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The impact of CEFTA implementation on the agri-food trade of the Republic of Srpska entity (Bosnia and Herzegovina)

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Abstract

Given the crucial role of the agricultural sector in the economic development of the Republic of Srpska, trade in agri-food products is of considerable importance, particularly with CEFTA countries. This paper investigates the impact of the multilateral trade agreement CEFTA on agri-food trade flows. Using statistical data from 2013 to 2021 and applying descriptive analysis methods, the paper aimed to assess exports, imports, and total trade in agri-food products. The findings reveal that CEFTA implementation positively affected agri-food product exports and overall trade volume between the Republic of Srpska and the CEFTA countries. Specifically, the results have indicated a consistent trade deficit in the total trade volume of the agri-food sector, highlighting the necessity for and significance of policy measures aimed at enhancing competitiveness and reducing the trade gap.

***Key words**:* Agri-food industry, CEFTA, Republic of Srpska, Trade impact.

Introduction

The research on the subject of the Central European Free Trade Agreement (CEFTA) became relevant from the moment this agreement was implemented in the Southeast Europe (SEE), more precisely in the Western Balkans (WBs). The CEFTA agreement continues to contribute to the regional and economic integration among the Western Balkan countries, thus playing a crucial role in preparing these countries for EU membership. In general, trade agreements concluded among SEE countries, i.e., the WBs, have ensured the inclusion of their agri-food sectors in international integration. The CEFTA, as a multilateral trade agreement, has been an instrument aiming to improve trade relations within the region, particularly in the agri-food sector by replacing 32 bilateral trade agreements and establishing a unified trade framework. This agreement addresses trade rules for agri-food products, including agricultural concessions for Bosnia and Herzegovina (B&H), and establishes clear import and export regulations among the CEFTA member countries (CEFTA, 2007).

Based on the Dayton Peace Agreement (1995), Bosnia and Herzegovina comprises two entities, namely the Federation of Bosnia and Herzegovina (FB&H) and the Republic of Srpska (RS), and the Brčko District (BD). Bosnia and Herzegovina became a member of the CEFTA in 2006, and the agreement implementation started in November 2007. The CEFTA agreement has facilitated the integration of B&H's agri-food sector into international trade, including countries like Bulgaria, Romania, and Croatia, before their EU accession, as well as Albania, Montenegro, North Macedonia, Serbia, and Moldova. Some of these countries were once part of the common Yugoslav market, hence regional trade ties have strengthened. The complete Annex 3 of the Agreement has regulated rules in regards with agricultural products trade, starting from agriculture concessions for Bosnia and Herzegovina to regulations that precisely restrict imports and exports with each member country. The primary reason behind the establishment of a multilateral trade agreement was economic cooperation among the regional partners through free trade, after the introduction of uniform, trade rules, the simplification of procedures for attracting foreign investments in B&H, and finally preparing the countries for the EU membership (CEFTA, 2007).

Despite challenges faced by the agri-food sector in Bosnia and Herzegovina, due to the devastation of the 1990s, CEFTA implementation has yielded positive effects. One of the key benefits has been the increase in trade volume of agri-food products between Bosnia and Herzegovina and the CEFTA countries.

Many studies have assessed how the CEFTA has impacted agri-food trade, employing statistical and mathematical methods, with other methodological tools. Božić and Nikolić (2013; 2017) analysed the agri-food trade between Serbia, the CEFTA, and the EU countries, and found that liberalisation could lead to further sectoral adjustments and growth. Other studies, such as Ćejvanović et al. (2014), evaluated the effects of the CEFTA on B&H's agri-food trade concluding that the agreement impacted the domestic agri-food sector. Using statistical data from 2005 to 2011 and applying the methods of descriptive analyses, the authors presented the trends in the imports and exports of agri-food products. The increased imports of agri-food products to B&H from the CEFTA countries, except in 2009, and exports of 26.23% to the CEFTA market, were obtained in this research. With another group of authors, Ćejvanović (2010) analysed the effects of the CEFTA on B&H's foreign trade of agri-food products from 2007 to 2009. The authors concluded that the CEFTA influenced the volume and structure of foreign trade in agri-food products between Bosnia and Herzegovina and its trade partners. The decrease in B&H's imports of agri-food products was 3.39% in 2009 compared to the previous year, while in the same period, the increase of exports to the CEFTA market was 3.57%. Serbia was Bosnia and Herzegovina's most important trade partner when trading agri-food products. Using standard statistical and mathematical methods, some authors were focused on exploring and analysing trends and main features of foreign trade in agri-food products within the CEFTA region, like Kuzman et al. (2010), Zekić and Matkovski (2015), and Kuzman (2014), while the others dealt with certain product groups: vegetables (Vlahović et al, 2007), sugar (Vlahović and Užar, 2018), milk and dairy products (Veljković et al, 2010), and fruit and vegetables (Matkovski and Skoko, 2017).

