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Textile Sector of the Visegrad Group Countries in Trade with the European Union

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Abstract

The Visegrad Group countries' accession to the European Union (EU) gave new perspectives for the future economic and social development of the region. The full integration of the Visegrad Group countries with the European Union is conducive to generating new challenges i.a. in the field of development of broadly understood entrepreneurship. Textiles is one of the sectors of the European economy which, in the current financial perspective, significantly contributes to the creation of new jobs and the development of entrepreneurship, which ultimately affects the growth of competitiveness of the integrating countries. The aim of this paper is to examine the competitive position of the textile sector (CN 50-60 and 63) of the Visegrad Group countries as a whole in trade with the European Union in the period 2004-2016. Preliminary analysis of the problem allowed to formulate the following research hypothesis: The Visegrad Group countries' accession to the European Union has a positive impact on entrepreneurship development and improving competitiveness of the textile sector of the Visegrad Group countries in the context of implementation of the Europe 2020 Strategy.

Key words: textile industry, the Visegrad Group economy, European integration, comparative advantages, competitiveness.

Introduction

Entrepreneurship, in addition to competitiveness and innovation, has become one of the most important issues in recent years, related to analysis of economic growth processes in economies, improvement of competitiveness, the creation of new jobs, and increasing the well-being of society. It is perceived as one of the main determinants of economic development. The *Europe 2020* Strategy seeks to develop new solutions for the development of entrepreneurship, particularly through solutions that promote the development of strategic and prospective sectors of the economy. One of them is the textile sector.

The Visegrad Group (V4) is an agreement between four countries – Poland, Hungary, the Czech Republic and Slovakia, signed in 1991, reflecting the efforts of the Central European countries to cooperate on many joint activities within the framework of generally understood European integration. The aspiration of all countries belonging to the V4 group was accession to the structures of the European Union. They perceived their integration with the EU as the next step in the process of overcoming artificial divisions in Europe through mutual support. They achieved this goal in 2004 (May 1), when they all became members of the EU [1]. The accession of the Visegrad Group countries to the European Union gave

new perspectives for the future economic and social development of these countries. The full integration of the Visegrad countries with the European Union is also conducive to the generation of new challenges, especially for economic entities operating in the textile sector, and broadly understood entrepreneurship. Particular attention should be paid to the signing of the so-called “Warsaw Declaration” in 2017 between the countries of the Visegrad Group. The signatories of this document, i.e. the Prime Ministers of the Visegrad Group countries, obliged in this document a. o. to strengthen cooperation on research, technology, innovation and digital transformation of the countries of this region, in particular through the use of EU funds. The document also emphasises co-operation aimed at achieving competitive advantage in the V4 region in preparation for the launch of next-generation mobile services (5G). The “Warsaw Declaration” underlines the importance of startups, which directly translates into the development of entrepreneurship. They were promised to receive help, including Capital support, to allow them to transform into competitive companies. The signatories also committed themselves to making joint efforts to promote innovative startups from the Visegrad Group on the international stage [2].

The aim of this paper is to examine the competitive position of the textile sector (CN 50-60 and 63) of the Visegrad Group economies in trade with the European Union in the years 2004-2016. Preliminary

analysis of the problem allowed to pose the hypothesis that the accession of the Visegrad Group countries to the European Union had a positive impact on the development of entrepreneurship and improvement of the textile industry's competitiveness in the context of the implementation of the Europe 2020 Strategy.

Research methodology

One of the most important factors affecting the economic growth of the state is foreign trade, and its value testifies to the competitiveness of a given country. The basis of the theory of comparative advantage is the assumption that every country should produce and sell abroad what it produces comparatively better than others [3]. Comparative advantage is thus defined as the ability of the economy to produce a particular good in a more efficient way than it is produced by other economies, which is expressed in the directions of export and import specialisation of the country [4]. The commonly used measures of a state's competitive position is the RCA index – Revealed Comparative Advantage (index of disclosed comparative advantages) [5], IMP – index of import penetration, and RTA – index of relative advantage of trade. On this basis, the following analysis defines the comparative advantages of the textile sector of the Visegrad Group in trade with the European Union. RCA and RTA ratios above unity indicate a comparative advantage, while the IMP index above unity speaks of a lack of advantages and testifies the market absorption for a given

product group. The following trade analyses of the Visegrad Group were based on Eurostat and World Bank data. For detailed analysis of data, i.e comparative advantage research, products from the textile sector group have been taken into account, divided into chapters 50 to 60 and 63 in accordance with the Combined Nomenclature of Commodity for Foreign Trade (CN) [6]. The period 2004-2016 was selected for the analysis. The choice of the lower time period marks the entry by the Visegrad Group countries into the European Union, and the upper boundary of the research is determined by the moment of the UK starting the exit procedure from the European Union – “BREXIT”.

