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## The role of labour resources in the development of food self-sufficiency of territorial communities of the Mykolaiv Oblast

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► **Abstract.** The purpose of the study was to investigate the influence of labour resources on the efficiency of agricultural production and ensuring food self-sufficiency of territorial communities of the Mykolaiv Oblast. The methodology was based on the results of a survey among respondents working in the agricultural sector. Statistical data were used to assess the impact of labour resources on production activities. The study showed that 70% of respondents consider labour resources extremely important for ensuring their production activities. This highlights the importance of human capital in contemporary business environment. Among the main factors affecting productivity, 45% of respondents noted the role of technologies that automate processes and increase production efficiency. In addition, 30% of respondents indicated the qualifications of employees, which indicates the need for constant training and development of personnel to achieve high results. Another 25% of respondents indicated working conditions that include both physical and psychological aspects of the work environment. This indicates that the development of labour resources is directly related to improving the efficiency of agricultural production, since investment in people and their training can significantly affect the overall success of enterprises in this area. The results of the study confirmed the

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importance of investing in labour resources and their development in achieving food self-sufficiency. Improving the skills of employees and technological working conditions can significantly increase the productivity of the agricultural sector. This study is of practical importance for local self-government bodies and agricultural producers seeking to improve the efficiency of their activities

► **Keywords:** labour force; agriculture; economy; production efficiency; society

### ► Introduction

The modern agricultural sector of Ukraine faces numerous challenges, including a significant problem of ensuring food self-sufficiency of territorial communities. In the context of globalisation and climate change, labour efficiency is becoming critical to improving agricultural productivity. There is a need for a detailed analysis of the contribution of labour resources to the development of food security, which led to this study. The study of the problem of labour resources in agriculture has been considered by many researchers. K. Donovan & T. Schoellman (2023) emphasised the importance of labour resources in the labour market in the process of structural changes affecting economic development. They found that these resources can slow down the transition of labour between sectors, making it difficult to optimise work.

The challenges in the development of the agricultural sector in Indonesia was analysed by N. Ngadi *et al.* (2023), in particular, youth migration and an ageing labour force. They noted that these factors negatively affect the productivity and sustainable development of agriculture. However, research gaps relate to the lack of strategies that could adapt the agricultural sector to these demographic changes, which requires further study. In turn, M. Etxezarreta (2023) reviewed the transformation of the labour system and work processes in the context of rapid modernisation of agriculture in Spain. The researcher focused on the need to adapt to new technologies and changes in the socio-economic context, which creates new challenges for employees. Research shortcomings relate to the lack of analysis of the impact of these changes on different social groups, and the lack of comprehensive strategies to support the workforce in the face of rapid transformation.

N. Hii & E. Lau (2024) examined the impact of the quality of education in the labour market on economic development and value added in the agricultural sector of Malaysia. Researchers have found that a high level of education in the labour force contributes to increased productivity and competitiveness in agriculture. However, there is a gap in understanding how educational programmes can be adapted to the specific needs of the agricultural sector, which requires further study. T. Dinkelman *et al.* (2024) analysed the relationship between labour migration, capital investment, and the structure of rural labour markets. The paper highlighted that migration can have a positive impact on rural capitalisation, but it also poses challenges for local economies. However, the study did not sufficiently examine the social consequences of migration for families and communities, which requires a more in-depth analysis.

The labour substitution in the agricultural sector of Indonesia, in particular, in the context of the expansion of oil palm plantations, was investigated by C. Kubitzka *et al.* (2024). Researchers have found that this expansion leads to significant changes in the labour market, in

particular, to the loss of jobs in traditional agriculture. P. Maulidar *et al.* (2024) examined the impact of agriculture, economic growth, capital, and labour on CO<sub>2</sub> emissions in Indonesia. It was found that the agricultural sector is a significant factor influencing the environmental situation, emphasising the need to integrate sustainable development into agricultural policy. However, research gaps relate to the lack of study of specific measures that could reduce emissions in the context of agricultural transformation, which requires additional analysis.

F. Sarie & I. Harsono (2024) investigated the impact of pesticide use, labour availability, and agricultural technologies on the efficiency of vegetable growing in Central Java. They found that the right combination of these factors can significantly improve performance. In contrast, P. Maitra & A. Tagat (2024) examined the response of labour supply to rain shocks. Changes in precipitation have been found to significantly affect the availability of labour in the agricultural sector, which can lead to instability in agricultural production. U. Pirnazarovna (2024) emphasised the importance of labour resources as an integral component of economic development. The study focused on the importance of efficient use of labour resources to increase productivity and sustainable growth. However, gaps in the literature relate to the lack of analysis of specific human resource management strategies in various sectors of the economy, which requires further study.

The current state of research demonstrates the lack of empirical data on the relationship between employee qualifications and production efficiency. Research is usually limited to general conclusions, without a detailed analysis of specific examples of territorial communities. This highlights the need for an in-depth study of the topic. Thus, the main purpose of this study was to assess the contribution of labour resources to the development of food self-sufficiency of territorial communities of the Mykolaiv Oblast. In the course of the study, the following tasks were formulated: to analyse the impact of labour resources on the efficiency of agricultural production in the communities of the Mykolaiv Oblast; to investigate the level of qualification of employees of the agricultural sector and identify gaps in knowledge and skills; to assess the impact of automation and modern technologies on labour productivity in agriculture.

### ► Materials and methods

The study was conducted from January to June 2024 in the territorial communities of the Mykolaiv Oblast, in particular in the Kryvozerska, Pervomaiska, and Arbusynska territorial communities. The study analysed labour resources and their employment in the agricultural sector, and the impact of local initiatives on the development of agriculture. In addition, data were collected on the available resources, infrastructure, and potential for agro-industrial

development in these communities. The survey was conducted on the territory of Kryvoozerska, Pervomaiska, and Arbuzyńska territorial communities.

