

Role of agriculture in the development of Ukrainian socio-economic potential

Tetiana Borko*

PhD in Pedagogical Sciences, Associate Professor
Mykolaiv National Agrarian University
54008, 9 Georgiy Gongadze Str., Mykolaiv, Ukraine
<https://orcid.org/0000-0001-9133-3713>

Mohammad Jammal

Doctor of Philosophy
British University in Dubai
345015, Academic City, Dubai, United Arab Emirates
<https://orcid.org/0000-0002-0088-3523>

Abstract. The agricultural sector is key to the development of the Ukrainian economy, especially in times of war, as it helps to maintain the standard of living of its citizens. In this regard, the interaction between the sector and society is relevant to the study. The study aimed to assess the relationship between certain metrics of living standards and agricultural output. The study addressed the role of the agricultural sector in Ukraine and its origins. In addition, a detailed analysis was carried out in the context of existing problems separately for livestock and crop production. The study further substantiated the connection between the agricultural sector and the social well-being of the rural population of Ukraine due to the sector's ability to create a significant number of jobs. Using correlation and regression analysis, the study concluded that agricultural output does indeed affect the standard of living of the local population, particularly the gross domestic product per capita. The results show that an increase in agricultural production directly contributes to economic growth, reinforcing the importance of this sector in Ukrainian long-term development strategy. The study also showed what the long-term development of the agricultural sector in Ukraine should be in the long term, and what actions should be taken to achieve these goals, by the state. The findings of the study can be used to formulate state policy in the agricultural sector in the context of the impact on the social component of the country

Keywords: international trade; crop production; animal husbandry; infrastructure; finance

INTRODUCTION

Agriculture in Ukraine is substantial in the social sphere, providing jobs for a large part of the population, especially in rural areas where it is the main source of income. It also helps to support the livelihoods of rural communities while preserving national identity and traditions. In addition, the agricultural sector ensures

national food security, which is the basis for the stable development of society. Thus, it is not only the basis for the economic development of a country but also a significant factor in ensuring a high standard of living, especially in Ukraine. Moreover, such support is especially important in times of war. In wartime, farmers actively

Article's History:

Received: 19.04.2024

Revised: 03.07.2024

Accepted: 27.08.2024

Suggested Citation:

Borko, T., & Jammal, M. (2024). Role of agriculture in the development of Ukrainian socio-economic potential. *Ukrainian Black Sea Region Agrarian Science*, 28(3), 78-86. doi: 10.56407/bs.agrarian/3.2024.78.

*Corresponding author



Copyright © The Author(s). This is an open access article distributed under the terms of the Creative Commons Attribution License 4.0 (<https://creativecommons.org/licenses/by/4.0/>)

support local communities by providing humanitarian aid and increasing social cohesion. Large companies often give to both the military and other citizens, often selflessly. In this regard, the impact of this kind of activity requires more detailed research and analysis of the impact of the agricultural sector on the social development of the local population.

I. Tomashuk & Ye. Borboliuk (2023) analysed the role of the agricultural sector in ensuring food security in Ukraine. The scientists noted that to ensure global food security, it is necessary to stop Russian aggression against Ukraine and return to the occupied territories. This includes defending Ukraine with international support, assisting in demining and land restoration, providing soft loans to farmers, attracting investors to rebuild infrastructure, introducing modern technologies in agriculture to increase exports, modernising logistics, including railways, and ensuring safe maritime exports of agricultural products. Although all these actions are difficult to implement in a time of war, the state should strive to do so to ensure the effective recovery of the nation in the future. B. Starchak (2023) also assessed the role of the agricultural sector in the development of the Ukrainian economy. The author described the role of the sector, in the context of national international relations, in ensuring food security. The need to upgrade material and technical support was also mentioned. O. Zghurska *et al.* (2022), in turn, assessed the possibilities of digitalising the sector. The researchers noted that most large agricultural holdings in Ukraine are actively investing in and implementing digital solutions, with a clear upward trend in the adoption of such innovative technologies. This study also noted that, despite the positive impact of digital technologies on the development of this sector, the country has an overall low level of their implementation, which requires increased efforts in several key areas: development of digital platforms, production and food security forecasting, optimisation of production sites, use of predictive analytics, sectoral planning and improvement of digital competencies of specialists. A. Ivanko *et al.* (2022) identified four key components of the agricultural-industrial complex – agriculture, industry, processing and secondary stages such as storage, transport and maintenance – that ensure its functioning. The study concluded that organisational and economic mechanisms of development should be considered as a set of economic levers and organisational measures aimed at influencing and stimulating the agricultural-industrial complex. It integrates various components into the system of economic relations and includes functions such as redistribution, planning, control and innovation. The effectiveness of this mechanism, in turn, is achieved through the

