STRUCTURAL CHANGES AND PERFORMANCE OF SERBIAN AGRICULTURE AFTER 2000

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ABSTRACT

Agricultural policy in Serbia during the transition period has failed to bring the agricultural sector closer to the development level of advanced European Union economies. The sector has been characterized by short-term measures, lack of strategic planning, outdated technologies, and low capitalization, resulting in limited value added and low productivity. This research examines the structural changes and development of agriculture in Serbia during the transition period, with emphasis on production structure and agricultural policy directions. The results indicate that crop production still dominates total agricultural output, while livestock production remains underdeveloped compared to developed economies, indicating a low level of processing and sustainable intensification. The analysis also shows that developed countries increasingly support environmentally sustainable small and medium-sized farms. Although Serbia's agricultural budget has recently exceeded 6% of the national budget, the achieved results remain significantly below the country's objective potential and comparative advantages.

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Introduction

The primary objective of agricultural development in Serbia is to transform the sector in order to achieve compatibility with the agricultural systems of the European Union. Certain progress has been made in terms of production structure and specialization; however, a substantial gap relative to developed countries persists, particularly from the perspective of productivity (Aničić et al., 2021). Significant differences compared to EU agriculture are also reflected in ownership structures, farm sizes, land use patterns, as well as in financing mechanisms and access to credit. The structure of agricultural production in Serbia is dominated by crop production, accounting for approximately two-thirds, while livestock production represents only one-third—contrary to the structure observed in the most developed economies. The Common Agricultural Market offers considerable opportunities but also imposes numerous obligations, including regulatory harmonization and compliance with established standards. Increased exposure to competition necessitates modernization, restructuring of production, changes in farm size, and greater specialization. At the same time, the focus of agricultural support in the EU is shifting toward the promotion of small and medium-sized farms based on environmentally and socially sustainable technologies.

Serbian agriculture continues to be characterized by the widespread use of outdated technologies and insufficiently capitalized production with low value added, resulting in significantly lower productivity compared to developed countries. Enhancing productivity requires adequate investment and financing throughout the entire agri-food value chain (Trifunović et al., 2024). Due to slow capital turnover, low profitability, and the lack of internal financing sources, the agricultural sector in Serbia requires financial and credit support, which should be provided with strong state involvement. Innovation and adaptation to the increasingly demanding preferences of consumers represent essential determinants of competitiveness in international markets. For many years, Serbian agriculture has maintained a positive trade balance and a significant share in the country's overall foreign trade. However, it is necessary to eliminate the prevailing practice whereby rising agricultural product prices disproportionately benefit intermediaries, while producers receive the smallest share of gains. A positive signal for further development has been provided by the competent ministry through a significant increase in the agricultural budget, which reached RSD 125.7 billion in 2024, accounting for 6.74% of the national budget.

The aim of this paper is to highlight the importance of structural changes in the agricultural sector as a prerequisite for aligning Serbian agriculture with that of developed EU countries in terms of productivity, farm size, financing mechanisms, and various forms of support. In this way, the sector can respond more effectively to increasingly complex and diversified consumer demands. It is evident that existing comparative advantages have not been fully utilized, suggesting that there is substantial potential to enhance the competitiveness of the agricultural sector and achieve improved results in foreign trade.

Literature review

Structural Changes in the Agricultural Sector of Transition Economies and the European Union

The transformation of the agricultural sector in the Republic of Serbia has not yet been completed, with the most significant processes involving changes in ownership structure, farm size, and land use patterns. These changes are largely determined by the broader economic transition and the process of European Union accession (Lalić & Trifunović, 2026). In addition, new challenges have emerged, particularly those related to climate change, environmental degradation, and biodiversity loss. The most pronounced gap in the agricultural sector remains the lag in productivity compared to developed European countries. Structural changes in agriculture are also strongly influenced by unfavorable demographic trends, including rural depopulation, a decline in household size, and population aging.

The primary objective of agricultural development is to transform the sector in order to achieve compatibility with the agricultural systems of the European Union. Agricultural development primarily aims to transform the sector by aligning its institutional, economic, and production frameworks with those of the European Union.While some progress has been made in terms of production structure and specialization, a significant gap relative to developed countries persists, particularly in terms of productivity and sustainable intensification. Structural constraints such as inadequate infrastructure, weak institutional support, and limited entrepreneurial capacity continue to hinder sustainable growth (Bejatović & Ristić, 2016).

