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The current landscape of the competitive position of the Visegrad Group in the intra-EU services trade[1]

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Abstract
The aim of the analysis presented in the article was to examine the current position that the V4 occupied in trade in services on the single market after 20 years of the membership in the EU. The findings confirmed that the V4 countries have adapted differently to the market conditions, which is reflected in their differentiated competitive positions in the intra-EU trade. The research was carried out by mapping technique based on three factors: (1) the Reveal Symmetric Comparative Advantage (RSCA), (2) the net exporter index (NX), and (3) the country's share of the service in total intra-EU export. The results can be used to develop a new approach by Visegrad countries, which could help upgrade their position in the EU services market and indicate service industries, for which it will be most effective.
Keywords: trade in services, European Union (EU), Visegrad Group (V4), intra-EU trade

Aktualna sytuacja w zakresie pozycji konkurencyjnej Grupy Wyszehradzkiej w wewnątrzunijnym handlu usługami

Streszczenie
Celem analizy, przedstawionej w niniejszym artykule, była ocena obecnej pozycji konkurencyjnej Grupy Wyszehradzkiej (V4) w handlu usługami na jednolitym rynku po 20 latach członkostwa w UE. Wyniki potwierdziły, że kraje V4 w różny sposób dostosowały się do warunków rynkowych, co znajduje odzwierciedlenie w ich zróżnicowanej pozycji konkurencyjnej w handlu wewnątrzunijnym.

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Badanie przeprowadzono techniką mapowania w oparciu o trzy czynniki: (1) Ujawniona Symetryczna Przewaga Komparatywna (ang. *Reveal Symmetric Comparative Advantage*, RSCA), (2) indeks eksportera netto (NX) oraz (3) udział kraju w całkowitym eksporcie wewnątrzunijnym danej usługi. Wyniki mogą posłużyć do wypracowania przez kraje Wyszehradzkie nowego podejścia w celu poprawy swojej pozycji na unijnym rynku usług oraz wytypowania branż usługowych, dla których przyniesie to największą korzyść.
Słowa kluczowe: handel usługami, Unia Europejska (UE), Grupa Wyszehradzka (V4), handel wewnątrzunijny

International trade in services is playing an increasingly important role in the global economy. Many services that previously had to be produced and sold locally are now exchanged internationally. The services trade has become a crucial driver of economic growth and competitiveness for many countries. Over the past decade, countries have focused on enhancing their services export capabilities, driven by advancements in digital technologies, globalisation, and changing consumer preferences. These efforts are often supported by strategic national policies aimed at fostering innovation, improving digital infrastructure, and aligning with international regulatory standards. In fact, some countries have become leading global exporters of services. The services sector consists of a heterogeneous group of industries, where various factors have an impact on economic performance. In this context, it is important to undertake in-depth research to evaluate competitive positions in trade in services using available measures and existing techniques.

The Visegrad Group (comprising Czechia, Hungary, Poland, and Slovakia) has emerged as a dynamic regional bloc within the European Union. Since their accession to the EU in 2004, the V4 countries' role in the intra-EU services export landscape has gained significant traction (see: Directive 2006/123/EC), reflecting broader structural transformations and competitive positioning within the EU market. A factor that has facilitated regional integration and cohesion among EU Member States was the creation of the single market for services, particularly the adoption of the *Directive 2006/123/EC on services in the internal market*. The competitive positioning of the Visegrad Group in the intra-EU services trade reflects both their domestic economic policies and the broader EU regulatory landscape, which collectively shape their export dynamics.

The article presents the results of the research, which examines the current position of the V4 occupy in intra-EU trade in services to reveal how service companies from these countries are functioning in the single market after 20 years of EU membership. The main hypothesis is that the Visegrad countries have adapted differently to market conditions, which is reflected in their differentiated competitive positions in intra-EU trade. To this end, I look at the export performance of these countries in 2023. To assess the relative position of the V4, I apply a multifactor mapping technique based on two indices: Revealed Symmetric Comparative Advantage (RSCA) and the net exporter index (NX). To obtain a more comprehensive picture, I add as a third factor the share of each

country in the total intra-EU services export. Combining these variables will provide a holistic view of a country's competitive position.

This article starts with a literature review. Next, the materials and methods are described, followed by a presentation of the results of the analysis with a discussion of the findings. The final part contains conclusions and suggestions for follow-up research.

Literature review

A country's competitive trade position depends on various factors, including relative prices, market structure, entry barriers, and forms of competition. The success or failure of nation's efforts to sell domestically produced goods and services abroad is influenced by both endogenous and exogenous variables. The competitive position in trade is multifaceted, requiring both quantitative and qualitative indicators for assessment. One such indicator is export specialisation, which relies on the concept of comparative advantage. A country has a comparative advantage, when it can produce a given product relatively cheaper than other products compared to another country. According to this principle, a country exports goods and services in which it has a comparative advantage and imports those in which it does not. In the literature, several indexes show the scale of comparative advantage. The widely known Balassa's index RCA (see: Balassa 1965) is based on one-way trade, revealing that a country either exports goods in which it has a comparative advantage or imports goods in which it has a comparative disadvantage. However, in reality a country can simultaneously sell and buy products from the same category. To address this situation, various measures based on two-way trade or net trade have been proposed, some incorporating normalisation, economy size, or income as scalars to trade volume.

