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External shocks and international trade in services, with particular emphasis on the V-4

Abstract: This article attempts to answer the following main research question: how three selected external economic shocks (the 2008–2009 global financial crisis, the COVID-19 pandemic and Russia's invasion of Ukraine) might have influenced international trade in services between 2005 and 2024. Sixteen specific research questions have been formulated regarding such trade (global exports and imports, as well as the three most important types of service) on a global scale, with a particular focus on the Visegrad Group (V4) countries. The following research methods were applied: a literature review on economic shocks (including the author's own classification of such shocks), source text analysis, logical inference, deductive reasoning, documentary and critical analysis methods, descriptive analysis and comparative analysis. Following the planned analyses, it was indicated which external shocks might have had the greatest impact on the trade in services (2 cases), and which might have had a high (6 cases), medium (15) or low (9) impact. Cases of no potential impact were also identified (16). The issues presented in this article represent an attempt to highlight key and significant areas for further analysis. In the author's view, it contributes to the discussion on the development and determinants of international service trade, assuming further, progressive "servicization" on a global scale.

Keywords: external shocks; international trade; international trade in services; trade sectors in services; V4 countries

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INTRODUCTION

Over nearly the past half-century of global economic development, a dynamic increase in the significance of international trade in services can be observed. The value of global service exchange is rising, and the service export ratio is expanding in many countries worldwide – indicating that the service sector plays an increasingly vital role in economic development. When comparing data from 1980 and 2024, the growth dynamics of global

service exports and imports outpace those of goods: merchandise exports – 1.193%, service exports – 2.237%; merchandise imports – 1.185%, service imports – 1.804%, as presented in Table 1 below.

Table 1. Dynamics of world export and import of services, 1980–2024, billion USD

International trade in services	Billion USD	Percentage change
Exports of services in 2024	8,852.172	
Imports of services in 2024	8,078.610	
Exports of services in 1980	395.66	2.237%
Imports of services in 1980	447.77	1.804%
International trade in goods		
Exports of goods in 2024	24,456.413	
Imports of goods in 2024	24,782.764	
Exports of goods in 1980	2,050.129	1.193%
Imports of goods in 1980	2,091.006	1.185%

Source: <https://unctadstat.unctad.org/datacentre/dataviewer/US.TradeServCatTota> (access: 4.11.2025)

It therefore seems justified to use the term “servicization” in reference to the processes occurring in the internationalizing world economy. In the era of globalization, the 21st century may be not only the century of services, but also the century of internationally traded services.

These processes may be influenced by various phenomena that disintegrate the global economy. The contemporary world is becoming increasingly incomprehensible to those engaged in foreign economic exchange. The realities of international business (international management processes, international marketing, international finance, international transport, freight forwarding and logistics, and finally international trade) involve continuous and unpredictable disruptions that often lead to chaos, misinformation and so-called discontinuities. There is an observed uncertainty, volatility and complexity in business models, as well as a tension between accumulated, processed and implemented business knowledge and the potential methods for solving the diverse problems faced by market participants on both the demand and supply sides. The 21st century has brought severe global turmoil that has significantly impacted international business. Between periods of predictable stability – often lasting several decades – there emerge sudden, unprecedented phenomena referred to as “discontinuities” in developmental processes. They have had (and continue to have) a massive impact on humanity, global business and the natural environment. However, there is one fundamental difference: today, these discontinuities occur much more frequently, triggering a state of chaos and international disruption. One can only agree with the prophetic thesis of Płoszajski (2005) who, even before the greatest external shocks of the 21st century, wrote that “the fate of the world (including the business world) has always been shaped by events which, in light of current beliefs, ‘had no right to happen’ – at least not so quickly.” Thus, one can cite here the global financial crisis of 2008–2009, the COVID-19 pandemic, the invasion of independent Ukraine by the Russian Federation in February 2022, and the aftermath of these events.

The purpose of this study is to attempt to answer the following main research question (MRQ): how have these three external shocks affected international trade in services between 2005 and 2024? Sixteen detailed research questions (DRQs) have been

formulated regarding turnover in trade in services (both in total and across the three main types of services) on a global scale, with a particular focus on the Visegrad Group (V4) countries (Poland, Czechia, Hungary and Slovakia).

The Visegrad Group countries share common historical and cultural roots, the post-1989 transformation and the treaty obligation to adopt the euro which is linked to EU membership. However, they are currently divided by different geopolitical aspirations and economic strategies, which is reflected in the structural divergence of their international trade in services and best seen in the example of monetary integration: Slovakia has already adopted the common currency, while Poland, Czechia and Hungary are deliberately postponing this process in order to maintain monetary independence.

How, then, did these three external shocks affect:

1. commercial services trade turnover between 2005 and 2024:
 - a) global exports (DRQ1) and global imports (DRQ2),
 - b) V4 exports (DRQ3) and V4 imports (DRQ4);
2. transport services trade turnover between 2005 and 2024:
 - a) global exports (DRQ5) and global imports (DRQ6),
 - b) V4 exports (DRQ7) and V4 imports (DRQ8);
3. travel services trade turnover between 2005 and 2024:
 - a) global exports (DRQ9) and global imports (DRQ10),
 - b) V4 exports (DRQ11) and V4 imports (DRQ12);
4. other business services trade turnover between 2005 and 2024:
 - a) global exports (DRQ13) and global imports (DRQ14),
 - b) V4 exports (DRQ15) and V4 imports (DRQ16)?

The following research methods were applied in this study: a review of the relevant literature, source text analysis, logical inference, deductive reasoning, documentary and critical analysis, descriptive analysis and comparative analysis.

LITERATURE REVIEW

Economic shocks have long been a feature of the global economy, yet they have become particularly salient in recent years. A shock is a specific event that disrupts an economy or economies from a state of equilibrium. Economic shocks are classified into external (also referred to as exogenous) and internal (endogenous). The European Commission economic paper (*Economic Policy...*, 1997) distinguishes between country- and region-specific shocks, real and financial shocks, and exogenous versus policy-induced shocks. Another classification was proposed by Czaja (2007). Based on a scale criterion, he distinguished between macro-scale and micro-scale shocks; based on the symmetry criterion, between symmetric and asymmetric shocks; based on the source criterion, external (exogenous) and internal (endogenous) shocks; based on the absolute value criterion, positive and negative shocks; based on the market criterion, supply and demand shocks; and based on a type criterion, technical and oil shocks. The author of this study proposes the following classification, which may be somewhat narrower, yet more illustrative of the current state of the global economy – Table 2.

Table 2. Author's classification of economic shocks

Economic shocks	
External (exogenous)	Internal (endogenous)
– global financial and economic crises – pandemics – energy and commodity crises – climate crisis – migration crisis – armed conflicts, wars – shifts in the economic policies of major powers (e.g. Trump's tariff war 2.0 or Brexit) – AI / technological changes	– hyperinflation – price adjustments / price regulations – sharp fluctuations in the domestic exchange rate – changes in the money supply – tax policy changes – changes in trade policy instruments – regulation of the income redistribution model – unemployment – decline in household incomes

Source: author

It is also worth noting that – despite the intuitive negative connotations associated with the word ‘shock’ – a sudden, unforeseen event can be positive in nature. Examples include successful innovations, breakthrough inventions, beneficial investments, revolutionary scientific discoveries, positive supply shocks and favorable environmental conditions for agricultural cultivation. Furthermore, creative destruction is observed across specific sectors of the global economy, where resources (capital, labor) are first abruptly released and subsequently utilized in a more innovative, efficient and profitable manner (Zysk, Gryczka, 2025). Table 3 presents selected examples of attempts to define and describe issues related to economic shocks in the relevant literature.