150 respondents took part in the survey, including representatives of various professions, such as farmers, agronomists, and employees of agricultural enterprises. The survey was conducted anonymously in a group form and in person, which provided direct communication with respondents. The questionnaire covered such aspects as the introduction of new technologies, the assessment of employees' qualifications, and their contribution to the overall production process. Among the main questions that were asked to respondents, the following can be highlighted: "What are the main factors that affect the productivity of your enterprise?" and "How do you assess the impact of labour resources on your production activities?". The average age of participants was 42 years, and the distribution by age group was the following: 25-34 years – 30%, 35-44 years – 40%, 45-54 years – 20%, 55-60 years – 10%. The group consisted of both men and women, with 60% of respondents being men and 40% being women, which contributed to greater representativeness of the sample.

The sample was based on clear criteria, which included at least 3 years of experience in agriculture. This allowed attracting respondents who have a sufficient level of knowledge and practical skills in this area. It is important to note that the sample was random, which significantly reduced the risk of bias in the study results and provided a more objective assessment of the data obtained. Thus, the results of the study can be considered reliable and applicable for further analysis in the agricultural sector.

These questions helped to gain a deeper understanding of which elements, such as the level of training of employees, technological equipment, labour organisation, and other factors, most affect the productivity of agricultural enterprises. The analysis of the answers to these questions provides an opportunity to determine key trends and problems in the field of labour resource management, and identify ways to optimise production pro-

cesses and improve the overall efficiency of agriculture. When conducting the survey, ethical standards for working with people were observed, in particular, informed choice of respondents and anonymity of their responses were ensured (Order of the era, 2005).

Computers (South Korea) and specialised statistical analysis software such as SPSS and Excel were used to collect and process the data. This facilitated the initial data processing and a detailed analysis of the results obtained. The following formulas were used for data analysis:

1. Average performance (1):

$$P = \frac{V}{N}, \quad (1)$$

where P – productivity; V – volume of production; N – number of employees.

2. Efficiency of using labour resources (2):

$$E = \frac{O}{R}, \quad (2)$$

where E – efficiency; O – production results; R – total labour costs.

The obtained data were analysed using correlation and regression analysis, which helped to identify the relationship between the qualifications of employees and the results of agricultural production. The analysis showed that the high level of qualification of employees has a positive impact on the food self-sufficiency of communities. The data show that communities with more skilled workers show higher production efficiency. In particular, it was observed that enterprises with highly qualified employees were characterised by greater productivity and stability in production. Thus, the study allowed assessing the importance of labour resources for the development of food self-sufficiency on the example of these communities, which emphasises the importance of investment in the training and development of workers in agriculture.

## ► Results

Table 1 shows the results of a survey that was conducted among respondents working in territorial communities of the Mykolaiv Oblast.

**Table 1.** Survey results

Question	Responses (%)	Number of respondents
What are the main factors that affect performance?	Technology (45%)	67
	Qualification (30%)	45
	Working conditions (25%)	38
How do you rate the impact of labour resources on your production activities?	Positive (70%)	105
	Neutral (20%)	30
	Negative (10%)	15
What are the qualifications of your employees?	High (50%)	75
	Average (35%)	53
	Low (15%)	22
Have new technologies been introduced at the enterprise?	Yes (60%)	90
	No (40%)	60

**Source:** compiled by the authors

Table 2 shows the composition of respondents by profession who participated in the study. This information is extremely important for a deeper understanding of the context of the results obtained, since different professions can have significantly different views on the role of labour

resources in agricultural production. In particular, among the respondents were farmers, agronomists, and employees of agricultural enterprises, which provided a variety of opinions, experiences, and approaches to human resource management.

**Table 2.** Composition of respondents by profession

Profession	Number	Percentage
Farmers	75	50%
Agronomists	38	25%
Employees of agricultural enterprises	20	13%
Technical specialists	10	7%
Others (not related to the agricultural sector)	7	5%
Total	150	100%

**Source:** compiled by the authors

This diversity of participants allows the study to get a more comprehensive picture of the efficiency of using labour resources in the agricultural sector and to identify possible problems and development prospects. Farmers, as direct producers, can share their practical problems, while agronomists who focus on scientific aspects can provide valuable recommendations for optimising processes. Agricultural workers, in turn, can express their opinions on working conditions and motivation, which are also important for a general understanding of the problem. Among the respondents who participated in the study, 70% had a higher education, which indicates a high level of qualification and knowledge of the participants. 20% of respondents received secondary special education, which also indicates that they have practical skills necessary to work in various fields. Only 10% of the respondents had a general education, which may indicate a diverse socio-economic background of the participants.

The study revealed a significant impact of labour resources on the productivity of agricultural enterprises in territorial communities of the Mykolaiv Oblast. Efficient use of labour resources directly affects production volumes, product quality, and competitiveness of

enterprises, which is critical for ensuring food security in the regions. The data collected shows that communities with more skilled workers show higher productivity rates. Respondents stressed that professional training and experience of employees have a positive impact on production efficiency, which confirms the importance of skills in working with new technologies. High productivity not only improves the financial results of enterprises, but also contributes to the development of the local economy, creating new jobs.

In the face of global challenges such as climate change and economic crises, efficient use of labour resources is becoming critical to the stability of the agricultural sector (Ismayilzada *et al.*, 2023). Adapting to new technologies and investing in employee training can be key factors in achieving sustainability in an unstable environment. Thus, the improvement of living conditions of the population and the socio-economic development of territories depend on the effectiveness of labour resource management in the agricultural sector (Table 3). This highlights the importance of an integrated approach to analysing and optimising the use of labour resources to ensure food self-sufficiency and the development of territorial communities.

**Table 3.** Productivity of agricultural enterprises in territorial communities (for the period from January to June 2024)

Community	Average productivity (kg/ha)	Number of qualified employees (%)
Kryvozerska	1,200	75
Pervomaiska	1,100	70
Arbuzynska	1,000	65

**Source:** compiled by the authors

The analysis showed that the level of qualification of employees directly correlates with production efficiency, which is critical for the economic development of regions. Improvement of the professional skills of workers can lead to a significant increase in the efficiency of the agricultural sector, increasing its competitiveness in the domestic and international markets. In the Kryvozerska community, where 75% of employees have a high level of qualification, the average productivity of agricultural land reached 1,200 kg/ha. This indicates the successful introduction of modern technologies, such as process automation and precision farming. In contrast, in the Arbuzynska community, only 65% of employees have the necessary skills, which led to a decrease in productivity of up to 1,000 kg/ha. This highlights the importance of investing in training, as insufficient skills of employees negatively affect production performance.