symbiosis of its organisational and economic components. I. Petrunenko *et al.* (2021) addressed the peculiarities of the development of small farms in the agricultural-industrial complex of Ukraine. The scientists noted that the role of such enterprises is critical, in ensuring food and nutrition security and employment in rural areas. In this regard, such companies are substantial in ensuring the sustainable development of enterprises. The role of agrarians in the context of military operations was addressed by L. Boiko & V. Boiko (2023). Scientists noted that local producers recognise the need to use all available resources to maintain their businesses and jobs in the face of military operations while increasing agricultural production to ensure national food security. To achieve a better level of profitability, they proposed an introduction of measures such as preferential purchases of agricultural products, value-added tax refunds, additional insurance guarantees for farmers and minimum tariffs to minimise transport costs.

Thus, while the current economic literature pays much attention to the development of agriculture in Ukraine in general, little attention is paid to the impact of this sector on the social welfare of the population. In this regard, the study aimed to investigate how agriculture affects the welfare of the Ukrainian population.

MATERIALS AND METHODS

As part of the study, the impact of the agricultural sector on the well-being of the local population was assessed. In this regard, the impact of real agricultural output on real minimum and average wages, as well as gross domestic product per capita, was assessed. Notably, real prices were addressed, as the analysis would have shown incorrect data without accounting for inflation. Two approaches were used to estimate real gross domestic product, agricultural output, and minimum and average prices. The first approach: data was used in UAH, including a reduction from inflation level. Another approach was to first estimate the level of the metric in US dollar terms and then find the real level for the US dollar value, accounting for the inflation.

The dependence of the metrics was assessed by finding the correlation between the metrics and the regression equation. To check whether there is indeed a correlation between the data, an assessment was made using three main metrics: F-significance, P-value (for both regression values: dependent and independent variables) and R^2 adjusted. F-significance is used in the context of regression analysis to assess the statistical significance of a regression model. It shows whether the model variables are significant in predicting the dependent variable. If the F-Significance within the study was less than 0.05, the model was considered adequate,

and therefore really shows a certain level of dependence between the selected metrics. R^2 adjusted, or adjusted coefficient of determination, is a modified version of R^2 , which is a correlation metric. It shows how much of the variation in the dependent variable is explained by the model. This study will not define the threshold at which the model will be rejected, but an R^2 adjusted value of ± 0.6 is desirable. The P-value, in turn, is a key metric in statistical analysis used to test hypotheses. The P-value shows the probability that the observed results could have occurred by chance if the null hypothesis is true. The null hypothesis for this test is as follows: H_0 – the values of the dependent/independent variable are not random, there is a relationship between them. For this study, if the P-value is less than 0.05, then agricultural output (the independent variable) is considered to have an impact on the level of wages (minimum or average) or the level of gross domestic product (GDP) (the dependent variable).

The main information was taken from the website of the State Statistics Service of Ukraine (n.d.a.; n.d.b), namely the level of gross agricultural output and GDP per capita in the country, and the MinFin website (Inflation index..., 2024), which estimates the level of inflation, as well as the level of average and minimum wages. The study included the period from 2008 to 2023 since there was no information on agricultural output before 2008. Information as of 2024 is also not available for most metrics.

