

DOI: <https://doi.org/10.36719/2789-6919/55/105-108>

İsa Ahmadov
Azerbaijan Technical University
Masters' student
<https://orcid.org/0009-0006-3050-9192>
ababaku174@gmail.com

Risk Management and Logistics Assessment of Customs Procedures in International Road Freight Transportation in Azerbaijan

Abstract

This article analyzes risk management approaches and the impact of customs procedures on logistics in international road freight transportation in Azerbaijan. The study systematizes the main risk groups arising in the transportation process, including delays, document inconsistencies, security incidents, route variability, and additional cost factors. It is substantiated that the customs stage has a direct impact on transit time, transport planning, and service level. The possibilities of the "single window" principle, risk-based control, corridor applications, and electronic declaration mechanisms to speed up processes are assessed. At the same time, shortcomings such as infrastructure overload at border points, interpretation of regulatory requirements, and limited information exchange are noted. As a result, it is recommended to increase digital tracking, insurance mechanisms, standardized procedures of operators, and customs-logistics coordination to strengthen risk management.

Keywords: road freight transportation, risk management, customs procedures, transit time, digital control

İsa Əhmədov
Azərbaycan Texniki Universiteti
magistrant
<https://orcid.org/0009-0006-3050-9192>
ababaku174@gmail.com

Azərbaycanda beynəlxalq avtomobil yük daşımalarında risklərin idarə olunması və gömrük prosedurlarının logistika baxımından qiymətləndirilməsi

Xülasə

Bu məqalədə Azərbaycanada beynəlxalq avtomobil yük daşımalarında risklərin idarə olunması yanaşmaları və gömrük prosedurlarının logistika baxımından təsiri təhlil edilmişdir. Araşdırmada daşınma prosesində yaranan əsas risk qrupları, o cümlədən gecikmələr, sənəd uyğunsuzluğu, təhlükəsizlik insidentləri, marşrut dəyişkənliyi və əlavə xərc amilləri sistemləşdirilir. Gömrük mərhələsinin tranzit vaxtına, nəqliyyat planlamasına və xidmət səviyyəsinə birbaşa təsir göstərdiyi əsaslandırılır. "Vahid pəncərə" prinsipi, risk əsaslı nəzarət, koridor tətbiqləri və elektron bəyannamə mexanizmlərinin prosesləri sürətləndirmə imkanları qiymətləndirilir. Eyni zamanda, sərhəd məntəqələrində infrastruktur yüklənməsi, normativ tələblərin interpretasiyası və məlumat mübadiləsinin məhdudluğu kimi çatışmazlıqlar qeyd olunur. Nəticə olaraq, risk idarəetməsinin gücləndirilməsi üçün rəqəmsal izləmə, sığorta mexanizmləri, operatorların standartlaşdırılmış prosedurları və gömrük-logistika koordinasiyasının artırılması tövsiyə edilir.

Açar sözlər: avtomobil yük daşımaları, risklərin idarə olunması, gömrük prosedurları, tranzit vaxtı, rəqəmsal nəzarət

Introduction

Azerbaijan is located at the intersection of the East-West and North-South transport corridors and plays an important transit role in international road freight transportation. As the volume of cargo flows through our country increases, the organization of these transportations in a risk-free, safe and efficient manner becomes a priority. Risk management in international road transportation refers to measures taken to identify and minimize threats and obstacles that may arise during the transit of cargo (for example, customs delays, theft, accidents, additional costs, etc.) (Huseynli, 2018, pp. 42–45). Another important factor is the optimization of customs procedures. The speed and transparency of customs clearance directly affect logistics processes; efficient customs operations reduce transit time and costs, and increase the competitiveness of entrepreneurs. This section will review the practice of risk management in the field of international road freight transportation in Azerbaijan and the assessment of customs procedures from a logistics point of view, and analyze current achievements and problems.

Research

Risks in International Road Transport and Their Management. Traditional risks in international road freight transportation include physical risks (accidents, damage to cargo), security risks (theft, smuggling), geopolitical risks (border closures, conflicts) and operational risks (transportation delays, document inconsistencies) (Gurbanli, 2014, pp. 116–123). Azerbaijan is trying to reduce these risks by joining international conventions. The TIR Convention, which we have been a party to since 1996, is a clear example of this - thanks to the TIR system, cargo transits under customs seals and undergoes minimal border checks (AGTL/ABADA, 2025). Currently, the TIR system is applied in 78 countries, and Azerbaijan has also successfully implemented this system, offering transport companies a reliable and efficient transit regime (AGTL/ABADA, 2025). For example, trucks transported with a TIR carnet have fast clearance at our country's customs points through the "one-stop shop" principle, because the cargo is sealed and under international guarantee.