Table 3. Summary of some research results focused on economic shocks

Source	Subject matter	Key findings
Kucharski (2014)	Shocks to the economy	Every market economy is subject to cyclical fluctuations. Aggregate output is influenced by various types of demand and supply shock.
Troise et al. (2022)	VUCA, VUCA2	To characterize the environment in which economies, organizations or individuals operate, the term VUCA2 is frequently utilized, highlighting its volatility, uncertainty, complexity and ambiguity.
Espitia et al. (2022)	The COVID-19 pandemic and economic disruptions	The COVID-19 pandemic induced both a demand and a supply shock, thereby materializing the risks associated with the system of international economic interdependencies built over decades.
Mbah, Wasum (2022)	The economic ramifications of Russia's invasion of Ukraine	The sequence of adverse economic shocks and the global economic crisis triggered by Russia's armed aggression against Ukraine.
Vandenbussche et al. (2022)	The economic ramifications of Brexit	Service sectors are particularly vulnerable to the indirect effects of trade shocks due to their central position in the network.
Bukowski et al. (2023)	The economic impact of the COVID-19 pandemic	The COVID-19 pandemic has altered the pace and direction of several constituent processes of globalization.

Gorynia, Trąpczyński (2023)	Economic crises	The third decade of the 21st century has brought two severe economic crises with profound and multidimensional repercussions for the global economy.
Ciravegna et al. (2023)	Exogenous and endogenous economic shocks	The “new normal” is characterized by frequent disruptive events in the international business environment, such as the COVID-19 pandemic and the Russia-Ukraine conflict.
Aiyar et al. (2023)	International trade in commercial services (among others)	A fragmentation into three worlds could occur: the Global West (led by the United States and Europe), the Global East (under the aegis of China and Russia), and the Global South (developing nations) with protectionist consequences.
Sawadogo et al. (2024)	International trade in services in SSA (Sub-Saharan Africa)	Total services exports, transport services exports, travel services, insurance services, financial services, charges for the use of intellectual property, and other business services foster the diversification of export products.
Trzonkowski (2026)	Shocks to the economy	Economic shocks are an inherent feature of economic performance at both global and regional scales

Source: author

As illustrated in the table above, referencing even a few select studies clearly reveals that the global economy is heading toward an inevitable transformation (potentially manifesting as a slow deglobalization), rendering the introduction of the concept of “polycrisis” into the discourse on the future of international business highly justified (Malewska, 2025).

INTERNATIONAL TRADE IN SERVICES IN THE YEARS 2005–2024 AND SELECTED ECONOMIC SHOCKS

In line with the research assumptions, an attempt will be made to address the main research question (MRQ): how did these three selected external shocks (the global financial crisis of 2008–2009, the COVID-19 pandemic and the invasion of independent Ukraine by the Russian Federation in February 2022) affect international trade in services between 2005 and 2024? To achieve this, detailed research was conducted guided by sixteen detailed research questions (DRQs). Consequently, the study will present findings regarding international trade in services turnover (exports and imports) focusing on the three most significant types of services from a global perspective, with particular emphasis on the Visegrad Group (V4) countries (Poland, Czechia, Hungary and Slovakia).

International trade turnover in commercial services between 2005 and 2024

This section presents the international trade turnover in commercial services (which encompass financial and insurance services, consulting and professional services, marketing and PR services, trade and repair services, transport and logistics services, travel and food services, IT and telecommunications services, real estate and construction services, recreational, sports and cultural services, as well as personal [B2C] services) from both a global perspective (exports and imports) and within the Visegrad Group (V4) countries (likewise covering exports and imports).

Global exports (DRQ1)

As illustrated in the Figure 1, during the global financial crisis, global commercial services exports experienced a contraction, falling from USD 4,023.9 billion in 2008 to USD 3,603.2 billion in 2009 while reaching only USD 3,926.3 billion in 2010 (representing a two-year adverse impact, highlighted in orange on the chart). Similarly, during the COVID-19 pandemic, exports declined from USD 6,320.2 billion in 2019 to USD 5,247.4 billion in 2020 while reaching only USD 6,328.6 billion in 2021 (likewise indicating a two-year adverse impact, highlighted in orange on the chart). Conversely, following the invasion of independent Ukraine by the Russian Federation in February 2022, no decline in global commercial services exports was recorded in either 2023 or 2024.

Global imports (DRQ2)

As illustrated in the Figure 2, during the global financial crisis, global commercial services imports experienced a contraction, falling from USD 3,869.8 billion in 2008 to USD 3,465.6 billion in 2009 while reaching only USD 3,789.8 billion in 2010 (representing a two-year adverse impact, highlighted in orange on the chart). Similarly, during the COVID-19 pandemic, imports declined from USD 6,031.9 billion in 2019 to USD 4,967.5 billion in 2020 while reaching only USD 5,776.9 billion in 2021 (likewise indicating a two-year adverse impact, highlighted in orange on the chart). Conversely, following the invasion of independent Ukraine by the Russian Federation in February 2022, no decline in global commercial services imports was recorded in either 2023 or 2024 – analogously to the trend observed in exports.

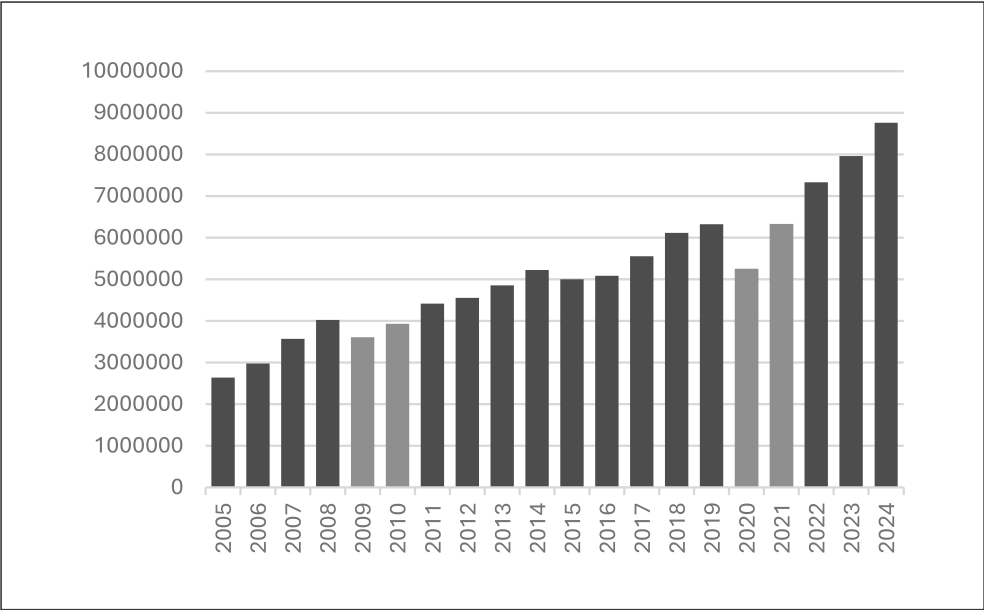
V4 countries' exports (DRQ3)

As illustrated in the Figure 3, during the global financial crisis, commercial services exports from the V4 countries experienced a decline from USD 91.3 billion in 2008 to USD 76.7 billion in 2009 while reaching only USD 82.5 billion in 2010 (representing a two-year negative impact, indicated in orange on the chart). Similarly, during the COVID-19 pandemic, exports fell from USD 143.8 billion in 2019 to USD 126.2 billion in 2020 (reflecting a negative impact of only one year, indicated in orange on the chart). In contrast, following the Russian Federation's invasion of sovereign Ukraine in February 2022, no decline in commercial services exports from the four analyzed countries was recorded in either 2023 or 2024 – a trend that aligns with global export and import developments.

