

# Directions for Developing the Logistics Sector in Azerbaijan: Challenges, Opportunities and Strategic Priorities

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| ARTICLE INFORMATION                                                                                                                                                                                                                                  | ABSTRACT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
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| <b>Article history:</b><br>Published: October 2026<br><br><b>Keywords:</b><br>Logistics<br>Transport Infrastructure<br>Supply Chain Management<br>Azerbaijan<br>International Trade<br>Middle Corridor<br>Digitalization<br>Economic Competitiveness | Logistics plays an essential role in improving national competitiveness, facilitating international trade, attracting foreign investment and integrating domestic enterprises into global value chains. For Azerbaijan, the development of an efficient logistics system is particularly important because of the country's geographical position between Europe and Asia and its potential to serve as a regional transport and distribution hub. The expansion of international transport corridors, the modernisation of port and railway infrastructure, the digitalisation of customs procedures and the development of logistics services can strengthen Azerbaijan's position in international supply chains. Nevertheless, infrastructure bottlenecks, administrative complexity, insufficient integration of logistics information systems, high transport costs and limited development of value-added logistics services remain important challenges. This article examines the current role of logistics in Azerbaijan's economic development and identifies strategic directions for improving the efficiency and competitiveness of the sector. The analysis applies a qualitative approach based on economic reasoning, policy analysis and the assessment of logistics development priorities. It argues that Azerbaijan should move beyond the traditional transit model towards an integrated logistics ecosystem that combines transport infrastructure, digital technologies, industrial production, warehousing and international trade services. |

## 1. Introduction

The development of logistics has become a strategic priority for countries seeking to strengthen their participation in international trade and improve economic productivity. In a globalised economy, logistics is not limited to the transportation of goods from one location to another. It encompasses the planning, coordination and management of transportation, warehousing, inventory, customs clearance, information exchange and distribution activities. The effectiveness of these functions directly influences production costs, delivery reliability, export competitiveness and the investment attractiveness of national economies.

For Azerbaijan, logistics development has particular significance. The country is situated at the intersection of important transport routes connecting Europe, the South Caucasus, Central Asia and the Caspian region. Its geographical position creates opportunities to facilitate the movement of goods between Asian production centres and European consumer markets. The development of the Trans-Caspian International Transport Route, commonly known as the Middle Corridor, has increased the strategic importance of Azerbaijan's railway, road, maritime and logistics infrastructure [7].

However, geographical advantages do not automatically generate economic benefits. To convert its transit potential into sustainable growth, Azerbaijan must establish a coordinated logistics system that offers competitive prices, predictable delivery times, reliable infrastructure and efficient administrative procedures. Logistics development should therefore be considered not only a transport policy objective but also an instrument of industrial diversification, export promotion and regional economic integration.

The purpose of this article is to identify the principal challenges facing Azerbaijan's logistics sector and formulate strategic priorities for its further development. The article focuses on infrastructure modernisation, digital transformation, customs facilitation, multimodal transport, private-sector participation and the integration of logistics with domestic production.

Logistics efficiency is closely connected with transaction costs, economies of scale, supply chain integration and the spatial organisation of economic activity. According to supply chain management theory, the competitiveness of an enterprise depends not only on production efficiency but also on its ability to coordinate suppliers, manufacturers, transport operators, warehouses, distributors and customers. From a transaction-cost perspective, inefficient logistics increases the costs associated with delays, uncertainty, administrative procedures and coordination failures. Businesses may consequently experience higher inventory requirements, reduced cash-flow efficiency and weaker export competitiveness. Improving logistics reliability can reduce these costs and support more efficient resource allocation.

The concept of comparative advantage also provides a useful framework for understanding Azerbaijan's logistics potential. The country's geographical position may reduce the distance or improve the connectivity between particular trading partners. Nevertheless, the economic value of this advantage depends on the quality of infrastructure, the efficiency of border procedures, the availability of transport capacity and the competitiveness of logistics service providers.

A further relevant concept is the development of logistics clusters. These clusters combine transport infrastructure with warehouses, distribution centres, customs services, industrial facilities, information technology providers and financial services. Their development can create economies of scale, attract investment and encourage the emergence of specialised services such as freight

forwarding, cargo consolidation, cold-chain logistics and inventory management.

For Azerbaijan, these theoretical perspectives suggest that investment in physical infrastructure should be accompanied by institutional reform, digital integration and the development of private logistics capabilities [5].

## 2. The strategic importance of logistics for Azerbaijan

Azerbaijan's logistics sector contributes to economic development through several interconnected mechanisms.

