

THE ECONOMIC IMPACT OF GEOPOLITICAL TENSIONS ON GLOBAL TRADE AND SUPPLY NETWORKS

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Abstract

Geopolitical tensions significantly impact global supply chains, disrupting trade, logistics, and economic stability. This study examines the economic resilience of Kosovo, Belgium, and Azerbaijan, which face diverse geopolitical challenges due to their differing geographical positions, economic structures, and international trade networks. The research aims to identify key factors influencing economic sustainability in the face of geopolitical disruptions and propose strategies for mitigating risks. A comparative analysis was conducted using qualitative and quantitative methods to assess the impact of geopolitical conflicts, sanctions, and trade restrictions on global supply chains. The study integrates statistical trade data, policy analyses, and case studies to evaluate the geopolitical pressures affecting logistics and international commerce. Findings reveal that economic stability and resilience to geopolitical risks depend on a country's ability to adapt through infrastructure development, trade diversification, and international cooperation. Kosovo struggles with trade limitations due to partial international recognition and regional instability. Belgium faces supply chain disruptions due to Brexit and EU sanctions against Russia but benefits from strong institutional frameworks. Azerbaijan, while strategically positioned as an energy supplier, must navigate regional tensions and shifting global trade alliances. This study provides novel insights by comparing countries with different economic structures and geopolitical vulnerabilities, highlighting diverse adaptation strategies. The results underscore the need for proactive policy measures, investment in infrastructure, and diversification of trade partnerships to strengthen resilience. These findings offer valuable implications for policymakers and businesses seeking to mitigate geopolitical risks and enhance global supply chain stability.

Keywords Economic Disruptions, Economic Sanctions, Export-Import Challenges, Market Volatility, Resource Scarcity.



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INTRODUCTION

Geopolitical tensions and conflicts have a significant impact on global supply chains and international trade, especially in countries such as Kosovo, Belgium, and Azerbaijan. These countries face different challenges due to their geographical location, economic opportunities, and political conditions. Given the growing globalisation and interdependence of economies, the study of the impact of foreign policy factors on national economies is becoming increasingly important, especially in the context of current international conflicts. In order to effectively examine the impact of geopolitical tensions on global supply chains and international trade, it is necessary to consider a wide range of factors that affect this area. Maintaining supply chain stability is a key challenge for many countries, as globalisation has significantly increased interdependence between economies. This requires ensuring reliable logistics systems, protecting critical infrastructure and maintaining trade relations even in the face of political conflicts or economic sanctions. Given the global economic changes and growing trade restrictions, analysing the impact of geopolitical factors is becoming increasingly important for forecasting and preventing possible economic risks.

There is a significant amount of research on the impact of geopolitical tensions on global supply chains and international trade. For example, Escaith (2022) indicated that current geopolitical risks, such as trade wars, regional conflicts, economic sanctions, and changes in international relations, pose significant challenges to global supply chains, forcing companies to seek alternative supply chains and diversify their production processes. Ekwall and Kovács (2021) discussed the role of government regulation and economic policy in preventing supply chain disruptions during geopolitical crises. The authors emphasised that strategic planning and investment in infrastructure are critical to mitigating the risks associated with international conflicts and other crises. Dawar and Bai (2024) examined the impact of regional conflicts on energy trade and supply, emphasising that geopolitical tensions can significantly affect energy prices, change the structure of global markets, and create new challenges for businesses dependent on a stable supply of resources. The authors noted that factors such as military conflicts, economic sanctions, and political instability make forecasting and managing risks much more difficult.

Global economic crises and trade conflicts often lead to higher production and logistics costs, forcing companies to review their supply strategies and focus on finding new markets and partners (Hanoum et al., 2024; Muis et al., 2024; Quliyev et al., 2024; Zakiyah et al., 2024). Leal-Arcas et al. (2024) examined how modern global challenges, such as the rise of populism, Brexit, the climate crisis, the COVID-19 pandemic, and the Russian invasion of Ukraine, are reshaping international trade policies. The authors emphasised the need for a comprehensive approach to policy-making that considers social, environmental, and geopolitical aspects, recognising the key role of trade policies in addressing modern global problems. Anastopoulos et al. (2023) emphasised that recent geopolitical events, such as trade wars and economic sanctions, have led to serious disruptions in supply chains, particularly in the high-tech and energy sectors. The authors emphasised that restoring such chains requires not only reorganising production processes but also revising international agreements and trade routes.

Boston Consulting Group (2020) examined the impact of national protectionist policies on global trade and its implications for strategic industries such as automotive and pharmaceuticals. The researchers emphasised the need for companies to adapt to new conditions by diversifying suppliers and localising production. Park (2024) explored how geopolitical tensions in East Asia and their impact on sea routes are driving up transport costs and threatening global economic stability. In particular, the author drew attention to the importance of strategic planning for governments and corporations to minimise the impact of these factors on trade. Manboah-Rockson and Teng-Zeng (2024) emphasised the importance of international cooperation to maintain stability in global supply chains, in particular through the signing of multilateral agreements and the creation of new trade alliances.

The existing literature on the impact of geopolitical tensions on global supply chains focuses on large economies or large-scale regional conflicts, leaving a notable gap in understanding the experiences of smaller or less economically integrated countries facing geopolitical challenges. Most studies examine broad, generalized geopolitical risks such as trade wars, economic sanctions, and military conflicts without delving into how countries with different economic structures, political frameworks, and international trade networks cope with these disruptions. Moreover, research on specific strategies that small economies use to increase the resilience of their supply chains and adapt to changing geopolitical conditions is limited. This gap is particularly important because countries such as

Kosovo, Belgium, and Azerbaijan, each with a different geopolitical context, face unique challenges in their efforts to stabilize and strengthen global trade linkages. Addressing this gap is necessary to develop targeted policies and strategies that will help less resilient economies better manage geopolitical risks and achieve sustainable economic development.

