COMPETITIVENESS OF THE AGRICULTURAL SECTOR OF SOUTHEAST EUROPE: THE WESTERN BALKANS VS. EUROPEAN UNION

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ABSTRACT

Despite its importance, the state of the agricultural sector in Southeast Europe is not at a satisfactory level. The goal of the paper was to examine the impact of agricultural competitiveness on economic development and to identify the parameters that contribute to its improvement. The Revealed Comparative Advantage index was employed to assess the comparative advantage, while the Unit Values index was used to examine the quality of important agricultural products. Ordinary Least Squares regression was applied to examine the impact of agricultural competitiveness on economic development. Kruskall-Wallis test was used to compare important factors that affect this competitiveness. The results indicate that Southeast Europe generally has a competitive agricultural sector. Republic of Serbia stands out in terms of competitiveness, but it is primarily driven by low productivity, prices and yields. Enhancing the value-added of agricultural products is crucial for boosting trade, strengthening agricultural competitiveness and fostering economic development.

Introduction

In the context of the open market and strong competition, for countries undergoing the European Union (EU) integration process, such as those in Southeast Europe (SEE), i.e. Western Balkans (WBs), one of the key challenges is improving the agriculture

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sector competitiveness. The significance of agricultural sector for the WBs, is reflected in its high contribution to gross domestic product (GDP) (e.g., Albania: 16.98%, Bosnia and Herzegovina: 4.83%, Montenegro: 6.04%, Serbia: 5.34%, North Macedonia: 7.28%) and employment (e.g., Albania: 34.93%, Bosnia and Herzegovina: 16.87%, Montenegro: 7.16%, Serbia: 13.57%, North Macedonia: 9.70%). Comparing these indicators available for 2022 (WDI, 2024) with the other EU countries of SEE, as well as EU, particularly the sector's share in GDP (Bulgaria: 3.71%, Croatia: 3.39%: Greece: 3.75%, Slovenia: 1.71%, Romania: 3.81%, EU: 1.68%) and employment rates (Bulgaria: 6.45%, Croatia: 5.90%: Greece: 11.16%, Slovenia: 4.31%, Romania: 18.01%, EU: 3.99%) it becomes evident that the importance of agriculture for the economies of these countries is significantly greater than in the EU. Also, these indicators have a greater importance in relation to other sectors and developed countries (Dimitrijević et al., 2022; Pantović et al., 2022).

Despite its significance for the economies of these countries, the sector faces numerous structural challenges, such as the small average size of farms, fragmented land holdings, insufficient equipment and obsolete agricultural technology, low productivity as reflected in yields per hectare and livestock head, and an unfavourable export structure dominated by raw materials rather than products with higher value added. The importance of estimation of revealed comparative advantages (RCA) for SEE and WBs has been recognised by numerous authors.

Some studies have confirmed that the SEE, except Albania, have comparative advantages in the agri-food sector compared to the world market, measured by RCA index. On the other hand, agricultural productivity significantly affects the competitiveness of the agricultural sector (Matkovski, et al., 2019). WBs, except Albania, have comparative advantages in the agri-food sector. The Republic of Serbia stands out among them with the greatest comparative advantage in this sector (Matkovski et al., 2021).

Considering the importance of agriculture for WBs, special importance should be given to this sector in the EU integration. The agricultural productivity and yields of the WBs lag significantly behind the EU. Also, these countries have high prices of agricultural products, which makes them prices uncompetitive. All this leads to relatively low competitiveness of the WBs agricultural sector. Only the Republic of Serbia stands out as the only net producer of agricultural and food products (Volk et al., 2012). The Republic of Serbia is the leader among WBs in terms of agricultural production and export, which on the other hand has a positive impact on the economic development of these countries. WBs should increase the competitiveness of the agricultural sector by increasing the productivity of agriculture, but also by improving the structure of exports, given that this structure is dominated by products of the lower stages of processing, cereals, fruits and vegetables. Despite the competitiveness of the WBs agricultural sector (except Albania), it is lower compared to the EU. The main reasons for this are the degree of processing of these products, unsatisfactory quality and quantity, fluctuations, as well as low price competitiveness (Dimitrijević et al., 2023).

