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**Afghanistan's Prospects for Trade Growth
and
Improved Regional Alignment**

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NOTES

The views expressed are those of the authors and do not necessarily reflect the views and policies of the ADB, UNFAO or the governments they represent.

In this publication, the symbol “\$” refers to US dollars.

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1 Why regional cooperation, and integration (RCI) is important for Afghanistan

1.1 Purpose, scope, and audience

This paper examines Afghanistan's current trade position and discusses practical opportunities for improved regional alignment under prevailing financial, political, and institutional constraints. It is prepared as part of a wider effort to support dialogue among multilateral development partners, including the Asian Development Bank (ADB) and the World Bank, on policy options that can assist the people of Afghanistan through trade, regional cooperation and integration (RCI), and targeted measures to strengthen economic resilience.

This document is the technical contribution to a two-part study. A companion policy briefing presents the findings and recommendations in non-technical form for decision makers. Following the principles of evidence-based economic policy, this report explicates the data, methods, estimates, and literature on which those findings rest, so that each empirical claim can be traced to a source and each estimate to a technical specification. Sections 2 and 3 carry the quantitative material — trade statistics and their measurement, the trade complementarity index, revealed comparative advantage, and the gravity estimates — with construction, data vintages, and caveats stated in place rather than relegated to appendices. Sections 4 and 5 apply the growth-diagnostics framework of Hausmann, Rodrik, and Velasco (2005) to identify binding constraints on the Afghan economic and derive a sequenced set of hypothetical interventions to overcome them.

The perspective of this study is focused on feasibility rather than simple aspiration. Afghanistan's development needs are large and well documented, but the channels through which external partners can act are unusually narrow. Sovereign lending, on-budget grant support, policy-based operations, and large-scale public investment are all foreclosed or severely restricted under current conditions. Trade and RCI stand out because they work through borders, corridors, standards, payment channels, and enterprises rather than through the recognition of a state. They are, in consequence, among the few domains in which measurable progress is achievable now. Five sets of constraints define the context in which that judgment is made.

1.1.1 *A constrained policy environment*

Political constraints. Afghanistan's de facto administration is not recognized by any member of the international community, and this shapes every dimension of external economic engagement. Recognition-dependent instruments—sovereign borrowing, on-budget grants, membership-based voting rights, and most forms of concessional finance—remain unavailable. In parallel, however, bilateral engagement has deepened in practice: several regional states have accepted Afghan diplomatic or commercial representation, reopened trade offices, and concluded working arrangements on transit, customs, and labor mobility, creating a widening gap between formal non-recognition and functional cooperation. The financial consequences of the political impasse bind most tightly. Central

bank reserves have remained inaccessible since 2021, and Afghan banks have lost their correspondent relationships, placing the country substantially outside the international payment system. Trade payments now clear predominantly through hawala networks centered on Kabul's Sarai Shahzada money market and its provincial counterparts. The practical effect is that commercially viable trade often cannot be financed, insured, or settled at scale—a constraint that no amount of export potential can overcome on its own.

1.1.2 Geopolitical and conflict-related disruption.

Afghanistan is landlocked and dependent on a small number of crossings, so corridor risk is not a trade-facilitation detail but a first-order macroeconomic variable. Recurrent Afghanistan–Pakistan tensions have closed Torkham and Spin Boldak for extended periods, stranding cargo, voiding contracts, and destroying perishable consignments outright; because the same crossings generate the bulk of government revenue, a single closure erodes trader incomes and the fiscal base simultaneously. Broader conflict in the Middle East has compounded this exposure, raising freight and insurance costs and reducing the predictability of Iranian and Gulf transit at precisely the moment when those routes matter most as an alternative to Pakistan. Corridor concentration therefore converts external political events into immediate losses for Afghan producers, and corridor diversification becomes a matter of economic security rather than logistical convenience.

1.1.3 Socioeconomic pressures.

Large-scale returns from Iran and Pakistan have added hundreds of thousands of people to the domestic labor force within a compressed period. The inflow is concentrated in Nangarhar, Kandahar, and Kabul—provinces least equipped to generate employment or absorb new arrivals—and returnees are predominantly low-skilled, entering thin labor markets where they compete for scarce wage work and press down on prevailing wages. The effect is to convert a national labor surplus into visible local hardship. Reverse migration also cuts the other way: remittances, which currently help finance the external deficit and sustain household consumption, decline as migrants return. Absorbing this population productively requires new tradable-sector employment in the same border and production areas now under greatest pressure, which makes the employment case for trade expansion urgent rather than gradual.

1.1.4 Macroeconomic and external-sector challenges.

Macroeconomic stabilization has been real but shallow, and it masks acute external and fiscal vulnerability. The trade deficit reached roughly US\$9.3 billion in FY2024/25, about 52 percent of GDP, with imports near US\$12.1 billion against exports of some US\$2.8 billion. That gap is financed by remittances, humanitarian inflows, and informal channels rather than by export earnings, so the balance of payments rests on transfers that are themselves contracting. Fiscal space is equally constrained: domestic revenue reached a record AFN 241.7 billion, or 19.2 percent of GDP, yet more than 90 percent of expenditure is absorbed by recurrent costs and development spending has fallen to AFN 23.2 billion—some 85.5 percent below its FY2021 peak—leaving almost nothing for the border facilities, customs modernization, feeder roads, cold storage, and testing laboratories on which export growth depends. Exchange rate stability, meanwhile, has been sustained through administrative controls, auctions, and inflows; as those inflows recede, depreciation

pressure is likely to build, while past appreciation has already penalized exporters. Growth of about 1.9 percent in FY2024/25 was driven by consumption, remittances, and an agricultural rebound rather than by tradable production, which is why stabilization has not translated into trade recovery.

1.1.5 Declining external aid.

Humanitarian and development assistance has fallen sharply from its post-2021 peaks and is expected to decline further. For several years aid has functioned as Afghanistan's de facto balance-of-payments support and its principal social safety net at the same time. As it recedes, the arithmetic is unforgiving: either export earnings, private investment, and labor income expand, or consumption and imports must contract. Because foreign direct investment remains negligible—net inflows were on the order of US\$37 million in 2023 and effectively nil in 2022—the burden of adjustment falls disproportionately on trade. Alternative growth drivers are therefore not a diversification preference but a necessity.

1.2 Afghanistan's macroeconomic and external position

The macroeconomic material in this subsection establishes the aggregates against which the trade analysis in Section 2 is read. Figures are drawn from the National Statistics and Information Authority (NSIA), Da Afghanistan Bank, the IMF World Economic Outlook database and International Merchandise Trade Statistics, the World Bank Afghanistan Macro Poverty Outlook, and UNCTAD investment data; where these disagree, the discrepancy is noted rather than averaged. Afghan fiscal years (FY1403 = 2024/25) are used for domestic aggregates and calendar years for partner-reported trade, which is itself a source of small inconsistencies between series.

Afghanistan's economy has entered a phase of relative macroeconomic stabilization, characterized by low inflation, exchange rate stability, and modest output recovery. However, this stabilization masks acute stress at the district and community level. Real GDP growth is estimated at around 1.9 percent in FY2024/25, driven primarily by consumption, remittance inflows, and a partial recovery in agriculture. Exchange rate management, which has helped anchor the prices, is operationally rooted in Kabul's Sarai Shahzada money market and its provincial equivalents, where hawala dealers still clear the overwhelming majority of trade payments now that corresponding banking has collapsed. The record domestic revenue collection AFN 241.7 billion in FY2024/25 is mainly due the collections at borders from a remarkably small number of check points — Islam Qala (Herat), Torkham and Spin Boldak (Nangarhar and Kandahar), Hairatan and Aqina (Balkh and Faryab), Sher Khan Bandar (Kunduz), and Abu Nasr Farahi (Farah) — so a closure at any one simultaneously erodes trader incomes and the fiscal base. With more than 90 percent of spending absorbed by recurrent costs, the returnee wave now concentrating in Nangarhar, Kandahar, and Kabul arrives in provinces least equipped to generate jobs or absorb newcomers, converting a national labour surplus into visible local hardship and leaving almost no development budget for the irrigation, roads, and clinics these districts need. Investment remains subdued due to financial sector weakness, sanctions-related constraints, and heightened policy uncertainty

Afghanistan's trade imbalance remains a structural constraint on growth and trade resilience. The deficit reached about US\$9.3 billion, or roughly 52 percent of GDP, in FY2024/25, as imports continued to rise while exports remained narrow, low-value, and vulnerable to corridor disruptions. This imbalance reflects more than a cyclical gap between demand and supply. It points to a weak domestic tradable sector, limited export diversification, heavy dependence on imported fuel, food, machinery, and consumer goods, and insufficient value addition in agriculture and minerals. Because the deficit is financed largely through remittances, humanitarian inflows, and informal payment channels rather than sustained export earnings, Afghanistan remains exposed to external shocks and border closures. Without stronger export capacity, corridor diversification, trade finance, and investment in processing and logistics, the trade deficit will continue to weaken competitiveness, drain purchasing power, and reinforce dependence on external inflows.

Afghanistan's fiscal position constrains export expansion despite stronger domestic revenue collection. In FY2024/25, revenue reached a record AFN 241.7 billion, or 19.2 percent of GDP, and the fiscal deficit narrowed to 0.5 percent of GDP after the loss of on-budget international grants. However, the composition of spending limits the state's ability to support trade competitiveness. More than 90 percent of expenditure is absorbed by recurrent costs, leaving development spending at only AFN 23.2 billion—about 85.5 percent below its FY2021 peak. This sharply restricts public investment in export-enabling infrastructure such as border facilities, customs modernization, feeder roads, irrigation, cold storage, quality-testing laboratories, and logistics platforms. The fiscal base is also highly exposed to trade itself, with a large share of revenue collected at a small number of border crossings; any closure or disruption therefore weakens both trader incomes and public revenue. As a result, Afghanistan has maintained basic fiscal operations but lacks the fiscal space needed to reduce trade costs, diversify corridors, upgrade export value chains, or absorb returnee pressures in border and production areas.

Afghanistan's financial sector remains a binding constraint on trade. Since 2021, the contraction of credit, loss of correspondent banking relationships, sanctions-related payment risks, and incomplete transition to Islamic banking have sharply reduced the availability of formal trade finance. As a result, importers and exporters rely heavily on cash and hawala networks to settle transactions, limiting transparency, raising compliance risks, and making it difficult to scale formal export flows. Although liquidity conditions improved modestly in 2025 as banks resumed limited lending, the recovery remains too small and uneven to support trade expansion. Payment restrictions, weak credit recovery mechanisms, unresolved treatment of legacy interest-bearing loans, higher provisioning requirements, and recognition of pre-2021 non-performing loans have kept banks risk-averse. This leaves Afghan traders without reliable letters of credit, working capital, insurance, or settlement channels, increasing transaction costs and weakening competitiveness in regional markets.

The policy environment remains constrained by non-recognition, sanctions risk, banking-sector Islamization frictions, and wide regulatory uncertainty, which sharply limits FDI and long-horizon regional cooperation and integration (RCI) projects. Near-term RCI gains are most feasible in trade facilitation and predictable borders, sanctions-compliant payments

and trade finance, labor mobility, and corridor and logistics upgrades. Table 1.1 summarizes the salient macroeconomic indicators.

Table 1.1: Salient macroeconomic indicators (latest available)

Area	Current situation	RCI relevance
Real GDP / growth	Gradual recovery, ~1.9% (FY2024–25 est.), driven by consumption, remittances, agriculture rebound; investment weak.	Growth needs external demand growth and corridors; domestic market too thin for scale.
Inflation	CPI 3.6% in FY2025/26; near-zero to slightly positive in 2024; food price deflation easing, demand subdued.	Low inflation helps cross-border traders; signals weak aggregate demand.
Exchange rate	Afghani broadly stable/previously appreciating; some depreciation late-2024; supported by foreign exchange controls/auctions and inflows.	Stability reduces trade risk; appreciation hurts export competitiveness and undermines the many income and public revenue streams from trade.
Trade balance	Deficit ~\$9.3B (~52% of GDP) in FY2024/25, up ~57% YoY; imports rising to ~\$12.1B, exports ~\$2.8B.	Strong pull for regional exports; urgency for predictable transit and export upgrading.
FDI / investment	Net FDI inflows ~\$37m in 2023 (est.); effectively nil in 2022; negligible cross-border M&A.	RCI investment likely transactional (trade/extractives) absent de-risking.
Fiscal stance	Revenues relatively strong for a low-aid state; cash-balanced budget but low development spending.	Little scope for co-financing RCI infrastructure; PPP and external finance needed.
Financial sector	Credit contraction, weak intermediation; Islamic banking conversion ongoing and challenging; sanctions and AML constraints.	Trade relies on cash/hawala; formal trade-finance corridors are high value.
Jobs / labor	High unemployment and underemployment; rising pressure from large returnee flows.	Afghanistan remains labor-exporting; need safer mobility and remittance channels.
Private sector	Active but constrained by policy uncertainty, finance scarcity, and demand weakness.	RCI can lower cost of inputs and logistics and open regional value chains.

Note: AML = Anti-money laundering, b = billion, CPI = consumer price index, FDI = foreign direct investment, FY = fiscal year, m = million, PPP = public private partnership, RCI = regional cooperation and integration

Source: ADB staff

1.3 RCI Implications of current economic conditions

1.3.1 *Growth, Demand, and Structure*

Recovery is real but fragile, highly sensitive to humanitarian and foreign inflows and trade continuity. Investment is the binding constraint: weak banking credit, sanctions risk, and uncertain rules suppress private capital formation, keeping growth concentrated in consumption and remittances rather than productive capacity.

Implication: RCI should focus on near-term, high-turnover channels — trade and corridor efficiency, agrifood and light-industry export niches — rather than assuming broad investment-led growth.

1.3.2 *Inflation and Exchange Rate Dynamics*

Deflation and low inflation reflect subdued domestic demand and cheaper imports; IMF analysis finds that the exchange rate is the dominant price driver given import dependence. Currency stability benefits trade planning, but a strong Afghani combined with an import surge worsens the trade gap and squeezes tradables producers.

Implication: RCI can help rebalance by expanding export-enabling standards, cold chain¹, and trade finance — not just transit infrastructure.

1.3.3 *FDI and Investment Climate*

UNCTAD data confirm FDI is near its floor, estimated at net inflows of ~\$37 million in 2023. Investors face extreme legal uncertainty, non-recognition, sanctions compliance burdens, and limited dispute-resolution recourse, making broad FDI-led growth implausible in the near term.

Implication: Viable RCI investment will cluster in resource extraction, wholesale trade, and logistics, unless projects are heavily de-risked and payment channels clarified.

1.3.4 *Finance, Payments, and Capital Markets*

The Islamic banking conversion and the loss of correspondent banking leave credit and payment systems shallow, and formal securities markets are essentially absent. Most trade relies on cash and hawala networks, which are functional but opaque and difficult to scale for formal export flows.

¹ References to cold chains in this study are for distributed technologies, not end-to-end systems deployed by supermarkets and producer cooperatives in the OECD and middle income countries. Small scale, individual enterprise refrigeration technologies, often powered by household solar or microgrid systems, are already conferring substantial benefits in low income countries of SE Asia and Africa, and they can be critical to buffering intermittent value chain disruption in border areas and other parts of Afghanistan.

Implication: RCI efforts that create sanctions-compliant trade settlement and limited-scope trade finance could reduce transaction costs substantially and encourage formalization.

1.3.5 Labor Markets and Migration

Job creation is lagging behind labor force growth, intensified by large returnee inflows from Pakistan and Iran estimated at 1.5–2.0 million individuals in 2023–24. This structural labor surplus makes formalized labor-export channels economically important for both households and the broader economy.

Implication: RCI that supports safe labor mobility, skills certification, and cheaper remittances is economically rational for Afghanistan and complementary for labor-short neighbors.

Absent major policy normalization, Afghanistan's macroeconomic path is best described as stable-but-stuck: low inflation and a managed foreign exchange regime provide short-term calm, while weak investment, financial isolation, and border volatility cap growth and deepen external imbalances. RCI can still deliver meaningful welfare gains if it concentrates on practical, low-politics cooperation that lowers transaction costs and stabilizes trade and labor flows.

1.4 Why trade and regional cooperation are productive channels for development agency

Taken together, these conditions explain why regional trade and RCI are treated in this paper as the central rather than the residual policy channel. Three features recommend them. First, they can advance under non-recognition: technical cooperation on customs procedures, transit regimes, standards and phytosanitary certification, corridor management, and enterprise-to-enterprise linkage is conducted agency-to-agency and firm-to-firm, and does not require political normalization. Second, the returns are quick and measurable—reductions in dwell time, clearance costs, and corridor concentration register within months and accrue directly to traders and border communities. Third, they address the binding constraint rather than a symptom. As the analysis in the following sections shows, Afghanistan's difficulty lies less in what it can produce than in what it costs to move that output to market: complementarity with neighboring economies is high, revealed comparative advantage is clear in several product groups, and gravity estimates indicate exports well below potential. The shortfall is a cost-and-access problem, and cost and access are exactly what RCI instruments act upon.

Afghanistan still retains an institutional platform for this work. It remains a member of the Central Asia Regional Economic Cooperation (CAREC) program, sits astride CAREC corridor alignments linking Central Asia to South Asian and Gulf markets, and is a party to established transit arrangements that can be revived or extended without new political preconditions. Neighboring economies have their own interest in predictable Afghan transit, energy trade, and market access. This alignment of interests is what makes incremental progress plausible even in an otherwise adverse environment.

None of this suggests that trade and RCI can substitute for the resolution of Afghanistan's deeper political and institutional problems, or that they can offset the loss of aid at comparable scale. The claim is narrower and more practical: under present constraints, deeper regional trade and stronger RCI represent the most credible available means of generating new economic opportunities, diversifying markets and transit routes, raising the returns to domestic production, and building resilience against shocks the country cannot control. That proposition sets the agenda for the remainder of the paper.

1.5 Structure of the report

Section 2 establishes the factual baseline: what Afghanistan trades, with whom, through which corridors, and how that pattern has shifted, together with an account of how the underlying statistics are constructed and where they can be misleading. Section 3 asks where unrealized potential lies, applying three diagnostics — trade complementarity, revealed comparative advantage, and a gravity model — each presented with its formal definition, data, estimation, and limitations. Section 4 identifies which constraints currently bind, applying three standard tests with the evidence assembled in Sections 2 and 3 and compares to external studies. Section 5 derives a sequenced set of policy options that can be tested under present institutional conditions. References follow.

2 Afghanistan's current regional trade patterns and leading partners

This section establishes the factual baseline for the rest of the report: what Afghanistan trades, with whom, through which corridors, and how that pattern has shifted. It is deliberately descriptive. The analytical chapters that follow interpret this evidence—trade complementarity, the gravity estimates, and revealed comparative advantage each ask a different question of the same underlying flows—and the policy responses are set out separately. The purpose here is to fix the facts before drawing inferences from them.