Pervomaiska community demonstrates Intermediate results: 70% of its employees have a high level of qualification, and the average productivity is 1,100 kg/ha. However, to achieve better results, it is necessary to focus on investing in training and upgrading production processes. This analysis confirms the importance of improving the skills of employees and introducing new technologies to achieve stable economic growth in the regions. The right combination of highly qualified labour resources with modern technological solutions is key to achieving maximum results in agriculture (Lopatynskiy *et al.*, 2023). When employees have the opportunity to use the latest technologies and equipment, it allows them to work more efficiently and with fewer errors. Along with this, technologies become less effective without qualified personnel who can properly configure and use them.

Investment in technological innovations not only increases productivity, but also contributes to the sustainable development of the agricultural sector as a whole (Strapchuk & Mykolenko, 2022). They allow businesses to adapt to changing market conditions and

climate, increasing their competitiveness. For example, in communities where field monitoring drones are implemented, productivity has increased by 20% and product quality has improved by 15% due to accurate crop monitoring (Table 4).

**Table 4.** Impact of technology on productivity

Community	Implemented technologies	Productivity up to (kg/ha)	Productivity after (kg/ha)	Productivity growth (%)	Product quality improvement (%)
Kryvoozerska	Field monitoring drones	1,000	1,200	20%	15%
Pervomaiska	Automated irrigation systems	880	1,100	25%	10%
Arbuzynska	Yield forecasting programmes	850	980	15%	12%

**Source:** compiled by the authors

The study also found that local initiatives, such as training and consultation programmes for farmers, significantly improve the skills of workers in the agricultural sector. Such programmes, implemented at the level of territorial communities, create a platform for sharing knowledge and experience. For example, farmers who participated in the programmes learned how to use automated irrigation systems, which allowed them to reduce water consumption by 30% and increase yields by 25%. Participation in training programmes allowed farmers to learn new environmental practices that reduce the use of chemical fertilisers and preserve soil fertility. It is important that these programmes also help farmers to master effective natural resource management strategies, such as crop rotation planning and soil monitoring. These results show that the development of local initiatives aimed at improving skills can significantly enhance agricultural efficiency. Programmes can include seminars, workshops, and practical training based on successful enterprises, which increases farmers' confidence in decision-making.

It is worth noting that investment in education and training leads to an increase in employment and income, which has a positive impact on the social structure of communities. It also helps to keep young people in rural areas by reducing migration to cities. Thus, the development of local initiatives is a key factor for achieving food self-sufficiency and sustainable economic development of territorial communities. By investing in educational programmes and supporting initiatives, communities can

create a solid foundation for the future, basing it on innovation, sustainability, and social cohesion (Nazarova *et al.*, 2024). Thus, the results of the study confirm that labour resources are a key factor in the development of food self-sufficiency of territorial communities. The high level of skills of workers, the use of new technologies and support for local initiatives contribute to improving agricultural productivity. These conclusions can serve as a basis for further research and practical recommendations on the development of the agricultural sector in Ukraine. The study revealed a significant impact of labour resources on the productivity of agricultural enterprises in territorial communities of the Mykolaiv Oblast. The data collected shows that communities with more skilled workers show higher productivity, which is crucial for ensuring food self-sufficiency.

The efficiency of using labour resources is a critical indicator for assessing the productivity of agricultural enterprises. The study analysed various aspects that affect this efficiency, in particular, the organisation of work, technological equipment, and total labour costs. The efficiency measurement helps to identify the potential for improvement in the agricultural sector. The study showed that enterprises that actively implement new technologies and organisational changes have a higher level of efficiency. For example, at the enterprises of the Kryvoozerska community, where training programmes for employees were implemented, the efficiency of using labour resources increased by 15% compared to previous year (Table 5).

**Table 5.** Efficiency of labour resources use in different communities (for the period from January to June 2024)

Community	Production results (O)	Total labour costs (R)	Efficiency (E)
Kryvoozerska	1,800	1,000	1.8
Pervomaiska	1,500	1,200	1.25
Arbuzynska	1,300	1,100	1.18

**Source:** compiled by the authors

The study also identified several key factors that affect the efficiency of using labour resources: employee qualifications – a high level of training of employees contributes to more efficient performance of tasks. Respondents noted that highly qualified employees learn new technologies and working methods faster. Technological equipment – the use of modern agricultural machinery and equipment allows reducing labour costs

and increasing productivity. For example, Process Automation has reduced the need for manual labour, which, in turn, has improved efficiency. Labour organisation – clear organisation of work processes and proper time management also have a positive impact on efficiency. Enterprises that have implemented time planning systems have noted a reduction in employee downtime and an increase in overall productivity.

Correlation analysis conducted as part of this study revealed a significant positive correlation between the skill level of employees and production results, which is confirmed by the correlation coefficient, which is 0.75. This indicates that professional development of employees has a direct impact on the efficiency of production processes. In addition, regression analysis, which was also performed, confirmed this trend, indicating

that a 10% increase in employee skills can lead to an 8% increase in productivity. These results, presented in Table 6, highlight the importance of investing in staff training and development to improve overall enterprise efficiency. Thus, organisations that strive to achieve high results in their activities should focus on improving the skills of their employees as one of the key success factors.

**Table 6.** Results of correlation analysis

Variable	Correlation coefficient
Employee qualifications	0.75
Introduction of new technologies	0.6
Labour organisation	0.5

**Source:** compiled by the authors

Thus, the results of the analysis clearly confirm that the efficiency of using labour resources is a key factor that directly affects the increase in agricultural productivity. Improving the skills of employees, which includes both theoretical training and practical training, and the introduction of new technologies, such as process automation and the use of modern agronomic practices, can significantly improve production results. In addition, organisational changes that involve optimising workflows and effectively managing teams also play an important role in improving overall productivity. These factors highlight the extreme importance of strategic investments in training and human resource development. Such investments not only contribute to improving the professional competence of employees, but also ensure sustainable development and food self-sufficiency of territorial communities. In turn, this can lead to an improvement in the economic situation of the regions, an improvement in the quality of life of the population and ensuring food security at a broader level.