V4 countries' imports (DRQ4)

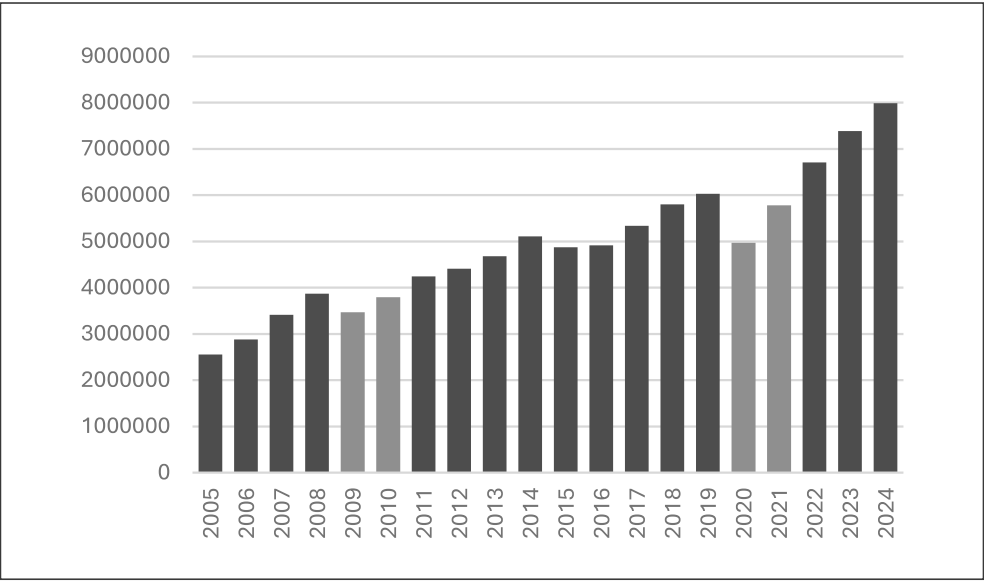
As illustrated in the Figure 4, during the global financial crisis, commercial services imports into the V4 countries experienced a decline from USD 80.3 billion in 2008 to USD 68.3 billion in 2009 while reaching only USD 74.6 billion in 2010 (representing a two-year negative impact, indicated in orange on the chart). Similarly, during the COVID-19 pandemic, imports fell from USD 107.5 billion in 2019 to USD 94.3 billion in 2020 (reflecting a negative impact of only one year, indicated in orange on the chart). In contrast, following the Russian Federation's invasion of sovereign Ukraine in February 2022, no decline in commercial services

Figure 1. Global commercial services exports, 2005–2024, in USD million



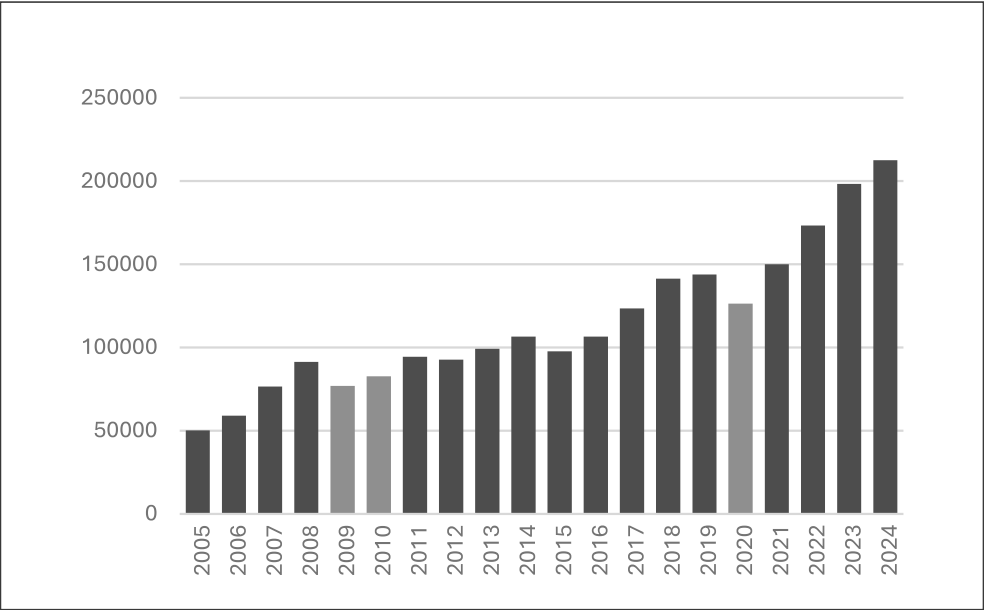
Source: own calculations based on: <https://stats.wto.org/> (access: 24.10.2025)

Figure 2. Global commercial services imports, 2005–2024, in USD million



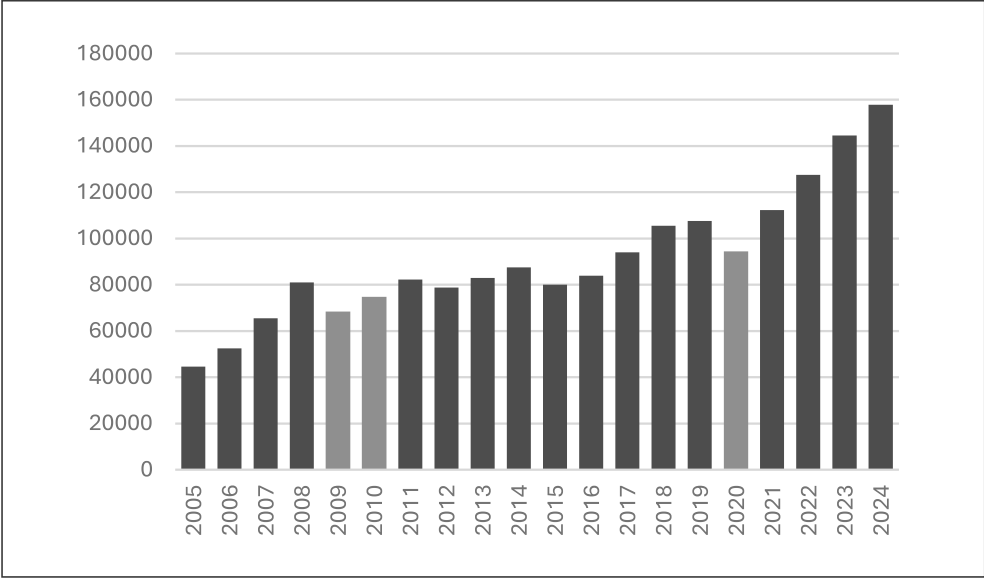
Source: as for Figure 1

Figure 3. Commercial services exports of the V4 countries, 2005–2024, USD million



Source: as for Figure 1

Figure 4. Commercial services imports of the V4 countries, 2005–2024, USD million



Source: as for Figure 1

imports into the four analyzed countries was recorded in either 2023 or 2024 – a trend that aligns with global export and import developments as well as V4 countries' exports.

Trade in transport services, 2005–2024

This section presents international trade in transport services (comprising maritime transport, inland/land transport, air transport, space transport, and auxiliary and supporting services for all modes of transport, such as cargo handling, storage and warehousing, freight forwarding, and cargo inspection) from both a global perspective (exports and imports) and within the Visegrad Group (V4) countries (likewise covering exports and imports).