The concept of comparative advantage also can be applied to trade in services (Mongiało 2007). Countries offer services in which they have an advantage and buy those in which they do not. Some researchers, to assess comparative advantage in international service transactions, used the traditional Balassa measure (Mongiało 2004, 2013; Matuszczak 2015; Wosiek 2018). This indicator has been also adopted to calculate export specialisation in services of the Visegrad Group. Stefaniak-Kopoboru and Kuczewska, based on the RCA index, demonstrated changes in the services trade of these countries over the seven years following EU accession, indicating different degrees of specialisation in relation to third partners (Stefaniak-Kopoboru, Kuczewska 2016). In modern trade, countries often simultaneously export and import the same goods (Salvatore 2013), and this phenomenon has been also observed in the case of trade in services (Mongiało 2013). This scenario requires the use of measures beyond traditional RCA to capture the dynamic nature of comparative advantage. In addition, we find in the literature an approach called mapping (Widodo 2009). This approach simultaneously apply two indicators to construct a matrix. This matrix demonstrates the position of each subject as a point on a graph. Distances between points reflect similarities or differences based on chosen indicators. For example, if countries are

located close together on the graph, it indicates that their export performances are similar in the evaluated sector. Conversely, if they are positioned far away, it signifies substantial differences in export performance. As a result, we can reveal a country's position relative to others in a particular industry or export performance in a product group. The inventor of this technique was Widodo (see: Widodo 2009). He created a matrix with two measures: Revealed Symmetric Comparative Advantage (RSCA), which was formulated by Dalum, Laursen and Villumsen (see: Dalum et al. 1998) and Trade Balance Index (TBI). That latter one Widodo associated with Lafay's work. Widodo employed this method to select "leading exported products" of catching-up economies. His methodology has been adopted by other researchers for trade in goods (Benesova et al. 2017; Szczepaniak 2019; Cieślik 2017, 2021; Pawlak, Smutka 2022; Hewavitharana et al. 2022; Anggrasari et al. 2023). This analytical tool has also been utilised to detect a country's position in services trade, with modifications concerning the choice of the indices (Ambroziak, Stefaniak 2022, 2021a, 2021b). These examples demonstrate that mapping techniques is suitable for analysing international trade in services as well.

Materials and methods

In order to analyse the competitive position of the Visegrad countries in trade in services I followed the approach chosen by Ambroziak and Stefaniak (2021a, 2022). However, these researchers employed the RSCA index and Lafay indicator. In this article, instead of Lafay index, I constructed the matrix based on the net exporter measure (NX), which formula was presented by UNIDO (1982). This index, in normalised form for mapping, can be described as follows:

$$NX_j^A = [(X_j^A - M_j^A) / (X_j^A + M_j^A)]$$

where X_j and M_j represent the export and import of the service by country A, respectively.

This term expresses net exports of a service **j** as a percentage of total trade of this service for each country. A negative sign indicates that a country is relative net importer. The relation of the size of its surplus or deficit in trade in services to the total turnover measured as the sum of exports and imports of this service is indicated by the value of this measure. The values of the NX are within the range [–1, 1]. The mathematical form of the NX index can be subsequently found in Lafay's work of 1992 and it was named the Trade Balance Index (TBI) by Tri Widodo in his paper of 2009 (see: Widodo 2009).

The second index, which was chosen to build the matrix map, was the RSCA. This indicator is expressed by the following formula:

$$RSCA_j^A = (RCA_j^A - 1) / (RCA_j^A + 1)$$

where RCA_j^A is a measure of revealed comparative advantage that Bela Balassa formulated, and it is calculated in the following way:

$$RCA_j^A = (X_j^A / X^A) / (X_j^{REF} / X^{REF})$$

where X_j^A represents the export volume of sector **j** of country A,
X^A is the total exports of services of country A,
X_j^{REF}/X^{REF} design the corresponding values for the reference group of countries.

The RSCA indicator takes values in the range [-1;1). A negative sign indicates that the country does not have a comparative advantage, while a positive one means the opposite.

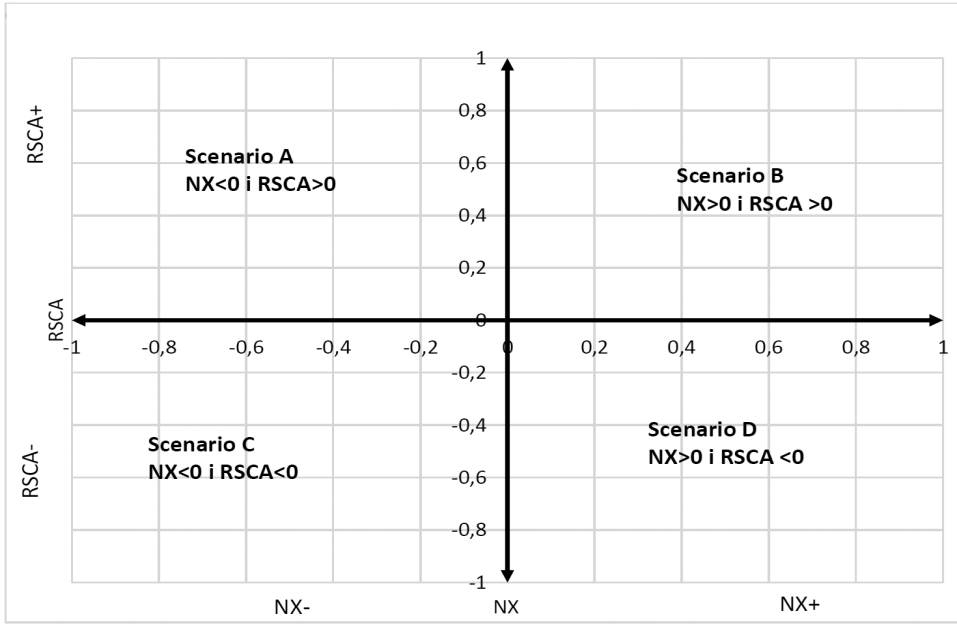
The intention to refer to the RSCA and NX measures was, firstly, to select the indices, which are normalised. This decision solves the problem of the asymmetries of the indices Secondly, the objective was to analyse trade patterns and to determine the specialisation strength from the perspective of flexible concept of the comparative advantage to capture the two-way trade.

