



THE INTERNATIONAL TRADE OF NON-EURO CEE COUNTRIES DURING THE PERIOD 2014-2021. A MULTIPARAMETER ANALYSIS

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Abstract

On their development path the Central and Eastern European (CEE) countries partially overcame the gap to the developed countries by means of the external trade, acquiring the needed goods and services and satisfying the foreign demand for their products which otherwise was lacking on their territory or seizing an opportunity. In the current paper the authors aim at analysing the evolution of the trade flows of the countries they thought to be the most similar in this aspect, which are the ones belonging to the non-euro area of the European Union (EU) during the period 2014-2021. The research used the Eurostat database, the products being classified after the Standard International Trade Classification (SITC) main categories in order to find out the sectors with the largest contribution to the total surplus or deficit. Moreover, there were identified the main partners of every analysed country and calculated the evolution of respective trade balances at the start and the end of the selected period of time. The authors findings reveal an increasing dependency on exports to Germany, imports from China, decreasing imports of mineral fuels from Russia and also important similarities and differences in the group. The novelty of the manuscript resides in comparing the most profitable sectors during the analysed period and identifying the partners' contribution to the surplus or the deficit. The current research might be extended with a more in-depth level of multinational enterprises and also in the case of services.

Key words:

international trade, external trade, balance of trade, trade partners, CEE trade

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1. Introduction

All countries use exports and imports in order to benefit from an identified opportunity on the global market or to satisfy the need of goods and services they cannot produce due to the lack of production factors or efficiency. External trade is the traditional way and first step of internationalisation of a company, being complementary with and might leading to a foreign direct investment (FDI) eventually (Albulescu and Goyeau, 2019).

Internationalization can be defined as the extension of a production process (understood as the evolution of some resources or raw materials from the initial to the final stage of consumption) across a political border. If people don't want or are not allowed to move from one territory to another, then it is important that the final goods are moved to the destinations where they are required for consumption. The primary material resources also not being distributed evenly on the Earth's surface, explain the trend of an increasingly economic globalization. This expected evolution is recorded also in the case of Central and East European (CEE) countries, which increased their share in the international trade from 2.2% to 4.6% during the period 2000-2016 (Bierut and Kuziemska-Pawlak, 2017; Voronina et al., 2018), as a consequence of the EU membership and the increase of multinational corporations' activity in host economies.

In the current paper the authors will try to analyse both flows of the external trade of EU non-Euro CEE countries during the period 2014-2021 by comparing the volumes, the trade balances, identifying the main destinations and sources and finding the most profitable sectors. According to the European Commission's Convergence Report (European Commission, 2022), Croatia is ready to adopt the euro starting with 1 January 2023 and therefore we will exclude it from the group and will draw the primary data for Bulgaria, Czechia, Hungary, Poland and Romania even if Bulgaria has its national currency pegged to EUR. Data is drawn from the EUROSTAT databases using the Standard International Trade Classification (SITC). During our research we will try to answer the following questions: whether we have either an homogenous or heterogenous group of countries (Q1), which are the most successful and unsuccessful countries in terms of trade profitability if the case is depending on the balance of trade (Q2), which are the sectors with the largest contribution to the external trade of the selected countries in the analysed period (Q3) and, last but not least, what is the trend of the international relations with the most important partner countries after the financial and global crisis of 2008-2012 (Q4). Using data from the years 2020 and 2021 makes our research more useful, as seizing the effect of the pandemic on the previously established connections of non-euro CEE countries with the foreign entities and on the evolution of their external trade in general. Given the services share in total trade is still pretty small, the authors proposed to analyse for the moment only the external trade evolution with goods for the selected countries and period.

The paper is organized as follows: in the second section we will reveal the most recent articles regarding the economies and especially the external trade of CEE countries, the third section will cover the methodology and data used in our research, the fourth section includes our results and the last section makes conclusions.

2. Literature Review

The economies of CEE countries have undergone major structural transformations over the past 33 years from a planned or centralized type to market economies. In response to the creation of the Committee of European Economic Cooperation in western Europe, the Eastern European countries (Bulgaria, Czechoslovakia, Hungary, Poland, and Romania) founded COMECON (by name of the Council for Mutual Economic Assistance or CMEA) in 1949 under the coordination of the Union of Soviet Socialist Republics. Unfortunately, Comecon was only an imitation of internationalization, as all decisions regarding the production and trade were made politically and especially after consulting the Soviet Union. Therefore, the COMECON member states were faced an unrealistic perspective as what they understood by international trade was first the abolition of any type of trade carried out by private actors (Apăvăloaei et al., 2019). After meeting the pre-accession criteria and a successful negotiation, the Visegrad group (the Czech Republic,

Slovakia, Hungary, Poland), the Baltic countries, Slovenia, Bulgaria, Romania and Croatia joined the EU and its single market, leading to a higher standard of living for their citizens, stronger national and EU institutions or ensuring the respect of fundamental rights.

