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CHANGES IN THE EXPORT COMPETITIVENESS OF THE VISEGRAD GROUP AND GERMANY IN YEARS 2004-2014 – IS THERE CONVERGENCE?

INTRODUCTION

We analyse the changes in the export competitiveness of the Visegrad Group founding members: Poland, Czech Republic, Slovakia and Hungary (V4)[1]. We treat these changes as a demonstration of the V4's ability to catch up with the most developed EU countries, in this study represented by Germany. The analysis covers the years 2000-2014, where 2000 sets the moment when the pre-accession adjustments took place, and 2014 is the last year with available relevant statistical data. The study covers a period of 15 years, during which – in our opinion – long-term changes should be visible. In order to emphasize important events that took place within the years under investigation (accession of the V4 countries to the EU and the collapse of world trade), we divide the analysed period into two sub-periods, distinguishing the years 2004 and 2009. The changes are presented chronologically to evaluate the evolution of the V4 export competitiveness within the entire 15-year period. Discussion of the results is preceded by the introduction to the illusive concept of competitiveness and presentation of the research methodology.

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COMPETITIVENESS AS THE SUBJECT OF ECONOMIC RESEARCH[2]

There are different approaches to defining national competitiveness[3], depending on the research objectives[4]. While modelling competitiveness, three aggregation levels can be distinguished: micro (company/product), meso (industry/cluster) and macro (the whole economy). Moreover competitiveness can be analyzed as a static phenomenon (competitive position at a given moment) or in a dynamic perspective (competitive ability during the analyzed period)[5].

Competitiveness is a relative concept, thus both the position and the competitive ability should be examined against other entities. In this context, competitiveness can be considered as the ability to achieve developmental goals, which makes it not a goal in itself, but the means to achieving long term national prosperity. For that reason, entities that show better results in a defined area can be considered more competitive.

When evaluating national competitiveness at the macroeconomic level, usually the examined country is compared to its trading partners or the countries at the similar/different level of development, identified through the level of productivity[6] or innovation[7]. Following the postulates of evolutionary economy, the competitiveness of the economy can be treated as the national ability to adapt the structure of export to changes in world trade, in particular in the ability to shift specialization towards exports based on knowledge and innovation[8]. This approach makes it possible to highlight the relationship between national innovative capacity and national productivity level and the evolution of the export structure as means supporting long-term development.

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[2] This part of the article uses considerations on the taxonomy of competitiveness contained in: Żmuda (2017) and Czarny, Żmuda (2017).

[3] The quoted sources are limited to the most recent or representative ones for the way of arguing. An extensive review of the literature national competitiveness can be found in: Czarny, Żmuda (2017).

[4] K. Aiginger, S. Bärenthaler-Sieber& J. Vogel, *Competitiveness under new perspectives*, WWWforEurope Working Paper 2013, p. 11.

[5] M. Żmuda, & E. Molendowski, *W poszukiwaniu istoty konkurencyjności gospodarki narodowej: studium interdyscyplinarne*, „Finanse, Rynki Finansowe, Ubezpieczenia" 2016, No. 81(3), p. 328.

[6] P. Krugman, *Making sense of the competitiveness debate*, „Oxford Review of Economic Policy" 1996, No. 12(3), pp. 17-25.

[7] J. Fagerberg, *International Competitiveness*, „The Economic Journal" 1988, no. 98(391), pp. 355-374; T. Pelagidis, & M. Mitsopoulos (ed.), *Unlocking Growth: Innovation as a Driver of Competitiveness and Prosperity, Greece: From Exit to Recovery?* Washington 2014.

[8] F. Castellacci, Innovation and the competitiveness of industries: Comparing the mainstream and the evolutionary approaches, „Technological Forecasting and Social Change" 2008, No. 75(7), pp. 984-1006; Z. Wysokińska, Konkurencyjność w międzynarodowym i globalnym handlu towarami technologicznie intensywnymi (high-tech), „StudiaEuropejskie" 2012, No. 1, pp. 127-146.

As the analyzes reveal large differences in the productivity levels of industries and regions[9], there is a growing interest in competitiveness at the meso-economic level. In this case, selected sectors/clusters[10] from different countries or industries from one national economy are compared[11].