In addition, the value of the NX is not affected by the structural distortions. None of the measures used to determine the comparative advantage is perfect, and when deciding to use them, their imperfections should be taken into account when interpreting the test results. In case of NX, the situation could happen that it will generate the value of 1 to indicate very high specialisation, but in the reality exports could be tiny, because the import is equal zero (Gnidchenko, Salnikov 2015).

Another weakness of the indices is the question of the robustness of the empirical distribution of the results. However, at least the RSCA seems to meet this requirement (Deb, Sengupta 2017). Bearing in mind these limitations, we can build the 2*2 matrix map with the help of the RSCA and NX indexes. Juxtaposing these two measures allows for constructing a matrix that identifies and maps a country's export position and shows its competitive status *ex post* compared to others. The results are best presented in a two-dimensional coordinate system.

As a result of the mapping, a country may fall into one of four quadrants, reflecting its current degree of export specialisation (see: *Figure 1*). If a country has a revealed comparative advantage (RSCA) and is a net exporter (NX), it will appear in quadrant B, the most desirable scenario. The worst-case scenario is quadrant C, with no revealed advantage and a negative trade balance. However, it might also happen that a country competitive in service supply (RSCA>0) will be a net importer, appearing in quadrant A. Conversely, quadrant D will contain countries generating more revenue than expenditures from trade, despite lacking a comparative advantage.

Figure 1: The possible competitive positions of the country in trade in services



Source: author's own elaboration based on the concept of Widodo (2009).

The matrix is supplemented with an additional factor – the share of the export of the concerned service from the sample country in the corresponding export of the reference group. This methodology results in a three-factor mapping, providing a more complete picture of the relative competitive position.

The data of trade in services between the Visegrad countries and the rest of the EU was sourced from Eurostat (2024). The most recent figures refer to 2023 and reflect the existing patterns of services trade for this subregional bloc. The volume of international services transactions is divided into 12 main categories following the balance of payments' classification. In this article, the mapping technique has been applied to 11 of them, as the category entitled "Government goods and services n.i.e." was excluded.

When using this data, it is important to note that it is provisional. Additionally, Eurostat does not currently provide information about the value of personal, cultural, and recreational services sold by Hungary in the EU internal market. Furthermore, balance of payments statistics, followed by Eurostat, record only transactions between residents and non-residents of the economy. Thus, they do not fully capture the actual volume of services transactions, which may occur in different 4 modes of delivery according to the GATS approach. In fact, the sales of the foreign service companies established in the host country (so-called "mode 3" in the GATS terminology) are not recorded in the balance of payments after the company has operated in the market of that country for more than one year. This form is most common in construction, distribution services, and

the financial market. Therefore, a more in-depth analysis of the role of foreign-owned firms operating in the V4 markets and their contribution to the services trade of these countries was not conducted in this article due to the limitations of the balance of payments methodology and the incompatibility among the available statistical sources.

Results and discussion

The results of the calculations of RSCA and NX for the V4 countries are demonstrated in *Tables 1–3*. For better visualisation of the outcomes, 11 matrix maps for each of the service categories are presented in this article.

Table 1: Index of NX, by services categories, 2023.

Service categories/country	Czechia	Hungary	Poland	Slovakia
Manufacturing services on physical inputs owned by others	0,70	0,77	0,87	0,76
Maintenance and repair services n.i.e.	0,10	-0,11	0,43	0,08
Transport	0,22	0,10	0,44	-0,01
Travel	-0,09	0,31	-0,03	-0,21
Construction	0,46	0,08	0,51	0,11
Insurance and pension services	-0,74	-0,68	-0,42	-0,45
Financial services	0,09	-0,30	0,12	0,01
Charges for the use of intellectual property n.i.e.	-0,40	-0,39	-0,67	-0,68
Telecommunications, computer and information services	0,09	-0,05	0,01	0,08
Other business services	-0,04	0,01	0,08	0,02
Personal, cultural and recreational services	-0,68	lack of data	0,23	-0,24

Source: author's own calculation based on Eurostat (2024), data as of 16.03.2024.

Table 2: Index RSCA, by services categories, 2023.