The CEE countries accession into the EU has increased the exports and imports in both parts and final goods between the two parts of the European continent; it stimulated not only the exploitation of the existent comparative advantages but also the production of intermediate goods, created previously in the home countries of MNCs (Martinez-Zarzoso et al., 2015). Using the gravity model and aiming at analysing the trade integration of the previous countries, (Bussière, Fidrmuc and Schnatz, 2005) found out that the flows volumes between the newer and older members had been very dynamic and although they were significantly behind than the standard, gravity forces would suggest particularly in the first years of the transition process, converged to a more normal level over time. CEE economies are widely open (compared to the international average) and thus very dependent on external developments, mentioning the small and medium economies are the most open as they need exports as much as possible in order to generate the needed financial support for the acquisition of materials, resources or capital. Ekonomicznego Katowicach and Sobański (2015) reached to interesting results regarding the openness, which ranges from 80-100% in case of Romania, Poland and Ukraine to 170% in case of Hungary, the Slovak Republic and the Baltic Countries in 2013. The author shows also, that after the financial and global crisis the share of exports and imports in GDP for the CEE region surpassed even that of the group of major exports among the developing countries in Asia. The correlation analysis performed by Vaida Pilinkienė, 2016 demonstrates that trade openness positively and significantly correlates with GDP per capita as well as with a series of indicators of competitiveness, such as the research and development expenditure, industry added value and labour productivity. This result reveals that the high-degree trade openness of CEE countries provides the relevant conditions for economic growth and competitiveness increase in the respective countries.

There are also authors (Zaman et al., 2011; Mencinger, 2013) who identified some negative implications of the accession to the EU and the increasing role of the MNCs in the economy. Among the related effects generated in a vulnerable or a transition economy we can enumerate as follow: a large current account deficits and the corresponding increase of indebtedness, large trade account deficits, the cheap sale of the best productive assets to foreign companies (with the exception of Slovenia), a growing gap between the gross domestic product and gross national product, the avoiding or lowering taxes on profits by manipulating the transfer prices through subsidiaries, reducing competition where local companies went bankrupt as the MNCs turned into a powerful monopoly, foreign banks with twice the rates of returns on equity in their home countries in case of financial crisis.

Miron and Holobiuc (2020) studied the main trends within 3 geographical clusters of countries: Central Eastern, North Western and Southern Europe and their findings show that economies which had lower initial GDP increased faster than the countries with higher performances and also with the increase of GDP, the gap reduces. Although the North Western countries had important increases of GDP per capita, the group is still diverging. As far as the Southern Europe countries are concerned, in the analysed period they recorded more modest economic performances or even negative. The authors argue that countries from Central and Eastern Europe had the most significant performances in terms of enhancing their GDP per capita and especially reducing the disparities. The same conclusion has been drawn by Vrh, 2018 who discovered a decline in the domestic added value gap between the CEE-10 countries and EU-15 starting with 2003, even if the latter group still had a systematically larger share of added value in their exports. In order to perform better on the international market and maximize the added value, companies need to position at the two ends of the smile curve proposed by Shih, the founder of Acer (Meng, Ye and Wei, 2020), meaning that research & development and marketing activities add the largest added value and the fabrication process is the smallest. Covering the years following the accession of CEE countries into the European Union, from 2004 until 2018, Dobrzanski and Grabowski (2019) demonstrated that all the analysed member states improved in terms of both pure and structural productivity, due to price liberalisation, removal of most of tariff barriers, strict fiscal policy,

competitive exchange rates, privatisation of state companies or deregulation.

The results of Kordalska and Olczyk (2022) validate the success of some Asian countries (Vietnam, Philippines or Malaysia), which have changed the production structure from an assembly hub for global value chains (GVC) for Japan and Korea to the leading exporters of high technology intermediates to advanced economies. Therefore, the authors recommend that the CEE countries should be oriented towards changing their role within GVCs, especially with the leader, or they should look after new chains or even create regional chains of their own.

Together with economic growth, international trade is one of the main factors influencing a country competitiveness. Compared to the innovation driven economies, where the relationship between trade and competitiveness is at the 1% level, in case of efficiency-driven economies the influence is significantly larger, at a 10% level (Rusu and Roman, 2018). Besides the export volumes, what countries export can count more in the equation of economic growth (Burciu et al., 2020) being the proponents of the restructuring of industries aiming more sophisticated outputs even if their comparative advantage (abundance of resources, cheaper labor, etc.) would rather indicate a specialization in low tech manufacture products and eventually medium tech manufactures. As the authors remind, in the 1980s, Poland, Hungary, Romania and Yugoslavia tried to develop import-based growth strategies, starting from the idea of developing competitive domestic industrial sectors by importing Western technology, but it did not produce the expected results. The effect is known as the “Polish disease”, which describes the inability to overcome the technological gap to the Western economies through imports and the negative impact of this policy on the ongoing deficit. During the period 2008-2017, the share of high-tech products in the EU export decreased to 16,2% from 17,2%; but inside the Union the CEE countries performed better than the EU-15, a good compound annual growth rate being reported by Poland (9,8%), Latvia (7,9%), Romania (7,7%) and Slovakia (7,0%) (Braja and Gemzik-Salwach, 2020).