The most important agricultural export sectors of the Republic of Serbia are cereals and fruit. These sectors achieve a competitive advantage, measured by the Revealed Comparative Advantage (RCA) index. However, this competitiveness is not sustainable considering that it is based on a low price policy or inadequate product quality. That is why the export structure must change in the direction of products with a higher degree of processing and value-added (Dimitrijević et al., 2023a). The quality of agricultural products has a very important importance and influence on the export and competitiveness of the agricultural sector. The most important export products within these agricultural sectors (cereals and fruit) are corn, frozen fruit and apples. In the case of corn, the cost side dominates, i.e. production costs, while in the case of frozen fruits and apples, the quality of the products stands out in their competitiveness, measured by the Unit Values (UV) index. In the case of corn, import prices are higher than export prices, which means that the value coverage of imports by exports is lower than the quantitative coverage of imports by exports. In the case of products where quality dominates (frozen fruit and apples), the situation is the opposite. Products, where quality dominates, have a positive impact on exports and the economic development of the Republic of Serbia, unlike products where this is not the case (corn), which is exported in almost the largest quantities of all other agricultural products (Dimitrijević et al., 2023b). It is concluded that for products that are of good quality, the yields and quantities that are exported are small, while the competitiveness of products that are exported in larger quantities is based on low prices, which cannot be a sustainable solution for preserving the competitiveness of these products and the entire agricultural sector.

There is a pronounced gap between WBs and EU, especially in agricultural productivity. The countries in this part of Europe are agricultural countries with low productivity and prices of agricultural products. These unfavorable trends in agriculture have a negative impact on both the competitiveness of agriculture and the entire economy. Bearing in mind that the EU excels in terms of productivity in agriculture, the quality and quantity of agricultural production, as well as healthy food, it is necessary for these countries to reform and harmonize their agricultural policy in line with the Common Agricultural Policy (CAP) EU (Simonović et al., 2019). One of the goals of the WBs is to join the EU, which implies the harmonization of the agricultural policy of these countries with the CAP EU (Erjavec et al., 2021).

Although the EU is distinguished by the competitiveness of the agricultural sector, there is still a notable difference between the old and new EU members. Therefore, structural transformation should be carried out in many new EU members in the direction of increasing labor productivity, as an essential component of the competitiveness of agriculture (Nowak & Różańska-Boczula, 2021).

Given the existing studies on this topic, the subject of the paper is to examine the competitiveness of the agricultural sector of the SEE, as well as to make a comparison between non-member and EU member countries and the EU, thereby contributing further to the understanding of their agricultural competitiveness. Considering that Serbia stands out as one of the leading countries in SEE, i.e. Western Balkan, in terms of overall

economic progress, including the agro-food sector, towards EU integration than all other countries, two additional hypotheses have been defined in this paper for it.

The goal of the paper was to determine the impact of the agricultural sector competitiveness on economic development, as well as to determine the parameters that contribute to its competitiveness and compare the candidate countries for EU membership with the EU. Based on the subject and goal of the research, the following research hypotheses were set:

H_1: The most Southeast Europe countries have a competitive agricultural sector.

H_2: The competitiveness of the agricultural sector in Southeast Europe and European Union significantly affects economic development.

H_3: The Republic of Serbia has the most competitive agricultural sector in Southeast Europe.

H_4: Competitiveness of the agricultural sector of the Republic of Serbia is not sustainable.

Materials and methods

The research was conducted for the period from 2006-2023 based on the availability of data. The research was conducted on a sample of SEE: Serbia, Bosnia and Herzegovina, Montenegro, North Macedonia, Albania, Bulgaria, Romania, Slovenia, Croatia and Greece. Such a sample was chosen to bear in mind that the first five countries are countries that are candidates for the EU, as WBs, and the other five are EU member countries. For this reason, the EU is also included in the sample.