The transformation of agricultural systems in transition economies is largely shaped by economic transition and EU accession processes, especially through changes in ownership structures, farm size distribution, and land use patterns (Swinnen & Vranken, 2010). Agricultural production in most developing countries is significantly constrained by limited access to financial resources, as it often operates within a vicious cycle of low incomes, insufficient savings, and low levels of investment, which inevitably leads to dependence on state support (Aničić et al., 2023).

The Common Agricultural Market provides numerous benefits through the Common Agricultural Policy, facilitating and accelerating the flow of goods. At the same time, it imposes a wide range of obligations, including regulatory harmonization and compliance with relevant standards. The sector is exposed to strong competitive pressures, which necessitate modernization, restructuring of production, changes in farm size, and increased specialization (Czubak & Pawłowski, 2020). After more than three decades of transition, numerous studies confirm that the agricultural sector in transition economies continues to differ significantly from that of developed countries, particularly in terms of high fragmentation (Radlińska, 2024).

The agricultural sector is increasingly affected by climate change and environmental degradation, leading to more frequent occurrences of droughts, floods, and wildfires

(Stošić et al., 2024; Bučalina Matić et al., 2024). In response to these challenges, the European Green Deal was adopted in 2019 (EC, 2019), aiming to establish a competitive economy by 2050 with net-zero greenhouse gas emissions and economic growth decoupled from resource use (Arabadjueva & Bogojević, 2024). All countries are required to update their climate neutrality strategies every ten years, with agricultural sector development identified as a key priority. These strategies must also be aligned with the United Nations Sustainable Development Goals for 2030 (UN, 2015).

The development of the agricultural sector in the European Union is guided by the European Green Deal, the Farm to Fork Strategy, and the EU Biodiversity Strategy (EC, 2020). These three strategic documents constitute a comprehensive framework for the agricultural sector, within which policies and measures promote sustainable and environmentally friendly food production systems (Boix-Fayos & De Vente, 2023). The focus of support is increasingly shifting toward the promotion of small and medium-sized farms based on environmentally and socially sustainable technologies (Guth et al., 2020).

Agricultural holdings in transition economies differ from those in developed countries in terms of economic strength, agrarian structure, level of mechanization, employment, and specialization (Banski & Mazur, 2021). The agricultural sector in transition economies is characterized by a high share of small farms (up to 5 hectares) with limited economic capacity (Slamová & Belčáková, 2019). Agricultural policies in these countries have been primarily oriented toward the modernization of technology and infrastructure, as well as toward increasing productivity and innovation (Fan et al., 2024). Agricultural production in these economies also plays a crucial role in the preservation and restoration of biodiversity, although it requires specific forms of financial support (Rossi, 2022).

The transformation of agricultural holdings in transition economies has largely followed the models of Germany and France, where strength is based on large-scale farms characterized by high efficiency and economies of scale. The main objective has been to ensure food security for EU citizens at affordable prices (Ostojić, Petrović & Despotović, 2025). However, the objectives of the European Green Deal require that high productivity in large farms be achieved with minimal water waste and reduced use of fertilizers and plant protection products (Shin et al., 2022). In livestock production, the goal is to increase productivity while simultaneously reducing negative environmental impacts (Tryjanowski et al., 2011). By 2030, artificial intelligence is expected to enable more efficient allocation of resources and yields (LaFevor & Magliocca, 2021).

The European Green Deal also emphasizes that small farms can play a key role in the transformation of the agricultural sector. Their development is supported through EU regulations promoting organic agriculture and the achievement of competitive advantages (Panzaru et al., 2023). The concept of organic agriculture is based on economic, environmental, and social benefits. Its effects are reflected in the optimization of resource use, increased biodiversity, regional development, and

reduced environmental pollution. In the long term, it enhances the resilience of the agricultural sector to climate change (RZS, 2025). The transition toward a resilient organic production model also requires the introduction of appropriate financial support mechanisms for small organic farms.