Global exports (DRQ5)

As illustrated in the Figure 5, during the global financial crisis, global exports of transport services experienced a decline from USD 910.7 billion in 2008 to USD 709.8 billion in 2009 while reaching only USD 828.9 billion in 2010 and USD 905.9 billion in 2011 (representing a three-year negative impact, indicated in orange on the chart). Similarly, during the COVID-19 pandemic, exports fell from USD 1,051.2 billion in 2019 to USD 881.9 billion in 2020 (reflecting a negative impact of also only one year, indicated in orange on the chart). Following the Russian Federation's invasion of sovereign Ukraine in February 2022, a decline in global transport services exports was also recorded, dropping from USD 1,539.3 billion in 2022 to USD 1,369.8 billion in 2023, while reaching only USD 1,482.9 billion in 2024 (representing a two-year negative impact, indicated in orange on the chart).

Global imports (DRQ6)

As illustrated in the Figure 6, during the global financial crisis, global imports of transport services experienced a decline from USD 1,054.8 billion in 2008 to USD 827.6 billion in 2009 while reaching only USD 976.4 billion in 2010 (representing a two-year negative impact, indicated in orange on the chart). Similarly, during the COVID-19 pandemic, imports fell from USD 1,244 billion in 2019 to USD 1,043.9 billion in 2020 (reflecting a negative impact of also only one year, indicated in orange on the chart). Following the Russian Federation's invasion of sovereign Ukraine in February 2022, a decline in global transport services imports was also recorded, dropping from USD 1,749 billion in 2022 to USD 1,669.1 billion in 2023, while reaching only USD 1,746.4 billion in 2024 (representing a two-year negative impact – consistent with export trends, indicated in orange on the chart).

V4 countries' exports (DRQ7)

As illustrated in the Figure 7, during the global financial crisis, transport services exports from the V4 countries experienced a decline from USD 23.4 billion in 2008 to USD 18.8 billion in 2009, to USD 19.4 billion in 2010, while reaching only USD 23.2 billion in 2011 and USD 22.9 billion in 2012 (representing a negative impact lasting as long as four years, indicated in orange on the chart). Similarly, during the COVID-19 pandemic, exports fell

from USD 37.1 billion in 2019 to USD 33.8 billion in 2020 (reflecting a negative impact of only one year, indicated in orange on the chart). In contrast, following the Russian Federation's invasion of sovereign Ukraine in February 2022, no decline in commercial services exports from the four analyzed countries was recorded in either 2023 or 2024 – diverging from the trends observed in global transport services exports and imports.

V4 countries' imports (DRQ8)

As illustrated in the Figure 8, during the global financial crisis, transport services imports into the V4 countries experienced a decline from USD 16 billion in 2008 to USD 12.3 billion in 2009, while reaching only USD 14.5 billion in 2010 (representing a two-year negative impact, indicated in orange on the chart). Similarly, during the COVID-19 pandemic, imports fell from USD 23.6 billion in 2019 to USD 21.4 billion in 2020 (reflecting a negative impact of only one year, indicated in orange on the chart). Following the Russian Federation's invasion of sovereign Ukraine in February 2022, a decline in transport services imports into the four analyzed countries was also recorded, dropping from USD 35.8 billion in 2022 to USD 33.5 billion in 2023, while reaching only USD 35.4 billion in 2024 (representing a two-year negative impact, indicated in orange on the chart) – diverging from the trend observed in V4 countries' exports.

Trade in travel services, 2005–2024

This section presents international trade in travel services (comprising accommodation and food services, including restaurant and catering services, travel agency and tour operator services, tour guide services and other operations directly linked to tourism) from both a global perspective (exports and imports) and within the Visegrad Group (V4) countries (likewise covering exports and imports).

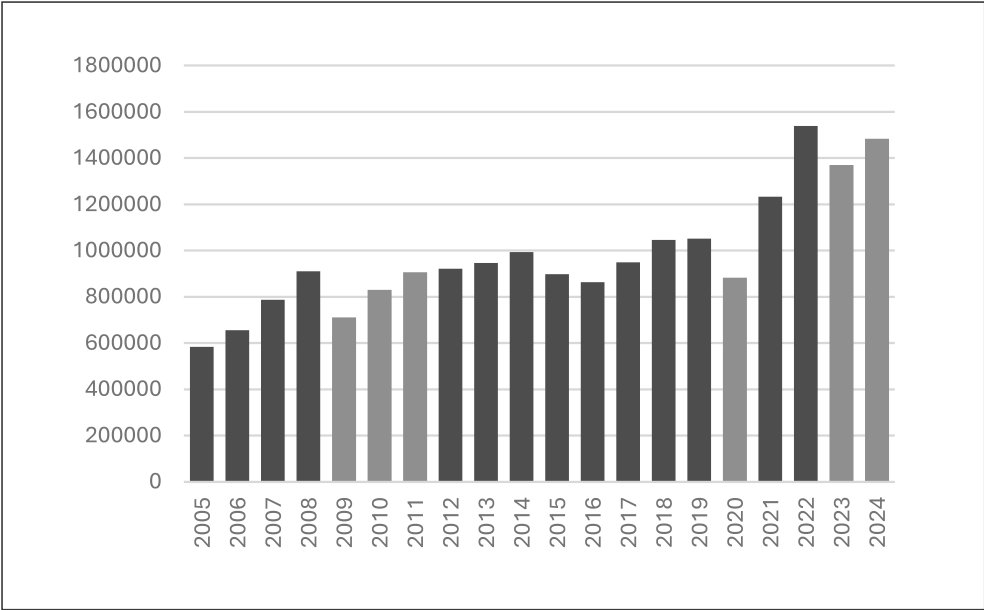
Global exports (DRQ9)

As illustrated in the Figure 9, during the global financial crisis, global exports of travel services experienced a decline from USD 971.8 billion in 2008 to USD 894 billion in 2009, while reaching only USD 966.7 billion in 2010 (representing a two-year negative impact, indicated in orange on the chart). During the COVID-19 pandemic, exports suffered a sharp decline from USD 1,495.3 billion in 2019 to USD 570.4 billion in 2020, while reaching only USD 655.8 billion in 2021, and USD 1,151.7 billion in 2022 (reflecting a three-year negative impact, indicated in orange on the chart). In contrast, following the Russian Federation's invasion of sovereign Ukraine in February 2022, no decline in global travel services exports was recorded.

Global imports (DRQ10)

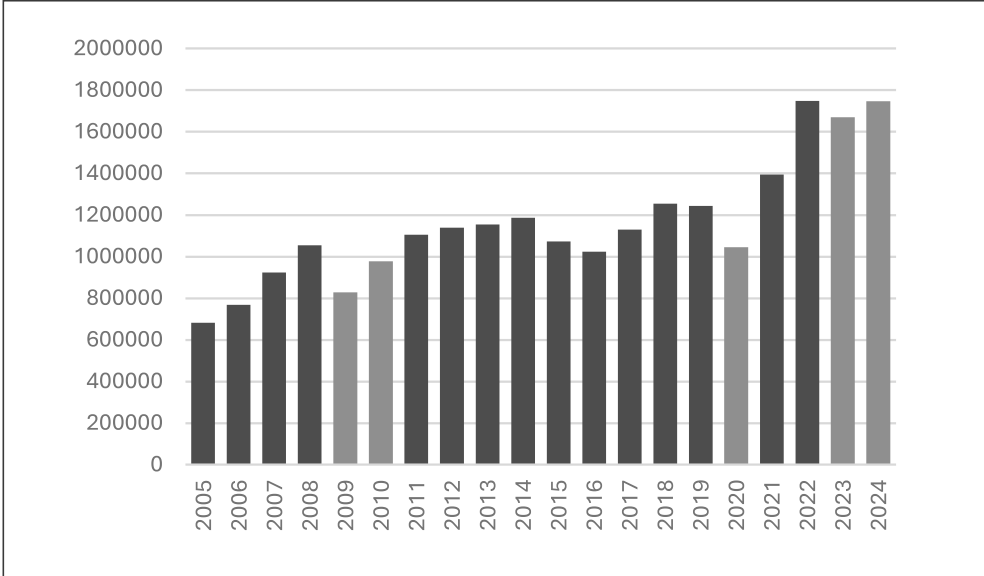
As illustrated in the Figure 10, during the global financial crisis, global imports of travel services experienced a decline from USD 880.3 billion in 2008 to USD 809.3 billion in 2009 (representing a one-year negative impact, indicated in orange on the chart). During the COVID-19 pandemic, imports suffered a sharp decline from USD 1,419.8 billion in 2019 to USD 567 billion in 2020 and to USD 641 billion in 2021, while reaching only USD

