Asian Journal of Technology and Applied Sciences
ISSN: 2301-xxxx (online) | IF: 10.01 | Vol: 1, issue 1
Available: http://asiansciencejournal.org

THE IMPACT OF TRANSPORT CORRIDOR DIVERSIFICATION ON UZBEKISTAN'S EXPORT COMPETITIVENESS AND FOREIGN TRADE RESILIENCE

Vaxobova Dilnoza Bobir qizi
Kimyo International University In Tashkent
Namangan branch, International
Economic Relations major, 4th-year student
Associate Professor at the Department of
Economics. PhD
Turg'unmirzayev Azmiddin
ORG-ID: 0009-0007-2579-2410
WoS ID: PSL-6110-2026
A.Turgunmirzayev@kiut.uz

Abstract: The article assesses how the diversification of transport corridors affects the export competitiveness and foreign trade resilience of Uzbekistan, a doubly landlocked economy. Using official trade statistics for 2025–2026, corridor-level freight data and elasticities from the trade-cost literature, the study decomposes exports by their exposure to overland logistics and evaluates four corridor directions: northern, trans-Caspian, eastern and southern. Only about 42% of 2025 exports were goods other than gold, yet this segment carries the country's diversification agenda. The share of the Middle Corridor in Uzbekistan–EU freight rose from 12% to 28% between 2021 and 2025, and in early 2026 exports excluding gold grew by roughly a third while total exports fell. The findings suggest that corridor diversification strengthens resilience, whereas competitiveness gains depend on logistics reliability, cargo balance and export-oriented transport policy.

Keywords: transport corridors, diversification, export competitiveness, trade resilience, Middle Corridor, transit.

Introduction

Geography sets the starting conditions for trade, but transport policy determines how binding they remain. Uzbekistan is one of only two doubly landlocked countries in the world: its goods must cross at least two national borders before reaching a seaport. For such economies the cost of distance is compounded by the cost of transit through neighbouring jurisdictions, whose infrastructure, procedures and political choices lie outside national control.

Since 2017 Uzbekistan's foreign trade has expanded rapidly. In 2025 its foreign trade turnover reached USD 81.2 billion, exports grew by 24% to USD 33.8 billion, and the country traded with 210 partners. The updated Uzbekistan–2030 strategy raises the export target to USD 67 billion by 2030. Growth on this scale requires more than additional output: it requires routes that are cheaper, faster and less exposed to a single point of failure.

The geopolitical shocks of the 2020s turned this issue into a practical priority. Disruptions on the traditional northern routes increased attention to the Trans-Caspian International Transport Route, known as the Middle Corridor, while Uzbekistan advanced two long-planned projects — the China–Kyrgyzstan–Uzbekistan railway and the Trans-Afghan railway. Existing studies examine these corridors mainly in terms of transit capacity and regional connectivity; how a portfolio of corridors translates into the export performance of a landlocked producer has received far less attention.

The aim of this article is to assess the impact of transport corridor diversification on Uzbekistan's export competitiveness and foreign trade resilience. The working hypothesis is that diversification improves resilience mainly through route substitution, whereas its effect on competitiveness depends on whether new corridors reduce time and unreliability for the specific goods that drive export diversification.

Literature Review

The trade-cost literature provides the starting point. Limão and Venables show that poor infrastructure accounts for up to 60% of predicted transport costs for landlocked countries, and that a deterioration of infrastructure from the median to the 75th percentile raises transport costs by 12 percentage points and reduces trade volumes by 28% [1]. Arvis, Raballand and Marteau go further, arguing that for landlocked developing countries the decisive factor is not physical infrastructure as such but the low reliability and predictability of logistics, which force traders to hold larger inventories and often stem from rent-seeking along transit routes [2].

Time is a separate dimension of trade cost. Djankov, Freund and Pham estimate that each additional day a product is delayed before shipment reduces trade by more than 1%, with stronger effects for time-sensitive agricultural goods [8]. Hummels and Schaur find that each day in transit is equivalent to an ad valorem tariff of 0.6–2.1%, with parts and components being the most time-sensitive [9]. Together with the finding of Hausmann, Hwang and Rodrik that the sophistication of a country's export basket predicts its subsequent growth [10], these results imply that corridor quality shapes not only the volume but also the composition of exports a landlocked country can sustain.

The resilience literature adds a risk dimension. Miroudot distinguishes robustness, the ability to keep operating during a shock, from resilience, the ability to recover after it [11]. Baldwin and Freeman propose evaluating supply-chain risk through a portfolio lens that weighs the cost of diversification against the reduction in exposure to shocks [12]. Applied to transport, this framework treats each corridor as an asset with its own cost, transit time and risk profile.