Small farms are increasingly engaging in direct sales to consumers. The formation of cooperatives shortens supply chains, reduces transportation costs, and supports local agriculture. The use of pesticides is reduced, while pasture-based systems are increasingly favored over intensive livestock production. In both crop and livestock production, these practices reduce negative impacts on climate and the environment, while regenerative agricultural practices contribute to improving soil quality (Gascuel-Odoux et al., 2022; Panić et al., 2025; Lalić & Trifunović, 2026).

According to estimates by the European Bank for Reconstruction and Development (EBRD, 2024), transition economies in Central and South-Eastern Europe have achieved modest annual improvements in competitiveness. Compared to 2016, access to finance for small and medium-sized enterprises has improved, along with labor productivity and the quality of logistics services. During the period 2016–2024, the SEE region has improved its competitiveness through an increase in the number of new enterprises, enhanced logistics performance, higher labor productivity, and more sophisticated service exports. The most competitive economies are the Czech Republic, Slovakia, Poland, and Slovenia. Serbia has recorded the greatest progress in the areas of integration, inclusiveness, and the green economy during the same period (RZS, 2025).

A key question arises as to how productivity can be increased in the context of revised EU regulatory measures aimed at strengthening efficiency and sustainability. Agricultural productivity is influenced by three main groups of factors: producers, consumers, and agricultural markets. In addition, the social dimension of agriculture and global challenges related to population growth must be taken into account (Alexandratos & Bruinsma, 2012). Numerous studies examining the relationship between productivity and farm size indicate that larger production volumes do not necessarily imply farm enlargement, and that purchase prices may vary depending on farm size (Huan et al., 2022).

Farmers face numerous challenges, including extreme weather events, input shortages, high production costs, price volatility, and environmental regulations (Bizzo et al., 2023). Research on the resilience and adaptability of EU agriculture highlights the interaction of three major categories of challenges (Barreiro-Hurle et al., 2024; Vigani et al., 2024): the interplay between climate change and environmental sustainability, changing food consumption patterns, and the dynamics of globalization.

In order to reach its full potential, Serbian agriculture must overcome its overall low level of productivity. The sector remains characterized by the use of outdated technologies and insufficiently capitalized production with low value added. Therefore, improving productivity requires investment, adequate financing, and support across the entire agri-food value chain (Atanasijević & Danon, 2014). Knowledge, as a source of innovation and a driver of successful adaptation to increasingly demanding consumer

preferences, represents a key determinant of competitiveness in international markets (Vasiljević & Savić, 2014).

Serbian agriculture requires financial and credit support due to slow capital turnover, low profitability, and the lack of internal financing sources, which should be provided with strong state involvement. The need for a greater role of the state is also driven by underdeveloped financial markets and institutions (Radović, 2015).

Access to finance for farmers and the agri-food sector as a whole has been constrained for years due to numerous interrelated limitations influenced by legal, economic, and institutional factors (Dimitrijević, 2023). Regional specificities and the diversity of farm types have been inconsistently addressed by agricultural policy. Support schemes have lacked clearly defined objectives and implementation mechanisms, resulting in limited effectiveness (Bogdanov, 2014).

The literature reviewed suggests that agricultural transformation in transition economies is shaped by a complex interaction of structural, institutional, financial, environmental, and technological factors. While the European Union has increasingly oriented agricultural policy toward sustainability, innovation, and value-added production, many transition economies continue to face challenges related to fragmented farm structures, insufficient capitalization, and productivity gaps. In this context, Serbia represents a particularly relevant case, as it combines significant natural and export potential with persistent structural constraints. Therefore, examining the performance and structural evolution of Serbian agriculture provides an opportunity to assess the extent to which current development patterns are aligned with contemporary European agricultural trends and policy objectives.

Materials and Methods

This study is based on a descriptive, comparative and trend analysis of structural changes and development performance of the agricultural sector in the Republic of Serbia. The research combines quantitative analysis of secondary statistical data with a review of relevant scientific literature and policy documents related to agricultural development in transition economies and the European Union.

The empirical analysis relies on data obtained from the Statistical Office of the Republic of Serbia (SORS), the Ministry of Agriculture, Forestry and Water Management (Green Book reports), Eurostat, the European Bank for Reconstruction and Development (EBRD), and other relevant national and international institutions. The observed period covers primarily the years 2020–2024, while selected indicators and literature sources are used to provide a broader perspective on structural changes that have taken place since 2000. The applied research methodology includes descriptive statistical analysis, comparative analysis, trend analysis, and structural analysis of key indicators of agricultural development. Particular attention is devoted to gross value added, employment, foreign trade performance, production structure, agricultural budget support, and productivity-related indicators. Comparative analysis was used to assess the position of Serbian agriculture relative to selected transition economies and developed European Union member states.