3. Material and Methods

In the current paper the authors propose a phenomenological research trying to capture and analyse the recent evolution of the international trade of the non-euro CEE economies. Following the European Commission's Convergence Report 2022, we decided to download the customized raw data for 5 countries from EUROSTAT, namely Bulgaria, Czechia, Hungary, Poland and Romania. In order to identify the most important sectors we have used the one-digit codes of SITC nomenclature, resulting the following products:

- food and live animals;
- beverages and tobacco;
- crude materials, inedible, except fuels;
- mineral fuels, lubricants and related materials;
- animal and vegetable oils, fats and waxes;
- chemicals and related products;
- manufactured goods classified chiefly by material;
- machinery and transport equipment;
- miscellaneous manufactured articles;
- commodities and transactions not classified elsewhere in the SITC.

The comparison is made taking into consideration the share in total trade and the balance of trade for each category, which is a very good indicator for finding out the sectors which contribute to a country surplus or a deficit. Finally, we identified the main 5 sources and destinations standing out at the start and the end of the analysed period for every non-euro CEE country and calculated the balance of trade of each of them during the period 2014-2021.

4. Results and Discussion

The proximity to the home countries of MNCs (on which the gravitational models base on) and the EU membership quality coming with all advantages, especially the tariff or non-tariff barrier removal, determined

the CEE countries to redirect and acquire goods to/from another EU member states. With the exception of the evolution of intra-EU imports share starting with 2017, all analysed economies follow a trade pattern which reveal a very high dependence on the European market (Tables 1, 2).

Table 1

Share of intra-EU27 exports in total exports, total products (p.p.)

Country/ Time	2014	2015	2016	2017	2018	2019	2020	2021	Average	(2021- 2014) /2014
Bulgaria	60.2	62.4	63.9	61.2	65.2	64.2	65.5	66.7	63.7	10.7
Czechia	77.2	78	78.4	78.9	79.7	79.4	79.7	80.4	79	4.3
Hungary	76.3	77.3	77.4	77.7	78	78.5	78.4	78.2	77.7	2.6
Poland	71	72.6	73.1	73.5	74.3	74	74	74.8	73.4	5.2
Romania	67	69.3	70.7	71.7	72.8	73.2	74.1	73.2	71.5	9.3

Source: authors calculation based on Eurostat, [TET00037], last update 15.09.2022, extracted on 21.09.2022.

Table 2

Share of intra-EU27 imports in total imports, total products (p.p.)

Country/ Time	2014	2015	2016	2017	2018	2019	2020	2021	Average	(2021- 2014)/ 2014
Bulgaria	60	62.5	64.1	62.4	62.1	61.2	61	60.6	61.7	1.0
Czechia	74.9	74.7	75.9	75.2	74.3	74	72.9	73.7	74.5	-1.5
Hungary	73.4	74.7	75.7	74.1	72.8	71.9	70.6	71.3	73.1	-3
Poland	66.9	67.8	69.6	69	67.4	66.5	67.7	65.9	67.6	-1.5
Romania	73.1	74.7	74.8	73.6	72.6	72.7	73.6	72.4	73.4	-0.9

Source: authors calculation based on Eurostat, [TET00037], last update 15.09.2022, extracted on 21.09.2022.

Table 1 shows that inside this quasi-homogenous group of countries, the newest EU members, Romania and Bulgaria have the smallest intra-EU share of exports, but they nevertheless recorded the highest increase in the analysed period (10.7 p.p. in case of Bulgaria and 9.3 p.p. in case of Romania). Poland and Czechia increased their shares moderately, 5.2 p.p. and 4.3 p.p. respectively and Hungary, although not having the largest share of intra-EU exports registered a modest increase, of 2.6 p.p. Czechia had the highest share (80.4% of intra-EU exports in total in 2021), while the lowest is held by Bulgaria (60.2% in 2014). During the analysed period, the share of intra-EU imports had practically the same evolution for all 5 CEE countries, with a continuous increase until 2016, peaking at 75.9% in case of Czechia and 75.7% for Hungary and then decreasing until 2021. Bulgaria holds the smallest share of intra-EU trade also for imports as the indicator values ranged between 60% and 64.1% and Romania is the most constant, its share ranging between 72.4% and 74.8%. An interesting gap between the export and import intra-EU share occurs in cause of Poland, as although the average is at a level of 73.4% of exports towards the EU member states, the average share of intra-EU imports reaches only 67.6%. It is also worth mentioning the difference between a more static intra-EU share of imports compared to a dynamic share of exports of the CEE-5 countries.

Depending on every country territory and population, product competitiveness, the degree of openness, decision factors or private actors etc., the CEE-5 states perform differently on the international market. These factors influence the total production or the plentitude of resources, either human or land (territory and population), the purchase decision (product competitiveness), the know-how transfer and opportunities

capitalization (the degree openness) and also the institutional or human capital education (public and private actors), which will finally lead to a different weight in the European trade. We have calculated each country share in the intra- and extra-EU trade flows and we found out a significant improvement of the relative indicator in the selected period, which is determined mainly by Poland. Bulgaria increased its share in total UE export by 40%, but, starting from a low level, the improvement in the total share is only of 0.2 p.p. As both tables reveal, the analysed group of countries contribute to the total trade of the EU with an average of more than 14 p.p. during 2014-2021 which is already an important share given the development stage and size of the other UE member states.

Table 3

Share of exports per country in EU-27 exports, total products (p.p.)

