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Research paper

Trends in Economic Development in The Context of International Trade Relations: An International Comparative Analysis

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Abstract

This study investigates current trends in international trade relations by examining the challenges and structural shifts facing both developed and developing economies. The research employed a combination of qualitative content analysis and comparative document analysis, focusing on economic indicators and policy developments across diverse national contexts. A systematic evaluation of macroeconomic reports, media narratives, and trade statistics enabled the identification of key disruptions, including the 2008 global financial crisis and the 2020 pandemic, both of which significantly reduced GDP in the USA, China, Germany, Argentina, and Kyrgyzstan. To assess long-term trade dynamics, the study applied comparative economic profiling, tracing changes in export volumes, trade structure, and growth forecasts. Particular attention was given to landlocked and middle-income countries, revealing that despite structural vulnerabilities, Argentina and Kyrgyzstan increased their exports of goods and services by 1.5 times. Additionally, the proportion of developing countries in global trade rose from 24% in 1964 to 44% in recent years. The study also applied geopolitical and logistical analysis to assess the impact of maritime disruptions, finding that conflicts near key transport routes have extended delivery timelines from 12 to 20 days by 2024. Furthermore, projections for landlocked countries show a post-pandemic recovery lag, with growth rates at 4.7% and 4.8% for 2024 and 2025, respectively, which remain below the pre-pandemic benchmark of 5.3%. In conclusion, while the findings underscore the vulnerability of global trade to systemic crises, they also highlight emerging opportunities for sustainable growth through strategic adaptation and export diversification. The applied methodological approach, grounded in triangulation across statistical, documentary, and discursive sources, ensures a robust basis for interpreting economic development within the evolving landscape of international trade.

Keywords: *Export; Gross Domestic Product; Import; Inflation; Maritime Transport; Trade Sectors.*

1. Introduction

In 2024, the global economy continues to undergo profound shifts, shaped by the rapid development of digital technologies, evolving trade policies, and the growing impact of regional economic alliances. International trade, as both a driver of national economic strength and a tool for intergovernmental cooperation, has become increasingly significant in the face of crises such as pandemics, geopolitical conflicts, and resource disruptions. These conditions underscore the necessity of revisiting trade strategies to enhance economic resilience, ensure supply chain stability, and support sustainable growth.

The intensification of regional economic integration, through alliances such as the European Union (EU), ASEAN, and USMCA, illustrates divergent regulatory approaches and reveals the urgency of comparative analysis to identify effective trade policies. Environmental constraints and climate obligations further demand the harmonisation of trade frameworks with sustainability objectives, compelling governments to adopt innovative strategies that align with both economic competitiveness and ecological responsibility (Iskakov & Ruziyeva, 2014; Matskiv et al., 2025).

Against this backdrop, the present study explores how contemporary trends in international trade influence national economic trajectories. It aims to identify key developmental patterns by comparing countries with different economic statuses, with particular attention to their vulnerabilities, recovery strategies, and long-term trade adaptation mechanisms.

In the context of international trade development, an important component is the formation of an investment image (Makhazhanova et al., 2024). This issue was examined in the study by Sarybayev & Ozerova (2023), where the authors highlighted that to promote export-import relations between the Eurasian Economic Union (EAEU) member states and the People's Republic of China (PRC), it is crucial to create an appropriate investment image, with a particular emphasis on attracting foreign investors. At the same time, several restrictions and

limitations hinder the effective realisation of international trade relations, as discussed in the work of Alikhanov & Gyyazov (2023). The authors argue that the free trade policies and division of labour, which once contributed to the optimisation of national economies during the peak of globalisation, had lost much of their relevance by 2023, necessitating a revision of international trade strategies. Furthermore, the issue of creating trade and economic associations remains vital, as noted by Mambeteminova (2021). According to the author, the process of forming such associations began in the second half of the 20th century, with the European Union (EU) serving as a successful and long-standing example of economic integration.

In addition, Atyshov et al. (2022) identify export as the primary form of international economic cooperation, arguing that exports represent a material prerequisite for imports, thus forming the backbone of trade relations. It is also essential to consider historical disagreements and unresolved issues that may influence interstate trade relations. In this context, the study by Beishembiev & Toktobaev (2023) is significant, as it addresses the long-standing border issue between Kyrgyzstan and China, which has remained relevant for centuries. However, thanks to the Treaty on the Delimitation and Demarcation of State Borders, the two governments have been able to develop qualitatively new relations from the 2010s onwards. In the modern structure of international trade, it is also important to recognise the role of China as one of the dominant global trading powers. This position is discussed by Leitão & Lorente (2020), who note that, in the 2020s, the PRC government has observed a shift in the logic of globalisation compared to the 1980s and 1990s, when countries such as the United States of America (USA), ASEAN, and the EU were the primary drivers of global economic integration.

Under modern conditions, international trade trends are increasingly influenced by quantifiable variables (Bisenovna et al., 2024; Tkachuk et al., 2024). For instance, Wang and Zhang (2020) emphasise that certain international organisations have drawn attention to the relationship between environmental regulations and international trade, highlighting the growing role of sustainability considerations in shaping trade flows. Additionally, Li et al. (2022) have underscored the importance of renewable energy in the formulation of sustainable and coordinated development policies, pointing to the need for integrating environmental and economic strategies in international trade.

However, despite the abundance of literature on international trade development, investment attractiveness, and regional economic integration, there remains a notable gap in the comparative analysis of how global trade disruptions such as financial crises, pandemics, and geopolitical tensions differentially impact developed and developing economies. Most existing studies tend to focus on specific regions or thematic aspects of trade without systematically comparing macroeconomic responses, structural vulnerabilities, and trade performance across a heterogeneous group of countries. Furthermore, there is insufficient exploration of how landlocked states adapt to logistical constraints in times of global instability, or how shifting globalisation patterns, such as the rise of new export powers and the transformation of trade alliances, reshape the trade capacities of economically diverse states. This study addresses this gap by offering an international comparative perspective on contemporary trade dynamics, aiming to reveal the asymmetries, shared challenges, and emerging opportunities that define current global trade relations.

Based on the analysis of contemporary transformations in trade policy, the increasing role of regional economic alliances, and the evolving challenges posed by global crises and environmental constraints, this study aims to identify key directions for the development of international trade. These insights, which arise from the review of trade diversification strategies, the impact of geopolitical shifts, and the growing integration of sustainability into trade mechanisms, underscore the urgency of rethinking international trade paradigms in the context of national economic development. Accordingly, the objectives of this study are: first, to determine the divergence in economic trajectories between developed and developing countries; and second, to analyse the principal challenges and opportunities shaping the future of international trade amid contemporary global transformations.