The increase in productivity and changes in the structure of trade in macro- and meso-economic approach result from the activity of companies[12] which are the subject of analysis of competitiveness at the microeconomic level. In this approach, the relative economic success of the country is reflected in the participation of domestic companies in the sales of a given product (locally: through the participation in the domestic market or import penetration scale, or globally through the export volume of domestic companies that are internationally competitive)[13].

Assuming that the national competitiveness is shaped by joined cumulated success at the micro and mezzo levels, we define competitiveness as the ability to achieve the national ability – understood as ability to raise the living standards of the country's inhabitants or maintaining then at a high level[14].

Over the last decades, attempts have been made to model competitiveness (expressed through the level and changes of GDP *per capita*) by means of various sources of its origin. Traditionally, the international success of the economy was determined by the facto endowment (labour, capital, land or natural resources). Also today, price competitiveness is a function of cheapness and the availability of workforce and resources[15]. However, in order to maintain competitiveness in the long run, it is not enough to keep costs low without an increase in productivity and innovation. That is why the focus of analyzes and strategies for building competitiveness has been transferred to those factors that can be created. This is especially about: the technological advancement of local enterprises[16], human

[9] P. Gugler, M. Keller & X. Tinguely, *The role of clusters in the global innovation strategy of MNEs: Theoretical foundations and evidence from the Basel pharmaceutical cluster*, „Competitiveness Review" 2015, No. 25(3), pp. 324-340.

[10] A cluster is a geographically concentrated group of companies from a given sector. It is believed that it facilitates the flow of innovation (Delgado, Porter, & Stern, 2014), by creating the basis for improving the position of the entire national economy in the global value chain (Fundeanu & Badele, 2014) and stimulating the growth of macro-competitiveness (Huggins & Izushi, 2015).

[11] L.D. Johnston & M.D. Chinn, *How well is the United States competing? A comment on Papadakis*, „Journal of Policy Analysis and Management" 1996, No. 15(1), pp. 68-81.

[12] A. Vlachvei, O. Notta, K. Karantininis & N. Tsounis, *Factors Affecting Firm Competitiveness and Performance in the Modern Business World*, IGI Global 2016.

[13] M. Papadakis, *Confounding Productivity and Competitiveness: A Rejoinder to the Comment, 'How Well Is the United States Competing?*, „Journal of Policy Analysis and Management" 1996, No. 15(1), pp. 82-88.

[14] M. Weresa (ed.), *Poland: Competitiveness Report 2015. Innovation and Poland's Performance in 2007-2014*, Warsaw 2015, p. 352.

[15] R. Huggins & H. Izushi, *The Competitive Advantage of Nations: origins and journey*, „Competitiveness Review" 2015, No. 25(5), pp. 458-470.

[16] A.B. Ciocanel& F.M. Pavelescu, *Innovation and Competitiveness in European Context*, „Procedia Economics and Finance" 2015, No. 32, pp. 728-737; S.S. Cohen, & J. Zysman, *Manufacturing Innovation and American Industrial Competitiveness*, „Science" 1988, No. 239(4844), pp. 1110-1115.

capital[17], the quality of institutions[18]and economic freedom[19]. The increasing globalization and intensification of the flow of production factors mean that the national competitiveness also result from effective integration within the international division of labor. Flows of foreign direct investments (FDI) allow access to basic and advanced production factors. On the other hand, participation in international trade and, consequently, the freedom to enter new markets, make it easier for countries with a lower level of development to increase efficiency, giving them a developmental impulse.

In conclusion, we state that the international competitiveness of the country is determined by its ability to achieve developmental goals in the global economy. This is reflected in the ability to export goods and services and to attract foreign production factors. We will use these findings to examine the export competitiveness of of the V4 countries classifying the exported goods along their factor intensities, distinguishing different levels of technological advancement from V4 countries.

RESEARCH METHODOLOGY

Our competitiveness analysis can be located between the macro and meso leveles. We use data from *the UN Trade statistics* database, grouped according to *theStandard International Trade Classification* (SITC), Rev. 3. Commodity groups (in the text also known as industries or simply goods) are shared due to the intensity of using production factors, as done by Wysokińska[20], referring to SITC, Rev. 3 (division of commodity groups into products see Czarny, Żmuda, 2017, table 1).