Country/ Time	2014	2015	2016	2017	2018	2019	2020	2021	Average	(2021- 2014)/ 2014
Bulgaria	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.6	40.0
Czechia	4.1	4.3	4.4	4.5	4.5	4.6	4.7	4.5	4.5	9.8
Hungary	2.6	2.7	2.7	2.8	2.7	2.8	2.9	2.7	2.7	3.8
Poland	4.8	5.1	5.1	5.4	5.5	5.7	6.2	6.2	5.5	29.2
Romania	1.4	1.5	1.5	1.6	1.6	1.6	1.6	1.6	1.6	14.3
TOTAL	13.4	14.2	14.3	14.9	14.9	15.3	16	15.7	14.8	

Source: authors calculation based on Eurostat, [Intra and Extra-EU trade by Member State and by product group], last update 16.08.2022, extracted on 04.09.2022.

Table 4

Share of imports per country in EU-27 imports, total products (p.p.)

Country/ Time	2014	2015	2016	2017	2018	2019	2020	2021	Average	(2021- 2014)/ 2014
Bulgaria	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Czechia	3.6	3.8	3.8	3.9	3.9	3.9	3.9	3.9	3.8	8.3
Hungary	2.4	2.5	2.5	2.5	2.5	2.6	2.6	2.5	2.5	4.2
Poland	4.7	4.8	4.9	5.1	5.2	5.2	5.5	5.6	5.1	19.1
Romania	1.8	1.9	2.0	2.0	2.0	2.1	2.1	2.1	2.0	16.7
TOTAL	13.2	13.7	13.9	14.2	14.3	14.5	14.8	14.8	14.2	

Source: authors calculation based on Eurostat, [Intra and Extra-EU trade by Member State and by product group], last update 16.08.2022, extracted on 04.09.2022.

The balance of trade of the non-EURO CEE countries reveals important differences inside the group:

- I. Czechia has a trade surplus which rose from 15.6 billion in 2014 until 19.94 billion EUR in 2020. Probably due to the pandemic situation the increasing slowed down in 2020, thus the trade balance reached 18.03 billion in 2020 and then it registered a significant decrease until 12.24 billion, which is 3.36 billion less than the level registered in 2014;
- II. Hungary, after a 3-year uptrend, started to register a decline of the trade balance reaching even a negative value in 2021 (-1.12 billion EUR);

- III. The most sinuous values are recorded in case of Poland, which reaches a first peak in 2016 (3.89 billion EUR), a minimum in 2018 (-4.58 billion EUR), in 2020 the second peak, which is considered the highest ever trade surplus (10.56 billion EUR), for changing it the next year for a deficit (-0.58 billion EUR);
- IV. Bulgaria holds the most constant balance of trade, starting from -4.07 million EUR in 2014 and reaching -4.41 billion EUR in 2021 and values ranging between -4.58 billion EUR (in 2018) and -2.14 billion EUR in 2016;
- V. The most unfavourable and alarming balance of trade is that of Romania, which increased its deficit by more than 4 times during the selected period, reaching a record in 2021 (-24.44 billion EUR) and showing a chronical evolution which might negatively impact the economy (Figure 1).