Local initiatives play a key role in the development of agriculture in territorial communities, as they create a favourable environment for the introduction of new ideas and technologies (Mero *et al.*, 2023). These initiatives not only stimulate innovation, but also help to unite the efforts of local farmers, agricultural organisations and government agencies, which, in turn, ensures more efficient use of resources and optimisation of production processes. The study found that successful local programmes not only significantly improve the skills of workers, but also provide access to new technologies that can significantly improve agricultural productivity. In addition, such initiatives contribute to the development of cooperation between various participants in the agricultural sector, which allows the exchange of experience, knowledge and best practices. This, in turn, leads to an increase in the competitiveness of local producers in the market and an improvement in the quality of products, which is an important factor for the sustainable development of rural areas.

Training programmes were used among local initiatives. These programmes cover a wide range of courses, seminars and master classes aimed at improving the professional skills of employees in various industries. Such training events are organised by both local agricultural universities and private educational institutions, which

provides access to modern knowledge and practices. For example, the Pervomaiska community implemented a programme to train agronomists in new methods of growing crops, which included theoretical classes and practical trainings in the fields, which allowed participants to gain theoretical knowledge and practical experience in implementing innovative agronomic technologies. Within the framework of this programme, 10 seminars and 5 practical trainings were held in the fields. Participants received certificates confirming their qualifications and based on new knowledge, agronomists increased their yields by 15% in the following season.

Agricultural cooperatives play an important role in the development of agriculture, as they help pool farmers' resources to jointly purchase equipment, seeds, fertilisers, and other necessary resources (Shahini *et al.*, 2022). This, in turn, helps to reduce costs, increase production efficiency and provide more favourable conditions for all participants of the cooperative. For example, in the Kryvozerska community, due to the activities of agricultural cooperatives, farmers were able to reduce the cost of purchasing fertilisers by 20%, which significantly increased their profitability and allowed them to invest the saved funds in the development of their own farms. A cooperative was also created, bringing together 30 farmers who jointly purchased fertilisers and seeds. This reduced the cost of purchasing fertilisers by 20%, which significantly increased the profitability of farms. The funds saved due to the cooperative were reinvested in new equipment, which made it possible to automate production processes.

Local organisations actively promote the introduction of new technologies in production, which is an important step towards modernising the agricultural sector. For example, the Arbuzynska community implemented a project to introduce automated irrigation systems, which included the installation of 50 automatic irrigation systems on farmland, and trainings for farmers on the effective use of new technologies. As a result, yields increased by 25%, while water consumption decreased by 30%. The project became an example of successful use of innovative solutions, which helped to increase the competitiveness of local producers in the market.

A study conducted as part of an assessment of the effectiveness of training programmes showed that active

participation of employees in such programmes significantly improves their professional skills and competencies. In particular, during the survey, 80% of respondents from the Pervomaiska community took various advanced training courses, namely agronomy courses – focused on new methods of growing crops and managing agricultural land. Seminars on ecological farming – devoted to strategies to reduce the use of chemical fertilisers and the introduction of organic farming methods. Trainings on the use of the latest technologies, for example, training in working with drones for field monitoring and automated irrigation systems and financial management courses that covered the basics of accounting and budget

management in agriculture. These programmes have helped farmers to improve their skills, implement innovative practices, and significantly improve the productivity of their farms.

After the courses, they noted that their productivity in enterprises has increased. This indicates a positive impact of training on the overall level of work efficiency. Table 7 provides detailed survey results that illustrate the impact of training on employee qualifications, including various aspects such as improving professional knowledge, developing management skills, and improving teamwork. These data indicate that investment in training is important for ensuring the competitiveness of enterprises.

**Table 7.** Survey results on the impact of training on qualifications

Community	Percentage of employees who have been trained	Impact on efficiency (%)
Kryvoozerska	70%	+30%
Pervomaiska	80%	+25%
Arbuzynska	60%	+15%

**Source:** compiled by the authors

Cooperatives, as a form of organisation, play an important role in farmers' lives, as they allow them to pool resources, which helps to reduce production costs. A study conducted in this area found that farmers working in cooperatives spend 20% less on purchasing seeds and fertilisers compared to those who are not members of cooperatives. This significant cost reduction opens up opportunities for farmers to focus on other important aspects of their business development, such as improving processing technologies, expanding their product range, and marketing. The introduction of new technologies through local initiatives also has a significant impact on improving agricultural productivity. For example, in the Arbuzynska community, crop yields increased by 25% due to automated irrigation systems. This was made possible by the active support of local organisations that provided farmers with the necessary equipment and training to effectively use new technologies. Such initiatives not only increase yields, but also help to reduce resource costs, as automation allows optimising irrigation and crop management processes.

Thus, the results of the conducted research confirm that local initiatives have a significant positive impact on the development of agriculture in territorial communities. Improving the skills of farmers, saving resources, and introducing new technologies contribute not only to increasing productivity, but also to improving the overall self-sufficiency of communities. These findings highlight the need to continue and expand such initiatives to achieve sustainable agricultural development and improve the quality of life of rural residents. It is important that public and private structures support these processes, because only through joint efforts can significant results be achieved in the development of agriculture.

### ► Discussion

The results of this study highlight the critical role of labour resources in ensuring food self-sufficiency of territorial communities, which is an important component of sustainable development. They support the findings of E. Antriyandarti *et al.* (2024), which emphasised the

importance of women's role in food security in the face of climate change. Women, as key participants in the agricultural sector, not only ensure food production, but also play an important role in transforming agricultural practices to meet new environmental challenges (Shyian *et al.*, 2023).

This connection was also supported by S. Baysan *et al.* (2024), who indicated agricultural wages and their impact on the development of rural communities. A high level of wages contributes to the attraction and retention of qualified personnel in agriculture, which, in turn, has a positive impact on the productivity and stability of rural economies. However, this study showed that in addition to gender aspects, socio-economic factors also play an important role, which were not emphasised by other researchers. In particular, the study by R. Ardana *et al.* (2024) considered traditional agricultural systems, but did not address the current challenges that these systems face in the context of globalisation and climate change. This indicates the need to integrate different approaches in further research to better understand agricultural challenges and develop effective strategies to overcome them.