This paper aims to assess the impact of the CEFTA implementation on foreign trade in the Republic of Srpska's agri-food sector from 2013 to 2021 based on descriptive statistical measures. The evaluation was provided both at the level of total trade and by specific product groups according to the Harmonized System (HS) classification.

Material and Methods

Secondary data were used and collected through the desk research method. The paper utilised data obtained from the Institute of Statistics in the Republic of Srpska related to the value of foreign trade in agri-food products between the Republic of Srpska and the CEFTA countries from 2013 to 2021, classified according to Harmonised Classification (HS) from 01 to 24.

Tab. 1 The list of agri-food products according to Harmonised Classification (HS)

Customs tariffs	Agri-food products
01	Live animals
02	Meat and edible meat offal
03	Fish and crustaceans, molluscs and other aquatic invertebrates
04	Dairy produce, birds' eggs, natural honey
05	Products of animal origin, not elsewhere specified or included.
06	Live trees and other plants; bulbs, roots and the like; cut flowers and ornamental foliage
07	Edible vegetables and certain roots and tubers
08	Edible fruit and nuts; peel of citrus fruit, or melons
09	Coffee, tea, mate and spices
10	Cereals
11	Products of the milling industry
12	Oil seeds and oleaginous fruits
13	Lac; gums, resins and other vegetables saps and extracts
14	Vegetable plaiting materials; vegetable products not elsewhere specified or included
15	Animal or vegetable fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes
16	Preparations of meat, fish, crustaceans, molluscs, or other aquatic invertebrates
17	Sugar and sugar confectionery
18	Cocoa and cocoa preparations
19	Preparations of cereals, flour, starch or milk; pastry cooks' Products
20	Preparations of vegetables, fruit, nuts or other parts of plants
21	Miscellaneous edible preparations
22	Beverages, spirits, and vinegar
23	Residues and waste from the food industries; prepared animal fodder
24	Tobacco and manufactured tobacco substitutes

Source: Customs tariffs of Bosnia and Herzegovina (2024)

The secondary data were analysed using descriptive statistical measures. In addition to the above descriptive statistical measures, the average annual growth rate was calculated in the paper (Table 2.).

Tab. 2 Descriptive statistical measures and the average annual growth rate

Measures	Equations
Arithmetic mean	$$\mu = \frac{1}{N}\sum Xi$$ n – number of years X_i – values of export, import and total trade volume
Variation interval	$$Iv = Xmax - Xmin$$ I_v – variation interval X_{max} – maximum value of export, import and total trade volume X_{min} – minimum value of export, import and total trade volume
Coefficient of Variation	$$Kv = \frac{\sigma}{\mu} * 100$$ σ – standard deviation μ – arithmetic mean
Average Annual Growth Rate	$$rg = \left(\sqrt[n-1]{\frac{Yn}{Y1}} - 1\right) * 100$$ Y_1 – first data of time series Y_n – last data of time series n – number of years

Source: Lovrić et al. (2006)

The descriptive statistics was done in IBM SPSS Statistics 22, both for the level of total foreign trade and for product groups traded between the Republic of Srpska and the CEFTA countries. In addition, inductive and deductive methods were applied. The data that have been collected and analysed are presented in the local currency (BAM – convertible mark[1]).

Results and Discussion

The CEFTA countries represent one of the most important trade partners of the Republic of Srpska in regards with agri-food products. Compared to the global market, the Republic of Srpska's agri-food sector had a more substantial share in the market with the CEFTA countries. The average share of the agri-food industry in trade with these countries was 32.05%, whereas the global trade accounted for only 13.75%. This is a result of strong trade ties that have

[1] Exchange rate of 1 BAM = 0.51 EUR.

historically existed between the former Yugoslav republics, especially due to the geographical location of the Republic of Srpska and its connection with the CEFTA countries. Additionally, the trade facilitation and rules of the CEFTA agreement have enabled a higher volume of agri-food product exchange between the Republic of Srpska and its trade partners. Figure 1 illustrates the share of the Republic of Srpska's agri-food sector in both the total trade exchange and the CEFTA countries from 2013 to 2021.