The research is based on the assumption that the long-term competitiveness and sustainability of Serbian agriculture depend on structural transformation, productivity growth, improved capitalization, stronger livestock production, and more efficient agricultural policy measures.

Results and Discussions

Performance Outcomes and Foreign Trade

In the contemporary global environment, there is a clear trend of increasing demand and structural changes in the demand for agricultural products (Aničić et al., 2025). Such dynamics require a strong market orientation of agricultural producers, ranging from agribusiness enterprises to individual farms. Sustaining a competitive position in advanced global markets necessitates enhancing the competitiveness of the entire sector, based on the application of modern knowledge and innovation, as well as on the synergistic interaction of all competitiveness factors (Anufrijev et al., 2025).

The performance of Serbia's agricultural sector is shaped by a combination of external factors—such as globalization, liberalization, technological progress, climate change, limited availability of natural resources, and demographic changes—and internal factors, including the size of agricultural holdings, the structure of the sector, sources of productivity growth, the use of technology, and the level of knowledge and information (Aničić, et al.,2023). At the same time, the state and local governments play a crucial role in creating a supportive socio-economic environment for the development of rural areas and agriculture, particularly in less developed regions of the Republic of Serbia.

Data presented in Table 1 illustrate trends in the gross value added (GVA) of agriculture, employment, and foreign trade (exports and imports) over the period 2020–2024. In addition, data from the Statistical Office of the Republic of Serbia (SORS) provide a comparative perspective on the position of Serbian agriculture relative to neighboring countries and developed EU economies.

Table 1. Share of the Agricultural Sector in Key Macroeconomic Indicators, 2020–2024

Indicator	2020	2021	2022	2023	2024
GVA of the agricultural sector at current prices (million RSD)	291,305	339,051	398,174	333,893	303,410
Share in total GVA (%)	6	6.2	6.3	4.4	3.7
Number of employed persons (thousands)	421.4	390.5	390.7	373.2	371.9
Share in foreign trade – exports (%)	21.3	19	17.3	16.2	17.4
Share in foreign trade – imports (%)	8.9	8.4	8	9.1	9.7

Source: Statistical Office of the Republic of Serbia (SORS), 2025

According to the Statistical Office of the Republic of Serbia (2025, pp. 66–80) the average utilized agricultural area per holding in developed European countries amounted to 38 hectares in 2020, while in transition economies it was only 15 hectares—2.5 times lower. The process of land consolidation has been particularly slow in Romania (4.4 ha), Greece (5.3 ha), and Serbia (6.4 ha). In contrast, the largest average farm sizes are recorded in Denmark and France (approximately 70 ha each). In terms of productivity, the highest levels are observed in the Netherlands (EUR 157,000 per holding), while the lowest are recorded in Romania (EUR 10,000) and Serbia (EUR 12,000). According to Eurostat data, the average share of agricultural GVA in GDP over the last decade has ranged between 1.3% and 1.4%. In the group of the most developed countries, this share has been around 1%, while in transition economies it declined from an average of 2.8% of GDP in 2013 to 1.8% in 2023. In 2023, the highest shares of agricultural GVA in GDP were recorded in Serbia (4%), Romania (3.1%), and Greece (2.8%) (SORS, 2025).

The findings presented in Table 1 reveal a structural paradox of Serbian agriculture. Although the sector maintains a relatively high share in gross value added and foreign trade compared with many EU member states, these indicators do not necessarily reflect a high level of productivity or competitiveness. On the contrary, the relatively large contribution of agriculture to total GVA is partly a consequence of the lower level of overall economic development and the slower structural transformation of the economy. At the same time, the comparatively small average farm size and low productivity per holding indicate that Serbian agriculture continues to rely predominantly on extensive production patterns and primary agricultural commodities. These findings are consistent with previous studies highlighting the persistence of structural constraints in transition economies, particularly fragmented land ownership, insufficient capitalization, and limited technological modernization.