According to Wysokińska's classification, we divide the commodity groups along their factor intensities into resource-, labor-, capital- and technology-intensive. Therefore, we treat technology as a specific factor of production, distinguishing two types of technologically advanced industries (producing goods that are easy and difficult to imitate).

We consider resource- and labor-intensive products as the least technologically advanced (we also label them as "less technologically advanced"). The remaining groups are considered technologically advanced, with the most advanced products being difficult to imitate.

We measure competitiveness with the Balassa's revealed comparative advantage index (RCA) which allows to determine whether and to what extent the share of export of the commodity group *j* from the country *i* in this country's

[17] E. G. Erickson & H. Rothberg, *Intellectual capital and competitiveness: Guidelines for policy*, „Competitiveness Review" 2000, No. 10(2), pp. 192-198; M. Herciu& C. Ogrean, *Wealth, Competitiveness, and Intellectual Capital – Sources for Economic Development*, „Procedia Economics and Finance" 2015, No. 27, pp. 556-566.

[18] S. Huemer, B. Scheubel, & F. Walch, *Measuring institutional competitiveness in Europe*, „CESifo Economic Studies" 2013, No. 59(3), pp. 576-608.

[19] G.V. Bujancă & S.R. Ulman, *The Impact of the Economic Freedom on National Competitiveness in the Main Economic Power Centres in the World*, „Procedia Economics and Finance" 2015, No. 20, pp. 94-103.

[20] Z. Wysokińska, *Aspekty technologiczne konkurencyjności międzynarodowej Unii Europejskiej oraz Polski*, „Studia Europejskie" 1997, No. 2.

total exports differs from the share of this commodity group in the world's total exports. To calculate RCA, we use the formula[21]:

RCA = Eij/Eit / (Enj/Ent) where:

E: export

i: country

n: group of analyzed countries

j: commodity group

t: group of analyzed goods.

When the RCA index exceeds 1, then we talk about the existence of the comparative advantage of the country *i* in the exports of goods from the commodity group *j*.

Using RCA as a measure of revealed comparative advantage, we assume that the specialization in the exports of goods from commodity groups of high technological intensity is a determinant of the competitiveness of the national economy[22]. Indirectly – through the analysis of comparative advantages, and thus also the export specialization – evaluation of competitiveness shows the strengths and weaknesses of the economies surveyed.

We understand that he major disadvantage of RCA is its relative stability. Current economic conditions determine the long term strengths and weaknesses of he analyzed economy, reflected in advantages and dis advantages of individual sectors. Advantages tend to be quite durable, and the resulting specialization patterns can cause economies to freeze in an unsatisfactory developmental level.

Objections to the RCA index do not prevent us from using it in dynamic terms to show changes the exports structure. We start our analysis in year 2000 when the pre-accession adjustments took place in Poland, the Czech Republic, Slovakia and Hungary (hereafter in reference to the name of the Visegrad Group we use the abbreviation V4), and end the study in 2014 – the last year, with available, interesting for us, statistical data.

We believe that 15 years will be enough to reveal long-term analyzed. We expect that over time, exports of V4 countries will evolve in the direction of specialization based on knowledge and innovation, approaching the model which is Germany's export specialization. We also believe that the degree of convergence will be diversified. In the V4 group at the beginning of the study, analyzed period Poland fell behind the group and we assume that he structural differences will be still visible in year 2014. Hungary was, and we believe will remain, a V4 group leader.

Before analyzing long term changes we focus on the evolution of export structures of the surveyed countries in 5-year periods. And so, we will check whether

[21] B. Balassa, *Trade Liberalisation and 'Revealed' Comparative Advantage*, „The Manchester School of Economic and Social Studies"1965, No.*33*(2), pp. 99-123.

[22] W. Bieńkowski, M. Weresa, Z. Czajkowski, M. Gomułka, B. Brocka-Palacz, E. Latoszek, J. Misala, (ed.), *Czynniki i miary międzynarodowej konkurencyjności konkurencyjności gospodarek w kontekście globalizacji – wstępne wyniki badań,* Warsaw 2008, p. 21.

and to what extent the evolution of comparative advantages of the analyzed countries was influenced by the accession to the EU (2004) and the economic crisis which in 2009 caused the collapse of international trade.