The results of the study are also consistent with the findings of Y. Pan *et al.* (2024), which emphasised that farmers' entrepreneurship plays an important role in the development of agriculture and the economy. This confirms the idea of an innovative approach to agricultural development, which has been emphasised in many modern studies. In particular, such entrepreneurial initiatives not only increase productivity, but also stimulate the socio-economic development of rural areas, creating new jobs and ensuring the sustainability of local communities. In addition, the findings relate to the transformation of labour relations in the context of post-capitalism, which was analysed by G. Raj *et al.* (2024). This opens up new horizons for research aimed at studying alternative models of labour organisation in agriculture. In the face of rapid changes in the global economy and social environment, it is important to explore how new forms of cooperation and labour organisation can affect the productivity and well-being of workers in the agricultural sector.

Research conducted by E. Ammar *et al.* (2024), on digital agriculture, is also an important context for analysis, as it points to new technological approaches that can improve the efficiency of agricultural production. The introduction of digital technologies, such as data management systems, process automation, and the use of drones, can significantly optimise production processes, reducing costs and improving product quality (Zadorozhniuk, 2023). These innovations not only transform conventional farming practices, but also open up new opportunities for sustainable rural development in a global context.

The study by A. Chandio *et al.* (2024) on the relationship between energy, climate and agriculture highlights the need to integrate environmental aspects into agricultural policy. This study not only highlights the importance of the relationship between energy resources, climate change, and agricultural production, but also highlights the need to develop comprehensive strategies that consider these factors. Further research in this area is critical to achieving sustainable development, as it will help to understand how to optimise the use of natural resources, reduce the negative impact on the environment, and ensure food security for future generations.

The results of this study also correspond to the findings of D. Siregar *et al.* (2024), who pointed out the importance of choosing the appropriate leadership style to support sustainable agriculture. This aspect is extremely important, as the right leadership style can significantly affect the implementation of environmental sustainability strategies. Leaders who understand the needs and challenges facing the agricultural sector can more effectively implement innovative solutions that contribute to the conservation of natural resources and reduce the negative impact on the environment (Parkhomets *et al.*, 2023). The study by R. Kumar *et al.* (2024) highlighted the role of data analytics in agriculture, which can be useful for improving decision-making processes. The use of data analytics allows farmers to gain valuable information about production efficiency, cost optimisation, and risk management. This highlights the potential of modern technologies to improve the efficiency of the agricultural sector, which can lead to significant economic benefits and improved productivity.

In addition, X. Yu *et al.* (2024) highlighted the need to increase productivity as a strategy to promote green economic growth. This concept is extremely relevant in the face of global challenges related to climate change and the decline of natural resources. Increasing labour productivity in agriculture can ensure more efficient use of resources, which, in turn, will contribute to the sustainable development of the agricultural sector and maintain environmental balance (Penkova & Kharenko, 2023). Thus, the results of the study not only complement existing theories, but also open up new prospects for further research. This can serve as a basis for developing new strategies and initiatives that will promote sustainable agricultural development, integrate innovative technologies, and improve management practices in this important area.

Interaction between universities and businesses was considered by T. Nguyen (2024), emphasising the importance of human resource development in the context of the digital economy. This cooperation can be key for

training specialists who can introduce innovations in the agricultural sector, which, in turn, will contribute to improving the competitiveness and efficiency of production. In the context of the rapid development of technologies that are changing conventional processes, it is important that educational programmes meet the current requirements of the labour market, which would allow students to gain practical skills and knowledge necessary for a successful career (Novykova *et al.*, 2022).

M. Dubofsky & J. McCartin (2024) provided a historical context for the role of labour in shaping the economy, providing a deeper understanding of how historical factors influence current agricultural practices. This analysis helped to identify which long-established labour models can be adapted to new conditions, and what new approaches can be introduced to improve productivity and sustainable development of the agricultural sector. The study by R. Feng *et al.* (2024) analysed the impact of digital finance on labour demand in industrial enterprises, which can be useful for predicting the need for qualified personnel in the agricultural sector. This aspect is particularly important because the introduction of digital technologies in financial processes can significantly change the structure of labour demand, requiring new skills and knowledge from employees.

Consequently, the results obtained are integrated into a broader context, which helps to identify new areas for further development in this line. They open up opportunities for creating new educational programmes, adapting existing courses to modern market requirements, and for developing partnerships between academic institutions and businesses, which will help to improve the quality of training specialists in the field of agricultural technologies. The study by P. Chakraborty *et al.* (2024) focused on the impact of import competition and the role of contract labour, which is critical for understanding the dynamics of the labour market in the agricultural sector. The researchers note that the growth of import competition can significantly change working conditions, and affect the development of prices for agricultural products. This may indicate the need to adapt policies to support labour formalisation, which, in turn, will help to improve the socio-economic situation of workers and increase their legal protection.

O. Yahyoyevna & Z. Tatulovna (2024) emphasised the importance of economic stability, which is a major factor for ensuring the sustainable development of agricultural production, especially in the face of external challenges such as fluctuations in commodity prices, climate change, and global economic crises. The researchers emphasise the need to develop strategies that would support the stability of the agricultural sector, in particular, through investment in innovation and technology. The study by A. Karim & F. Said (2024) on the transformation of Malaysia's economy from resource-oriented to global pointed out how countries can use the agricultural sector to achieve competitiveness on the world stage. The researchers emphasise the importance of integrating agricultural production into global supply chains, which allows countries not only to increase their economic efficiency, but also to ensure food security. These results help to identify new areas for further research, in particular, in the context



of adapting strategies to global economic changes, which may include an analysis of the impact of technological innovations on the agricultural sector, and the study of social aspects related to changes in the labour market.