The research was conducted in several steps. In the first step, the competitiveness of the observed countries was determined and compared to the EU. Comparative advantage is often used as a measure of competitiveness. This index is known as the Revealed Comparative Advantage Index (RCA). The Balassa index is often used for comparative advantage analysis and this RCA index is constructed in the following form (Balassa, 1965):

$$RCA = \left(\frac{Xij}{\sum iX} ij\right) / \left(\frac{Xi}{\sum iXi}\right) \qquad \text{за } i= 1, 2 \ldots., I; j=1, 2, \ldots., J \qquad (1)$$

where X_{ij} is the export of product j from country i, and $/\sum_i X_{ij}$ is the total export of country i; X_i is the world export of that product, and $/\sum_i X_i$ is the total world export. The country has a revealed comparative advantage if RCA > 1, and a comparative disadvantage if RCA < 1.

The second part of the research refers to determining the impact of the competitiveness of the agricultural sector of the observed countries on economic development. Ordinary Least Squares (OLS) regression was used for this research. For this part of the research, assumptions related to the stationarity of time series, then multicollinearity between variables which determined the research model (no multicollinearity between variables), as well as autocollinearity and heteroscedasticity of the model (cross-section dependence) were examined. The Unit Root test was used to test stationarity. ADF -

Fisher Chi-square showed that all variables in the model are stationary (RCA - statistic 38.6116, prob. 0.01; trade - statistic 67.5110, prob. 0.00; agr_value - statistic 33.8811, prob. 0.05), except for the dependent variable GDP (statistic 6.07, prob. 0.99), which is why it is differentiated at the first level, thus its stationarity was obtained (statistic 104.195, prob. 0.00). The Durbin-Watson test showed that there is no autocollinearity in the model (1.67), while the Breusch-Pagan, i.e. cross-section dependence test showed that there is heteroscedasticity of the model (statistic 18.77, prob. 0.00), which was overcome by using cross-section SUR for the wight model (statistic 49.57, prob. 0.68), which resulted in homoscedasticity of the model.

The following regression equation was used for this research:

$$GDP_{i,t} = \alpha + \beta_1 RCA_{i,t} + \beta_2 trade_{i,t} + \beta_3 agr\_value_{i,t} + \varepsilon_{i,t} \quad (2)$$

The third part of the research refers to the comparison of competitiveness, but also productivity, yield, as well as price determined through the UV index, which is also used as a measure of quality, between the observed countries. As a measure of product quality, the UV (unit values) index is used, which represents the share of value exports in quantity (Fischer, 2010):

$$UV^k_{ct} = \text{Export value}_{ct} / \text{Exported quantity}, \quad (3)$$

where k represents the country, c is the product and t is the year.

For this part of the research, and to compare the observed indicators between countries, the Kruskall-Wallis test for comparison groups was used.

Table 1. presents an overview and description of the variables used in the research.

Table 1. Variable definition

Label	Definition	Source
RCA	Revealed Comparative Advantage index	Authors' research based on ITC, 2024
UV_cereals	Unit Values for cereals (Export Value 1000 USD/ Export Quantity t)	Authors' research based on FAOSTAT, 2024
UV_fruit	Unit Values for fruit (Export Value 1000 USD/ Export Quantity t)	Authors' research based on FAOSTAT, 2024
yield_cereals	Cereals, primary Yields (kg/ha)	FAOSTAT, 2024
yield_fruit	Fruit Primary Yields (kg/ha)	FAOSTAT, 2024
agr_pw	Agriculture, forestry, and fishing, value added per worker (constant 2015 US$) - Value added per worker is a measure of labor productivity—value added per unit of input.	WDI, 2024
trade	Trade (% of GDP) - Trade is the sum of exports and imports of goods and services measured as a share of gross domestic product.	WDI, 2024
agr_value	Agriculture, forestry, and fishing, value added (current US$)	WDI, 2024
GDP	GDP (current US$)	WDI, 2024

Source: Authors' research

Results

The first part of the research aimed at determining the competitiveness of the agricultural sector of SEE and EU, which the following Table 2 showed.