Compared with developed EU countries, where productivity growth has been largely driven by technological innovation, specialization, and economies of scale, Serbian agriculture continues to face significant challenges in improving efficiency and increasing value added. Therefore, future development should focus not only on expanding production volumes but also on strengthening processing capacities, innovation adoption, and integration into higher-value segments of the agri-food value chain.

The data presented in Table 1 provide additional insight into the macroeconomic position of agriculture and its role within the overall economy. Although the sector maintains a relatively significant share in foreign trade, particularly on the export side, its contribution to gross value added and employment shows a declining trend over the observed period. This indicates that, despite its strong external orientation, the sector faces structural limitations in generating higher value added and employment.

These trends are consistent with the previously observed structural characteristics of Serbian agriculture. The dominance of crop production, combined with the decline in

livestock production, contributes to lower value-added generation and weaker vertical integration within the agri-food value chain. Furthermore, the relatively small share of agriculture in total GVA, alongside modest employment participation, reflects the sector's limited productivity compared to developed EU economies.

At the same time, the positive foreign trade balance and the relatively high share of agricultural exports highlight the sector's comparative advantages, particularly in primary production. However, the data suggest that these advantages are not sufficiently transformed into higher levels of processing and value-added activities.

Overall, the evidence from Table 1 confirms that Serbian agriculture operates within a dual framework: on the one hand, it remains an important export-oriented sector, while on the other, it is constrained by structural inefficiencies that limit its contribution to broader economic development.

According to the **Statistical Office of the Republic of Serbia** (2025, pp. 66–80) in Sector A – Agriculture, Forestry and Fisheries, approximately 3,000 enterprises operated in 2023, employing around 24,000 workers and generating EUR 600 million in gross value added. The agricultural sector accounted for 1.5% of total gross value added in the economy and 1.8% of total employment. Regarding cooperatives, according to data from the Statistical Office of the Republic of Serbia (SORS) for 2023, out of a total of 2,117 registered cooperatives, only 1,502 were active. The cooperative sector faces numerous systemic challenges, including inadequate regulatory frameworks, limited working capital, unfavorable tax policies, and insufficient access to credit support. The structure of agricultural production in Serbia is dominated by crop production, which accounts for approximately two-thirds of total output, while livestock production represents one-third, an inverse structure compared to that of the most developed economies. Over the past decade, total agricultural production in Serbia has increased from EUR 5 billion to EUR 6.59 billion. However, this growth has been accompanied by a decline in livestock production and an expansion of crop production (SORS, 2025).

Table 2. Indices of Gross Agricultural Production in Serbia, 2020–2024 (previous year = 100)

Indicator	2020	2021	2022	2023	2024
Total agricultural production	102.9	92.5	91.7	108.5	92.4
Crop production	104.6	89.9	88.7	115.5	87.9
Livestock production	99.7	98.6	98.7	95.1	101.4

Source: Ministry of Agriculture, Forestry and Water Management (MAFWM), *Green Book*

The data presented in Table 2 indicate pronounced volatility in agricultural production in Serbia over the observed period. Total agricultural output fluctuates significantly, with a notable decline in 2021 and 2022, followed by a temporary recovery in 2023, and a renewed decrease in 2024. This variability is primarily driven by crop production, which exhibits strong cyclical movements and is highly sensitive to external factors such as weather conditions and input availability. In contrast, livestock production

shows relatively stable but modest dynamics, with a slight downward trend until 2023 and a mild recovery in 2024. Overall, the results suggest that Serbian agriculture remains structurally vulnerable, with a high dependence on crop production and limited stabilization capacity from the livestock sector, which further constrains the sector's long-term sustainability and resilience.

In 2024, the share of agricultural products in total exports increased from 16.2% in 2023 to 17.4%, while the share in total imports also rose from 9.1% in 2023 to 9.7% in 2024. Total trade in 2024 reached nearly EUR 9 billion, representing an increase of 11.4% compared to 2023. The total value of exports of agri-food products amounted to EUR 5.1 billion, while imports reached EUR 3.8 billion (MAFWM, 2025). The export structure continues to be dominated by primary agricultural commodities, such as maize, frozen raspberries, wheat, refined sunflower oil, and fresh apples. Of the total agricultural exports in 2024, 49.1% were directed toward the European Union, followed by CEFTA countries with a share of 28.3%.