Figure 5. Global exports of transport services, 2005–2024, USD million

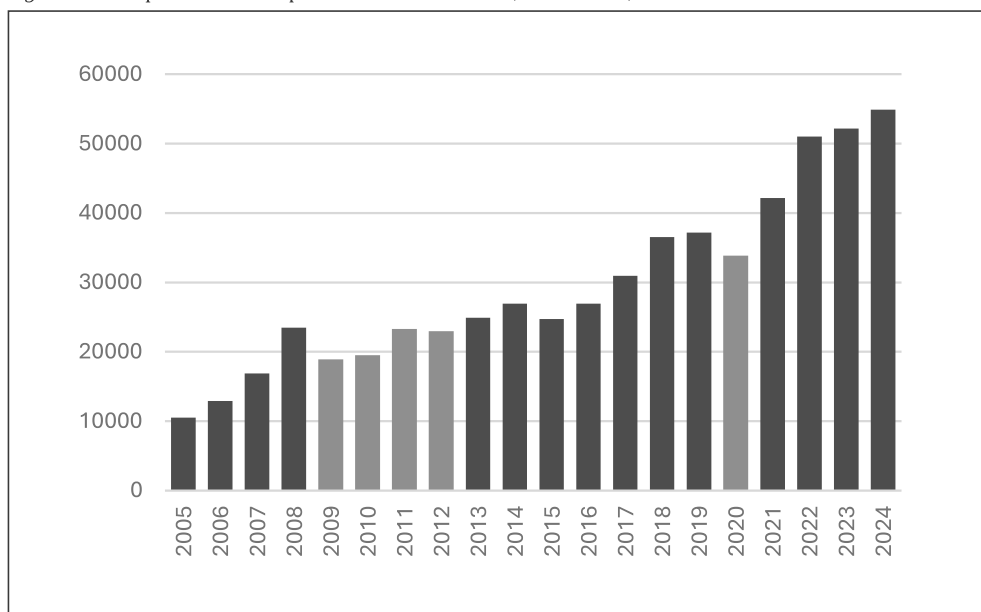


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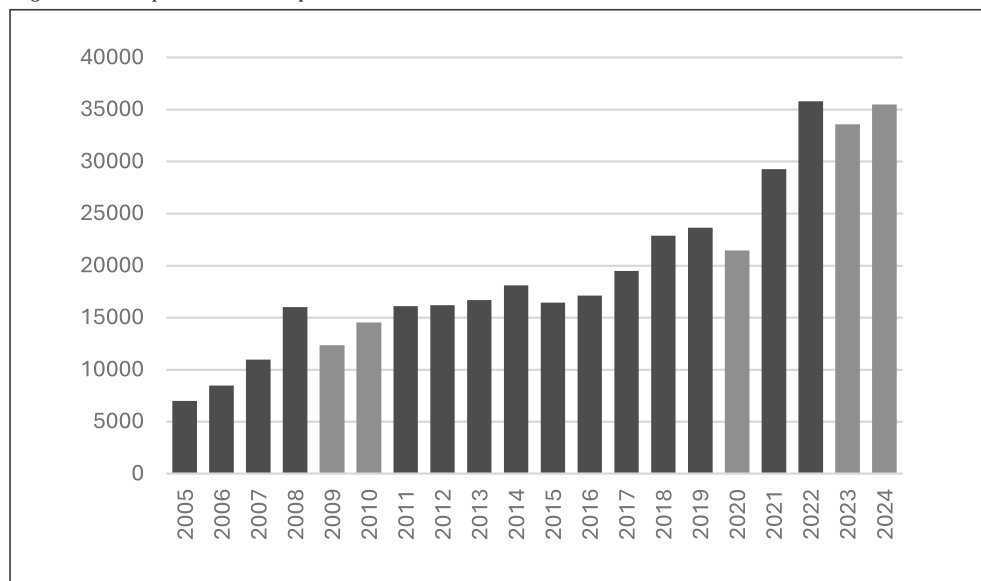
Figure 6. Global imports of transport services, 2005–2024, USD million



Source: as for Figure 1

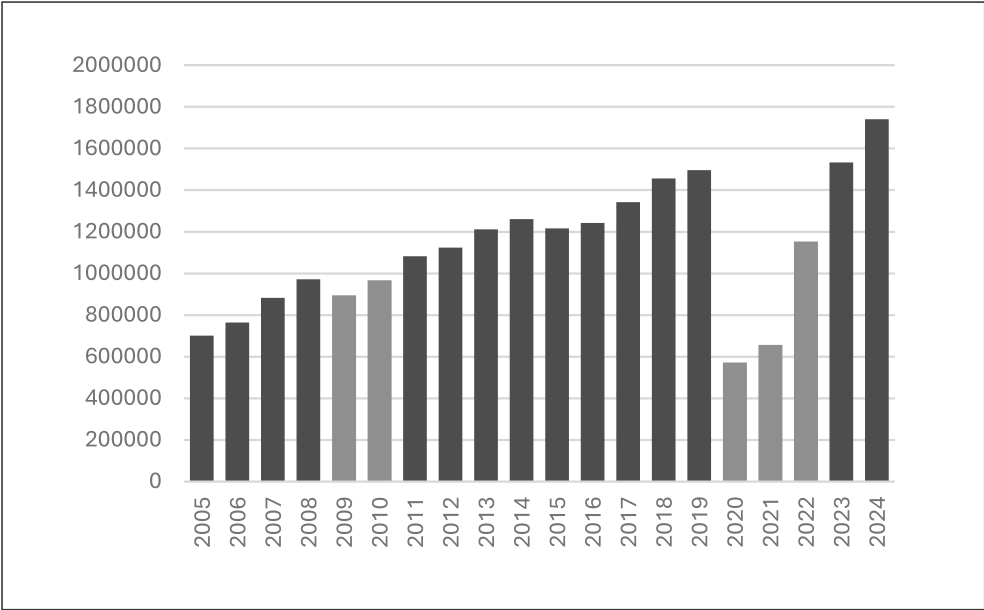
Figure 7. Transport services exports of the V4 countries, 2005–2024, USD million