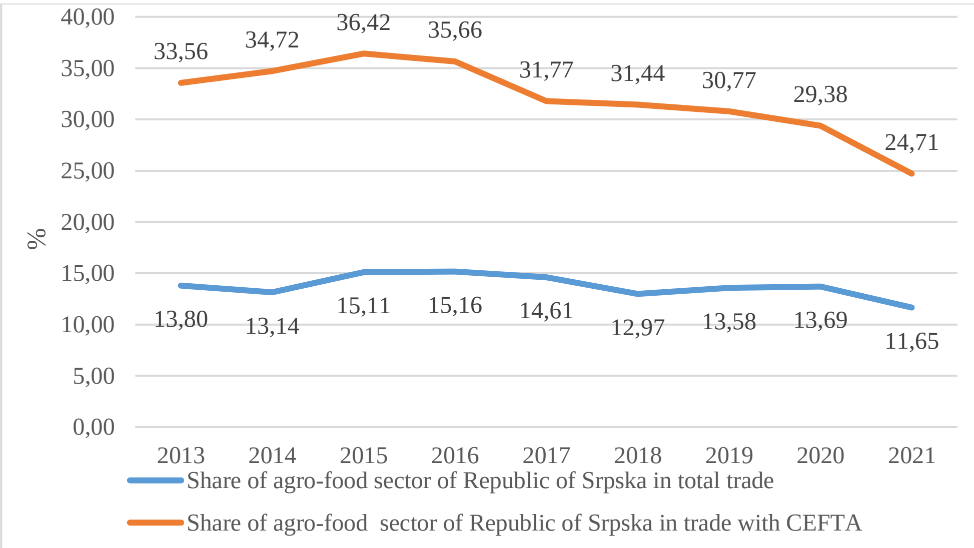

Fig. 1 Share of the agri-food sector of the Republic of Srpska in the total trade and with the CEFTA countries in the 2013 -2021 period

The data in Table 3 provide a comprehensive overview of the foreign trade dynamics and descriptive analysis of the agri-food sector between the Republic of Srpska and the CEFTA countries from 2013 to 2021. Regarding the exports, the minimum value observed was 96.97 million BAM, while the maximum reached 160.11 million BAM, with an average of 122.32 million BAM. The coefficient of variation of 18.44% indicated low variability in export values over the period. The exports generally showed an increasing trend between 2013 and 2016 with a 2.31% annual growth rate. Notably, there was a significant increase in 2018 and 2019, when the exports spiked to 160.11 and 159.02 million BAM, respectively.

The imports of agri-food products from the CEFTA countries fluctuated, ranging from 341.72 million BAM to 395.44 million BAM. The average import value during this period was 373.64 million BAM, with a relatively low coefficient of variation of 4.35%. The average annual growth rate for imports was negative (-0.50%), indicating a slight decline over time.

The trade balance showed deficits, ranging from -290.00 million BAM to -195.43 million BAM. However, in 2018 and 2019 there was notable improvement in the trade balance. The coverage rate varied between 25.06% and 44.86%, with a significant increase in 2018 (42.45%) and 2019 (44.86%), indicating an improvement in the Republic of Srpska's ability to cover the imports with the exports during those years. The descriptive analysis presented for the exports, the imports, and the total provided further insight into the trends and fluctuations in the agri-food sector trade with the CEFTA countries.

Tab. 3 Foreign trade of the agri-food sector between the Republic of Srpska and the CEFTA and indicators of descriptive analysis in the 2013 -2021 period (mil. BAM)

Indicators	2013	2014	2015	2016	2017	2018	2019	2020	2021
Exports (mil. BAM)	96.97	107.29	111.87	126.16	115.59	160.11	159.02	107.44	116.40
Imports (mil. BAM)	386.97	395.44	379.76	376.35	378.82	377.22	354.86	341.72	371.66
Volume (mil. BAM)	483.87	502.68	491.61	502.51	494.23	537.26	513.48	449.15	488.06
Balance (mil. BAM)	-290.00	-288.14	-267.89	-250.19	-263.23	-217.04	-195.43	-234.28	-255.26
Covering rate (%)	25.06	27.14	29.46	33.52	30.52	42.45	44.86	31.44	31.32
Descriptive analysis of foreign trade in agri-food products									
Indicators	Minimum (million BAM)		Maximum (million BAM)		Average (million BAM)		AAGR (%)	C_v (%)	
Exports (mil. BAM)	96.97		160.11		122.32		2.31	18.44	
Imports (mil. BAM)	341.72		395.44		373.64		-0.50	4.35	
Volume (mil. BAM)	449.15		537.26		495.88		0.11	4.79	

Source: Author's calculations.