Table 2. Competitiveness of the agricultural sector (RCA) of SEE and EU

Years	Serbia	Bosnia and Herzegovina	Montenegro	North Macedonia	Albania	Bulgaria	Romania	Slovenia	Croatia	Greece	EU
2006	3.23	1.00	1.49	2.72	1.41	1.46	0.57	0.52	1.66	3.29	1.28
2007	2.97	0.98	1.39	2.18	1.21	1.41	0.60	0.53	1.49	2.94	1.23
2008	2.62	0.97	1.53	2.02	0.95	1.87	0.92	0.57	1.32	2.71	1.25
2009	2.96	1.04	1.92	2.32	0.90	2.17	0.96	0.55	1.47	2.78	1.23
2010	3.15	1.14	2.11	2.28	0.76	2.28	1.13	0.59	1.44	2.72	1.26
2011	2.84	1.05	1.70	1.95	0.78	2.17	1.18	0.57	1.42	2.33	1.26
2012	3.24	1.16	2.36	2.05	0.81	2.13	1.18	0.53	1.59	2.27	1.30
2013	2.53	1.14	2.21	2.04	0.79	2.38	1.36	0.55	1.47	2.30	1.32
2014	2.68	1.03	3.78	1.67	0.51	2.16	1.34	0.55	1.48	2.18	1.28
2015	2.68	1.18	2.33	1.48	0.84	2.01	1.32	0.56	1.51	2.51	1.24
2016	2.58	1.22	2.10	1.47	1.06	2.05	1.25	0.55	1.57	2.62	1.21
2017	2.29	1.15	1.73	1.30	0.70	1.83	1.23	0.56	1.52	2.34	1.22
2018	2.26	0.98	1.66	1.19	0.60	1.95	1.24	0.60	1.67	2.24	1.23
2019	2.31	0.91	1.62	1.21	0.70	2.02	1.31	0.57	1.66	2.20	1.24
2020	2.41	0.93	1.63	1.15	0.95	1.95	1.28	0.54	1.67	2.39	1.23
2021	2.40	0.80	1.77	1.10	0.72	2.12	1.57	0.55	1.71	2.32	1.25
2022	2.22	0.74	1.20	1.07	0.12	2.13	1.64	0.48	1.71	2.07	1.26
2023	1.96	0.75	1.69	1.10	/	2.11	1.58	0.46	1.86	2.33	1.27

Source: Authors' research, based on ITC, 2024

Based on Table 2, it can be concluded that most SEE countries had a competitive agricultural sector, measured by the RCA index. Bearing in mind that this index should be greater than 1 to say that a country has a competitive agricultural sector, this can be said for the Republic of Serbia, Montenegro, North Macedonia, Bulgaria, Romania, Croatia and Greece, while Bosnia and Herzegovina in recent years did not recorded the competitiveness of this sector, as well as Albania and Slovenia, which years ago, i.e. during the entire observation period did not achieve the competitiveness of the agricultural sector. The EU as a whole had a competitive agricultural sector. Almost all SEE countries that have a competitive agricultural sector, even non- members EU, were performing better results than EU, measured by RCA index. Among WBs, Bosnia and Herzegovina and Albania did not have a competitive agricultural sector, as well as Slovenia within the EU.

The following analysis in Table 3 showed the importance of the competitiveness of the agricultural sector for economic development in SEE and EU, which is particularly important for long-term development policy, especially for countries that are largely dependent on agriculture, as is the case with the Republic of Serbia and the entire WBs.