Service categories/country	Czechia	Hungary	Poland	Slovakia
Manufacturing services on physical inputs owned by others	0,37	0,46	0,22	-0,05
Maintenance and repair services n.i.e.	0,20	0,03	0,49	0,37
Transport	0,14	0,22	0,31	0,28
Travel	0,06	0,13	-0,27	-0,10
Construction	0,22	0,05	0,45	0,16

Insurance and pension services	-0,44	-0,85	-0,50	-0,52
Financial services	-0,56	-0,76	-0,62	-0,53
Charges for the use of intellectual property n.i.e.	-0,29	-0,51	-0,68	-0,72
Telecommunications, computer and information services	-0,03	-0,29	-0,13	-0,02
Other business services	-0,03	-0,05	-0,01	0,00
Personal, cultural and recreational services	-0,57	lack of data	-0,06	-0,66

Source: author's own calculation based on Eurostat (2024), data as of 16.03.2024.

Table 3: Relative shares of V4 in the intra-EU export of services, in %, 2023.

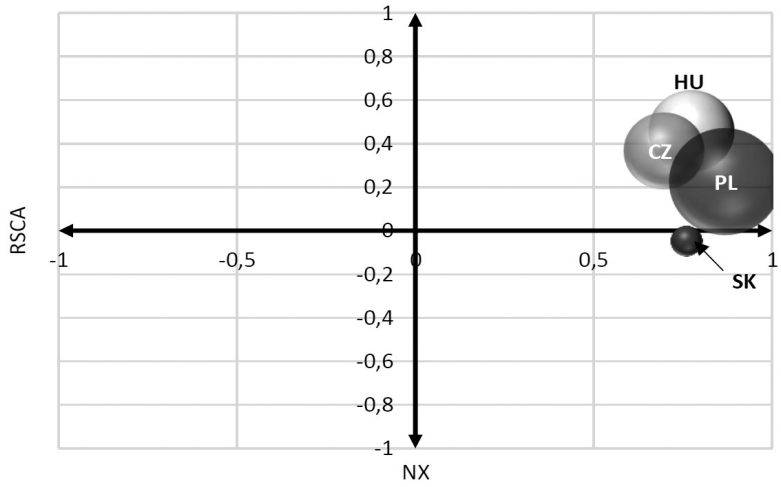
Service categories/country	Czechia	Hungary	Poland	Slovakia
Manufacturing services on physical inputs owned by others	3,72	4,21	7,13	0,57
Maintenance and repair services n.i.e.	2,60	1,66	13,35	1,35
Transport	2,28	2,44	8,48	1,11
Travel	1,94	2,06	2,61	0,51
Construction	2,68	1,73	11,94	0,87
Insurance and pension services	0,68	0,13	1,52	0,20
Financial services	0,49	0,21	1,06	0,19
Charges for the use of intellectual property n.i.e.	0,96	0,51	0,87	0,10
Telecommunications, computer and information services	1,63	0,87	3,49	0,60
Other business services	1,64	1,42	4,41	0,62
Personal, cultural and recreational services	0,48	lack of data	4,04	0,13

Source: author's own calculation based on Eurostat (2024), data as of 16.03.2024.

Information from the tables and the following matrix maps allows us to formulate several observations regarding the situation in selected service categories.

In the case of manufacturing services (see: *Figure 2* below), Poland, Czechia and Hungary were found in quadrant B of the graph, while Slovakia belonged to quadrant D. This situation mirrors the fact that all four Visegrad countries were net exporters to the EU market. Except for Slovakia, they also had a comparative advantage. The RSCA index for Slovakia was only slightly below zero, suggesting that the competitive position of Slovak service providers is not as unfavourable relative to their competitors. We can note that Hungary achieved the highest level of specialisation, while Poland had the lowest RSCA index value despite having an intra-EU export volume of manufacturing services almost 1.7 times larger than Hungary.

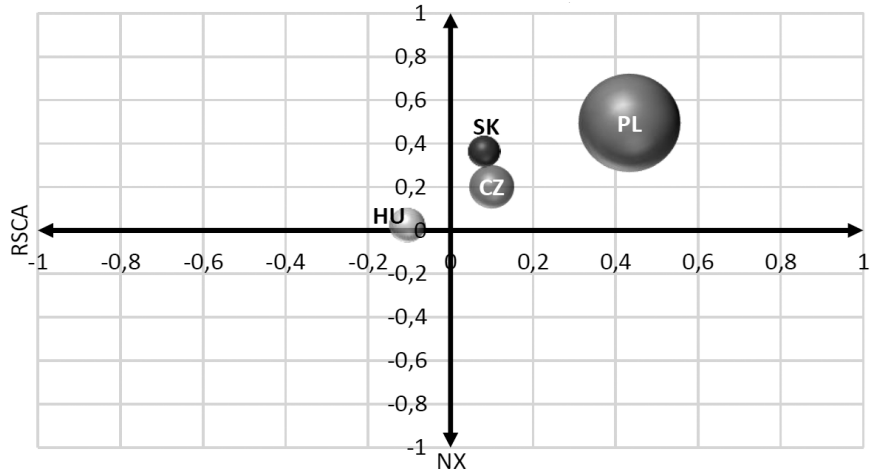
Figure 2: Mapping of position of V4 in intra-EU trade of manufacturing services



Source: author's own calculation.

When we examine the results of mapping in the maintenance and repair services (see: *Figure 3*), it becomes apparent that, with the exception of Hungary, the remaining V4 members can be assigned to scenario B. Among them, Polish and Slovak firms performed the best in the EU market, while Czech service suppliers were much less successful in attracting clients. It is also worth noting Poland's very high double-digit share in total intra-EU exports of these services. Poland accounted for more than five times the share of the Czech Republic, eight times that of Hungary, and almost ten times that of Slovakia. This data indicates Poland's dominant role among the V4 in exporting these services to the EU market, as depicted by the graphical positioning of the bubbles on the chart.