Despite the consistently positive trade balance and growing export performance, the structure of Serbia's agricultural exports reveals a persistent reliance on primary commodities with relatively low value added. This indicates the existence of a "high export, low value-added" pattern, where comparative advantages are primarily realized in raw or minimally processed products.

Such a structure limits the potential for greater income generation, productivity growth, and stronger integration into higher segments of global value chains. Therefore, enhancing the level of processing and increasing the share of higher value-added products remain key challenges for improving the overall competitiveness and long-term sustainability of the agricultural sector.

Table 3. Key Indicators of Foreign Trade in Agri-Food Products, 2020–2024

Indicator	2020	2021	2022	2023	2024
Exports (million EUR)	3,635	4,163	4,765	4,637	5,091
Imports (million EUR)	2,048	2,442	3,138	3,345	3,804
Trade balance (million EUR)	1,587	1,721	1,627	1,292	1,287
Trade volume (million EUR)	5,683	6,605	7,903	7,982	8,895
Export coverage of imports (%)	177.5	170.5	151.8	138.6	133.9
Share in total trade of the Republic of Serbia (%)	14.2	9.9	11.9	12.2	13
Share of exports in total exports of the Republic of Serbia (%)	21.3	15.1	17.3	16.2	17.4
Share of imports in total imports of the Republic of Serbia (%)	8.9	6.3	8	9.1	9.7

Source: Ministry of Agriculture, Forestry and Water Management (MAFWM), *Green Book*

These findings are consistent with previous studies on agricultural development in transition economies, which emphasize that export growth based predominantly on primary commodities rarely leads to substantial productivity gains or sustained improvements

in competitiveness. Similar patterns have been identified in several Central and South-Eastern European countries, where positive trade balances coexist with relatively low levels of processing, technological intensity, and value-added generation.

The empirical findings indicate that Serbian agriculture maintains a relatively strong position in foreign trade, reflected in a persistent trade surplus and a growing share in total exports. However, this performance is largely driven by primary agricultural commodities with low value added, pointing to structural limitations in the sector's development model.

At the same time, key structural indicators, such as low productivity, fragmented farm structure, insufficient capitalization, and limited access to finance, highlight a significant gap compared to developed EU economies. The volatility of production, particularly in crop agriculture, further underscores the sector's vulnerability to external shocks and environmental factors.

Overall, the results suggest that Serbian agriculture operates within a dual framework: it is externally competitive in terms of export performance, yet internally constrained by structural inefficiencies that limit its capacity for higher value-added production and long-term sustainable growth. Addressing these constraints through targeted structural reforms, increased investment, and improved policy design remains essential for enhancing the sector's competitiveness and resilience.

Since 2023, the budget of the Ministry of Agriculture, Forestry and Water Management (MAFWM) has exceeded RSD 100 billion. Over the previous decade, the share of the MAFWM budget in the national budget remained below 5.4%, while from 2023 onwards it has surpassed 6.7%. In 2024, the MAFWM budget reached RSD 125.7 billion, accounting for 6.74% of the national budget. According to Article 4, paragraph 3 of the Law on Incentives in Agriculture and Rural Development, this share cannot be lower than 5% of the national budget. Allocated funds are implemented through direct payments, rural development measures, specific incentives, IPARD support, and credit schemes. The largest portion of funds in 2024 (91%) was allocated through direct payments, with the following structure: crop production accounted for 56%, livestock production for 27%, and milk premiums for 16% (MAFWM, 2025).

The structure of agricultural budget expenditures reveals a pronounced concentration of support within direct payments, with a dominant allocation toward crop production. Such a distribution indicates a policy bias that reinforces the existing production structure, rather than promoting its transformation. The relatively lower share of support directed toward livestock production and rural development measures suggests limited effectiveness in addressing structural imbalances, particularly the underdevelopment of higher value-added activities. This allocation pattern may contribute to the persistence of low productivity and insufficient diversification within the agricultural sector.