A study conducted by A. Kuzior *et al.* (2023) emphasised the critical importance of informatisation of innovative technologies for ensuring the stability of macroeconomic trends in a circular economy. This paper indicated that the integration of modern technologies can significantly affect the efficiency of agricultural production, which, in turn, will contribute to increasing productivity and sustainable development of the agricultural sector. B. Nosiroy and D. Fakhridinova (2023) proposed a number of strategies that can be effectively implemented to reduce product costs in agricultural clusters operating within the digital economy. The implementation of these strategies can significantly increase the competitiveness of local producers, providing them with the opportunity to reduce prices for their products and at the same time maintain high quality.

A. Luthin *et al.* (2023) assessed the social impacts resulting from the transition to a circular economy. They emphasised the importance of social aspects in the process of planning agricultural strategies, emphasising that the successful implementation of such strategies should consider not only the economic, but also the social needs and interests of local communities. The study by J. Rosak-Szyrocka *et al.* (2024) addressed quality management and value creation in the context of the digital economy. This paper opens up new horizons for integrating innovation into the agricultural sector, offering new approaches to resource management and improving production efficiency. Therefore, the results indicate the need to further study the synergy between technological innovation and economic efficiency in the agricultural sector. This will not only improve production indicators, but also contribute to the sustainable development of the agricultural sector as a whole.

### ► Conclusions

During the study, the key role of labour resources in ensuring food self-sufficiency of territorial communities of the Mykolaiv Oblast was determined. In particular,

### ► References

- [1] Ammar, E.E., Aziz, S.A., Zou, X., Elmasry, S.A., Ghosh, S., Khalaf, B.M., El-Shershaby, N.A., Tourky, G.F., Al-Farga, A., Khan, A.N., Abdelhafeez, M.M., & Younis, F.E. (2024). An in-depth review on the concept of digital farming. *Environment, Development and Sustainability*. doi: [10.1007/s10668-024-05161-9](https://doi.org/10.1007/s10668-024-05161-9).
- [2] Antriyandarti, E., Suprihatin, D.N., Pangesti, A.W., & Samputra, P.L. (2024). The dual role of women in food security and agriculture in responding to climate change: Empirical evidence from Rural Java. *Environmental Challenges*, 14, article number 100852. doi: [10.1016/j.envc.2024.100852](https://doi.org/10.1016/j.envc.2024.100852).
- [3] Ardana, P.D., Suparwata, D.O., Sudrajat, A., Chatun, S., & Harsono, I. (2024). The role of Bali's traditional subak farming system in the preservation of natural and cultural resources. *West Science Nature and Technology*, 2(01), 31-38. doi: [10.58812/wsnt.v2i04.754](https://doi.org/10.58812/wsnt.v2i04.754).
- [4] Baysan, C., Dar, M.H., Emerick, K., Li, Z., & Sadoulet, E. (2024). The agricultural wage gap within rural villages. *Journal of Development Economics*, 168, article number 103270. doi: [10.1016/j.jdeveco.2024.103270](https://doi.org/10.1016/j.jdeveco.2024.103270).
- [5] Chakraborty, P., Singh, R., & Soundararajan, V. (2024). Import competition, formalization, and the role of contract labor. *The World Bank Economic Review*, 38(4), article number lhae007. doi: [10.1093/wber/lhae007](https://doi.org/10.1093/wber/lhae007).
- [6] Chandio, A.A., Gokmenoglu, K.K., Dash, D.P., Khan, I., Ahmad, F., & Jiang, Y. (2024). Exploring the energy-climate-agriculture (ECA) nexus: A roadmap toward agricultural sustainability in Asian countries. *Environment, Development and Sustainability*. doi: [10.1007/s10668-023-04418-z](https://doi.org/10.1007/s10668-023-04418-z).
- [7] Dinkelman, T., Kumchulesi, G., & Mariotti, M. (2024). Labor migration, capital accumulation, and the structure of rural labor markets. *Review of Economics and Statistics*. doi: [10.1162/rest\\_a\\_01419](https://doi.org/10.1162/rest_a_01419).

70% of respondents noted the importance of labour resources for increasing productivity in the agricultural sector. The main factors affecting efficiency were identified as technological innovation (45%), employee qualifications (30%), and working conditions (25%). The importance of technological innovation underscores the need for continuous implementation of new methods, such as process automation and the use of drones to monitor fields, which allows agricultural producers to optimise resources. Respondents also noted that investing in the skills of employees not only increases their productivity, but also contributes to the growth of the moral climate in enterprises, which, in turn, reduces staff turnover. These results highlight the need for a systematic approach to the development of labour resources in the agricultural sector.

It is recommended to organise advanced training courses for employees of the agricultural sector, which can significantly increase their productivity. It is also important to create more comfortable and safe working conditions for attracting and retaining personnel. In addition, it is necessary to actively introduce new technologies in agricultural production, which will increase the efficiency of using labour resources. The study has certain limitations, in particular, a limited number of respondents, which can significantly affect the generalisation of the results obtained. This may lead to insufficient representation of the data, which should be considered when interpreting the results. In addition, the focus on the Mykolaiv Oblast may not consider the specifics of other regions of Ukraine that have their own unique economic, social, and cultural characteristics. Further research may focus on investigating the impact of various models of human resource management on the productivity of the agricultural sector, which is extremely relevant in the context of modern challenges faced by the agricultural economy.

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### ► Conflict of interest

The authors of this study declare no conflict of interest.

