TRENDS IN FOREIGN TRADE OF SERBIA: A CASE STUDY OF AGRICULTURAL PRODUCTS

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ABSTRACT

The agriculture sector in the Republic of Serbia holds significant economic and social importance due to its substantial contribution to domestic gross domestic product (GDP) and employment of a large number of people. Agricultural products play a crucial role in Serbia's export structure. Food is one of Serbia's major export products, with a trade surplus steadily increasing since 2005. Fruit cultivation, as part of the agricultural sector, is of great importance, with domestic producers effectively utilizing natural advantages for production, thus achieving recognition and competitiveness internationally. This study aims to analyze the trends in foreign trade parameters over a decade, focusing on one agricultural product, specifically apricots. The research employs a quantitative research method using standard descriptive statistical instruments. Results indicate that Serbia maintains a trade surplus in apricots, with significant fluctuations and varying growth and decline trends in analyzed trade parameters over the period.

INTRODUCTION

It could be said that Serbia's agriculture is characterized by small agricultural holdings with fragmented plots of land mostly owned by individuals (Milanović et al, 2020).Agriculture represents a key sector in the Serbian national economy, evident from various indicators such as its contribution to GDP, employment, exports, and the revitalization of rural areas (Bogdanov et al., 2015, Nikolić et al., 2017). The significance of agriculture for Serbia's development is underscored by its share in total employment, approximately 20%, indicating the predominance of rural population and availability of natural, particularly land resources (Milošević, Milić, 2024). The role of agriculture in foreign trade is primarily influenced by natural conditions and the country's economic policies. Knowledge of the market is crucial because it indirectly enables the marketing of the company's goods and services (Milić et al., 2022) Zakić (2008) argues that in reorienting production and export structure of goods, one must consider the

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marginal costs of import substitution, adding that finding the optimal point of agricultural exports is challenging due to the uncertainties characterizing this issue.

According to reports from the Statistical Office of the Republic of Serbia, real GDP growth in the fourth quarter of 2023 compared to the same period the previous year was 3.8%, while real GDP growth in 2023, based on quarterly calculations, amounted to 2.5% compared to the previous year. Real gross value added growth in the agriculture, forestry, and fishing sector in the fourth quarter of 2023 increased by 7.7% compared to the same period the previous year.

The foreign trade of agricultural and food sectors significantly contributes to the total foreign trade of the Republic of Serbia, maintaining its status as the only sector in the Serbian economy with a positive trade balance. The exchange of agricultural and food products notably contributes to Serbia's overall foreign trade, with agricultural and food products accounting for 12.2% of total trade in 2023, where agricultural and food product exports accounted for 16.2% of total exports, while agricultural and food products accounted for 9.1% of total imports.

Fruit cultivation is a vital branch of agricultural production (Keserović et al., 2014), and currently, fruits are the most competitive group of products in the Republic of Serbia (SEEDEV, 2017). The significance of fruit cultivation for the national economy is evident through its high export value, contribution to a positive trade balance, promotion of employment in rural areas, continuous supply to the domestic market with fresh and processed fruits, and other positive effects on agricultural and rural development sectors. Some authors have conducted earlier studies analyzing fruit production (Vlahović et al., 2015, Milić et al., 2016, Stanković, Vaško, 2018, Užar et al., 2019, Nedeljković, Potrebić, 2020, Nedeljković, 2021) and emphasized its importance in the development of the Serbian economy.

In the European Union, various types of fruits are produced, including pome and stone fruits. It is estimated that during 2022, 35.9 million tons of fruits were produced, with 14.7 million tons of pome fruits (apples and pears), 10.5 million tons of citrus fruits (oranges, lemons), 6.3 million tons of stone fruits (peaches, nectarines, apricots, cherries, plums), 2.6 million tons of subtropical and tropical fruits (figs, kiwi, avocado, and bananas), 1.1 million tons of nuts, and 0.7 million tons of berries (Ministry of Agriculture, Forestry and Water Management, 2024). According to the Ministry of Agriculture, Forestry and Water Management, in 2023, Serbia had 200,228 hectares under fruit cultivation, which is 4.7% more compared to 2022. The most represented areas are under plum, apple, cherry, and raspberry cultivation (Table 1).