Regional studies emphasise Central Asia's growing role as a land bridge. Pomfret documents how regular China–Europe rail services and the Belt and Road Initiative reopened the region's connectivity options [7]. The World Bank estimates that targeted investments and efficiency measures could triple Middle Corridor freight volumes and halve travel times by 2030 [5], while its Logistics Performance Index ranked Uzbekistan 88th of 139 economies in 2023 [13], indicating that logistics quality remains a constraint. What remains underexplored is the link between corridor diversification and Uzbekistan's own export structure, as distinct from transit flows; this article addresses that gap.

Methodology

The study combines three methods. First, a structural decomposition of 2025 exports separates services, non-monetary gold and other goods, because these components differ sharply in their dependence on overland corridors: gold is shipped by air and services do not cross borders physically, whereas agri-food, textiles, chemicals and other goods rely on road and rail. Second, a corridor-level assessment maps four directions — northern (via Kazakhstan and Russia), trans-Caspian (the Middle Corridor), eastern (China, including the China–Kyrgyzstan–Uzbekistan railway) and southern (via Afghanistan to Pakistani ports) — using indicators of volume, transit time, project status and risk. Third, competitiveness effects are illustrated by applying published trade-cost elasticities [8; 9] to the time savings expected from new corridors, and resilience is assessed through observed responses to recent shocks.

Asian Journal of Technology and Applied Sciences
ISSN: 2301-xxxx (online) | IF: 10.01 | Vol: 1, issue 1
Available: http://asiansciencejournal.org

Data cover 2021 to October 2026 and come from the National Statistics Committee, the Ministry of Transport, international financial institutions and specialised transport sources. Calculations not taken directly from a source are marked as the author's estimates. The main limitation is the absence of published export tonnage by corridor, which rules out a full econometric estimation; the results should therefore be read as an evidence-based assessment rather than a causal estimate.

Results

Export structure and corridor exposure. In 2025 Uzbekistan's exports of USD 33.81 billion included USD 9.76 billion of services (28.9%), a third of which were transport services [14], and USD 9.9 billion of non-monetary gold [15]. By the author's calculation, gold accounted for 29.3% of exports, leaving about USD 14.2 billion, or 41.9%, for other goods. This segment is directly exposed to overland logistics and is also the one that embodies export diversification: food exports reached USD 2.94 billion in 2025, up 35.4% [3], while textile exports fell by 8.2% to USD 2.63 billion [14].

By destination, Russia (12.8%), China (7.3%), Kazakhstan (4.6%), Afghanistan (4.5%), Kyrgyzstan (2.3%) and Tajikistan (2.0%) together absorbed 33.5% of total exports [3], all of them reached overland. More distant markets such as France (2.6%), the United Arab Emirates (2.1%) and Pakistan (1.0%) remain small, and it is precisely for these markets that alternative routes matter most.

The corridor portfolio. The northern direction through Kazakhstan and Russia remains the backbone of Uzbekistan's overland trade, but its weight in European-bound freight is declining. The Middle Corridor's share in Uzbekistan–EU freight rose from 12% in 2021 to 28% in 2025, and transit traffic with European countries reached 1.5 million tonnes in 2025, 29% more than a year earlier [16]. Uzbek freight on the Middle Corridor doubled from 0.5 million tonnes in 2020 to over 1 million tonnes in 2025 [17], against a total route volume of 4.5 million tonnes in 2024 [18].

In the eastern direction, the China–Kyrgyzstan–Uzbekistan railway of about 480 km [19] is financed through a USD 4.7 billion loan agreement signed in December 2025 [20], with China holding 51% of the project company and Kyrgyzstan and Uzbekistan 24.5% each [6]. By mid-2026 construction was about 17% complete [21]. Once operational, the line is expected to shorten freight routes from China to Uzbekistan and onward markets by about 900 km and 7–8 days [22].

In the southern direction, Uzbekistan, Afghanistan and Pakistan signed a framework agreement on a feasibility study for the Trans-Afghan railway in July 2025, which Uzbekistan ratified in February 2026; the project cost has been estimated at about USD 7 billion [23]. Officials expect container costs on this route to be nearly three times lower than on current alternatives [24], but construction financing has not been secured, and repeated Pakistan–Afghanistan border closures illustrate the political risk [25].

Competitiveness effects. Applying the estimates of Hummels and Schaur [9], the 7–8 days saved by the China–Kyrgyzstan–Uzbekistan railway are equivalent to removing an ad valorem tariff of roughly 4–17% on time-sensitive flows (author's calculation: from 7 × 0.6% to 8 × 2.1%). Using the lower-bound estimate of Djankov et al. [8], the same saving would raise the affected trade by at least 7–8%. The gains are largest for perishable food, the fastest-growing export category.