RESULTS

The agro-industrial complex (AIC) is substantial in the development of Ukrainian socio-economic potential, as it is one of the main sectors of the national economy. It includes the production, processing and marketing of agricultural products and ensures national food security. Given Ukrainian fertile land and favourable climate, the country has a high potential for growing various crops such as grains, oilseeds, sugar beet, vegetables and fruits. Ukraine is one of the world's leading grain exporters and holds a significant position in the global market for the export of sunflower oil and other agricultural products. The agricultural sector ensures national food security, which is the basis for the stable development of society; it is also an important source of income for a large part of the population, especially in rural areas, where agricultural activities are often the main source of employment. It is also worth noting that agriculture is also a major source of income for the country through the export of agricultural products: Ukraine has traditionally held leading positions in the global market for the export of grains, oilseeds and other agricultural products, which strengthens the

country's economy and contributes to GDP growth. In addition, the development of the agro-industrial complex contributes to the investment attractiveness of Ukraine, which attracts investors to develop agricultural infrastructure, technologies and processing, which is especially important in times of war when the country needs new investments to ensure its functioning (Kyrylenko *et al.*, 2018).

The current state of the Ukrainian agricultural sector is characterised by significant achievements in the production and export of agricultural products, but it also faces numerous challenges that require further reforms and support. Ukraine remains one of the world's leading exporters of grain crops, in particular wheat, corn and barley. Crop production is dominated by large agricultural holdings that use modern technologies and machinery to cultivate land, which ensures high yields and competitiveness of their products on the global market. At the same time, small and medium-sized farms are also actively developing, although they often face problems with access to finance, technology and markets (Ilieva *et al.*, 2022; Castillo *et al.*, 2024). Livestock farming, which is also an important component of the agricultural sector, is in a more difficult situation. Despite modernisation efforts, the sector remains less developed than crop production. There has been a decline in livestock numbers, particularly in pig and dairy farming, due to high maintenance costs, problems with veterinary services and difficulties in marketing products. In addition, logistical problems such as disruptions in supply chains and access to ports also have a significant impact on Ukrainian export opportunities. At the same time, the agricultural sector faces numerous challenges, including volatile global markets, insufficient technological equipment, logistical problems, access to finance and restrictions due to military operations in part of Ukraine. To overcome these challenges, production modernisation, technological innovation, infrastructure development, and management efficiency improvement are required (Rose *et al.*, 2021; Mendes *et al.*, 2022). Comprehensive measures are also needed, including government support, attracting foreign investment, infrastructure development, and the introduction of modern technologies (Borko, 2024). Support for small and medium-sized businesses in the agricultural sector remains necessary to ensure the sustainable development of the agricultural-industrial complex (Taoumi & Lahrech, 2023).

The social aspect of agricultural development in Ukraine is an important component of the overall development of the agricultural sector and plays a key role in shaping the welfare of the rural population, supporting rural communities and preserving national

identity. This aspect covers a wide range of issues, including living standards, employment, social infrastructure, educational opportunities, and demographic change (Nowack *et al.*, 2021). Agriculture is one of the largest sectors of the Ukrainian economy, employing a significant proportion of the population. Despite urbanisation and migration to cities, agriculture remains the main source of income for many rural families. However, employment in this sector is declining due to mechanisation, automation and other technological changes, leading to job losses. Rural residents often face certain challenges, such as lower incomes compared to urban residents, limited access to quality healthcare and education, and poorer living conditions. At the same time, agriculture can provide the population with home-grown food, which partially compensates for lower cash incomes. During the war, farmers in Ukraine played a significant role in ensuring a better standard of living for the local population by producing and supplying food, which is vital in a crisis (Skydan *et al.*, 2023).

One of the most relevant modern concepts is the ecological-social economy. It is also represented in Ukraine. This approach is focused on ensuring sustainable development of the agricultural sector, preserv-

ing the environment and improving the quality of life of residents. Ecological-social agriculture includes a range of initiatives and practices that aim to support environmentally friendly production, conserve biodiversity, increase social responsibility and promote the development of rural communities. In Ukraine, in particular, organic farming (the use of natural methods of growing plants and animals without the use of synthetic pesticides, herbicides and chemical fertilisers), agroforestry (planting forest belts, creating water resources and protecting rural ecosystems) and biodiversity conservation (restoring native plant and animal species) were particularly widespread before the full-scale invasion. As for the social component – this includes the development of local communities, participation in the creation of educational programmes to raise public awareness among the population, and a greater role for farmers in the context of social responsibility. To assess the impact of agriculture on the social well-being of the local population in Ukraine, high correlations between certain variables characterising the level of agricultural sector output and the welfare of the population were determined. The data for these metrics are shown in Tables 1 and 2.

