
Conditions for the Operation of Transport Enterprises in the Development of Trade between Europe and the Caucasus Countries – Managerial, Economic, and Geopolitical Aspects

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Abstract:

Purpose: This study aims to identify the managerial, economic, and geopolitical conditions influencing the operation of transport enterprises supporting trade between Europe and the South Caucasus. It examines how strategic management capabilities, bilateral trade patterns, and transport security shape the development of sustainable logistics connections between the two regions.

Design/Methodology/Approach: The study adopts a qualitative research design based on a literature review, comparative analysis, and desk research. It integrates perspectives from strategic management, international trade, transport economics, and political studies. Official trade statistics, international reports, and policy documents are analysed to assess Poland's role in Europe–Caucasus trade and the impact of geopolitical developments on transport security in Armenia, Azerbaijan, and Georgia during 2020–2026.

Findings: The results indicate that the competitiveness of transport enterprises increasingly depends on adaptive management, resilience, digitalisation, and sustainability rather than solely on transport costs. Poland has the potential to serve as a logistics gateway to Central and Northern Europe, although trade with the South Caucasus remains uneven and underutilised. Geopolitical developments, including regional conflicts and the growing importance of the Middle Corridor, significantly influence transport accessibility and logistics reliability.

Practical Implications: The findings support transport enterprises and policymakers in strengthening logistics resilience through risk management, transport corridor diversification, digital transformation, and cross-border cooperation.

Originality/Value: The study integrates managerial, economic, and geopolitical perspectives into a comprehensive framework explaining the operation of transport enterprises within the Europe–South Caucasus trade corridor and the relationship between enterprise strategy, trade development, and transport security.

Keywords: Transport enterprises, logistics management, Europe–South Caucasus trade, transport security, Middle Corridor, geopolitical risk.

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1. Introduction

International trade increasingly depends on efficient, reliable, and resilient transport systems connecting distant markets and supporting global supply chains. Transport enterprises, traditionally viewed as providers of physical movement services, have evolved into strategic actors responsible for coordinating logistics processes, managing uncertainty, and supporting economic integration. This transformation is particularly relevant in regions where transport networks are shaped not only by economic factors but also by geopolitical instability, infrastructure constraints, and changing patterns of international cooperation.

The Europe–South Caucasus trade corridor represents such a complex environment. Located between Europe and Asia, Armenia, Azerbaijan, and Georgia occupy a strategically important position within emerging transport routes linking European markets with Central Asia and China.

However, the region remains exposed to political tensions, territorial disputes, competing geopolitical interests, and security challenges affecting transport accessibility and operational continuity. Therefore, enterprises operating in these corridors must develop adaptive strategies combining efficiency, resilience, and sustainability.

Poland may play an increasingly important role in this context due to its developed logistics infrastructure and strong position in international freight transport. Although it is not the shortest geographical route between the South Caucasus and Western Europe, its access to Central and Northern European markets creates opportunities to serve as a logistics gateway for Caucasus-related trade flows. Nevertheless, Poland–Caucasus trade remains relatively limited and asymmetric, suggesting that this potential is not yet fully utilised.

Existing research has examined transport corridors, logistics networks, and supply chain resilience; however, insufficient attention has been paid to the interaction between transport enterprise management, trade development, and geopolitical factors in the Europe–South Caucasus context. This gap is particularly significant following the war in Ukraine, the diversification of transport routes, and the growing importance of the Middle Corridor.

Therefore, this study aims to identify the managerial, economic, and geopolitical conditions influencing transport enterprises supporting Europe–South Caucasus trade. The article integrates strategic management, transport economics, and geopolitical perspectives to examine how enterprise capabilities, economic opportunities, and transport security shape sustainable logistics connections. The study contributes by providing a comprehensive framework for understanding transport enterprises as active actors influencing the resilience and competitiveness of international trade corridors.

2. Management Strategies for Transport and Logistics Enterprises Serving Europe–Caucasus Trade in the Context of Sustainable Transport Development

2.1 Strategic Role of Transport Enterprises in International Trade and Logistics Networks

Transport enterprises constitute a fundamental component of international trade systems by enabling the physical movement of goods, connecting markets, and supporting the functioning of global and regional supply chains. In contemporary economic conditions, their role extends beyond the provision of traditional transport services.