Source: as for Figure 1

Figure 8. Transport services imports of the V4 countries, 2005–2024, USD million

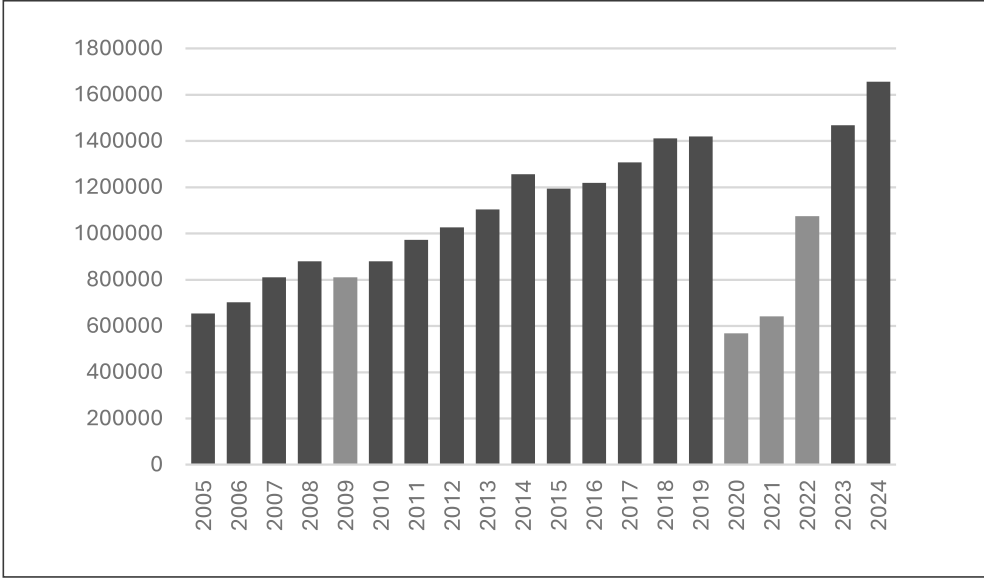
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Figure 9. Global exports of travel services, 2005–2024, USD million



Source: as for Figure 1

Figure 10. Global imports of travel services, 2005–2024, USD million



Source: as for Figure 1

1,074.7 billion in 2022 (reflecting a three-year negative impact, indicated in orange on the chart). In contrast, following the Russian Federation's invasion of sovereign Ukraine in February 2022, no decline in global travel services imports was recorded – a trend that aligns with export developments.

V4 countries' exports (DRQ11)

As illustrated in the Figure 11, during the global financial crisis, travel services exports from the V4 countries experienced a multi-year decline from USD 29.2 billion in 2008 to USD 24.7 billion in 2009, USD 24.5 billion in 2010, USD 27.1 billion in 2011, USD 25.6 billion in 2012, USD 26.2 billion in 2013, USD 26.9 billion in 2014, USD 24.1 billion in 2015, and USD 25.6 billion in 2016 (representing a negative impact lasting as long as eight years, indicated in orange on the chart). Similarly, during the COVID-19 pandemic, exports suffered a sharp decline from USD 32.1 billion in 2019 to USD 16.5 billion in 2020, and USD 18 billion in 2021 while reaching only USD 26.9 billion in 2022 (reflecting a three-year negative impact, indicated in orange on the chart). In contrast, following the Russian Federation's invasion of sovereign Ukraine in February 2022, no decline in travel services exports from the four analyzed countries was recorded in either 2023 or 2024 – a trend that aligns with global export and import developments for these services.

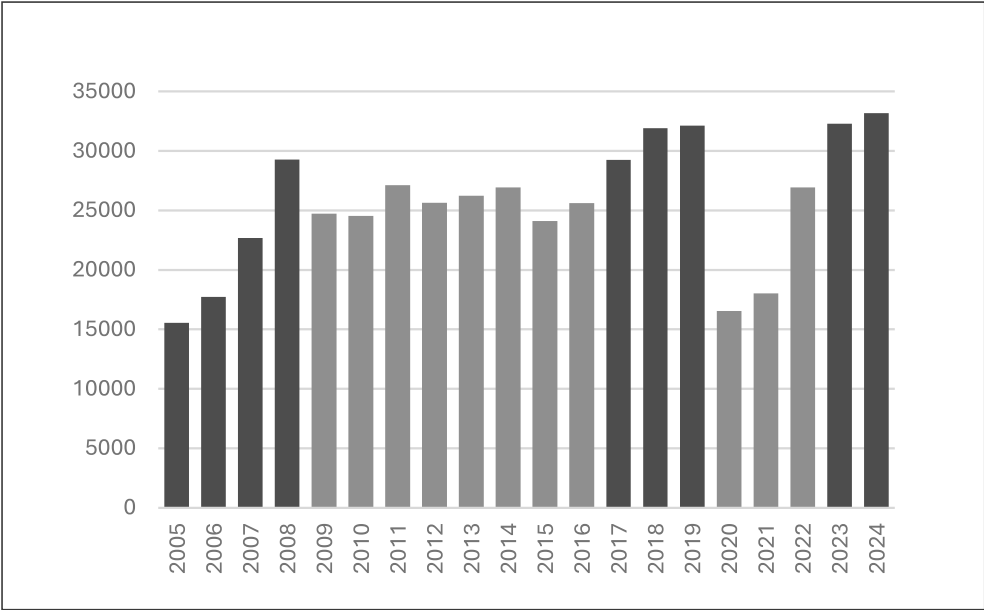
V4 countries' imports (DRQ12)

As illustrated in the Figure 12, during the global financial crisis, travel services imports into the V4 countries experienced a multi-year decline from USD 20.2 billion in 2008 to USD 16.4 billion in 2009, USD 16.9 billion in 2010, USD 17.7 billion in 2011, USD 17 billion in 2012, USD 17.5 billion in 2013, USD 18.1 billion in 2014, USD 16.4 billion in 2015, USD 17.2 billion in 2016 and USD 19.2 billion in 2017 (representing a negative impact lasting as long as nine years, indicated in orange on the chart). Similarly, during the COVID-19 pandemic, imports suffered a sharp decline from USD 20.6 billion in 2019 to USD 11.6 billion in 2020, while reaching only USD 12.3 billion in 2021 and USD 17.6 billion in 2022 (reflecting a three-year negative impact, indicated in orange on the chart). In contrast, following the Russian Federation's invasion of sovereign Ukraine in February 2022, no decline in travel services imports into the four analyzed countries was recorded in either 2023 or 2024 – a trend that aligns with global export and import developments for these services, as well as V4 countries' exports.

Trade in other business services, 2005–2024

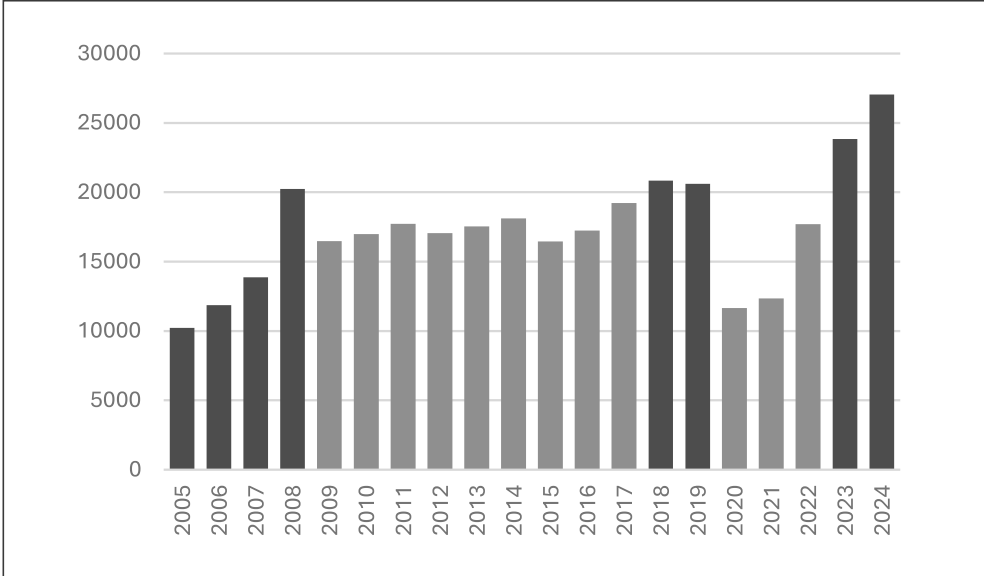
This final analysis presents international trade in other business services (comprising research and development (R&D) services, professional and management consulting services – including legal, tax, accounting, HR or PR services – marketing and market research, technical and architectural services, as well as operational leasing and rentals) from both a global perspective (exports and imports) and within the Visegrad Group (V4) countries (likewise covering exports and imports).

