Development and Intensity of Mutual Trade between the Visegrad Group and the Russian Federation[1]

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Abstract

Russian's position in the foreign trade relations of the Visegrad Group countries has a long history. Russian Federation is an important trading partner for them, especially in the import of energy raw materials. Poland is the most active trading partner for the Russian Federation within the Visegrad Group. In 2018, the three most exported items of the Visegrad Group to the Russian Federation were machinery and nuclear reactors, cars, and electrical machinery. Mineral fuels accounted for 85 % of the Visegrad Group imports from the Russian Federation. The trade intensity between the Visegrad Group countries and the Russian Federation in 2014 - 2018 was higher than one, except for the Czech Republic. That indicates that the Russian Federation has exported relatively more goods to Slovakia, Poland and Hungary than to the rest of the world.

Key words

foreign trade, trade intensity index, the Russian Federation, the Visegrad Group.

JEL Classification: F21, F14

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Introduction

The Central European region plays an extensive role in the integration grouping, within the regional grouping of the Visegrad Group has been operating for almost two decades. The Visegrad Group was originally founded on the 15th of February 1991, by three states (Hungary, Poland, and the Czech and Slovak Federal Republic = CSFR) in the city of Visegrad to agree on the resumption of mutual cooperation. The group was named Visegrad Three. In 1993, after the establishment of two separate republics, the Czech Republic and Slovakia, the group was renamed the Visegrad Four and consists of four countries: Hungary, Poland, the Czech Republic and Slovakia (V4) (Ministry of Foreign and European Affairs of the Slovak Republic, 2014).

The position of the Russian Federation in the foreign trade relations of the Visegrad Group countries has a long history as well as it is an important trading partner for them, especially in the import of energy raw materials. The Czech Republic has a specific position among the V4 countries and achieves a positive trade balance with the Russian

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Federation, which is unusual in comparison with other EU countries. The Russian-Ukrainian crisis, which began in late 2013, has resulted in the imposition of sanctions between the European Union and the Russian Federation. That weakened the mutual trade relations between the Visegrad countries and the Russian Federation to some extent. The energy sector remains a matter of interest, both from the EU perspective but also globally. For the V4 countries, the energy sector is of key importance, which Slovakia felt notably in 2009 during the gas crisis. The Visegrad Group represents a necessary transit region for Russian energy raw materials heading west to EU countries.

1 Methodology

This paper aims to examine the development and intensity of mutual trade between the V4 countries and Russia. Several theoretical methods were used, in the form of general methods (Abstraction, analysis, synthesis, deduction and induction). Special methods were used to clarify foreign trade data, for explicit and graphical display. At the same time, empirical methods were used, predominantly the comparison approach for comparing countries, regions and achieved results and a one-factor indicator of mutual trade evaluation.

The potential of mutual trade relations can be designated by the intensity of trade, which is measurable in international trade through the trade intensity index (TII). Trade intensity index is the ratio of the share of exports of country *i* to country *j* to the total exports of country *i* and the share of exports to country *j* to the value of total world exports. (World Bank, 2016). The calculation is based on:

$$\mathbf{TII_{ij}} = (x_{ij} / X_{it}) / (x_{wj} / X_{wt}) \quad (1)$$

where:

x_{ij} – expresses the value of the first country's exports to the second country.

x_{wj} – expresses the value of the first country's total exports to the world.

X_{it} – expresses the value of world exports to the second country.

X_{wt} – expresses the total value of world exports.