Tables 4 and 5 provide a detailed breakdown of the exports and a descriptive analysis of the agri-food products traded between the Republic of Srpska and the CEFTA countries. The data presented in Table 4 offer insights into the key trends and fluctuations in the exports of agri-food products on the CEFTA market, highlighting the most significant tariff groups. Dairy products demonstrated a considerable share in exports with an average of 23.23%, the highest among all groups. This indicates the stability and importance of dairy products in the agri-food export structure. Fruit also showed a notable average share of 8.71% with an increase in the last years, indicating the growing demand for these products on the CEFTA market. Fish and fish products showed gradual growth. Tobacco and tobacco products demonstrated specific fluctuations, peaking in 2015 and 2016, but maintaining a relatively significant average share of 2.75%. Meat and edible meat products showed a decline in exports, especially after 2017, reflecting a modest average share of 2.95%. The minimum in exports was recorded for customs tariffs 05 (products of animal origin), 09 (coffee), and 23 (residues and waste). Product groups of custom tariffs 18 (cocoa and cocoa preparations) and 19 (preparations of cereal flour) maintained a stable export performance with an average share of 15.52% and 11.16%, respectively, indicating a continuous demand on the CEFTA market. The growth of exports in groups such as dairy products and fruit can be attributed to enhanced production capacities and improved quality standards. On the other hand, the decline in groups like meat and edible meat products may result in increased market competition or a decrease in production.

Tab. 4 Exports of agri-food products between the Republic of Srpska and the CEFTA (million BAM) and an average share in agri-food exports (%) in the 2013 – 2021 period

Customs tariffs 01-24	2013	2014	2015	2016	2017	2018	2019	2020	2021	Average share in agri-food exports %
01	2.66	3.88	2.16	2.25	3.48	11.25	2.58	3.25	3.48	3.08
02	3.31	4.45	4.49	6.65	3.25	2.43	3.51	2.13	1.35	2.95
03	3.79	3.56	3.64	4.62	3.69	3.47	4.85	5.53	6.91	3.74
04	28.91	29.92	20.22	22.44	21.74	34.79	45.79	29.24	22.09	23.23
05	0.01	0.02	0.04	0.05	0.06	0.03	0.03	0.05	0.13	0.04
06	0.50	0.28	0.26	0.17	0.36	0.62	0.37	0.27	0.31	0.29
07	1.40	1.09	1.44	1.46	3.62	1.95	2.47	1.93	0.98	1.49
08	4.67	10.50	11.43	9.01	8.93	8.25	7.53	13.32	19.10	8.71
09	1.79	1.46	1.91	1.52	0.21	0.10	0.14	0.23	0.38	0.78
10	0.63	1.68	3.02	2.33	1.78	1.25	1.34	0.89	0.92	1.28
11	2.12	1.70	2.32	2.75	3.64	5.87	4.20	3.97	4.89	2.82
12	1.99	1.40	1.57	1.26	1.42	1.16	1.20	1.28	4.49	1.50
13	:	:	:	:	:	:	0.01	0.07	0.01	:
14	0.02	0.02	:	:	:	:	:	:	:	:
15	0.01	0.11	0.03	0.22	0.13	0.12	0.31	0.08	0.05	0.09
16	2.18	3.52	0.10	3.17	3.33	3.51	3.54	3.89	3.61	2.46
17	0.75	2.92	3.76	2.76	2.78	2.07	0.55	0.22	0.32	1.51
18	19.54	16.49	21.56	25.71	17.93	16.37	14.36	16.78	16.40	15.52
19	10.97	12.08	13.15	13.31	14.81	14.46	12.34	13.72	15.31	11.16
20	2.56	1.77	2.12	2.22	2.28	2.13	2.63	2.14	2.38	1.88
21	3.37	2.81	3.69	4.16	2.02	2.23	3.24	4.36	3.93	2.81
22	4.42	6.89	8.10	9.10	10.01	10.31	7.09	4.26	7.85	0.84
23	0.49	0.31	0.46	0.39	0.39	0.20	0.11	0.28	1.49	0.40
24	0.89	0.45	6.39	10.63	9.75	1.03	0.12	0.10	0.03	2.75