Table 1. Area and production of fruits by types, 2021-2023

Fruit type	2021		2022		2023	
	Area (ha)	Production (tons)	Area (ha)	Production (tons)	Area (ha)	Production (tons)
Apples	27.034	513.238	27.253	486.215	27.412	379.690
Pears	5.074	55.938	5.011	59.711	5.046	48.028
Cherries	4.453	15.863	4.518	22.947	4.435	15.576
Sour cherries	19.551	155.137	19.875	164.446	19.614	144.849
Apricots	6.023	31.362	6.092	44.386	6.011	29.087
Quinces	2.009	10.428	2.040	10.865	2.086	10.603
Plums	72.569	412.778	72.323	488.593	74.418	362.713
Peaches	5.063	30.873	5.007	31.840	5.116	30.814

Nectarines	2.104	13.060	2.072	13.545	2.230	13.926
Walnuts	3.016	7.646	3.411	11.836	3.492	9.900
Hazelnuts	5.083	6.242	7.115	9.328	8.592	10.190
Other nuts	812	1.046	730	877	695	705
Raspberries	20.807	110.589	19.703	116.093	19.016	98.674
Blackberries	5.376	31.036	5.418	32.161	5.784	30.701
Strawberries	6.788	22.427	7.039	32.943	7.229	23.704
Blueberries	2.363	16.451	2.995	19.476	8.318	53.011
Other berries	747	2.009	702	1.641	734	1.522
Total	**188.872**	**1.436.122**	**191.304**	**1.546.903**	**200.228**	**1.263.692**

From the perspective of rakija production, alongside plum and apple as the most prevalent fruit types, apricot, grape, and pear are significantly utilized. A notable quantity of apricots are planted in the flatland areas of Vojvodina (such as Subotica-Horgoš sand dunes and the Fruška Gora region). According to official statistical data, the largest apricot orchard areas regionally are found in the Belgrade region at 43% (2,591 ha), followed by the Šumadija and Western Serbia region at 23% (1,402 ha), the Vojvodina region at 21% (1,262 ha), with the least acreage in the Southern and Eastern Serbia region at 13% (756 ha).

METHODOLOGY AND DATA SOURCES

For the purpose of this research, available databases such as TradeMap (World Trade Organization), FAOSTAT, the Statistical Office of the Republic of Serbia, and other relevant literature by domestic and foreign authors were utilized. The ten-year period analysis of apricot foreign trade (2014-2023) was processed using descriptive statistics employing common instruments (mean, range, standard deviation, rate of change, coefficient of variation). The trend in indicators was depicted using the annual growth rate, and the variation of specific parameters was calculated using the coefficient of variation. Visual representation of parameter trends was achieved through graphs with calculated linear trend formulas. The results are presented in both tabular and graphical form.

RESEARCH FINDINGS

According to FAOSTAT data, Turkey indisputably holds the largest production of fresh apricots globally with 803,000.00 tons in 2022, representing 20.70% of global production. Following Turkey are Uzbekistan and Iran with 451,263.00 tons and 305,932.000 tons, respectively. In 2022, Italy was the largest European producer of apricots with 230,080.00 tons according to the same source. Worldwide apricot exports totaled 319,814 tons in 2023, with imports at 13,450 tons, positioning apricots as a fruit with a global trade surplus for the observed year. Spain was the leading exporter of apricots with 75,768 tons, while Russia was the largest importer with 50,886 tons. Regarding Serbia, over the ten-year analyzed period, the average apricot production was 32,657 tons, with the visual representation of production trends depicted in Graph 1.
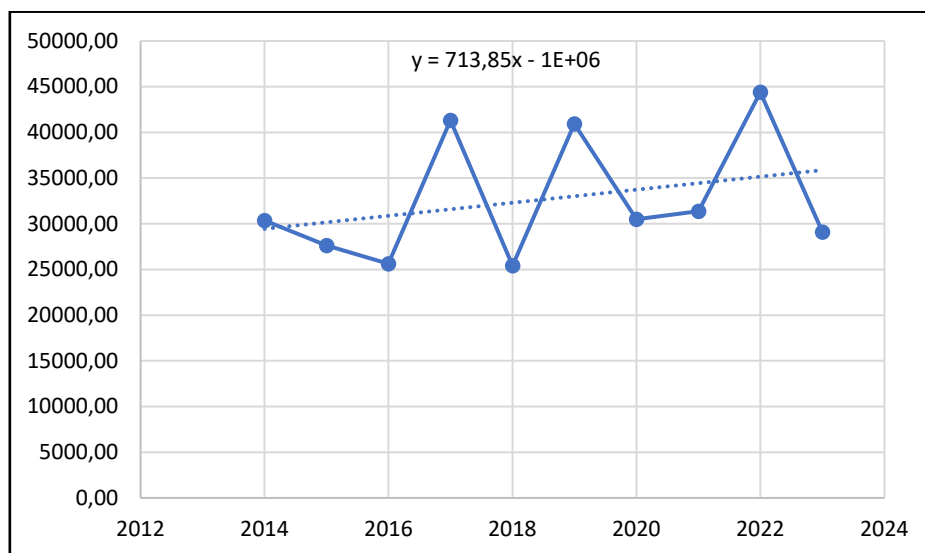
Graph 1. Apricot Production in Serbia (tons)