Statistical analysis of revealed comparative advantages of the textile sector of the Visegrad Group in trade with the European Union

Data collected by the World Bank and Eurostat indicate how the trade exchange of the Visegrad Group countries has developed over the last decade in trade with the world and the European Union. According to World Bank data, the five main trade partners of the Visegrad Group countries in the world outside the European Union in 2004-2016 are Russia, China, USA, South Korea and Ukraine, while in the intra-EU exchange they are Germany, France, Italy, the United Kingdom and Austria, whose total trade value for the five main partners in the years 2004-2016 is, respectively, USD 1766,63 billion with non-EU countries and USD 4943,55 billion in intra-EU exchange [7]. The main trading partner of the Visegrad Group countries in the years 2004-2016 remains invariably Germany, with an cu-

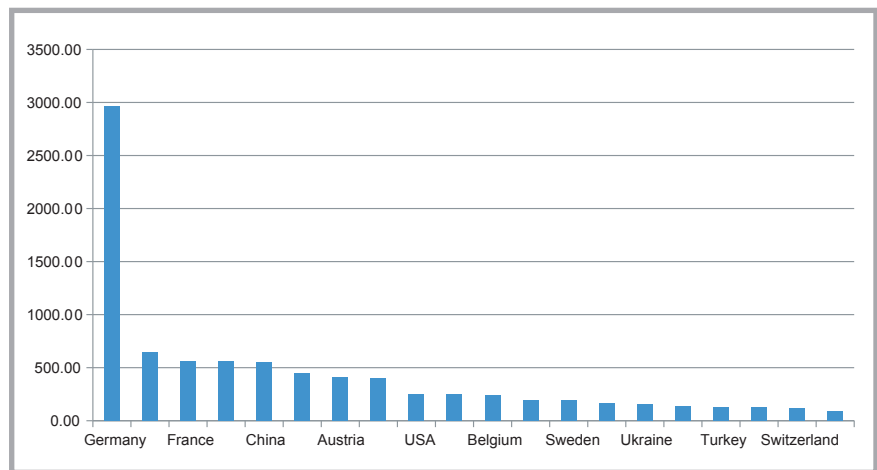


Figure 1. Main trading partners of the Visegrad Group in the world – cumulative values of trade exchange in 2004-2016 in billion USD. Source: own study based on data from the World Bank – access 2018.

mulated value in the period analysed of 2961.83 billion USD, which is almost five times higher than the next in the order i.e. Russia, with an cumulative value of 648.44 billion USD (see Figure 1).

The main trading partners of the Visegrad Group in exports are Germany, France, the United Kingdom, Italy, Austria, the Netherlands, Russia, Spain, Romania and the USA, while in imports they are Germany, China, Russia, Italy, France, the Netherlands, Austria, South Korea, the United Kingdom and the USA – see Figure 2.

Taking into account the trade balance of the Visegrad Group countries, it should be noted that it achieves strong trade surpluses through cumulative values for 2004-2016 mainly with countries from the European Union, i.e. Germany (229 billion USD), the United Kingdom (163 billion USD), France 78 (billion USD), Romania (65 billion USD), and Austria (53 billion USD), and a deficit

mainly with countries outside the European Union, which include China (-415 billion USD), Russia (-261 billion USD), South Korea (-135 billion USD), Japan (-88 billion USD) and Vietnam (-19 billion USD) – see Figure 3.

The moment of entry of the group of states analysed to the European Union is the moment reflecting the beginning of a dynamic increase in the surplus of trade of the Visegrad Group countries in intra-EU trade. Since 2004, there has been a steady upward trend in trade between the Visegrad Group and the countries of the European Union, whose total value of exports was from 132 billion EUR (2004) to 327 billion EUR (2016) and of imports from 129 billion EUR (2004) to 279 billion EUR (2016) (see Figure 4). Since 2004, the Visegrad Group countries have recorded a clear surplus in intra-EU trade, which in absolute terms increased from EUR 2.4 billion in 2004 to EUR 48.5 billion in 2016 [8].