2. Materials and methods

This study employed a triangulated methodological approach that included qualitative content analysis, documentary analysis, and statistical comparison. Each method served a distinct function within the broader analytical framework. Content analysis was applied to mass media sources and policy narratives to uncover discursive trends and institutional responses to trade disruptions. Documentary analysis was used to extract structured data from official economic reports, international agreements, and intergovernmental publications, enabling an assessment of policy evolution and institutional frameworks.

The study utilised a wide range of sources to analyse the dynamics and development of international trade. Information on the activities of the North American Free Trade Agreement (NAFTA) (2017) was used, alongside data on the importance of Gross Domestic Product (GDP) obtained from Investopedia (Picardo 2024, Floyd 2025). Additionally, data from the World Bank Group for several countries were incorporated (GDP growth… 2025, Exports of goods and services… 2025), providing key economic indicators essential for the analysis. Further insights were gathered through content analysis of mass media, particularly Radio Azattyk (Tagaev 2022). To supplement this, information from the U.S. Bureau of Economic Analysis was included, notably the report on the 2023 trade gap of $779.8 billion (2023 Trade Gap is $779.8 Billion 2024). For a detailed analysis of the economic situations in the United States, China, Germany, and Kyrgyzstan, reports from the International Monetary Fund (IMF) were examined (International Monetary Fund 2023b, International Monetary Fund 2024b, International Monetary Fund 2023a, International Monetary Fund 2024a).

Additionally, country-specific materials were used, including the IMF's Argentina profile (International Monetary Fund: Argentina 2024) and information from the Deloitte Global Economics Research Center (Argentina economic outlook 2024). The study also analysed the publication on the development and evolution of trade on the United Nations Conference on Trade and Development (UNCTAD) website (Key evolutions in trade… 2024). Data on steel production volumes were sourced from the World Steel Association (World Steel in Figures 2023). The features of trade agreements were examined using information from the official website of the Department of Enterprise, Trade and Employment of Ireland (Free Trade Agreements 2023). In relation to the European Union (EU), the Eurostat publication Globalisation Patterns in EU Trade and Investment was analysed (International trade in… 2024), offering important insights into trade flows and investment dynamics. The study also considered the EU-Chile Association Agreement of 2002 and its modernisation in 2023 (EU-Chile Association Agreement 2002, Towards an EU-Chile Advanced... 2024). In this context, the reactions of Members of the European Parliament (MEPs) and trade indicators between the EU and Chile were reviewed, based on European Commission publications (EU-Chile Agreement brings… 2024, European Union, Trade… 2024).

In addition, the statement on the Global Arrangement on Sustainable Steel and Aluminium (2021) and the publication by the Roosevelt Institute think tank (Meyer and Tucker 2023) were analysed to explore issues of sustainable trade and environmental considerations. Furthermore, specific aspects of the Montreal Protocol on Substances that Deplete the Ozone Layer (1987) were examined to understand the intersection of international environmental agreements and trade. As part of the analysis of NAFTA's activities, U.S. Congressional reports from 2003 and 2017 were reviewed (The Effects of NAFTA… 2003, The North American… 2017), providing insights into the long-term economic impact and evolution of this agreement. Additionally, to study global economic growth trends, a documentary analysis of the

United Nations Conference on Trade and Development (UNCTAD) report of April 2024 and the United Nations Department of Economic and Social Affairs report was conducted (Trade and Development Report Update, 2024; World Economic Situation and Prospects 2024). These reports were essential for understanding the current dynamics and projections for international trade and economic development. In the context of coal industry development, the study also utilised materials from the World Resources Institute, Global Energy Monitor, and World Bank Blogs, which provided up-to-date information on the transformation of the coal sector and its global implications (Jaeger 2023, Boom and Bust Coal 2024, Agnolucci & Temaj 2024).

3. Results and discussion

3.1 Features of world trade in the context of developed and developing countries

International trade relations are unique in that they allow both high- and low-income countries to participate, even in the face of enormous differences in GDP, industrial capability, and institutional frameworks. Nonetheless, there are notable differences in the composition and functionality of trade between industrialised and developing nations. For example, while developed economies like the US and Germany enjoy the advantages of diverse export portfolios, strong innovation ecosystems, and extensive trade agreements, developing countries like Argentina and Kyrgyzstan frequently face structural vulnerabilities like a limited industrial base, dependence on a limited range of export commodities, and volatility in inflation. These differences are also evident in the orientations of trade policy: industrialised nations typically place more emphasis on digital trade, environmental standards, and regulatory harmonisation, whereas poor nations usually place more focus on market access, tariff concessions, and infrastructure development. This study uses a benchmarking approach to capture these differences and find similarities. It compares five countries from different economic tiers and geographic regions, namely the United States, China, Argentina, Germany, and Kyrgyzstan, thereby providing a comprehensive comparative analysis of their economic performance and trade policy frameworks.

One of the fundamental indicators in the context of economic development is gross domestic product (GDP), which reflects the total value of goods and services produced within a country over a specified period. As one of the most accurate measures of real economic output, GDP growth rates are widely used to assess economic growth dynamics. Focacci (2023) has noted that despite existing criticisms of GDP as an economic indicator, GDP figures remain pivotal for understanding the economic situation of states. However, it should also be acknowledged that GDP does not account for the shadow economy, which can represent a significant share of economic activity in certain countries (Picardo 2024). In recent years, GDP growth trends in the United States, China, Argentina, Germany, and Kyrgyzstan have shown varying dynamics, reflecting differences in economic resilience, structural capacities, and external influences (Fig. 1).

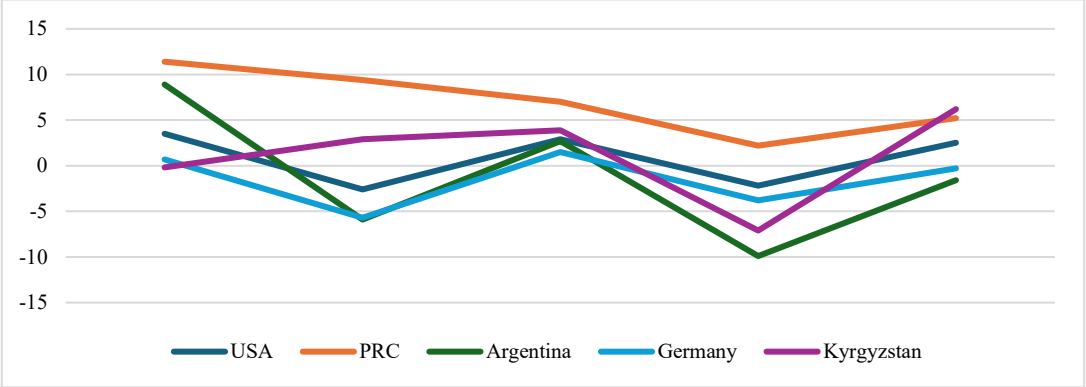

Fig. 1: Dynamics of GDP change by country

Source: created by the authors based on GDP growth (annual %) – United States, China, Argentina, Germany, Kyrgyz Republic (2025).