Three features organize the picture. First, Afghanistan runs an extreme import dependence against a narrow and largely unprocessed export base. Second, both its trade and its public revenue are concentrated on a handful of border crossings, which makes corridor disruption simultaneously a commercial and a fiscal event. Third, the partner mix has shifted decisively—away from Pakistan and toward Iran, Central Asia, and the People's Republic of China since 2021, and then again under the shocks of late 2025 and early 2026. Each of these is documented in turn below.

2.1 Data sources, coverage, and measurement

Every quantitative statement in this report rests on one of four families of source, and the differences between them account for most of the apparent inconsistencies in published figures on Afghan trade.

The first is partner-reported mirror data. Afghanistan ceased reporting regularly to UN Comtrade after August 2021, so bilateral flows are reconstructed from what partner countries report as trade with Afghanistan. The product-level analysis in Section 3 uses the BACI database (CEPII, 2026, version 202601), which harmonizes UN Comtrade declarations at the six-digit Harmonized System level, reconciles the two sides of each bilateral flow, and weights each declaration by an estimated reporter-reliability score (Gaulier and Zignago 2010). For a non-reporting state the reconstruction depends entirely on the reliability of the reporting partners — principally Pakistan, India, the United Arab Emirates, the People's Republic of China, Uzbekistan, and Iran.

The second is national statistics: the NSIA Statistical Yearbook and Foreign Trade Statistics series, together with customs receipts and monetary data published by Da Afghanistan Bank. These have better coverage of small crossings than mirror data but are not independently audited and have been reported irregularly since 2021.

The third is international aggregations that draw on both: the IMF International Merchandise Trade Statistics Yearbook, the World Bank WITS platform, and UN ESCAP trade-cost estimates.

The fourth is documentary and press reporting of specific events — border closures, energy agreements, corridor volumes — used only where the event itself is the object of interest and cross-checked against at least two sources where possible.

Four measurement problems recur, and each biases the figures in a known direction. **Mirror asymmetry.** Trade with partners that themselves report poorly is systematically understated, which affects flows through Iran and, to a lesser extent, Central Asia. **Valuation asymmetry.** Exporters report free-on-board values while importers report cost-insurance-freight values, so measured imports embed freight and insurance — a substantial wedge for a landlocked economy, and one that inflates Afghanistan's recorded import bill relative to the underlying goods value. **Transit attribution.** Goods are frequently attributed to the country of transit rather than of origin or final destination, so recorded partner shares measure corridor use as much as commercial partnership. **Under-declaration.** Incentives to under-declare at customs are strong on both sides of most crossings, and the long history of the Afghanistan–Pakistan Transit Trade Agreement generated substantial reverse flows of nominally duty-free goods.

A further share of cross-border commerce is not recorded at all. Seasonal and small-scale trade at minor crossings, fuel moving outside customs channels, and transactions settled through hawala rather than banks all fall outside official statistics. Published estimates of the informal share vary too widely to cite with confidence, but their direction is consistent: official figures understate both trade volumes and the degree to which border districts depend on their immediate neighbors.

Published estimates of the informal share of Afghan cross-border commerce cluster in the range of 30 to 40 percent of formal trade. That range is widely cited but its provenance is not well documented in the sources available for this study, and it is reported here as an indication of order of magnitude rather than as an estimate with a defensible standard error. Its practical implication is that the denominator of most ratios in this report is unstable, and that differences of a few percentage points between partner shares should not be treated as meaningful.

Two data vintages appear in this paper because they answer different questions. FY2024/25 (Afghan FY1403) is the most recent year with reasonably complete official coverage: imports of roughly US\$12.1 billion against exports of about US\$2.8 billion, producing a deficit near US\$9.3 billion, or some 52 percent of GDP. FY2025/26 captures the disruption that followed: imports of about US\$13.6 billion against exports of only US\$1.8 billion, with the deficit widening to an annualized US\$11.7 billion, or roughly 60 percent of GDP. Where the structure of trade is at issue, this section uses the FY2024/25 baseline; where the effect of the 2025–26 shocks is at issue, it uses the more recent series. Both are cited explicitly to avoid the impression of inconsistency.

Alongside those two aggregate vintages, the product-level diagnostics of Section 3 rest on three further benchmarks, each identified where it is used: the 2022–2024 three-year average from BACI v202601 for revealed comparative advantage, an eleven-year panel to 2024 for trade complementarity, and the 2015–2021 window for the gravity estimates. The last of these straddles the structural break of the 2021 transition, which is treated explicitly in Section 3.7.6.

2.2 The scale and structure of trade

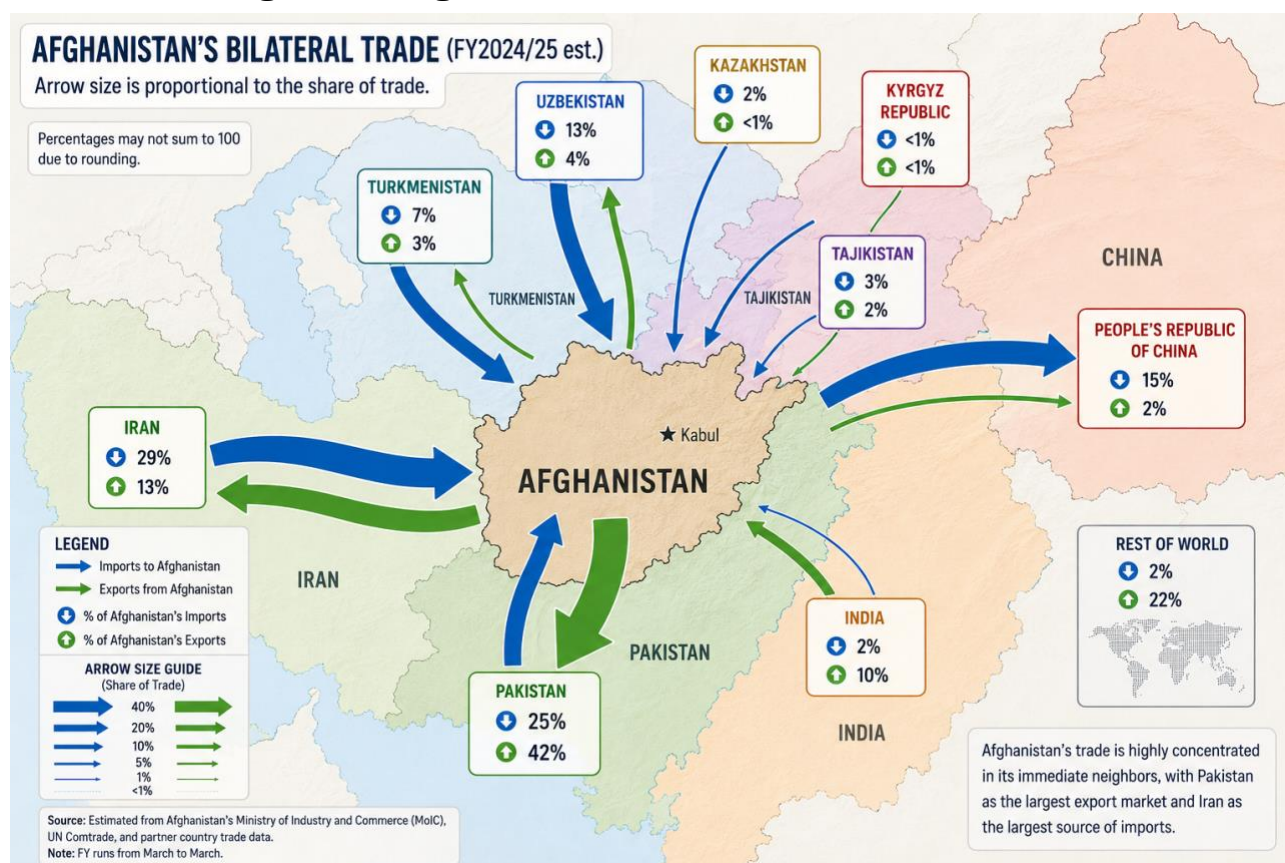
Afghanistan's trade is unbalanced to a degree that has few parallels. The import-to-export ratio exceeds seven to one. Imports grew 15.4 percent in FY2025/26, following a 36.6 percent increase the previous year, while exports contracted. The resulting gap is not financed by export earnings but by remittances, humanitarian inflows, and informal payment channels, which means the deficit does not exert the self-correcting pressure that a conventional external imbalance would. It persists because the transfers that fund it persist, and it becomes acute when they do not.

The export base is narrow. Agriculture dominates: fresh and dried fruits, nuts, and saffron together account for the largest share of formal exports, with fresh and dried fruit alone close to 40 percent. Handwoven carpets and textiles form the second category, and carry recognition in international luxury markets that few other Afghan products enjoy. Minerals are third and mostly potential rather than realized: coal to Pakistani industry has grown sharply since 2022, and talc, marble, and chromite move in modest volumes, but formal extraction and export remain constrained by finance, licensing, and transport. Beyond these three groups the export list thins out quickly, which is why a shock to any one of them registers immediately in aggregate figures.

Imports, by contrast, are broad and largely non-discretionary. Liquid fuels are the single largest category by value, with petrol, diesel, and liquefied petroleum gas approaching US\$2.5 billion in 2025. Food staples—wheat flour, rice, cooking oil, sugar—follow, together with machinery and vehicles, construction materials, pharmaceuticals, and consumer manufactures. Because most of this is essential and price-inelastic, import demand does not fall much when incomes fall, which is a further reason the trade gap has proved resistant to adjustment.

Each bilateral relationship maps onto a specific corridor and a specific border economy, and this geography is what converts trade statistics into household outcomes. Trade with Pakistan runs through Torkham in Nangarhar, Spin Boldak in Kandahar, and Ghulam Khan in Khost, sustaining dense day-trading, portering, and fruit-convoy economies that employ tens of thousands of low-income workers. Trade with Iran runs through Islam Qala in Herat and Milak–Zaranj in Nimroz, giving western provinces both an export outlet and, through labor migration, a remittance lifeline that is itself exposed to deportation and shifting Iranian immigration policy. Trade with Central Asia runs through Hairatan in Balkh, Aqina in Faryab, Torghundi in Herat, and Sher Khan Bandar in Kunduz, and carries the electricity and fuel on which northern workshops and cold stores depend. These same crossings generate most customs revenue, so a closure at any one of them reduces household incomes and public revenue at the same moment. All of these neighbors are also members of the Central Asia Regional Economic Cooperation (CAREC) program, which is the institutional setting in which most of the practical remedies discussed later in this paper would have to be pursued.

Figure 2.1: Afghanistan's Trade Shares (FY2024/25 est.)



Data sources: NSIA Statistical Yearbook FY1403 (2024/25) for aggregate trade totals (exports ~\$2.8B; imports ~\$12.1B); partner shares are preliminary estimates derived from UN Comtrade/WITS mirror data (2023, latest bilateral available) adjusted for documented corridor shifts (Pakistan border closures, Iran/Chabahar expansion, China overland growth). See 2025); IMF International Merchandise Trade Statistics (IMTS) Yearbook 2024; Afghanistan National Statistics and Information Authority (NSIA), Foreign Trade Statistics FY1402 (2023/24). Partner shares are approximate; data subject to significant under-reporting of informal trade and disruptions to official statistics post-2021.

Table 2.1 repays careful reading. Pakistan remains Afghanistan's largest export market at roughly 42 percent of exports, while Iran is its largest source of imports at roughly 29 percent. The common shorthand of a "largest trading partner" is therefore ambiguous: measured by combined turnover Pakistan and Iran are close, with Iran ahead on the import side and Pakistan on the export side. The People's Republic of China supplies about 15 percent of imports but takes only about 2 percent of exports. Central Asia in aggregate—Uzbekistan, Turkmenistan, Tajikistan, Kazakhstan, and the Kyrgyz Republic—accounts for roughly a quarter of imports, a share that has risen further since the table was compiled. India takes about 10 percent of exports with almost no reciprocal flow. The 22 percent of exports recorded as "rest of world" largely reflects onward shipment and re-export through Gulf entrepôts rather than genuinely distant final demand.

2.3 What the official statistics understate

Three distortions matter enough to affect interpretation. The first is the confusion of transit with trade. A large share of what is recorded as imports from Iran or the United Arab Emirates consists of goods originating elsewhere—in the PRC, Türkiye, or the Gulf—that merely pass through; conversely, exports recorded to Iran include consignments bound for India through Chabahar. Recorded partner shares therefore measure corridor use as much as commercial partnership. The policy implication is practical: reducing apparent

dependence on a given partner may require changing corridors rather than changing suppliers, and the two call for entirely different interventions.

The second is asymmetry. Afghanistan's trade with Pakistan, Iran, India, and the PRC is existential for Afghanistan and marginal for each of them. Pakistan and Iran each account for between a quarter and two-fifths of one side of Afghanistan's trade, whereas Afghanistan accounts for a low single-digit share of Pakistan's exports and well under one percent of Iranian, Indian, and Chinese trade. This produces a bargaining asymmetry with direct consequences: closing a border or altering transit terms is cheap for the larger partner and expensive for Afghanistan. It is a principal reason that purely bilateral negotiation has repeatedly failed to deliver durable predictability, and a principal argument for pursuing border and transit commitments through multilateral and technical frameworks in which the asymmetry is diluted.

The third is valuation. Incentives to under-declare at customs are strong on both sides of most crossings, and the long history of the Afghanistan–Pakistan Transit Trade Agreement generated substantial reverse flows of nominally duty-free goods. Recorded values are therefore biased downward in some categories and distorted in composition in others. None of this undermines the broad pattern set out in this section, but it does mean that small differences between reported shares should not be treated as meaningful.

2.4 Leading trade partners

The partners below are presented in alphabetical order. Four of them—the People's Republic of China, the Russian Federation, Turkmenistan, and Uzbekistan—were not treated separately in earlier drafts despite accounting individually or jointly for substantial shares of Afghan trade, and are included here for completeness.

2.4.1 India

India is critical for Afghan exports and minor as a source of imports, and has no land border with Afghanistan. Before August 2021 it absorbed up to 20 percent of Afghan exports—principally dried fruits, saffron, and carpets—facilitated by the air corridor established in 2017. Exports fell sharply when that corridor closed, and partial recovery through Chabahar Port brought India's share back to roughly 11 percent by 2023. India then became the principal destination for fruit exports redirected away from Pakistan after the October 2025 closure, which is why Afghan fruit and spice exports rose even as the aggregate fell. That recovery proved fragile: the Middle East disruption of early 2026 cut Indian imports from Afghanistan by 95.2 percent year on year in March 2026. Because much of the redirected volume is perishable, the Chabahar route does not by itself make these exports viable—a longer maritime voyage adds both transit time and spoilage risk, so the route depends on cold-chain and consolidation capacity at Zaranj and Chabahar and on reliable sailing schedules. Maritime access substitutes for a blocked land corridor only where the product can survive the additional days at sea.

2.4.2 Iran

Iran is Afghanistan's largest source of imports, at roughly 29 percent in FY2024/25 and rising to 34.3 percent after the Pakistan closure, up from 10 to 15 percent in the mid-2000s. The flow is dominated by fuel—some 3,000 tons a day of petroleum products through the western crossings—together with cement, steel, and foodstuffs. Afghan exports to Iran are comparatively modest, consisting mainly of fresh and dried fruit, saffron, and carpets, so the relationship is heavily import-weighted. By late 2024 annual turnover was estimated at around US\$4 billion, higher than with any other single country. Trade moves through Islam Qala in Herat, Milak–Zaranj in Nimroz, and Mahirud. The strategic significance of the relationship lies in Chabahar Port, which allows Afghan goods to reach India and global markets without transiting Pakistan, and which absorbed a substantial share of redirected cargo in 2025.

2.4.3 Kazakhstan and the Kyrgyz Republic

Kazakhstan and the Kyrgyz Republic together account for a small but rising share of imports and almost none of Afghanistan's exports. Kazakhstan supplies wheat, flour, and fertilizer, and increasingly petroleum products and liquefied petroleum gas; imports from Kazakhstan rose 102.2 percent in the months following the Pakistan closure, the largest proportional increase of any partner. The Kyrgyz Republic remains under one percent in either direction, and its principal relevance to Afghanistan is as a source of summer hydropower under CASA-1000 rather than as a merchandise partner. Both connect to Afghanistan by rail through Hairatan and Aqina, and both would gain materially from completion of the Trans-Afghan railway.

2.4.4 Pakistan

Pakistan has historically been Afghanistan's dominant trade partner and remains its largest export market. In the 2000s it accounted for more than half of Afghanistan's total external trade; by 2023 its share had fallen to about 30 percent of imports and 47 percent of exports, and the FY2024/25 estimates place it near 25 percent of imports and 42 percent of exports. Principal imports are flour, vegetables, cooking oil, rice, textiles, cement, and manufactured goods; principal exports are fruits, nuts, carpets, medicinal plants, and, increasingly, coal to Pakistani industry. Trade moves through Torkham, Chaman–Spin Boldak, Ghulam Khan, and Kharlachi. The structural risk in this relationship is political: recurrent closures, most severely the complete closure of 11 October 2025, have repeatedly interrupted the corridor that carries the largest share of Afghan exports, and each interruption has pushed a further increment of activity into informal channels that are harder to tax, finance, or protect.

2.4.5 People's Republic of China

The PRC has become Afghanistan's third-largest source of imports at roughly 15 percent, rising from a negligible base a decade ago and reaching 9.6 percent of a larger import total in the months after the Pakistan closure. The flow consists of machinery, electronics,

vehicles, solar equipment, and consumer manufactures, arriving overland through Central Asia and Pakistan and, in small volumes, directly through the Wakhan Corridor. Afghan exports to the PRC remain at about 2 percent of the total, concentrated in pine nuts—the subject of a dedicated air corridor since 2018—together with saffron, carpets, and small mineral volumes. This is the clearest case of complementarity in Afghanistan’s trade: the PRC needs industrial raw materials that Afghanistan holds in quantity and supplies manufactures Afghanistan cannot produce at scale. Realizing it depends on the Mes Aynak copper and Amu Darya oil agreements, both advancing slowly, and on customs and road capacity at Wakhan, which at present cannot handle significant freight.

2.4.6 Russian Federation and Türkiye

Neither country borders Afghanistan, and both have become materially more important since 2022. The Russian Federation is now a significant fuel supplier, providing discounted oil products and liquefied petroleum gas—Afghanistan has become the region’s largest buyer of Russian LPG, at roughly 418,000 tons in the first eleven months of 2025—moving by rail through Central Asia to Hairatan and Aqina, alongside wheat and flour. This diversification accelerated as Iranian supply became less predictable, and it illustrates how quickly Afghan traders reallocate sourcing when a corridor becomes unreliable. Türkiye matters in two ways: as a supplier of manufactured goods and pharmaceuticals, and as a corridor partner completing CAREC Corridor 2 and connecting to the Middle Corridor across the Caspian. The gravity estimates presented later in this paper identify Türkiye as a partner whose structural propensity to trade is high relative to realized trade with Afghanistan, which makes it a natural candidate for expanded engagement.

