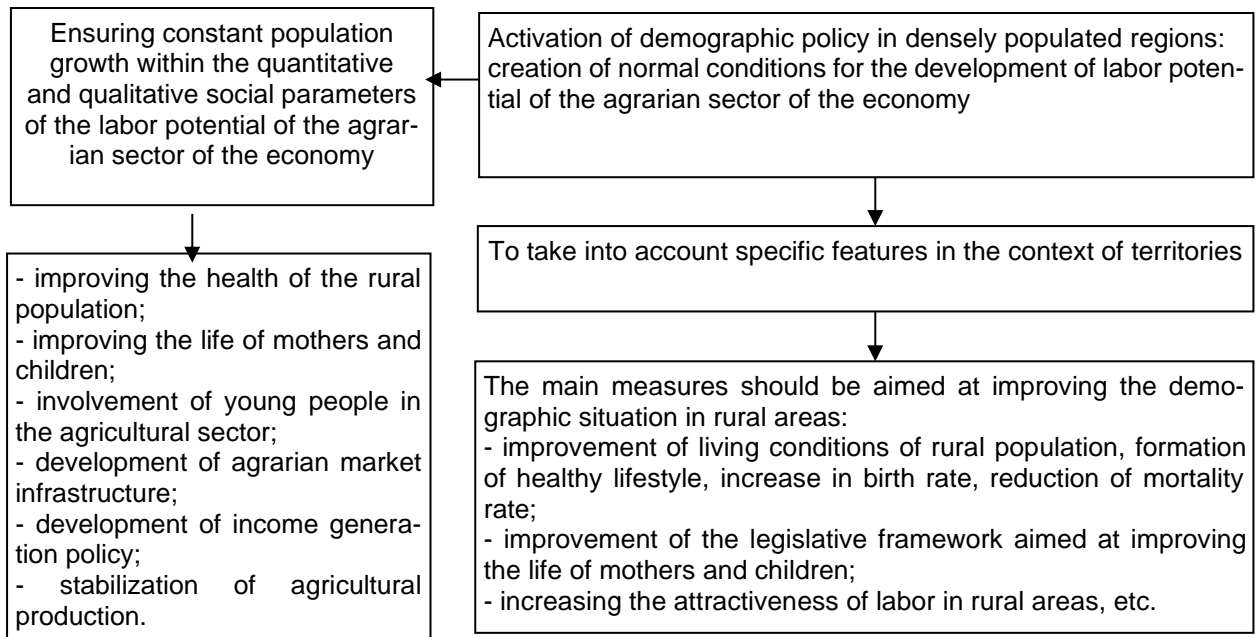
Thus, an integrated approach to the development of agrarian policy, including economic and social measures, is an important factor for increasing labor potential.

The efficiency of rural employment is characterized by high labor activity of an employee in the agricultural sector. In our opinion, structural reforms in the agrarian sector should be based on the following principles:

- first, the formation of the agrarian market depends on biological factors;
- secondly, optimal employment in agricultural production can be achieved only under certain conditions, in particular, everyone should be an owner and be directly responsible for the results of his/her activity;
- thirdly, the agricultural labor market should have its own subsidiary farms along with employment in public production.

rural areas, it is necessary to carry out demographic policy and ensure the inflow of migrants (Nurzhanova G., Mussirov G., Niyazbekova S. et al.) [12]. The arrival of migrants improves the age structure of the rural population, so it can be considered an important component of demographic development (natural population growth) (Baydakov A.K., Bespayeva R.S., Dosumova ZH.S.) [13].

The directions of demographic policy in the agricultural sector are presented in the figure (figure).



Note: developed by the authors

Figure - The main directions of demographic policy in the agricultural sector.

rural areas, contributing to the sustainable development of rural areas.

The proposed directions of demographic policy are focused on stabilizing and strengthening the labor potential of rural areas. Based on the analysis, the main aspects requiring their development, strengthening and improvement in order to create a favorable social and economic environment for the rural population are highlighted:

- \* develop and implement measures to improve the health of the rural population;
- \* to strengthen the attraction of young people to the agrarian sector through educational programs and the creation of modern jobs;
- \* to improve economic policy in agriculture through priority financing and preferential lending.

It should be noted that Kazakhstan has been implementing the «Diploma to Village» project for more than 14 years. It is designed to enable young doctors, veterinarians and teachers to go to work in villages where there is a

shortage of qualified specialists. The professional adaptation of young people begins at school and continues with the study of specialized professions. In 2023, the program was modernized and is still active, supporting young specialists who want to work in rural areas (With a diploma to the village...) [14].

The main areas of the program include the issuance of preferential loans for the purchase or construction of housing, as well as the provision of a lifting allowance. Starting from 2024, the amount of the preferential housing loan has been increased, which makes the program even more attractive for specialists. Program participants are required to work for at least three years in rural areas in their chosen profession.