One of the main tools in risk management is insurance mechanisms. Local carriers carrying out international transportation cover the risk of damage or loss of cargo by obtaining carrier liability insurance under the CMR (Convention on the Contract for the International Carriage of Goods). In addition, some companies purchase additional insurance for particularly dangerous cargo (e.g. "CMR insurance", "cargo insurance"), which mitigates the financial consequences of risks. In terms of security, equipping trucks with GPS tracking systems is widespread. Azerbaijani companies monitor the movement and stops of vehicles along the route by applying satellite monitoring to trucks, and are able to detect unplanned deviations (Huseynli, 2018, p. 43).

Logistics Assessment of Customs Procedures. The role of customs processes in the logistics of international cargo transportation is crucial. The State Customs Committee of Azerbaijan has carried out significant reforms in the field of digitalization and risk management in recent years. Thanks to the "Single Window" principle, implemented since 2008, inspections of various control bodies at border checkpoints have been combined and procedures have been accelerated (SCC, 2021). The "Green Corridor" clearance system, which came into force in 2019, allows companies that strictly comply with the legislation to obtain prior permission from customs control and cross the border quickly. By 2021, 284 companies were granted the right to Green Corridor with permanent status for exports and 506 companies for imports (WCO, 2021). As a result, in many cases, customs clearance of trucks at Azerbaijani border checkpoints is completed in just a few hours, which is a good indicator compared to countries in the region (ADB, 2023).

Transparency and a unified approach are important when assessing the impact of customs procedures on logistics efficiency. According to entrepreneurs, in the past, in some cases, uneven application of customs legislation and different interpretations among officials were observed (ADB, 2009, pp. 26-30). This sometimes led to additional brokerage costs and loss of time. However, as part of the reforms, the Customs Committee began to widely apply the "Automated Risk Management System" (RAIS) (SCC Annual Report, 2022, p. 5). This system, like many advanced countries in the world, applies the principle of "green, yellow, red, blue" corridors by conducting automatic risk

analysis on electronic declarations (Gurbanli, 2014, pp. 117–125). For example, if RAIS algorithms do not detect any risk signs in a declaration, the system automatically designates it as a green lane and the cargo is released without further inspection (Customs Risk Management, 2014, pp. 119–124). However, if certain risk indicators are detected (e.g., under-declaration of a high-value product, unusual route, etc.), the system marks the declaration as a red lane and the cargo is directed to physical inspection.

Another important factor influencing the logistical efficiency of customs procedures is infrastructure provision. In 2019-2020, reconstruction work was carried out at a number of border crossing points (for example, “North” Customs Post, “Red Bridge” Customs Post), new scales, scanners and electronic queuing systems were installed. This significantly reduced the waiting time of trucks at the border. For example, at the Red Bridge checkpoint, the average entry clearance time was 3.7 hours in 2020, but it decreased to 3.1 hours in 2022 (CAREC, 2023). Also, the average cost of crossing the border at that checkpoint decreased from \$120 to \$69 in 2022 (Asian Development Bank, 2023).

Customs-Logistics Cooperation and International Integration. In addition to implementing the recommendations of international organizations, the Azerbaijani customs service is establishing close cooperation with the customs authorities of neighboring countries. In 2020, a memorandum on electronic information exchange was signed with countries such as Russia, Tükiye, and Kazakhstan. This allows for advance access to information on cargo crossing the Azerbaijani border and the preparation of a risk profile in advance (President.az, 2025). Steps are also being taken to synchronize joint customs control procedures within the “North-South” and “East-West” corridors. For example, the customs authorities of Azerbaijan and Georgia are discussing a “joint border control” regime – with which trucks will be checked only once at the border of the two countries, which will save time. The expansion of a joint logistics center in the Astara (Southern Cargo Terminal) zone is also being discussed with Iran (Bayramova, 2024). Here, it is planned to increase the share of Azerbaijan's "Southern Cargo Terminal" LLC in the Astara (Iran) terminal, and efficiently transfer cargo arriving by Iranian railway directly to Azerbaijan and in the opposite direction (Bayramova, 2024). Such integration measures serve to make the logistics chain uninterrupted and sustainable.