The data obtained demonstrate that during the period preceding the global economic crisis, most of the countries under study exhibited GDP growth, although in some cases, such as Kyrgyzstan, there was a slight negative GDP growth rate. Nevertheless, several general trends significantly affected GDP levels over time. The global economic crisis, in particular, triggered a decline in GDP across all analysed countries by 2009, except Kyrgyzstan. However, in the case of Kyrgyzstan, GDP losses became more pronounced in subsequent years (GDP growth… 2025). The period from 2010 to 2020 was largely characterised by GDP growth or, at a minimum, short-term stagnation across these economies. Notably, in 2020, as illustrated in Figure 1, GDP growth rates for all selected countries turned negative, largely as a consequence of the COVID-19 pandemic, which severely disrupted global economic activity.

Beyond macroeconomic and epidemiological disruptions, international trade is profoundly shaped by political transformations and social movements. Sanctions, trade wars, and shifts in domestic political regimes frequently redefine trade flows and strategic alignments. For instance, the imposition of Western sanctions on Russia following the 2022 invasion of Ukraine significantly altered Eurasian trade logistics and redirected export-import flows across Central Asia, particularly affecting re-export practices from countries like Kyrgyzstan (Babets et al., 2024). Similarly, trade wars between the United States and China have not only disrupted bilateral flows but also prompted global supply chain reconfigurations and policy recalibrations among third-party states. Political transitions, such as the Tulip Revolution in Kyrgyzstan in 2005, also demonstrate how domestic upheaval can temporarily restrict trade capacity and investor confidence. These examples underscore those political variables – both domestic and international – serve not merely as background conditions but as central determinants in the architecture of global trade relations. For example, the GDP performance of Kyrgyzstan in 2005 may also reflect the impact of the “Tulip Revolution”, a significant domestic political event (Tagaev 2022). Further supporting this analysis, Tsoulfidis & Tsaliki (2022) examined global GDP growth and contraction phases, concluding that a sustained growth phase was observed from the mid-1980s until 2007, followed by a period of stagnation and decline that continued into the post-2007 era, culminating in the pandemic-induced recession of 2020. The above-discussed reasons for GDP growth and decline have also had a substantial impact on the trade opportunities of the countries studied within the framework of international trade relations.

Given these fluctuations, the dynamics of goods exports from these countries have been heterogeneous, reflecting both global economic cycles and domestic factors (Fig. 2).

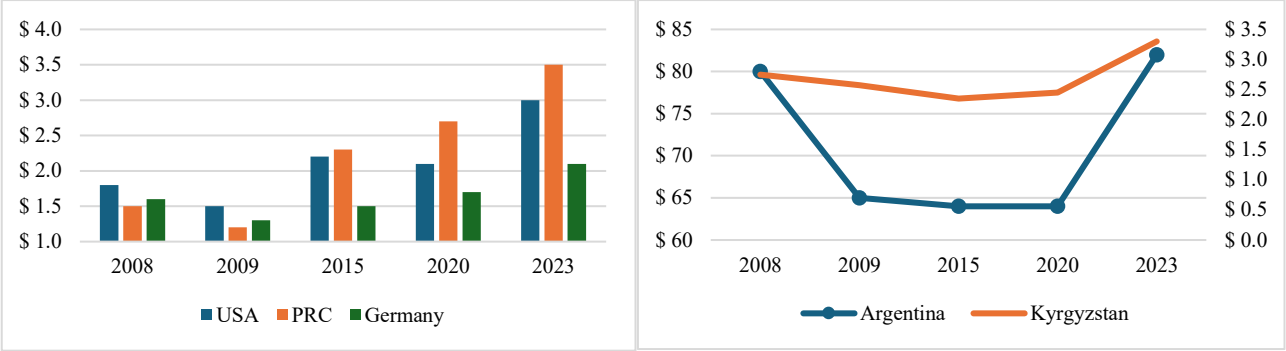

Fig. 2: Dynamics of changes in exports of goods and services by country (unit of measurement on the left – trillion, on the right – billion)

Source: created by the authors based on Exports of goods and services (current US$) – United States, China, Argentina, Germany, Kyrgyz Republic (2025), International Monetary Fund (2024a), 2023 Trade Gap is $779.8 Billion (2024).

An important aspect to consider is the volume of trade between Kyrgyzstan and Argentina, which, although not characterised by rapid growth between 2008 and 2020, increased by nearly one and a half times during the 2020s. According to the International Monetary Fund (IMF) report (2024), published in March 2024, Kyrgyzstan's trade patterns underwent significant changes following Russia's full-scale invasion of Ukraine in February 2024. A key development highlighted in the report concerns the sharp increase in imports from China, whose share of Kyrgyzstan's total imports rose from 26% in 2021 to over 40% in 2022. Likewise, the value of goods imported increased to 26% of GDP in 2022, and doubled between 2021 and 2023, amounting to approximately 10 billion US dollars. The main categories of imported goods included consumer electronics, computers, automobiles, construction equipment, and other essential products. However, the IMF analysis also pointed out that a significant portion of Chinese imports was subsequently re-exported to Russia, a process not reflected in official statistics due to the absence of customs declarations within the Eurasian Economic Union (EAEU). As a result, Russia's already dominant share of Kyrgyzstan's exports increased dramatically, rising from 48% to 77%, excluding re-exports.

With regard to trends in U.S. economic development, the International Monetary Fund (2023b) noted that sustained economic growth in the United States would have positive global repercussions in the long term. This is primarily attributed to the U.S. commitment to supporting developing and low-income countries in addressing critical issues, such as energy security, food supply, and broader economic instability. Strengthening partnerships with developing countries helps these nations better integrate into global supply chains, thus maximising the benefits of international trade. In addition, U.S. partnership programmes aim to enhance investment opportunities, particularly through mobilising private capital to support infrastructure development in emerging markets. Moreover, U.S. international trade policy places a strong emphasis on public and private investment aimed at facilitating the transition to clean and renewable energy, job creation, development of digital infrastructure, and anti-corruption initiatives. The U.S. government is also actively engaged in reforming the World Trade Organization (WTO) and is participating in negotiations to address structural issues within the WTO framework. Luckie (2023) also highlights the ongoing discussions on WTO reform, noting that U.S. representatives are playing an active role in informal consultations aimed at shaping the future of global trade governance.