2.4.7 Tajikistan

Tajikistan plays a modest but stable role concentrated in Afghanistan’s northeastern provinces. Principal imports are electricity—up to 150 MW of summer hydropower—together with food grains and textiles; exports are predominantly fruit and dried nuts. Trade moves through Sher Khan Bandar in Kunduz and several smaller northern crossings, and Tajikistan connects to Afghanistan through CAREC road and energy corridors. It is also a supplier under CASA-1000. The relationship is best characterized by local cross-border commerce and practical energy flows rather than by large formal trade volumes.

2.4.8 Turkmenistan

Turkmenistan accounts for roughly 7 percent of Afghan imports and 3 percent of exports, supplying petrol, diesel, and about 150 MW of electricity into Herat and westward through Torghundi and Andkhoy. Imports from Turkmenistan rose 91.0 percent following the Pakistan closure, second only to Kazakhstan. Turkmenistan is also central to the largest prospective change in Afghanistan’s energy trade, the TAPI gas pipeline, and to rail connectivity through Aqina. Afghan exports in the other direction remain small, and the relationship is likely to remain asymmetric for the foreseeable future.

2.4.9 Uzbekistan

Uzbekistan accounts for about 13 percent of Afghan imports and 4 percent of exports, and is the single most important partner in electricity, delivering up to 450 MW into Kabul and

the northern grid—more than half of all imported power. It also supplies petroleum products, wheat flour, fertilizer, and machinery. Trade moves principally through Hairatan in Balkh, the most developed of Afghanistan’s rail connections, and Uzbekistan is the leading promoter of the Trans-Afghan railway toward Pakistani ports. It is additionally gas-rich and forms part of CAREC Corridor 2. Taken together, these features make Uzbekistan the most plausible anchor for northern corridor development and the partner with which incremental progress has been most consistent since 2021.

2.5 Two decades of reorientation

Afghanistan’s trade geography has changed substantially over twenty years, though not in the direction the word diversification usually implies. In the 2000s trade was overwhelmingly concentrated on Pakistan, which accounted for more than half of total external trade, while connectivity with other neighbors was limited by infrastructure and by the absence of working transit arrangements.

The 2010s brought genuine geographic broadening. Iran’s share rose as Chabahar’s role expanded, Central Asian trade grew—Uzbekistan most of all—and the Afghanistan–India air corridor established in 2017 created a rapid channel for high-value, low-bulk exports that had not previously existed. For a few years Afghanistan was adding routes and markets simultaneously.

Since the political transition of August 2021 the direction has reversed in one respect and accelerated in another. International disengagement, sanctions exposure, and the loss of correspondent banking cut Afghanistan’s links to Western and global markets and closed the India air corridor, while dependence on regional CAREC members deepened. Iranian and Uzbek shares grew, the PRC’s overland share rose sharply, and the Russian Federation entered as a major fuel supplier where it had previously been marginal. The net result is a trade profile that is more regional and less global than at any point since 2001.

One element of this structure has proved durable through every disruption. Uzbekistan, Turkmenistan, and Tajikistan together supply more than 75 percent of Afghanistan’s electricity imports, which in turn provide roughly three-quarters of grid supply. This is the deepest form of regional integration Afghanistan currently has, and unlike merchandise trade it has continued largely uninterrupted since 2021, sustained by commercial contracts that both sides have had reason to honor. It is also the clearest demonstration that regional cooperation can function in this setting when the interests are aligned and the instrument is technical rather than political, and energy imports in turn relieve a binding constraint on production capacity and economic activity.

What the two decades show, then, is less diversification than corridor substitution. Afghanistan has not materially broadened its export basket, nor added significant new final markets; it has repeatedly rerouted the same narrow basket in response to political events. That distinction matters for everything that follows, because it implies that the constraint lies in market access and trade costs rather than in the composition of what Afghanistan produces.

2.6 The 2025–26 shocks and the realignment of corridors

Between October 2025 and March 2026 two successive shocks struck Afghanistan's trade architecture. Together they provide something close to a natural experiment on corridor dependence, and the response is informative well beyond the episode itself.

The Pakistan border closure. On 11 October 2025, military clashes along the Durand Line led to the complete closure of the Pakistan border, severing access to Afghanistan's second-largest import source and its single largest export market at once. Pakistan had been supplying about US\$135 million in monthly imports and absorbing around 40 percent of Afghan exports. In the four months to February 2026, imports from Pakistan fell by roughly 95 percent and exports by about 88 percent. Afghan traders reported losses near US\$2.5 million a day, with perishable consignments spoiling at sealed crossings.

Year-on-year comparison, which controls for seasonality, reveals a sharply differentiated pattern. Total exports fell only 9.6 percent year on year over November to February—considerably less than expected—because some products were redirected successfully. Fresh and dried fruits, Afghanistan's flagship export, rose 36.7 percent as traders pivoted to India, and spices gained 72.4 percent. Pakistan-dependent bulk commodities, however, collapsed: vegetables fell 73.6 percent, raw cotton 65.3 percent, and minerals and fuels 64.5 percent. The dividing line was not political but physical, and Section 2.7 sets out the mechanism.

On the import side, adjustment was rapid but costly. The combined share of Central Asia and the Russian Federation rose from 19.6 percent to 29.5 percent of imports, adding about US\$128.5 million a month, with imports from Kazakhstan up 102.2 percent and from Turkmenistan up 91.0 percent. Iran consolidated its position as the largest source, rising from 29.2 percent to 34.3 percent, while the PRC's share reached 9.6 percent. Total imports actually rose about 8 percent after the closure, which demonstrates that alternative routes existed—but at higher freight cost, borne by Afghan consumers and firms.

The Middle East disruption. The second shock arrived while this adjustment was still in progress. From late February 2026, conflict across the Middle East disrupted the Strait of Hormuz and Gulf shipping routes, striking precisely the corridor that had just absorbed Pakistan's lost share. By that point Iran supplied 34.3 percent of Afghan imports and the United Arab Emirates a further 17.1 percent, so the exposure was at its maximum when the disruption occurred.

The effect fell most heavily on exports, which declined 22 percent year on year. India, which had become the critical alternative market for Afghan agricultural exports, saw its imports from Afghanistan collapse 95.2 percent year on year in March 2026, from US\$32.4 million to US\$1.6 million, as air freight and Gulf sea shipments were disrupted. Total exports fell to US\$78 million in March 2026, a 21.8 percent decline on the same month a year earlier. Imports proved more resilient but still contracted, with flows from Iran down 12.8 percent and from the United Arab Emirates down 16.5 percent. The trade deficit widened to an annualized US\$11.7 billion.

Three conclusions follow. Corridor concentration converts external political events into measurable income losses within weeks, not years. Redirection is possible but highly selective, and the selection is governed by product characteristics rather than by policy. And each rerouting raises costs that Afghanistan absorbs rather than passes on, because its bargaining position in every one of these relationships is weak. A further consequence operates through the budget: disrupted trade raises consumer prices while simultaneously reducing customs receipts, narrowing the fiscal room to cushion households at exactly the moment it is most needed.

2.7 Value density: why the shocks hit unevenly

Value density measures how much economic value a good carries relative to its weight or volume, usually expressed as USD per kilogram, cubic metre, or truckload. It shows how much value is contained in each unit of transport capacity. For example, a kilogram of saffron is worth several hundred dollars and has very high value density, while a kilogram of fresh onions is worth only a few cents and has very low value density. Both use freight space, but they generate very different value per unit transported.

$$\text{Value density} = \text{Shipment value (USD)} \div \text{Shipment weight or volume}$$

Value density matters because it determines whether a product can remain profitable when trade costs rise. A good can be exported through an alternative route only if the difference between its market price and farmgate price is greater than the added cost of freight, insurance, spoilage, financing, customs, and detours. When borders close and shipments are rerouted, these costs increase sharply.

$$\text{Profitable export requires: } P(\text{market}) - P(\text{farmgate}) > \tau \text{ (per-unit trade cost)}$$

The key point is that most trade costs depend on weight and volume, not on the value of the shipment. A truck charges roughly the same to carry a tonne of onions as a tonne of dried apricots. As a result, the same increase in freight cost has little effect on a high-value product but can make a low-value product unprofitable.

$$\text{Ad valorem trade cost} = \tau \div \text{value density}$$

Because value density is in the denominator, low-density goods face a much larger effective trade-cost shock from the same freight increase, while high-density goods are less affected. In this way, value density turns one physical transport shock into very different outcomes across sectors.

Two implications of this arithmetic are worth stating formally, because they organize much of the evidence in Sections 3 and 4. First, a uniform increase in per-unit freight cost is equivalent to a much larger ad valorem tax on low-density goods than on high-density goods, so a single physical shock produces a fan of sectoral outcomes rather than a uniform contraction. Second, because the relative price of high-quality varieties falls when a per-unit transport charge is added — the Alchian–Allen conjecture, confirmed empirically by Hummels and Skiba (2004) — rising trade costs shift the composition of exports toward the highest-value grades even as total volume falls. Both effects are visible in the Afghan

data for 2025–26. Time costs compound them: Djankov, Freund, and Pham (2010) estimate that each additional day in transit reduces trade by roughly one percent on average, and by substantially more for time-sensitive agricultural goods, which is the mechanism by which corridor delay translates into lost perishable exports even when the corridor eventually reopens.

2.7.1 The Afghan evidence

The trade response to the border closure is a near-textbook demonstration. When Pakistan corridor access collapsed and goods had to reroute through longer, costlier paths, exports split precisely along the value-density line.

Table 2.1: Examples of Border Disruption for Selected Commodity Trade

Export Line	Approx. Value Density	Post-Shock Response	Interpretation
Fresh & dry fruits	High (esp. dried)	+36.7%	Absorbed higher freight; redirected to India
Spices (e.g., saffron)	Very high	+72.4%	Freight trivial vs. value; readily redirected
Vegetables	Very low	–73.6%	Freight prohibitive; could not redirect
Cotton (raw)	Low	–65.3%	Bulky, low value; redirection uneconomic
Minerals & fuels	Low (esp.coal)	–64.5%	Heavy, low value; corridor-dependent

The goods that survived the shock were those whose value density was high enough that the incremental freight cost of a longer corridor remained a small fraction of their value. The goods that collapsed were those where the same freight increase exceeded the entire trade margin. The correlation is not incidental — it is the causal signature of the value-density mechanism operating on Afghanistan's export base.

Value density does more than describe export performance; it exposes the structural fragility of Afghanistan's export base. First, exports remain concentrated in low-density perishables, with fresh and dried fruits accounting for roughly 40 percent of total exports and many shipments unable to withstand corridor disruptions. Second, Afghanistan's landlocked geography raises the cost of every alternative route, increasing the value-density threshold required for goods to remain commercially viable. Third, perishability intensifies this constraint: low-density perishable goods cannot absorb higher freight costs or be stored until borders reopen, leading to distress sales and lost producer surplus, including the reported \$2.5 million in daily losses at sealed crossings. Fourth, value density shapes transport options: high-density goods can justify air freight, the fastest and most resilient mode, while low-density goods remain dependent on road and sea routes that are more exposed to corridor closures.

2.8 Energy trade

One of the most strategically important trade categories is energy, including electric power and a variety of raw and refined fuels. This section summarizes the bilateral perspective for Afghanistan. Afghanistan sits at the center of a dense regional energy network. It imports most of its electricity and virtually all of its refined fuel from its neighbors, while exporting coal in the other direction. This subsection describes those bilateral flows in turn — cross-border electricity, fuel and gas, and the major projects now under construction — with the supporting figures set out in Tables 2.2 to 2.4.

Cross-border electricity

Afghanistan's power sector is defined by import dependence. Domestic plants — overwhelmingly hydropower — generate only about 250 MW, while roughly 800 MW is purchased from four neighbors, so imported electricity supplies on the order of three-quarters of grid demand at an annual cost of about US\$250–280 million. Uzbekistan is by far the largest supplier, delivering up to 450 MW into Kabul and the northern grid over a 442-km line, followed by Tajikistan at up to 150 MW of summer hydropower to the northeast. Turkmenistan and Iran together add roughly 200 MW, serving Herat and the western provinces; the split between the two shown in Table 2.2 is indicative, since public reporting does not cleanly disaggregate them. All of these flows are one-directional — Afghanistan imports power but does not currently export it.

Table 2.2. Cross-border electricity trade (imports to Afghanistan, current)

Partner	Supply to Afghanistan (MW)	Main lines / entry points	Areas served	Notes
Uzbekistan	Up to ~450	Surkhan–Hairatan 220 kV; 442 km line to Kabul via 5 provinces	Kabul and northern/eastern grid	Largest single supplier; 2026 supply agreement signed
Tajikistan	Up to ~150	220 kV lines into the northeast (Kunduz, Baghlan)	Northeastern provinces	Summer hydropower; supply deal renewed for 2026
Turkmenistan	≈150 †	Torghundi / Andkhoy 110–220 kV lines	Herat (west) reaching toward Kabul	Long-standing supplier; expanding under new deals
Iran	≈50 †	Western interconnections (Islam Qala area)	Herat, Farah, Nimroz (western provinces)	Serves western border provinces
Total imported	≈800	—	≈75% of grid supply	Vs. ~250 MW domestic generation; ~US\$250–280 m/yr

† Turkmenistan and Iran together supply roughly 200 MW; the split shown is indicative.

Fuel and gas trade

Liquid fuels are Afghanistan's largest energy import by value. Combined imports of petrol, diesel, and liquefied petroleum gas (LPG) reached nearly US\$2.5 billion in 2025, up sharply on the previous year — petrol rose about 27 percent, diesel 53 percent, and LPG 30 percent. Iran remains the traditional lead supplier, moving roughly 3,000 tons of products a day through the western crossings at Islam Qala and Nimroz, while Turkmenistan, Russia, Kazakhstan, Uzbekistan, and Azerbaijan supply the balance through northern rail and road routes; Afghanistan has become the region's largest buyer of Russian LPG. Pipeline gas is negligible today — cross-border gas arrives mainly as bottled LPG rather than through a

network. Coal runs in the opposite direction: it is the one energy commodity Afghanistan exports, with shipments to Pakistani industry rising sharply since 2022.

Table 2.3. Cross-border fuel and gas trade (current)

Partner	Main commodities	Direction	Route / border crossing	Scale and notes
Iran	Diesel, petrol, LPG	Import to AFG	Islam Qala / Dogharun (Herat); Nimroz	Traditional lead supplier; ~3,000 t/day of products via western crossings
Turkmenistan	Petrol, diesel; (future gas)	Import to AFG	Torghundi; Aqina (Faryab)	Major Central Asian fuel source; mineral-fuel imports ~US\$0.5 bn in prior years
Russia	LPG, discounted oil products	Import to AFG	Rail via Central Asia (Hairatan, Aqina)	Region's largest buyer of Russian LPG; ~418,000 t in 11 months of 2025
Kazakhstan	Natural gas, petroleum products, LPG	Import to AFG	Rail via Hairatan / Aqina	LPG partly via Kazrosgaz JV; sizeable share of energy + grain trade
Uzbekistan	Petroleum products; gas-based power	Import to AFG	Hairatan (Balkh)	Fuel plus 120 MW gas-fired generation under 2024 energy deals
Azerbaijan	Petroleum products	Import to AFG	Via Turkmenistan / Caspian routes	Supplementary supplier diversifying fuel sources
Pakistan	Coal	Export from AFG	Torkham; Ghulam Khan; Kharlachi	Reverse flow: Afghan coal exported to Pakistani industry (surged since 2022)

Planned and under-construction projects

Several cross-border projects could transform this picture over the next few years. CASA-1000, which will move up to 1,300 MW of Kyrgyz and Tajik summer hydropower to Afghanistan and Pakistan, is about 80 percent complete on the Afghan section and is targeted for operation by the end of 2026; Afghanistan would take up to 300 MW for domestic use and earn an estimated US\$45–65 million a year in transit fees. The long-delayed TAPI pipeline would carry 33 billion cubic meters of Turkmen gas annually toward Pakistan and India, with roughly 5 bcm absorbed by Afghanistan, and its Afghan section has been advancing. Uzbekistan is deepening its role through the planned 500 kV Surkhan–Dasht-e-Alwan line (up to 1,000 MW) and a broader package of supply and grid-upgrade deals, including new gas-fired generation and substations.

Table 2.4. Planned and under-construction cross-border energy projects

Project	Partners	Type	Capacity / Afghan share	Status (2026)	Afghan benefit
CASA-1000	Kyrgyzstan, Tajikistan → Afghanistan, Pakistan	Electricity transmission	Up to 1,300 MW (summer); ~300 MW to AFG	~80% complete in AFG; target operation end-2026 / Jan-2027	Up to 300 MW for domestic use + ~US\$45–65 m/yr transit fees
TAPI pipeline	Turkmenistan → Afghanistan → Pakistan → India	Natural gas pipeline	33 bcm/yr; ~5 bcm/yr to AFG	Construction advancing on Afghan section	Domestic gas supply + transit revenue and jobs
Surkhan–Dasht-e-Alwan 500 kV	Uzbekistan → Afghanistan	Electricity transmission	Up to 1,000 MW	US\$243 m deal signed (2025); under development	Raises Uzbek supply capacity toward 1,000+ MW
Uzbekistan supply expansion	Uzbekistan → Afghanistan	Power + infrastructure	+120 MW gas-fired generation; grid upgrades	US\$1.15 bn in deals (2024); substations under way	More reliable Kabul-area supply; new substations

Data reliability

These figures should be read as indicative rather than precise. Afghanistan stopped reporting regularly to international trade databases after 2020, and a large share of cross-border energy trade — fuel in particular — moves through informal channels, so both volumes and values carry wide uncertainty. The electricity capacities cited are contracted or typical peak levels rather than metered annual deliveries.

2.9 Why the pattern persists: Afghanistan's periphery trap

The preceding evidence describes a trade structure that has been remarkably stable in composition while being repeatedly rerouted in geography. Economic geography explains why. New trade theory holds that economies gain competitiveness when firms serve large markets, expand output, reduce average costs, and produce differentiated varieties (Krugman 1979). Afghanistan presents the reverse condition on every count. Its domestic market is small, its export routes are costly and unreliable, and Afghan firms rarely reach the scale needed to compete in processed or manufactured goods. Weak domestic demand combined with vulnerable corridors means that increasing returns to scale, the central mechanism of the theory, simply do not operate.

The home-market effect (Krugman 1980) compounds this. Larger neighbors—Pakistan, Iran, India, and the PRC—offer deeper domestic markets, denser supplier networks, and better access to ports and logistics. Processing and manufacturing therefore locate outside Afghanistan, leaving Afghan producers to supply raw or lightly processed commodities into other countries' value chains. The near-absence of intra-industry trade in differentiated varieties confirms the diagnosis: Afghanistan's trade is overwhelmingly inter-industry and classical in character, exporting primary commodities and importing manufactures and fuel. That absence is itself a symptom of the missing scale economies.