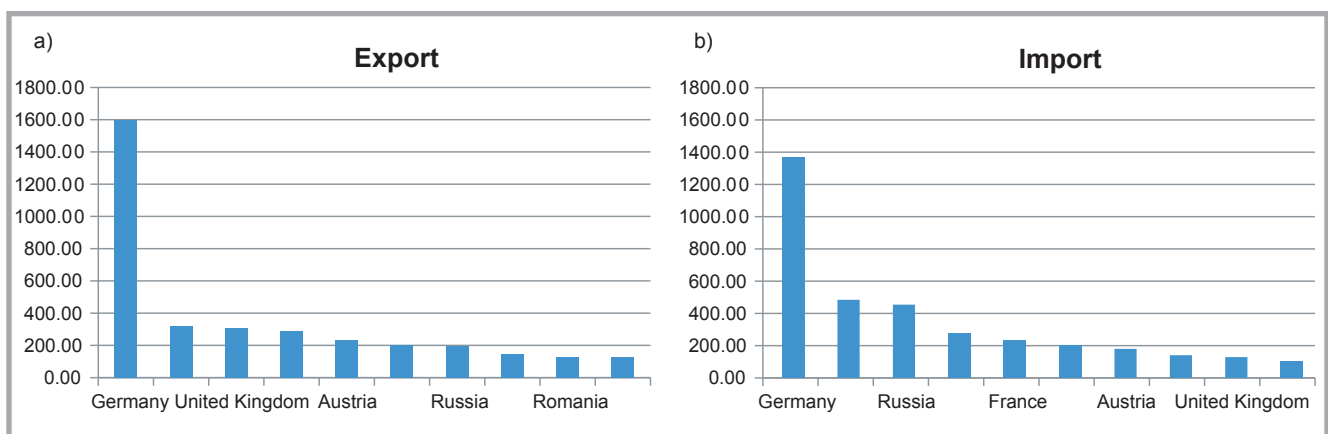


Figure 2. Main trading partners of the Visegrad Group in the world in a) export and b) import – accumulated values for the years 2004-2016 (data in billion USD). Source: own study based on data from the World Bank – access 2018.