The coronavirus pandemic, Russia's full-scale invasion of Ukraine, and the subsequent rise in geopolitical tensions have impacted most EU member states, and this trend is likely to persist in light of the global demand for strategic autonomy (Yu & Xiao, 2023; Krawczyńska et al., 2024). In the case of Germany, it is important to note that, according to the International Monetary Fund (2023a), the country demonstrates a low level of trade concentration, which offers a degree of insulation from local and regional trade shocks. However, Germany's open economy and significant trade links beyond the EU also render it vulnerable to trade restrictions and cross-border disruptions. This issue is further explored in the study by Horák et al. (2023), which emphasises that Germany holds the largest share of extra-EU trade among all EU Member States, making it highly integrated into global trade networks. Nevertheless, Germany's import structure reveals acute dependence on China, particularly for semiconductors and other hard-to-substitute high-tech goods, as well as moderate dependence on the United States for similar product categories. Additionally, Goldberg et al. (2023) highlight that Germany is heavily reliant on lithium battery imports from China, which further exposes the German economy to risks arising from global economic fragmentation and disruptions in the supply chains of strategic goods.

Turning to China, the International Monetary Fund (2024b) has observed that significant trade liberalisation and market reforms between 1990 and 2019 had a positive impact on China's economic growth, with growth rates exceeding those of comparable economies by 5.5%. The openness of Chinese markets, combined with high levels of investment, fostered sustained domestic economic expansion and boosted trade relations with numerous Asian countries closely tied to China's economy (Adamkulova et al., 2025; Ismayilov et al., 2024). However, IMF analysis also indicates that since the 2020s, both capital productivity and the growth advantage driven by high investment have begun to decline. Without further structural reforms aimed at enhancing the productivity of international trade, China's economic growth rate may slow to the global average under various scenarios, potentially by 2028. This view is supported by Dong et al. (2023), who argue that while China has experienced decades of robust economic development, the past decade has been marked by a noticeable slowdown due to structural and numerical imbalances. These challenges, according to the authors, must be addressed to expand China's future trading opportunities and maintain its role as a global trade leader.

The Argentine government faces a completely different economic situation compared to the other countries analysed (International Monetary Fund: Argentina 2024). Since 2020, Argentina has been experiencing a sharp and persistent rise in inflation. While in 2020, the percentage change in the inflation rate from the previous year had already reached a high level of 42%, by April 2024, this figure had escalated dramatically to 230%. Furthermore, Perelman (2024) emphasises that during periods of hyperinflation, such figures may reach three or even four digits, highlighting the severity of Argentina's inflationary crisis. A report published by Deloitte Global Economics Research Center in November 2024 (Argentina economic outlook 2024) noted that Argentina's current economic trends underscore the government's commitment to stabilising the economy through measures such as fiscal adjustments, debt control, and tighter control of the money supply. However, the inflation problem also reflects exchange rate disparities, which continue to create volatility in the domestic market. In response, the Argentine government has implemented policies aimed at reducing the fiscal deficit and easing exchange controls

to restore macroeconomic stability. Nevertheless, risks remain, including those associated with limited foreign exchange reserves, the impact of climate change on trade, and uncertainties regarding the sustainability of ongoing reforms. In addition to these national challenges, it is important to recognise a global trend that has become increasingly evident in the 21st century – namely, the growing share of developing economies in international trade relations. This shift has been propelled by structural changes in production and distribution networks, as well as by the integration of advanced digital technologies. In particular, the rise of e-commerce platforms has allowed small and medium-sized enterprises in developing countries to access global markets more easily, bypassing traditional trade barriers and intermediaries. Furthermore, blockchain technologies are increasingly utilised to enhance transparency and traceability in cross-border supply chains, thereby reducing transaction costs and improving trust among trade partners. These innovations, when combined with enhanced digital logistics infrastructure and mobile payment systems, have fundamentally reshaped trade dynamics, allowing developing nations to leapfrog traditional trade bottlenecks. As illustrated in Figure 3, such transformations have contributed to a substantial rise in trade volumes, even amid global uncertainties. While regional disparities persist, the technological shift has accelerated the integration of emerging economies into global trade flows, redefining their role in international commerce.

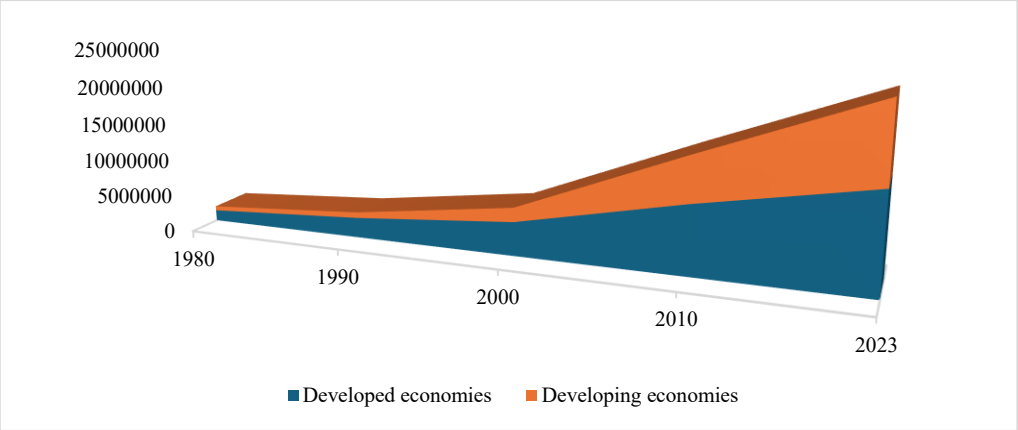

Fig. 3: Total volume of trade in goods (millions of dollars at current prices)

Source: created by the authors based on Key evolutions in trade and development over the decades (2024).

Trade, as a mechanism of interaction between states, has expanded significantly since the establishment of the United Nations Conference on Trade and Development (UNCTAD). By 2023, trade in goods, measured in current prices, had increased more than 130 times compared to 60 years ago (Key Evolutions in Trade… 2024). However, as noted in the study by Nachum et al. (2022), not all developing countries have been able to contribute significantly to world trade. For example, the African region accounts for only 2.6% of total global trade. Nonetheless, between 1964 (the founding of UNCTAD) and 2023, the share of developing countries in global trade turnover increased from 24% to 44%. While regional disparities have resulted in varying levels of benefit from trade expansion, the overall development of international trade relations has significantly contributed to economic growth worldwide. The rapid growth of trade among developing countries can be attributed to tariff liberalisation in 1995, which followed agreements within the World Trade Organization (WTO), as well as numerous bilateral and regional trade agreements. However, in 2024, several obstacles remain to the full integration of developing economies into competitive global trade relations. Over the past decade, the average global tariff rate has declined from 13% to 7%, yet there has been a marked increase in non-tariff measures, rising from 53% to 72%. This shift has resulted in higher compliance costs for businesses in developing economies, restricting their competitiveness in global markets. A distinctive feature of contemporary global trade development has been the expansion of maritime transport as a dominant mode of goods transportation.