Average apricot exports from Serbia to the world over the observed ten-year period were slightly over 5,135 tons, reaching a maximum of 8,989 tons in 2017. During the same period, there was a mild growth trend of 0.88%, alongside significant variability measured by a coefficient of variation of 63.83%. The highest exports were to Russia, where the average export during the analyzed period exceeded 1,076 tons, accounting for nearly 21% of Serbia's average total apricot exports. Most exports to Russia occurred at the beginning of the observed period and least in 2021. Apricot exports to Russia also exhibited a large variation of up to 116.7% and a relatively significant decline trend of nearly 24%. Romania ranked as the second-largest export destination by export volume, averaging 1,042 tons with pronounced variability in its fluctuations. Other significant export destinations include Bosnia and Herzegovina, Austria, Croatia, and Montenegro (Table 2).

Table 2. Dynamics of apricot exports to key countries in tons (2014-2023)

	Mean (t)	Min.	Max.	Standard deviation	Annual growth rate (%)	Coefficient of variation (%)
World	5135,70	1519,00	8989,00	3278,34	0.88	63.83
Russia	1076,30	168,00	3559,00	1256,65	-23.97	116.76
Romania	1042,00	200,00	2632,00	823,28	10.82	79.01
Bosnia and Herzegovina	801,40	204,00	1901,00	636,34	10.61	79.40
Austria	366,30	3,00	1282,00	463,72	-10.2	126.60
Croatia	276,00	44,00	653,00	218,34	5.98	79.11
Montenegro	258,30	46,00	496,00	158,48	26.77	61.36
Slovakia	129,90	27,00	482,00	130,08	16.39	100.14
Slovenia	69,60	10,00	149,00	47,68	15.42	68.51
Germany	62,20	3,00	186,00	68,05	12.59	109.41

Source: Author's calculation

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It is interesting to note that, similar to Russia, Austria also experienced a declining export trend (-10.2%), accompanied by considerable variability during the observed period. Among the regional countries, the most apricots were exported to Bosnia and Herzegovina, Croatia, and Montenegro. Montenegro recorded a relatively high growth trend in exports and the most stable export movement among all observed destinations (Table 1).

A similar situation arises when considering the value indicators of apricot exports. Specifically, a negative trend has been observed in exports to Russia and Austria, while exceptionally large revenue variability has been recorded in exports to Montenegro (Table 3).

Table 3. Dynamics of apricot exports in euros (2014-2023)

	Mean (euros)	Min.	Max.	Std. dev	Annual change (%)	Coefficient of variation (%)
World	3636500,00	1171000,00	7214000,00	2091394,391	5.66	57.51
Russia	964400,00	192000,00	2733000,00	954496,0509	-18.53	98.97
Romania	791600,00	149000,00	2293000,00	686569,1193	31.65	86.73
Bosnia and Herzegovina	316300,00	78000,00	760000,00	256164,4654	15.59	80.99
Austria	196000,00	2000,00	646000,00	201577,6663	-2.72	102.85
Croatia	230706,80	68,00	652000,00	233161,0623	12.01	101.06
Montenegro	455100,00	22000,00	2888000,00	861995,0309	35.95	189.41
Slovakia	101100,00	23000,00	392000,00	108883,679	23.42	107.70
Slovenia	57900,00	10000,00	122000,00	38951,39421	14.52	67.27
Germany	34500,00	2000,00	116000,00	35609,7677	18.08	103.22