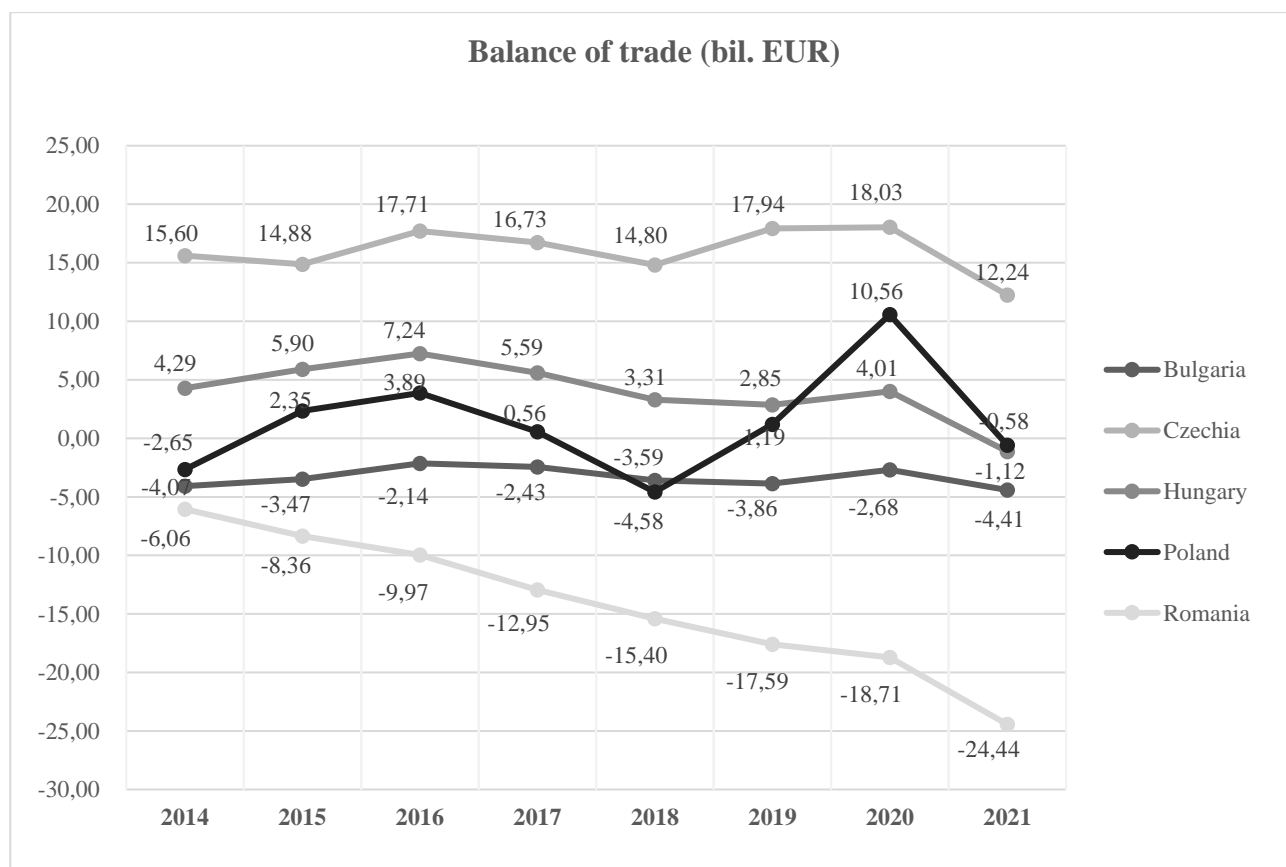


Figure 1. Balance of trade of non-EURO CEE countries (bil. EUR)

Source: authors calculations based on Eurostat, [DS-018995], last update 15.09.2021, extracted on 20.09.2022.

Table 5 illustrates the most important sectors grouped according to SITC for the CEE-5 countries trade: the machinery and transport equipment, which hold an average share ranged between 21.9% (Bulgaria) and 56.8% (Czechia) in case of exports and 27.1% (Bulgaria) and 48% (Hungary) in case of imports; the manufactured goods classified chiefly by material with shares between 10.6% (Hungary) and 22.2% (Bulgaria) in case of exports and 14% (Hungary) and 19.7% (Romania) in case of imports; miscellaneous manufactured articles, with shares between 9.1% (Hungary) and 16.6% (Poland) in case of exports and 9% (Hungary) and 12.8% (Poland) in case of exports; chemicals and related products, which ranged between 4.8% (Romania) and 12.1% (Hungary) in case of exports and between 11.5% (Czechia) and 14.4% (Bulgaria). Other sectors own shares less than 10% with only a few exceptions, food and live animals (Bulgaria and Poland in case of their exports) and mineral fuels, lubricants and related materials (Bulgaria in case of its imports). The authors findings are in line with previous researches (Burciu et al., 2020), showing the propensity of all CEE-5 countries to engage in medium-tech manufactures trade.

Table 5

Average share of main categories in total exports and imports during the period 2014-2021 (p.p.)

Country	Bulgaria		Czechia		Hungary		Poland		Romania	
	Export	Import	Export	Import	Export	Import	Export	Import	Export	Import
Food and live animals	11.1	7.8	3.4	4.7	6.8	4.7	10.9	7.3	7	7.9
Beverages and tobacco	1.4	1.6	0.8	0.7	0.5	0.6	1.8	0.8	1.7	0.9
Crude materials, inedible, except fuels	6.9	8.7	2.2	2.1	1.9	2	2.3	3	4.2	2.9
Mineral fuels, lubricants and related materials	8.6	13.5	2.1	5.8	3.1	8.5	2.6	7.3	4.2	7
Animal and vegetable oils, fats and waxes	1.2	0.4	0.2	0.2	0.5	0.2	0.2	0.4	0.3	0.2
Chemicals and related products	10.4	14.4	6.5	11.5	12.1	12.8	9.3	14.3	4.8	13.7
Manufactured goods classified chiefly by material	22.2	17.1	15.1	16.4	10.6	14	18.6	17.3	16.5	19.7
Machinery and transport equipment	21.9	27.1	56.8	46.6	55	48	37.7	35.4	46	37
Miscellaneous manufactured articles	13.5	8	12.5	11.6	9.1	9	16.6	12.8	15.2	10.7
Commodities and transactions not classified elsewhere in the SITC	2.6	1.4	0.3	0.3	0.4	0.3	0.2	1.5	0.2	0

Source: authors calculations based on Eurostat, [DS-018995], last update 15.09.2021, extracted on 21.09.2022.

As previously stated and as table no. 6 shows, Czechia, Hungary and Poland with mature and functional market economies and a higher GDP per capita register a positive balance of trade, while Bulgaria and Romania - a negative one, with the mention that Romania averages -14.18 billion EUR, which is already a huge drawback for the current account and domestic capital, especially in crisis periods when all foreign investors transfer the amounts in order to help the GVC leaders, usually located in developed countries.