At the same time, corridor capacity does not automatically generate export loads. In 2025 rail container imports reached 256,115 TEU, while exports totalled only 99,637 TEU, up 3.5% [26]. By the author's calculation, about 61% of inbound containers had no export cargo for the return trip, which raises the cost of each export shipment through empty

repositioning. Similarly, transit through Uzbekistan reached 15.3 million tonnes in 2025, 54% above 2021, yet the country's share of China–Europe transit freight remains only 1–2% [6].

Resilience evidence. Two recent episodes show how route and product diversification interact. First, when Pakistan repeatedly closed its border with Afghanistan in 2025, Afghan trade remained stable because traders shifted cargo through Iran and Central Asia, including Uzbekistan [6] — a direct illustration of route substitution. Second, in January–May 2026 total exports fell by 15.5% to USD 12.6 billion because gold sales dropped from USD 6.49 billion to USD 1.5 billion [27]. By the author's calculation, exports excluding gold rose from about USD 8.4 billion to USD 11.1 billion, or by roughly 32%. The headline decline thus reflected the volatility of a single commodity rather than a weakening of corridor-dependent exports.

Discussion

The results support the working hypothesis. Corridor diversification has already strengthened resilience: the growing weight of the Middle Corridor and the ability of regional traders to reroute through Uzbekistan show that alternative routes function as options that can be exercised when one route is disrupted. In Miroudot's terms [11], Uzbekistan's corridor system is becoming more resilient but not yet robust, since most alternatives still have lower capacity, longer transit times or unresolved financing.

The effect on competitiveness is less automatic. The World Bank's diagnostic of the Middle Corridor stresses coordination, border procedures and port performance rather than track length [5], echoing the argument of Arvis et al. that reliability matters more than physical infrastructure [2]. The container imbalance adds a constraint specific to Uzbekistan: as long as three out of five inbound containers leave empty, the logistics costs borne by exporters remain high regardless of the number of corridors. Transit growth benefits the services balance — transport services exports of about USD 3.2 billion in 2025 (author's calculation) already exceed the USD 3 billion target set in early 2025 [28] — but it does not by itself raise the competitiveness of domestic producers.

From a portfolio perspective [12], the optimal strategy is not to maximise the number of corridors but to match each corridor to the export segment it serves best: the eastern route to time-sensitive trade with China, the Middle Corridor to European markets and higher-value manufactures, the southern route to South Asian markets and sea access for bulk goods, and the northern route to established CIS markets. The risks differ as well: the Trans-Afghan project carries the highest political risk, the Middle Corridor the highest capacity risk, and the China–Kyrgyzstan–Uzbekistan railway the highest construction and financing risk.

Three policy directions follow. First, export tonnage by corridor should be published regularly, so that route concentration can be monitored in the same way as market concentration. Second, export cargo consolidation at the 24 logistics centres that have received international dry-port status [17] should target the container imbalance by linking export-oriented clusters to the routes that bring in imports. Third, border digitalisation should give priority to perishable food exports, where each day saved has the largest trade effect [8].

Conclusion

The study leads to four conclusions. First, only about 42% of Uzbekistan's 2025 exports consisted of goods other than gold, but this segment is the main carrier of export diversification and is fully exposed to overland logistics. Second, corridor diversification is already visible: the Middle Corridor's share in Uzbekistan–EU freight more than doubled between 2021 and 2025, while the eastern and southern projects have moved to the construction and feasibility stages respectively. Third, diversification has improved resilience, as shown by regional route substitution in 2025 and by the growth of non-gold exports in

early 2026 despite the fall in total exports. Fourth, competitiveness gains depend on reliability and cargo balance more than on new track: the China–Kyrgyzstan–Uzbekistan railway could lower trade costs on time-sensitive flows by the equivalent of roughly 4–17% ad valorem, but only if export loads grow together with inbound flows. Future research should estimate corridor-specific export elasticities once tonnage data by route become available.