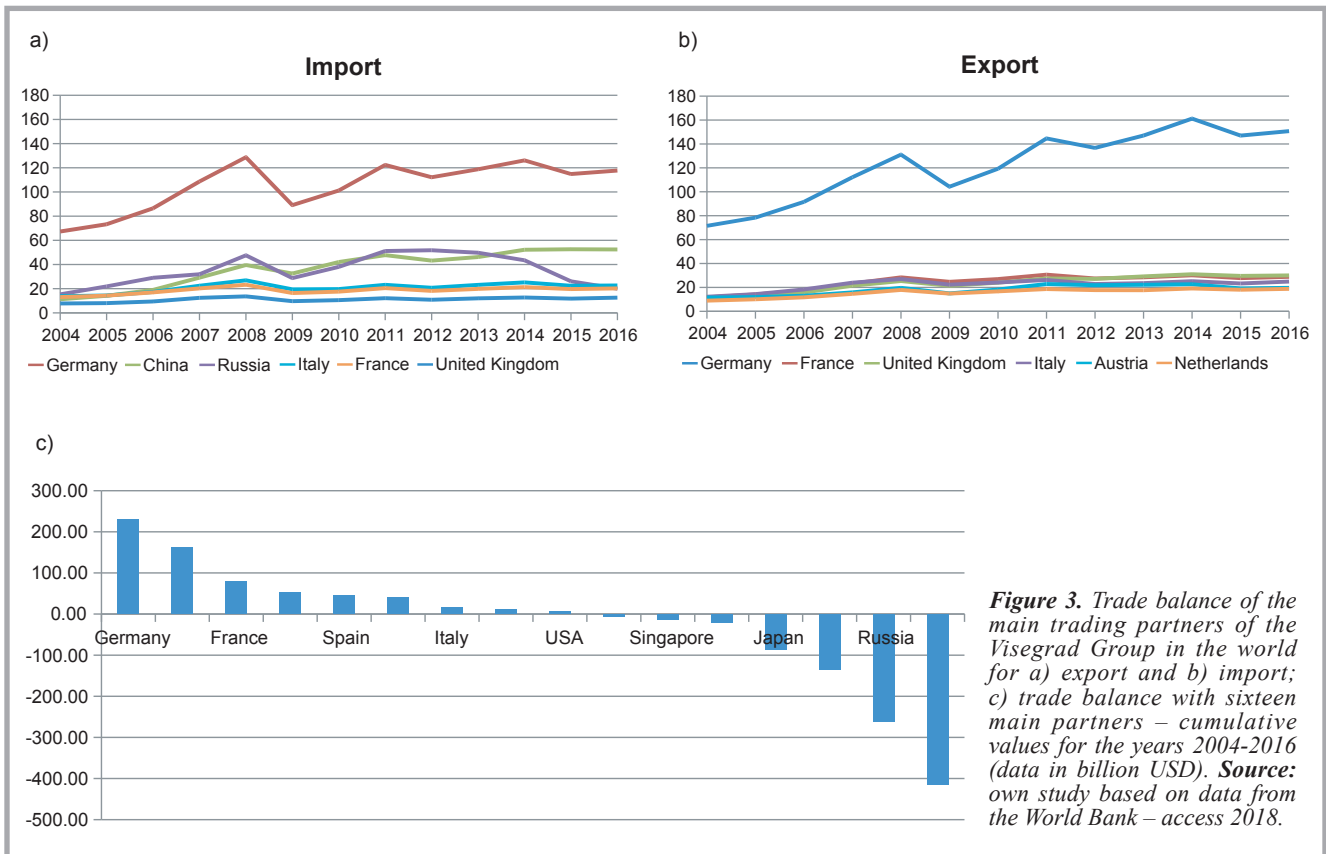


Figure 3. Trade balance of the main trading partners of the Visegrad Group in the world for a) export and b) import; c) trade balance with sixteen main partners – cumulative values for the years 2004-2016 (data in billion USD). **Source:** own study based on data from the World Bank – access 2018.

According to World Bank data, the ten main trading partners of the Visegrad Group countries in trade with the European Union in 2004-2016 include Germany, France, Italy, the United Kingdom, Austria, the Netherlands, Spain, Romania, Sweden and Denmark, whose total trade value in the period discussed was 274 billion USD in 2004 and had doubled by 2016 to 550 billion USD (see **Figure 5**) [9].

At the same time, it should be emphasised that the Visegrad Group achieved a total surplus of 9.37 billion USD in 2004 in trade with the main partners of the European Union, which increased significantly till 2016, reaching the val-

ue of 85.72 billion USD (see **Figure 6**). Trade balance of the Visegrad Group with the ten largest trading partners in the European Union for the years 2004-2016 (in billion USD)

In this context, the trade balance with Germany is particularly distinguished, with the surplus value increasing from less than 5 billion USD in 2004 to almost 40 billion USD in 2016. Similarly a clear upward trend in the period discussed can be seen with the United Kingdom and France, for example – other countries oscillate in a steady side trend of 5 billion USD (see **Figure 6**). At the same time, it should be emphasised that despite the crisis at the end of 2010, since 2004,

a steady upward trend in imports and exports with the main EU partners has been visible – see **Figure 3** and **6**.

Undoubtedly such a significant increase in trade surplus with a simultaneous increase in the total value of trade of the Visegrad Group with the main trading partners of the European Union was influenced by the accession of the Visegrad Group countries to the European Union, which resulted in a simplification of procedures related to trade between Member States as well as greater flexibility of production and low wage costs compared to other partners in the initial period of integration, which is consistent with the fundamental static effect in the short term.

Preliminary analysis of trade in the Visegrad Group countries and the increase in the value of production in the textile industry in 2004-2016 raises the research question as to whether the Visegrad Group through an increase in the value of production in the textile industry plus a simultaneous increase in the trade exchange value and trade surplus also achieves comparative advantages in the textile sector in trade with the EU? To answer such a research question, we analysed the trade and