Transport and logistics enterprises increasingly operate as strategic actors responsible for integrating transportation processes, information flows, infrastructure capacity, and customer requirements within complex international logistics networks (Lee *et al.*, 2024).

The competitiveness of transport enterprises is determined not only by the availability of transport infrastructure but also by their ability to provide reliable, flexible, and cost-effective services. Factors such as delivery time, operational reliability, service quality, digital integration, and the ability to coordinate cross-border operations have become important determinants of competitive advantage. Consequently, transport enterprises operating in international markets must develop managerial capabilities that allow them to respond effectively to changing trade patterns, customer expectations, and regulatory requirements.

The development of international trade corridors has further strengthened the strategic importance of transport enterprises. Modern logistics networks are not merely passive infrastructures facilitating trade; they represent dynamic systems in which enterprises, infrastructure operators, public authorities, and international organisations interact.

Within such systems, transport companies influence the efficiency and attractiveness of particular trade routes through decisions regarding fleet management, route selection, technological investments, and cooperation with logistics partners (Wang *et al.*, 2025).

This perspective is particularly relevant for trade relations between Europe and the South Caucasus countries. Due to geographical distance, complex transit conditions, and the involvement of multiple transport corridors, enterprises operating in this area must combine operational efficiency with the ability to manage cross-border complexity. The effectiveness of transport services becomes an important factor influencing the economic attractiveness of trade relations, as inadequate transport performance may increase transaction costs and limit market opportunities.

Therefore, the development of Europe–Caucasus trade depends not only on economic demand and political relations but also on the managerial capabilities of transport enterprises responsible for transforming potential trade flows into reliable logistics connections. The following analysis of Poland–Caucasus trade patterns demonstrates how differences in market structure, geographical conditions, and transport accessibility influence the actual utilisation of existing trade opportunities.

2.2 Adaptive Management of Transport Enterprises Under Sustainability and Geopolitical Challenges

Transport enterprises operating in international environments increasingly face conditions characterised by uncertainty, rapid technological change, and growing sustainability requirements. Traditional approaches based primarily on cost minimisation and operational efficiency are gradually being complemented by adaptive management strategies aimed at improving resilience, flexibility, and long-term competitiveness (Ivanov, 2023).

One of the most important managerial challenges is the necessity to respond to external disruptions affecting transport networks. These disruptions may result from geopolitical tensions, armed conflicts, regulatory changes, infrastructure limitations, or fluctuations in global markets. In regions characterised by strategic competition and unstable political conditions, transport enterprises must develop risk-management capabilities, diversify operational options, and maintain the ability to adjust routes and logistics solutions in response to changing circumstances.

The South Caucasus represents an example of an environment where transport enterprises operate under particularly complex conditions. The region's strategic location between Europe and Asia creates significant opportunities for trade development, while simultaneously exposing logistics systems to political tensions, border restrictions, and competition between alternative transport corridors. As a result, managerial decisions concerning route planning, partnerships, infrastructure utilisation, and investment priorities are closely connected with broader geopolitical developments.

At the same time, transport enterprises face increasing pressure related to sustainable development. Environmental regulations, climate objectives, and changing customer expectations require companies to reduce emissions, improve energy efficiency, and adopt cleaner technologies. Sustainable transport management is therefore becoming not only an environmental obligation but also an important element of competitive strategy (Borowski, 2026). Digitalisation, intelligent transport systems, data-driven decision-making, and improved resource utilisation provide additional opportunities to increase efficiency while reducing environmental impacts.

The ability to combine economic efficiency, environmental responsibility, and resilience to external risks represents a key characteristic of modern transport

enterprises. In this context, companies operating along Europe–Caucasus trade routes must be understood as adaptive organisations embedded within wider socio-economic and geopolitical systems. Their performance depends not only on internal managerial capabilities but also on external conditions shaping the security and accessibility of transport networks (Borowski, 2026).

These considerations provide the foundation for analysing the economic dimension of Europe–Caucasus trade relations. The following section examines the current structure and potential development of Poland’s trade with South Caucasus countries, highlighting how economic opportunities are influenced by transport accessibility and logistics capabilities.