REFERENCES

1. Limão N., Venables A.J. Infrastructure, Geographical Disadvantage, Transport Costs, and Trade // The World Bank Economic Review. – 2001. – Vol. 15, No. 3. – P. 451–479. – DOI: 10.1093/wber/15.3.451
2. Arvis J.-F., Raballand G., Marteau J.-F. The Cost of Being Landlocked: Logistics Costs and Supply Chain Reliability. – Washington, DC: World Bank, 2010. – URL: http://hdl.handle.net/10986/2489
3. National Statistics Committee of the Republic of Uzbekistan. Foreign Trade Turnover, January–December 2025: Press Release. – Tashkent, 21.01.2026. – URL: https://stat.uz/img/news/press-reliz-uzb_p47043.pdf
4. Uzbekistan Plans to Increase Exports to US$67 Billion by 2030 // UzDaily. – 2026. – URL: https://www.uzdaily.ru/en/uzbekistan-plans-to-increase-exports-to-us67-billion-by-2030/
5. World Bank. The Middle Trade and Transport Corridor: Policies and Investments to Triple Freight Volumes and Halve Travel Time by 2030. – Washington, DC: World Bank, 2023. – URL: https://www.worldbank.org/en/region/eca/publication/middle-trade-and-transport-corridor
6. Uzbekistan's Logistics Push Aims to Turn Transit Growth into Revenue // The Times of Central Asia. – 2026, July. – URL: https://timesca.com/uzbekistans-logistics-push-aims-to-turn-transit-growth-into-revenue/
7. Pomfret R. The Central Asian Economies in the Twenty-First Century: Paving a New Silk Road. – Princeton: Princeton University Press, 2019. – 328 p. – DOI: 10.1515/9780691185408
8. Djankov S., Freund C., Pham C.S. Trading on Time // The Review of Economics and Statistics. – 2010. – Vol. 92, No. 1. – P. 166–173. – DOI: 10.1162/rest.2009.11498
9. Hummels D.L., Schaur G. Time as a Trade Barrier // American Economic Review. – 2013. – Vol. 103, No. 7. – P. 2935–2959. – DOI: 10.1257/aer.103.7.2935
10. Hausmann R., Hwang J., Rodrik D. What You Export Matters // Journal of Economic Growth. – 2007. – Vol. 12, No. 1. – P. 1–25. – DOI: 10.1007/s10887-006-9009-4
11. Miroudot S. Reshaping the Policy Debate on the Implications of COVID-19 for Global Supply Chains // Journal of International Business Policy. – 2020. – Vol. 3, No. 4. – P. 430–442. – DOI: 10.1057/s42214-020-00074-6
12. Baldwin R., Freeman R. Risks and Global Supply Chains: What We Know and What We Need to Know // Annual Review of Economics. – 2022. – Vol. 14. – P. 153–180. – DOI: 10.1146/annurev-economics-051420-113737
13. Arvis J.-F., Ojala L., Shepherd B., Ulybina D., Wiederer C. Connecting to Compete 2023: Trade Logistics in an Uncertain Global Economy. – Washington, DC: World Bank, 2023. – URL: http://hdl.handle.net/10986/39760
14. Uzbekistan's Foreign Trade Turnover Reaches US$81.2 Billion in 2025, Up 20.7% // UzDaily. – 2026, January. – URL: https://uzdaily.ru/en/uzbekistans-foreign-trade-turnover-reaches-us812-billion-in-2025-up-207/