Figure 11. Travel services exports of the V4 countries, 2005–2024, USD million



Source: as for Figure 1

Figure 12. Travel services imports of the V4 countries, 2005–2024, USD million



Source: as for Figure 1

Global exports (DRQ13)

As illustrated in the Figure 13, a decline in global exports of other business services was recorded only during the global financial crisis, dropping from USD 2,012.4 billion in 2008 to USD 1,880.5 billion in 2009, while reaching only USD 2,001.8 billion in 2010 (representing a two-year negative impact, indicated in orange on the chart). Interestingly, no decline in global exports of these services was recorded either during the COVID-19 pandemic or following the Russian Federation's invasion of sovereign Ukraine in February 2022.

Global imports (DRQ14)

As illustrated in the Figure 14, a decline in global imports of other business services was recorded only during the global financial crisis, dropping from USD 1,845.4 billion in 2008 to USD 1,755.3 billion in 2009, while reaching only USD 1,848.8 billion in 2010 (representing a two-year negative impact – consistent with export trends, indicated in orange on the chart). Once again, no decline in global imports of these services was recorded either during the COVID-19 pandemic or following the Russian Federation's invasion of sovereign Ukraine in February 2022.

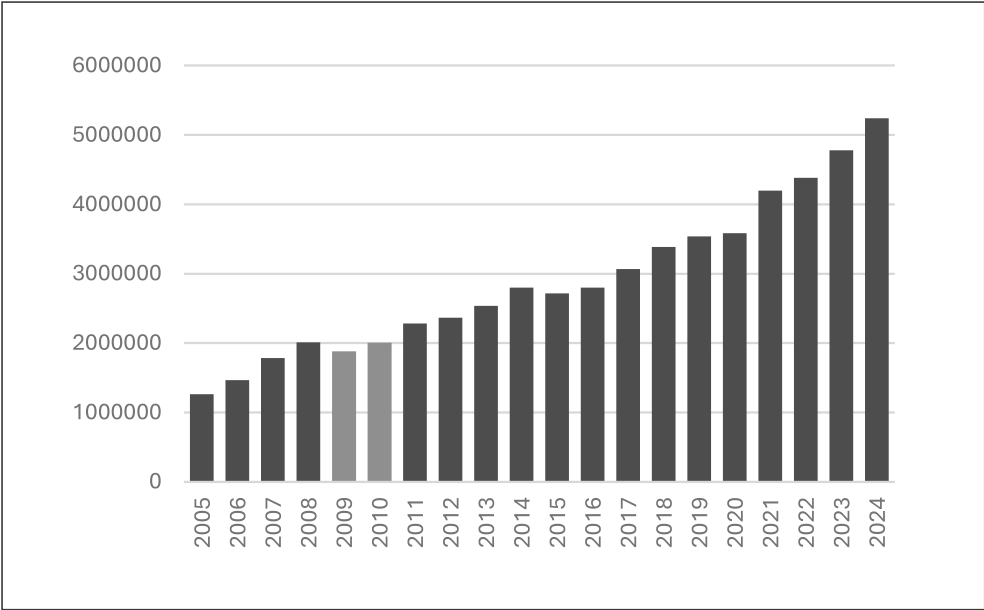
V4 countries' exports (DRQ15)

As illustrated in the Figure 15, a decline in other business services exports from the V4 countries was recorded only during the global financial crisis, dropping from USD 31.9 billion in 2008 to USD 27.9 billion in 2009 (representing a negative impact of only one year, indicated in orange on the chart). Once again, no decline in exports of these services from the V4 countries was recorded either during the COVID-19 pandemic or following the Russian Federation's invasion of sovereign Ukraine in February 2022.

V4 countries' imports (DRQ16)

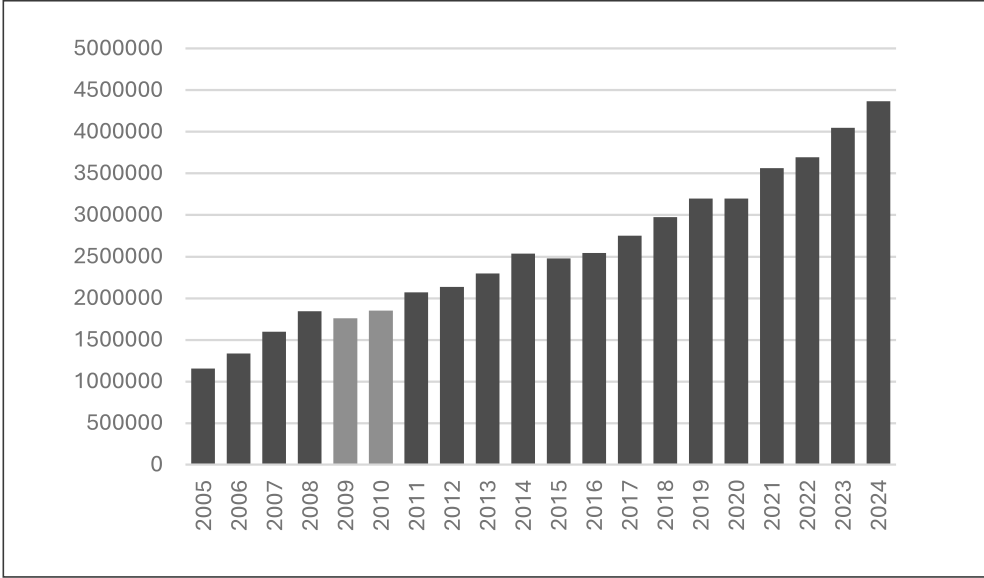
As illustrated in the Figure 16, during the global financial crisis, other business services imports into the V4 countries experienced a decline from USD 37.7 billion in 2008 to USD 33.9 billion in 2009, while reaching only USD 37.5 billion in 2010 (representing a two-year negative impact, indicated in orange on the chart). Similarly, during the COVID-19 pandemic, imports fell from USD 54.2 billion in 2019 to USD 53.1 billion in 2020 (reflecting a negative impact of only one year, indicated in orange on the chart). In contrast, following the Russian Federation's invasion of sovereign Ukraine in February 2022, no decline in other business services imports into the four analyzed countries was recorded in either 2023 or 2024 – a trend that aligns with global export and import developments for these services, as well as V4 countries' exports.