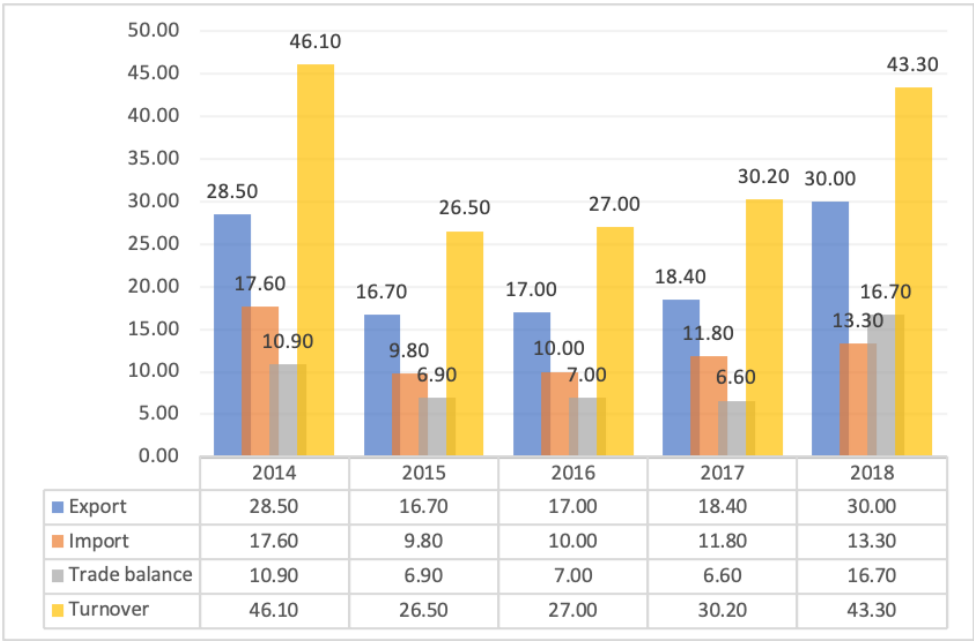
The values can reach three variations. TII = 1, when the exporting country *i* exports to the country *j* the same ratio that belongs to the country *j* concerning its share in world imports. Furthermore, TII> 1, when it comes to trade flows in higher values than might be expected given the importance of the country in the world economy, i.e. country *i* exports to country *j* in a larger proportion than to the whole world. Or if TII <1, then the trade intensity is lower than might be expected.

The source of this research was statistical data based on the International Trade Centre, which provided data for the analysis of mutual foreign trade between the V4 countries and the Russian Federation. The commodity structure of mutual foreign trade was classified according to the nomenclature of the harmonized system. The research was limited to the period 2014 – 2018.

2 Results and Discussion

In the observed period from 2014 to 2018, mutual foreign trade had a fluctuating tendency. The highest values of goods exchange were reached in 2014. Subsequently, in 2015, there was a significant 42.5 % decline in mutual trade due to the Russian-Ukrainian crisis and gradually increased in the following years. The highest increase in 2018 was up to 43.3 % compared to the previous year, which was a result of higher world prices for energy raw materials. A significant part of mutual trade between Russia and the V4 countries was made of exports of Russian minerals, in the period under review it caused a positive trade balance from the Russian point of view. A detailed overview of the mutual exchange of goods in the years 2014 – 2018 is represented by graph 1.

Graph 1 Development of foreign trade of the Russian Federation with the V4 group in the years 2014 – 2018 (in bil. USD)



	2014	2015	2016	2017	2018
Export	28.50	16.70	17.00	18.40	30.00
Import	17.60	9.80	10.00	11.80	13.30
Trade balance	10.90	6.90	7.00	6.60	16.70
Turnover	46.10	26.50	27.00	30.20	43.30

Source: Autor's own calculation according to International Trade Centre

However, it is also important to mention that the level of exports and imports is mutually influenced by the economic trend of preventing excessive imports and importing only necessary goods that countries cannot produce themselves or their production would be inefficient. At the same time, the size of the given business territory plays a certain role in terms of the sales market, consumer power, the economic situation and also the prevailing industrial focus of the country's economy (Jovanovic & Damnjanovic, 2014).

2.1 Territorial structure of the mutual trade

Within the Visegrad Four countries, Poland is the most active trading partner for Russia. Thanks to that, the V4 has a more significant representation in Russia's foreign trade from a territorial point of view. A detailed overview of the position of the V4 countries in the territorial structure of Russia's exports and imports in 2018 is shown in table 1.

Tab. 1 Position of V4 countries in the territorial structure of RF exports and imports, 2018 (in %)

	Export RF		**Import RF**	
	Share (in %)	**Rank**	**Share (in %)**	**Rank**
Slovakia	0.8	29	0.9	25
Czech Republic	1.1	19	1.6	14
Hungary	1.1	21	0.9	26
Poland	3.7	7	2.2	11
V4	**6.7**	**-**	**5.6**	**-**

Source: Autor's own calculation according to International Trade Centre

In terms of Russian export trade operations, Poland occupied 7th place with a share of 3.7 % and thus ranked among the TOP 10 export trade partners of Russia. The indicated proves Poland's stronger import activity and also its sharper trade dependence on Russia compared to the other V4 members. The aforementioned is broadly due to the disposition of a large consumer market. The Czech Republic followed Poland with a share of 1.1 %, then Hungary with the same share (1.1 %) and finally Slovakia (0.8 %). Hence, Slovakia plays the least level of significance for the Russia of all V4 countries in terms of the performance of export activities. Together, the V4 countries accounted for 6.7 % of Russian exports in 2018, which is still less than in Germany, the Netherlands and China.