Source*: Author's calculations*

Table 5 provides a descriptive analysis of the agri-food export values from the Republic of Srpska to the CEFTA market in 2013 - 2021. This analysis offers a comprehensive view of variability and growth trends in different product groups. Fruit as a product group stood out with the highest average export value of 10.30 million BAM and an AAGR of 9.25%, indicating a strong and positive growth trajectory. The coefficient of variation of 39.88% suggests moderate variability, reflecting a consistent demand but some export fluctuation. Dairy products maintained solid export figures with an average of 28.35 million BAM, but their AAGR was -3.31%, showing a slight decrease over the years. This decline is relatively modest, considering the group's overall export size. The Cv of 28.80% pointed to moderate variability. Tobacco and tobacco products exhibited the highest coefficient of variation of 134.83%, indicating very high variability. This was coupled with a significant AAGR decline of -33.46%, showing a major drop in the export performance. The products of customs tariffs coffee and tea and meat and edible meat products both showed negative AAGR, with -17.72% and -10.63%, respectively. These declines reflect a decrease in export values, suggesting challenges in market demand or competitiveness. The product group coffee and tea had a coefficient of variation of 91.41%, signalling a high fluctuation. Fish and fish products demonstrated an AAGR of 7.79% indicating steady growth, while the coefficient of variation of 26.26% reflected moderate variability. Oil seeds and oleaginous fruits showed an AAGR of 10.72% and a high coefficient of variation of 60.45%, pointing to some instability but overall positive growth. Products of animal origin (05) recorded a low average export value of 0.05 million BAM with an AAGR of 38.42%. The cereals showed a relatively low AAGR of 4.83% and a coefficient of variation of 49.71%, indicating export fluctuations. The strong growth in fruit can be explained by an increasing demand for these products in regional markets, due to improved production practices and diversification of agr-food products. The modest growth or decline in certain groups suggests that some product groups remain important for the export, while others face increasing competition or market shifts that impact their performance.

Tab. 5 Descriptive analysis of agri-food exports from 2013 to 2021 (million BAM)

Customs tariffs 01-24	Minimum (million BAM)	Maximum (million BAM)	Average (million BAM)	AAGR (%)	C_v (%)
01	2.16	11.25	3.89	3.41	7.70
02	1.35	6.65	3.51	-10.63	44.65
03	3.47	6.91	4.45	7.79	26.16
04	20.22	45.79	28.35	-3.31	28.80
05	0.01	0.13	0.05	38.42	74.14
06	0.17	0.62	0.35	-5.79	39.79
07	0.98	3.62	1.81	-4.35	45.22
08	4.67	19.10	10.30	19.25	39.88
09	0.10	1.91	0.86	-17.72	91.41
10	0.63	3.02	1.54	4.83	49.71
11	1.70	5.87	3.50	11.04	39.64
12	1.16	4.49	1.75	10.72	60.45
13	:	:	:	:	:
14	:	:	:	:	:
15	0.31	0.22	0.08	34.97	87.72
16	0.10	3.89	2.98	6.49	39.62
17	0.22	3.76	1.79	-10.28	74.88
18	14.36	25.71	18.35	-2.17	18.84
19	10.97	15,31	13.29	4.26	10.49
20	1.77	2.63	2.25	-0.90	11.57
21	2.02	4.36	3.31	1.96	24.89
22	4.26	10.31	7.56	7.45	28.72
23	0.11	1.49	0.46	15.00	88.55
24	0.03	10.63	3.27	-33.46	134.83

Source: Author's calculations

Table 6 provides data on the imports of agri-food products between the Republic of Srpska and the CEFTA countries from 2013 to 2021, along with the average share of these imports in the total sector's imports. The largest imports in the agri-food industry came from the cereals and beverages sector, which showed steady growth or at least stagnation over the past period. Cereal imports decreased in 2021 compared to 2013 but still held a significant average share of 17.77% of total agri-food imports. Cereal preparations imports showed a continuous increase from 42.60 million BAM in 2013 to 50.63 million BAM in 2021, with an average share of 12.50% in agri-food imports. This suggests a rising demand for cereal–based and flour-based food products. Product group 22 (Beverages, spirits, and vinegar) showed fluctuations in values but stabilised in 2021 at 45.46 million BAM. The average share of total agri-food imports was 14.78%. These products recorded substantial imports, indicating constant demand for beverages and other products from the CEFTA countries.

Product groups related to live animals and dairy products showed a decline in imports, which can be explained by increased domestic production or changes in consumption patterns. The import of live animals declined from 10.83 million

BAM in 2013 to just 2.65 million BAM in 2021. An average share of imports was 1.35% compared to the total agri-food imports. The import values of dairy products varied, declining in 2021 to 7.81 million BAM from 8.25 million BAM in 2016. The average share of dairy products in the total agri-food imports was 2.44%. The positive and negative trends explained by certain product groups may indicate changes in consumer habits, domestic production, or market competition.