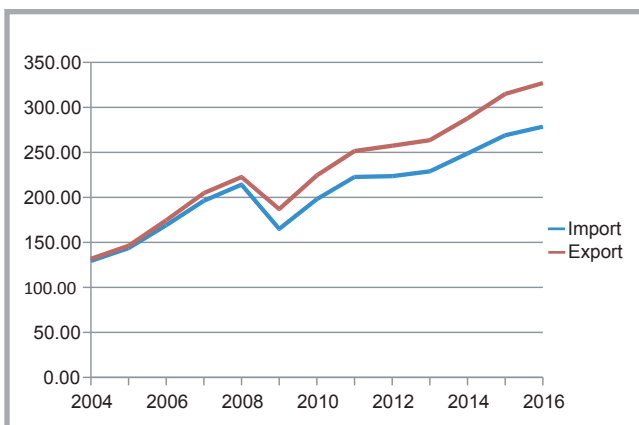


Figure 4. States of the Visegrad Group in intra-EU trade in billions EUR. **Source:** Own study based on data from EURO-STAT – access: 2018.

competitiveness of the textile sector of the Visegrad Group in trading with the European Union.

The Visegrad Group countries collectively increased the value of intra-EU trade exchange in the textile sector, i.e. from 8.3 billion EUR in 2004 to 10.2 billion EUR in 2016, with a simultaneous increase in the value of exports from 2.8 billion EUR in 2004 to 4.1 billion EUR in 2016 and of imports from 5.6 billion EUR in 2004 to 6.1 billion EUR in 2016. It should be emphasised that despite the negative trade balance of the textile sector in the intra-EU trade of the Visegrad Group, we can notice a constant trend that reduces the trade deficit, i.e. a reduction in the deficit from 2.7 billion EUR in 2004 to 1.9 billion EUR in 2016 – see **Figure 7**. At the same time, the European Union as a whole recorded a slight decrease in the value of intra-EU trade in the textile sector from 88.8 billion EUR in 2004 to 87 billion EUR in 2016, with a fall in exports from 45 billion EUR in 2004 to 44.8 billion EUR in 2016 and in imports from 43.7 billion EUR in 2004 to 42.1 billion EUR in 2016. It should also be emphasised that during the period discussed the trade balance maintained a constant trade surplus, i.e. it increased from 1.2 billion EUR in 2004 to 2.7 billion EUR in 2016 – see **Figure 7**.

On the basis of the preliminary analysis, it can be concluded that the textile sector is starting to play an important role for the Visegrad Group in trade with the European Union, which is especially reflected in positive trade exchange data, whose constant upward trend can be observed from 2009 – see **Figure 7**. Such a precise research background enables a detailed analysis of comparative advantages for the textile sector.

In order to analyse the disclosure of comparative advantages, RCA indices were calculated, i.e. the index of comparative export advantage; IMP – import penetration index and RTA – index of relative trade advantage. On this basis, the comparative advantages in the textile sector of the Visegrad Group were determined. RCA and RTA ratios above unity indicate a comparative advantage, while IMP rates above unity indicate that there is no advantage and testify market absorption for a given product group.

As a result of the analyses conducted, it can be noted that the Visegrad Group

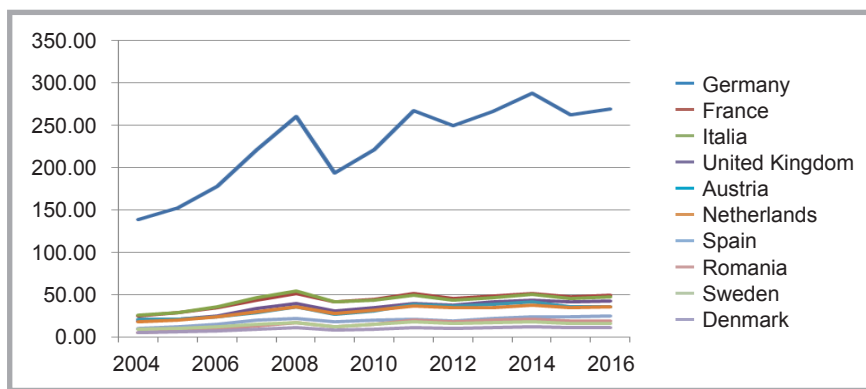


Figure 5. Values of trade exchange in 2004-2016 in billion USD of the ten largest trading partners of the Visegrad Group in intra-EU trade. **Source:** Own study based on data from the World Bank – access: 2018.