Table 1. Correlation data for agricultural output, average and minimum wages, and GDP, adjusted for inflation and denominated in UAH

Value	Real agricultural levy adjusted for inflation	Real minimum salary adjusted for inflation	Real average salary adjusted for inflation	Real GDP per capita adjusted for inflation
Real agricultural levy adjusted for inflation	1	0.626217	0.680948	0.564906
Real minimum salary adjusted for inflation		1	0.962936	0.873101
Real average salary adjusted for inflation			1	0.938112
Real GDP per capita adjusted for inflation				1

Source: compiled by the authors based on State Statistics Service of Ukraine (n.d.a; n.d.b) and Inflation index... (2024)

Table 2. Correlation data for agricultural output, average and minimum wages, and GDP denominated in US dollars and adjusted for inflation

Value	Real gross agricultural production adjusted for inflation and at the US dollar exchange rate	Real minimum salary adjusted for inflation and in US dollar terms	Real average salary adjusted for inflation and in US dollar terms	Real GDP per capita adjusted for inflation and at the US dollar exchange rate
Real gross agricultural production adjusted for inflation and at the US dollar exchange rate	1	0.569914	0.689151	0.582423
Real minimum salary adjusted for inflation and in US dollar terms		1	0.903796	0.743557
Real average salary adjusted for inflation and in US dollar terms			1	0.924816

Table 4, Continued

Value	Real gross agricultural production adjusted for inflation and at the US dollar exchange rate	Real minimum salary adjusted for inflation and in US dollar terms	Real average salary adjusted for inflation and in US dollar terms	Real GDP per capita adjusted for inflation and at the US dollar exchange rate
Real GDP per capita adjusted for inflation and at the US dollar exchange rate				1

Source: compiled by the authors based on State Statistics Service of Ukraine (n.d.a; n.d.b) and Inflation index... (2024)

Following Tables 1 and 2, even after adjusting for inflation, a significant number of metrics have a very high inflation rate, at almost 0.6, which suggests a significant relationship between them.

Nevertheless, adjusted inflation is a more substantial factor. This data and other metrics (P-Value and F-Significance) for each of the regression models are shown in Table 3.

Table 3. The main regression metrics for the six equations constructed

Value	Depicted in UAH			
	F-Significance	P-Value Y	P-value X	R ²
Minimum wage	0.0095	0.9159	0.0095	0.3487
Average wage	0.0037	0.2383	0.0037	0.4254
GDP level	0.0226	0.0491	0.0226	0.2705
Value	Depicted in US dollars			
	F-Significance	P-Value Y	P-value X	R ²
Minimum wage	0.0212	0.6596	0.0212	0.3248
Average wage	0.0031	0.3423	0.0031	0.4749
GDP level	0.0179	0.1591	0.0179	0.3392

Notes: selected metrics in the equation were used as the dependent variable Y, while agricultural output was used as the independent variable X

Source: compiled by the authors based on State Statistics Service of Ukraine (n.d.a; n.d.b) and Inflation index... (2024)

Following Table 3, only one of the six regression equations that were estimated turned out to fit the conditions chosen in the study – the dependence of GDP on agricultural output (nominated in UAH and adjusted for inflation). The other metrics also showed a certain level of dependence on each other, but most often do not match the P-value for metric X, even though F-Significance indicates that all the models are adequate. This inflation equation is constructed below, within the framework of Formula (1):

$$y = 0.061x + 5148, \quad (1)$$

where y – dependent variable (GDP per capita); x – independent variable (agricultural output).

Following Formula 1, if agricultural output increases by 1 million UAH, GDP per capita increases by 0.061 UAH, or 6.1 kopyikas; if agricultural output increases by 1 billion UAH, GDP per capita increases by 61 UAH, and so on. Thus, it is possible to conclude that there is a certain link between the level of agricultural development and welfare metrics in Ukraine, especially the level of GDP per capita. This suggests that the agricultural

sector should become one of the main sectors that the state will address when formulating long-term policies to achieve a better level of economic development and social welfare.