15. Uzbekistan's Foreign Trade Turnover Rises 20.7% to $81.2bn in 2025 // Daryo. – 2026, 22 January. – URL: https://daryo.uz/2026/01/22/uzbekistans-foreign-trade-turnover-rises-207-to-812bn-in-2025/
16. Tashkent's Ambitions for the Crossroads between Asia and Europe // AsiaNews. – 2026. – URL: https://www.asianews.it/en/central-asia/uzbekistan/tashkent-s-ambitions-for-the-crossroads-between-asia-and-europe
17. Freight Volume on the Middle Corridor Exceeds 1 Million Tons // UzDaily. – 2026. – URL: https://www.uzdaily.ru/en/freight-volume-on-the-middle-corridor-exceeds-1-million-tons/
18. Cargo Shipment via Azerbaijan's Railways along Middle Corridor up 6% // Report.az. – 2025, 20 October. – URL: https://report.az/en/infrastructure/cargo-shipment-via-azerbaijan-s-railways-along-middle-corridor-up-6
19. China–Kyrgyzstan–Uzbekistan Railway Project Enters Active Construction Phase // Kun.uz. – 2026, 13 July. – URL: https://kun.uz/en/news/2026/07/13/china-kyrgyzstan-uzbekistan-railway-project-enters-active-construction-phase-a7f659
20. Fazl-e-Haider S. China–Kyrgyzstan–Uzbekistan Railway Financing Loan Signed // Eurasia Daily Monitor, The Jamestown Foundation. – 2026, 27 January. – URL: https://jamestown.org/china-kyrgyzstan-uzbekistan-railway-financing-loan-signed
21. The China–Kyrgyzstan–Uzbekistan Railway Could Be Built a Year Ahead of Schedule // Akchabar. – 2026. – URL: https://www.akchabar.kg/en/news/zheleznuyu-dorogu-kitaj-kirgizstan-uzbekistan-mogut-postroit-na-god-ranshe-kufvvtlvhhoolnmg
22. Construction of China–Kyrgyzstan–Uzbekistan Railway Progressing as Planned – Kyrgyz Transport Minister // Kun.uz. – 2025, 13 November. – URL: https://www.kun.uz/en/news/2025/11/13/construction-of-china-kyrgyzstan-uzbekistan-railway-progressing-as-planned-kyrgyz-transport-minister
23. Uzbekistan Ratifies Feasibility Study Agreement for Trans-Afghan Railway // Kun.uz. – 2026, 10 February. – URL: https://kun.uz/en/news/2026/02/10/uzbekistan-ratifies-feasibility-study-agreement-for-trans-afghan-railway
24. Uzbekistan Estimates $7bn Cost for Trans-Afghan Railway Corridor // Daryo. – 2026, 19 June. – URL: https://daryo.uz/en/2026/06/19/uzbekistan-estimates-7bn-cost-for-trans-afghan-railway-corridor/
25. Pakistan Proposes Financing Drive for Railway to Uzbekistan through Afghanistan // Arab News Pakistan. – 2026. – URL: https://www.arabnews.pk/pakistan/pakistan-proposes-financing-drive-for-railway-to-uzbekistan-through-afghanistan-3002606
26. Uzbekistan's Rail Imports Outpace Exports by 2.5 Times in Latest Trade Data // Kun.uz. – 2026, 19 March. – URL: https://kun.uz/en/news/2026/03/19/uzbekistans-rail-imports-outpace-exports-by-25-times-in-latest-trade-data
27. O‘zbekiston may oyida oltin eksportini to‘xtatdi // Spot.uz. – 2026, 2 July. – URL: https://www.spot.uz/oz/2026/07/02/gold-export/
28. Uzbekistan's Transport Market Hits 70.7 Trillion Soums // Zamin.uz. – 2025. – URL: https://zamin.uz/en/uzbekistan/153448-uzbekistans-transport-market-hits-707-trillion-soums.html
8. 28.Турғунмирзаев, А. (2025). НОВЫЕ ПРОЯВЛЕНИЯ КОНКУРЕНЦИИ В СФЕРЕ СТРАХОВЫХ УСЛУГ: ТЕОРИЯ И ПРАКТИКА. Экономическое развитие и анализ, 3(2), 368-376.
9. 29.Турғунмирзаев, А. (2025). ЦИФРОВИЗАЦИЯ СТРАХОВОГО РЫНКА КАК ФАКТОР ПОВЫШЕНИЯ ЕГО КОНКУРЕНТОСПОСОБНОСТИ. Передовая экономика и педагогические технологии, 2(1), 289-297.

10. 30.Тургунимирзаев, А. (2025). НАПРАВЛЕНИЯ СТРАТЕГИИ РАЗВИТИЯ СТРАХОВЫХ КОМПАНИЙ В ЦИФРОВОЙ ЭКОНОМИКЕ. Экономическое развитие и анализ, 3(1), 439-446.
11. 31.ТУРҒУНМИРЗАЕВ, А. (2025). СУҒУРТА БОЗОРИНИ РАҚАМЛАШТИРИШ УНИНГ РАҚОБАТБАРДОШЛИГИНИ ОШИРИШНИНГ ОМИЛИ СИФАТИДА. ILG‘OR IQTISODIYOT VA PEDAGOGIK TEXNOLOGIYALAR Учредители: Shafi Science Center Ltd, 2(1), 289-297.
12. 32.Турғунмирзаев, А., & Шамситдинов, М. (2023). Суғурта Компаниялари Рақобатбардошлигини Бошқаришда Рақамли Иқтисодиётнинг Ўрни. Nashrlar, 238-241.
13. 33.Turgunimirzayev, A. Directions of the Development Strategy of Insurance Companies in the Digital Economy. Economic Development and Analysis, 3(1), 439-446.
14. 34.Turgunmirzaev, A. New Appearances of Competition in the Insurance Services Sector: Theory and Practice. Economic Development and Analysis, 3(2), 368-376.
15. 35. Turg‘unmirzayev, A. Digitalization of the Insurance Market as A Factor 4in Increasing Its Competitiveness. Advanced Economics and Pedagogical Technologies, 2(1), 289-297.
16. 36.Turgunmirzaev, A. (2025). Developing Forms of Competition in The Insurance Field: Theory and Practical Aspects. Central Asian Journal of Innovations on Tourism Management and Finance, 6(3), 1083-1090.