We make Germany the reference point. It has a stable and highly developed economy which is the economic leader of the EU. Therefore, we expect that its comparative advantages will be concentrated on technologically advanced products throughout the whole study. An additional reason for granting Germany the title of a "competitiveness role model" is that it has been the world's largest exporter for years, and even today, when it competes for primacy with China, its position has not got worse much.

CHANGES IN COMPARATIVE ADVANTAGES OF THE V4 AND GERMANY IN 2000-2004

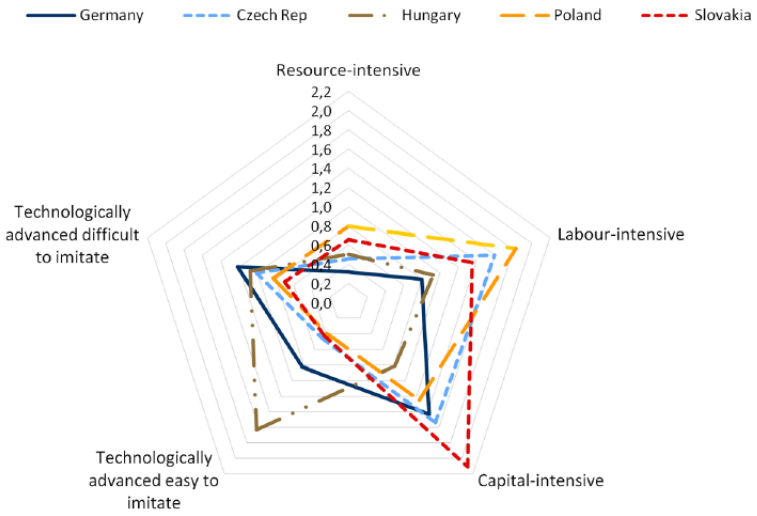
In 2000, i.e. at the beginning of the period covered by our analysis, Germany had a different structure of comparative advantages than the other V4 countries. At that time, as well as in the other analyzed years (2004, 2009, 2014), Germany recorded the highest RCA in capital-intensive goods. In 2000, it was 1.43 (see Figure 1). Further groups of goods where Germany had advantages were technologically advanced and difficult to imitate products (RCA = 1.22). Thus, their advantages were centered in the export of two out of the three commodity groups at he highest level of technological advancement.

Among the V4, in the 2000 Hungary had the most modern exports structure with comparative advantages in the export of both technology-intensive categories of goods (easy to imitate (RCA = 1.22) and difficult to imitate (RCA = 1.08))

The Czech Republic had a somewhat worse structure of exports, at in 2000 showing the greatest diversity of advantages among the V4 group members, specializing in the export of both low-tech labor-intensive goods and technologically advanced capital-intensive goods, as well as the most advanced goods difficult to imitate (though in their case the advantage was trace – RCA was 1.01).

Slovakia, like Poland, had comparative advantages in exports of labor-intensive and capital-intensive goods in 2000. However, Slovakia should be considered more developed than Poland at the time, as it had a record-breaking advantage in the exports of capital-intensive goods (RCA = 2.11), while Poland with RCA = 1.83 was a record holder in labor-intensive exports.

Figure 1. RCA ofthe V4 countries and Germany in 2000

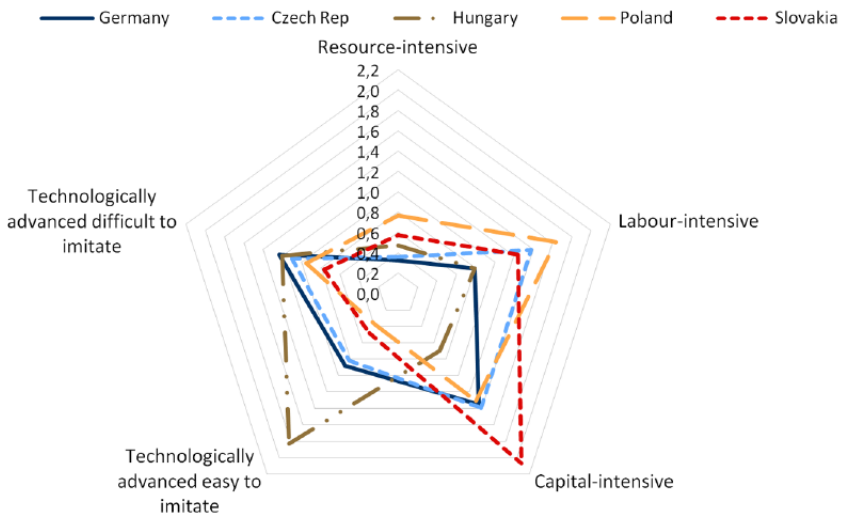


Source: Own calculations based on UN COMTRADE [access: 15.01.2017].