The purpose of this study is to identify the key factors that affect the economic sustainability of Kosovo, Belgium, and Azerbaijan in the context of geopolitical tensions. The key objectives of the study were: To analyze the current state of global supply chains and international trade under geopolitical tensions, with a focus on Kosovo, Belgium, and Azerbaijan. To assess the impact of geopolitical conflicts, economic sanctions, and trade policies on supply chains in these countries. To identify strategic solutions, including trade diversification, infrastructure investments, and policy adaptations, that enhance economic resilience to geopolitical shocks. By addressing these objectives, this study offers critical insights for policymakers and businesses seeking to develop adaptive trade strategies and fortify supply chain stability against geopolitical uncertainties.

RESEARCH METHOD

This study employs a comparative case study design, utilizing both qualitative and quantitative research methods to analyze the impact of geopolitical tensions on global supply chains. The comparative approach allows for the exploration of differences and similarities across three countries, Kosovo, Belgium, and Azerbaijan, each experiencing distinct geopolitical challenges. This mixed-methods design enables a more comprehensive understanding of how these countries manage supply chain disruptions in the context of geopolitical crises.

The sample for this study consists of three countries: Kosovo, Belgium, and Azerbaijan. These countries were selected using a purposive sampling technique, based on their contrasting geographical locations, economic structures, and political environments. This non-random sampling method ensures the inclusion of countries with varying levels of integration into international trade networks, allowing for a detailed analysis of diverse geopolitical risks and their effects on supply chains.

Data for this study was collected through both primary and secondary sources. Primary data was gathered through semi-structured interviews with experts in international trade, logistics, and political economy, as well as policymakers from each of the three countries. These interviews aimed to explore the subjective experiences and perspectives of stakeholders directly affected by geopolitical tensions and supply chain disruptions. A total of 30 interviews were conducted, with 10 participants from each country, ensuring a balanced representation of experts from various sectors such as logistics, government, and business.

Secondary data was collected from trade reports, government publications, academic articles, and industry analyses. Key sources include international organizations such as the World Trade Organization (WTO), the European Commission, and national trade agencies. This data provides quantitative insights into trade volumes, logistics disruptions, sanctions, and economic performance indicators. To systematically organize the data collection process, a data collection instrument grid was developed, which included the following instruments: Interview Guides (for primary data collection); Secondary Data Coding Framework (for categorizing and analyzing published reports and articles).

Data analysis was carried out using a mixed-methods approach. For qualitative data, thematic analysis was conducted to identify key patterns and themes from the interview transcripts. These themes were cross-referenced with secondary data to validate findings and uncover underlying geopolitical trends that affect supply chains. For quantitative data, statistical analysis was performed using descriptive statistics to analyze trade volumes, logistic disruptions, and economic indicators. Additionally, regression analysis was employed to assess the relationship between geopolitical tensions (independent variable) and supply chain disruptions (dependent variable) across the three countries. This helped quantify the economic impact of geopolitical crises on trade performance and logistics efficiency. The power of the study is supported by the sample size of 30 interview participants, which is sufficient to ensure data saturation and generate reliable qualitative insights. The quantitative analysis, based on secondary data, covers a wide range of variables across multiple years (2000–2024), enhancing the robustness of the findings. The sample size for statistical analysis is adequate to provide meaningful conclusions, with a confidence level of 95% and a margin of error of $\pm 5\%$.

The statistical analysis was conducted using SPSS (Statistical Package for the Social Sciences). Descriptive statistics, including mean, median, and standard deviation, were used to summarize the data. Multiple regression analysis was employed to explore the relationship between geopolitical

tensions and supply chain disruptions, controlling for other variables such as market volatility and trade policy changes. The regression model was tested for multicollinearity and normality to ensure reliable results. Additionally, correlation coefficients were calculated to determine the strength of relationships between different geopolitical factors and their impact on global trade routes.

RESULTS AND DISCUSSION

Geopolitical Tensions In The Context Of Today's World

Geopolitical tensions are one of the key factors affecting global supply chains and international trade. In today's globalised world, where economic processes are interconnected and interdependent, any political or military conflicts can have a significant impact on the economic stability and development of both individual countries and the global economy as a whole. Geopolitical tensions arise for a variety of reasons, including territorial disputes, political conflicts, economic sanctions, military actions, and terrorist threats. Each of these factors has a significant impact on international trade and supply chains. For example, territorial conflicts lead to the closure of transport corridors, making it difficult or even impossible to deliver goods. Economic sanctions can restrict access to key markets and resources, and military action can destroy critical infrastructure and endanger the transport of goods. Global supply chains cover all stages of the production and delivery of goods from the producer to the end consumer. They include raw material suppliers, manufacturers, logistics companies, distributors, and retailers. Geopolitical conflicts affect each of these stages, leading to delays, increased costs, and even production stoppages.

One of the most recent examples of the impact of geopolitical tensions on global supply chains is the conflict between Russia and Ukraine that began in 2014. This conflict led to the imposition of economic sanctions against Russia by Western countries, which in turn impacted the supply of energy, metals, and other critical commodities. The sharp rise in energy prices caused by the sanctions has had a significant impact on production costs in many European countries (Auda, 2024). Geopolitical tensions impact the stability and security of logistics routes (Kryvoruchko et al., 2021). Another significant example of how geopolitical tensions disrupt global supply chains is the series of attacks by Houthi rebels in Yemen, particularly those targeting the Red Sea and the Suez Canal. From November 2023 to February 2024, Houthi insurgent activities significantly impacted maritime traffic in the region, which is a vital conduit for global trade (Rodriguez-Diaz et al., 2024). The instability brought on by the Houthi strikes resulted in a noticeable decrease in marine activity in the Red Sea and the Suez Canal, which are vital shipping lanes for petroleum, raw materials, and other essential commodities. Shipping companies were forced to look for alternate routes as a result of this interruption. This led to longer transit times and higher operating expenses.

Global supply lines have long been at serious risk from piracy, especially in areas with heavy maritime activity (Jakubik et al., 2017; Halimah et al., 2024; Melinda et al., 2024). Pirates pose a hazard to maritime routes mainly because they target commercial vessels to steal products, hold crew members hostage, or take over ships for illicit purposes. Piracy in Somali waters in 2008-2011 significantly hampered maritime trade in the region (Morrison, 2021). It disrupted shipping operations by causing delays, increasing transportation costs due to the need for enhanced security measures, and sometimes leading to the rerouting of vessels to avoid dangerous waters. Additionally, the presence of pirates in key maritime zones complicated the insurance process for shipping companies, driving up premiums for vessels operating in high-risk areas. In the broader context of geopolitical tensions, piracy exacerbates the risks already posed by territorial disputes, conflicts, and economic sanctions, making it even more challenging for countries and companies to secure stable and reliable trade routes.