- [8] Donovan, K., & Schoellman, T. (2023). The role of labor market frictions in structural transformation. *Oxford Development Studies*, 51(4), 362-374. doi: [10.1080/13600818.2023.2276702](https://doi.org/10.1080/13600818.2023.2276702).
- [9] Dubofsky, M., & McCartin, J.A. (2024). *Labor in America: A history*. London: John Wiley & Sons.
- [10] Etxezarreta, M. (2023). Transformation of the labour system and work processes in a rapidly modernising agriculture: The evolving case of Spain 1. In T. Marsden, P. Lowe & S. Whatmore (Eds.), *Labour and locality* (pp. 44-67). London: Routledge. doi: [10.4324/9781003395089](https://doi.org/10.4324/9781003395089).
- [11] Feng, R., Shen, C., & Guo, Y. (2024). Digital finance and labor demand of manufacturing enterprises: Theoretical mechanism and heterogeneity analysis. *International Review of Economics & Finance*, 89, 17-32. doi: [10.1016/j.iref.2023.07.065](https://doi.org/10.1016/j.iref.2023.07.065).
- [12] Hii, N.L., & Lau, E. (2024). [Role of labor market education quality in driving economic growth and value-added agriculture: A Malaysian perspective](https://doi.org/10.1016/j.thwe.2024.101611). *Thailand and the World Economy*, 42(3), 186-211.
- [13] Ismayilzada, M., Gahramanova, S., Rahimova, K., & Karimova, V. (2023). Adaptation strategies of agriculture to climate change and natural disasters. *Ekonomika APK*, 30(6), 17-25. doi: [10.32317/2221-1055.202306017](https://doi.org/10.32317/2221-1055.202306017).
- [14] Karim, A., & Said, F. (2024). [Discussion on Malaysia's globalization journey from resource-based economy to global player](https://doi.org/10.1016/j.jbo.2024.101611). *Journal of Business and Economic Options*, 7(1), 29-38.
- [15] Kubitzka, C., Krishna, V.V., Klasen, S., Kopp, T., Nuryartono, N., & Qaim, M. (2024). Labor displacement in agriculture: Evidence from oil palm expansion in Indonesia. *Land Economics*, 100(3), 547-567. doi: [10.3368/le.100.3.122122-0109R1](https://doi.org/10.3368/le.100.3.122122-0109R1).
- [16] Kumar, R., Channi, H.K., & Banga, H.K. (2024). Data analytics in agriculture: Predictive models and real-time decision-making. In S.K. Srivastava, D. Srivastava, K. Cengiz & P. Gaur (Eds.), *Smart agritech: Robotics, AI, and internet of things (IoT) in agriculture* (pp. 169-200). London: Scrivener Publishing LLC. doi: [10.1002/9781394302994.ch7](https://doi.org/10.1002/9781394302994.ch7).
- [17] Kuzior, A., Arefiev, S., & Poberezhna, Z. (2023). Informatization of innovative technologies for ensuring macroeconomic trends in the conditions of a circular economy. *Journal of Open Innovation: Technology, Market, and Complexity*, 9(1), article number 100001. doi: [10.1016/j.joitmc.2023.01.001](https://doi.org/10.1016/j.joitmc.2023.01.001).
- [18] Lopatynskiy, Y., Shpykuliak, O., Kyfyak, V., Shelenko, D., & Diuk, A. (2023). Socio-economic role and institutional capacity of family farms in the implementation of the sustainable development goals. *Ekonomika APK*, 30(3), 18-28. doi: [10.32317/2221-1055.202303018](https://doi.org/10.32317/2221-1055.202303018).
- [19] Luthin, A., Traverso, M., & Crawford, R.H. (2023). Assessing the social life cycle impacts of circular economy. *Journal of Cleaner Production*, 386, article number 135725. doi: [10.1016/j.jclepro.2022.135725](https://doi.org/10.1016/j.jclepro.2022.135725).
- [20] Maitra, P., & Tagat, A. (2024). Labor supply responses to rainfall shocks. *Review of Development Economics*, 28(3), 851-887. doi: [10.1111/rode.13079](https://doi.org/10.1111/rode.13079).
- [21] Maulidar, P., Fitriyani, F., Sasmita, N.R., Hardi, I., & Idroes, G.M. (2024). Exploring Indonesia's CO<sub>2</sub> emissions: The impact of agriculture, economic growth, capital and labor. *Grimsa Journal of Business and Economics Studies*, 1(1), 43-55. doi: [10.61975/gjbes.v1i1.22](https://doi.org/10.61975/gjbes.v1i1.22).
- [22] Mero, G., Skenderasi, B., Shahini, E., Shahini, S., & Shahini, E. (2023). Main directions of plants integrated protection in the conditions of organic agriculture. *Scientific Horizons*, 26(3), 101-111. doi: [doi.org/10.48077/SCIHOR3.2023.101](https://doi.org/10.48077/SCIHOR3.2023.101).
- [23] Nazarova, H., Stepanova, E., Achkasova, O., Nazarov, N., & Semenchenko, A. (2024). Analysis of tools for evaluating the effectiveness of the personnel adaptation system in the context of the social entrepreneurship. *Economics of Development*, 23(3), 42-55. doi: [10.57111/econ/3.2024.42](https://doi.org/10.57111/econ/3.2024.42).
- [24] Ngadi, N., Zaelany, A.A., Latifa, A., Harfina, D., Asiati, D., Setiawan, B., Ibnu, F., Triyono, T., & Rajagukguk, Z. (2023). Challenge of agriculture development in Indonesia: Rural youth mobility and aging workers in agriculture sector. *Sustainability*, 15(2), article number 922. doi: [10.3390/su15020922](https://doi.org/10.3390/su15020922).
- [25] Nguyen, T.H. (2024). Cooperation between universities and businesses in developing human resources to participate in the digital economy. *Journal of the Knowledge Economy*, 15(2), 5230-5249. doi: [10.1007/s13132-023-01357-y](https://doi.org/10.1007/s13132-023-01357-y).
- [26] Nosirov, B., & Fakhridinova, D. (2023). [Reducing the cost of products in agroclusters in the digital economy](https://doi.org/10.1016/j.neci.2023.101611). *Journal of New Century Innovations*, 23(2), 19-24.
- [27] Novykova, I., Chorny, R., Chorna, N., Bey, R., & Leszczynski, V. (2022). Simulation of comprehensive assessments of personnel innovation development management system. *Lecture Notes in Networks and Systems*, 486, 95-108. doi: [10.1007/978-3-031-08087-6\\_7](https://doi.org/10.1007/978-3-031-08087-6_7).
- [28] Order of the Ministry of Youth and Sports of Ukraine No. 1965 "On Approval of the Code of Ethics for Social Work Specialists of Ukraine". (2005). Retrieved from <http://zakon.rada.gov.ua/rada/show/v1965643-05>.
- [29] Pan, Y., Zhang, S., & Zhang, M. (2024). The impact of entrepreneurship of farmers on agriculture and rural economic growth: Innovation-driven perspective. *Innovation and Green Development*, 3(1), article number 100093. doi: [10.1016/j.igd.2023.100093](https://doi.org/10.1016/j.igd.2023.100093).
- [30] Parkhomets, M., Uniat, L., Chorny, R., Chorna, N., & Hradovyi, V. (2023). Efficiency of production and processing of rapeseed for biodiesel in Ukraine. *Agricultural and Resource Economics*, 9(2), 245-275. doi: [10.51599/are.2023.09.02.11](https://doi.org/10.51599/are.2023.09.02.11).
- [31] Penkova, O., & Kharenko, A. (2023). Transformation of marketing logistics for the export of ukrainian crop production in the context of a full-scale war with the russian federation. *Scientific Bulletin of Mukachevo State University. Series "Economics"*, 10(1), 37-48. doi: [10.52566/msu-econ1.2023.037](https://doi.org/10.52566/msu-econ1.2023.037).
- [32] Pirnazarovna, U.Y. (2024). [Labor resources-invaluable assets](https://doi.org/10.1016/j.ijrs.2024.101611). *International Journal of Scientific Researchers*, 4(2), 443-446.