In 2004 (see Figure 2) all V4 countries, except Hungary, recorded comparative advantages in exports of relatively less technologically advanced labor-intensive goods. The smallest advantage, as 5 years earlier, was recorded by Slovakia (1.24), while the greatest by Poland (1.64).

The Czech Republic, Poland and Slovakia maintained advantages in exports of capital-intensive goods, although the advantages decreased in comparison with 2000 (the corresponding RCA indexes were: 1.39, 1.31, 2.07). In exports of these goods, Slovakia and the Czech Republic recorded greater RCA indexes than Germany, which means a greater competitiveness in exports of this category of products. In turn, Hungary had an advantage in the sale of technologically advanced goods easy to imitate (RCA = 1.63). At the same time, Hungary and the Czech Republic already had an advantage in exports of goods difficult to imitate (the corresponding RCAs were: 1.21 and 1.1).

Figure 2. RCA ofthe V4 countries and Germany in 2004



Source: Own calculations based on UN COMTRADE [access: 15.01.2017].

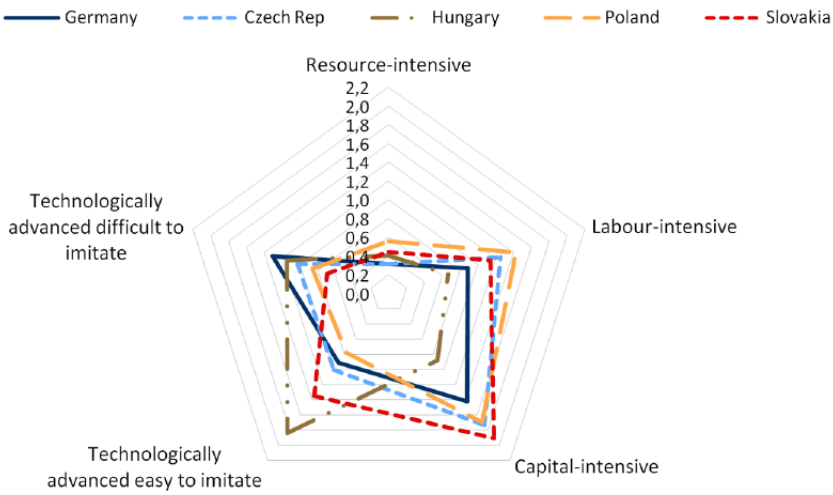
In total, in the years 2000-2004 none of the V4 countries gained a new advantage, but they also did not lose those already gained. Poland was the closest to record a new advantage in the most technologically advanced sector (goods difficult to imitate, RCA = 0.95). In 2004, Hungary not only remained the technological leader of the V4 group, but actually moved away from other countries by increasing RCA indexes in both technology-intensive categories (goods easy to imitate RCA = 1.83 and difficult to imitate RCA = 1.21). After the first five years of the study, the highest technological advancement in Hungarian exports and the high advancement of exports from the Czech Republic were visible among the countries. At the same time, the Czech Republic showed a greater variety of advantages than Hungary, recording them both in labor and capital-intensive products and in the most technologically advanced products difficult to imitate. At the same time, Hungary as the only country in V4 did not have a comparative advantage in exports of either any of the less technologically advanced goods, or capital-intensive goods.

CHANGES IN COMPARATIVE ADVANTAGES OF THE V4 AND GERMANY IN 2004-2009

In 2009, despite the deepening of the economic crisis and the collapse in international trade it, V4 exports continued to undergo technological evolution. And so, the RCA indexes of Poland and the Czech Republic in exports of capital-intensive goods increased. The corresponding index for Slovakia decreased, but

remained the greatest in the analyzed group of countries (and greater than the corresponding index of Germany). Hungary maintained advantages in exports of goods easy to imitate, while Slovakia with RCA = 1.35 gained them. On the other hand, the regression was registered in exports of the most technologically advanced goods difficult to imitate: both the Czech Republic and Hungary maintained their advantages, but these decreased significantly.