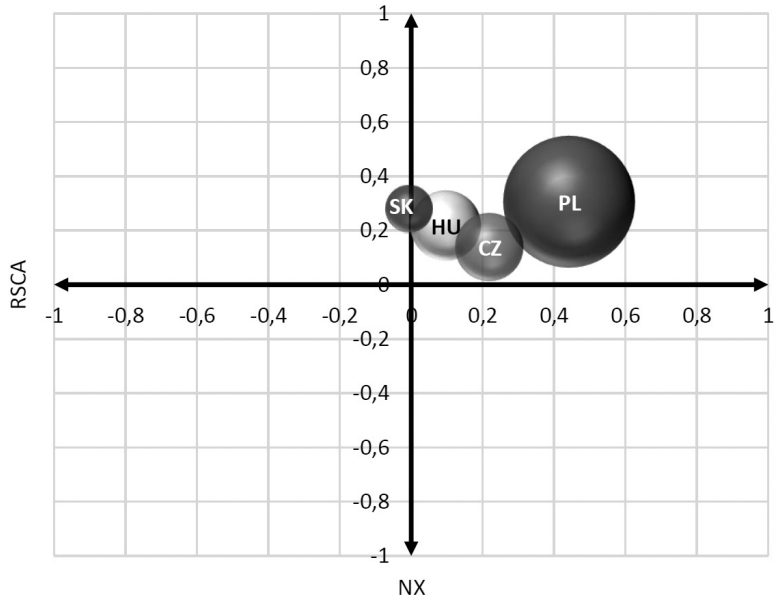
Figure 3: Mapping of position of V4 in intra-EU trade of maintance and repair services



Source: author's own calculation.

Regarding the export performance in the EU transport industry (see: *Figure 4*), three out of the four V4 countries can be classified in group B: Poland, Czechia, and Hungary. They turned out to be net exporters in this sector and demonstrated export specialisation. Poland had the best relative trade balance in this industry and the highest RSCA value among the group. Moreover, Poland's share in intra-EU exports of transport services was the highest in the sample. It seems that the ability of Czech and Hungarian service providers to compete with Polish carriers is limited, as indicated by the RSCA values. Analysing Slovakia's data, despite showing a comparative advantage in offering transport services in 2023, it ended up in quadrant A due to a negative trade balance. However, Slovakia's NX index was only statistically slightly below the value of zero, suggesting that its competitive position is not significantly worse than the other V4 countries.

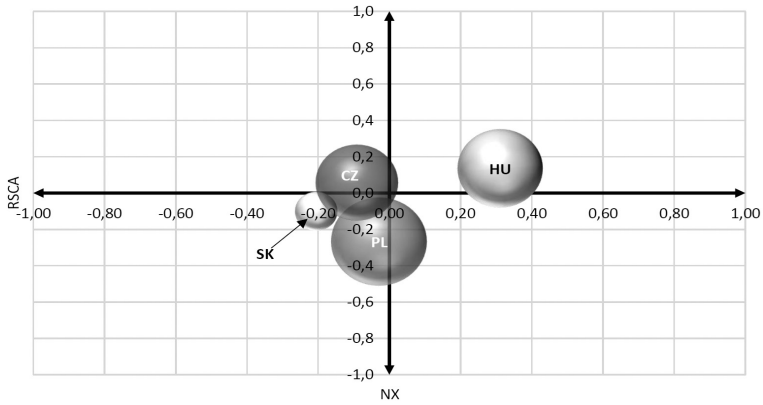
Figure 4: Mapping of position of V4 in intra-EU trade of transport services



Source: author's own calculation.

Based on the mapping results, we can see that the V4 generally held a weak competitive position in the travel industry in 2023 (see: *Figure 5*). Poland and Czechia were placed in quadrant C of the chart, indicating the worst-case scenario, because they lacked export specialisation and turned out to be net importers. Only Czechia and Hungary possess a comparative advantage in this category, with Hungary being the only net exporter. However, it is important to note that the figures published by Eurostat in the category of "travel" should be considered a rough estimator of the volume of exports and imports of tourist services due to the methodology adopted in the balance of payments classification of trade in services. In terms of shares in intra-EU exports, the first place in 2023 belonged to Poland, while the last was occupied by Slovakia.

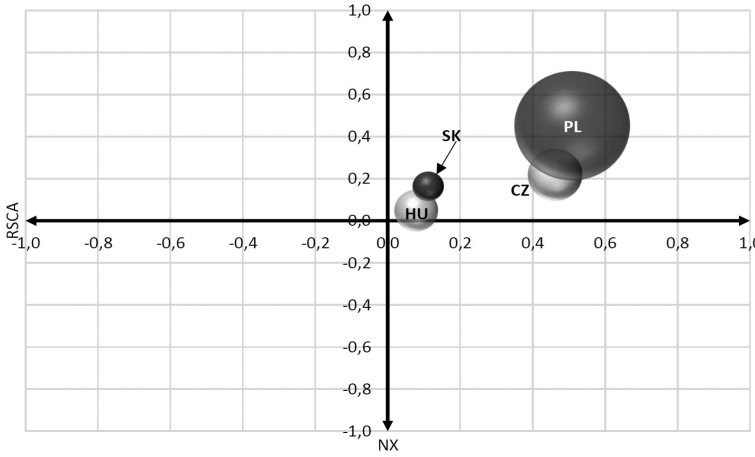
Figure 5: Mapping of position of V4 in intra-EU trade of travel



Source: author's own calculation.