Figure 13. Global exports of other business services, 2005–2024, USD million

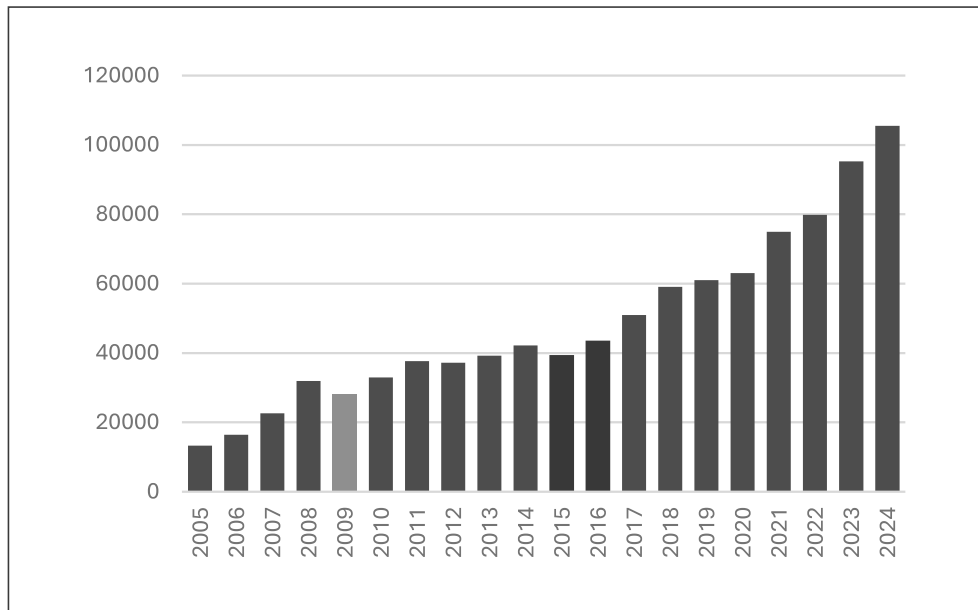


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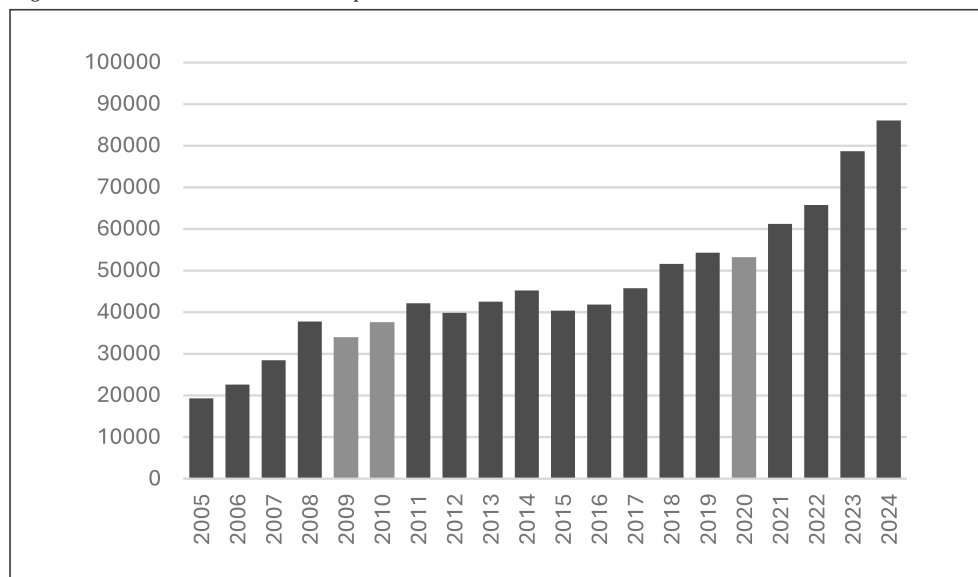
Figure 14. Global imports of other business services, 2005–2024, USD million



Source: as for Figure 1

Figure 15. Other business services exports of the V4 countries, 2005–2024, USD million

Source: as for Figure 1

Figure 16. Other business services imports of the V4 countries, 2005–2024, USD million

Source: as for Figure 1

SUMMARY AND DISCUSSION

To summarize the research findings, Table 4 has been prepared to present the results of the analyses. Using descriptive text and shaded cell coloring, the table illustrates how the three analyzed external shocks affected international trade in services over the 2005–2024 period, in line with the adopted assumptions and the sixteen detailed research questions.

Table 4. Synthesis of the research findings

Scope of the research / Economic shock	2008–2009 global financial crisis		COVID-19 pandemic		Russian invasion of Ukraine	
1. International trade in commercial services						
a. Global exports / Global imports	2 years	2 years	2 years	2 years	No impact	No impact
b. V4 countries' exports / V4 countries' imports	2 years	2 years	1 year	1 year	No impact	No impact
2. International trade in transport services						
a. Global exports / Global imports	3 years	2 years	1 year	1 year	2 years	2 years
b. V4 countries' exports / V4 countries' imports	4 years	2 years	1 year	1 year	No impact	2 years
3. International trade in travel services						
a. Global exports / Global imports	2 years	1 year	3 years	3 years	No impact	No impact
b. V4 countries' exports / V4 countries' imports	8 years	9 years	3 years	3 years	No impact	No impact
4. International trade in other business services						
a. Global exports / Global imports	2 years	2 years	No impact	No impact	No impact	No impact
b. V4 countries' exports / V4 countries' imports	1 year	2 years	No impact	1 year	No impact	No impact

Source: author

Purple indicates the highest impact of a given shock on the trade turnover of the analyzed services, red denotes a high impact, orange represents a medium impact, and yellow signifies a low impact. Conversely, green indicates no impact. Specifically:

The 2008–2009 financial crisis had the highest impact on travel services exports and imports in the Visegrad Group (V4) countries (accounting for 2 cases),

A high impact was exerted by the 2008–2009 financial crisis on transport services exports from both a global perspective and from the Visegrad Group (V4) countries; similarly, the COVID-19 pandemic had a high impact on travel services exports and imports both globally and within the Visegrad Group (V4) countries (accounting for 6 cases),

A medium impact was exerted by the 2008–2009 financial crisis on commercial services exports and imports both globally and within the Visegrad Group (V4) countries, on transport services imports both globally and within the Visegrad Group (V4) countries, on global travel services exports, as well as on global exports and imports of other

business services and imports of these services into the Visegrad Group (V4) countries; similarly, the COVID-19 pandemic had a medium impact on global commercial services exports and imports; conversely, the Russian invasion of Ukraine had a medium impact on global transport services exports and imports and on imports of these services into the Visegrad Group (V4) countries (accounting for 15 cases),

A low impact was exerted by the 2008–2009 financial crisis on global travel services imports and on other business services exports from the Visegrad Group (V4) countries; similarly, the COVID-19 pandemic had a low impact on commercial services exports and imports within the Visegrad Group (V4) countries, on global and Visegrad Group (V4) transport services exports and imports, as well as on other business services imports into these countries (accounting for 9 cases),

The COVID-19 pandemic had no impact on global trade in other business services across both directions of trade and had no impact on exports of these services by the Visegrad Group (V4) countries; as mentioned in point “c” above, the Russian invasion of Ukraine exerted a medium impact on global transport services exports and imports and on imports of these services into the Visegrad Group (V4) countries, while having no impact on the remaining types of services (accounting for 16 cases).

Regarding transport services, it is worth noting that the freight rate normalization process in 2021–2022, consisting of the gradual restoration of the operational efficiency of global supply chains, initiated a price correction, which in 2023 – due to the macroeconomic contraction in consumer demand and the simultaneous structural oversupply of the newly tonnaged container fleet – transformed into a sharp market downturn and deflation of freight rates below the operational break-even point for shipowners. Future research should bear in mind the long-term effects of the Red Sea disruptions from late 2023.

The issues discussed in this article represent merely an attempt to identify the primary and vital areas for further analysis. This study serves as a contribution to the debate on the development and determinants of international trade in services. Given the dynamic pace of global “servicization,” these matters require further advanced research, particularly in context of evaluating the long-term consequences of the Russian invasion of Ukraine, the trade policy of US president Donald Trump’s second administration, and the new trade agreements being signed by the European Union.

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