In 2000, approximately 5,984 million tonnes of goods were transported by sea, whereas by 2021, this figure had risen to nearly 11,000 million tonnes (UNCTAD 2024). Historically, developing economies have served primarily as loading points for maritime trade, but their share in global unloading has grown significantly, surpassing 50% in 2011 and reaching an all-time high of over 60% in 2020. Park et al. (2019) highlight that maritime transport holds greater economic significance for developing countries than air or land transport, reinforcing their increasing role in global value chains and their growing importance as consumer markets. As a result, despite differences in economic structures and conditions, all of the countries analysed in this study have experienced both economic growth and decline due to external shocks, such as economic crises or the COVID-19 pandemic. Common challenges, such as inflation and export instability, underscore the critical need for adaptive economic strategies. These strategies would enable countries to maintain economic stability while enhancing their participation in international trade relations.

In summary, the comparative dynamics of GDP and export performance among developed and developing countries confirm that while external shocks such as pandemics and geopolitical crises universally affect international trade capacity, the degree of resilience and recovery varies significantly by country. The cases of Kyrgyzstan and Argentina, in particular, illustrate how targeted export strategies can mitigate adverse conditions. These findings underscore the importance of adaptive trade policies and structural reforms that enhance economic resilience and foster deeper integration into global trade networks.

3.2 Changes in trade across specific product groups and features of international legal agreements

As noted in the Eurostat publication Globalisation Patterns in EU Trade and Investment (International Trade in… 2024), the metallurgical industry is often regarded as a sector of strategic importance. In recent decades, a clear trend has emerged in which metallurgical enterprises have been relocated from developed to developing countries (Mehdi 2025; Krylovskyi 2024). This shift was primarily driven by the necessity to position production facilities closer to regions where coal and iron ore can be delivered more efficiently. During the reorientation of industrial production within the European Union (EU) towards high-quality steel products, China took a proactive approach by investing heavily in new production capacities. By 2023, Chinese manufacturers accounted for more than half of total global steel production, according to the World Steel Association (World Steel in Figures 2023). Researchers Skoczkowski et al. (2020) similarly emphasise that the metallurgical industry plays a crucial role in the global economy, as steel production continues to grow, except for short periods of stagnation. Notably, China's share of EU iron and steel imports has expanded significantly over the past two decades. In 2002, China accounted

for just over 2% of total iron and steel imports to the EU, whereas by 2023, this figure had risen to almost 13%, making China the largest and most important supplier of these commodities to the EU.

Other significant exporters of iron and steel to the EU market in 2023 included India (10.1%) and the Republic of Korea (9.1%). Conversely, the share of EU iron and steel exports has grown significantly in certain key markets. For example, exports to Turkey increased from 5.1% in 2002 to 8.5% in 2023, while exports to Mexico rose from 3% in 2002 to 6.2% in 2023. Despite these shifts, the USA and the United Kingdom (UK) have remained the primary buyers of EU-manufactured steel and iron. In 2023, the USA accounted for nearly 20% of EU steel and iron exports, while the UK held a 13.1% share. These figures highlight the continued importance of transatlantic and intra-European trade relationships in the metallurgical sector, despite the increasing presence of emerging economies in the global market.

In the context of global environmental governance, the Paris Agreement has significantly influenced national trade and energy strategies by compelling states to align economic development with climate objectives. Following the Agreement's adoption, many countries, including Greece, the UK, Denmark, Spain, Portugal, the USA, and Chile, undertook systemic shifts in their trade and industrial policies to phase out coal and accelerate decarbonisation (Jaeger 2023). These changes reflect not merely internal environmental policy reforms but a broader realignment of international trade practices, whereby access to markets and preferential trade agreements increasingly hinge upon demonstrable progress in climate mitigation. Consequently, adherence to the Paris Agreement has emerged as a prerequisite for sustaining export competitiveness, especially in regions such as the EU. In these cases, carbon-adjusted trade mechanisms and green clauses in modernised agreements, such as the EU-Chile framework, condition market access on environmental performance. As such, environmental agreements are not only shaping domestic production priorities but also redefining trade flows and the global distribution of strategic industries. This fosters a new nexus between environmental responsibility and economic viability. Nevertheless, some governments have taken an alternative path by increasing coal production capacities despite these global commitments. According to the 2024 Global Energy Monitor report (Boom and Bust Coal 2024), countries within Central Asia have demonstrated a marked increase in coal capacity compared to a decade ago. Notably, coal production in Uzbekistan grew by 14.5% in the short period between 2022 and 2023, and this figure is projected to reach an almost 80% increase by 2025. In addition, the Bogatyr coal mine, one of the largest coal mines in the region, has plans to increase production by a quarter, further signalling a regional shift towards coal expansion. Such a strategy, however, is described as highly risky and controversial, especially considering the global trend of coal phase-out and the increasing shift towards renewable energy sources. The 2024 Global Energy Monitor report explicitly highlights that Kazakhstan and Kyrgyzstan would be among the countries most severely affected by an eventual global coal exit, given their reliance on coal for energy and exports, as well as their climate obligations under international agreements. In this context, Aguirre-Unceta (2024) has pointed out that Kyrgyzstan's economic dependence on mineral extraction has effectively become a resource "curse", as revenues from the mining sector have failed to translate into diversified economic development. Instead, this dependence has fostered rent-seeking behaviour, reinforced the volatility of public finances due to fluctuating commodity prices, and limited investment in non-extractive sectors (Bulavynets, 2024). Moreover, it has intensified regional inequalities and political contestation over the control and distribution of resource rents, thereby exacerbating both socio-economic disparities and institutional instability in the country.

Thus, while coal production in Central Asia serves partly for export purposes, it is primarily aimed at supporting domestic energy systems, particularly coal-fired thermal power plants, which remain critical to the region's energy security. Nonetheless, from an economic perspective, arguments in favour of coal production are increasingly difficult to sustain. Demand for coal in the United States and the European Union has dropped significantly, with reductions of approximately 100 million tonnes in each of these major economic blocs (Agnolucci & Temaj 2024). In contrast, demand in China has surged by approximately 220 million tonnes, and India has increased coal consumption by around 100 million tonnes. Together, China and India now account for approximately 70% of global coal consumption, which may partially explain the incentives for Central Asian coal production expansion, despite the associated environmental and geopolitical risks. In summary, while some regions are moving decisively towards decarbonisation, others, such as Central Asia, continue to invest in coal as a short-term solution to energy and economic challenges, risking long-term consequences associated with climate change, international trade restrictions, and geopolitical isolation.