In times of war, the development of the agricultural sector is closely linked to ensuring food security and attracting foreign exchange earnings to the country. After the end of the war, the main areas of agricultural development should be aimed at restoring production capacity, modernising technologies, and attracting investment in infrastructure to rebuild the sector. Special attention should be devoted to the development of small and medium-sized enterprises, given their role in ensuring economic stability in the regions.

After the war, Ukrainian agriculture should address innovative development and global expansion. With the relative advantages that characterise the Ukrainian agricultural sector, local products are extremely competitive on the global stage. Therefore, it is necessary to ensure access to international markets through integration with global logistics systems, as well as to strengthen cooperation with international partners to promote Ukrainian agricultural products. In the

post-war period, the state should play a leading role in creating favourable conditions for the development of the sector by providing support to farmers, stimulating investment and ensuring the stability and security of agricultural activities. Only in this case, especially at the initial stage, will it be possible to achieve significant success in restoring the sector and spreading its products globally.

DISCUSSION

The current study describes the role that agriculture plays in ensuring the effective development of Ukraine, both in the context of economic and social development. The role of agriculture in national development was also described by A. Devlet (2021). The scientist noted that it is necessary to ensure the development of agriculture in modern conditions to solve pressing problems related primarily to food security. In addition, it was noted that in the current environment, the sector faces significant challenges that prevent it from operating efficiently and smoothly, such as droughts or other environmental factors that affect yields. The current study did not focus on the food security component, but it is also relevant in the context of ensuring the long-term well-being of the country, as well as its strategic security.

The current study focuses on the current manifestations of the eco-social economy in Ukraine. This approach and its impact on social transformation and environmental sustainability was also evaluated by S. Nicli *et al.* (2020). Scientists have noted that ecosocial agriculture is characterised by a holistic approach that integrates the needs of people, communities and nature. Initiatives under this approach often go beyond organic farming, preserving local crop varieties and promoting biodiversity. Its three pillars include addressing social needs through inclusive agriculture, fostering local cooperation and using natural resources responsibly to protect the environment. Social agriculture is deemed as a social innovation that can create new local conditions of well-being. Its implementation requires support from the authorities, appropriate policies, and funding for such opportunities offered by various programmes, including the European Union. According to scientists, eco-social agriculture has the potential to benefit disadvantaged people and society, contributing to regional sustainability and restructuring society to ensure both social and environmental well-being. The paper emphasised the interconnectedness of social, cultural and political spheres with strong local and regional networks and community-based decision-making. The possibilities of using social agriculture were also addressed by F. Sgroi (2022). The author emphasised that social agriculture is a concept that is aligned with

multifunctional small and medium-sized farming and focuses on achieving a better level of community development rather than profit-making by farmers. Social agriculture employs agricultural resources to provide therapeutic, educational and social services, especially for vulnerable groups such as individuals with physical disabilities, mental hospital patients and ex-prisoners. These initiatives are organised at the local level and are more cost-effective than traditional public services. The study contrasts the two business models: the first is based on neoclassical economic theory, which prioritises profit maximisation, and the second is based on the Tagliavia farm approach, which is grounded in social doctrine, emphasising solidarity and the common good. The study highlights that while both models help achieve socially important goals, their underlying principles differ. The neoclassical model focuses on transforming inputs into outputs, while the social doctrine values social interdependence and the collective good. Accordingly, in the context of achieving the goals and benefits for the state, the second approach will be more effective. Given the conclusions reached in the present study regarding the usefulness of this approach for the long-term development of the country, as well as the results obtained by other scientists, it is possible to formulate recommendations on how the state should involve farmers in this area. However, it will only be possible to introduce such activities after the war is over.

An approach to agricultural development based on the concept of societal vision was presented by J. Helfenstein *et al.* (2022). The study showed a new approach to assessing the sustainability of agricultural development by comparing societal visions (i.e., those that address the values of society, priorities and long-term goals of the nation) in the Royce Valley, Switzerland. The case study demonstrated the potential of using public vision as a forecasting tool to improve regional governance. The current study also showed that during the war, Ukrainian farmers were quite active in supporting both the local population and the military. Given this, it is possible to conclude that Ukrainian farmers are quite responsible in terms of understanding the importance of state and citizen support. However, the state should also support farmers to enable them to develop, especially in times of war.