Afghanistan consequently fits the profile of an economic geography periphery (Krugman 1991), in which agglomeration forces work against it. The regional cores—Karachi, Tehran, and the Indian and Chinese industrial belts—combine large domestic markets with dense supplier networks, so their scale and linkage advantages are self-perpetuating: new firms locate there because other firms are already there. Afghanistan's high effective trade costs

prevent the backward and forward linkages that would allow a core to take root. In principle its low labor costs should attract activity dispersing from congested cores, but corridor disadvantage and risk are large enough to overwhelm that advantage.

The result is a self-reinforcing trap. Poor market access yields low output, low output sustains high average costs, high costs make firms uncompetitive, and uncompetitiveness confines Afghanistan to raw commodity production that keeps export value density low—which in turn magnifies the effect of any corridor disruption. The vulnerability is therefore structural and path-dependent rather than cyclical. It will not correct itself as shocks pass, because the agglomeration forces that produce it persist regardless of the status of any single corridor.

This is why the 2025–26 shocks matter beyond their immediate cost. Through hysteresis, the Pakistan closure and the Middle East disruption destroyed trading relationships and stranded goods, and any nascent Afghan processing or export capacity that failed in the process will not be rebuilt automatically when corridors reopen, because the agglomeration advantages remain concentrated across the border. Shocks of this kind ratchet Afghanistan further into the periphery: given its position in the regional economic geography, a temporary disruption can produce a permanent downward shift. The corollary is that the case for corridor reliability rests not only on avoiding immediate losses but on preventing the irreversible loss of productive capacity.

3 Potential opportunities for regional trade and RCI

Section 2 established what Afghanistan currently trades and through which corridors. This section asks a different question: where does unrealized potential lie? Three diagnostics are applied to the same underlying trade data, each answering one part of the question. Each is presented in full — definition, data, estimation, and limitations — before its results are read, so that the weight the findings can bear is visible alongside the findings themselves.

3.1 How the three diagnostics fit together

The trade complementarity index (TCI) asks whether Afghanistan's export supply structure matches a partner's import demand structure. It is a test of fit: a high score means that what Afghanistan sells is what the partner buys, irrespective of whether any trade actually occurs. Revealed comparative advantage (RCA) asks a different question—whether Afghanistan is disproportionately specialized in a product relative to world trade, which is a test of competitive position rather than of partner fit. The gravity model asks a third—whether observed trade falls short of what economic size, distance, and bilateral characteristics would predict, which is a test of performance against potential.

Taken separately, each is easy to over-read. High complementarity with a partner means nothing if Afghanistan cannot reach that market; a high RCA can reflect a shrinking denominator rather than genuine strength; and a negative gravity residual identifies a shortfall without saying what causes it. Taken together, they are considerably more informative, because an opportunity that all three identify is one where demand exists, Afghanistan is competitive, and trade is nonetheless below potential—which localizes the problem in access and cost rather than in capability. Section 3.8 sets out where the three converge.

One methodological caution applies throughout. All three diagnostics rest on mirror data, because Afghanistan stopped reporting to UN Comtrade after August 2021, and all three therefore inherit the limitations described in Section 2.1. The RCA estimates use the BACI v202601 release with a 2022–2024 benchmark; the TCI uses an eleven-year panel to 2024; the gravity estimates are fitted over 2015–2021 and so straddle the structural break of the transition. Results are reported to the precision the data support and no further, and the caveats attaching to each are stated where its method is set out.

3.2 Trade complementarity: construction and findings

3.2.1 Definition and interpretation

The World Trade Organization (WTO) Trade Complementarity Index (TCI) is a measure showing how well one country's export supply structure matches another country's import demand structure. High values indicate greater prospects for mutually beneficial trade. A higher index value means the countries' trade profiles are more complementary — greater potential for trade — while a lower value indicates less trade match. The index is widely used by the WTO and other organizations to evaluate the compatibility of two countries'

trade structures, helping to identify the potential for greater bilateral trade or the effects of trade agreements.

The index used here is the standard complementarity measure set out in UNCTAD and WTO (2012) and widely applied in the form given by Michaely (1996). It compares the commodity composition of one country's exports with that of another's imports, and is constructed as one minus half the sum of absolute differences between the two shares, scaled to a 0–100 range:

The TCI between country i (exporter) and country j (importer) is expressed as:

$$TCI_{ij}=100 \left[1 - \sum_k \left| \frac{X_{ik}}{\sum_k X_{ik}} - \frac{M_{jk}}{\sum_k M_{jk}} \right| \right]$$

Where:

- X_{ik} : value or share of good k in total exports of country i
- M_{jk} : value or share of good k in total imports of country j
- The sum is taken over all product categories k

The index ranges from 0 (no complementarity) to 100 (perfect complementarity). The primary applications are assessing trade potential between countries, informing bilateral trade negotiation strategies, and evaluating the impact of integration agreements.

Three properties matter for interpretation. The index is symmetric in the pair, so a high score is a statement about the fit between two structures rather than about either country alone; it is defined over shares, so it is invariant to the scale of either economy and says nothing about whether trade actually occurs; and it is silent on trade costs, which is precisely why it must be read alongside the gravity results in Section 3.7. A high complementarity score identifies a match that would be profitable if it could be reached, not one that is being realized.

3.2.2 Data

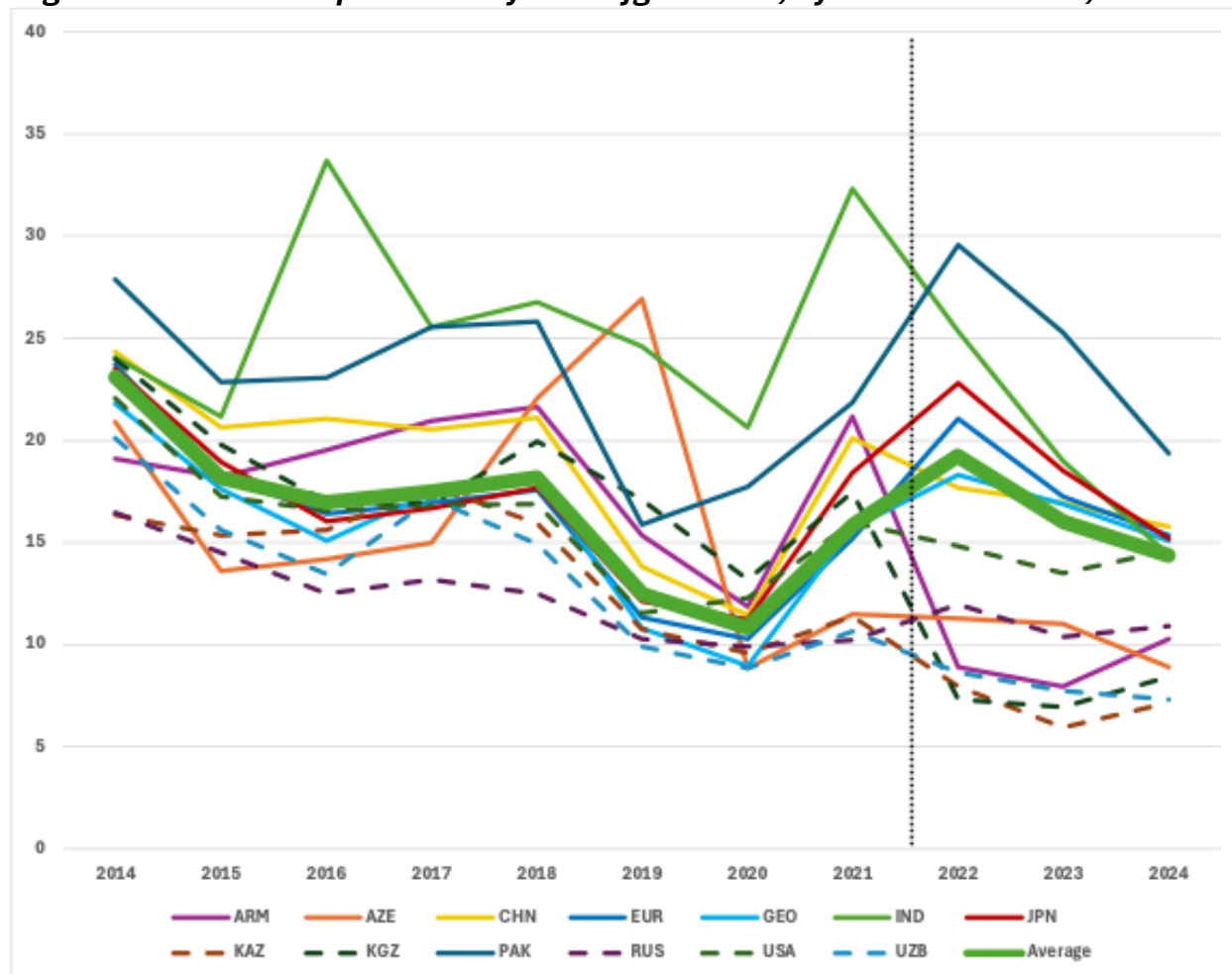
The complementarity estimates reported here are computed from BACI v202601 bilateral mirror-trade data over an eleven-year panel to 2024, synthesizing more than nineteen million observations at the product level and aggregating to the partner-year scores plotted in Figure 3.1. Because Afghanistan's export shares after August 2021 are themselves reconstructed from partner reports, the post-transition years inherit the mirror-data limitations set out in Section 2.1.

3.2.3 Findings

The TCI analysis synthesizes over 19 million observations across eleven years of detailed bilateral mirrored trade data from UN Comtrade. Results indicate clear advantages for Afghanistan to expand trade with neighbors and particularly Central Asian regional partners. Partners consistently above the average TCI before the political transition — in order of TCI difference from the mean — were India, Pakistan, Armenia, Azerbaijan, China, and Japan. The EU and USA track near the average because of the magnitude of their pre-

transition trade volumes. The TCI is a symmetric indicator, meaning the message should be directed to Afghanistan's trading partners as emphatically as to Afghanistan itself: deteriorated trade links impose costs on both sides.

Figure 3.1: Trade Complementarity with Afghanistan, by Partner and Year, 2015–2024



Note: TCI = trade complementarity index; GCC = Gulf Cooperation Council. Scores are index points on a 0–100 scale.

Source: Authors' calculations from BACI v202601 (CEPII, 2026) bilateral mirror-trade data.

Interpreting the TCI results for Afghanistan. The TCI analysis synthesizes eleven years of BACI bilateral trade data and produces several durable patterns. Afghanistan's highest complementarity scores are consistently with India, the Gulf Cooperation Council, and Central Asian partners — reflecting the structural match between Afghanistan's agrifood and artisan export base and the import profiles of these markets. Complementarity with Pakistan is also high, though volatile, due to the political overlay on the bilateral relationship. The following partner-by-partner reading derives the main policy implications.

Pakistan (TCI ≈ 55–65). Afghanistan's vegetable products, dried fruits, and mineral exports align closely with Pakistan's import demand, while Pakistan's manufactures, foodstuffs, and chemicals match Afghan import needs. The high TCI score explains why

border closures carry such a large economic cost: when a near-perfect trade complement is interrupted, Kandahar grape growers, Nangarhar's vegetable traders and Nimroz's onion farmers have no short-run substitute market. Their goods at sealed crossings, generating an approximately \$2.5million in daily losses that falls as forgone incomes, driving families to sell assets, borrow, or withdraw children from school, and skipping meals. A single extended closure during peak harvest could wipe out a household's entire annual cash income. The complement is also asymmetric — Pakistan loses a marginal export market, while Afghanistan loses its primary one. This asymmetry underscores the priority of a border-continuity compact.

India (TCI ≈ 50–60). India's large and diversified import demand for agrifood commodities, carpets, and gems aligns closely with Afghanistan's export supply structure. The gap between the TCI-implied potential and realized bilateral trade flows represents the largest identifiable "unrealized trade" opportunity in the dataset. This gap was sharply worsened by the 2021 closure of Pakistani airspace to Afghan exports and the resulting loss of the direct overland route. Chabahar offers the best available route to close this gap, but full operationalization requires multi-year tariff certainty and cargo-tracking integration.

Central Asian partners (TCI ≈ 30–45). Uzbekistan, Turkmenistan, and Tajikistan show intermediate TCI scores. These countries export energy, metals, and construction materials that Afghanistan imports, generating real complementarity on the import side. However, Afghanistan's current export mix — dominated by agrifood and artisan goods — is less well-matched to Central Asian import demand than to South Asian or Gulf demand. Expanding bilateral trade with Central Asia will therefore require both corridor investment and export product diversification, making it a medium-term rather than short-term opportunity.

People's Republic of China (TCI ≈ 25–35). China's extreme manufacturing specialization produces a modest complementarity score with Afghanistan, though the minerals dimension — copper, chromite, lithium — is potentially significant as China's demand for critical minerals continues to grow. Belt and Road-related infrastructure and China's strategic interest in Mes Aynak and Hajigak deposits suggest that the effective TCI could rise substantially over the medium term if extraction governance and transit infrastructure are developed.

The eleven-year panel in Figure 3.1 reveals an important structural shift: complementarity scores with Pakistan declined from their 2015–2018 peaks, consistent with the repeated border disruptions of that period, while scores with India and Central Asia edged upward — reflecting trade route diversification and the Chabahar corridor's gradual operationalization. The COVID-19 shock of 2020 compressed all scores briefly before recovery. The 2021 political transition produced a renewed dip followed by partial recovery as informal trade channels adapted. These dynamics reinforce the conclusion that geopolitical and logistical barriers, not structural incompatibility, are the primary constraint on Afghanistan's trade expansion.

3.3 Comparative advantage: the RCA findings

3.3.1 Data and method

This subsection sets out the data and method behind the systematic analysis of Afghanistan's Revealed Comparative Advantage (RCA) using the most current available trade data — BACI v202601 (CEPII, January 2026 release), covering the period 1995–2024. The 2022–2024 three-year average is used as the benchmark, replacing the 2019 estimates that appeared in earlier versions of this report. The revision is material: the 2021 political transition, the severe 2021–2022 drought, and structural shifts in Afghanistan's export orientation under Taliban administration have substantially altered the country's trade profile.

Export data are drawn from BACI v202601 using a mirror-data methodology. Afghanistan ceased reporting to UN Comtrade after August 2021. BACI reconstructs Afghanistan's export profile from what partner countries — principally Pakistan, India, the United Arab Emirates, China, Uzbekistan, and Iran — report as imports from Afghanistan, weighted by importer-report reliability scores. This is the standard approach endorsed by CEPII for non-reporting conflict-affected states and is the most defensible methodology available for the post-2021 period. Export shares are mapped to the WITS 17-group HS classification and the Balassa RCA index ($RCA_{ij} = (X_{ij}/X_i) \div (XW_j/XW)$) is computed for Afghanistan and five comparator CAREC member economies.

In formal terms, the Balassa (1965) index of revealed comparative advantage for country i in sector j is the share of sector j in country i 's exports divided by the share of sector j in world exports:

$$RCA(i,j) = (X(i,j) / X(i)) \div (X(w,j) / X(w))$$

A value above unity indicates that the country is more specialized in that sector than the world as a whole, and is conventionally read as revealed comparative advantage. Two properties of the index require care in the present application. It is a ratio of shares, so a rise can reflect contraction elsewhere in the export basket or an expansion of the world denominator rather than any improvement in underlying competitiveness — a point developed by Vollrath (1991) in his comparison of alternative specifications, and one that applies directly to Afghanistan, whose export basket contracted sharply after 2021. And it is computed on gross exports, so it attributes the full value of a re-exported or lightly transformed good to the last exporter, which matters for the miscellaneous and stone-and-glass categories where Gulf re-export channels are important.

Two important caveats apply. First, the Taliban administration actively promotes mineral and gemstone exports through informal and semi-formal channels; mirror data from the UAE and China partially capture these flows, but some fraction of lapis lazuli, gemstone, and chromite exports may be underreported. Second, opium and narcotic products are excluded from formal trade databases; Afghanistan's overall informal export economy is substantially larger than the figures analyzed here.

3.3.2 Results

Table 3.1 presents an estimated RCA matrix for Afghanistan and five comparator countries — Pakistan (PAK), India (IND), Uzbekistan (UZB), Kazakhstan (KAZ), and China (CHN) — computed from BACI v202601 using 2022–2024 average export shares. Values in bold indicate $RCA \geq 1.0$ (comparative advantage relative to the world). Afghanistan has seven sectors with $RCA \geq 1$, up from five in the 2019 benchmark.

**Table 3.1: Revealed Comparative Advantage
Selected CAREC Partners (2022–2024 Average, BACI v202601)**

Sector (WITS 17-group)	AFG	PAK	IND	UZB	KAZ	CHN
Animal Products	1.21	0.43	1.71	0.86	0.36	0.29
Vegetable Products	9.20	1.64	0.92	2.00	0.55	0.29
Food Products	0.68	0.96	0.90	0.71	0.61	0.37
Minerals	4.15	0.25	1.05	1.75	2.05	0.20
Fuels	0.01	0.03	1.29	0.56	4.46	0.05
Chemicals	0.02	0.22	1.10	0.67	0.41	0.68
Plastics/Rubbers	0.06	0.29	0.76	0.43	0.25	1.10
Hides/Leather	5.00	3.78	1.71	7.80	0.24	1.10
Wood & Paper	0.12	0.26	0.53	0.53	0.26	0.82
Textiles	5.48	11.08	1.94	6.48	0.16	1.72
Clothing	0.50	7.08	1.21	2.55	0.03	2.24
Footwear	0.21	0.63	0.77	0.56	0.00	1.69
Stone & Glass	2.72	0.21	0.65	1.21	0.27	0.86
Metals	0.26	0.25	1.22	1.14	1.40	1.03
Machinery & Electrical	0.00	0.23	0.72	0.24	0.13	1.76
Transportation	0.01	0.21	0.86	0.36	0.25	0.76
Miscellaneous	2.37	0.89	1.32	3.03	0.50	1.26

Bold = $RCA \geq 1.0$ (comparative advantage vs. world). Source: Authors' calculations from BACI v202601 (CEPII, 2026), applying Balassa (1965) RCA index to 2022–2024 mirror-data reconstruction of Afghanistan export shares; WTO/UNCTAD 2022–2024 world export share benchmarks.

3.4 Sectors with comparative advantage

3.4.1 Vegetable Products (RCA 9.20)

Vegetable Products (HS 06–15, principally dried grapes/raisins HS 0806, dried apricots and prunes HS 0813, almonds HS 0802, fresh pomegranates HS 0810, and saffron HS 0910) remain Afghanistan's single largest source of revealed comparative advantage and the dominant component of formal exports. The 2022–2024 RCA of 9.20 represents a substantial decline from the 2019 value of 15.28, driven by three overlapping factors: the 2021–2022 drought (NDVI anomaly across Kandahar–Helmand of -2.0 to -2.5 standard deviations below the 1981–2010 mean), supply-chain disruption following the August 2021 transition, and elevated world food prices that increased the denominator of the Balassa index. Raisin exports from Kandahar province, which typically account for 60–70% of Afghan dried-fruit export value, fell sharply in 2021–22 before beginning recovery in 2022–23 as precipitation improved.