We identified the most important products contributing to the balance of trade of every analysed country by annual average:

- I. Bulgaria records a surplus for miscellaneous manufactured articles (1,196.31 million EUR), manufactured goods classified chiefly by material (825.12 million EUR), food and live animals (671.92 million EUR)

- and a deficit in the trade of machinery and transport equipment (-2314.46 million EUR), mineral fuels, lubricants and related materials (-1,784.25 EUR), chemicals and related products (-1533.25 million EUR).
- II. Czechia records a very large surplus for machinery and transport equipment (23,933.96 million EUR) and miscellaneous manufactured articles (3,231.73 million EUR) and high deficits for chemicals and related products (-6,132.09 million EUR), mineral fuels, lubricants and related materials (-4,950.5 million EUR), food and live animals (-1,411.94 million EUR).
- III. Hungary records a high surplus for machinery and transport equipment (9,027.48 million EUR) and food and live animals (2272.08 million EUR) and deficits in case of mineral fuels, lubricants and related materials (-5,015.39 million EUR) and manufactured goods classified chiefly by material (-2,906.14 million EUR).
- IV. Poland records a high surplus for miscellaneous manufactured articles (8,443.03 million EUR), food and live animals (7,895.65 million EUR) and machinery and transport equipment (5,320.34 million EUR), and very large deficits for chemicals and related products (-10,509.25 million EUR) and mineral fuels, lubricants and related materials (-9,878.55 million EUR).
- V. Romania records a high surplus only in case of miscellaneous manufactured articles (1,150.05 million EUR), while high deficits are recorded for chemicals and related products (-7,545.75 million EUR), manufactured goods classified chiefly by material (-4,694.77 million EUR), mineral fuels, lubricants and related materials (-2,764.09 million EUR) and food and live animals (-1,679.61 million EUR).

Table 6

Balance of trade of main products during the period 2014-2021 (annual average, million EUR)

Product / Country	Bulgaria	Czechia	Hungary	Poland	Romania
Food and live animals	671.92	-1,411.94	2,272.08	7,895.65	-1,679.61
Beverages and tobacco	-98.74	257.64	-51.33	2,303.04	411.06
Crude materials, inedible, except fuels	-795.02	536.56	-49.01	-1,590.17	361.32
Mineral fuels, lubricants and related materials	-1,784.25	-4,950.50	-5,015.39	-9,878.55	-2,764.09
Animal and vegetable oils, fats and waxes	219.59	87.64	342.3	-451.19	35.71
Chemicals and related products	-1,533.25	-6,132.09	-184.91	-10,509.25	-7,545.75
Manufactured goods classified chiefly by material	825.12	440.19	-2,906.14	2,820.16	-4,694.77
Machinery and transport equipment	-2314.46	23,933.96	9,027.48	5,320.34	459.86
Miscellaneous manufactured articles	1,196.31	3,231.73	421.52	8,443.03	1,150.05
Commodities and transactions not classified elsewhere in the SITC	280.42	-0.39	153.14	-3,010.64	82.25
TOTAL	-3,332.37	15,992.80	4,009.74	1,342.40	-14,183.96

Source: authors calculations based on Eurostat, [DS-018995], last update 15.09.2021, extracted on 21.09.2022.

The authors have also tried to analyse the source and destination countries of all selected non-EURO CEE member states and the tables below (Tables 7-11) show similarities but also large differences inside the group, together with interesting evolution of their partners' share or balance of trade. Thus, Germany is identified as

the main partner by far, regarding both trade flows for all countries except Bulgaria, which imported mostly from the Russian Federation in 2014 (15.2%). However, in 2021 Bulgaria changed the main source into Germany (12.3%) as well (Table 7). As to the balance of trade, all countries except Romania record a raise in trade relations with Germany, Czechia even registering an important result of 12,662.8 million EUR. The United Kingdom share in Czechia's and Poland's trade has decreased significantly between 2014 and 2021, especially for imports, due to Brexit but both CEE countries managed to record an important surplus growth: 1429 million EUR in case of Czechia (increase of 38.2%) and 5284.23 million EUR in case of Poland (increase of 88.0%). Although not a member of the EU, Turkey made use of the its proximity to Bulgaria and Romania for being an important partner of both countries and also improving its balance of trade from a deficit to a surplus between 2014 and 2021. Very large deficits are recorded by Bulgaria, Hungary and Poland in their international trade with the Russian Federation; although the dependence is reduced by almost half (in terms of import shares), there remain a minimum of 2546.2 million EUR in case of Bulgaria in 2021 (Table 7), while in the same year Poland records a deficit of 8721.2 million EUR (Table 10). China's dominance in the world trade - 13% of world's exports in 2014 and 14.7% in 2020 (Nicita and Razo, 2021) might be the explanation for the huge raise of the surplus in 2021 compared to 2014 in relation with Czechia (10,487 million EUR, 186.8% increase), Hungary (4,843.5 million EUR, 142.44% increase), Poland (19,182.2 million EUR, 216.1% increase) and Romania (3,502.8 million EUR, 196% increase), becoming the second large supplier country for Czechia, Hungary and Poland and 4th largest supplier for Romania in 2021. Basically, the same situation applies also for Netherlands, which registered a surplus with Czechia (4457 million EUR in 2021 starting from 2986.3 million EUR in 2014) and Poland (6022.4 million EUR in 2021, starting from 2576.4 million EUR in 2014). Other important partners for the CEE-5 countries are Italy (2nd largest partner for Romania), France, Slovakia and Austria as traditional partners of Czechia and Hungary respectively and it is also worth mentioning Greece in case of Bulgaria and inevitably the trade inside the analysed group.