In the construction sector (see: *Figure 6*), the competitive position of the V4 as a group is much better than in travel and relatively similar to the transport industry. Poland turned out to achieve the highest level of export specialisation, although the other Visegrad countries also demonstrated a comparative advantage. As all V4 members were net exporters in this industry, the whole group is found in quadrant B of the graph. In terms of the role in the intra-EU export of construction services, Poland clearly dominated the V4, accounting for over four times the share of the Czech Republic and almost thirteen times that of Slovakia.

Figure 6: Mapping of position of V4 in intra-EU trade of construction

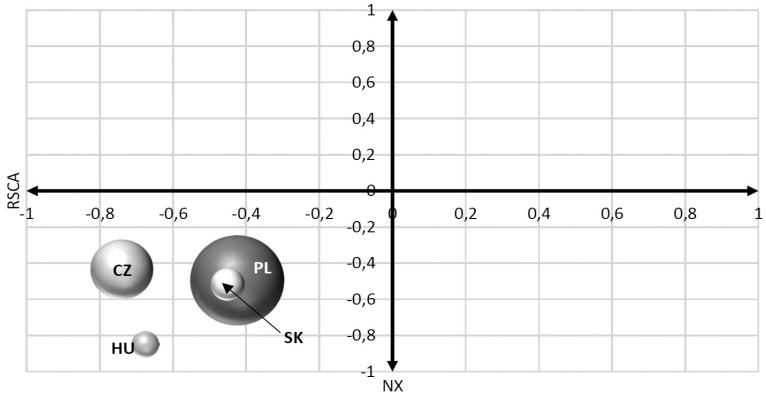


Source: author's own calculation.

In the insurance industry (see: *Figure 7*), we can find that the V4 were homogeneous, with both measures being negative. Consequently, the entire bloc was placed in quadrant C of the graph. This fact indicates, firstly, that all the Visegrad countries imported more

than they exported to the EU market in this sector. Secondly, none of them demonstrated a comparative advantage in insurance services. Hungary had the weakest RSCA value, and the largest trade deficit was recorded in the Czech Republic. Regarding intra-EU export shares of insurance services, Poland ranked first, while Hungary was last among the V4.

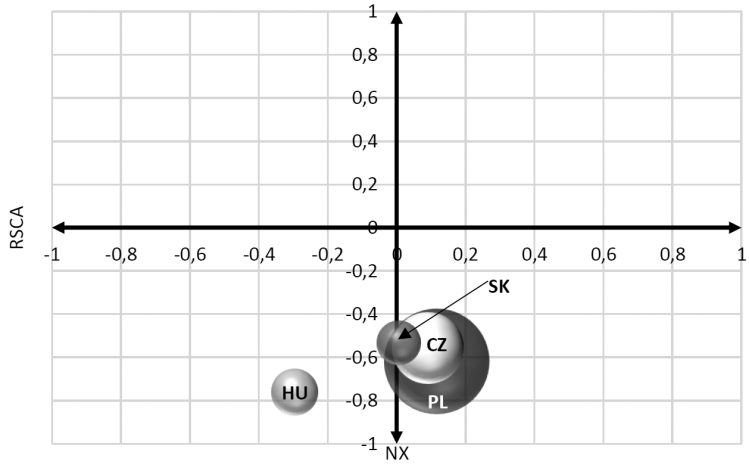
Figure 7: Mapping of position of V4 in intra-EU trade of insurance and pension services



Source: author's own calculation.

A slightly better picture of the Visegrad countries' competitive position compared to the insurance sector can be observed in the financial services (see: *Figure 8*). Although the mapping revealed that none of the V4 countries had a comparative advantage in this segment, Poland, Czechia and Slovakia achieved a small but positive trade balance in this category. However, Hungary significantly imported more than it exported. In terms of intra-EU export shares, Poland performed the best, followed by the Czech Republic.

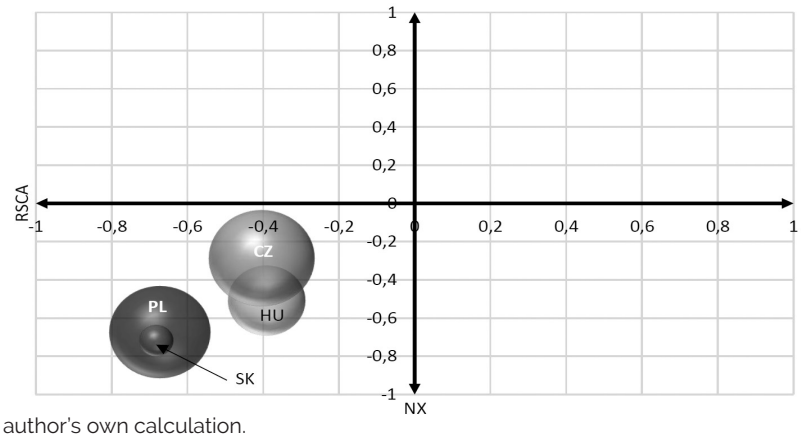
Figure 8: Mapping of position of V4 in intra-EU trade of financial services



Source: author's own calculation.