Tab. 6 Imports of agri-food products between the Republic of Srpska and the CEFTA (million BAM) and an average share in the agri-food imports (%) in the 2013 – 2021 period

Customs tariffs 01-24	2013	2014	2015	2016	2017	2018	2019	2020	2021	Average share in agri-food imports %
01	10.83	8.49	8.17	4.14	3.78	2.90	2.69	2.28	2.65	1.35
02	2.99	2.09	2.08	2.62	2.77	2.89	3.25	4.24	4.65	0.83
03	0.74	1.96	1.82	3.24	2.24	3.36	2.61	2.94	3.06	0.66
04	4.40	5.02	5.89	8.25	5.71	10.44	20.97	12.18	7.81	2.44
05	0.08	0.11	0.06	0.26	0.30	0.26	0.11	0.52	0.94	0.08
06	1.38	1.48	1.10	1.11	0.86	0.88	0.97	0.99	1.30	0.30
07	7.94	6.32	6.34	8.84	7.29	8.66	10.90	8.40	8.24	2.18
08	3.89	3.14	3.03	4.21	5.81	5.13	7.31	5.49	9.35	1.42
09	1.93	1.90	1.48	1.57	1.35	1.61	1.79	1.82	1.77	0.45
10	63.44	75.96	71.78	92.73	82.23	71.74	47.75	44.07	51.01	17.77
11	17.36	13.73	13.77	16.93	15.86	14.04	10.95	10.66	10.48	3.67
12	4.60	4.94	4.56	6.56	5.45	3.05	2.46	2.62	2.92	1.10
13	0.003	0.01	0.06	0.003	0.02	0.01	0.03	0.02	0.01	0.005
14	0.06	0.05	0.06	0.05	0.04	0.03	0.03	0.02	0.03	0.01
15	8.03	11.50	10.63	10.46	11.10	6.35	3.88	3.10	2.70	3.06
16	37.09	37.85	35.85	36.93	39.90	44.44	39.63	38.94	39.82	10.44
17	4.29	8.88	7.83	11.33	22.21	20.05	13.77	16.55	20.39	3.76
18	27.65	22.10	18.59	15.87	13.55	16.44	14.15	12.89	12.94	4.56
19	42.60	45.73	43.12	44.25	46.28	46.76	49.54	49.94	50.63	12.50
20	11.66	13.19	12.28	10.10	10.30	9.69	13.12	12.62	14.17	3.20
21	18.30	20.54	21.38	21.39	22.01	23.76	26.78	31.63	34.61	6.61
22	87.34	84.07	75.11	40.40	46.41	45.30	41.05	36.22	45.49	14.78
23	21.72	18.89	23.79	28.24	28.84	34.77	37.36	39.20	42.04	8.26
24	8.66	7.51	10.56	6.88	4.53	4.68	3.77	4.38	4.66	1.64

Source: Author's calculations.

Table 7 presents a descriptive analysis of agri-food imports from 2013 to 2021.

Tab. 7 Descriptive analysis of agri-food imports from 2013 to 2021 (million BAM)

Customs tariffs 01-24	Minimum (million BAM)	Maximum (million BAM)	Average (million BAM)	AAGR (%)	C_v (%)
01	2.28	10.83	5.10	-16.13	62.35
02	2.08	4.65	3.06	5.68	28.66
03	0.74	3.36	2.44	19.35	34.51
04	4.40	20.97	8.96	7.45	57.85
05	0.06	0.94	0.29	32.27	97.07
06	0.86	1.48	1.12	-0.74	19.63
07	6.32	10.90	8.10	0.46	17.35
08	3.03	9.35	5.26	11.57	39.03
09	1.35	1.93	1.69	-1.10	11.80
10	44.07	92.73	66.74	-2.69	24.75
11	10.48	17.36	13.75	-6.11	24.75
12	2.46	6.56	4.13	-5.54	34.72
13	0.003	0.06	0.02	13.53	108.80
14	0.02	0.06	0.04	-6.44	33.69
15	2.70	11.50	7.53	-12.72	48.03
16	35.85	44.44	38.94	0.89	6.46
17	4.29	22.21	13.92	21.51	45.23
18	12.89	27.65	17.13	-9.05	28.95
19	42.60	50.63	46.54	2.18	6.38
20	9.69	14.17	11.95	2.46	13.30
21	18.30	34.61	24.49	8.29	22.30
22	36.22	87.34	55.71	-7.83	36.51
23	18.89	42.04	30.54	8.60	26.87
24	3.77	10.56	6.18	-7.46	37.92

Source: Author's calculations.

This analysis provided an insight into the key trends, stability, and fluctuations in imports across customs tariffs. Fish and fish products (03), products of animal origin (05), and sugar and sugar confectionery (17) showed significant annual growth in imports with AAGR of 19.35%, 32.27%, and 21.51%. The import stability was prominent in the meat (16) and cereals (19) preparations, with the coefficient of variation of 6.46% and 6.38%. Product groups such as live animals (01), animal and vegetable fats (15), and cocoa and cocoa preparations (18) indicated notable declines in annual growth, suggesting changes in demand policies or competition. The product groups under customs tariffs 05 and 13 exhibited the highest levels of volatility, with the coefficient of variation amounting to 97.07% and 108.80%. The growth of imports expressed due to AAGR may be linked to increased demand for these products, while the decline of certain product groups could be due to increased competition for domestic products, or shifts in consumer preferences. A high coefficient of variation recorded by product groups 05 and 13 can be explained by a low trade volume or price instability.