Figure 3. RCA ofthe V4 countries and Germany in 2009

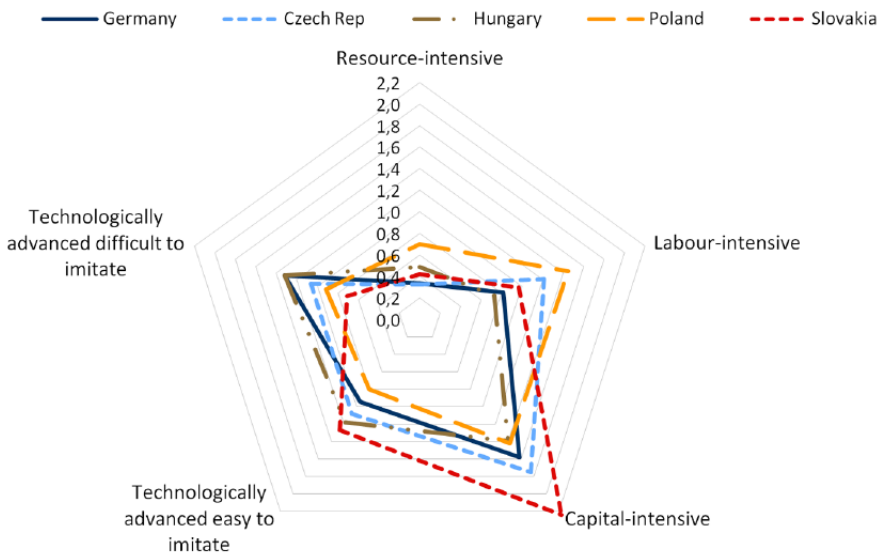


Source: Own calculations based on UN COMTRADE [access: 15.01.2017].

CHANGES IN COMPARATIVE ADVANTAGES OF THE V4 AND GERMANY IN 2009-2014

In 2014, Hungary maintained its position of technology leader among the V4 countries. Hungarian comparative advantage in exports of the most technologically advanced goods difficult to imitate not only increased, but also reached the German level (RCA = 1.3). For the first time, Hungary also gained a comparative advantage in exports of capital-intensive goods, completing the advantages from all three technologically advanced industries.

Figure 4. RCA of V4 countries and Germany in 2014



Source: Own calculations based on UN COMTRADE [access: 15.01.2017].

The Czech Republic, like Hungary, has a similar range of specialization, but it shows lower RCA indexes in exports of the most technologically advanced goods, both easy and difficult to imitate (both RCA indexes = 1.1), while maintaining a very good position in exports of capital-intensive goods (with the highest RCA in V4 and a higher index than that owned by Germany) and (decreasing over time) advantages in exports of labor-intensive goods. In general, the Czech Republic confirmed the position of the most versatile exporter among the V4 countries. It has comparative advantages in exports of various goods, both labor- and capital-intensive, and both groups of goods with the highest technological advancement. At the same time, Czech Republic demonstrates the right direction of development towards a knowledge-based economy. The decrease in their comparative advantages in exports of labor-intensive goods is accompanied by the increased of RCA indicators in all three technologically advanced industries.

On the other hand, Slovakia has a record-breaking (in the group and in the analyzed period) advantages in exports of capital-intensive goods (in 2014, RCA = 2.2). It also maintained advantages in exports of goods technologically advanced easy to imitate, although these decreased. In 2014, Slovakia lost an advantage in exports of labor-intensive goods, moving to more technologically advanced sectors. At the same time, although it has not yet gained an advantage in exports of goods difficult to imitate, it is worth noting that it has already adjusted to the participation in the European monetary union (EMU), which is expected by the other states from the group. This adjustment did not prevent it from maintaining

great advantages in exports of capital-intensive and technologically advanced goods and easy-to-imitate goods.