The observed allocation structure raises important questions regarding the long-term effectiveness of agricultural policy. While direct payments contribute to income

stabilization, they may have limited capacity to stimulate technological modernization, productivity growth, and structural transformation. International experience suggests that greater emphasis on investment support, innovation adoption, rural development, and knowledge transfer mechanisms tends to generate more sustainable development outcomes. Therefore, the current structure of agricultural support in Serbia may require gradual adjustment toward measures that encourage higher value-added production and stronger competitiveness.

Consequently, a reorientation of public support toward investment measures, rural development programs, and value chain upgrading appears essential for fostering structural transformation, improving competitiveness, and enhancing the long-term sustainability of Serbian agriculture.

The strategy for agricultural development should be based on increasing the export of agri-food products through more intensive production, as well as on adjusting the production structure in line with effective demand, particularly for environmentally sustainable and organic food products with a higher degree of finalization (Mitrović et al., 2017). Agriculture should be supported in order to maximize the utilization of natural, human, and processing capacities. The effective use of agricultural potential is contingent upon the integration of small-scale producers into markets, enabling them to achieve higher profits and additional economic benefits (Zakić et al., 2014).

In Serbia, increases in agricultural product prices disproportionately benefit intermediaries, while primary producers capture the smallest share of gains (Marjanović, 2025). Within the overall value chain, farmers receive the lowest returns. Moreover, non-selective import practices crowd out domestic producers, despite the country's comparative advantages in agricultural production and its traditional role as a food exporter (Aničić et al., 2025). When considering value added per worker in agriculture, Serbia exhibits a persistent and substantial lag behind the European Union. This underscores the importance of implementing appropriate financing and investment policies aimed at technological upgrading, innovation, knowledge acquisition, and productivity growth (Dimitrijević et al., 2023).

Agricultural support measures are designed to ensure the stability of domestic food supply, increase sales and exports, and stimulate job creation within the sector (Kuzman et al., 2017).

Conclusions

The findings of this study indicate that the agricultural sector in Serbia possesses significant potential for further development, both in the segment of small-scale farms and among agribusiness enterprises. However, the country's comparative advantages remain underutilized, while the adoption of innovation and advanced knowledge, already widely implemented in developed EU countries, continues to lag behind, resulting in substantially weaker performance.

The empirical analysis confirms that the development constraints of Serbian agriculture are primarily structural in nature. Although the sector maintains a positive foreign trade balance and a significant share in total exports, these achievements have not been accompanied by proportional improvements in productivity, value-added generation, or technological modernization. The results reveal a persistent mismatch between the sector's resource potential and its actual economic performance.

Key structural constraints, including low productivity, limited access to financing, smaller average farm size, and an imbalanced production structure characterized by the dominance of crop production (two-thirds) over livestock production (one-third), highlight the need for a more effective and coherent agricultural policy framework.

Particular attention should be devoted to the long-term consequences of the existing production structure. The predominance of crop production, combined with the decline of livestock production, limits opportunities for higher value-added creation, stronger vertical integration, and greater resilience of the agri-food sector. At the same time, the export structure remains largely based on primary agricultural commodities, indicating insufficient development of processing capacities and higher stages of value creation.

There is a clear need for strategic and predictable measures. From a policy perspective, Serbia requires a more coherent, predictable and investment-oriented agricultural policy framework focused on improving access to finance, stimulating technological modernization, promoting farm consolidation, strengthening livestock production, and supporting innovation throughout the agri-food value chain. The recent increase in the share of agriculture in the national budget represents a positive signal toward fostering faster and more sustainable sectoral development.

The findings further suggest that future agricultural policy should place greater emphasis on investment support, technological upgrading, innovation adoption, knowledge transfer, and the development of higher value-added production. Such measures would contribute not only to productivity growth and improved competitiveness, but also to stronger integration into European and global value chains.

Such policy adjustments would not only enhance the competitiveness of market participants and improve foreign trade performance, but also contribute to mitigating rural depopulation and promoting more balanced regional development.

Ultimately, unlocking the full potential of Serbian agriculture requires a comprehensive approach focused on structural transformation, increased investment, technological upgrading, and stronger integration into higher value-added segments of the agri-food value chain.

The results of this research provide evidence that sustainable growth of Serbian agriculture will depend not only on the availability of natural resources and favorable production conditions, but also on the successful implementation of structural reforms capable of transforming comparative advantages into durable competitive advantages.

Conflict of interests

The authors declare no conflict of interest.

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