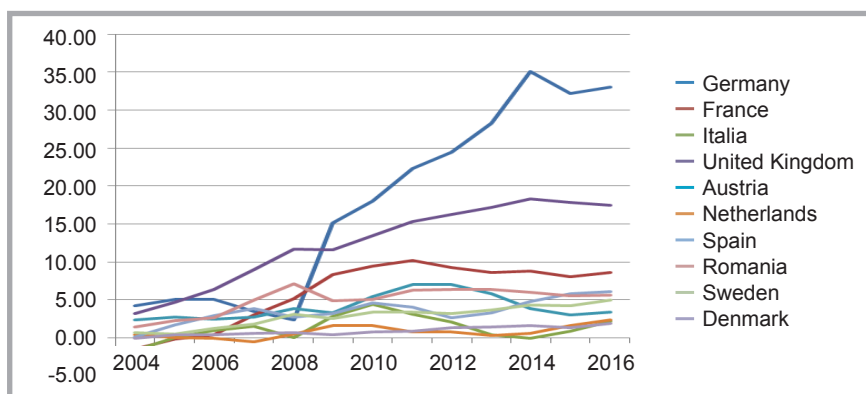


Figure 6. Trade balance of the Visegrad Group with the ten largest trading partners in the European Union for the years 2004-2016 (in billion USD). **Source:** Own study based on data from the World Bank – access: 2018.



Figure 7. Value of trade exchange, trade balance, export and import for textiles (CN8 50-60 and 63) of the Visegrad Group in trade with the European Union (a) and European Union INTRA (b) in 2004-2016 (data in EUR). **Source:** Own study based on data from the Eurostat data – access: 2018.

Table 1. RCA, IMP and RTA indicators in the textile sector of the Visegrad Group in trade with the EU in 2004-2016, respectively. Source: Own study based on data from Eurostat data – access: 2018.

RCA Visegrad Group in trade with the European Union													
Textiles CN	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
50	0.03	0.03	0.03	0.10	0.11	0.11	0.05	0.03	0.18	0.09	0.05	0.07	0.03
51	1.36	1.44	1.51	1.63	1.52	1.47	1.63	1.57	1.62	1.50	1.40	1.36	1.35
52	0.71	0.80	0.74	0.71	0.76	0.66	0.60	0.58	0.63	0.59	0.53	0.47	0.47
53	1.41	1.50	1.28	1.03	0.93	0.65	0.73	0.70	0.64	0.67	0.71	0.77	0.76
54	0.92	1.01	1.01	0.97	0.97	0.83	0.83	0.83	0.77	0.74	0.76	0.80	0.84
55	0.67	0.64	0.61	0.53	0.49	0.47	0.48	0.49	0.57	0.58	0.56	0.50	0.53
56	0.86	0.84	0.85	0.86	0.85	0.91	0.84	0.90	0.84	0.86	0.87	0.85	0.91
57	0.46	0.52	0.50	0.53	0.57	0.54	0.61	0.69	0.71	0.74	0.77	0.80	0.74
58	0.76	0.69	0.62	0.57	0.60	0.52	0.56	0.54	0.60	0.54	0.52	0.47	0.53
59	0.73	0.81	0.82	0.85	0.86	0.87	0.82	0.89	0.85	0.88	0.86	0.87	0.84
60	0.36	0.38	0.50	0.62	0.58	0.73	0.71	0.76	0.75	0.74	0.74	0.76	0.78
63	2.49	2.29	2.04	1.82	1.68	1.45	1.43	1.41	1.41	1.40	1.31	1.29	1.28

IMP Visegrad Group in trade with the European Union													
Textiles CN	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
50	1.01	1.05	1.01	0.79	0.72	0.85	0.77	0.49	1.38	0.84	0.50	0.41	0.36
51	2.28	2.37	2.30	2.17	2.01	1.81	2.03	2.05	2.00	1.74	1.58	1.53	1.61
52	2.38	2.42	2.26	1.99	1.85	1.90	1.79	1.82	1.86	1.74	1.61	1.53	1.49
53	1.69	1.74	1.54	1.32	0.99	1.06	1.04	1.08	0.85	0.96	0.93	0.93	0.99
54	1.65	1.66	1.72	1.72	1.57	1.76	1.72	1.64	1.57	1.60	1.49	1.44	1.49
55	1.83	1.75	1.74	1.60	1.49	1.48	1.49	1.50	1.63	1.62	1.48	1.42	1.42
56	1.72	1.67	1.68	1.70	1.65	1.72	1.71	1.82	1.92	1.95	1.84	1.82	1.81
57	1.12	1.19	1.24	1.21	1.39	1.28	1.29	1.32	1.29	1.30	1.32	1.24	1.22
58	2.98	2.82	2.77	2.60	2.58	2.54	2.50	2.37	2.32	2.49	2.34	2.27	2.31
59	2.92	2.88	2.71	2.49	2.26	2.32	2.46	2.40	2.32	2.19	2.14	2.01	2.06
60	2.77	2.84	2.83	2.44	2.23	2.18	2.05	1.86	1.83	1.88	1.68	1.64	1.65
63	1.12	1.18	1.17	1.14	1.18	1.20	1.21	1.21	1.29	1.36	1.31	1.30	1.34