International trade is also highly dependent on political stability and the absence of conflict (Musayeva et al., 2024). Geopolitical tensions lead to the imposition of trade barriers such as tariffs, quotas, embargoes, and other restrictions (Cherkasov & Makliuk, 2025). This can reduce the volume of trade between countries, increase the cost of importing and exporting goods, and lead to shortages of certain goods on the market. The trade war between the United States and China, which began in 2018, led to a significant increase in tariffs on a wide range of goods, which restricted trade between the world's two largest economies (Elpianora et al., 2024; Jung & Park, 2024; Miharja et al., 2024; Wirnayanti et al., 2024). This has had a negative impact on global supply chains, forcing companies to look for new suppliers and re-engineer their logistics processes. In addition, geopolitical tensions could affect investor and business confidence, leading to a reduction in investment in certain regions or

industries. This, in turn, can slow economic growth and the development of the infrastructure necessary for the efficient functioning of supply chains and international trade.

In the context of Kosovo, Belgium, and Azerbaijan, geopolitical tensions have different manifestations and consequences. To further understand the study, it is important to analyse the history and possible geopolitical conflicts and tensions in these countries. Kosovo, a small territory in the Balkans. Its historical and political context forms the basis for understanding current geopolitical tensions and their impact on the economy and international trade. In the early 20th century, Kosovo was incorporated into Serbia and later into the Kingdom of Yugoslavia. After World War II, Kosovo became an autonomous province within the Socialist Federal Republic of Yugoslavia. In 1989, Kosovo's autonomy was revoked by Serbia, which led to growing tensions between the Serbian government and the province's Albanian population. The breakup of Yugoslavia in the early 1990s led to the growth of national movements in the Balkans. Kosovo became the epicentre of one of the bloodiest conflicts of this period. In the late 1990s, the conflict between Serbian forces and the Kosovo Liberation Army (KLA) escalated into open warfare (Bekaj, 2010). In 1999, the North Atlantic Treaty Organization (NATO) intervened in the conflict by conducting a military operation against Serbia, which led to the withdrawal of Serbian troops from Kosovo and the establishment of the United Nations Interim Administration in Kosovo. Kosovo arrived at the liberation with the help of NATO (Kelmendi, 2011).

In 2008, Kosovo declared its independence from Serbia, an important political moment in the region's recent history (United Nations High Commissioner for Refugees, 2008). Although more than 100 countries have recognized Kosovo's independence, Serbia and several other countries, including Russia and China, do not recognize its sovereignty (World Population Review, 2024). This creates ongoing tensions between Kosovo and Serbia, as well as in the broader international context. Geopolitical uncertainty and limited international recognition make the economic situation in Kosovo very challenging. One of the main challenges is limited access to international markets and financial institutions. Nevertheless, Kosovo has made some progress in economic development, in particular thanks to support from the European Union (EU) and other international organisations (Mexhuani, 2023).

Located in the centre of Western Europe, Belgium plays a key role in the political and economic structures of the EU and NATO. The historical and political context of its involvement in the EU and NATO is important for understanding the country's current challenges and prospects. Belgium gained independence from the Netherlands in 1830 and quickly became an important centre of industrial development and trade. Throughout its history, the country has been influenced by different cultures and political forces, making it a multinational and multilingual state. After the World War II, Belgium became one of the founders of a number of international organisations that contributed to the economic and political unification of Europe. In 1949, Belgium joined NATO, and in 1951, it became one of the six founding members of the European Coal and Steel Community, which later became the EU (Kaplan, 2007).

Brussels, the capital of Belgium, is the seat of many key EU institutions, including the European Commission, the Council of the EU, and the European Parliament. This makes Belgium an important centre for political and diplomatic processes in Europe. Belgium actively supports the idea of European integration and EU enlargement. It is in favour of strengthening economic and political ties between member states, as well as developing a common foreign and security policy (Bourguignon et al., 2022; Firmansyah et al., 2024; Hasibuan et al., 2024; Laksono et al., 2025). Belgium's participation in EU decision-making contributes to the formation of a common European identity and stability in the region. Belgium provides bases for NATO forces and actively participates in joint military exercises and operations. Political support for NATO is a key element of Belgium's foreign policy (Joly & Haesebrouck, 2021). The country upholds the principle of collective security and mutual defence, which is the foundation of the Alliance. Belgium also actively contributes to strengthening cooperation between NATO and the EU, which is aimed at ensuring security and stability in Europe.

Although Belgium does not have a direct conflict with any country, it is included in the study to demonstrate how geopolitical conflicts can impact countries even when they are not directly involved. The disruptions caused by Brexit have increased customs procedures, delays, and logistics costs for Belgian ports. Similarly, the Russian-Ukrainian war has reduced trade volumes with Russia, creating additional challenges for Belgium as a major European logistics hub. Geopolitical instability in the Middle East and North Africa further affects the supply of energy and strategic goods, adding pressure

to Belgium's trade infrastructure. Global trade disruptions, including trade wars and shifting agreements involving major players like the US and China, also require Belgian operators to adapt quickly to maintain efficiency.

Azerbaijan's history dates back thousands of years and is characterised by a rich cultural heritage and significant political changes. Since ancient times, Azerbaijan has been an important trade and cultural crossroads between the East and the West. At different times in history, this territory was part of the Persian, Roman, Byzantine, Arab, Seljuk, and Mongol empires and other state formations. After the fall of the Russian Empire in the 1917 revolution, the Democratic Republic of Azerbaijan declared its independence in 1918, becoming the first secular republic in the Muslim East. However, in 1920, Azerbaijan was occupied by the Red Army and incorporated into the USSR as the Azerbaijan Soviet Socialist Republic. After the collapse of the USSR in 1991, Azerbaijan regained its independence, which was a new milestone in the country's history (Gasimov, 2023). However, immediately afterwards, Azerbaijan faced numerous challenges, the biggest of which was the armed conflict with Armenia over Nagorno-Karabakh. The war, which began in 1992, ended in 1994 with the signing of a ceasefire, but the conflict remained unresolved and periodically escalated until it resumed in 2020. At that time, Azerbaijan was able to recapture some territories controlled by Armenian forces, but the conflict remained relevant. In 2023, with the mediation of the international community, the conflict was resolved, opening up new opportunities for a peaceful settlement and economic development in the region (Ohanyan, 2024).