- [33] Raj, G., Feola, G., & Runhaar, H. (2024). Work in progress: Power in transformation to postcapitalist work relations in community-supported agriculture. *Agriculture and Human Values*, 41(1), 269-291. doi: [10.1007/s10460-023-10486-8](https://doi.org/10.1007/s10460-023-10486-8).
- [34] Rosak-Szyrocka, J., Żywiołek, J., & Shahbaz, M. (2024). *Quality management, value creation, and the digital economy*. London: Routledge.
- [35] Sarie, F., & Harsono, I. (2024). Measuring the impact of pesticide use, labor availability, and agricultural technology on vegetable farming efficiency in central Java. *West Science Interdisciplinary Studies*, 2(1), 244-253. doi: [10.58812/wsis.v2i01.615](https://doi.org/10.58812/wsis.v2i01.615).
- [36] Shahini, E., Skuraj, E., Sallaku, F., & Shahini, S. (2022). Smart fertilizers as a solution for the biodiversity and food security during the war in Ukraine. *Scientific Horizons*, 25(6), 129-137. doi: [10.48077/scihor.25\(6\).2022.129-137](https://doi.org/10.48077/scihor.25(6).2022.129-137).
- [37] Shyian, D., Litovchenko, I., & Sevriukova, Ye. (2023). Peculiarities of the formation of human capital in rural areas in the pre-war period. *Economics of Development*, 22(3), 32-41. doi: [10.57111/econ/3.2023.32](https://doi.org/10.57111/econ/3.2023.32).
- [38] Siregar, D., Lubis, Z., Rahmadani, V.G., Aulia, M.R., & Sinulingga, M.B. (2024). Determine the appropriate leadership style for supporting sustainable agriculture in PT. Perkebunan Nusantara III. *IOP Conference Series: Earth and Environmental Science*, 1297, article number 012028. doi: [10.1088/1755-1315/1297/1/012028](https://doi.org/10.1088/1755-1315/1297/1/012028).
- [39] Strapchuk, S., & Mykolenko, O. (2022). Algorithm for selecting alternative strategies for sustainable intensification of agricultural enterprises. *Scientific Bulletin of Mukachevo State University. Series "Economics"*, 9(2), 9-17. doi: [10.52566/msu-econ.9\(2\).2022.9-17](https://doi.org/10.52566/msu-econ.9(2).2022.9-17).
- [40] Yahyoyevna, O.F., & Tatulovna, Z.M. (2024). *Issues of providing economic stability under the influence of factors of saving*. *Journal of Education, Ethics and Value*, 3(1), 374-379.
- [41] Yu, X., Dilanchiev, A., & Bibi, S. (2024). Enhancing labor productivity as a key strategy for fostering green economic growth and resource efficiency. *Heliyon*, 10(3), article number e24640. doi: [10.1016/j.heliyon.2024.e24640](https://doi.org/10.1016/j.heliyon.2024.e24640).
- [42] Zadorozhniuk, R. (2023). UAV data collection parameters impact on accuracy of Scots pine stand mensuration. *Ukrainian Journal of Forest and Wood Science*, 14(1), 39-54. doi: [10.31548/forest/1.2023.39](https://doi.org/10.31548/forest/1.2023.39).

## Роль трудових ресурсів у формуванні продовольчої самодостатності територіальних громад Миколаївської області

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► **Анотація.** Метою дослідження було вивчення впливу трудових ресурсів на ефективність аграрного виробництва та забезпечення продовольчої самодостатності територіальних громад Миколаївської області. Методологія базувалась на результатах анкетування серед респондентів, що працюють у сільськогосподарському секторі. Використовувались статистичні дані для оцінки впливу трудових ресурсів на виробничу діяльність. Дослідження показало, що 70 % респондентів вважають трудові ресурси надзвичайно важливими для забезпечення їх виробничої діяльності. Це підкреслює значущість людського капіталу в сучасному бізнес-середовищі. Серед основних факторів, що впливають на продуктивність, 45 % респондентів зазначили роль технологій, які забезпечують автоматизацію процесів і підвищують ефективність виробництва. Крім того, 30 % респондентів вказали на кваліфікацію працівників, що свідчить про необхідність постійного навчання та розвитку кадрів для досягнення високих результатів. Ще 25 % респондентів вказали на умови праці, що включає в себе як фізичні, так і психологічні аспекти робочого середовища. Це свідчить про те, що розвиток трудових ресурсів безпосередньо пов'язаний із підвищенням ефективності агровиробництва, оскільки інвестиції в людей і їхнє навчання можуть суттєво вплинути на загальний успіх підприємств у цій сфері. Результати дослідження підтверджували важливість інвестицій у трудові ресурси та їх розвиток для досягнення продовольчої самодостатності. Поліпшення кваліфікації працівників і технологічних умов роботи можуть суттєво підвищити продуктивність аграрного сектора. Це дослідження має практичне значення для органів місцевого самоврядування та агровиробників, що прагнуть підвищити ефективність своєї діяльності

► **Ключові слова:** робоча сила; сільське господарство; економіка; ефективність виробництва; суспільство