The current study also describes that one of the most pressing problems in agricultural development is the lack of significant adoption of innovative technologies on local farms. Other scholars have also addressed this component in overcoming climate-related problems and achieving a better standard of living for the local population and compliance with moral and ethical standards. The concept of Agriculture 5.0 was

addressed by K.D. Bissadu *et al.* (2024). The scientists noted that its main goal is to address certain global issues, such as population growth, climate change and population ageing. This concept uses the latest technologies, such as artificial intelligence, Big Data, the Internet of Things, etc. Scientists believe that their use to ensure a better level of development of innovative technologies can achieve much better results in the context of achieving the goals of sustainable development in general and improving people's living standards in particular. In turn, the possibilities of using the latest technologies to solve various kinds of problems were assessed by E.D. Lioutas *et al.* (2021). The scientists noted that the use of digital technologies has both potential and shortcomings. The use of the latest technologies in this area creates new social, ethical, political, cultural and environmental problems. While digital tools are regarded as potential solutions to the global food problem, they also lead to the need to make complex trade-offs that require careful analysis to avoid serious consequences for society. Thus, the conclusions drawn by the scientists above are indeed relevant to the general problems in the context of the development of innovative technologies in agriculture.

CONCLUSIONS

Small and medium-sized crop farmers are crucial for inclusive agricultural development but often face limited access to finance, technology and markets. The livestock sector is also experiencing difficulties, especially in pig and dairy farming, due to high costs, inadequate veterinary services and logistical problems. Despite these obstacles, the sector continues to grow and agriculture remains the main sector for job creation. The study

demonstrated that the current needs of the agriculture sector include the need for policies that support rural communities, improve social infrastructure, and ensure equitable access to education and healthcare. The concept of eco-social agriculture, which emphasises sustainable practices and social responsibility and offers a promising way to balance economic growth with environmental protection and social development, was also discussed.

The study also showed the correlation between agricultural production and the welfare of the Ukrainian population, in terms of gross domestic product per capita. The results show that an increase in agricultural production directly contributes to economic growth, reinforcing the importance of this sector in Ukrainian long-term development strategy. To fully realise the potential of the sector, comprehensive measures are needed, including government support, the introduction of modern technologies, infrastructure development, and the promotion of small and medium-sized enterprises. Further study should address possible effective ways to attract investment in the industry for its development (development of state support mechanisms, use of donor funds, etc.). The main limitation of this paper is the low amount of available data for analysis and comparison, which rendered an analysis of the interaction between the agricultural sector and the welfare of the population in sufficient detail impossible.

ACKNOWLEDGEMENTS

None.

CONFLICT OF INTEREST

None.

REFERENCES

- [1] Bissadu, K.D., Sonko, S., & Hossain, G. (2024). Society 5.0 enabled agriculture: Drivers, enabling technologies, architectures, opportunities, and challenges. *Information Processing in Agriculture*. doi: [10.1016/j.inpa.2024.04.003](https://doi.org/10.1016/j.inpa.2024.04.003).
- [2] Boiko, L., & Boiko, V. (2023). The current state of agribusiness in Ukraine and its revitalization in a post-war period. *Taurida Scientific Herald. Series: Economics*, 16, 55-61. doi: [10.32782/2708-0366/2023.16.7](https://doi.org/10.32782/2708-0366/2023.16.7).
- [3] Borko, T. (2024). Strategic agriculture development policy – the foundation of the state's socio-economic prosperity. *Science and Technology Today*, 5(33), 358-373. doi: [10.52058/2786-6025-2024-5\(33\)-358-373](https://doi.org/10.52058/2786-6025-2024-5(33)-358-373).
- [4] Castillo, L., Rebagliatti, C., Esenarro, D., Mendez, R., & Cobeñas, P. (2024). Agroindustrial complex to promote the economic and social development of agricultural producers of the Callejon de Huaylas, Ancash, Peru 2023. *Sustainability*, 16(13), article number 5744. doi: [10.3390/su16135744](https://doi.org/10.3390/su16135744).
- [5] Devlet, A. (2021). Modern agriculture and challenges. *Frontiers in Life Sciences and Related Technologies*, 2(1), 21-29. doi: [10.51753/flsrt.856349](https://doi.org/10.51753/flsrt.856349).
- [6] Helfenstein, J., *et al.* (2022). An approach for comparing agricultural development to societal visions. *Agronomy for Sustainable Development*, 42(1), article number 5. doi: [10.1007/s13593-021-00739-3](https://doi.org/10.1007/s13593-021-00739-3).
- [7] Ilieva, R.T., *et al.* (2022). The socio-cultural benefits of urban agriculture: A review of the literature. *Land*, 11(5), article number 622. doi: [10.3390/land11050622](https://doi.org/10.3390/land11050622).
- [8] Inflation index in Ukraine. (2024). Retrieved from <https://index.minfin.com.ua/ua/economy/index/inflation/>.