Saffron (Herat province) has emerged as a strategically important sub-sector, with Afghanistan reporting approximately 20–25 tonnes of production annually, capturing a growing share of the premium saffron market. The Taliban administration has actively encouraged saffron as an alternative to poppy cultivation. Pakistan remains the primary export corridor for most Vegetable Products, accounting for approximately 40–50% of

formal agrifood trade, with India, the UAE, and Central Asian markets absorbing the balance.

Implication: Agrifood value-chain investment — post-harvest storage, cold-chain logistics, and phytosanitary certification — remains the highest-return RCI investment cluster for Afghanistan.

3.4.2 *Textiles (RCA 5.48)*

Textiles (HS 50–60, 63), which overwhelmingly consist of handwoven carpets and kilims (HS 5701–5703), represent Afghanistan's most globally recognized export product and its second-strongest comparative advantage. The 2022–2024 RCA of 5.48 is marginally below the 2019 value of 5.60, indicating remarkable resilience given the structural disruption of the post-2021 period. Afghan handmade carpets command significant premiums in European, North American, and Gulf markets owing to their distinctive design heritage. Pakistan serves as both a direct market and a transit/re-export hub for Afghan carpet exports to third countries.

The principal risks to carpet comparative advantage are: disruption to the artisan workforce (an estimated 1–2 million people engaged in carpet weaving across Herat, Kunduz, Faryab, and Kabul provinces); access to natural dyes and wool inputs; and the loss of skilled design expertise following emigration of urban professionals. Geographic Indication (GI) registration and digital provenance certification could protect and extend premium pricing.

Implication: Investment in carpet certification, GI registration, and e-commerce market linkage would extend Afghanistan's competitive position in high-margin Western and Gulf markets.

3.4.3 *Hides and Leather (RCA 5.00)*

Hides, skins, and leather goods (HS 41–43) — principally karakul (astrakhan) sheepskin, raw bovine hides, and semi-processed leather — show a strengthened RCA of 5.00 in the 2022–2024 period, up from 3.65 in 2019. This improvement reflects resumed live animal and hides exports northward through Uzbekistan and westward through Iran, as well as formalization of some UAE-routed leather trade. Karakul sheepskin, historically produced in Kunduz, Balkh, and Badghis provinces, commands premium prices in luxury fashion markets and has maintained its specialized niche despite the broader economic disruption.

Implication: Value-chain deepening toward processed leather and finished goods — linking Afghan raw hides to Pakistani tanneries and thence to export markets — represents the highest-return medium-term investment in this sector.

3.4.4 *Minerals (RCA 4.15)*

Minerals (HS 25–26), including chromite, talc, marble, and semi-processed stone products, have seen the sharpest improvement in RCA — rising from 1.25 in 2019 to 4.15 in the 2022–2024 period. This reflects a structural shift: the Taliban administration has actively promoted mineral exports as a primary revenue source, granting concessions and export

permits for chromite, talc, and marble across Kunar, Logar, Zabul, and Kandahar provinces. China has emerged as the dominant buyer of Afghan chromite and talc, with export volumes rising sharply from 2022 onward.

Afghanistan holds an estimated 1–3 trillion USD in mineral resources (US Geological Survey / Afghan Ministry of Mines assessment), but formal extraction remains artisanal and poorly documented. Coal exports to Pakistan (principally from Baghlan and Samangan provinces) represent a significant informal trade flow that is partially captured in Pakistani mirror data.

Implication: Mineral sector development requires governance frameworks before large-scale investment is viable. ADB and multilateral engagement should focus on royalty transparency, environmental safeguards, and sanctions-compliant payment structures as preconditions.

3.4.5 Stone and Glass (RCA 2.72)

Stone and Glass (HS 68–70, including semi-precious stones HS 71 in the WITS classification) — principally lapis lazuli (Badakhshan), marble (Herat, Kandahar), and a range of colored gemstones (emeralds from Panjshir, rubies from Jagdalak, tourmaline from Nuristan) — show a rising RCA of 2.72, up from 1.15 in 2019. The improvement reflects both formalization of lapis lazuli trade through UAE channels and growing Chinese demand for Afghan decorative marble.

Lapis lazuli from Badakhshan's Sar-e-Sang mine is unique globally — no comparable deposit exists — and commands high premiums in luxury materials markets. The Taliban's regularization of lapis exports through formal UAE transit has increased official capture of this trade flow, though significant smuggling via Pakistan and Tajikistan persists.

3.4.6 Miscellaneous (RCA 2.37 — newly above threshold)

Miscellaneous exports (HS 97–99 WITS grouping, which includes karakul pelts classified separately from broader hides, antiques, collector items, and re-exported goods) register an RCA of 2.37 in 2022–2024, rising from 0.84 in 2019 — crossing the comparative-advantage threshold for the first time. This reflects the growing role of Afghan re-export trade through UAE channels, as well as formalization of karakul and specialty handicraft exports. The composition of this category is heterogeneous and warrants careful monitoring.

3.4.7 Animal Products (RCA 1.21 — newly above threshold)

Animal Products (HS 01–05 — live animals, meat, dairy, fish, and animal by-products) register an RCA of 1.21 in 2022–2024, rising from 0.31 in 2019 and crossing the comparative-advantage threshold for the first time in available data. This reflects resumed live sheep and cattle export flows northward through Uzbekistan and Tajikistan, and some ovine trade westward through Iran. Afghan karakul sheep are a specialized livestock breed with premium market value. However, the improvement in this RCA partly reflects reduced world export shares in animal products following the COVID-19 disruption of global livestock trade, and should be interpreted cautiously.

3.5 Sectors without comparative advantage

Afghanistan exhibits very low RCA values across all manufacturing, chemicals, machinery, and transportation categories — consistent with its pre-industrial export structure. Food Products (RCA 0.68), which in the WITS classification captures processed food rather than raw agricultural commodities, is below unity despite Afghanistan's strong position in primary agrifood. This underscores the value-addition opportunity: upgrading from raw raisins to processed food products or from raw hides to finished leather could substantially raise export earnings without displacing existing comparative advantage.

Fuels (RCA 0.01), Machinery and Electrical (RCA 0.005), and Transportation (RCA 0.01) are effectively zero, reflecting Afghanistan's complete absence from global manufacturing supply chains. These sectors are not realistic targets for near- or medium-term RCI investment in Afghanistan's current circumstances.

3.6 Positioning within CAREC

3.6.1 *Complementarity and Competition among CAREC Members*

CAREC's twelve members span a wide range of export structures: hydrocarbon exporters (Kazakhstan, Turkmenistan, Azerbaijan), manufacturing exporters (China, Pakistan, Georgia, Azerbaijan), and primary commodity exporters (Afghanistan, Kyrgyz Republic, Tajikistan, Mongolia). This diversity creates significant complementarity potential for Afghanistan's export profile, which is concentrated in precisely the categories where China, Pakistan, and the Central Asian manufacturing economies have deficits or are net importers. This is a new opportunity for regional members, which have relatively weak historical ties in these categories.

3.6.2 *China: Textbook Complementarity*

China's RCA profile is dominated by Machinery and Electrical (38.8%), Textiles (6.4%), and Chemicals (8.5%), with very low shares in primary commodities. China's import demand for Afghan chromite, talc, marble, and (increasingly) lapis lazuli is structurally complementary. Belt and Road Initiative infrastructure — particularly the Wakhan Corridor feasibility studies and the Pakistan-China Economic Corridor (CPEC) junction at Peshawar — offers a long-run physical pathway, though the current Wakhan route remains logistically impractical at scale.

3.6.3 *Pakistan: Critical Partner, Structural Tension*

Pakistan (RCA dominated by Textiles 41.2%, Clothing 22.8%) is both Afghanistan's most important trade partner and a structural competitor in the sectors where Afghanistan is strongest. Pakistani and Afghan carpets compete in some market segments, and Pakistan's agrifood exports (mangoes, rice, wheat) partially overlap with Afghan dried fruit in Middle Eastern and European markets. However, Pakistan's deep domestic demand for Afghan raisins, almonds, and hides — and its role as a transit economy — makes the overall relationship complementary. Pakistan accounts for roughly 40–45% of Afghanistan's formal merchandise exports.

3.6.4 Bilateral Trade Implications by Partner

Table 3.2: Bilateral Trade Complementarity – Afghanistan and Key Partners (2022–2024)

Partner	AFG Exports with RCA ≥ 1	Partner Import Need	Complementarity	Key Constraints
Pakistan	Vegetable Products, Textiles, Hides/Leather, Stone & Glass	Agrifood inputs, raw materials, textile semi-manufactures	HIGH	Border closure risk; informal tariff barriers; transit fees
India	Vegetable Products (raisins, dried fruit), Minerals, Stone & Glass	Dried fruit, nuts, precious/semi-precious stones, marble	HIGH (route-constrained)	No direct land route; Chabahar underutilized; Pakistan transit risk
China	Minerals (chromite, talc), Stone & Glass (lapis lazuli, marble), Miscellaneous	Critical minerals, decorative stone, luxury commodities	MEDIUM-HIGH	Wakhan corridor limited; financing/banking barriers; BRI asymmetry
Uzbekistan	Textiles, Animal Products, Vegetable Products	Raw cotton inputs, semi-processed hides, agrifood	MEDIUM	Hairatan–Mazar bottleneck; da Afghanistan Bank freeze
Kazakhstan	Vegetable Products (fresh/dried), Stone & Glass	Horticultural products; decorative stone	LOW-MEDIUM	Long transit distance; cold-chain gap; phytosanitary barriers
Iran	Vegetable Products, Miscellaneous, Animal Products	Dried fruit, livestock, re-export commodities	MEDIUM	OFAC sanctions; informal trade dominates; currency inconvertibility

Source: Authors' analysis based on BACI v202601 RCA results, CEPII (2026) mirror-data reconstruction; ADB CAREC 2030 strategic framework; UN ESCAP trade facilitation assessments.

3.7 Gravity estimates: specification, data, and results

3.7.1 Theory and specification

Although the global economy is a complex web of multilateral relations, trade ultimately decomposes into bilateral flows of goods and services between pairs of countries. Gravity models exploit a robust empirical regularity: bilateral trade rises with the economic size of both partners and falls with the trade costs between them. A country's import demand grows with its own income (GDP), while its exports grow with the income and import demand of its trading partners. Distance, shared borders, common language, and historical ties stand in for the frictions that raise or lower trade costs. The basic specification is:

$$\log X_{ij} = c + b_1 \log \text{GDP}_i + b_2 \log \text{GDP}_j + b_3 \log \tau_{ij} + e_{ij}$$

$$\log \tau_{ij} = \log(\text{distance}_{ij} + \text{trade costs})$$

where X_{ij} denotes exports from country i to country j , GDP_i and GDP_j are the two economies' incomes, τ_{ij} represents trade costs proxied by distance and observable bilateral characteristics, and e_{ij} is a random error. The gravity metaphor is apt: like gravitational attraction, trade is larger between bigger economies and weaker between more distant ones.

The specification estimated here is the traditional log-linear gravity equation. Modern practice derives the same relationship from general-equilibrium foundations, in which bilateral trade depends not on absolute trade costs but on trade costs relative to each

country's multilateral resistance — the average barrier it faces against all partners (Anderson and van Wincoop 2003). Head and Mayer (2014) and Yotov, Piermartini, Monteiro, and Larch (2016) set out the resulting estimation conventions. The fixed-effects specification reported below partially addresses multilateral resistance, since country-by-direction dummies absorb the exporter and importer terms that the structural model requires, though they do so as time-invariant rather than time-varying effects.

Two estimation caveats should be recorded. Estimating the equation in logarithms drops observations with zero trade, which is not innocuous for a country whose bilateral matrix contains many zeros, and it yields inconsistent estimates in the presence of heteroskedasticity; Poisson pseudo-maximum-likelihood estimation on trade levels is the standard remedy (Santos Silva and Tenreyro 2006). The estimates reported here are ordinary least squares on log flows, which is the conventional and transparent benchmark, but the coefficients should be read as approximations whose magnitudes would shift somewhat under a Poisson specification. Second, the trade-cost proxies are the standard geographic and institutional variables and therefore capture only the component of trade cost that is correlated with them; border delay, informal payments, and the absence of trade finance enter the residual rather than the coefficient vector.

3.7.2 Data

For the estimates reported here, the study uses the BACI (Base pour l'Analyse du Commerce International) database — reconstructed bilateral trade flows for roughly 200 countries at the six-digit HS product level — supplemented by CEPII geographic and institutional variables including distance, contiguity (a shared border), common official language, and post-1945 colonial ties. Two specifications are estimated: an aggregate model that uses GDP to capture economic size (Table 3.3), and a fixed-effects model that replaces GDP with a separate dummy variable for each country in each trade direction (Table 3.4), isolating each country's structural propensity to export and to import.

3.7.3 The aggregate model

Table 3.3: Aggregate gravity model results

Variable	Coefficient	Std. error	t-statistic	p-value
Intercept	-24.219***	0.659	-36.731	<0.001
log(distance)	-1.363***	0.057	-23.813	<0.001
log(GDP, importer)	0.794***	0.017	47.903	<0.001
log(GDP, exporter)	1.381***	0.015	93.683	<0.001
Contiguity (shared border)	1.098***	0.249	4.411	<0.001
Common official language	0.404***	0.124	3.261	0.001
Colonial ties (post-1945)	1.473***	0.359	4.107	<0.001

*Note: *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$. Estimated by ordinary least squares on 181,669 bilateral observations; $R^2 = 0.54$. All coefficients are significant at the 1 percent level and carry the expected sign. Coefficients on the log variables are elasticities; coefficients on the 0/1 dummies (contiguity, common language, colonial ties) are approximate proportional effects, converted to multipliers in the text as e^{β} .*

Every explanatory variable is statistically significant at the 1 percent level and carries the sign that gravity theory predicts. The two size elasticities behave as expected but differ informatively in magnitude. The exporter-GDP elasticity of 1.381 exceeds one: a 10

percent increase in a country's own economic size is associated with a roughly 14 percent increase in its exports, so export capacity expands more than proportionally as an economy grows. The importer-GDP elasticity of 0.794 is smaller — a 10 percent larger partner economy pulls in about 8 percent more imports. For Afghanistan this asymmetry is encouraging in one respect, since even a modest domestic recovery should translate into a more-than-proportional gain in export capacity, but sobering in another, because the country's own small economic size is precisely what the size term penalizes.

The trade-cost variables carry the real policy content. The distance elasticity of -1.363 sits at the upper end of the range typically found in global gravity studies, where most estimates cluster between -0.9 and -1.5 , indicating that trade falls off steeply with distance and, by extension, with the trade costs that distance proxies. A shared border (contiguity) raises bilateral trade by a factor of about three ($e^{1.098} \approx 3.0$) beyond what size and distance alone predict; a common official language adds roughly 50 percent ($e^{0.404} \approx 1.5$); and a post-1945 colonial link is associated with more than a fourfold increase ($e^{1.473} \approx 4.4$). The border and language effects are directly relevant to Afghanistan, which shares land borders and linguistic communities with its neighbors; the colonial term functions largely as a control with little direct application to the Afghan case.

3.7.4 The fixed-effects specification

To extract more targeted, policy-relevant information, the analysis re-estimates the model with country-by-direction fixed effects, replacing the GDP terms with a separate dummy for each country as an origin (exporter) and as a destination (importer). Each fixed effect measures that country's average propensity to trade in a given direction relative to the sample benchmark, after controlling for distance, contiguity, language, colonial ties, and common year shocks. Because the dummies absorb economic size along with every other stable national characteristic, they are best read as composite measures of structural trade capacity rather than as size-free effects.

Table 3.4: Gravity model with country-by-direction fixed effects

Variable	Coefficient	Std. error	p-value
Trade-cost variables			
Intercept	14.887***	1.450	<0.001
log(distance)	-1.783***	0.186	<0.001
Contiguity (shared border)	0.852**	0.380	0.028
Common official language	1.169*	0.691	0.094
Colonial ties (post-1945)	2.131***	0.601	0.001
Origin (exporter) fixed effects			
Azerbaijan	0.748	0.619	0.230
China	9.878***	0.634	<0.001
Georgia	1.560***	0.582	0.009
India	6.029***	0.662	<0.001
Japan	6.908***	0.668	<0.001
Kazakhstan	2.334***	0.658	0.001
Kyrgyz Republic	-0.342	0.603	0.571
Pakistan	2.933***	0.655	<0.001

Russia	6.385***	0.602	<0.001
Turkey	7.287***	0.467	<0.001
United States	9.443***	0.725	<0.001
Uzbekistan	2.214***	0.585	<0.001
Afghanistan	-1.264*	0.692	0.071
Destination (importer) fixed effects			
Azerbaijan	1.121***	0.347	0.002
China	5.872***	0.467	<0.001
Georgia	1.049**	0.406	0.011
India	2.994***	0.520	<0.001
Japan	4.612***	0.571	<0.001
Kazakhstan	2.130***	0.428	<0.001
Kyrgyz Republic	0.293	0.459	0.524
Pakistan	1.589***	0.592	0.009
Russia	4.219***	0.435	<0.001
Turkey	4.725***	0.336	<0.001
United States	7.057***	0.575	<0.001
Uzbekistan	1.342***	0.448	0.004
Afghanistan	1.124**	0.479	0.021
Year effects			
Year 2015	-0.139***	0.048	0.005
Year 2016	-0.195***	0.055	0.001
Year 2017	-0.034	0.054	0.538
Year 2018	0.057	0.052	0.278
Year 2019	0.146**	0.059	0.016
Year 2020	0.041	0.082	0.615
Year 2021	0.256***	0.084	0.003

Note: *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$. Estimated on 18,009 observations; $R^2 = 0.55$. Each origin (destination) coefficient is the average within-sample propensity to export (import) relative to the omitted benchmark country, holding constant distance, contiguity, common language, colonial ties, and year effects. Year dummies are measured relative to the omitted base year. Afghanistan's rows are highlighted.

3.7.5 Results for Afghanistan

Every explanatory variable in both specifications is significant at conventional levels and carries the sign gravity theory predicts. Three findings matter for the opportunity set.

Three features stand out for Afghanistan. First, its origin (export) fixed effect of -1.264 is the lowest of the thirteen countries estimated and the only one that is both negative and statistically distinguishable from zero (at the 10 percent level). It implies that, holding geography and history constant, Afghanistan exports about 3.5 times less than the benchmark exporter ($e^{-1.264} \approx 3.5$). Only the Kyrgyz Republic has a negative point estimate (-0.342), and it is statistically insignificant; Azerbaijan's estimate is positive. Afghanistan is, in short, the region's structural export laggard.