In turn, Poland virtually stopped in development. Its stagnation is most visible when benchmarked to Slovakia, which during the analyzed period increased an advantage in exports of capital-intensive goods (although already in 2000 it was a leader in V4 in this respect) and gained it in exports of goods technologically advanced. Meanwhile, the comparative advantage of Poland in exports of capital-intensive goods decreased in comparison to year 2009. There is also a systematic decrease in its advantage in exports of labor-intensive goods (which is not surprising considering the categories progress in the economy and the continuous outflow of people from the Polish labor market as a result of the emigration). Poland did not gain a comparative advantage in any of the technology-intensive segments. Thus, the changes that took place in Polish exports in 2009-2014 were directed against the positive changes from the previous sub-period.

Summing up, it can be concluded that in 2014 there were no radical changes in the export specialization of the V4 countries. The technological leader remains Hungary, followed by the Czech Republic and, more recently, by Slovakia. Poland remained the weakest.

SUMMARY: CHANGES IN COMPARATIVE ADVANTAGES IN 2000-2014

The last year of the study (2014) confirms the long-term export specialization patterns of Germany, which in comparison with 2000 increased comparative advantages, maintaining them in technologically advanced commodity groups (capital-intensive and technology-intensive products difficult to imitate).

Our analysis shows that before the accession to the EU, V4 countries, except Hungary, could be considered as the catching-up economies, less developed than Germany. This is evidenced by the size and structure of their export specialization in 2000. V4 countries were distinguished by the advantages in exports of goods relatively poorly technologically advanced, especially labor-intensive ones. It was the abundance of work that was at the time the strength of the economies of the Czech Republic, Poland and Slovakia, unlike Germany, where the lack of resources and high labour costs were (and remain) weaknesses of the economy. In turn, the strengths of the German economy were and are the availability of highly skilled workforce and capital as well as high level of innovation as well as innovation, which the V4 lacked at the time.

In the case of the Czech Republic and Slovakia, the process of catching up with Germany is the most visible. The Czech Republic is the most versatile exporter among the analyzed V4 countries. It has comparative advantages in exports of both labor- and capital-intensive goods and both groups of goods with the highest technological advancement. On the other hand, Slovakia, although it has not yet gained an advantage in exports of goods difficult to imitate, has

already adjusted to the participation in the European Monetary Union, which is expected by all the other states. The adjustment to the participation in the EMU did not prevent Slovakia from maintaining advantages in exports of capital-intensive, technologically advanced and easy-to-imitate goods.

Hungary, with the advantages in exports of both groups of technology-intensive goods (easy and difficult to imitate), has shown he highest level of similarity of the German specialization pattern the beginning of the analyzed period. In the years 2000-2014, all V4 countries evolved towards knowledge-based economies, thus approaching the model represented by Germany. Thus, it can be assumed that their convergence was occurring as well as catching-up with the German economy. However, not all of them did so with the same intensity and in reference to the same commodity groups.

As time goes by, the V4 countries are moving away from technology with relatively low technological advancement. Countries that had such advantages either lost them (Slovakia) or decreased them (The Czech Republic and Poland until 2009.). At the same time, the Czech Republic, Poland and Slovakia, having comparative advantages in exports of capital-intensive products in 2000, increased them in the last year covered by the analysis, and Hungary gained them. Three out of four V4 countries had, at the end of the surveyed period, advantages in exports of technologically advanced goods easy to imitate: the Czech Republic gained them, Hungary decreased, while Slovakia increased them. Only Poland did not manage to enter such markets.

The decrease in Hungary's advantage in exports of goods easy to imitate is by no means an evidence of its weakness and moving away from technology-intensive exports, because in 2014 it increased an advantage in exports of the highest technologically advanced goods difficult to imitate, reaching the level of RCA equal to German.