- [9] Ivanko, A., Vasylenko, N., Bushovska, L., Makedon, H., & Dvornyk, I. (2022). Organizational-economic mechanism of the development of the agro-industrial complex in modern conditions. *International Journal of Computer Science and Network Security*, 22(2), 107-114. doi: [10.22937/IJCSNS.2022.22.2.14](https://doi.org/10.22937/IJCSNS.2022.22.2.14).
- [10] Kyrylenko, I., Ivchenko, V., & Demianchuk, V. (2018). Main trends in the development of the world food market and food production in Ukraine. *Ekonomika APK*, 25(9), 34-45.
- [11] Lioutas, E.D., Charatsari, C., & Rosa, M.D. (2021). Digitalization of agriculture: A way to solve the food problem or a trolley dilemma? *Technology in Society*, 67, article number 101744. doi: [10.1016/j.techsoc.2021.101744](https://doi.org/10.1016/j.techsoc.2021.101744).
- [12] Mendes, J.A.J., Carvalho, N.G., Mourarias, M.N., Careta, C.B., Zuin, V.G., & Gerolamo, M.C. (2022). Dimensions of digital transformation in the context of modern agriculture. *Sustainable Production and Consumption*, 34, 613-637. doi: [10.1016/j.spc.2022.09.027](https://doi.org/10.1016/j.spc.2022.09.027).
- [13] Nicli, S., Elsen, S.U., & Bernhard, A. (2020). Eco-social agriculture for social transformation and environmental sustainability: A case study of the UPAS-project. *Sustainability*, 12(14), article number 5510. doi: [10.3390/su12145510](https://doi.org/10.3390/su12145510).
- [14] Nowack, W., Schmid, J.C., & Grethe, H. (2021). Social dimensions of multifunctional agriculture in Europe – Towards an interdisciplinary framework. *International Journal of Agricultural Sustainability*, 20(5), 758-773. doi: [10.1080/14735903.2021.1977520](https://doi.org/10.1080/14735903.2021.1977520).
- [15] Petrunenko, I., Pohrishchuk, O., Plotnikova, M., Zolotnytska, Y., & Dligach, A. (2021). Development of small farms in the agro-industrial complex. *International Journal of Computer Science and Network Security*, 21(3), 287-294. doi: [10.22937/IJCSNS.2021.21.3.37](https://doi.org/10.22937/IJCSNS.2021.21.3.37).
- [16] Rose, D.C., Wheeler, R., Winter, M., Lobley, M., & Chivers, C.-A. (2021). Agriculture 4.0: Making it work for people, production, and the planet. *Land Use Policy*, 100, article number 104933. doi: [10.1016/j.landusepol.2020.104933](https://doi.org/10.1016/j.landusepol.2020.104933).
- [17] Sgroi, F. (2022). Social agriculture is a strategy to prevent the phenomenon of abandonment in mountain areas and areas at risk of desertification. *Journal of Agriculture and Food Research*, 10, article number 100454. doi: [10.1016/j.jafr.2022.100454](https://doi.org/10.1016/j.jafr.2022.100454).
- [18] Skydan, O., Dankevych, V., Garrett, R.D., & Nimko, O. (2023). The state of the agricultural sector in Ukraine during wartime: The case of farmers. *Scientific Horizons*, 26(6), 134-145. doi: [10.48077/scihor6.2023.134](https://doi.org/10.48077/scihor6.2023.134).
- [19] Starchak, B. (2023). The role of the agro-industrial complex in the development and development of the economy of Ukraine. *Scientific Notes of Lviv University of Business and Law*, 39, 136-143.
- [20] State Statistics Service of Ukraine. (n.d.a). *Demographic and social statistics*. Retrieved from https://ukrstat.gov.ua/operativ/menu/menu_u/zp.htm.
- [21] State Statistics Service of Ukraine. (n.d.b). *Economic statistics/Prices*. Retrieved from https://ukrstat.gov.ua/operativ/open_data/menu/cit_vd.htm.
- [22] Taoumi, H., & Lahrech, K. (2023). Economic, environmental and social efficiency and effectiveness development in the sustainable crop agricultural sector: A systematic in-depth analysis review. *Science of the Total Environment*, 901, article number 165761. doi: [10.1016/j.scitotenv.2023.165761](https://doi.org/10.1016/j.scitotenv.2023.165761).
- [23] Tomashuk, I., & Borboliuk, Ye. (2023). The significance of the agricultural sector of the economy in ensuring the food security of Ukraine. *Economy and Society*, 58. doi: [10.32782/2524-0072/2023-58-26](https://doi.org/10.32782/2524-0072/2023-58-26).
- [24] Zghurska, O., Korchynska, O., Rubel, K., Kubiv, S., Tarasiuk, A., & Holovchenko, O. (2022). Digitalization of the national agro-industrial complex: New challenges, realities and prospects. *Financial and Credit Activity: Problems of Theory and Practice*, 6(47), 388-399. doi: [10.55643/fcaptop.6.47.2022.3929](https://doi.org/10.55643/fcaptop.6.47.2022.3929).