RTA Visegrad Group in trade with the European Union													
Textiles CN	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
50	0.03	0.03	0.03	0.12	0.15	0.13	0.07	0.06	0.13	0.11	0.10	0.17	0.07
51	0.60	0.61	0.66	0.75	0.76	0.81	0.80	0.77	0.81	0.86	0.89	0.89	0.84
52	0.30	0.33	0.32	0.36	0.41	0.35	0.33	0.32	0.34	0.34	0.33	0.31	0.32
53	0.84	0.86	0.83	0.78	0.93	0.62	0.70	0.65	0.75	0.70	0.77	0.83	0.78
54	0.56	0.60	0.58	0.57	0.62	0.47	0.48	0.50	0.49	0.47	0.51	0.55	0.56
55	0.37	0.37	0.35	0.33	0.33	0.32	0.32	0.33	0.35	0.36	0.38	0.35	0.37
56	0.50	0.50	0.50	0.50	0.52	0.53	0.49	0.50	0.44	0.44	0.47	0.47	0.50
57	0.41	0.44	0.40	0.44	0.41	0.42	0.47	0.52	0.55	0.57	0.58	0.64	0.61
58	0.25	0.25	0.22	0.22	0.23	0.20	0.22	0.23	0.26	0.22	0.22	0.21	0.23
59	0.25	0.28	0.30	0.34	0.38	0.37	0.33	0.37	0.37	0.40	0.40	0.43	0.41
60	0.13	0.13	0.18	0.26	0.26	0.33	0.34	0.41	0.41	0.39	0.44	0.46	0.48
63	2.21	1.94	1.74	1.60	1.42	1.21	1.19	1.17	1.09	1.03	1.01	0.99	0.96

as a whole did not achieve comparative advantages in the export of the entire textile group (CN8 50-60 and 63) after joining the European Union, which resulted in a negative, below unity of the RCA indicator, which only in 2005 reached the desired value. A negative RTA indicator, i.e. below unity, which allows to weigh the relative benefits of exports and imports, indicates the lack of competitive advantage of the textile sector of the Visegrad Group. Similarly the IMP index above unity throughout the period analysed, indicates the absorptive capacity of the textile market originating from the European Union countries. However, it should be noted

that all indicators, despite unfavourable values indicating a lack of competitive advantage, have been growing, especially since 2009, which can be interpreted as a positive correlation with the increase in the trade exchange of the textile sector in trade with the European Union (see *Figure 7*).

The initial analysis of the textile sector as a whole (CN 8 50-60 and 63) leads to further more detailed exploration of the industry within the textile sector, in which the Visegrad Group achieves competitive advantages. A detailed analysis is presented in *Table 1*, in which positive values are marked in bold.

The results of the detailed analysis illustrated in the table above indicate that the Visegrad Group in the period audited, according to the *Combined Nomenclature of Foreign Commodities* – CN [10], achieved strong competitive advantages in the CN 51 product group – wool, thin or thick animal hair, horsehair yarn and woven fabric; CN 53 – other vegetable fibers, paper yarn and woven fabrics of paper yarn; CN 54 – continuous filaments, strip and the like of man-made textile materials; CN 63 – other made-up textile articles, sets, used clothing and used textile articles, rags. In the case of the IMP indicator, the group of products contained in CN 51 – wool, thin or thick animal hair, horsehair yarn

and woven fabric, and in CN 53 – other vegetable fibers, paper yarn and paper yarn fabrics, show low absorbability of textiles originating from European Union countries in individual years, as indicated by the IMP values below unity for these product groups.