First, logistics infrastructure supports international trade by connecting domestic producers with foreign markets. Efficient transportation and customs procedures are particularly important for non-oil exports, including agricultural products, processed food, chemicals, manufactured goods and other products with potential regional demand.

Second, logistics contributes to foreign investment attraction. Investors evaluate not only taxation and labour costs but also the reliability of supply chains, access to international markets, transport costs and the availability of specialised logistics services. A competitive logistics environment can therefore strengthen Azerbaijan's attractiveness as a location for manufacturing, distribution and regional headquarters.

Third, logistics can support economic diversification. The development of industrial parks, agricultural processing facilities and export-oriented enterprises requires reliable access to transport networks, warehouses and distribution services. Integrating logistics infrastructure with industrial development can improve the competitiveness of domestic production.

Fourth, the logistics sector creates employment opportunities in transportation, warehousing, customs brokerage, freight forwarding, information technology and supply chain management. The expansion of these activities can increase demand for specialised skills and support the development of higher-value services.

Finally, logistics can strengthen Azerbaijan's role in regional economic cooperation. By improving transport connections with neighbouring countries and Central Asian markets, Azerbaijan can facilitate trade flows and encourage greater integration between regional production networks [3].

The first strategic priority is the coordinated development of railway, road, maritime and aviation infrastructure. Modern logistics systems depend on the ability to transfer cargo efficiently between different modes of transportation.

Railways are particularly important for long-distance freight because they can transport substantial volumes of goods overland. Improving railway capacity, operational reliability, terminal facilities and connections with industrial zones can strengthen Azerbaijan's ability to handle international freight flows.

Maritime infrastructure is equally important because Azerbaijan's position on the Caspian Sea enables it to connect with ports in Central Asia. The Port of Baku at Alat is a central component of this connectivity. Its effectiveness depends not only on port capacity but also on the availability of vessels, railway connections, customs coordination and efficient cargo-handling procedures.

Road transport remains essential for regional distribution and first-mile and last-mile deliveries. Road infrastructure must be integrated with logistics terminals, industrial centres, border crossings and agricultural production areas. The objective should be to reduce unnecessary transfers, waiting times and transport costs [1].

A multimodal approach can improve the efficiency of the entire logistics chain. For example, a shipment transported by rail from an industrial centre can be transferred through a logistics terminal to maritime transport across the Caspian Sea and subsequently connected to railway networks in Central Asia. Such operations require coordinated schedules, compatible documentation and transparent pricing. Azerbaijan should therefore prioritise the interoperability of transport systems rather than evaluate infrastructure projects exclusively by their individual capacity. The economic value of a transport corridor depends on its overall performance from the point of origin to the final destination.

## 3. Digitalisation of logistics and customs procedures

Digital transformation represents another important direction for improving logistics performance. Traditional logistics processes frequently depend on separate information systems, paper documents and repeated administrative procedures. These arrangements can increase transaction costs and reduce the transparency of cargo movements.

Azerbaijan could strengthen logistics efficiency through integrated digital platforms connecting customs authorities, transport operators, ports, railway companies, freight forwarders and cargo owners. Such platforms could support electronic documentation, cargo tracking, advance customs information, automated notifications and the exchange of operational data.

The introduction of interoperable electronic transport documents would help reduce duplication and improve the consistency of information exchanged between institutions. Digital customs procedures could also allow authorities to focus inspections on higher-risk shipments while facilitating the movement of compliant cargo.

Data analytics and artificial intelligence offer additional opportunities. Predictive systems can help logistics companies estimate delivery times, identify congestion risks, optimise vehicle utilisation and improve warehouse operations. However, the effectiveness of these technologies depends on data quality, cybersecurity, technical standards and the availability of qualified personnel [2].

Digitalisation should not be treated as an isolated technological project. It requires clear institutional responsibilities, compatible systems, appropriate legal frameworks and cooperation between public and private stakeholders.

The Middle Corridor represents an important opportunity for Azerbaijan to strengthen its position in Eurasian logistics. The route connects transport networks in China and Central Asia with the Caspian Sea, the South Caucasus and European markets. Azerbaijan's contribution includes its maritime connections, railway infrastructure, road network and logistics services.

Nevertheless, the competitiveness of the corridor depends on the performance of the entire route. Differences in customs procedures, inconsistent documentation requirements, limited transport capacity and coordination difficulties between countries can increase delivery times and costs.

Azerbaijan can contribute to improving corridor performance through closer cooperation with regional partners, harmonisation of documentation and customs procedures, coordinated transport schedules and transparent tariff arrangements. Greater information exchange between railway operators, ports and freight forwarders would also help reduce uncertainty.