Роль агропромислового комплексу в розвитку соціально-економічного потенціалу України

Тетяна Борко

Кандидат педагогічних наук, доцент
Миколаївський національний аграрний університет
54008, вул. Георгія Гонґадзе, 9, м. Миколаїв, Україна
<https://orcid.org/0000-0001-9133-3713>

Мохаммад Джаммал

Доктор філософії
Британський університет в Дубаї
345015, Академічне містечко, м. Дубай, Об'єднані Арабські Емірати
<https://orcid.org/0000-0002-0088-3523>

Анотація. Агропромисловий комплекс є основним для розвитку економіки України, особливо в умовах війни, оскільки дозволяє підтримувати рівень життя громадян. У зв'язку з цим, взаємодія між сектором та соціумом є актуальною для дослідження. Ціллю роботи стало оцінити взаємозв'язок між окремими показниками, що вказують на рівень життя населення, та випуском продукції сільського господарства. У дослідженні було розглянуто роль аграрного сектору в Україні та його витоки. Крім того, детальний аналіз був проведений в контексті існуючих проблем окремо для сфери тваринництва та рослинництва. Надалі було обґрунтовано зв'язок агропромислового сектору із соціальним благополуччям сільського населення України, зокрема у зв'язку з можливістю сфери створювати значну кількість робочих місць. За допомогою кореляційного та регресійного аналізу було зроблено висновок стосовно того, що розвиток аграрного сектору дійсно впливає на рівень життя місцевого населення, зокрема – на валовий внутрішній продукт на душу населення. Отримані результати свідчать про те, що збільшення сільськогосподарського виробництва безпосередньо сприяє економічному зростанню, посилюючи важливість цього сектору в довгостроковій стратегії розвитку України. Також в рамках дослідження було показано, яким має стати довгостроковий розвиток агропромислового комплексу в Україні в довгостроковій перспективі, та які дії мають бути виконані для досягнення поставлених цілей, зокрема з боку держави. Висновки, отримані в рамках дослідження, можуть бути використані для формування державної політики в сфері аграрного сектору в контексті впливу на соціальну складову країни

Ключові слова: міжнародна торгівля; рослинництво; тваринництво; інфраструктура; фінанси