Azerbaijan's current political context is shaped by its geopolitical location, energy resources, and relations with neighbouring countries and major powers (Rasshyvalov et al., 2024). Azerbaijan is one of the key countries in the Caucasus region due to its rich oil and gas reserves, which play an important role in global energy policy (Ismayilov et al., 2024; Hajiyev et al., 2025; Qiu et al., 2025; Tep et al., 2025; Sari, & Oransa, 2025). Azerbaijan is located at the crossroads of important transport corridors connecting Europe and Asia. The country is a participant in various international projects, such as the Trans-Caspian gas pipeline, which provides gas supplies from Central Asia to Europe, bypassing Russia. This gives the country a strategic role in ensuring Europe's energy security.

Azerbaijan's relations with its neighbours, including Armenia, Georgia, Iran, and Russia, are important for regional stability. Azerbaijan's biggest challenge is the conflict with Armenia over Nagorno-Karabakh. Relations with Georgia are characterised by close economic cooperation, especially in transport and energy (Kadagishvili & Maisuradze, 2022). Azerbaijan maintains a strategic partnership with Turkey, which is one of the country's main allies in the region (Karabulut, 2021). Relations with Iran are complicated due to historical and cultural differences, as well as competition in the energy sector (Rajaei, 2022). Azerbaijan maintains pragmatic relations with Russia, especially in the context of military-technical cooperation and trade (Ismayilov, 2019). Azerbaijan's approach to its foreign relations reflects a complex balance between cooperation and competition, shaped by geopolitical interests and historical legacies. The country's ability to manage these diverse relationships is vital for its national security and the broader stability of the region, requiring continuous diplomatic efforts and strategic alignments.

The various difficulties that Kosovo, Belgium, and Azerbaijan have faced demonstrate how geopolitical tensions continue to have a significant impact on global supply chains and international trade. Trade routes are disrupted, expenses rise, and economic development is hampered by conflicts, territorial disputes, sanctions, and instability. Each nation's resources, international alliances, and geographical location influence its capacity to manage these conflicts. Belgium uses its membership in the EU and NATO to be resilient in the face of Brexit and the conflict in Ukraine, whereas Kosovo faces limited recognition and instability in the region. Azerbaijan has difficulties related to energy dependence and regional tensions, but it also has the opportunity to improve its standing through diversification and strategic alliances. In order to reduce risks and maintain economic stability in the face of a turbulent global environment, these incidents highlight the urgent necessity for nations to give infrastructure development, supply chain flexibility, and active international cooperation top priority.

The impact of geopolitical tensions on global supply chains in Kosovo

Geopolitical tensions have a significant impact on global supply chains, creating both direct and indirect consequences for international trade, production, and economic development. When conflicts or political tensions arise between countries, this often leads to disruption of existing trade routes, tariff increases, and the imposition of sanctions. Such changes can result in significant delays in deliveries,

increased logistics and production costs, and shortages of certain goods on the markets. Logistics and trade routes play an important role in Kosovo's economy, providing links to international markets and facilitating domestic trade. However, geopolitical tensions in the region have a significant impact on these routes, creating challenges for sustainable supply and trade. Kosovo, being landlocked, depends on its neighbours to access international trade routes. The main supply routes run through Albania, Serbia, North Macedonia, and Montenegro. The P7 motorway, which connects Pristina to the Albanian port of Durrës, is a key artery for importing and exporting goods (Euronews Albania, 2023). This route is important for access to the Adriatic Sea and further transport of goods to other European countries.

Despite the significant development of the transport infrastructure, political instability and geopolitical conflicts continue to affect the smooth flow of trade. Customs delays, border restrictions, and other administrative barriers are not uncommon, complicating logistics. Relations with Serbia are particularly important, as this country controls key crossing points on Kosovo's northern borders. Frequent political conflicts between Pristina and Belgrade lead to blockades and restrictions on the transport of goods, which significantly impact economic activity (Center for Social Dialogue and Regional Initiatives, 2019). In this case, leadership plays a vital role in these situations, for it is important to save the peace (Kelmendi et al., 2024b). Geopolitical tensions also alter Kosovo's interactions with other neighbouring countries (Figure 1). For example, complicated relations with Bosnia and Herzegovina limit the transit of goods through this country. At the same time, cooperation with Albania and North Macedonia is more stable, opening up opportunities for expanding trade ties and logistics routes through these countries (Murati & Salihu, 2024).

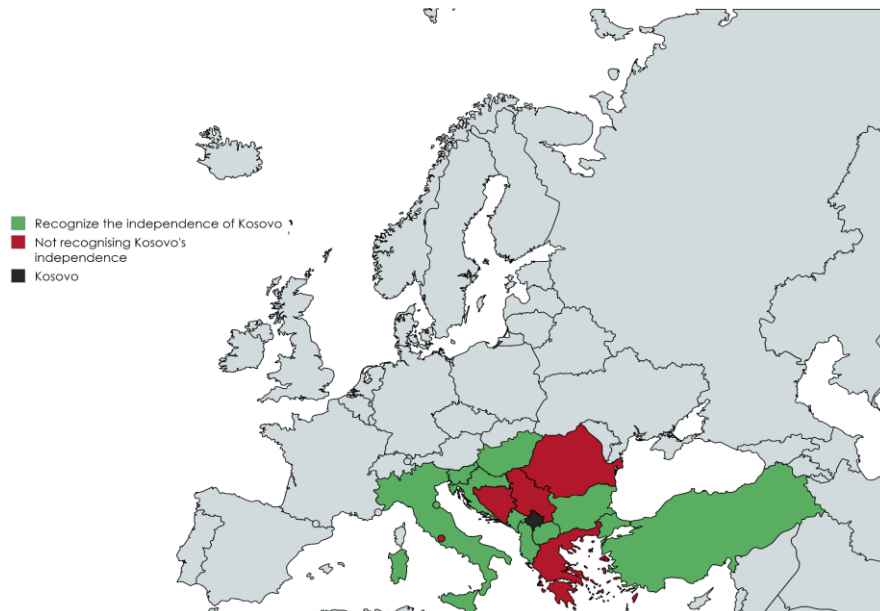


Figure 1. Kosovo's Neighbouring Countries that Have or Have Not Recognized its Independence