Table 7

Share of main partners of Bulgaria in its total export and import and the related balance of trade in 2014 and 2021 (p.p., million EUR)

Bulgaria	Export				Import				Balance of trade	
	2014	2021	2014	2021	2014	2021	2014	2021	2014	2021
Germany	12	14.9	2,655.2	5,181.2	12.3	12.3	3,213.1	4,800.5	-557.9	380.7
Turkey	9.3	6.2	2,058.4	2,143.6	5.6	7.7	1,468.1	3,017.9	590.3	-874.4
Italy	9	7.6	1,981.4	2,621.6	7	6.6	1,840.8	2,589.9	140.5	31.7
Romania	7.9	10.1	1,748.1	3,510.4	6.8	7.6	1,784.0	2,957.5	-35.8	552.9
Greece	6.7	6.6	1,481.7	2,292.6	5.1	5.3	1,337.0	2,072.2	144.7	220.4
Russian Federation	2.4	1.3	526.8	433.9	15.2	7.6	3,963.2	2,980.1	-3,436.4	-2,546.2

Source: authors calculations based on Eurostat, [DS-018995], last update 15.09.2021, extracted on 21.09.2022.

Table 8

Share of main partners of Czechia in its total export and import and the related balance of trade in 2014 and 2021 (p.p., million EUR)

Czechia	Export				Import				Balance of trade	
	2014	2021	2014	2021	2014	2021	2014	2021	2014	2021
Germany	32	32.5	42,176.3	62,263.4	30.1	27.7	34,952.5	49,600.6	7,223.9	12,662.8

Slovakia	8.4	8.1	11,044.0	15,515.4	6.8	5.7	7,884.0	10,193.1	3,160.0	5,322.3
Poland	6	6.8	7,884.9	12,964.4	8.6	9.2	9,941.7	16,571.1	-2,056.8	-3,606.6
United Kingdom	5.1	3.8	6,684.7	7,286.9	2.5	1.2	2,940.1	2,113.0	3,744.6	5,173.9
France	5.1	4.6	6,676.6	8,864.0	3.2	2.9	3,664.4	5,209.4	3,012.2	3,654.6
Austria	4.3	4.5	5,694.0	8,575.0	4.2	3.8	4,832.7	6,895.9	861.3	1,679.0
Netherlands	2.7	3.7	3,599.4	7,063.7	5.7	6.4	6,586.0	11,520.7	-2,986.3	-4,457.0
China	1.2	1.3	1,541.7	2,462.6	6.2	10.4	7,156.2	18,564.2	-5,614.5	-16,101.5

Source: authors calculations based on Eurostat, [DS-018995], last update 15.09.2021, extracted on 21.09.2022.

Table 9

Share of main partners of Hungary in its total export and import and the related balance of trade in 2014 and 2021 (p.p., million EUR)

Hungary	Export				Import				Balance of trade	
	2014	2021	2014	2021	2014	2021	2014	2021	2014	2021
Germany	28.1	26.9	23,398.8	32,230.2	25.3	23.5	19,982.7	28,379.4	3,416.1	3,850.8
Austria	5.6	4.7	4,695.6	5,679.4	7.3	6	5,800.0	7,290.8	-1,104.4	-1,611.3
Romania	5.6	5.5	4,639.8	6,538.0	3.2	2.9	2,531.6	3,558.8	2,108.3	2,979.2
Slovakia	5	5.2	4,195.8	6,284.2	5.4	5.8	4,257.6	7,003.8	-61.8	-719.6
Italy	4.7	5.8	3,899.2	6,980.7	4.4	4.4	3,500.1	5,267.2	399.2	1,713.5
Poland	3.9	4.3	3,261.7	5,158.4	5.2	5.6	4,078.6	6,750.7	-816.9	-1,592.4
Russian Federation	2.5	1.4	2,069.5	1,702.5	6.8	3.5	5,404.1	4,284.7	-3,334.6	-2,582.3
China	1.7	1.4	1,408.2	1,639.4	6.1	8.2	4,813.1	9,892.8	-3,404.9	-8,253.4

Source: authors calculations based on Eurostat, [DS-018995], last update 15.09.2021, extracted on 21.09.2022.

Table 10

Share of main partners of Poland in its total export and import and the related balance of trade in 2014 and 2021 (p.p., million EUR)

Poland	Export				Import				Balance of trade	
	2014	2021	2014	2021	2014	2021	2014	2021	2014	2021
Germany	26.3	28.7	43,599.7	81,934.0	27	26.3	45,444.5	75,274.3	-1,844.8	6,659.7
Czechia	6.5	5.9	10,715.0	16,848.6	4.1	3.7	6,837.0	10,730.5	3,878.0	6,118.1
United Kingdom	6.4	5.1	10,562.1	14,528.1	2.7	1.1	4,555.9	3,237.7	6,006.2	11,290.4
France	5.6	5.7	9,242.8	16,247.1	4.1	3.8	6,822.5	11,022.8	2,420.3	5,224.3
Italy	4.5	4.6	7,523.0	13,184.1	5.5	5	9,232.4	14,332.7	-1,709.4	-1,148.6
Russian Federation	4.2	2.8	7,006.4	8,003.5	10.1	5.8	17,060.2	16,724.7	-10,053.8	-8,721.2

Netherlands	4.2	4.3	6,900.1	12,310.9	5.6	6.4	9,476.5	18,333.3	-2,576.4	-6,022.4
China	1	1.1	1,682.8	3,064.0	6.3	10.9	10,557.7	31,121.1	-8,874.9	-28,057.1

Source: authors calculations based on Eurostat, [DS-018995], last update 15.09.2021, extracted on 21.09.2022.