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ANNEX

Revealed comparative advantages (RCA)

2000	Resource-intensive	Labor-intensive	Capital-intensive	Technologically advanced easy to imitate	Technologically advanced difficult to imitate
Germany	0,32	0,80	1,43	0,82	1,22
The Czech Republic	0,45	1,60	1,54	0,46	1,01
Hungary	0,51	0,92	0,81	1,63	1,08
Poland	0,80	1,83	1,25	0,39	0,83
Slovakia	0,66	1,35	2,11	0,42	0,70

Source: Own calculations based onthe data of UN COMTRADE, [access: January 2017]

2004	Resource-intensive	Labor-intensive	Capital-intensive	Technologically advanced easy to imitate	Technologically advanced difficult to imitate
Germany	0,32	0,79	1,35	0,88	1,24
The Czech Republic	0,36	1,38	1,39	0,82	1,10
Hungary	0,47	0,79	0,70	1,83	1,21
Poland	0,77	1,64	1,31	0,38	0,95
Slovakia	0,57	1,24	2,07	0,48	0,77

Source: Own calculations based onthe data of UN COMTRADE, [access: January 2017]

2009	Resource-intensive	Labor-intensive	Capital-intensive	Technologically advanced easy to imitate	Technologically advanced difficult to imitate
Germany	0,32	0,89	1,42	0,91	1,30
The Czech Republic	0,32	1,25	1,73	1,00	1,02
Hungary	0,40	0,67	0,88	1,83	1,15
Poland	0,56	1,42	1,70	0,77	0,86

Slovakia	0,44	1,14	1,91	1,35	0,69

Source: Own calculations based onthe data of
UN COMTRADE, [access: January2017]

2014	Resource-intensive	Labor-intensive	Capital-intensive	Technologically advanced easy to imitate	Technologically advanced difficult to imitate
Germany	0,34	0,81	1,58	0,94	1,32
The Czech Republic	0,33	1,21	1,75	1,08	1,06
Hungary	0,49	0,72	1,39	1,18	1,32
Poland	0,70	1,45	1,42	0,80	0,92
Slovakia	0,42	0,96	2,24	1,26	0,71

Source: Own calculations based onthe data of
UN COMTRADE, [access: January2017]

Summary: We analyse the changes in the export competitiveness of the Visegrad Group founding members: Poland, Czech Republic, Slovakia and Hungary (V4). We treat these changes as a demonstration of the V4's ability to catch up with the most developed EU countries, in this study represented by Germany. The analysis covers the years 2000-2014, where 2000 sets the moment when the pre-accession adjustments took place, and 2014 is the last year with available relevant statistical data. The study covers a period of 15 years, during which – in our opinion – long-term changes should be visible. In order to emphasize important events that took place within the years under investigation (accession of the V4 countries to the EU and the collapse of world trade), we divide the analysed period into two sub-periods, distinguishing the years 2004 and 2009. The changes are presented chronologically to evaluate the evolution of the V4 export competitiveness within the entire 15-year period. Discussion of the results is preceded by the introduction concerning the concept of competitiveness and the presentation of research methodology.

Keywords: national competitiveness, export competitiveness, V4 countries, catching-up economies

ZMIANY KONKURENCYJNOŚCI EKSPORTU PAŃSTW GRUPY WYSZEHRADZKIEJ I NIEMIEC W LATACH 2004-2014 – CZY NASTĘPUJE KONWERGENCJA?

Streszczenie: W tym opracowaniu analizujemy zmiany konkurencyjności eksportu z państw założycielskich Grupy Wyszehradzkiej: Polski, Czech, Słowacji i Węgier (grupa V4). Te zmiany traktujemy jako przejaw doganiania państw najwyżej rozwiniętych, w tym opracowaniu reprezentowanych przez Niemcy. Badanie obejmuje lata 2000-2014.

Początkiem badania czynimy rok 2000, w którym następowały dostosowania przedakcesyjne, zaś jego końcem – ostatni rok, z dostępnymi, interesującymi nas, danymi statystycznymi (2014). Badanie obejmuje okres 15 lat, w trakcie których – jak sądzimy – powinny być zauważalne zmiany długookresowe. Żeby podkreślić istotne momenty, jakie nastąpiły w latach objętym badaniem (akcesja państw V4 do UE oraz zapaść światowego handlu), dzielimy analizowany okres na dwa podokresy, wyróżniając lata 2004 i 2009. Zmiany przedstawiamy chronologicznie, dokonując analizy ewolucji konkurencyjności w całym 15-leciu. Omówienie wyników poprzedza wprowadzenie dotyczące pojęcia konkurencyjności oraz prezentacja metodyki badania.

Słowa kluczowe: konkurencyjność gospodarki narodowej, konkurencyjność eksportu, V4, państwa doganiające