Second, and in sharp contrast, Afghanistan's destination (import) fixed effect of $+1.124$ is positive and significant, placing its import propensity slightly above the benchmark and broadly in line with its CAREC neighbors. The gap between the two coefficients is telling:

Afghanistan's structural propensity to import exceeds its propensity to export by about 2.4 log points, a factor of roughly eleven ($e^{(1.124+1.264)} \approx 11$). This is the gravity-model signature of the country's chronic trade imbalance — an economy that absorbs imports readily but converts far too little of its productive base into exports.

Third, the very large origin effects of major economies — China (9.878), the United States (9.443), Turkey (7.287), Japan (6.908), Russia (6.385), and India (6.029) — are driven predominantly by sheer economic size, which the fixed effects absorb, and are therefore not the most informative comparison for Afghanistan. The more revealing benchmark is Afghanistan's own peer group of smaller regional economies. Even against the Kyrgyz Republic, its closest small-economy comparator, Afghanistan's export propensity is about 2.5 times lower ($e^{0.922} \approx 2.5$); against Uzbekistan, Kazakhstan, and Pakistan the structural shortfall is larger still. Afghanistan's export weakness is thus not merely an artifact of a small economy but a genuine structural deficit relative to comparably sized neighbors — a deficit that domestic policy reform, improved trade facilitation, and better bilateral relations could narrow.

3.7.6 *Caveats and limitations*

Several caveats temper these conclusions. Gravity coefficients are historical averages estimated over 2015–2021 and may not fully capture the structural break of the 2021 political transition; the year effects show only a modest upward drift over the sample and cannot speak to the post-transition regime. The BACI database, though the most comprehensive source available, rests on reported trade statistics that undercount the informal and transit flows estimated by UNODC at 30–40 percent of Afghanistan's formal trade — a bias itself concentrated in the household and small-trader activity discussed above, so the true export gap net of informal flows may be somewhat smaller than the headline coefficient suggests. The fixed-effects specification absorbs unobserved bilateral heterogeneity but cannot identify the precise source of trade suppression, whether policy, conflict, finance, or logistics. These limitations reinforce the value of reading the gravity results alongside the product-level RCA analysis (Section 3.3) and primary trader-survey evidence, and of re-estimating the model as more recent bilateral statistics become available.

3.7.7 *Policy implications of the estimates*

Policy implications of the gravity estimates. The coefficients can translate directly into implications and even priorities for ADB's regional cooperation and integration (RCI) programming. The following narrative draws out the most actionable insights from Tables 3.3 and 3.4.

The export gap is the primary policy target. Afghanistan's origin fixed effect of -1.264 implies that export volumes are roughly 3.5 times below the structural benchmark set by the country's geography and its partners' size. Closing even part of this gap would transform Afghanistan's external position: exports of about US\$2.8 billion sit against imports of roughly US\$12.1 billion, and the gravity model locates the deficit squarely on the export side rather than in excessive import demand. The implied agenda is familiar — lower trade costs, more reliable border management, and export-enabling investment in

agri-food and artisan value chains — but the model's contribution is to quantify the prize and to rank interventions by the counterfactual export volume each unlocks per dollar of cost.

Distance reflects trade costs, most of which are policy-amenable. The distance elasticity (-1.363 in the aggregate model and -1.783 with fixed effects) is at or above the global norm, so trade does fall off steeply with distance. For a landlocked country this might read as a geographic sentence — but distance in the gravity equation is a proxy for the entire bundle of trade costs, of which physical distance is only one part. The remainder — border delays, transit fees, customs friction, weak logistics, and the absence of trade finance — is exactly what policy can change. Because Afghanistan's effective economic distance to markets is inflated well beyond kilometers by these frictions, corridor upgrades, border-management reform, and trade facilitation offer unusually high returns: they compress effective distance without moving a single mountain.

Shared borders amplify trade — and border closures destroy that premium. The contiguity effect is positive and highly significant, multiplying bilateral trade roughly two- to threefold ($e^{0.852} \approx 2.3$ in the fixed-effects model, $e^{1.098} \approx 3.0$ in the aggregate) beyond what size and distance predict. For Afghanistan this border bonus applies to all six land neighbors — Pakistan, Iran, Turkmenistan, Uzbekistan, Tajikistan, and China. The result underscores the cost of border instability: when Pakistan closes Torkham or Chaman, Afghanistan does not simply lose a partner at ordinary distance, it forfeits the entire contiguity premium — an effect that is immediate, non-linear, and borne disproportionately by Afghan producers and traders. A predictable, rules-based border regime is therefore not a routine improvement but a way of protecting one of the largest single multipliers in Afghanistan's trade.

Linguistic and historical ties lower transaction costs. The common-language effect is positive and, in the fixed-effects model, large though only marginally significant. The Dari–Persian bridge linking Afghanistan, Iran, and Tajikistan, and the Pashto community straddling the Afghanistan–Pakistan frontier, reduce the information, negotiation, and contract-enforcement costs of cross-border trade. In programming terms this reinforces the priority of developing the Iran and Tajikistan corridors and of facilitating business-to-business engagement within the Pashto-speaking commercial networks along the Pakistan border, where shared language and kinship already supply frictions that formal institutions elsewhere must build from scratch.

Fixed-effects gaps as a targeting tool. The destination fixed effects rank markets by their structural appetite for imports. The largest belong to the United States, China, Japan, and Turkey — very large import markets, though only some are politically and geographically accessible to Afghan goods. Among Afghanistan's realistic targets, China (5.872) and India (2.994) show the strongest latent import demand, followed by the regional CAREC destinations of Kazakhstan (2.130), Pakistan (1.589), and Uzbekistan (1.342). These are precisely the markets where Afghan exports are most constrained by transit, payment, and standards barriers rather than by weak demand. ADB can use this ranking to sequence corridor and trade-facilitation investment toward the destinations where relieving access constraints will unlock the most export volume per dollar invested — the northern and western corridors toward Central Asia and, via Chabahar, toward India.

3.8 What the three diagnostics agree on

The three diagnostics were constructed independently and converge on a single conclusion: Afghanistan's trade problem is one of access and cost, not of capability or of absent demand. The RCA results show that competitive supply already exists in seven sectors. The TCI results show that regional and Indian import demand matches that supply closely. The gravity results show that realized exports are roughly three and a half times below the structural benchmark. If capability were the binding issue, RCA would be weak; if demand were the issue, complementarity would be low. Neither holds.

The convergence is sharpest in four places. Agrifood exports to India and the Gulf show high complementarity, Afghanistan's deepest comparative advantage, and the largest identifiable gap between potential and realized flows—making this the single clearest opportunity in the dataset, constrained by route reliability and perishability rather than by supply or demand. Carpets, hides, and other artisan manufactures combine durable comparative advantage with import demand in Pakistan, the Gulf, and Europe, and are constrained principally by certification, provenance, and payment channels. Minerals and decorative stone show strong comparative advantage and clear Chinese and Indian demand, constrained by governance and transport rather than by geology. And energy transit—in which Afghanistan's role is as a corridor rather than a producer—is the one category where a multilateral framework is already delivering.

The three diagnostics also agree on where opportunity is thinner. Complementarity with Central Asia is real on the import side but weaker for Afghan exports, because Central Asian import demand is less well matched to agrifood and artisan goods than South Asian or Gulf demand. Afghanistan has no comparative advantage in machinery, chemicals, fuels, or transport equipment, and the gravity results give no reason to expect that to change. Opportunities in those directions depend on corridor investment and product diversification, and are medium-term at best.

3.9 Priority opportunities by sector

3.9.1 The RCA as a Policy Compass

The updated RCA analysis provides a structured basis for prioritizing RCI investments. The seven sectors with $RCA \geq 1$ cluster into three strategic groups: (i) Agrifood (Vegetable Products, Animal Products), where comparative advantage is deep but vulnerable to climate shocks and transit disruption; (ii) Artisan and Heritage Manufactures (Textiles/carpets, Hides/Leather, Miscellaneous), where comparative advantage is durable and linked to unique cultural capital; and (iii) Extractives (Minerals, Stone and Glass), where comparative advantage is structurally strong but governance-constrained and sanctions-exposed.

3.9.2 Priority Sectors and Investment Opportunities

Table 3.5: Priority RCI interventions by sector

Sector	RCA (2022– 24)	Immediate (0–18 mo)	Medium Term (18 mo–5 yr)	Long Term (5+ yr)
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Vegetable Products (Raisins, almonds, apricots, saffron)	9.20	Cold-chain nodes at Kandahar, Herat; phytosanitary MRAs with Pakistan and India; SPS training	Agrifood processing clusters; GI registration for Herat saffron, Kandahar raisins	Integrated horticulture value chain connecting Helmand–Kandahar– Karachi and Nimroz– Iran corridors
Textiles (Handwoven carpets, HS 57)	5.48	CAREC-level standards harmonization; trade finance for artisan exporters	Carpet GI and certification scheme; e-commerce platform linkage; duty-free market access advocacy	Regional carpet brand identity programme; design-IP protection framework
Hides & Leather (Karakul, raw hides, HS 41–43)	5.00	Veterinary certification protocols for Pakistan/GCC markets; export- quality grading	Leather processing zone co-financing; value-chain linkage to Pakistani tanneries	Diversification toward finished leather goods; regional standards convergence
Minerals (Chromite, talc, HS 25–26)	4.15	Establish transparent royalty/export- permit data; sanctions-compliant payment rails	Multi-stakeholder mineral-governance framework; EITI-lite reporting standard	Chinese BRI-linked transport and processing corridor; environmental/social safeguards
Stone & Glass (Lapis lazuli, marble, HS 71)	2.72	Provenance certification pilot (lapis lazuli); harmonized gemstone export data	Multilateral provenance tracking system; UAE hub formalization	Regional gemstone certification authority; artisanal mining social protection scheme
Miscellaneous (Karakul pelts, re- exports, HS 97–99)	2.37	Identify and document commodity composition; establish formal export registry	Formal commodity classification and trade facilitation support	Link to broader handicrafts and cultural-heritage export strategy
Animal Products (Live animals, HS 01–05)	1.21	Veterinary health corridors with Pakistan and Uzbekistan; livestock disease surveillance	Livestock export corridor development; formal market linkages in Central Asia	Regional livestock trade agreement under CAREC framework

Source: Authors' analysis based on BACI v202601 RCA results; CAREC 2030 strategic framework; ADB project pipeline reviews; UN ESCAP trade facilitation capacity assessments.

Agro-processing and value addition represent the highest-return investment cluster: investment in storage, grading, and packaging for nuts, fruits, and saffron can substantially increase export earnings without changing production volumes. In mining and energy, balanced contracts for minerals with People's Republic of China and India — leveraging surplus energy for regional sales — could establish durable bilateral economic relationships. Light manufacturing in textiles and carpets, targeting new consumer segments in the region and the Gulf, builds on existing comparative advantage.

3.10 Priority opportunities by corridor and partner

Chabahar Port should be prioritized for modernization, offering Afghanistan direct maritime access and alternatives to Pakistani ports. The Lapis Lazuli Corridor, CAREC corridors, and improved railway links through Uzbekistan and Turkmenistan offer significant capacity for northward trade expansion. TIR (Transports Internationaux Routiers) system

implementation can simplify cross-border trucking, reducing costs and delays across multiple routes simultaneously.

Expanding agricultural and manufactured goods trade with Uzbekistan, Turkmenistan, and Tajikistan — including negotiating power purchase agreements and industrial joint ventures — would reduce the overconcentration on Pakistan. Restoring or expanding cargo via Chabahar and Iran to India is among the highest-priority bilateral trade opportunities. Pursuing Chinese investment in mining under mutually beneficial agreements and streamlining customs for the Wakhan Corridor could open a significant new trade and investment channel.

Afghanistan's dominant comparative-advantage sectors benefit from route diversification away from exclusive Pakistan dependence. The Hairatan–Mazar-i-Sharif railway (CAREC Corridor 6) constitutes an important “buffer” connects to the Uzbek rail network and thence to Kazakhstan and Russia; extending southward toward Kabul and westward toward Herat would open new corridors for carpet, dried fruit, and mineral exports. The Chabahar port route through Iran, formalized under the India–Iran–Afghanistan trilateral transit agreement, offers the most promising alternative gateway to Indian and third-country markets, though US OFAC sanctions on Iran create ongoing compliance risk for international logistics operators.

Two further opportunities follow from the partner analysis in Section 2.4 rather than from the three diagnostics. The Russian Federation and Türkiye have both become materially more important since 2022 without a land border, and the gravity results identify Türkiye in particular as a partner whose structural trade propensity is high relative to realized Afghan trade—it also completes CAREC Corridor 2 and connects to the Middle Corridor across the Caspian. And energy transit under CASA-1000 and, prospectively, TAPI offers Afghanistan revenue that depends on its geography rather than on its productive capacity, which makes it unusually robust to the constraints identified in Section 4.

3.11 Who gains: households, workers, and enterprises

The gravity estimates are not merely aggregate abstractions; the export gap they measure has a concrete human incidence. Afghanistan's revealed comparative advantage (Section 3.3) is concentrated in labor-intensive, largely rural and informal activities — dried fruit, raisins, almonds, and saffron; handwoven carpets and kilims; karakul pelts, hides, and livestock. These are the very sectors whose exports the origin fixed effect shows to be structurally suppressed. The -1.264 export gap therefore represents forgone income for smallholder farmers, orchard owners, pastoralists, and the estimated one to two million carpet weavers — a workforce in which women, often working from home, are heavily represented. Closing the gap would raise farmgate and workshop prices and expand paid work in precisely the parts of the economy where poverty is deepest and formal employment scarcest, giving export promotion a pro-poor and gender dividend that aggregate trade figures conceal.

The border and distance results sharpen this point. Because the contiguity premium is large and collapses non-linearly when a crossing closes, the losses from border disruption fall hardest on perishable, price-sensitive agri-food — the produce of poor rural households.

A closure at Torkham or Chaman does not spread its cost evenly: fruit spoils, farmgate prices collapse, and day laborers, packers, and truckers lose wages within days, while importers and larger firms with inventory and alternative routes absorb far less. The high effective-distance costs likewise bear most heavily on remote producing regions — Badakhshan, Herat, and the northeast — where internal and external trade frictions compound. For an economy that is a net exporter of labor and dependent on remittances, and that is absorbing large returnee inflows from Pakistan and Iran, the same language and border ties the model rewards also carry cross-border labor and kinship networks; trade-facilitation and safe-mobility measures that lower these frictions support household incomes on both sides of the frontier.

For firms and investors, the fixed-effects results describe a low-level equilibrium that is self-reinforcing. A structural export penalty of the magnitude estimated signals that Afghan enterprises systematically under-trade relative to their potential; thin export volumes mean thin trade finance, high working-capital costs, and firms that stay small and informal, which in turn keeps export volumes thin. The near-floor level of foreign direct investment — net inflows of roughly US\$37 million in 2023 — is the investment-climate counterpart of the -1.264 export gap. The contrast between Afghanistan's positive import propensity and its negative export propensity also reveals a skew in the enterprise base toward import-distribution and trading firms rather than export producers and processors — precisely the segment that RCI investment should aim to rebalance toward value addition.

The trade-cost findings identify where the investment climate can be improved most cheaply. Because border unreliability destroys the contiguity premium abruptly and unpredictably, it raises the risk premium on any trade-dependent investment and inflates the option value of holding inventory rather than committing capital to fixed assets such as cold storage, grading lines, and processing plants — the very investments needed to move firms up the value chain. Predictable border regimes, sanctions-compliant payment and trade-finance rails, and harmonized standards therefore act directly on the investment calculus: they lower the effective trade costs embedded in the distance elasticity and shrink the risk premium that currently deters fixed investment. The destination-market ranking, finally, tells investors where latent demand is largest — China and India, and the regional CAREC markets — so that interventions restoring access to those markets raise the expected return to export-oriented enterprise and are the most likely to crowd in private capital. In short, the same levers that would narrow the export gap for households — reliable borders, corridors, trade finance, and standards — are the levers that would shift Afghanistan's investment climate from transactional and extractive toward productive and export-generating.

3.12 Summary

The opportunity set is narrower than a list of sectors would suggest, but it is real and it is concentrated. Afghanistan holds revealed comparative advantage in seven sectors, led by vegetable products, textiles and carpets, hides and leather, and minerals. Its export structure is closely complementary to Indian, Gulf, and Pakistani import demand, and moderately so to Central Asian demand. Its realized exports sit roughly three and a half

times below what its geography and its partners' economies would predict, and the gravity estimates locate that shortfall on the export side rather than in excessive import demand.

The practical implication is that the highest-return interventions are those that lower the cost and raise the reliability of market access, not those that build productive capacity—because the supply-side competitiveness already exists. The distributional case reinforces the economic one: the sectors in which Afghanistan is competitive are labor-intensive, rural, and disproportionately female, so closing the export gap would raise incomes where poverty is deepest. What stands between the opportunity and its realization is the subject of Section 4.

4 What are the major binding constraints to promoting regional trade and RCI?

4.1 Approach to identifying binding constraints

A list of everything wrong with Afghanistan's trade environment would be long and of little use for programming. The more useful question is which constraints currently bind—that is, which carry the highest shadow price, so that relieving them would produce the largest response per unit of effort. This section applies the binding-constraints logic of growth diagnostics (Hausmann, Rodrik, and Velasco 2005) to trade and regional cooperation, using three observable tests.

The first test is responsiveness: does trade react quickly and substantially when the constraint tightens or relaxes? The 2025–26 episode described in Section 2.6 provides unusually clean evidence here, because two corridor shocks occurred within six months and the response can be measured directly. The second is circumvention: do firms and traders incur real costs to work around the constraint? Agents reveal shadow prices through what they are willing to pay, and Afghan traders' willingness to accept longer routes, hawala fees, and cash pre-payment is informative. The third is incidence: does the constraint bind specifically in the sectors where Section 3 locates comparative advantage? A constraint that binds only where Afghanistan has no prospect of exporting is not a priority.

The evidence base combines the three diagnostics of Section 3, the natural experiment of Section 2.6, and existing external studies—the World Bank's Afghanistan Trade Policy Review, the WTO Trade Policy Review, UN ESCAP trade-facilitation assessments and trade-cost estimates for landlocked Asia, published estimates of informal and transit flows, UNCTAD investment data, and ADB's CAREC diagnostic work. Where these sources disagree, the disagreement is noted rather than averaged away.

4.2 Border and corridor unpredictability

This is the binding constraint on all three tests, and by a wide margin. On responsiveness, the October 2025 closure cut imports from Pakistan by about 95 percent and exports by about 88 percent within four months, with reported trader losses near US\$2.5 million a day. On circumvention, traders absorbed substantially higher freight to reroute through Central Asia, the Russian Federation, and Iran, and total imports rose roughly 8 percent despite the closure—direct evidence that they were paying to avoid the constraint. On incidence, the products that collapsed were precisely the low-value-density agrifood and mineral lines in which Afghanistan holds comparative advantage.