The economic development of the European Union (EU) is inextricably linked to international trade relations, as EU representatives negotiate on behalf of all Member States regarding agreements that regulate preferential rates and duties on the transportation of goods between the EU and third countries (Free Trade Agreements 2024). While most of these agreements were concluded in the early and mid-2000s, some date back to the 1990s, and several have been updated or newly signed in recent years to reflect evolving economic and political realities. A notable example of such cooperation is the EU-Chile Association Agreement (2002), which has governed trade relations between the EU and Chile for over two decades. However, by 2023, this Agreement had lost some of its relevance due to its age, prompting a decision to modernise key provisions to adapt to contemporary trade needs and challenges (Towards an EU-Chile Advanced… 2024). The updated agreement aims to eliminate remaining trade barriers on certain product groups and facilitate market access, particularly for small and medium-sized enterprises (SMEs). In the context of this Agreement, Almeida et al. (2023) emphasised that its strategic importance lies in the fact that the EU is one of the world's largest importers of ore and other intermediate goods, making it heavily reliant on stable and secure supplies from external partners. The authors further highlighted that similar trade agreements – for example, those with Indonesia and with Mercosur, the Southern Common Market comprising Argentina, Brazil, Paraguay, and Uruguay – play a crucial role in securing access to essential resources and markets by facilitating the removal of tariffs, ensuring preferential access to critical raw materials, and promoting regulatory harmonisation. These agreements allow the European Union to diversify its sources of strategic inputs such as agricultural commodities, metals, and rare earth elements, which are vital for manufacturing and energy transitions. In the case of Mercosur, negotiations with the EU aim to stabilise long-term trade relations with resource-rich South American economies, reducing the bloc's dependency on a narrow range of external suppliers while fostering sustainable and predictable investment environments.

The significance of the modernised EU-Chile Agreement can also be observed in the reactions of European policymakers. According to a statement published by The Group of the European People's Party (EU-Chile Agreement brings… 2024), Members of the European Parliament (MEPs) noted that the new agreement could increase EU exports to Chile by up to EUR 4.5 billion and ensure critical supplies of strategically important product groups, including components for clean energy technologies. Furthermore, 99.9% of trade for SMEs will be duty-free, thus promoting the internationalisation of European small businesses. An essential aspect of the modernised agreement is its potential to improve access to key resources, such as lithium and green hydrogen, which are vital for the green transition and for achieving commitments under the Paris Agreement (Dooranov et al., 2024). The importance of fulfilling these obligations is underscored in the study by Torreblanca (2024), which highlights the necessity for cooperation mechanisms between the EU and Chile, particularly regarding water extraction from natural sources, as part of the strategy to achieve net-zero emissions by 2050. This cooperation would also serve as a framework for financing the energy transition for both Chile and the EU. Moreover, the agreement is expected to be mutually beneficial, as evidenced by the steady growth of bilateral trade flows. According to the European Commission (European Union, Trade in goods with Chile 2024), aside from brief periods of decline during the COVID-19 pandemic, both EU exports to Chile and Chilean exports to the EU

have been on a consistent upward trajectory since at least 2013. Thus, the modernisation of the EU-Chile trade agreement not only reflects the deepening of trade relations but also demonstrates the EU's broader strategy to secure critical raw materials, promote sustainable development, and enhance economic resilience in line with its climate goals and strategic autonomy agenda.

In the context of mutually beneficial international agreements that aim to improve the economic positions of individual countries while addressing global challenges, one of the most notable initiatives is the Global Arrangement on Sustainable Steel and Aluminium (2021) between the European Union (EU) and the United States (US). Negotiations on this agreement began in late 2021, reflecting a shared commitment by both sides to deepen cooperation in the trade of steel and aluminium and to address climate-related challenges, including those arising from the production and international trade of high-carbon steel and aluminium. According to the terms of the agreement, the US pledged to remove tariffs and allow duty-free imports of steel and aluminium from the EU, while the EU reciprocated by suspending corresponding tariffs on these American products. The broader aim of the arrangement is not only to liberalise trade but also to create a framework for promoting the trade of low-carbon steel and aluminium, thereby supporting green transition goals and protecting workers and communities from the adverse effects of climate change. Notably, the institutional structure that could arise under the Global Arrangement on Sustainable Steel and Aluminium has been compared to the Montreal Protocol on Substances that Deplete the Ozone Layer (1987). Like the Protocol, this arrangement would require strict compliance with agreed-upon environmental and trade standards by all participating states, while also differentiating between members and non-members in terms of trade privileges. Such a rules-based system under international agreements can create positive incentives for cooperation, potentially yielding dual benefits for both environmental protection and economic development within the framework of a sustainable global economy (Meyer and Tucker, 2023). However, as of autumn 2024, the future of the agreement remains uncertain, as negotiations continue without a finalised consensus on its adoption and enforcement. In addition to addressing environmental goals, researchers Aisbett et al. (2023) noted that a strategic motivation behind the Global Arrangement on Sustainable Steel and Aluminium is to limit China's growing dominance in the global steel export market.

Thus, the arrangement has both environmental and geopolitical dimensions, aiming to reshape international trade flows in key industrial sectors. Similar uncertainties and mixed outcomes are observed in relation to other major trade agreements, such as the North American Free Trade Agreement (NAFTA). According to a US Congressional report (The Effects of NAFTA… 2003), the actual impact of NAFTA on trade volumes between the US and Mexico was more modest than originally expected. The report indicated that even without NAFTA, trade between the two countries would likely have continued to grow. With the agreement, US exports to Mexico increased from 2.2% to 11.3% of total US exports between 1994 and 2001, while imports from Mexico rose from 1.9% to 7.7% of total US imports over the same period. Nonetheless, the overall impact on the US GDP was assessed as marginal, amounting to only a few billion dollars annually, or approximately hundredths of a percent of GDP growth. Economist Blecker (2021) similarly argued that NAFTA's net contribution to GDP growth in both the US and Canada from tariff reductions was less than 0.1%, which could be either slightly positive or negative depending on the metric used. This critical perspective was echoed in a 2017 US Congressional report (The North American… 2017), which concluded that US trade with Canada and Mexico was already expanding before NAFTA and would likely have continued to grow without the agreement. Conversely, the impact of NAFTA on Mexico was somewhat more pronounced and positive. The agreement helped Mexico avoid a significant budget deficit during its mid-1990s recession, providing economic stabilisation and encouraging foreign direct investment. One of the most notable outcomes was Mexico's emergence as a key manufacturing hub, especially in the automotive sector, where companies such as Volkswagen, Honda, Nissan, and Fiat Chrysler established or expanded their production facilities (Floyd 2025). In summary, trade agreements such as the Global Arrangement on Sustainable Steel and Aluminium and NAFTA illustrate the complex relationship between trade liberalisation, economic growth, and geopolitical considerations. While such agreements can generate targeted benefits – including strategic supply chain security and environmental cooperation—their overall macroeconomic impact may be limited or unevenly distributed, depending on the economic structures and goals of participating countries.