The program «With Diploma - to the Village» remains one of the state's tools in the agrarian policy to provide rural areas with qualified personnel and improve housing conditions for young specialists.

An important role in the state's priority in agrarian policy is given to the socio-economic development of rural areas and the development of private subsidiary farms. In recent

years, they have accounted for about half of all agricultural production (Zhenskhan D., Rustembayev B.Ye., Nukesheva A.ZH.) [15].

The results of the study of labor potential in rural areas show that the self-regulation mechanisms of this segment as a national labor market have not been formed and, therefore, should be regulated by the state.

The state, conducting employment policy, should monitor compliance with legal norms and relations between employees and employers. In this regard, there are institutional factors related to the effectiveness of the legal and regulatory framework of the labor market. Institutional factors for them, on the one hand, are the development of special target programs at the state or regional level, on the other hand, are closely related to the labor resources of the young generation, which are created within the framework of various benefits, scholarships, grants, etc. of these programs and various legislative acts related to wages.

Dynamics of the main indicators of the labor market of the Republic of Kazakhstan is presented in table 1.

Table 1 - Dynamics of the main indicators of the labor market of the Republic of Kazakhstan

Main indicators	2020	2021	2022	2023	2024	Deviations for 2024 to 2020, %
Labor force, thousand people	9 221.5	9 180.8	9 256.8	9 429.8	9 534.1	3.4
Employed population, thousand people	8 780.8	8 732.0	8 807.1	8 971.5	9 081.9	3.4
Employees, thousand people	6 681.6	6 686.7	6 710.2	6 847.3	6 893.4	3.2
Have the status of unemployed - total (thousand people), incl.	440.7	448.8	449.6	458.3	452.2	2.6
Youth unemployment rate (15-24 years old), %	3.6	3.8	3.7	3.8	3.5	-0.1
Unemployment rate, %	4.8	4.9	4.9	4.9	4.7	-0.1
Self-employed population, thousand people	2 099.2	2 045.4	2 096.9	1 24.2	2 188.5	4.3

Note: compiled by the authors according to the source (Employment and unemployment) [16]

As shown in table 1, the labor force in 2024 was 9 534.1 thousand, an increase of 3.4% from 2020. The employed population increased by a similar 3.4% to 9 081.9 thousand people.

The number of employed persons amounted to 6 893.4 thousand, which also shows an increase of 3.2%. At the same time, the self-employed population increased more significantly, by 4.3%, and amounted to 2 188.5 thousand people. The level of general unemployment and youth unemployment (15-24 years old) decreased by 0.1%.

The data show positive dynamics in the main indicators of the labor market, reflecting an increase in employment and a decrease in the unemployment rate, which indicates stable economic development and improved socio-economic conditions.

One of the priorities of the formation of the modern labor market in the country is the socio-psychological factor. These include vocational guidance, professional training, adaptation, the prestige of the profession, the content of the nature of work, the willingness to change jobs, the ability to combine study and work, and

the prospects for professional growth. If the work is not interesting and not significant, young people make a decision to change jobs quickly. This socio-psychological factor of labor market formation significantly distinguishes it from the factors of labor potential formation in general.

Another group of factors in the priority direction of the labor market in the agrarian sector is the organizational factor related to employment. Also, demographic factors affecting the formation of youth labor resources in the agrarian sector reflect the quantitative and qualitative nature of youth labor resources.

Thus, in order to fully use the labor potential in rural areas, in our opinion, it is necessary to solve two main problems: technical and organizational-economic conditions of labor; social infrastructure of rural areas (living conditions).

Today, the working and living conditions of the rural population indicate that the labor potential in the agricultural sector is not fully utilized. The experience of foreign countries with developed market economies can serve as an example for Kazakhstan in regulating the labor

market. At the same time, in our opinion, it is necessary to develop special programs aimed at the formation and development of a community of highly qualified Kazakhstani rural workers on technological modernization.

Training of technical, professional workers is the basis for the formation of a young generation that ensures sustainable economic development of the country. Sustainable economic growth in Kazakhstan has led to significant changes in the structure of the labor market, as well as to a natural increase in demand for qualified personnel. Despite the measures taken to develop the system of technical and vocational education, the rapidly growing demand for qualified personnel is not fully satisfied, and the qualification level of graduates does not meet the requirements of employers.

Table 2 reflects the data on the number of technical and vocational education organizations (TVE) and the number of students in these organizations for the period from 2020 to 2024. The table shows both the absolute value of indicators for each year and the difference in the number of organizations and students for this period.