Table 8 shows the total trade of agri-food products between the Republic of Srpska and the CEFTA countries from 2013 to 2021, highlighting both growth and decline across various product groups. Some sectors experienced strong, consistent growth, while others recorded decreased trade volume during the analysed period.

Tab. 8 Total trade of agri-food products between the Republic of Srpska and the CEFTA (million BAM) and an average share in total agri-food trade (%) in 2013 – 2021 period

Customs tariffs 01-24	2013	2014	2015	2016	2017	2018	2019	2020	2021	Average share in agri-food imports %
01	13.49	12.38	10.33	6.38	7.26	14.15	5.27	5.53	6.13	1.81
02	6.29	6.54	6.57	9.27	6.02	5.31	6.75	6.37	5.99	1.33
03	4.54	5.52	5.46	7.86	5.92	6.83	7.45	8.47	9.97	1.40
04	33.31	34.93	26.10	30.69	27.45	45.23	66.76	41.43	29.90	7.51
05	0.09	0.13	0.10	0.31	0.36	0.29	0.13	0.57	1.07	0.07
06	1.88	1.76	1.35	1.27	1.22	1.51	1.34	1.26	1.61	0.30
07	9.34	7.41	7.78	10.29	10.91	10.61	13.37	10.32	9.21	2.00
08	8.57	13.64	14.46	13.22	14.74	13.38	14.84	18.81	28.45	3.16
09	3.72	3.35	3.40	3.08	1.55	1.70	1.93	2.05	2.15	0.52
10	64.07	77.64	74.80	95.06	84.00	72.99	49.08	44.95	51.93	13.73
11	19.47	15.43	16.09	19.68	19.51	19.90	15.15	14.63	15.37	3.48
12	6.59	6.34	6.12	7.82	6.87	4.21	3.66	3.91	7.41	1.19
13	0.003	0.01	0.06	0.01	0.02	0.01	0.04	0.09	0.02	0.01
14	0.08	0.07	0.06	0.05	0.04	0.03	0.03	0.02	0.04	0.01
15	8.03	11.61	10.66	10.68	11.24	6.47	3.88	3.18	2.76	1.53
16	39.27	41.36	35.95	40.10	43.23	47.95	43.16	42.83	43.43	8.46
17	5.04	11.80	11.59	14.10	24.99	22.13	14.32	16.77	20.70	3.17
18	47.20	38.58	40.15	41.58	31.47	32.80	28.52	29.67	29.34	7.17
19	53.57	57.81	56.27	57.56	61.09	61.23	61.88	63.11	65.94	12.09
20	14.23	14.96	14.85	12.32	12.58	11.82	15.75	14.76	16.56	2.88
21	21.67	23.35	25.08	25.55	24.03	25.99	30.01	35.99	38.54	5.64
22	91.75	90.95	83.21	49.50	56.42	55.61	48.15	40.48	53.33	12.77
23	22.21	19.20	24.25	28.64	29.23	34.97	37.48	39.48	43.53	6.27
24	9.55	7.97	16.95	17.51	14.27	5.71	3.89	4.48	4.69	1.91

Source: Author's calculations.

The product group preparations of cereals (19) showed a steady increase over the observed period, particularly from 2020 to 2021, reaching a 12.09% share in the total agri-food trade. Cereals (10) consistently exhibited high trade volumes throughout the years. Fruit as well as residues and waste from the food industry have shown trade growth, especially in 2020-2021, suggesting an increased demand. Animal or vegetable fats and oils, and tobacco and tobacco products showed a decline in the total trade volume over the observed period. Animal or vegetable fats and oils decreased from 8.03 million BAM in 2013 to 2.76 million BAM in 2021. Beverages, spirits, and vinegar, which showed high values in the early years of the observed period, experienced fluctuations and a drop from 91.75 million BAM in 2013 to 53.33 million BAM in 2021. Preparations of cereals and meat maintained a relatively stable trade volume, with minor fluctuations throughout the years.

Table 9 presents a descriptive analysis of the total trade in agri-food products from 2013 to 2021, providing key statistics for each customs tariff. Products of animal origin, lac; gums, and vegetable plaiting materials had the lowest recorded value of trade volume. The maximum trade volume was recorded for cereals, beverages, and dairy products. Cereals and beverages had the highest average total trade. The highest annual growth rate was recorded for products of animal origin, fish and fish products, fruit, lac and gums, and sugar. The highest variability in trade volume was found for product groups with customs tariffs: 05, 13, 24 15,14, and 01.