It is important to distinguish between increasing transit volume and generating domestic economic value. Transit traffic can produce income from transportation and related services, but broader benefits arise when international freight activity supports local

employment, warehousing, packaging, processing, maintenance and distribution.

Accordingly, Azerbaijan should seek to develop logistics centres and service clusters around major transport nodes. These facilities could provide cargo consolidation, temporary storage, packaging, labelling, customs brokerage and other value-added services. This approach would help transform the country from a transit territory into a regional logistics and distribution centre.

The development of logistics infrastructure should be closely connected with the expansion of non-oil exports. Domestic enterprises often require reliable transportation, appropriate storage facilities and predictable delivery schedules to compete in foreign markets. Agricultural exporters, for example, depend on cold-chain infrastructure that maintains product quality during storage and transportation. Insufficient refrigerated capacity or delays at border crossings can increase losses and weaken competitiveness. Investment in refrigerated warehouses, temperature-controlled vehicles and monitoring technologies could therefore support agricultural exports [6]. Manufacturing companies require logistics services that enable efficient access to imported components and the timely distribution of finished products. Warehousing and distribution centres located near industrial parks can help reduce inventory costs and improve delivery reliability. Small and medium-sized enterprises may face particular difficulties because they cannot always afford dedicated logistics infrastructure. Shared warehouses, consolidated freight services and digital platforms could allow these firms to access logistics services at lower cost.

The government could support this process through public-private partnerships, investment facilitation and targeted infrastructure programmes. However, support should be designed to encourage sustainable commercial operations rather than permanent dependence on public subsidies. Attracting investment into logistics requires a predictable business environment and transparent regulatory procedures. Investors are more likely to participate when they can assess demand, understand operating conditions and anticipate the risks associated with infrastructure projects. Public-private partnerships can be useful for developing warehouses, freight terminals, cold-storage facilities and specialised logistics services. Their effectiveness depends on transparent procurement, appropriate risk allocation, clear performance requirements and independent monitoring.

Foreign logistics operators may also contribute international expertise, management practices and access to global customer networks. Partnerships between international companies and domestic firms could facilitate knowledge transfer and improve service quality. At the same time, investment promotion should extend beyond large infrastructure projects. Smaller investments in logistics software, cargo handling, fleet management, packaging and distribution can also generate productivity gains.

Azerbaijan could strengthen investment promotion by providing potential investors with clear information about logistics zones, infrastructure capacity, available services, customs procedures and market opportunities. Coordinated investment support would reduce uncertainty and improve the transparency of project development.

#### 4. Key challenges and policy recommendations

Despite its geographical advantages, Azerbaijan faces several challenges that may constrain logistics competitiveness [4].

One challenge is the need for stronger coordination among transport modes and institutions. Separate planning of roads, railways, ports and customs procedures can create bottlenecks even where individual infrastructure components are modern.

Another challenge concerns the availability and interoperability of digital systems. Digitalisation produces limited benefits when information cannot be exchanged efficiently between organisations or when businesses must continue to submit duplicate documents.

A third challenge is the development of specialised logistics skills. Modern supply chains require professionals with expertise in international transport, customs compliance, data analysis, warehouse management and digital logistics platforms.

The sector also faces the challenge of balancing infrastructure investment with commercial demand. Large projects require careful assessment of expected cargo flows, operating costs and long-term financial sustainability.

The following policy priorities could help address these issues:

- Adopt an integrated national logistics development framework. Coordinate transport infrastructure, customs reform, industrial policy and export promotion within a common strategic approach.
- Improve multimodal connectivity. Strengthen connections between ports, railways, roads, industrial parks and logistics terminals, with particular attention to transfer efficiency.
- Expand digital integration. Promote interoperable electronic documents, cargo tracking, advance customs information and secure data exchange.
- Develop value-added logistics services. Encourage investment in distribution centres, cold-chain facilities, cargo consolidation, packaging and contract logistics.
- Strengthen international cooperation. Coordinate operational standards, border procedures and transport information with countries participating in regional corridors.
- Support small and medium-sized enterprises. Facilitate access to shared warehouses, consolidated transport services and digital logistics platforms.
- Develop professional skills. Expand cooperation between universities, vocational institutions and logistics companies to improve training in supply chain management and digital technologies.
- Introduce measurable performance indicators. Monitor transport costs, cargo dwell time, customs clearance duration, on-time delivery, infrastructure utilisation and the quality of logistics services.

These measures should be implemented through a phased approach, with clear responsibilities, realistic financing arrangements and regular evaluation.

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