In addition to the partial non-recognition by neighbouring countries of Kosovo's independence from Serbia, an important factor in geopolitical tensions is the economic instability in the Western Balkans region, which directly affects Kosovo's logistics and trade routes. The Western Balkans is one of the least economically developed regions of Europe, which makes it vulnerable to economic crises and instability (World Bank, 2022). Kosovo, which is dependent on trade with neighbouring countries, is sensitive to economic crises in its neighbours, which can lead to a decrease in trade. For example, if the economic situation in Serbia, North Macedonia, or Montenegro deteriorates, it directly impacts the ability of these countries to import goods from Kosovo or export goods to Kosovo.

As a result, trade volumes decrease, which negatively affects the Kosovo economy, especially its export-orientated sectors. Sanctions against Russia significantly impacted trade routes, forcing Kosovo businesses to seek more expensive and less efficient alternatives. Logistics costs increased by 25-30% compared to 2021 (Mima, 2023), and the disruption of Russian exports, particularly energy and raw materials, further strained Kosovo's economy. However, the displacement of Russia from international markets boosted trade between Balkan countries and the EU, rising by 11.7 billion EUR from 2021 to 2023 (European Commission, 2024).

Changes in the energy sector have also had an important impact. Sanctions against Russia have restricted gas supplies to Europe, leading to higher energy prices and instability in the energy sector. Due to Kosovo's economic dependence on the European energy market, the country has been forced to look for new sources of energy, which has come with additional costs and infrastructure challenges. Market reorientation has become another important consequence of the sanctions. To compensate for the losses, Kosovo has expanded imports from alternative markets such as Turkey and China. According to "Kosovo import data" (TradelmeX, 2024), imports from these countries grew by 30% in 2022-2023, which was a necessary step to overcome the shortage of goods and reduce dependence on traditional European markets. However, this process requires significant resources and time to adapt new logistics and trade mechanisms. This reorientation, while opening up new opportunities, also creates additional costs that are difficult to compensate for in the short term.

Another aspect is the investment climate in the region. Economic instability and crises can reduce the investment attractiveness of the Western Balkans. This means less investment in infrastructure projects such as roads, railways, and logistics hubs, which are critical to ensuring efficient logistics routes. Without adequate investment in these areas, Kosovo's logistics networks remain less developed and less competitive compared to other European countries. It is also important to note that economic instability can lead to political instability, which in turn can impact logistics routes. Protests, strikes, and social unrest can hamper transport operations, block routes, and shut down ports and other key logistics facilities. For example, in 2021, mass protests against corruption, unemployment, and low living standards added new challenges to an already volatile social situation. The situation deteriorated during outbreaks of unrest due to tensions between the Serbian and Albanian communities, leading to short-term local economic crises and trade restrictions. In addition, strikes by workers in various sectors of Kosovo's economy further disrupted transport infrastructure and logistics, negatively impacting international trade and the local economy (Kalemaj & Kalemaj, 2022).

Against the backdrop of geopolitical challenges, Kosovo is trying to diversify its trade routes and reduce dependence on politically unstable routes. One of the ways is to develop multimodal logistics hubs that can provide more flexible and reliable supply routes. It is also important to introduce modern technologies in the field of logistics, which allows optimising transport processes and reducing the risks associated with political factors. In addition, Kosovo is actively working to integrate with European transport networks and participate in regional initiatives such as the Western Balkan Transport Corridor (European Commission, 2015). These measures are aimed at improving logistics infrastructure and ensuring stable and efficient trade routes.

The analysis shows that Kosovo's trade routes and logistics are greatly impacted by geopolitical conflicts, which exacerbates the region's economic weaknesses. Due to its landlocked status and dependence on its neighbours for access to global markets, Kosovo is especially vulnerable to interruptions brought on by regional conflicts, political unrest, and sanctions. Sanctions on Russia have made conventional trade channels even more difficult to navigate, driving up logistics costs and putting pressure on supply chains. Furthermore, internal political difficulties and the economic instability of the Western Balkans have made it difficult to invest in vital infrastructure, which has decreased Kosovo's competitiveness in the European market. Despite these obstacles, Kosovo is actively working to reduce the effects of geopolitical tensions by using contemporary technologies, improving logistical networks, and diversifying trade channels. In the midst of ongoing geopolitical unpredictability, these programs, along with those for regional integration, seek to fortify Kosovo's resilience and guarantee more sustainable economic growth.

The impact of geopolitical tensions on global supply chains in Belgium

Belgium's logistics and trade routes are sensitive to any changes in geopolitics, especially when it comes to the EU. Belgium has an extensive transport infrastructure, including seaports, rail lines, and motorways connecting it to many countries in Europe and the world. Another positive factor that shields Belgium from the strong influence of geopolitical tensions is its membership in the EU. As one of the founding members of the EU, Belgium has access to the European single market, which ensures free movement of goods, services, capital, and labour. This creates favourable conditions for business and increases the competitiveness of Belgian companies. It is also important to note the presence of international organisations. Brussels is home to numerous international organisations, including the headquarters of the EU and NATO. This strengthens Belgium's political and diplomatic influence,

promotes international cooperation, and provides additional economic benefits. However, geopolitical factors can still have a serious impact on the functioning of these routes.