The gravity results explain why the effect is so large. Contiguity multiplies bilateral trade roughly two- to threefold beyond what size and distance predict, and that premium does not decay gracefully when a crossing closes—it disappears. A closure therefore does not move Afghanistan from a near partner to a distant one; it removes one of the largest single multipliers in its trade. The unpredictability matters as much as the closures themselves, because it raises the risk premium on every trade-dependent investment and increases the

option value of holding inventory rather than committing capital to cold storage, grading lines, or processing plants.

Afghanistan's landlocked geography means all exports depend on transit-country cooperation. Pakistan's periodic border closures (motivated by bilateral political disputes) represent the single largest exogenous risk to Afghan export performance. Corridor diversification through Iran (Chabahar) and Central Asia (Hairatan) is the long-run solution; in the interim, ADB-facilitated diplomatic engagement on border-continuity protocols would reduce the volatility premium that Afghan exporters implicitly absorb.

4.3 Payments, trade finance, and banking isolation

This is the second binding constraint, and the one least amenable to trade policy narrowly defined. It scores high on circumvention in particular: the entire Afghan trading system has reorganized itself around hawala settlement, which functions but cannot supply the documentary instruments that formal trade requires. A trader who cannot obtain a letter of credit cannot bid on a tender, cannot insure a consignment, and cannot finance working capital across a growing season. The result is a hard ceiling on transaction size and on the formalization of export flows, independent of demand or competitiveness.

Afghanistan's formal banking system has contracted severely since 2021 following Afghanistan Bank's exclusion from SWIFT and the freeze of USD reserves. Most cross-border trade relies on hawala (informal value transfer), which cannot support the documentary requirements of formal trade finance (letters of credit, bank guarantees). ADB, UNDP, and bilateral donors can act as guarantors or intermediaries in sanctions-compliant trade finance facilities targeting agrifood and carpet exporters — the sectors with the highest employment multipliers.

OFAC and UN Security Council sanctions create compliance burdens for financial institutions handling Afghan transactions. Correspondent banking for Afghan exporters is practically unavailable through formal channels. Sanctions-compliant trade finance facilities — structured with OFAC general licenses or EU and UK humanitarian exemptions — are technically feasible but require careful legal architecture.

The incidence test is also satisfied: the sectors with the highest employment multipliers—agrifood and carpets—are those in which producers are smallest, least bankable, and most dependent on seasonal working capital. Thin export volumes mean thin trade finance, and thin trade finance keeps firms small and informal, which keeps export volumes thin. This is a self-reinforcing loop rather than a static gap, which is why partial measures have limited traction and why a demonstrated, sanctions-compliant settlement channel would have effects beyond the volume it directly carries.

4.4 Standards, certification, and sanitary compliance

Standards gaps are the principal non-tariff barrier for Afghanistan's agrifood exports to India and the European Union. Maximum Residue Limits (MRLs) for pesticides in raisins and dried apricots have been tightened under EU regulation; Afghan producers — largely small farmers with no access to extension services — cannot currently meet these

standards without substantial support. CAREC-level Sanitary and Phytosanitary (SPS) mutual recognition agreements, beginning with Pakistan and Uzbekistan, represent the highest-leverage standards investment.

Standards score lower on responsiveness than borders or payments—relaxing them produces gains over seasons rather than weeks—but very high on incidence, because they bind almost exclusively in Afghanistan’s highest-RCA sectors. Vegetable products, with an RCA above nine, face the tightest maximum residue limits; carpets face provenance and authenticity requirements; hides face veterinary certification requirements in Gulf and Pakistani markets. Afghanistan currently has no internationally accredited testing laboratory for pesticide residues, which means compliance cannot be demonstrated even where it is achieved. The constraint is therefore as much institutional as agronomic, and it is one where multilateral mutual-recognition arrangements can substitute for national capacity that does not yet exist.

4.5 Logistics, cold chain, and internal trade costs

UN ESCAP estimates that trade facilitation improvements in Central and South Asia can reduce trade costs by 10–15% for landlocked countries. For Afghanistan's agrifood exporters, time-sensitive perishable goods face the highest penalty from border delays and cold-chain gaps. The Pakistan–Afghanistan border at Torkham and Chaman handles the majority of formal trade; unpredictable closures by Pakistani authorities impose severe losses on perishable consignments. A border-continuity mechanism — even an informal understanding on minimum operating hours during agricultural seasons — would have immediate positive impact.

Two features of Afghan logistics deserve more weight than they usually receive. The first is that a substantial share of total trade cost is incurred before a consignment reaches the border. Evidence on intra-national trade costs in developing economies (Atkin and Donaldson 2022) indicates that internal freight and handling frequently exceed cross-border costs, and Afghanistan’s topography, thin secondary road network, and dispersed production areas—Badakhshan, Herat, the northeast—make this likely to be pronounced. A trade-facilitation agenda confined to border posts therefore addresses only part of the cost that exporters actually face.

The second is the interaction with value density set out in Section 2.7. Because most freight cost is levied on weight and volume rather than value, a given logistics improvement has a much larger proportional effect on low-density goods—which is where Afghanistan’s export concentration lies. Cold-chain capacity is the specific gap: it converts perishables from corridor-dependent to storable, which raises the effective value density of the same physical product and widens the range of routes over which it can profitably travel. The absence of cold chain is thus not a separate problem from corridor risk but a multiplier of it.

4.6 Non-recognition and the institutional constraint

Non-recognition of the de facto Taliban administration creates structural legal barriers for multilateral institutions to engage directly with Afghan government counterparts. ADB, the

World Bank, and bilateral donors have developed humanitarian and private-sector carve-out frameworks, but these remain constrained in scope. RCI investments must be designed around the private sector, civil society, and UN-system intermediaries rather than direct government-to-government programming. In this context, RCI can strengthen private sector cooperation across borders to mobilize investments. This includes soft investments in addition to physical infrastructure. Developing regional value chains is critical.

Non-recognition functions differently from the constraints above. It is not primarily a constraint on trade volumes—Afghan traders continue to trade—but a constraint on the instruments available to address the other constraints. It forecloses sovereign lending, on-budget grant support, policy-based operations, sovereign guarantees, and most government-to-government programming. It does not foreclose technical cooperation between line agencies, private-sector and enterprise-level engagement, work through UN system intermediaries, or participation in multilateral frameworks at the working level. The practical consequence is that non-recognition determines *how* interventions must be structured rather than *whether* they can proceed, which is why Section 5 treats it as a design parameter rather than as an obstacle.

4.7 Productive capacity, scale, and value addition

It is worth stating explicitly what the diagnostics suggest is *not* the primary binding constraint. Productive capacity in Afghanistan's export sectors is weak in absolute terms but is not what currently limits exports. The RCA results show competitive supply in seven sectors; the gravity results locate the shortfall on the export side while import propensity is positive; and the 2025–26 episode showed that when a corridor opened toward India, fruit and spice exports rose by 37 and 72 percent within months—a response that would be impossible if supply were the ceiling. On the responsiveness test, capacity fails: relieving it would not produce a rapid trade response, because access binds first.

The qualification is processing and value addition, where the constraint is genuine and structural. Afghanistan exports raw and lightly processed commodities and captures little of the value added downstream, for the agglomeration reasons set out in Section 2.9. Here capacity does bind, but it binds in a particular way: firms will not invest in grading lines, cold storage, or processing plants while corridor reliability and payment channels remain uncertain, because those are exactly the fixed, illiquid investments that unpredictability penalizes most. Value-addition capacity is therefore best understood as a constraint that is downstream of the first two rather than independent of them, which has clear implications for sequencing.

4.8 Climate, water, and labor

Afghanistan's agrifood comparative advantage depends on climatic and water conditions that are increasingly variable. The 2021–2022 drought demonstrated how a single adverse season can depress raisin and dried-fruit exports by 30–40%. Climate-adaptive investment — water-efficient irrigation, drought-resistant variety development, and off-season storage — is not only humanitarian but directly protective of Afghanistan's export earnings base.

Labor supply is not a constraint on Afghan trade; labor absorption is. Job creation lags labor-force growth, and the returnee inflows from Iran and Pakistan described in Section 1 have concentrated in Nangarhar, Kandahar, and Kabul—provinces least able to absorb them. What is scarce is not workers but certified skills and formal channels: Afghan workers face recognition barriers in the regional labor markets that could employ them, and Afghan exporters face a shortage of technically qualified staff in grading, quality-control, veterinary, and phytosanitary functions. Both are addressable through regional skills-recognition arrangements, and both would raise household incomes more quickly than most capital investments.

4.9 Evidence and data gaps

Measurement is itself a constraint on programming. Afghanistan has not reported regularly to international trade databases since 2021, so every quantitative statement in this paper rests on mirror data or on national series of uncertain coverage. Available estimates place informal and transit flows at 30 to 40 percent of formal trade, which means the denominator of most ratios is unstable. There is no recent, representative trader survey, so dwell times, informal payments, and rejection rates at borders are known anecdotally rather than measured. This matters practically: interventions cannot be prioritized by cost-effectiveness, nor evaluated afterwards, against a baseline that does not exist. The caveats attaching to the gravity estimates are set out in Section 3.7. A modest investment in corridor and trader measurement would raise the return on everything else recommended in Section 5.

4.10 Which constraints bind hardest

Applying the three tests consistently produces a clear ranking rather than a list. Border and corridor unpredictability binds first: it is the only constraint that passes all three tests decisively, and it is the one whose relief would produce measurable gains within a single season. Payments and trade finance bind second, with the highest circumvention cost of any constraint and a self-reinforcing character that partial measures do not break. Standards and certification bind third—slower to relieve, but concentrated precisely in the sectors where Afghanistan is most competitive. Logistics and cold chain bind fourth, and act mainly as a multiplier on the first constraint rather than independently of it. Productive and processing capacity binds fifth and is largely downstream of the others.

Non-recognition sits outside this ranking as a meta-constraint. It does not compete with the others for priority; it determines which instruments are available to address any of them. Climate, labor absorption, and data gaps are real constraints that do not currently bind on trade volumes, but each shapes the durability of gains achieved elsewhere. Table 4.1 summarizes the assessment.

Table 4.1: Binding constraints assessed against the three tests

Constraint	Evidence of a high shadow price	Tractable without recognition?	RCA sectors most affected	Rank
Border and corridor unpredictability	Imports from Pakistan –95%, exports –88% within four months;	Yes — technical border committees, published	Vegetable products, animal products, minerals	1

	~US\$2.5m/day trader losses; contiguity premium of 2–3x lost abruptly; traders paid higher freight to reroute	operating rules, CAREC umbrella		
Payments, trade finance, and banking isolation	Entire trading system reorganized around hawala; no letters of credit, guarantees, or cargo insurance; hard ceiling on transaction size	Partly — escrow and third-party trustee structures; requires legal architecture first	All, most acutely agrifood and carpets	2
Standards, certification, and sanitary compliance	Tightened residue limits in destination markets; no accredited national testing laboratory; compliance cannot be demonstrated even where achieved	Yes — mutual recognition with regional laboratories under CAREC	Vegetable products, hides and leather, animal products	3
Logistics, cold chain, and internal trade costs	Trade-facilitation gains of 10–15% estimated for landlocked Asia; pre-border freight plausibly exceeds cross-border cost; perishables cannot be stored through a closure	Yes — investment and co-financing, no recognition required	Vegetable products, animal products	4
Processing and value-addition capacity	Exports remain raw or lightly processed; fixed investment deterred by corridor and payment uncertainty rather than by absent opportunity	Yes, but downstream of constraints 1 and 2	All RCA sectors	5
Non-recognition of the de facto administration	Forecloses sovereign lending, on-budget support, policy-based operations, and sovereign guarantees; does not foreclose technical, private-sector, or multilateral channels	Not a constraint to relieve — a design parameter for all of the above	All, indirectly	Meta

Source: Authors' assessment. Ranking applies the responsiveness, circumvention, and incidence tests set out in Section 4.1.

4.11 Summary

Afghanistan's trade constraints are not equally binding, and treating them as a single undifferentiated list has been a weakness of earlier analysis. The evidence points consistently to two constraints that dominate: the unpredictability of borders and corridors, and the absence of formal payment and trade-finance channels. Standards, logistics, and cold chain follow, and productive capacity—contrary to the usual framing—is not the primary limitation, because Section 3 shows that competitive supply already exists in seven sectors.

Two features of this diagnosis shape what follows. First, the two dominant constraints are both institutional rather than physical, which means they can in principle be relieved faster and more cheaply than infrastructure gaps—and also that they will not be relieved by

investment alone. Second, non-recognition constrains the instruments available rather than the objectives, which points directly toward multilateral and technical channels. Section 5 sets out recommendations on that basis.

5 Policy recommendations to address the binding constraints

5.1 Design principles: working through multilateral and technical channels

The recommendations below follow from the ranking in Section 4.10 and from a single design constraint: the de facto administration is not recognized, so instruments that depend on recognition are unavailable. This rules out sovereign lending, on-budget support, policy-based operations, and sovereign guarantees. It does not rule out technical cooperation between line agencies, participation in multilateral frameworks at the working level, enterprise-to-enterprise engagement, or commercially structured transactions with third-party payment security. The distinction between political recognition and technical cooperation is what makes progress possible, and it should be maintained deliberately in the design of every intervention.

CASA-1000 as the working model. The clearest demonstration that this approach functions is CASA-1000. The project has continued through the political transition, is roughly 80 percent complete on the Afghan section, and is targeted for operation by the end of 2026. It works because its architecture is recognition-independent: it sits under a multilateral umbrella with World Bank and partner oversight, it is governed by commercial contracts between utilities rather than by intergovernmental agreement, its payment flows can be ring-fenced through escrow arrangements with third-party trustees, and the engagement runs at technical and utility level rather than at ministerial level. Afghanistan would take up to 300 MW for domestic use and earn an estimated US\$45–65 million a year in transit fees. The broader point is that cross-border electricity trade has been the most reliable element of Afghanistan’s external economic relations since 2021, as Section 2.5 notes, precisely because it is structured this way.

Six design principles generalize from that experience and should be applied across the recommendations that follow. First, work under a multilateral umbrella—CAREC above all, alongside the UN system, and where relevant the Economic Cooperation Organization and CAREC-adjacent transit frameworks—so that no participant is required to confer recognition. Second, engage at technical and working level: customs administrations, utilities, standards bodies, veterinary and phytosanitary services, and chambers of commerce, where cooperation is routine and politically low-salience. Third, use commercial and contractual instruments with third-party payment security rather than sovereign undertakings. Fourth, work through private, community, and NGO counterparts where public counterparts are unavailable. Fifth, prefer reversible, low-visibility measures that can survive political deterioration. Sixth, build measurement into every intervention from the outset, given the baseline gaps identified in Section 4.9.

The recommendations are sequenced by horizon. Short-term measures target the two dominant constraints and are designed to produce observable results within a single agricultural season. Medium-term measures address standards, corridors, and value addition, and depend on the short-term measures having established some predictability. Longer-term directions concern governance and value-chain integration, and should be prepared now but not expected to deliver early.

5.2 Short-term recommendations (0–18 months)

These four measures address border predictability and payments, the two constraints that Section 4 identifies as binding hardest. All four can be structured without recognition, and all four are designed to produce measurable effects within twelve to eighteen months.

1. Pakistan border-continuity compact. Establish a standing technical working group under CAREC auspices to negotiate minimum border-operating-hour guarantees during Afghan agricultural export seasons (July–November). Co-facilitate with UNDP and the Pakistan–Afghanistan Joint Economic Commission. This single intervention would have the highest immediate impact on Afghan export earnings.

2. Sanctions-compliant trade finance facility. Establish an ADB-administered agrifood and carpet export finance facility using humanitarian exemptions and OFAC general licenses, with hawala integration for last-mile disbursement. Pilot in Kandahar (raisins) and Herat (carpets, saffron).

3. Cold-chain investment. Co-finance refrigerated storage facilities at Torkham, Spin Boldak (Chaman), and Islam Qala (Herat–Iran) crossings in coordination with WFP logistics cluster. Prioritize raisin, dried apricot, and fresh pomegranate cold-chain.

4. Phytosanitary harmonization. Initiate CAREC-level SPS mutual recognition agreement negotiations between Afghanistan, Pakistan, and Uzbekistan, covering maximum residue limits for raisins, almonds, and dried apricots. Engage FAO and ITC as technical facilitators.

Two further short-term measures follow from the analysis in this revision. A corridor-performance monitoring facility should be established under CAREC auspices, collecting dwell times, clearance costs, rejection rates, and closure incidents at the seven principal crossings, and publishing them. This is inexpensive, requires only technical-level cooperation, directly addresses the measurement gap in Section 4.9, and creates the baseline against which every other intervention can be evaluated. Separately, a first sanctions-compliant settlement channel should be piloted for a single high-employment export line—Kandahar raisins is the natural candidate—using escrow structures with third-party trustees on the CASA-1000 model, with the explicit objective of demonstrating feasibility rather than of achieving scale.

5.3 Medium-term recommendations (18 months–5 years)

Medium-term measures address the third, fourth, and fifth constraints in the ranking—standards, logistics, and value addition—and assume that the short-term measures have established some corridor predictability. Without that predictability, investments in processing and cold chain will not be made, for the reasons set out in Section 4.7.

1. Chabahar transit formalization. Support formalization of Afghan transit rights under the India–Iran–Afghanistan trilateral transit agreement, with legal architecture designed to minimize OFAC sanctions exposure for international logistics operators. Engage Indian EXIM Bank and ADB co-financing.

2. Hairatan–Mazar railway extension. Champion and co-finance the northward extension of the Hairatan–Mazar-i-Sharif railway under CAREC Corridor 6, and explore feasibility of the Mazar–Herat segment to open the western agrifood corridor.

3. Geographic Indication and quality certification. Fund GI registration for Herat saffron, Kandahar raisins, and Afghan handmade carpets in the EU, GCC, and Indian markets. Establish a certification body with ITC (International Trade Centre) technical support.

4. Agrifood processing clusters. Co-finance raisin, almond, and saffron processing and packaging facilities in Kandahar and Herat provinces, linked to private-sector off-takers in Pakistan, the UAE, and India. Target value-added exports that can command 30–60% price premiums over raw commodity exports.

Three additions strengthen this set. Standards infrastructure should be treated as a regional rather than a national investment: rather than building an accredited residue-testing laboratory in Afghanistan from scratch, mutual-recognition arrangements with Pakistani and Uzbek laboratories under a CAREC framework would deliver compliance capability far sooner and at a fraction of the cost. Internal connectivity deserves explicit treatment alongside border infrastructure, given the evidence in Section 4.5 that pre-border freight costs may exceed cross-border costs: secondary and tertiary road links between production districts and crossings are likely to have higher returns per dollar than further investment at the crossings themselves. And a regional skills-recognition and labor-mobility arrangement should be pursued with Iran, the Gulf states, and Central Asian partners, addressing the absorption problem identified in Section 4.8 while lowering remittance costs.

Reducing non-tariff barriers and improving customs cooperation with all neighbors remains foundational. Transport upgrades at key border crossings — Torkham, Spin Boldak, Hairatan, Aqina — and expansion of rail connectivity would reduce the logistical costs that are equivalent to implicit tariffs for Afghan exporters. Investment in dry ports and bonded warehousing adjacent to major crossings would support formal trade growth.