Conclusion

The achievements in the field of risk management and improvement of customs procedures in international road freight transportation in Azerbaijan have significantly strengthened the international logistics position of our country. As a result of the successful implementation of the TIR system, automated risk management in customs, and innovations such as the “Green Corridor”, transit cargo is passing through more safely and quickly. However, the analysis shows that there is still potential for improvement. First, it is recommended to further strengthen the risk management system with artificial intelligence. The State Customs Committee (SCC), which has established an artificial intelligence-based risk management system in its new administrative building, can analyze large amounts of data and predict risks in real time. For the full effectiveness of this technology, it is important to increase the human resource potential and constantly improve the system. Second, customs training and education programs should be expanded. This includes both educational training on customs procedures for entrepreneurs and courses on international best practices for customs officers. The effectiveness of risk management in customs authorities also depends on the human factor – therefore, the professional skills of personnel should be constantly developed. Thirdly, it is important to encourage private investment in the logistics sector. The increase in the number of infrastructure facilities such as terminals, warehouse complexes, parking lots for cargo maneuvering, and the improvement of the quality of logistics services (refueling, service, overnight stays) on transit routes are factors that reduce risks and accelerate processes. The state can attract the private sector by providing incentives in this direction (for example, tax privileges in free economic zones, public-private partnership projects).

In general, effective risk management in international road freight transportation and optimization of customs procedures strengthen Azerbaijan's position as a logistics center. At a time when the “One Belt, One Road” initiative and regional economic integration are gaining momentum, our country must both ensure transit security and implement best practices in trade facilitation. By maintaining this balance, Azerbaijan will remain a reliable and attractive route for international carriers, while at the same time creating additional income and opportunities for the national economy.

References

1. Asian Development Bank (ADB). (2009). *Azerbaijan: Trade facilitation and logistics development strategy report* (pp. 26–30, 3350–3357). Mandaluyong City.
2. Asian Development Bank (ADB). (2023). *CAREC corridor performance measurement and monitoring (CPMM) 2022: Azerbaijan key findings*. Asian Development Bank, Central Asia Regional Economic Cooperation Program.
3. Azerbaijan International Road Carriers Association (ABADA/AGTL). (2025). *Development of the international road freight transport system (February 27, 2025)*. AGTL News.
4. Bayramova, A. (2019, June 11). *Logistics centers to be established in Ganja city and the Red Bridge area*. Report.az. Report Information Agency. <https://report.az>
5. Bayramova, A. (2024, December 18). *Azerbaijan and Iran may expand the operations of the “Southern Cargo Terminal”*. Report.az. Report Information Agency. <https://report.az>
6. Huseynli, T. (2018). Certain factors of risk management in customs authorities and their effectiveness. *International Journal of Tourism and Hospitality Studies*, 7(1), 259–267.
7. President of the Republic of Azerbaijan – Official Website (President.az). (2025, June 10). *Opening of the new administrative building of the State Customs Committee*. AZERTAC. <https://president.az>
8. Gurbanli, U. (2014). Customs risk management in the electronic customs system. In *Proceedings of the Conference on Problems of E-Government Development* (pp. 116–125).
9. Silk Way West Airlines. (2025, November 17). *Silk Way West Airlines and Azerpost: Postal and e-commerce logistics cooperation (Press release)*. Silk Way West Airlines. <https://www.silkwaywest.com>
10. World Customs Organization (WCO). (2021). *Digital and sustainable trade facilitation: Azerbaijan (86% implementation) – UN Global Survey on Digital and Sustainable Trade Facilitation 2021 results*. World Customs Organization. <https://asanimza.az>
11. State Customs Committee of the Republic of Azerbaijan (SCC). (2021). *Analytical report on the “Green Corridor” system and customs information systems*. SCC Risk Management Department.
12. State Customs Committee of the Republic of Azerbaijan (SCC). (2022). *Annual activity report of the State Customs Committee for 2022*, (pp. 5–7). SCC.

Received: 06.11.2025

Approved: 14.02.2026