Similarly to insurance services, the individual trade balance in charges for intellectual property rights with the rest of the EU Member States was negative for all V4 countries (see: *Figure 9*). This fact indicates that the Visegrad bloc does not have export specialisation in this area. Consequently, the group was placed in quadrant C of the graph, with the Czech Republic earning relatively the most revenue and Slovakia the least.

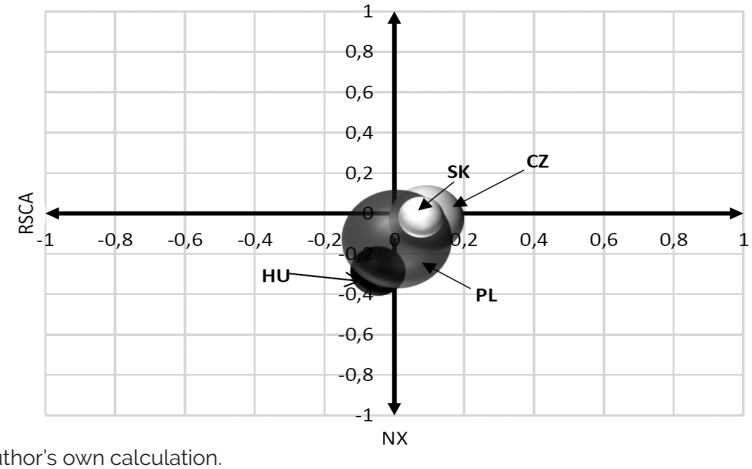
Figure 9: Mapping of position of V4 in intra-EU trade of charges for intelectual property rights



Source: author's own calculation.

The competitive position of the V4 on the EU market is rather unfavourable for ICT services (see: *Figure 10*). The mapping demonstrated that in 2023 Visegrad countries belonged to quadrant D or C of the graph, because their RSCA values were negative. Except for Hungary, the remaining members had a positive trade balance in this category, although only slightly above zero, and the values were very close to each other. Furthermore, the data indicates that none of the V4 countries achieved a comparative advantage. Poland held the best position in the EU ICT market, accounting for more than twice the export share of the Czech Republic.

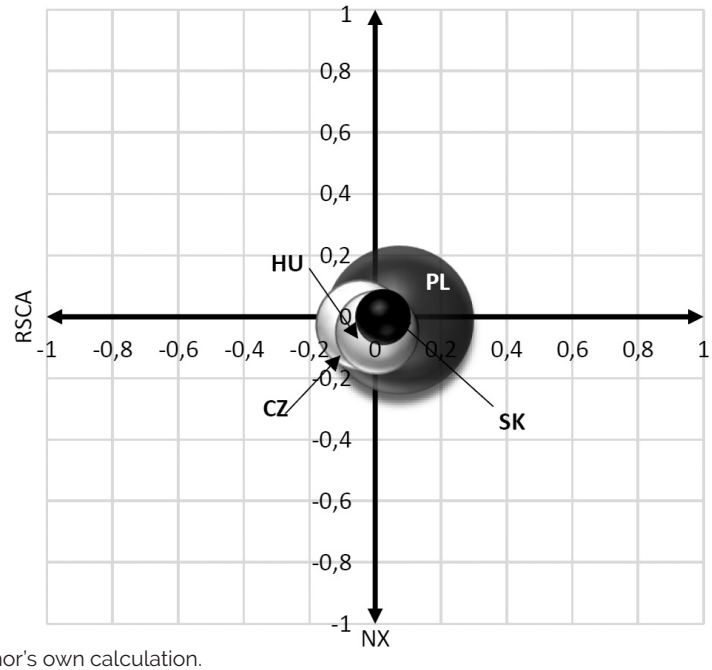
Figure 10: Mapping of position of V4 in intra-EU trade of ICT services



Source: author's own calculation.

As in the case of ICT, the competitive position of the V4 in other business services was relatively weak as well (see: *Figure 11*). Although the value of exports exceeded imports for Poland, Slovakia, and Hungary, none of them demonstrated a comparative advantage in this category. Among the group, the Czech Republic appears to be the weakest, because this country was a net importer and did not specialise in the delivery of business services to the EU market. Considering the individual share in the total intra-EU export in this category, we can note that the best position was held by Poland.

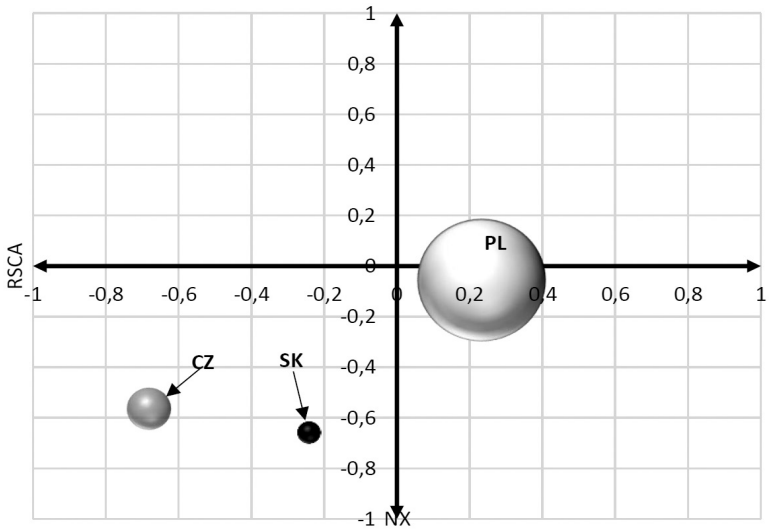
Figure 11: Mapping of position of V4 in intra-EU trade of other business services



Source: author's own calculation.