Table 3. The importance of the agricultural sector for economic development in SEE and EU

Label	Dependent variable GDP
Intercept	-4.46E+10 (-15.84988)***
RCA	3.84E+09 (12.70388)***
trade	3.15E+08 (15.87675)***
agr_value	1.556698 (7.421350)***
Adjusted R^2	0.657354
F-statistic	119.3055***

Source: Authors' research, baesd on ITC, 2024; WDI, 2024

Note: beta coefficients in front of parentheses, t-values in parentheses, *, **, *** indicate statistical significance at the 10%, 5%, and 1% level, respectively

Table 3 showed that the competitiveness of the agricultural sector not only had a positive statistical impact on the economic development of SEE and EU, but this impact is also the biggest as measured by the beta coefficient. Also, trade, i.e. trade openness, which represents the sum of exports and imports of goods and services measured as a share of gross domestic product, had a positive impact on the economic development, as well as the value-added created by the agricultural sector. This showed the importance of increasing the value added by this sector through processing capacities and innovations, which will contribute to a greater share in trade, as well as to the long-term competitiveness of this sector, all of which had a positive impact on the economic development.

In the next part of the analysis, Table 4 compared the agricultural sector competitiveness across the observed countries. Additionally, indicators reflecting the state of the agricultural sector will be included, focusing on its productivity, yield and quality, as expressed through the prices of key agricultural products.

Table 4. Comparative analysis of agricultural sector competitiveness in SEE and EU

Country	RCA	agr_pw	yield_cereals	yield_fruit	UV_cereals	UV_fruit
Serbia	195.75	57.35	131.71	52.65	48.65	159.24
Bosnia and Herzegovina	62.42	61.24	99.35	38.71	118.06	154.88
Montenegro	148.67	179.71	22.88	115.94	137.13	82.71
North Macedonia	128.08	105.94	35.47	97.47	143.35	23.06
Albania	45.15	47.41	118.12	193.47	172.82	11.94
Bulgaria	158.81	125.59	107.12	27.24	56.82	187.71
Romania	88.67	32.53	67.12	68.94	71.59	112.41
Slovenia	11.64	139.24	174.59	117.06	73.12	95.76
Croatia	129.75	124.82	173.24	47.41	62.18	58.00
Greece	190.17	154.53	89.82	181.24	149.12	81.53
EU	95.61	185.06	146.71	135.59	92.59	156.29
Chi-Square	186.58***	180.14***	131.79***	170.98***	88.57***	163.90***

Source: Authors' research, based on ITC, 2024; FAOSTAT, 2024; WDI, 2024

Note: *, **, *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively, values expressed in Mean Rank

Table 4 showed that in terms of the competitiveness agricultural sector among the observed countries and groups, the Republic of Serbia stands out, which is far ahead of all other SEE countries, including the EU. The Republic of Serbia was followed by Greece, Bulgaria and Montenegro considering the competitiveness agricultural sector. Bosnia and Herzegovina, Albania, Romania and Slovenia were below the average of the EU agricultural competitiveness. However, in terms of the productivity of this sector, the Republic of Serbia was at the back, i.e. only Albania and Romania had worse results in terms of labour productivity in this sector. Also, all observed countries were below the EU average.

Bearing in mind the pronounced disparities of the agricultural sector of the Republic of Serbia, which was the first in terms of competitiveness, and among the last in terms of productivity, the most important agricultural products of the Republic of Serbia in terms of yield and quality, i.e. their prices, were observed. According to cereals yields, the Republic of Serbia was close to the EU average, i.e. in front of it were only Slovenia and Croatia, while according to fruit yields, it was at the back, along with Bosnia and Herzegovina, Bulgaria and Croatia. On the other hand, the quality of cereals measured by the UV index, i.e. price, was the lowest compared to all other countries, while the quality and price of fruit were above the EU average, and it had a leading position with Bulgaria. From this, we again saw large disparities between the yields and the price of the most important agricultural products of the Republic of Serbia. The Republic of Serbia exported cereals with high yields at extremely low prices, while on the other hand, fruits with very low yields exported at high prices. Concluded that this kind of competitiveness of the agricultural sector, which is based on low prices or yields, is not sustainable in the long term. Therefore, it is necessary to invest in processing capacities and innovations to raise the productivity of the agricultural sector of the Republic of Serbia and increase yields, as well as the quality, and therefore the price of important agricultural products.