Table 2 - Number of technical and vocational education organizations and number of students

Indicators	2020	2021	2022	2023	2024	2024/2020 (+;-), %
Number of technical and vocational education organizations (units)	740	737	724	718	711	- 29 - 3,92%
Number of students in organizations of technical vocational education (persons), including:	475 443	477 539	494 042	525 909	547 994	+ 72 551 + 15,26%
Number of students from rural areas	98 764	103 240	99 344	106 112	100 238	+ 1 474 + 1,5%
Note: compiled by the authors according to the source (Employment and unemployment) [16]						

For 2020-2024 there was a decrease in the number of TVE organizations by 29 units (from 740 to 711). This may indicate the process of optimization or merger of institutions, as well as changes in educational policy, aimed at concentrating resources and improving the efficiency of the educational process.

However, despite the decrease in the number of institutions, there is a significant increase in the number of students. From 2020 to 2024, the number of students in T&E organizations increased by 72 551 (from 475 443 to 547 994). This growth indicates an increase in interest in technical and vocational education, which may be due to an increase in the quality of educational programs, adaptation to the needs of the labor market and other socio-economic factors that encourage young people to choose this direction of education.

From 2020 to 2024, the number of students from rural areas in technical and vocational education organisations increased by 1 474, which is an increase of 15%. The maximum number of students from rural areas was recorded in 2024, however, it decreased slightly to 100 238 in 2024. Despite slight fluctuations, the overall trend shows a moderate increase in the number of rural students over the last five years.

In the agri-food sector, digital transformation will change the structure of the labor market and the nature of work. It will redefine the role of farmers and agro-producers and change the skill set needed in the agri-food sector. EU countries provide a clear separation between advising farmers and verifying the correct allocation of financial support.

In 2024, 4 858 rural settlements were provided with broadband internet access using mobile technologies: 3G covered 2 813 rural settlements and 4G covered 2 045 SNPs. In addition, 1 950 rural settlements were connected to fixed Internet via ADSL technology, and another 2 606 rural settlements received access via fiber-optic communication lines.

Within the framework of the national project «Affordable Internet» it is planned to connect more than 3 000 villages to fiber optic communication lines services in 2024-2027.

Regarding educational institutions, in 2024, in 91.1% of rural schools (4 771 out of 5 237) in 91.1% of schools (4 771 out of 5 237) Internet connection speed for internal content (within Kazakhstan) reached at least 100 Mbps and for external content - 8 Mbps. In urban schools this indicator was slightly lower: in 86.3% of schools (2 085 out of 2 415) the speed was at least 100 Mbps for internal and 20 Mbps for external content. In total, in 4 484 schools out of 7 652 (58.6%) the Internet speed for internal content reached at least 100 Mbps and for external content - 20 Mbps.

Rural areas in particular are lagging behind in digital skills. There is a need to develop a digital skills training model aimed at educating rural populations so that they can learn how to assess and implement best practices and technologies for their businesses.

### Discussions

It is expected that at the new stage of economic development, resource-saving technologies in agriculture will become a priority for both public and private companies. Otherwise, the lag will increase day by day.

In our opinion, agricultural policy should pay attention to the development of joint activities of Kazakhstani research projects with international programs and projects, attracting foreign scientists and organizations. It is also necessary to create agrarian research centers, where it will be possible to use the experience of both foreign and domestic specialists to solve urgent and promising problems related to increasing the labor potential of rural areas.

To address complex issues related to the effective utilization of labor potential in rural areas, it is necessary to enhance the motivation of the rural population for self-employment.

Additionally, the issue of workforce outflow and the migration of highly qualified specialists abroad can only be resolved through radical measures: political and economic stability, as well as the accumulation of resources for investment in science and innovation in rural areas.

A development strategy is crucial for Kazakhstan and its regions. Launching production

through the advancement of science in economic diversification and increasing the level of innovation are among Kazakhstan's strategic objectives. This strategy defines the key mechanisms for science and education, as well as technological development in the country and its regions.

The innovation and technological process in the agricultural sector is a key factor determining the competitiveness of agricultural enterprises. Kazakhstan's innovation policy is closely linked to the integration of domestic science and its place in the global scientific community.

Innovative activities can be widely applied in science, social life, the political system, agriculture, and other areas of society. A focus on innovation processes means revitalizing the development dynamics of agricultural enterprises and integrating science with industry.

### Conclusions

1. A comprehensive approach to the essence of agricultural policy in the context of developing the labor potential of rural areas has been examined.

2. The main directions for improvement in the agricultural sector in the context of demographic policy have been proposed.

3. The dynamics of key labor market indicators have been analyzed, demonstrating an increase in employment and a decline in unemployment, which indicates stable economic development and improved socio-economic conditions.

4. An assessment has been made of the number of technical and vocational education (TVE) institutions and the student population in them from 2020 to 2024. Despite slight fluctuations, the overall trend shows a moderate increase in the number of rural students over the past five years.

5. A brief analysis of digital transformation has been conducted, contributing to positive outcomes in agricultural policy.

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