A lack of export specialisation has been detected in personal, cultural, and recreational services for Slovakia, Czechia, and Poland (see: *Figure 12*). Moreover, the first two countries imported more of these services than they exported to other EU countries. Among the Visegrad countries, Poland had the largest share in the intra-EU exports of these services, suggesting a better position than Slovakia and Czechia.

Figure 12: Mapping of position of V4 in intra-EU trade of personal, cultural and recreational services



Source: author's own calculation.

Taking into account these partial findings we can make the more general remarks. Firstly, the mapping demonstrated that, with the exception of Poland, the otherV4 countries appeared in each of the four quadrants of the graph. In some cases, the entire group is located in quadrant C, indicating that the Visegrad countries did not possess the export specialisation and were net importers. This trend was observed in insurance services and transactions related to charges for the use of intellectual property license fees. In case of construction, the whole bloc can be found in quadrant B, because both individual indicators are positive. The mapping also revealed a mixed situation, where a country generated a positive trade balance, but demonstrated no comparative advantage, placing it in quadrant D: Czechia, Poland and Slovakia – in ICT and manufacturing services; Hungary and Poland – in other business services; Poland and Czechia – in financial services. The least frequent situation is when the representatives of the V4 can be found in quadrant A. Examples include Slovakia in relation to transport, Hungary in the case of maintenance and repair services, and the Czech Republic in regards to travel.

Secondly, the accession to the EU has indeed opened up new opportunities for export expansion for service providers from the V4 countries. However, it has also led to intensified competition and the elimination of the least economically efficient businesses from the market. Despite starting from similar levels of socio-economic development and facing similar structural problems, the V4 countries coped with these challenges with varying degrees of success. The analysis of the competitive position indicates the accuracy of this statement. The V4 maintained different positions in the export of

services to the EU market, highlighting the lack of homogeneity within the group. Polish service providers often emerged as leaders in intra-EU exports across multiple service branches in 2023, while other Visegrad countries also demonstrated strong economic performance.

In general, the V4 as a bloc occupies a relatively good competitive position in transport and manufacturing services, as indicated by their placement in quadrant B of the chart. However, in other types of services, the group failed to demonstrate specialisation in knowledge-intensive sectors such as other business services and ICT. Despite being net exporters of these services to the EU market, they faced difficulties in competing, particularly in the ICT industry. This conclusion aligns with findings from Ambroziak and Stefaniak (2021a), indicating persistent challenges in export specialisation in ICT services for Hungary and Poland, as observed in 2013, 2018, and 2023. The Czech Republic, which in 2013 and 2018 had a comparative advantage in supplying these services on the EU market, in 2023 lost its position. Similarly, Slovakia experienced a deterioration in its performance, because its RSCA measure after improvement in 2018 in relation to 2013 recently was at the level below that of 2013. Furthermore, the actual competitive position of the V4 in delivering services to the EU internal market can be improved. In this context the essential role should be played by the policy-makers who are in charge of making policy decisions and who are responsible for undertaking the appropriate measures. The key element for the success lies in choosing the right strategy.

While there are cases, where the V4 countries have shown an export specialisation, the negative NX value indicates that the country imports more than it exports in the category concerned. This could be due to higher domestic consumption, investments abroad, or temporary economic conditions negatively impacting the trade balance. On the other hand, in other service sectors, where the RSCA index indicates a lack of export specialisation, the positive NX value demonstrates that the V4 country is exporting more services than it is importing. This could reflect the country's ability to compete effectively in the international market, leveraging strengths such as domestic demand, efficiency, or market positioning.

Conclusions

This article sheds more light on the pattern of trade in services of the Visegrad group. It identified the areas, where Poland, Hungary, Slovakia and Czechia had a unique and advantageous relative position in the EU market for services in 2023. Therefore, the article is a contribution to more general discussion on the assessment of the economic performance of the V4 in comparison to other EU Member States after 20 years of membership. This year's anniversary of the accession of the Visegrad countries is an opportunity to deepen research in this direction and to identify similarities and differences in the competitive position of this bloc not only in trade in services, but also in trade in goods. The notion of competitive position is dynamic and the conclusions resulting from the research should also be carefully drawn. It seems that further studies should be carried in two dimensions. Firstly, to conduct more detailed research and

expand the time horizon. There is also room for the review of the existing papers on services trade of the individual Visegrad countries to identify the gap in the literature and explain that a new technique is used for the analysis. Secondly, the future research work could answer the question: which of the alternative measures of the comparative advantage are the best option to select for mapping technique in trade in services? It is also worth addressing the issue: the smaller the negative values of RSCA and NX, the greater the chance for the V4 country to move to another quadrant of the chart and improve the terms of trade.

The knowledge of the trade patterns revealed, and the conclusions can be useful for policymakers in shaping national strategies. Additionally, both existing and prospective entrepreneurs and potential investors can benefit, as can analysts, from refined and refinable analytical technique.

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