The analysis above shows that the Visegrad Group as a whole in the textile sector, despite a significant surplus in trade with the European Union, which is accompanied by an increase in trade exchange in the textile group, remains a group of countries that in most of the products of the textile sector does not achieve comparative advantages, and in those in which comparative advantages were revealed are product groups characterised by low added value.

Conclusions

The fibre and textile industry is the oldest branch of consumer goods production in the world. It is a diverse and heterogeneous sector that covers the entire production chain of transforming natural and chemical fibers (such as cotton, wool and oil) into end-use products, including clothing, household items and industrial textiles. When it comes to the intensity of trade, textiles and clothing is the second largest economic activity in the world. Globalisation and ongoing liberalisation expose EU industry to increasing competition from a large number of countries with low labour costs (especially from Asia), for which this sector is one of the most important sources of income and employment.

The European Union is the world's largest textile and clothing market. The overall size of the textile and clothing industry in the EU-28 is 171 billion EUR turnover and 4.8 billion EUR worth of investments. According to Euratex estimate data for 2016, in the EU there were 177.7 thousand textile and clothing companies that employed over 1.7 million employees. The European textile and clothing industry is the second largest textile exporter and third largest clothing exporter.

The results of research on the competitiveness of the textile sector in the Visegrad Group countries are calculated RCA indices, the index of comparative export advantage, IMP – import penetration index, and RTA – index of relative advantage of trade in 2004-2016. On this basis, comparative advantages in the textile sector in

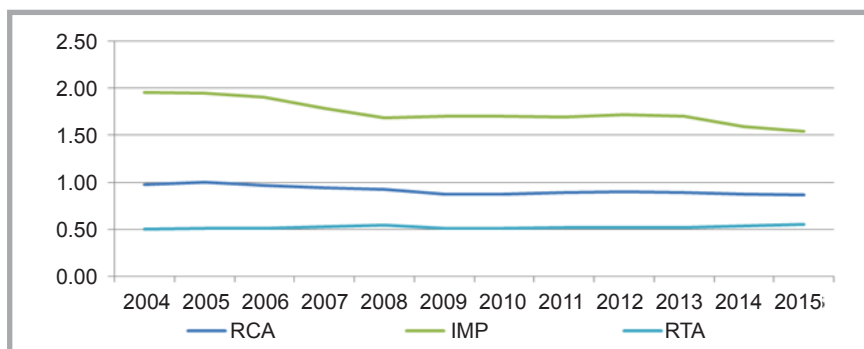


Figure 8. RCA, IMP and RTA indicators in the textile sector of the Visegrad Group in trade with the EU in 2004-2016. Source: Own study based on data from Eurostat data – access: 2018.

the group of economies studied were determined. The analyses carried out proved that the Visegrad Group still remains a group of countries which in most products of the textile sector does not achieve comparative advantages. The research hypothesis: *The Visegrad Group countries accession to the European Union has a positive impact on entrepreneurship development and improving competitiveness in the textile sector of the Visegrad Group countries in the context of implementation of the Europe 2020 Strategy* is only partially confirmed i.e. in the case in the CN 51 product group – wool, thin or thick animal hair, horsehair yarn and woven fabric; CN 53 – other vegetable fibers, paper yarn and woven fabrics of paper yarn; CN 54 – continuous filaments, strip and the like of man-made textile materials; CN 63 – other made-up textile articles, sets, used clothing and used textile articles, rags – and in other groups it does not achieve comparative advantages. It can therefore be concluded that the static effects of the accession of the Visegrad Group countries to the European Union are jointly reached in other sectors of the economy. Therefore appropriate actions should be taken to shape the competitive position of the Visegrad Group's economy in the textile sector, especially to stimulate enterprises (closer environment), e.g. change of management to a more effective one, increase work efficiency, modernisation of infrastructure in enterprises, optimisation of costs, opening to new markets as well as external conditions (further environment), which include access to external sources of financing business activities, freedom in establishing companies, modern infrastructure, fighting corruption and minimising bureaucracy. In this context, fiscal policy influencing exchange rate policy and exchange rates may have a significant impact on the competitive position in the textile sector. In searching for the causes of such a phenomenon, i.e. in most prod-

uct groups, the absence of comparative advantages should be the subject of further in-depth research in this field.

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