Brexit has been one of the biggest shocks in recent times. The UK's withdrawal from the EU has changed the terms of trade between the EU and the UK, which has had a significant impact on Belgian ports, particularly Antwerp and Zeebrugge (World Trade Organization, 2024a). Starting from 2021, all goods exported or imported between the EU and the UK will be subject to customs control. This includes filing customs declarations, paying duties and taxes, and complying with security requirements (European Commission, 2020). Goods passing through EU ports are now subject to additional checks, including phytosanitary and veterinary inspections for agricultural products, which increases the time required to process goods. This has also resulted in delays in the transportation of goods due to the need to pass these inspections. These changes have had a significant impact on the efficiency of logistics and trade through Belgian ports, increasing the cost of transporting goods and delivery times. This has led many companies to review their supply chains to avoid additional costs and delays (World Trade Organization, 2024b).

The Russian-Ukrainian war also has a strong impact. The sanctions imposed by the EU against Russia, as well as the corresponding counter-sanctions, are affecting trade between Europe and Russia (Auda, 2024). Belgium, as an important transport hub, is experiencing a decline in traffic to and from Russia. According to "EU trade with Russia – Latest developments" (Eurostat, 2024), exports to Russia decreased by around 40% in 2024 compared to 2021, leading to reduced trade volumes through major Belgian ports such as Antwerp and Zeebrugge. Global supply chains were also restructured as a result of the sanctions. Companies were forced to find alternate, frequently more costly routes as many old routes that travelled through or depended on Russia became unreliable or inaccessible. Belgian companies and the effectiveness of its ports were further strained by these delays and rising logistical expenses.

Additionally, the war made Europe's energy crisis worse, which resulted in skyrocketing energy prices that had an immediate effect on Belgium's manufacturing costs and general economic stability. Because Belgium imports a lot of energy, supply chain disruptions and growing energy prices have left the country more susceptible to outside shocks. Financial hardship was increased by the need to adjust to a restructured energy market, which included locating substitutes for Russian gas and oil. These difficulties revealed Belgium's reliance on the stability of international trade and its susceptibility to geopolitical shocks such as the conflict in Ukraine, despite its strong infrastructure and EU membership.

In addition, geopolitical tensions in the Middle East and North Africa are also impacting Belgium's logistics routes. Instability in these regions often leads to disruptions in the supply of energy and other strategic goods that pass through Belgian ports. This puts additional pressure on logistics networks and requires companies to be flexible and adaptive in their supply chain planning. Changes in the policies of the EU's trading partners, such as the US and China, may also have an impact on Belgium's logistics and trade routes. Trade wars, the introduction of tariffs, or changes in trade agreements can lead to changes in the volume and direction of trade passing through Belgium (Jung & Park, 2024). This may require Belgian logistics companies to constantly and promptly review their strategies and adapt to new conditions.

Despite its robust infrastructure and EU integration, Belgium is extremely vulnerable to geopolitical tensions due to its role as a major European hub for trade and logistics. Belgium's supply chains faced challenges as a result of certain geopolitical events. For instance, Brexit has a major effect on important ports by introducing customs procedures and delays. The Russian-Ukrainian conflict's sanctions further decreased trade volumes and changed supply lines, requiring businesses to take more expensive detours. Furthermore, the war-exacerbated energy crisis has increased costs, further straining Belgium's economy financially. Belgian logistics networks must constantly change in order to preserve their effectiveness and resilience in the face of continued regional instability and global trade disputes. These difficulties show how Belgium's economy is intertwined with international trade and underscore the necessity of adaptable approaches to lessen the effects of geopolitical shocks.

The impact of geopolitical tensions on global supply chains in Azerbaijan

Azerbaijan is a part of the Southern Gas Corridor, which transports natural gas from the Caspian region to Europe, increasing the EU's energy security and reducing its dependence on Russian gas. In 2023 alone, Azerbaijan exported 11.8 billion cubic meters of natural gas to Europe. In the first half of 2024, gas exports increased by 12.3% compared to the same period last year (International

Energy Agency, 2024). However, geopolitical tensions in the region could significantly affect logistics and trade routes in Azerbaijan. One of the main factors is the conflict between Azerbaijan and Armenia over Nagorno-Karabakh. Despite Azerbaijan’s victory (as of 1 January 2024, the Republic of Nagorno-Karabakh will cease to exist), the conflict remains a source of instability in the region, which can lead to disruptions in supply and trade (European Parliament, 2024). This military conflict has had a negative impact on the economy of Azerbaijan, as any war in general. Although no sanctions were imposed on Azerbaijan, some members of the European Parliament called for them. European politicians demanded a halt to Azerbaijani gas imports, which is an important source of revenue for the country (Jones & Zsiros, 2023). The humanitarian consequences of the conflict, such as the blockade of the only route between Nagorno-Karabakh and Armenia, have created additional difficulties for the economy. The blockade has led to a reduction in the supply of goods and resources, which has negatively impacted local businesses and economic activity in the region (Joyner, 2023).

One aspect is the impact of sanctions and economic restrictions on 2 of the 4 countries that share a land border with Azerbaijan (Iran and Russia). For example, the sanctions imposed on Iran were aimed at limiting its nuclear program, as well as its ability to finance terrorism and other destabilising activities in the region (Torbat, 2020). Sanctions have affected the transportation of oil and gas, as well as the movement of goods through Iranian ports, which has led to the complication of logistics and trade routes, which in turn has affected Azerbaijan’s economy, forcing it to look for alternative ways to export and import goods. The sanctions imposed on Russia as a result of the attack on Ukraine also became an economic blow, but these sanctions had positive aspects in addition to negative ones (Table 1). In particular, restrictions on the use of Russian ports and transport routes have led to a decrease in the volume of cargo transported through Azerbaijani corridors, such as the North-South International Transport Corridor (Ohanyan, 2024).

Table 1. Oil exports of Azerbaijan

	Export, barrels/day	Main directions
2020	500.417	Iran, Iraq, Italy, Greece, Kazakhstan
2021	482.750	Iran, Iraq, Italy, Greece, Kazakhstan, Oman
2022	441.333	USA, Canada, Italy, Israel, India, Spain, Turkey, Mexico
2023	389.083	Norway, USA, Canada, Italy, Israel, India, Spain, Turkey

Source: compiled by the authors based on CEIC data (2024).