3. The Economic Importance of Poland–Caucasus Trade

3.1 Poland as a Potential Gateway to Central and Northern European Markets

The importance of Europe–Caucasus trade is closely connected with Poland’s potential competitiveness as a gateway to European markets. Geographically in a strict sense, Poland is not necessarily close to the South Caucasus. Maritime connections across the Black Sea and land routes through Turkey and Southeastern Europe may represent more direct alternatives, particularly amid the war in Ukraine and broader geopolitical uncertainty, as discussed in the next section.

Nevertheless, Poland may serve as an entry point to Central and Northern European markets and as a logistics and distribution centre for trade extending further into the EU (e.g., Germany and France). Moreover, given Poland’s market size and recent economic growth (OECD, 2025), the country itself constitutes a potentially attractive destination for South Caucasian goods.

Poland’s potential role as a gateway for Caucasus traders should be understood in functional rather than purely geographical terms. Poland does not necessarily provide the shortest nor cheapest transport route between the South Caucasus and Western Europe. Nevertheless, its integration into the Trans-European Transport Network and the scale of its international road-freight sector make it an important logistics and distribution platform, especially for Central and Northern European markets.

For example, in 2024, Polish-registered vehicles accounted for nearly 20% of EU road-freight transport performance of which 64.2% involved international transport, cross-trade, or cabotage (Eurostat, 2025). Poland’s gateway potential is further reinforced by its position on the North Sea-Baltic TEN-T Corridor and its high level of international connectivity (European Commission, n.d.; World Bank, 2018).

That being said, with the partial exception of Georgia, there is little clear evidence that the South Caucasus countries are strategically exploring Poland’s position as a

gateway to wider European markets. As is seen below, the volume and structure of bilateral trades differ among them and fluctuate year by year. Poland's gateway function therefore should be understood primarily as a largely unrealised or emerging opportunity rather than an established feature of Poland-Caucasus trade strategies.

3.2 Country-Specific Patterns for Poland

At present, all three bilateral relationship is driven more clearly by Polish exports to the South Caucasus, although the character of this trade differs among the three destination markets. For example, while the data for 2025 remain incomplete, Georgia's imports from Poland amounted to USD 240.4 million in the period from January to October. By contrast, Georgia's exports to Poland reached only USD 43.2 million between January and November (Polish Embassy in Georgia, n.d.).

In Georgia, geopolitical and geoeconomic uncertainties, together with socio-politically influenced changes in consumer preferences, has encouraged businesses to diversify their sources and markets. At the same time, Georgia is developing as a diversified market for Polish consumer and intermediate goods rather than as a narrowly specialised bilateral trading partner (e.g., processed foods, beverages, and tobacco (27.2%), vehicles and transport equipment (16.0%), chemicals (14.0%), machinery and electrical equipment (9.5%), metals and metal products (6.7%), plastics and rubber (5.5%), see Polish Embassy in Georgia, n.d.). Its strategic location as a transit country connecting Europe with the South Caucasus and Central Asia further increases its relevance for Polish enterprises.

Poland–Armenia trade expanded sharply after 2021, although the scale and durability of this expansion remain uncertain (for example, imports from Poland increased from USD 76.6 million in 2022 to 138.7 million in 2023, before declining to 104.9 million in 2024, see Polish Embassy in Armenia, n.d.).

Additionally, differences between Eurostat and Armenian statistics (e.g., EUR 220.04 million for 2023, see Ministry of Economic Development and Technology, n.d.) suggest the possible importance of indirect trade routes, re-exports and divergent reporting conventions. Although the precise reasons for these discrepancies remain unclear, Armenia's landlocked position provides a substantially different perspective on Europe–Caucasus trade from that observed in Polish–Georgian relations.

The comparatively modest and fluctuating trade between Poland and Azerbaijan adds another dimension to this heterogeneous regional picture (e.g., USD 111.96 million in import from Poland and 15.72 million in export to Poland, see Polish Embassy in Azerbaijan, n.d.). Polish agri-food exports began to rise in the recent years which can be sensitive to transport infrastructure conditions. However, its size (less than EUR 30 million) makes it still too early to call it as a dominant trend.