More active engagement in the Shanghai Cooperation Organization (SCO), CAREC, and bilateral frameworks to lower tariffs and streamline documentation could provide meaningful market-access improvements. Alignment with regional standards on quality, phytosanitary requirements, and product certification would improve export competitiveness and gain easier access to new markets, particularly for agrifood products.

5.4 Longer-term directions (5+ years)

The following directions concern governance and structural integration. They will not deliver early results, but the preparatory work—data systems, legal architecture, and partner alignment—should begin now, because each has a long lead time.

1. Mineral governance framework. Support development of a transparent, multilateral mineral governance framework as a prerequisite for large-scale extractive-sector investment. Engage EITI (Extractive Industries Transparency Initiative), UNDP, and bilateral donors to establish royalty-tracking and export-permit systems.

2. Lapis lazuli provenance system. Establish a multilateral provenance certification and tracking system for Afghan lapis lazuli, modeled on the Kimberley Process for diamonds. This would formalize and expand the market for Afghan lapis at premium prices while reducing Taliban revenue opacity.

3. Regional value-chain integration. Design a CAREC-supported Afghan licit export development strategy that integrates Afghanistan into regional agrifood, textile, and mineral value chains as a supplier of raw and semi-processed inputs — linking to Pakistani tanneries, Indian food processors, and Chinese mineral refiners — with ADB financial intermediation.

5.5 Cross-cutting actions

Four cross-cutting priorities apply regardless of sub-region. First, sanctions-compliant payments and trade finance: piloting escrow-backed import settlement, confirmed letters of credit for priority sectors, and white-listed banks and money service providers for corridor trade. Second, border and customs digitalization: common data standards, electronic TIR (e-TIR) and electronic consignment notes (e-CMR) adoption, and interoperable risk-management systems, with published, predictable border operating rules to reduce ad hoc closures. Third, export enablers: regional mutual recognition for SPS and technical standards, joint labs at key borders, and cold-chain co-investment. Fourth, labor mobility and remittance efficiency: regional skills passports, transparent recruitment frameworks, and remittance-fee targets.

5.6 Priority actions by sub-region

The measures above apply nationally. Because Afghanistan's three trading sub-regions differ in corridor structure, partner interests, and institutional entry points, the practical priorities differ across them. Sub-regions and the countries within them are listed alphabetically.

5.6.1 Central Asia (*Kazakhstan, Kyrgyz Republic, Tajikistan, Turkmenistan, Uzbekistan*)

Corridor reliability and multimodal transit represent the most immediate opportunity. Expanding and modernizing rail-road links — for example, Hairatan–Mazar–Herat concepts — harmonizing axle and track standards, and digitizing transit guarantees and customs pre-clearance would substantially lower costs. Trade diversion from Pakistan makes northern route relevance urgent. Energy trade with bankable settlement arrangements is a second priority: scaling seasonal power swaps and CASA-style electricity imports with ring-fenced escrow payment structures using third-party trustees addresses Afghanistan's fiscal constraints while reducing counterparty risk for exporting neighbors. Agrifood value chains represent a third strand, specifically regional sanitary and phytosanitary (SPS) and quality recognition for Afghan fruit and nuts, and joint cold-chain nodes at border logistics parks. Export competitiveness depends on non-tariff solutions more than exchange rate adjustments. Key risk mitigations include sanctions screening, safe channels for state utility and corridor payments, and joint border incident protocols to prevent closures.

5.6.2 South Asia (India, Pakistan, and wider South Asian Association for Regional Cooperation (SAARC) links)

Establishing a predictable Afghanistan–Pakistan border regime is the highest-priority single intervention. A standing technical border committee, a hotline, and defined procedures for phased reopening after incidents — combined with piloting 24/7 customs windows and electronic cargo tracking at Torkham and Chaman — would address a recurring source of economic damage on both sides. Transit diversification and competition should run in parallel: keeping Karachi routes functional while institutionalizing alternative sea access via Iran and Central Asia reduces single-corridor risk. A limited-purpose AML/CFT-compliant trade-finance window for essential sectors — agrifood, textiles — and mutual recognition for testing and certification would address the banking choke point. The Chabahar corridor with India deserves explicit support: expanding containerization, bonded warehousing, and transparent tariff schedules as India's role in Chabahar grows. Key risk mitigations include separating trade and transit governance from security shocks via economic continuity clauses, and commodity-specific escrow and guarantee instruments.

5.6.3 Iran and the Gulf (Iran, Oman, Qatar, Saudi Arabia, United Arab Emirates)

Chabahar and the Iranian land bridge have become core to Afghanistan's trade resilience. Locking in multi-year tariff discounts and service-level agreements for Afghan cargo, and building joint dry ports in western Afghanistan, would institutionalize this route. Labor mobility frameworks are a major unrealized opportunity: bilateral or quadrilateral agreements for legal Afghan labor recruitment, skill verification, and worker protection, paired with lower-cost remittance corridors, could deliver large welfare benefits. Establishing regulated remittance and settlement corridors through UAE and Qatari financial hubs — with strict know-your-customer (KYC) requirements and clearer licensing for money service providers — is a prerequisite for reducing dependence on cash and hawala. Resource and construction supply chains — transaction-based deals in mining, cement, and construction materials with environmental, social, and governance (ESG) and community-benefit clauses — represent the most plausible FDI channel given current governance constraints. Key risk mitigations include sanctions-compliant special purpose vehicles (SPVs), third-party arbitration clauses, and worker-protection monitoring.

5.7 Targeted and localized assistance

Given the complexity of national-level assistance relations, it may be advisable to focus on topics that can advance assistance with only limited or implicit national government support. For the consideration of the trilateral working group, this section reviews primary categories of more localized and targeted assistance. Each of these could be supported by identifying private and independent community and NGO counterparts in Afghanistan and other countries whose agency can advance local development.

5.7.1 Developing economic zones

Because Natural agglomeration bypass Afghanistan, and clusters are likely to never form on their own in Afghanistan. Engineering and developing a cluster offer real hope. A special economic zone, or an agro processing park that artificially assembles, in one location, the

shared infrastructure and labor pool that geography has denied. It is important to note that economic zones are not automatically successful, particularly when they are poorly located, weakly connected, or isolated from markets. For Afghanistan, they should be treated not as real-estate projects, but as targeted instruments for overcoming the country's periphery trap. This requires a few core conditions: zones must be located near key corridors such as Chabahar or the northern CAREC routes; developed alongside enforceable transit agreements, corridor infrastructure, reliable power, bonded warehousing, and streamlined customs; focused on high-value-density activities such as drying, cold chain, saffron, essential oils, carpets, leather, and marble processing; integrated into regional value chains rather than left as standalone industrial estates; supported by public or concessional anchor investment until private activity reaches critical scale; and paired with practical enabling reforms, including trade finance, standards certification, skills training, dispute-resolution mechanisms, and predictable operating rules that allow firms to invest, trade, and expand with confidence.

5.7.2 Enterprise-to-Enterprise Engagement

Hosting trade shows for Afghan goods around the region — facilitating engagement and development of national private trade associations — can create market linkages without requiring formal government involvement. Supporting legal, financial, and institutional reforms for contracting (domestic and transboundary) would reduce transaction costs for private traders and investors.

5.7.3 Border Facilitation

Enterprise buffer zones of 1–5 km with visa-free day-trading access could substantially increase cross-border commercial activity in border communities. Developing dedicated infrastructure for border markets — with no vendor customs requirements and weekly or monthly leasehold for stalls — would formalize and support small-scale trade. Container transfer and bonding facilities, combined with 1–5-day truck entry visas, would accelerate commercial freight flows at major crossings.

It also needs to be emphasized that border-proximate areas are only the front line of trade facilitation, and a comprehensive perspective on value chains is needed to support sustained comparative advantage and protect investments in upgrading and value addition at every stage from primary production to overseas market penetration. Without this, value chains will remain fragmented and trapped in lower value, lower skill, and lower income. primary export dependence.

5.7.4 Targeted Infrastructure

Irrigation extension, repair, and renewal could directly support the agrifood export base that the RCA analysis identifies as Afghanistan's highest-comparative-advantage sector. Expansion of secondary and tertiary road networks — particularly connectivity between production areas and border crossings — addresses a fundamental constraint on export logistics. Regional bridge and tunnel assessment could identify high-return connectivity investments along key trade corridors.

5.7.5 Microgrid Deployment in Remote Areas

Household and SME microgrid deployment in remote areas would support productive activity in regions currently without reliable electricity access, providing a foundation for small-scale agro-processing and light manufacturing. Combining microgrids with ICT connectivity and water purification could catalyze broader economic development in areas otherwise cut off from regional markets.

5.8 Implementation, sequencing, and risks

Three sequencing rules follow from the constraint ranking. Predictability precedes investment: measures that make corridors and payments more reliable should precede capital investment in processing and cold chain, because the latter will not be made while the former is uncertain. Measurement precedes prioritization: the corridor-monitoring facility should be among the first things established, since without it interventions cannot be ranked by cost-effectiveness or evaluated afterwards. And demonstration precedes scale: a single working sanctions-compliant settlement channel is worth more than a large facility that never clears legal review, because it changes what counterparties believe is possible.

Four risks should be managed explicitly. Political deterioration could interrupt any bilateral component, which argues for multilateral structuring and for keeping interventions reversible. Sanctions and compliance risk falls on intermediaries rather than on Afghan counterparties, so legal architecture must be settled before operational design, not after. Elite capture is a genuine risk in any measure that raises the value of a licence, a permit, or a border position, which argues for transparency requirements and for preferring measures whose benefits are dispersed. And there is a reputational risk specific to the analysis itself: the quantitative results in this paper rest on mirror data with acknowledged limitations, and should be presented with those limitations attached rather than as precise estimates.

The central message for ADB and CAREC partners is that Afghanistan's comparative advantage, while structurally resilient, operates under severe facilitation constraints: Pakistan border volatility, the absence of formal trade finance, phytosanitary barriers, and an internationally isolated banking system suppress export volumes well below their potential. The highest-return interventions are in trade facilitation and export finance — not productive capacity — because the supply-side competitiveness already exists. The opportunity cost of inaction is measured in foregone export earnings and rural livelihoods for an estimated 3–4 million Afghans directly dependent on agrifood, carpet, and hides export value chains.

5.9 Summary

The recommendations follow directly from the constraint ranking. In the short term, the priorities are a border-continuity mechanism, a sanctions-compliant trade-finance facility, cold-chain investment at the principal crossings, phytosanitary harmonization, corridor-performance monitoring, and a demonstration settlement channel. In the medium term, they are Chabahar transit formalization, northern rail extension, geographical indication

and certification, agrifood processing clusters, regional standards mutual recognition, internal connectivity, and labor-mobility arrangements. In the longer term, they are mineral governance, provenance certification, and regional value-chain integration.

What makes this set implementable under present conditions is not the individual measures but their common architecture: multilateral umbrella, technical-level engagement, commercial instruments with third-party payment security, and private or community counterparts where public ones are unavailable. CASA-1000 demonstrates that this architecture works in Afghanistan, and cross-border electricity trade demonstrates that it is durable. The agenda set out here applies the same logic to merchandise trade.

6 References

- ADB (2024). CAREC Regional Cooperation and Integration Strategy 2030. Manila: Asian Development Bank.
- Alchian, A. A. and W. R. Allen (1964). University Economics. Belmont, CA: Wadsworth.
- Anderson, J. E. and E. van Wincoop (2003). "Gravity with Gravitas: A Solution to the Border Puzzle." *American Economic Review*, 93(1), 170–192.
- Arab News (2025). How Afghanistan stayed afloat in a region reeling from the global fuel crisis. <https://www.arabnews.com/node/2639460/world>
- Arvis, J.-F., Y. Duval, B. Shepherd and C. Utotham (2016). "Trade Costs in the Developing World: 1996–2010." *World Trade Review*, 15(3), 451–474.
- Atkin, D. and D. Donaldson (2022). Who's Getting Globalized? The Size and Implications of Intra-national Trade Costs. NBER Working Paper 21439. Cambridge, MA: National Bureau of Economic Research.
- AtlasPress (2026). Significant increase in fuel imports reported in Afghanistan for 2025. <https://atlaspress.news/en/2026/03/11/afghanistan-fuel-imports-increase-2025-petrol-diesel-lpg/>
- Balassa, B. (1965). "Trade Liberalization and Revealed Comparative Advantage." *Manchester School*, 33(2), 99–123.
- Caspian News (2024). Turkmenistan, Afghanistan pledge closer cooperation in energy and transport projects. <https://caspiannews.com/news-detail/turkmenistan-afghanistan-pledge-closer-cooperation-in-energy-transport-projects-2024-2-29-0/>
- CEPII (2026). BACI: International Trade Database at the Product Level — Version 202601. Paris: Centre d'Études Prospectives et d'Informations Internationales. http://www.cepii.fr/CEPII/en/bdd_modele/presentation.asp?id=1 (accessed June 2026).
- CEPII (2026). Gravity Database. Paris: Centre d'Études Prospectives et d'Informations Internationales.
- Da Afghanistan Bank (2025). Monthly Economic Bulletin, Q4 2024. Kabul: Da Afghanistan Bank.
- DID Press Agency (2024). Daily fuel imports from Iran to Afghanistan reach 3,000 tons. <https://en.didpress.com/16795/>
- Djankov, S., C. Freund and C. S. Pham (2010). "Trading on Time." *Review of Economics and Statistics*, 92(1), 166–173.
- Gaulier, G. and S. Zignago (2010). BACI: International Trade Database at the Product Level. CEPII Working Paper 2010-23. Paris: CEPII.
- Gazeta.uz (2025). Uzbekistan and Afghanistan sign energy infrastructure agreements worth \$243 million. <https://www.gazeta.uz/en/2025/08/19/energy/>

- Hausmann, R., C. A. Hidalgo et al. (2011). *The Atlas of Economic Complexity*. Cambridge, MA: Puritan Press for Harvard Kennedy School.
- Hausmann, R., D. Rodrik and A. Velasco (2005). *Growth Diagnostics*. Cambridge, MA: John F. Kennedy School of Government, Harvard University.
- Head, K. and T. Mayer (2014). "Gravity Equations: Workhorse, Toolkit, and Cookbook." In *Handbook of International Economics*, Vol. 4. Amsterdam: Elsevier, 131–195.
- Hummels, D. and A. Skiba (2004). "Shipping the Good Apples Out? An Empirical Confirmation of the Alchian-Allen Conjecture." *Journal of Political Economy*, 112(6), 1384–1402.
- International Labour Organization (2025). *World Employment and Social Outlook: Trends 2025*. Geneva: ILO.
- International Monetary Fund (2024). *International Merchandise Trade Statistics (IMTS) Yearbook 2024*. Washington, DC: IMF.
- International Monetary Fund (2025). *World Economic Outlook Database*, April 2025. Washington, DC: IMF.
- Jamestown Foundation (2025). Uzbekistan strengthens energy partnership with Afghanistan. <https://jamestown.org/uzbekistan-strengthens-energy-partnership-with-afghanistan/>
- Krugman, P. R. (1979). "Increasing Returns, Monopolistic Competition, and International Trade." *Journal of International Economics*, 9(4), 469–479.
- Krugman, P. R. (1980). "Scale Economies, Product Differentiation, and the Pattern of Trade." *American Economic Review*, 70(5), 950–959.
- Krugman, P. R. (1991). "Increasing Returns and Economic Geography." *Journal of Political Economy*, 99(3), 483–499.
- Limão, N. and A. J. Venables (2001). "Infrastructure, Geographical Disadvantage, Transport Costs, and Trade." *World Bank Economic Review*, 15(3), 451–479.
- Michael, M. (1996). *Trade Preferential Agreements in Latin America: An Ex-Ante Assessment*. Policy Research Working Paper 1583. Washington, DC: World Bank.
- NSIA — National Statistics and Information Authority of Afghanistan (2020/2024). *Statistical Yearbook FY1398 (2019/20) and Foreign Trade Statistics FY1402 (2023/24)*. Kabul: NSIA.
- OilPrice (2024). Afghanistan and Central Asia collaborate to boost regional trade. <https://oilprice.com/Geopolitics/Asia/Afghanistan-and-Central-Asia-Collaborate-to-Boost-Regional-Trade.html>
- Santos Silva, J. M. C. and S. Tenreyro (2006). "The Log of Gravity." *Review of Economics and Statistics*, 88(4), 641–658.
- The Diplomat (2025). Uzbekistan agrees to continue supplying Afghanistan with electricity. <https://thediplomat.com/2025/11/uzbekistan-agrees-to-continue-supplying-afghanistan-with-electricity/>

- Times of Central Asia (2025). From electricity to fuel, Central Asia is doing more business with Afghanistan. <https://timesca.com/from-electricity-to-fuel-central-asia-is-doing-more-business-with-afghanistan/>
- Times of Central Asia (2025). Uzbekistan and Afghanistan sign \$243 million power transmission deal. <https://timesca.com/uzbekistan-and-afghanistan-sign-243-million-power-transmission-deal/>
- Times of Central Asia (2026). Afghanistan generates 250 MW of electricity, imports 800 MW from Central Asia and Iran. <https://timesca.com/afghanistan-generates-250-mw-of-electricity-imports-800-mw-from-central-asia-and-iran/>
- TOLOnews (2025). CASA-1000 project reaches 80% completion in Afghanistan. <https://tolonews.com/business-199131>
- UN Comtrade / World Bank WITS (2019/2023). Bilateral merchandise trade data. <https://wits.worldbank.org>
- UN ESCAP (2023). Asia-Pacific Trade and Investment Report 2023. Bangkok: United Nations Economic and Social Commission for Asia and the Pacific.
- UNCTAD (2024). World Investment Report 2024. Geneva: United Nations Conference on Trade and Development.
- UNCTAD and WTO (2012). A Practical Guide to Trade Policy Analysis. Geneva: United Nations Conference on Trade and Development and World Trade Organization.
- Vollrath, T. L. (1991). "A Theoretical Evaluation of Alternative Trade Intensity Measures of Revealed Comparative Advantage." *Weltwirtschaftliches Archiv*, 127(2), 265–280.
- World Bank (2022). Afghanistan Trade Policy Review. Washington, DC: World Bank Group.
- World Bank (2024). Updated Q&A on CASA-1000 resumption in Afghanistan. <https://www.worldbank.org/en/country/afghanistan/brief/updated-q-a-on-casa-1000-resumption-in-afghanistan>
- World Bank (2025). Afghanistan Macro Poverty Outlook, April 2025. Washington, DC: World Bank.
- WTO (2023). Trade Policy Review: Afghanistan. Geneva: World Trade Organization.
- Yotov, Y. V., R. Piermartini, J.-A. Monteiro and M. Larch (2016). An Advanced Guide to Trade Policy Analysis: The Structural Gravity Model. Geneva: World Trade Organization and United Nations Conference on Trade and Development.