As for Russia's import operations, in 2018 the Visegrad Group did not rank among the top 10 trading countries. Their share in Russian imports was 5.6 %. Russia exported the most to Poland (with a share of 2.2 %), followed by the Czech Republic (1.6 %) and Slovakia and Hungary with the same share of 0.9 %. Therefore, the V4 countries have the slightest significance for the Russian Federation in terms of import activities.

Poland dominated even in the case of Russia's position in the territorial structure of exports and imports of the V4 countries in 2018. Detailed overview of Russia's share and its rank in the territorial structure of V4's foreign trade is in table 2.

Tab. 2 The position of the Russian Federation in the territorial structure of exports and imports of the V4 countries, 2018

	Export V4		**Import V4**	
V4 Countries	**Share RF**	**Rank RF**	**Share RF**	**Rank RF**
Slovakia	1.9%	13	5.0%	6
Czech Republic	2.0%	13	3.2%	7
Hungary	1.5%	20	3.9%	9
Poland	3.1%	7	7.3%	3

Source: Autor's own calculation according to International Trade Centre

It can be seen from the above-mentioned table that in the area of exports of individual V4 countries, Russia had in 2018 the most important position in Poland, where it ranked 7th with a 3.1 % share. It was followed by the Czech Republic with a share of 2 % and the same placement as in Slovakia. In both cases, Russia reached 13th place, although the share of Russia in Slovak exports was slightly smaller and represented by 1.9 %. The last place within the V4 countries was taken by Hungary, whose share of Russia was only 1.5 %, with the 20th place of Hungary's export partners.

While analyzing imports, Russia's position was much stronger, in all V4 countries it was among the top 10 most important import partners. Russia had the best rank in Poland, where it placed 3rd with a share of 7.3 %. This was followed by Slovakia, the Czech Republic, and Hungary had the least dependence on Russian imports.

Based on the obtained data, we can state that in terms of the territorial structure of trade of Russia, there was a strong trade connection with Poland. The lowest level of business activities was recorded with Hungary and Slovakia. In Slovakia, however, it is important to take into account the size of the country and other factors that move it to a lower level compared to the other members of the V4. At the same time, a more significant trade dependence of the V4 countries in Russia was observed in terms of their imports of goods.

2.2 Commodity structure of the mutual trade

Commodity structure of trade of the V4 countries and Russia in 2018 sufficiently diverse. Commodities within exports and imports were also sufficiently different. Based on available data, in 2018 a significant share of V4 exports to Russia was made up of machinery and nuclear reactors, boilers (HS 84), which accounted for 27.7 %. In second place were cars (HS 87) with a share of 18.8 % and third place belonged to electrical machinery and equipment (HS 85) with a share of 12 %.

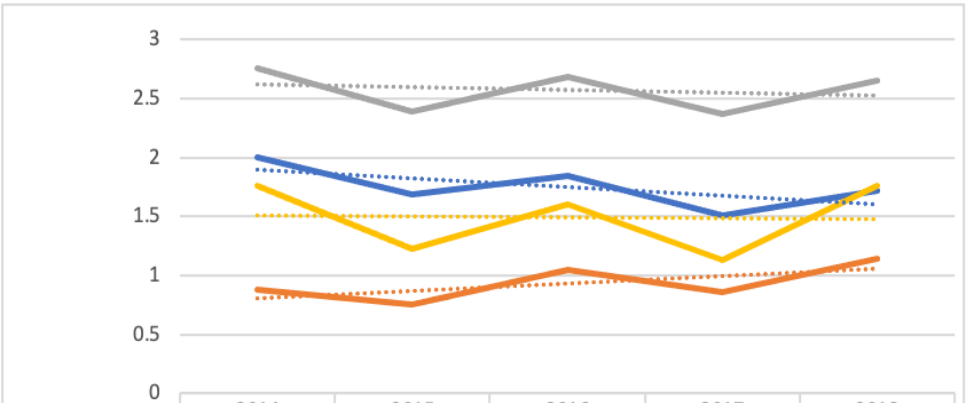
Together, these three established groups accounted for almost 58.5 % of V4 exports to Russia. Pharmaceutical products (HS 30) and plastics and plastic products (HS 39) followed, with the same share of 3.8% of total V4 exports to Russia.