3.3 Looking Into the Future

Consequently, the asymmetric and uneven character of Poland–South Caucasus trade requires a country-specific interpretation of the classical determinants of international trade, particularly transport costs, infrastructure quality, accessibility and delivery reliability. The economic significance of these factors varies according to each country's geographical position, commodity structure, and function within regional transport networks.

That being said, apart from certain agri-food and chemical products, major traded goods, including machinery, vehicles, metals, and plastics, do not generally require temperature-controlled transport or other specialised logistics infrastructure. Thus, the volume and structure of bilateral trade suggest that trade opportunities remain underexploited on both sides. Their future development may increase demand for reliable, efficient, and environmentally sustainable logistics services.

Evidence from the wider Middle Corridor supports the view that improved transport performance could help realise some of this potential. World Bank modelling indicates that coordinated infrastructure investment and operational reforms could halve corridor travel times and triple freight volumes by 2030, while increasing trade between Azerbaijan, Georgia and Kazakhstan and the EU by approximately 28% (World Bank, 2023).

The projected gains depend not only on physical infrastructure but also on improved border coordination, digitalisation, and service reliability. Although these estimates cannot be applied directly to Poland's bilateral trade or to Armenia which is not included in the Corridor, they demonstrate that reducing time-related and organisational costs may stimulate trade even where the existing commodity structure does not require specialised transport facilities.

4. Political Determinants of Transport Security in the South Caucasus Inter-Region (2020-2026)

4.1 Transport Security as a Political and Strategic Challenge in the South Caucasus

In geopolitically sensitive regions, transport infrastructure is often exposed to political instability, armed conflicts, and external geopolitical competition. Efficient and resilient transport systems facilitate economic development, international trade, military mobility, and regional integration, while their disruption may have profound political, economic, and social consequences. The South Caucasus —comprising Armenia, Azerbaijan and Georgia—is a prominent example of such a space called - according to naming requirements – an *inter-region* (Tripković, 2007). The transport security is closely intertwined there with territorial disputes, great-power rivalry, and competing regional integration projects.

Thus the political environment remains the principal factor influencing transport security across the region. Unlike many European transport networks, where risks are primarily associated with technical failures or natural disasters, transport systems in the South Caucasus are directly affected by interstate conflicts, unresolved territorial disputes, sanctions, diplomatic crises, and shifting alliances.

Consequently, understanding political determinants is essential for assessing the resilience and sustainability of regional transport networks. The above principal political factors are vital for transport infrastructure, cross-border connectivity, and regional logistics.

The main research hypothesis here is illustrated by the following statement: political developments—including armed conflicts, geopolitical rivalry, and regional cooperation initiatives—constitute the primary determinants and obstacles either of transport security in Armenia, Azerbaijan, and Georgia during the period 2020–2026.

Methodologically, this part of paper employs a qualitative comparative approach combining political analysis with security studies. It draws upon academic literature, policy reports, and publications from international space. Comparative analysis enables the identification of similarities and differences among the three South Caucasus states while considering the broader geopolitical environment.

4.2 Political Context of Transport Security in the South Caucasus (2020-2026)

The strategic importance of the South Caucasus has increased considerably since the Second Nagorno-Karabach War in 2020. The Armenian-Azerbaijani conflict over this area is rooted in the difficult history – old and contemporary - of relations between both nations (Broers, 2019; de Waal, 2023; Zakrzewska-Dubasowa, 1990).

The Second War fundamentally altered the regional balance of power and additionally reshaped transport connectivity between Europe and Asia (McBride, 2026). Azerbaijan regained control over significant territories previously occupied by Armenian forces, while Russia strengthened its military presence through peacekeeping operations and keeping its military bases in Armenia, South Abkhazia and Osetia and simultaneously withdrew its troops from Nagorno-Karabakh (Strachota, Wilk, 2024).

The European Union for its part intensified political engagement in the region, particularly after Russia's attack of Ukraine in 2022, seeking alternative transport and energy corridors that would reduce dependence on Russian routes (Bida, 2026).