Another risk point is the competition between major geopolitical players for influence in the region. Azerbaijan is located in the zone of interests of Russia, the EU, Turkey, and China. This often leads to different economic and political influences on logistics and trade routes. China’s growing presence in the region as part of the One Belt, One Road initiative is contributing to infrastructure development but also creating new challenges and risks (Moradlou et al., 2024). The internal political and economic situation in Azerbaijan should be taken into account. Economic crises, political instability, and corruption negatively affect the efficiency of logistics and trade routes, which in turn leads to delays, increased transportation costs, and reduced competitiveness of Azerbaijani goods in international markets.

Geopolitical tensions' effects on Azerbaijan's international supply chains draw attention to the twin problems of regional instability and rivalry for influence among superpowers. Azerbaijan is a major contributor to the energy security of Europe as a participant in the Southern Gas Corridor, but its trading routes and logistics are complicated by internal economic problems, sanctions on neighbouring countries, and continuous tensions with Armenia over Nagorno-Karabakh. Azerbaijan has looked for other export markets and used its advantageous location to fortify ties with China and the EU. However, obstacles including corruption and ineffective logistical networks, as well as competition from programs like China's One Belt, One Road, impede development. Notwithstanding these challenges, Azerbaijan's abundant energy resources offer a chance to strengthen its position in international markets. However, attaining increased resilience will necessitate infrastructure spending, trade route diversification, and strong diplomatic tactics to negotiate the intricate geopolitical environment.

The study of the impact of geopolitical tensions on the examples of Kosovo, Belgium, and Azerbaijan demonstrates how national characteristics and geopolitical aspects affect the ability of countries to withstand external challenges and adapt to change. Kosovo, as a country located in the

Balkans and constantly facing geopolitical challenges, is an example of a country where geopolitical tensions have a significant impact on the economy. The conflict in the former Yugoslavia has left a deep mark on the economic stability of the region, and the non-recognition of Kosovo by many countries around the world creates additional difficulties for international trade. Geopolitical tensions in the region lead to instability, which affects supply chains and makes them less reliable (Semenenko et al., 2021). Frequent changes in trade routes, caused by both political and economic factors, impede the stable supply of goods, which creates additional risks for companies doing business in Kosovo. It should be emphasised that this issue has a direct impact when used by populist politicians, because populism increases popular support while endangering international relations (Kelmendi et al., 2024a).

Belgium, being one of the key centres of European trade and logistics, is also not immune to the impact of geopolitical tensions, although its situation is significantly different from Kosovo's. As a member state of the EU and NATO, Belgium has significant advantages in terms of stable trade relations, developed infrastructure, and political stability. However, its position as an important trade hub also means that any geopolitical changes at the global level could have a significant impact on its economy. Geopolitical tensions, such as those between the US and China or between Russia and the EU, are constantly causing changes in global supply chains, which directly affect Belgium. Because of its role as a transit country, changes in international trade, such as trade wars or sanctions, lead to major disruptions in supply chains, increased logistics costs, and reduced efficiency in international trade. However, unlike Kosovo, Belgium has significant resources to overcome such challenges.

Located at the crossroads of Europe and Asia, Azerbaijan is an important player in the global energy market. Its economy is heavily dependent on oil and gas exports, making it vulnerable to geopolitical changes in the region. Conflicts in neighbouring countries, such as Armenia or Iran, as well as global geopolitical shifts, have a significant impact on Azerbaijan's energy supply chains and international trade. Geopolitical tensions in the region, including unresolved territorial disputes, impact the stability of energy supplies and Azerbaijan's ability to maintain its position on the global market. However, unlike Kosovo, Azerbaijan has greater opportunities to influence international trade processes through its energy resources. The country is actively cooperating with international partners, such as the EU and China, to strengthen its trade ties and reduce its dependence on the unstable region.

By comparing the impact of geopolitical tensions on Kosovo, Belgium, and Azerbaijan, it can be seen that geographic location, economic resources, and political stability play a key role in determining the resilience of supply chains and international trade. Kosovo, with its limited resources and political instability, faces difficulties in overcoming the effects of geopolitical tensions. At the same time, Belgium, as an economically developed and politically stable country, is much better positioned to overcome external challenges, but its dependence on global supply chains makes it vulnerable to changes at the global level. Despite its heavy dependence on oil exports, Azerbaijan has the potential to strengthen its position in the global market through active foreign policy and the development of alternative trade routes.

Historical, economic, and geopolitical conditions related to the geopolitical conflicts in Kosovo, Belgium, and Azerbaijan have had a significant impact on global supply chains and international trade. After the breakup of Yugoslavia in the 1990s and the subsequent war in Kosovo, the region became one of the key flashpoints in Europe. The conflict in Kosovo, in particular, affected trade and economic ties in the region, creating significant barriers to the integration of the Balkan countries into global markets. Belgium, as the centre of the EU, plays an important role in maintaining stability in Europe, but it is also impacted by rising tensions between the EU and its neighbours, which impacts global supply chains. Azerbaijan, located at the crossroads between Europe and Asia, is an important energy supply hub but also faces challenges due to the unresolved conflict with Armenia and the complex geopolitical situation in the region. The importance of the findings is that they identify the main factors that contribute to the disruption of global supply chains due to geopolitical tensions. Economic ties, despite their strength, are not always able to compensate for political and military conflicts.

Ongoing geopolitical changes, including growing competition between major powers such as the United States, China, and Russia, are having a significant impact on the situation in the regions under review. In particular, the competition for influence in the Caucasus between Russia and the West is a key factor contributing to the growth of tensions. This, in turn, directly affects energy supplies from Azerbaijan to Europe. This statement is also confirmed by Saipiatuddin et al. (2024), who note that instability in the region could have serious consequences for the stability of energy markets and the uninterrupted supply of energy to Europe. However, it is important to note that such competition

between states can also be seen as an incentive for Azerbaijan to actively seek new opportunities to diversify its economic ties and strengthen its position in global markets. This situation also demonstrates how global competition can exacerbate existing geopolitical tensions, forcing countries to choose between strengthening relations with traditional partners and seeking new areas of cooperation.