Table 11

**Share of main partners of Romania in its total export and import and the related balance of trade
in 2014 and 2021 (p.p., million EUR)**

Romania	Export				Import				Balance of trade	
Country/ Time	2014	2021	2014	2021	2014	2021	2014	2021	2014	2021
Germany	19.2	20.8	10,100.7	15,339.2	19.2	20.1	11,219.8	19,812.1	-1,119.1	-4,472.9
Italy	11.9	10.6	6,243.7	7,805.9	10.8	8.9	6,324.0	8,738.8	-80.4	-932.9
France	6.8	6.5	3,551.0	4,771.2	5.7	4.2	3,322.2	4,143.1	228.9	628.1
Hungary	5.1	5.7	2,672.1	4,245.9	7.8	6.9	4,586.6	6,755.7	-1,914.5	-2,509.7
Turkey	4.5	3.5	2,361.3	2,602.3	3.3	4.5	1,953.4	4,412.9	407.9	-1,810.6
Poland	2.5	4	1,316.4	2,977.7	4.7	6.2	2,725.4	6,134.9	-1,409.0	-3,157.3
China	1.1	1.2	566.7	908.2	4	6.3	2,353.9	6,198.3	-1,787.2	-5,290.0

Source: authors calculations based on Eurostat, [DS-018995], last update 15.09.2021, extracted on 21.09.2022.

5. Conclusions

During the period 2014-2021 the CEE-5 countries have generally had a positive evolution of their international trade, both quantitative and structural, increasing their share in the total trade of the European Union and trading more sophisticated products. Trying to answer the first research question (Q1), the authors found out that there are many similarities but also big differences among the non-EURO group of countries within the EU. We can enumerate for the first label the increasing share inside the EU trade, a very high dependence on the single market of the EU, a relative low share of raw materials and high share of machinery, transport equipment and manufactured goods in total trade, large deficits in trading mineral fuels and the high-tech trade of chemicals, very large volumes of trade with Germany, the increasing deficits in the balance of trade with China. Significant differences are in the results of the balance of trade of every country, where the high surplus of Czechia, the sinuous evolution of Poland and the chronic deficit of Romania stand out, which is also the case for some products (food and live animals, crude materials, inedible, except fuels, manufactured goods classified chiefly by material and machinery and transport equipment), the high dependence of Bulgaria and Hungary on the mineral fuels supplied by the Russian Federation, the deficit recorded by Romania in its trade with Germany compared to the other countries in the group.

The balance of trade could be an indicator of the country or a product competitiveness; therefore the answer to our Q2 question could be that the most profitable trade in the analysed period is performed by Czechia, Hungary and Poland in this order, Bulgaria and especially Romania needing targeted measures in order to stimulate exports for countering the huge increase in the imports volumes.

The most important sectors for the CEE-5 trade (Q3) are the machinery and transport equipment and manufactured goods classified chiefly by material as shares in countries trade but there are also other sectors which register important surplus or deficit in some cases: food and live animals (an annual average of 7,895.65 million EUR surplus, Poland), mineral fuels, lubricants and related materials (high deficits for all countries, peaking at -9,878.55 million EUR average, Poland), chemicals and related products (annual averages -6,132.09 million EUR for Czechia, -10,509.25 million EUR for Poland, -7,545.75 for Romania).

The main partners of the selected countries remain mostly the same at the end at the analysed period

compared to 2014 and keep their places among the first ones (Q4), with several exceptions:

- Bulgaria – Romania climbs to the 2nd position in 2021 starting from the 4th in 2014 with Turkey falling to the 4th in case of exports, while in case of imports the Russian Federation and Germany change places; it is worth mentioning that before 2019 the share of Russian Federation in Bulgaria's imports has been decreasing already from 15.2% until 9.9%.
- Czechia – United Kingdom falls from the 4th position in 2014 until 7th position in 2021 in case of exports, probably because of the Brexit, China and the Netherlands go up to the 2nd and 4th positions respectively in case of imports, confirming the above-mentioned high competitiveness of their exports.
- Hungary – Italy is ranked on the 2nd position in 2021 starting from the 5th, changing positions with Austria, while in case of exports China goes to the 2nd place and the Russian Federation falls to the 9th position; just like in the case of Bulgaria, the decrease in demand has been already happening before the global demand of mineral fall along with the pandemic crisis.
- Poland – France and United Kingdom change places and about 0.8 p.p. of shares in total exports between 2014 and 2021 in case of exports, while China and the Netherlands go up one position and the Russian Federation falls to the 4th position in case of imports.
- Romania – Poland comes from the 11th place in 2014 to the 5th in 2021 and Turkey goes to the 7th place in 2021 from the 5th in 2014 in case of exports, while in case of imports China climbs to the 4th position in 2021 starting from the 6th in 2014.

The current research may be extended further with identifying and following the evolution of the MNCs which extended their lucrative activities on the CEE-5 countries territories in the recent years, analysing the evolution of trade with services or more in-depth analysis of the goods subcategories (more SITC digits) weight in the total trade.

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