Discussions

Bearing in mind that trade of agricultural products has a positive impact on trade flows (Matkovski et al., 2028), the value added of this sector should be increased by investing in processing capacities that will lead to higher product quality, and thus the price, but also by applying modern and innovative production methods that will to increase the yield of agricultural products. This is especially important for countries where agriculture plays a significant role in economic development, such as WBs. Also, in other Central and Eastern Europe (CEE) countries, lower productivity of agriculture compared to other EU countries is expressed, which is related to the level of economic development measured by GDP per capita, that is, countries with a lower level of the economic development also have lower agricultural productivity. Considering that the competitiveness of agriculture is determined precisely by the productivity of production factors, these countries also have a lower competitiveness of agriculture compared to the old EU members. That is why structural transformations of agriculture

are necessary in all observed countries (Nowak, 2016). In this context, it is necessary to produce agricultural products with higher value-added instead of big exporting quantities of agricultural raw materials with low value-added (Constantin et al., 2023). In addition to processing activities, international trade activities are equally important for the development of agricultural competitiveness (Istudor et al., 2022).

EU have a greater comparative advantage in cereals measured by the RCA index compared to WBs. Among WBs, economic development measured by GDP per capita, political stability and agriculture value added per worker positively influence RCA (Kovljenić et al., 2024). Given that in terms of labour productivity in agriculture, as well as economic development, WBs lag behind the EU, the competitiveness of these countries in agriculture cannot be sustainable. WBs should also increase the productivity of other agricultural production factors, such as soil productivity, by using bigger amounts of mineral fertilizers, while preserving the environment, but also by increasing livestock and improving technological progress in agriculture (Đokić et al., 2022).

WBs, as well as CEE countries, record low levels of partial productivity of agriculture, especially labor productivity, compared to the EU, which has a negative impact on the competitiveness of agriculture in these countries (Zekić et al., 2009, Zekić et al., 2010). Increasing agricultural productivity directly impacts production diversification, access to higher value markets, resilience to climate change, and increased competitiveness (Čekrlija et al., 2023). The productivity of agricultural inputs can contribute to greater agricultural production while preserving the environment and climate change, and thus to sustainable development (Dimitrijević et al., 2024).

In addition to the fact that the WBs lag behind developed countries in terms of development, the most noticeable is the lag behind the European average in labor productivity. Productivity and competitiveness indicators are causally linked to innovation and technological readiness (Bacovic, 2021; Bešić et al., 2024). The technological progress of WBs agriculture, which is significantly worse than the EU, represents a great potential for increasing the efficiency of WBs agriculture (Horvat et al., 2020). In addition to WBs, the new EU members compared to the old ones (EU-15) have worse productivity in agriculture (Kijek et al., 2019; Baráth & Fertő, 2017). To eliminate these disparities, a policy of cohesion and alignment with the CAP is essential. Agricultural labor productivity and green gas emissions represent major milestones in the evolution of the CAP (Constantin et al., 2021). In addition to the CAP, the WBs should align its agricultural policy with the European Green Deal, with the aim of sustainable agricultural development and climate change mitigation (Županić et al., 2021).

The productivity of the CEE largely depends on the implemented transition process, distortions, implemented reforms, as well as invested capital and new technologies (Swinnen & Vranken, 2010). The CEE achieve agricultural competitiveness mainly among crops (wheat and sunflower) and this is due to lower factor prices. Improving the agricultural competitiveness of these countries can be achieved through the improvement of product quality, technological changes, productivity and efficiency, as

well as the improvement of processing capacities and products with higher value-added (Bojnec, 2002). The candidate countries for EU membership have difficulty achieving competitiveness of the agricultural sector due to low levels of development, lack of investments in the agricultural sector, as well as access to the international market and low productivity. In addition, agriculture cannot play a significant role in Albania, Bosnia and Herzegovina and Montenegro due to climatic conditions (mountainous regions), which significantly limits agricultural production (Jankowska, 2021).