In 2018, the V4 countries imported in value terms 30 billion USD from Russia. Mineral fuels (HS 27) accounted for the largest share of almost 85 % in imports of V4 from Russia. That indicates Russia's high dependence on exports, especially in terms of energy and minerals to these countries. The most important type of commodity were unspecified commodities (HS 99) with a share of 8 %, followed by iron and steel (HS 72) with a share of 4.7 %. Less significant items were inorganic and organic metal compounds (HS 28) and rubber and rubber products (HS 40), which accounted for less than 2 % of total V4 imports from Russia.

2.3 Intensity of the mutual trade

The degree of implementation of trade transactions between the V4 and Russia plays an influential role in mutual economic relations and their future development. A detailed overview of the development of the intensity of the Russian trade with the V4 countries in the years 2014 – 2018 based on the TII index is shown in graph 2.

Graph 2 Development of the trade intensity between the Russian Federation and the V4 countries in the years 2014 – 2018 with the trend line



	2014	2015	2016	2017	2018
TII SK-RF	2	1.69	1.84	1.51	1.72
TII CZ-RF	0.88	0.75	1.05	0.86	1.14
TII PL-RF	2.76	2.39	2.68	2.37	2.65
TII HU-RF	1.76	1.22	1.6	1.13	1.76

Source: Autor's own calculation according to International Trade Centre

The values of the development of the intensity of trade relations between Russia and the Visegrad Group countries based on the TII index show that in the observed period Russia achieved a TII index value higher than 1 in each year examined with all countries except the Czech Republic. That means that Russia has carried out trade flows with a higher value than might be expected, given the importance of the country in the global economy. Russia has exported a relatively surpassing amount of goods to Slovakia, Poland, and Hungary than to the whole world, and thus these countries represent significant sales markets for Russia.

In terms of volatility of the achieved values, the most significant fluctuating tendency was observed in the examined period with Slovakia. With Poland, the TII index did not fall below 2 in the years under review. Therefore, we consider Poland to be Russia's strongest trading partner among the V4 members. With Hungary in 2014 and 2018, the achieved TII value completely coincided. With the Czech Republic, the intensity of Russian trade flows was significantly unstable. We can see that initially the value of the TII index, in 2014 and 2015 and also in 2017, was lower than 1 and thus the intensity of the business connection was at a lower level than could be expected. Only in 2016 and 2018, the TII exceeded the value of 1, when their mutual trade intensity visibly strengthened. Nevertheless, the Czech Republic was considered in this area as the country with which Russia has the weakest trade intensity within the V4.

The years 2015 and 2017 were comprehensively years of weakening foreign trade between the Russian Federation and the Visegrad Group. The indicated is connected with sanctions imposed on Russia, lower world prices for energy raw materials, which have caused a slowdown in the domestic economy, the devaluation of the Russian ruble, and a reduction in its exports to the European Union.

In addition to the development of trade intensity, the graph shows a prediction of the future possible values. Trend line representing the development with Poland and points to only a very slight decrease in trade intensity. The TII value should be around 2.5, which is considered positive. The trend line describing the intensity of the Russian Federation with Slovakia reached the steepest declining trend, with expected trade decline to the level of approximately 1.5. A similar situation took place in Hungary. Only with the Czech Republic, we can see a more significant increase and thus a positive development of trade intensity, from which we can assume the growth of mutual trade flows soon.