The situation is quite different when it comes to the import of this fruit. The average import of apricots amounts to 491.5 tons, mostly from Greece (300 tons), as well as Spain and Italy. There is a moderate upward trend in imports, except for imports from Italy, where a negative value of this foreign trade indicator (-10.43) was recorded. These are traditionally favorable areas for cultivating this fruit, so it is not surprising that imports are oriented towards them. The highest recorded import was in 2017. (Table 4)

Table 4. Dynamics of apricot imports from major countries in tons (2014-2023)

	Mean (t)	Min	Max.	Standard deviation	Annual change (%)	Coefficient of variation (%)
World	491,50	223,00	946,00	207,06	9.29	42.13
Greece	300,10	108,00	716,00	182,68	10.35	60.88
Spain	69,80	9,00	147,00	42,79	23.69	61.32
Italy	51,20	19,00	98,00	27,83	-10.43	54.36

Source: Author's calculation

The value parameters of apricot imports vary the most during the observed period for imports from Spain (84.7%), while in line with the negative trend in quantities, the value parameter is also negative, with an annual growth rate of -1.05% (Table 5).

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Table 5. Dynamics of apricot imports in euros (2014-2023)

	Mean (euros)	Min.	Max.	Std. dev	Annual change (%)	Coefficient of variation (%
World	529800,00	181000,00	890000,00	233438,4525	14.17	44.06
Greece	298100,00	98000,00	483000,00	126957,0794	16.61	42.59
Spain	99000,00	11000,00	274000,00	83851,72098	32.56	84.70
Italy	78200,00	18000,00	184000,00	51436,69248	-1.05	65.78

Source: Author's calculation

Graph 2 depicts the trend of apricot trade balance in Serbia, showing a positive trend, indicating a trade surplus.
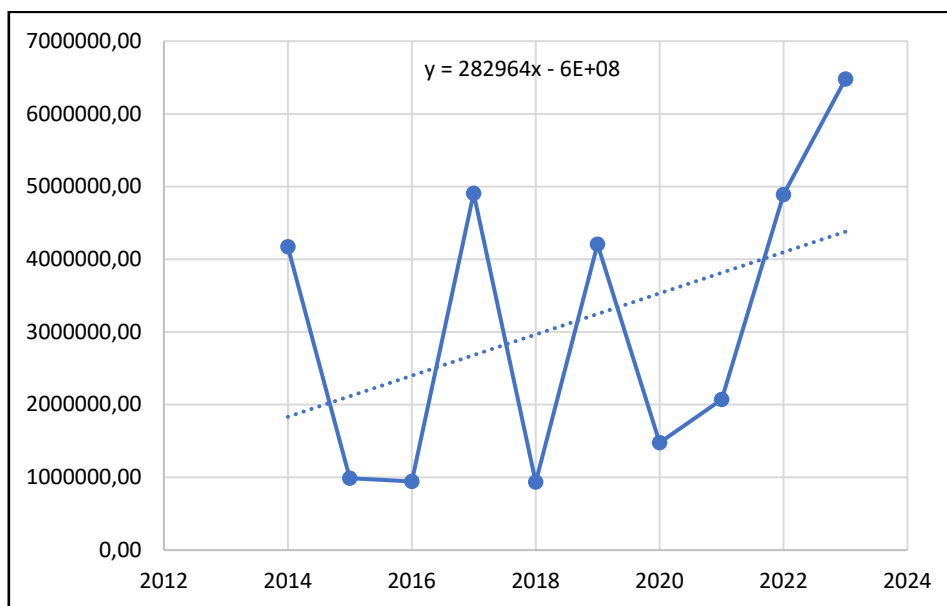
Graph 2. Foreign trade balance in apricot trade (Euros)

CONCLUSION

Based on the preceding discussion in the paper, we can conclude that agriculture represents one of the most important economic sectors, with foreign trade playing a significant role in the country's overall GDP. Using the example of one agricultural product, apricots, we have demonstrated trends observed over the past decade. From these trends, we conclude that Serbia maintains a surplus in this fruit type, exporting more apricots on average globally than it imports. Both exports and imports exhibit high variability, with Russia being the primary destination for Serbian exports on average during the analyzed period, facilitated by a free trade agreement between the two countries. Additionally, exports to Russia show a declining trend and significant variability. Greece is the leading country from which apricots are imported on average, characterized by substantial fluctuations in trade and a slight upward trend. This study provides a solid foundation for future projections in apricot production and overall fruit trade planning.

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