Such geopolitical changes point to the importance of rethinking strategic approaches to supply chain management. There is a need for a deeper understanding of potential risks and the development of scenarios that can ensure economic stability even in the face of geopolitical tensions. Approving the results of the study, Shi and Lu (2024) note that a comparison between countries dependent on these routes shows that countries with more diversified economic ties and developed infrastructure are more resilient to external shocks. Countries such as Belgium are already demonstrating the ability to adapt to change, while others, such as Kosovo, face more serious challenges due to geopolitical instability in their regions.

Geopolitical tensions often lead to the reallocation of trade routes and changes in global supply chains, which creates additional costs and increases the risk of supply disruptions. In cases of conflict or political instability, companies are forced to find alternative routes to transport their goods, which typically entails a significant increase in logistics costs. Costs may include security, insurance, or even reorganisation of the supply chain due to the closure or blocking of key routes. This is confirmed by Qian and Arkadievna (2024), noting that such changes not only increase operating costs but also affect global markets, causing price fluctuations. This underscores the difficulty of forecasting and managing in the face of geopolitical uncertainty. Liu et al. (2024) confirm these theses, noting that such disruptions can have long-term consequences, as companies and states are forced to adapt their strategies to new conditions, which is regularly a complex and expensive process. In this context, it is worth comparing different approaches to mitigating such risks, including investing in supply chain diversification and building more resilient business models that can withstand the impact of geopolitical changes.

Rising prices and instability are creating additional challenges for companies and economies, especially in regions with political tensions such as the Caucasus and the Balkans. This is particularly evident in regions where infrastructure is already under threat from ongoing conflicts or economic sanctions. This study is supported by Zhao et al. (2024), who note that regions with protracted conflicts, such as the Caucasus, are more likely to experience supply disruptions, which leads to significant economic losses for both the region and the global economy. Companies operating in regions with high levels of political tension should anticipate significant costs to adapt their supply chains to changing market conditions. These results are also confirmed by Nnaji et al. (2024), who note that volatile markets force companies to invest in alternative routes, tracking, and risk management technologies, which significantly increases their operating costs and can affect the final cost of products.

Economic dependence on politically unstable regions poses serious challenges for global companies, especially in the context of rising geopolitical tensions (Kim et al., 2025; Kerimkulov et al., 2015). Janbaaz and Fallah (2019) confirm the findings, showing that countries that depend on energy resources from Azerbaijan or other Caucasus countries are at increased risk. This is due to the fact that instability in the region could affect the stability of supplies, which, in turn, would affect global energy markets and lead to higher prices. It is worth noting that, unlike more stable regions, the Caucasus countries offer unique opportunities that can be strategically important for companies able to manage risks effectively. In this context, the risks of economic dependence on the Caucasus can be compared to the benefits of diversifying sources of supply and minimising the impact of political fluctuations on business operations. Therefore, it is important to consider the issue not only in terms of risks but also opportunities for developing new strategic partnerships and supply routes.

The discussion emphasises the different levels of resilience displayed by Kosovo, Belgium, and Azerbaijan while highlighting the complex effects of geopolitical tensions on global supply networks. Belgium benefits from its membership in the EU and NATO, which enables it to minimise disruptions through robust political and economic frameworks, whereas Kosovo faces challenges related to inadequate infrastructure, regional instability, and partial international recognition. But because of its reliance on international supply networks, Belgium is susceptible to outside shocks like Brexit and the conflict between Russia and Ukraine, which have raised logistical costs and seriously disrupted trade. Despite facing difficulties from regional conflicts and changes in the global energy market, Azerbaijan, which is mostly dependent on oil exports, has demonstrated the ability to diversify its economy through strategic alliances. These results highlight the vital role that trade route diversity, infrastructure

development, and active international cooperation play in reducing the risks associated with geopolitical tensions and guaranteeing long-term economic stability.

The findings highlight a number of useful implications for businesses and politicians negotiating the intricacies of geopolitical conflicts. In order to lessen vulnerability to global disruptions, authorities should immediately invest in strong infrastructure, diversify trade channels, and fortify international connections, according to the research. For example, Belgium can use its prominent position within the EU to promote coordinated energy and trade policies that improve regional stability. The findings emphasise how crucial it is for businesses to create flexible supply chain plans, which include diversifying suppliers and markets, in order to reduce the risk of geopolitical shocks like trade wars or sanctions. While businesses in energy-dependent economies like Azerbaijan should look at renewable energy opportunities to lessen their dependency on unstable markets, companies operating in affected regions like Kosovo must embrace technology that optimises logistics and improves operational resilience. In order to ensure sustainable economic growth in a world that is becoming more unstable, cooperation between governments and corporations is essential in tackling these issues.

CONCLUSION

The study emphasizes that an economy's resilience to geopolitical shocks depends not only on a country's economic strength, but also on its ability to strategically adapt to changing global dynamics. Infrastructure development, diversification of trade routes and active participation in global organizations are critical determinants of resilience. This article presents a new conceptual framework for understanding the "resilience strategy" of small and medium-sized economies facing geopolitical crises. This paradigm suggests that a country's ability to change its supply chain strategies - through diversification, international cooperation, and infrastructure investment - determines its effectiveness in mitigating geopolitical tensions. Small states such as Kosovo and Azerbaijan, unlike large economies, should prioritize the development of alternative trade routes and strategic alliances, especially in the face of political and economic turmoil. These findings have important implications for policymakers and businesses in similar geopolitical environments. Governments should prioritize infrastructure investment, diversify trade alliances, and strengthen international cooperation to increase a country's resilience to geopolitical shocks. For businesses, especially in smaller economies, building flexible and responsive supply networks will be essential to address the complex challenges of disruptions to global trade. In conclusion, the study provides significant insights into the factors that contribute to the economic resilience of countries facing geopolitical crises. This study broadens the scope of resilience strategy by providing insight into how nations can effectively address geopolitical threats, thereby increasing the stability and resilience of global supply networks.

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AUTHOR CONTRIBUTIONS

Conceptualization, JK, AB; methodology, OT, KK; software, ES, OT; investigation, AB, KK; resources, JK, OT; data curation, AB; writing—original draft preparation, JK, AB, KK; writing—review and editing, AB, OT, ES; visualization, JK, KK.

CONFLICTS OF INTEREST

The author(s) declare no conflict of interest.

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