There is still a gap in the competitiveness of agriculture between the old and new EU members, given that the new members have lower productivity and a higher share of agriculture in gross value added. Therefore, these countries should focus on productive and sustainable agricultural systems, which will also affect the competitiveness of this sector (Jarosz-Angowska et al., 2022). In addition to innovations, increasing the efficiency and productivity of the agricultural sector, research and development (R&D), products with higher value-added, and accession to the EU play a significant role in improving the competitiveness of the agricultural sector (Mizik, 2021).

Taking into account that the WBs are in the process of accession to the EU, as well as their significant lag behind the EU, especially the old members, improving the productivity and efficiency of agriculture, as well as the modernization of this sector are of extreme importance for these countries (Đokić et al., 2022a). WBs, as well as new EU members, i.e. the countries of CEE, are at a similar level of technological efficiency of agriculture, whose improvement is influenced by the size of the land per worker, the fertilizer used per hectare, as well as EU membership (Đokić et al., 2020).

Despite the comparative advantage of the WBs agricultural sector, where Serbia dominates, and Albania is the only one that does not realize the comparative advantage of this sector, to reach EU standards, it is necessary to increase the quality of agricultural products. Exports are dominated by products with a low stage of processing and value-added, low quality or quantity, i.e. yields, as well as low price competitiveness. Therefore, these countries have to adapt their agriculture to increase agricultural productivity and competitiveness (Matkovski et al., 2016). Regional cooperation and the Open Balkans initiative can contribute to the achievement of these goals (Rikalović et al., 2022).

Conclusions

Given the significant lagging of the agricultural sector in terms of productivity and competitiveness, not only in the WBs but also the new EU members compared to the old ones, it is important to carry out structural transformation following the EU and to harmonize national agricultural policies with the CAP EU. Among the WBs, all countries, except Albania and Bosnia and Herzegovina in recent years, have achieved a comparative advantage in the agricultural sector. All observed EU countries, except Slovenia, also have a comparative advantage in this sector. It can be said that the first hypothesis is confirmed, given that most SEE countries, except Albania and Slovenia, have a comparative advantage in the agricultural sector.

To maintain the high competitiveness of this sector, it is necessary to increase productivity by introducing modern technologies and technological progress in agriculture, as well as by greater processing of agricultural products and production of products with greater value added. This, as well as by innovating production, can influence the increase in quality and prices, as well as the yield of important agricultural products. This will reflect on the higher value-added of agricultural products and trade of these products, which will further have a multiplied impact on improving the competitiveness of the agricultural sector, and will also positively reflect on the economic development of the observed countries, thus confirming the second hypothesis of the research.

The Republic of Serbia realizes the biggest comparative advantage of this sector, not only concerning WBs but also to other SEE countries that are the members of EU, as well as to the EU at all, thus confirming the third hypothesis of the research. However, the productivity of the agricultural sector of the Republic of Serbia is at the very bottom compared to SEE. Also, all SEE countries have a lower productivity of the agricultural sector compared to the EU. The most important agricultural export products of the Republic of Serbia are characterized by low quality and price, as in the case of cereals, or low yields, as in the case of fruit. Bearing this in mind, with the expressed low productivity of the agricultural sector, it is concluded that this competitiveness of the agricultural sector of the Republic of Serbia, which is based on low prices and yields, is not sustainable in the long term, thus confirming the fourth hypothesis of the research.

Some limitations that can be singled out, which can also be a recommendation for future research, is to include old EU members in the sample, as well as to observe and compare the comparative advantage of the most important agricultural products of all observed countries through their yields and prices that should reflect the quality of these products.

Conflict of interests

The authors declare no conflict of interest.

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