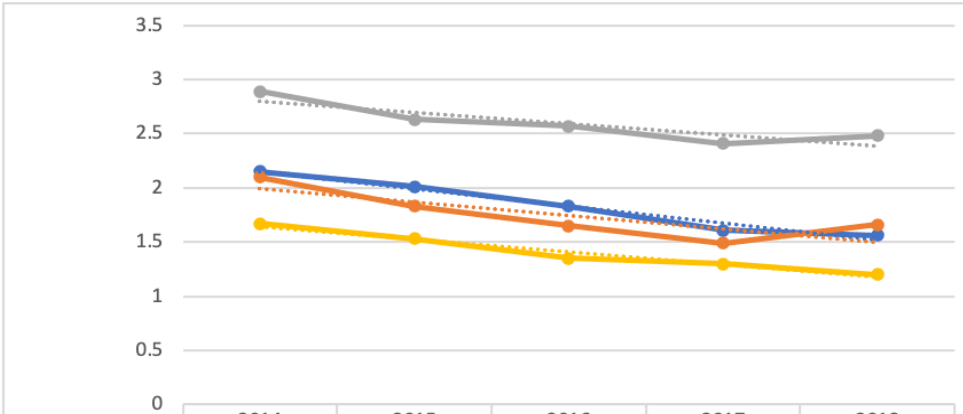
In the following section, we will examine the trade intensity from the perspective of the V4 countries with Russia. The detailed development is shown in the following graph 3.

The graph shows that all V4 countries, except Hungary, achieved a value of the TII index at least once higher than 2. A value lower than 1 was not reached in any of the studied countries. That indicates steady and more intensive trade flows compared to recorded data of Russian exports. Thus, selected V4 countries export a relatively higher amount of goods to Russia than to the whole world, and Russia acts as a valuable importer and their strong trading partner. The data from graph 3 does not show extreme fluctuations as in the previous data of trade intensity from the Russian point of view. The given development can be described as relatively stable.

The highest value of the TII index with Russia, which was higher than 2 during all studied years, was reached by Poland. That confirmed that in the period under review Poland was the largest trading partner among all V4 members. On the contrary, the lowest value of the TII index was in Hungary, which never reached the level of value 2.

All achieved values of TII of Hungary were lower in comparison with other V4 countries. Based on this fact, we can describe Hungary as the least intensive trading partner of Russia among the V4 countries. This also confirmed that the years 2015 and 2017 were accompanied by a weakening of international trade, which was also reflected in the relations between the Visegrad Four and Russia.

Graph 3 Development of the trade intensity of the V4 countries with the Russian Federation in the years 2014 – 2018 with the trend line



	2014	2015	2016	2017	2018
TII SK-RF	2.15	2.01	1.83	1.61	1.56
TII CZ-RF	2.1	1.83	1.65	1.49	1.66
TII PL-RF	2.89	2.63	2.57	2.41	2.48
TII HU-RF	1.67	1.53	1.35	1.3	1.2

Source: Autor's own calculation according to International Trade Centre

Investors from the V4 countries have adapted to the crisis caused by the sanctions policy. In recent years, Russian investors have shown a steady interest in the V4 countries, which are geographically, culturally, politically and economically close. Russian companies are present in the V4 countries in the field of engineering, the financial sector, the energy sector, the fuel industry, metallurgy, and the chemical industry. (Kittová, 2020) Despite the trade policy restrictions introduced since the end of 2014, large Russian companies continue to invest in the V4 countries.

Conclusion

Based on this research on the development and intensity of mutual foreign trade between the V4 countries and Russia, we came to the following conclusions. Apart from significant participation in the foreign trade of EU countries, a certain dependence of the V4 countries' demand on Russia was demonstrated in the years 2014 - 2018. The ranking of the Visegrad Group countries in Russia's foreign trade is as follows: Poland, the Czech Republic, Hungary and finally Slovakia. From the point of view of the V4 countries, Russia had the most important position in Poland, then in the Czech Republic, Slovakia and Hungary. Within the framework of mutual trade cooperation, the V4 countries mostly exported machinery and equipment to Russia and imported energy raw materials.

The results of the research in the field of trade intensity also point to the existence of mutual intensity of foreign trade. From the point of view of the V4 countries a slight decrease in intensity is observed. On the contrary, Russia's intensity is slightly increasing. That can be explained by the fact that relations are sufficiently influenced by trade policy restrictions between the EU and Russia.

Trade and energy cooperation between the V4 countries and Russia is determined by the policy of ongoing sanctions between the EU and Russia. Nevertheless, we can state that cultural, economic, or scientific contacts between the V4 countries and Russia continue to take place regularly.

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