The transport security in the South Caucasus extends beyond the protection of physical infrastructure. It encompasses political stability, border management, resilience against hybrid threats, cyber protection of transport systems, institutional effectiveness, and the capacity of governments to cooperate despite persistent

geopolitical tensions. The latter may be overcome by transport initiatives, namely: the Middle Corridor (Trans-Caspian International Transport Route), the Baku–Tbilisi–Kars railway, and the proposed Zangezur Corridor (see below). They illustrate how transport infrastructure has become an instrument of both economic cooperation and geopolitical competition (Aguar, 2025).

The strategic location of South Caucasus has historically transformed this inter-region into an arena of competition among regional and global powers (Cornell, 2001). Russia, Turkey, Iran, the European Union, People's Republic of China, and the United States have all sought to influence political developments and transport connectivity, recognizing the region's importance for energy supplies, trade routes, and military mobility.

As it was mentioned above defining political event during the analysed period was the Second Nagorno-Karabakh War in 2020. The Azerbaijan's military victory, supported by advanced technologies and Turkish political assistance, significantly altered regional transport dynamics. The ceasefire agreement of 10 November 2020 introduced new opportunities for reopening transport links while simultaneously generating new political controversies, particularly regarding the above cited Zangezur Corridor connecting mainland Azerbaijan with the Nakhichevan Autonomous Republic through southern Armenia.

Despite the ceasefire disagreements concerning the Armenian-Azerbaijan border delimitation, sovereignty, and transport access repeatedly threatened regional stability. In late 2022 Azerbaijan blockaded the Lachin Corridor - the only land route connecting Nagorno-Karabakh to Armenia - what created shortages of food and medical supplies. The Azerbaijan's military offensive in late 2023 resulted in the collapse of the breakaway Armenian Republic of Artsakh hence over 100,000 ethnic Armenians fled to Armenia (*The Armenian-Artsakh ...*). These dramatic events further transformed the regional political landscape without fully eliminating the underlying causes of interstate tensions.

Another major geopolitical development was Russia's full-scale invasion of Ukraine on February 24, 2022. The conflict substantially increased the strategic importance of the cited Middle Corridor, connecting China and Central Asia with Europe through Kazakhstan, the Caspian Sea, Azerbaijan, Georgia, and Turkey. As sanctions and security concerns reduced the attractiveness of northern routes through Russia the investments in South Caucasus transport infrastructure were accelerated.

The European Union expanded its engagement by promoting the Global Gateway strategy and supporting transport connectivity projects designed to diversify trade routes and strengthen economic resilience. Georgia emerged as an important transit partner due to its Association Agreement with the EU, while Azerbaijan increased its role as both an energy supplier and transport hub. Armenia, despite maintaining close security relations with Russia through the Collective Security Treaty

Organization (CSTO), gradually diversified its foreign policy by strengthening cooperation with the European Union and other Western partners after 2023.

Competition among external powers further complicated transport security. Russia sought to preserve its traditional influence over regional transport corridors, Turkey promoted east-west connectivity through the Baku–Tbilisi–Kars railway, Iran opposed transport arrangements that could reduce its regional significance, while China viewed the South Caucasus as an important component of the Belt and Road Initiative. These overlapping geopolitical interests created both opportunities for infrastructure development and new security challenges.

5. Conclusion

The analysis demonstrates that the development of Europe–Caucasus trade depends on the interaction between managerial capabilities of transport enterprises, economic potential, and geopolitical conditions. Transport companies operating in this region must move beyond traditional operational models and develop adaptive strategies based on flexibility, digitalisation, sustainability, and risk management.

Although Poland has the potential to function as a gateway to Central and Northern European markets, current trade relations with South Caucasus countries remain relatively limited and asymmetric, indicating that existing opportunities are not yet fully utilised. Their future expansion will largely depend on improving transport efficiency, cross-border coordination, and the reliability of logistics networks.

At the same time, the South Caucasus remains a politically sensitive transport space where conflicts, external competition, and changing alliances directly influence infrastructure security and route accessibility. Consequently, successful development of Europe–Caucasus transport connections requires not only investments in infrastructure but also strategic adaptation of enterprises to a dynamic economic and geopolitical environment.

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