The positive impact of the NAFTA agreement on the development of the Mexican economy has also been highlighted by researchers Denata et al. (2023), who focused on the growth of international trade and the increase in export and import volumes. In particular, the agreement significantly contributed to the expansion of Mexico's role in global trade, boosting its economic integration within North America. However, in the context of the rapid development of the automotive industry in Mexico, Uner and Oğultürk (2024) pointed out that NAFTA also triggered strikes and discontent in other member countries, as automobile manufacturers preferred to relocate production to Mexico due to lower wages and reduced production costs. This shift highlighted labour cost disparities and socioeconomic tensions that arose from increased trade liberalisation. For Canada, the NAFTA agreement was not considered a significant breakthrough in terms of market access. During the mid-1990s, the United States imported oil worth $740 billion, of which 16.8% came from Saudi Arabia and 15.1% from Canada. By 2015, Canada was selling nearly 100% of its oil exports to the United States, reflecting an already deep economic interdependence in the energy sector. Thus, the conclusion of NAFTA did not substantially alter the existing trade dynamics between the two countries, as bilateral markets had largely been open before and following the agreement. Subsequently, NAFTA was replaced by the United States-Mexico-Canada Agreement (USMCA) in 2020, reflecting an attempt to modernise and adjust the framework for trilateral trade relations. Nevertheless, official US reports indicated that the new agreement would not produce a significant impact on trade and economic growth (U.S.-Mexico-Canada Trade Agreement... 2019). However, the relevance of USMCA was later reinforced by international shocks, including the COVID-19 pandemic and Russia's full-scale invasion of Ukraine, which underlined the need for secure and stable regional trade frameworks. The future significance of USMCA is expected to be clarified during the "Joint Review" process scheduled for 2026 (USMCA – A three-year retrospective… 2023), where all three member countries will assess the agreement's effectiveness and make necessary adjustments.

To conclude, the shifting patterns in global trade, exemplified by transformations in the metallurgical and coal industries, reveal the dual pressures of economic pragmatism and environmental responsibility. The evolution and renegotiation of key trade agreements, such as those between the EU and Chile or the EU and the US, demonstrate a broader realignment of trade priorities around sustainability, access to strategic resources, and geopolitical positioning. These developments affirm that international legal frameworks must continually adapt to emerging global realities, balancing national interests with collective environmental and economic goals.

3.3 Challenges and prospects for international economic integration

According to the UNCTAD Trade and Development Report Update (2024), annual declines in international merchandise trade are exceptionally rare. Over the 40-year period up to 2023, significant drops in trade were observed on only two previous occasions: during the global financial crisis of 2009 and the coronavirus pandemic in 2020, as also emphasised by Fronczek (2024). These two events represented the most severe disruptions to world trade since the end of World War II. In this context, the decline in international trade in 2023, despite an increasingly globalised and interdependent world, constitutes an unprecedented phenomenon. This decline can be attributed to the rapid transformation of consumption patterns observed between 2020 and 2022, when consumer demand shifted away from services towards

durable goods, such as home and office equipment. The structural shift in consumption – initially triggered by pandemic-related restrictions – has had lasting impacts on global trade flows. Furthermore, the transition back from durable goods to service-based consumption was also explored by Bellos et al. (2024), who noted that this trend could potentially enhance both national economies and environmental indicators, particularly through reduced material consumption and emissions. In addition to these structural shifts, two significant supply chain shocks further exacerbated trade disruptions: blockages along critical maritime routes, specifically the Panama Canal and the Red Sea. These disruptions led to sharp increases in transit fees, forcing many vessels to re-route, thereby extending delivery times by 12 to 20 days. Such delays not only increase shipping costs but also affect the reliability of supply chains, with particularly acute consequences for developing economies. However, as noted by Notteboom et al. (2024), towards the end of the Red Sea crisis, expectations of a surplus in new shipping capacity for 2024 and 2025 may help to offset some of these disruptions. The anticipated overcapacity in liner shipping could mitigate logistical bottlenecks and alleviate pressure on shipping costs, offering some hope for stabilising trade flows in the near future (Jakubik et al., 2017; Kerimkulov et al., 2015). Nevertheless, alterations in shipping routes and the imposition of additional costs are likely to disproportionately affect developing economies, particularly landlocked countries, which are heavily dependent on maritime trade corridors for access to international markets.

A distinct economic trend, particularly in light of recent global crises, is the ongoing challenge of economic development in landlocked countries. According to the United Nations Department of Economic and Social Affairs (World Economic Situation and Prospects 2024), economic growth in landlocked countries stabilised in 2024, yet these countries continue to suffer from the long-term negative effects of the coronavirus pandemic. Among the key structural problems faced by these nations are geographic remoteness, dependence on raw materials, underdeveloped social protection systems, and extreme vulnerability to climate-related disasters. These factors significantly impede sustainable economic growth. Razzaq (2024) highlights the Central Asian region as a prime example, where the lack of direct access to seaports and vulnerability to fluctuations in prices of strategically important resources often hinder effective economic progress. Forecasts indicate that economic growth rates for landlocked countries will stand at 4.7% in 2024 and 4.8% in 2025, below the pre-pandemic level of 5.3%. While these figures reflect a degree of stabilisation, they are insufficient to fully recover the output losses resulting from the pandemic shock. On a more positive note, landlocked countries within the Commonwealth of Independent States (CIS) continue to demonstrate relatively strong economic performance, primarily supported by wage growth, high levels of remittances, and active construction sectors that drive investment growth (Murtezaj et al., 2024; Berisha & Rexhepi, 2022). Nevertheless, governments in the Central Asian region face increasing risks associated with secondary sanctions, particularly regarding the re-export of certain goods to Russia, which could complicate foreign trade relations. Another significant challenge for these economies is the precarious state of foreign exchange reserves. Data for 2024 indicates that Kazakhstan, Kyrgyzstan, and Uzbekistan possess reserves equivalent to or lower than three months' worth of import transactions, posing serious risks to their monetary and financial stability. Despite these challenges, some countries, such as Uzbekistan, have navigated recent crises more effectively. As noted by Dwight (2024), Uzbekistan's government has managed to overcome many difficulties of recent years due to a consistent focus on structural reforms and trade liberalisation, which has helped to strengthen economic resilience. In summary, modern international trade and the broader economic development of states are facing severe challenges, including the lingering effects of the pandemic, disruptions to global logistics chains, and ongoing economic crises. These pressures are particularly acute for landlocked countries, although some positive developments, such as wage growth and targeted structural reforms, offer potential for recovery and growth. Nonetheless, further economic progress in these countries remains heavily dependent on external support, investments, and well-designed social policies aimed at reducing vulnerabilities and promoting sustainable development.