Tab. 9 Descriptive analysis of agri-food imports from 2013 to 2021 (million BAM).

Customs tariffs 01-24	Minimum (million BAM)	Maximum (million BAM)	Average (million BAM)	AAGR (%)	C_v (%)
01	5.27	14.15	8.99	-9.39	40.10
02	5.31	9.27	6.57	-0.61	16.72
03	4.54	9.97	6.89	10.34	24.94
04	26.10	66.76	37.31	-1.34	34.04
05	0.09	1.07	0.34	36.96	93.33
06	1.22	1.88	1.47	-1.92	16.19
07	7.41	13.37	9.92	-0.16	17.96
08	8.57	28.45	15.57	16.19	35.33
09	1.55	3.72	2.55	-6.66	32.61
10	44.95	95.05	68.28	-2.59	24.91
11	14.63	19.90	17.25	-2.91	13.35
12	3.66	7.82	5.88	1.48	26.54
13	0.003	0.09	0.03	27.93	104.54
14	0.02	0.08	0.05	-9.88	43.09
15	2.76	11.61	7.61	-12.52	47.93
16	35.95	47.95	41.92	1.27	7.95
17	5.04	24.99	15.72	19.32	39.23
18	28.51	47.20	35.48	-5.77	18.62
19	53.57	65.94	59.83	2.63	6.39
20	11.82	16.56	14.20	1.91	11.44
21	21.67	38.54	27.80	7.46	21.08
22	40.48	91.75	63.27	-6.56	31.20
23	19.20	43.53	31.00	8.77	26.93
24	3.89	17.51	9.45	-8.50	57.86

Source: Author's calculations.

Conclusion

The CEFTA agreement, concluded in 2006 between the SEE countries, and implemented in Bosnia and Herzegovina since 2007, was designed to foster regional cooperation and accelerate economic development. Establishing a free trade zone between the SEE countries has enhanced trade exchange and contributed to the EU integration process. Over the period from 2013 to 2021, the CEFTA countries were considered important trading partners of the Republic of Srpska, accounting for an average of 32.05% of its agri-food products. The descriptive analysis tools of trade trends have indicated modest overall growth in the total agri-food trade between the Republic of Srpska and the CEFTA countries, with an AAGR of 0.11%. The exports of agri-food products from the Republic of Srpska to the CEFTA market increased by 2.31%, whereas the imports declined slightly by -0.50%. The positive exports trend underscores the Republic of Srpska's stable presence in the CEFTA market, further highlighting a favourable impact the CEFTA has had on the agri-food sectors' trade dynamic.

A descriptive analysis of trade indicators by product groups revealed notable export and import performance disparities. Dairy products recorded the highest average exports value, amounting to 28.35 million BAM, while cereals dominated the imports with an average of 66.74 million BAM. The variations in trade performance were more pronounced in exports than imports, underscoring the different levels of stability across product groups. While some product groups demonstrated a strong and secure market presence, others faced instability, indicated by calculated coefficients of variation.

There is a significant potential for enhancing foreign trade in agri-food products between the Republic of Srpska and the CEFTA countries. Achieving this goal requires a dedicated focus on stimulating agricultural production through increasing productivity, modernising the sector, implementing quality standards, and ensuring food safety. By fully leveraging the benefits of the CEFTA agreement, the Republic of Srpska can strengthen its regional trade position, reduce reliance on volatile sectors, and foster overall trade stability.

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Утицај примјене CEFTA споразума на спољотрговинску размјену у агроиндустријским производима Републике Српске

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Сажетак

С обзиром на кључну улогу пољопривредног сектора у економском развоју Републике Српске, трговина у пољопривредно – прехрамбеним производима је од великог значајна, посебно са земљама CEFTA. Овај рад истражује утицај мулитлатералног трговинског споразума CEFTA на трговинске токове пољопривредно – прехрамбеним производима. Коришћењем статистичких података за период 2013 -2021 и примјеном метода дескриптивне анализе, рад има за циљ да процјени извоз, увоз и укупну трговину у агроиндустријском сектору. Резултати показују да је CEFTA позитивно утицала на извоз пољопривредно – прехрамбених производа и укупан обим размјене између Републике Српске и земаља CEFTA. Конкретно, резултати су указали на конзистентан трговински дефицит у укупном обиму размјене пољопривредно –прехрамбеног сектора, наглашавајући неопходност и значај олитичких мјера усмјерених на јачање кокурентности и смањење трговинског јаза.

Кључне ријечи: агроиндустрија, CEFTA, Република Српска, утицај

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