The main areas of economic development for the Government of Kyrgyzstan should focus on expanding partnerships both with neighbouring countries and with key global players in the international arena (Uzenbaev et al., 2019). In this regard, greater integration into regional initiatives, particularly through cooperation with the Chinese government within the framework of the "One Belt, One Road" initiative, could present significant opportunities for economic growth. At the same time, it is crucial to ensure the diversification of export relations, given the current heavy dependence on trade with the Russian Federation (Faichuk et al., 2022). Among the most promising sectors for development are the agro-industrial complex, the textile industry, and the green economy, which could serve as engines of sustainable growth and sources of international competitiveness (Boiko 2016; Shahini & Shtal 2023). For the Government of the People's Republic of China, it is necessary to address the general slowdown in economic growth caused by declining productivity levels. In response, increased investment in innovative technologies and education is required to ensure stable and sustained growth in the context of 21st-century economic challenges. Additionally, fulfilment of global commitments to reduce harmful emissions into the atmosphere is imperative. In this sphere, adopting the experiences of countries such as the United States and Germany could help reduce dependence on coal and foster the transition to greener industrial models. Regarding the United States, with its already highly developed economy and extensive global trade relations, it is essential to continue supporting developing countries. In the long term, this strategy will not only promote stability in international trade but also encourage the emergence of new, competitive trading partners. Furthermore, such policies will contribute to strengthening the geopolitical position of the United States on the international stage, enhancing its influence and soft power. For Germany, it is vital to focus on strengthening domestic production capacities and expanding intra-EU trade relations, particularly given the growing risks of increased dependence on imports from China. Additionally, Germany should capitalise on its technological advancements to assume a leading role in the green energy sector, which could foster the creation of new product and service categories poised to meet the rising global demand in green energy markets in the near future. One of the most challenging economic and trade environments remains in Argentina, primarily due to persistently high inflation and domestic political instability. A critical segment for Argentina's international trade development should focus on agricultural and food exports, as well as active participation in international food security programmes, which would not only stimulate job creation but also generate foreign exchange inflows (Trusova et al., 2021). Moreover, the Argentine government needs to establish favourable conditions for foreign direct investment, particularly in the agriculture and energy sectors, through the implementation of transparent policies and an explicit commitment to eliminating corruption schemes.

Several practical suggestions for improving resilience and competitiveness in global commerce can be made by policymakers and corporate executives based on the comparative results of this study. First, in order to lessen reliance on marine chokepoints and reduce vulnerabilities related to worldwide logistics disruptions, governments in developing and landlocked nations should give priority to investing in multimodal transport infrastructure. This entails using bilateral and international collaboration to modernise rail networks, border crossings, and regional transit corridors. Second, the implementation of adaptable and varied trade methods that lessen dependence on a limited number of export commodities and trading partners is urgently needed. Promoting innovation, digitisation, and value-added manufacturing – especially in the agro-industry, renewable energy, and technology-intensive sectors – will help policymakers encourage sectoral diversity (Damyanov et al., 2021; Kavaldzhieva, 2019). Thirdly, company executives in developed and emerging nations are urged to use green finance mechanisms and preferential trade regimes associated with low-carbon technology to connect their export strategy with sustainability requirements and trends in digital transformation. In order to boost SME involvement in international markets, governments can also fortify trade facilitation institutions by improving transparency, expediting customs procedures, and cultivating regulatory predictability. Finally,

through technical help, integration into regional value chains, and concessional financing, international financial institutions and development partners should offer focused support for structural reforms in economies that are at risk. Together, these actions will be essential for strengthening national capacity to take advantage of new trade realignments, adjust to systemic shocks, and support a more sustainable and inclusive international trading system.

Overall, the prospects for international economic integration remain constrained by persistent structural barriers and external disruptions. While some landlocked and developing countries have leveraged structural reforms and regional cooperation to buffer against economic shocks, their progress is uneven and heavily contingent on external factors such as investment inflows and geopolitical stability. The ongoing reconfiguration of global trade routes and production systems suggests that only those states that pursue flexible, forward-looking policies will succeed in strengthening their positions within the global economy.

4. Conclusions

This study aimed to assess the main opportunities and difficulties influencing the future of international trade in the face of global transformations, as well as the differences in economic trajectories between industrialised and developing nations. The results show that whereas global catastrophes like the COVID-19 pandemic and the 2008 financial crisis caused large GDP contractions in every country assessed, their following economic paths have differed significantly. Despite exhibiting resilience bolstered by institutional capabilities and structural buffers, developed economies like the US, Germany, and China still experienced disruptions in their production networks and trade flows. On the other hand, by 2023, developing nations like Argentina and Kyrgyzstan showed significant export growth in spite of persistent political unpredictability and structural risks. This implies that developing economies may be reorienting and becoming more integrated into international trade networks.

The study also shows that production geographies and trade flows have undergone significant restructuring as a result of globalisation and changing international trade agreements. One example of how production has changed to accommodate strategic supply chain issues is China's rise to prominence as a major exporter of metallurgical products to the EU. The upgrading of trade agreements, like the one between the EU and Chile, also highlights a tendency towards incorporating strategic autonomy and sustainability into trade policy. However, not every attempt at trade liberalisation has consistently favourable macroeconomic results. The unequal distribution of advantages, for example, is demonstrated by the case of NAFTA, where significant gains in Mexico's manufacturing sector contrast with less significant GDP impacts in the United States and Canada.

The unequal effects of recent interruptions in global commerce represent another important realisation. Logistics limitations, such as disruptions in marine lanes, were a major factor in the 2023 global trade volume decline, which was one of the biggest downturns since the conclusion of World War II. Landlocked nations were found to be more vulnerable because of their reliance on delayed supply chains and access to foreign ports. Growth estimates for these nations are 4.7 to 4.8 percent for 2024 and 2025, although these figures show a slow recovery trajectory and are still below the pre-pandemic norm.

These findings point to the imperative for adaptive economic strategies. For developing and landlocked nations, resilience depends on diversifying export markets, reducing reliance on a limited number of trade partners, and investing in infrastructure that facilitates trade connectivity. The role of strategic and inclusive trade agreements will be central in this regard, particularly those that support access to critical raw materials, green technologies, and digital innovation.

It is important to acknowledge that one of the limitations of this study was the inability to account for the shadow economy, which could significantly alter actual economic growth figures, particularly in the case of developing economies. Future research could focus on a more detailed analysis of ongoing negotiations regarding the Global Arrangement on Sustainable Steel and Aluminium, especially in the context of a potential new U.S. administration. Furthermore, a comparative analysis of UN economic growth forecasts versus actual data for 2025 would provide valuable insights into the accuracy of current predictive models and the effectiveness of international economic policy responses.

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