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Uzbekistan:
Country Economic Memorandum

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FOSTERING PRIVATE SECTOR-LED GROWTH AND GLOBAL INTEGRATION

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Fostering Private Sector-Led Growth and Global Integration

December 2024

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Abbreviations

BOS	Business of the State
BPS	Business Pulse Survey
BTI	Bertelsmann Transformation Index
CPCPC	Competition Promotion and Consumer Protection Committee
ECA	Europe and Central Asia
EU	European Union
EU27	27 countries of the European Union
FDI	foreign direct investment
GDP	gross domestic product
GoU	Government of Uzbekistan
GVC	global value chain
IMF	International Monetary Fund
IP	intellectual property
iSOEF	Integrated State-Owned Enterprises Framework
JSC	joint stock company
km	kilometer
LLC	limited liability company
LMIC	lower middle-income country
LPI	Logistics Performance Index
MEF	Ministry of Economy and Finance
NTM	nontariff barriers and measures
O&M	operations and maintenance
PISA	Programme for International Student Assessment
PPP	public-private partnership
PSO	public service obligation
PTA	preferential trade agreement
RVC	regional value chain
SOB	state-owned bank
SOE	state-owned enterprise
STRI	Services Trade Restrictions Index
TFP	total factor productivity
TRS	Time Release Study
TSR	Trans-Siberian Railway
UFRD	Uzbekistan Fund for Reconstruction and Development
UMIC	upper middle-income country
UTY	Uzbekiston Temir Yo'llari (Uzbekistan Railways)

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Overview

Uzbekistan's economic story over the past seven years is a captivating one of transition and reform; however, the country is not yet enjoying the full economic returns from these efforts. Since Uzbekistan launched into an ambitious new reform program in 2017, growth has been respectable and resilient, despite the global uncertainties and external challenges it has experienced. Growth also has been more stable than in other countries, and Uzbekistan was one of the few countries to continue to grow over the COVID-19 pandemic period. There are three problems, however, with this scenario.

First, growth has been good but not great. Uzbekistan experienced an average annual per capita value-added growth rate of 4.2 percent from 2010 to 2022, surpassing that of Europe and Central Asia. It excludes the high-income average (2.7 percent) and lower-middle income country average (3 percent), and is on par with the average for upper-middle income countries (UMIC) (4.2 percent). To measure up to its laudably ambitious reform goals and against some of the best transition stories worldwide, Uzbekistan needs to achieve even higher growth. To achieve UMIC by 2030, the country needs to experience growth rates close to double digits.

Second, the Uzbekistan economy is running on only one engine of growth, that of capital accumulation which is not sustainable. Decomposing growth over the last five years, the entirety of it is driven by capital deepening, not total factor productivity (TFP). High investment is driven by state-led programs and other sources. Almost half of investment has been in machinery and equipment, (with residential and nonresidential property constituting the next largest category of investment). Investment in research and development is considerably low, at just 0.04 percent of gross domestic product (GDP). High investment has led the ratio of capital to output in the economy to increase from 1.9 over the period 2010–16 to 2.5 between 2017 and 2022, and the incremental capital-output ratio rose slightly from 1.0 to 1.1, suggesting decreased returns to investment. Declining returns to capital point to economic inefficiencies and may be associated with lower TFP. The factors contributing to weak TFP will be the subject of significant analysis in this report and will include inefficient use of production factors, regulatory barriers, market distortions (Chapter 3), human capital constraints, infrastructure deficiencies (Chapter 2), technological constraints, and low trade integration (Chapter 4).

Human capital limitations are likely hindering Uzbekistan's potential for increased investments and growth. The 2022 Programme for International Student Assessment results show that 80 percent of students in Uzbekistan lack minimum proficiency in Mathematics, Reading, and Science. While students are expected to complete 11 years of schooling, this drops to 9.1 years for girls and 9.2 years for boys when adjusted for learning quality. A recent World Bank study[1] also shows that the productivity potential of children and young people in Uzbekistan will be about 40 percent below what could be possible had they had access to better education and health provision. According to various studies, one year of improved learning can be associated with 1 percent gain in the GDP per capita growth rate. The education reform program in Uzbekistan, focusing on quality improvement, can yield a GDP that is, as students join the workforce, 5 percent greater than it would have been without these reforms. Successful transition economies, such as Viet Nam and Estonia, have improved their test scores and workforce competitiveness by prioritizing education.[2]

Third, and most concerningly, Uzbekistan's growth has not generated sufficient employment creation. This kind of growth—investment driven, especially in state-led areas and by state-owned enterprises (SOEs) in sectors that do not need much labor—has led to only an anemic job creation, which is in stark contrast to Uzbekistan's rapid working age population growth. Employment growth has been weak, averaging 0.5 percent annually since 2017. The employment rate for those over 15 was 53.6 percent in 2022—at only 37.3 percent for women—and with little improvement since 2017. The service sector presently encompasses over 40 percent of jobs in Uzbekistan, yet many of these positions are concentrated in social services and low-skilled sectors.

[1] For further information, see World Bank. 2021a. Education Excellence Towards Human Capital and Economic Growth in Uzbekistan. Washington, DC: World Bank. https://documents1.worldbank.org/curated/en/099630003032235055/pdf/P1745170e2a05e09a0ab2300654cdbfb6aa.pdf?_gl=1*ptamkg*_gcl_au*MTI1NDExMjg1MS4xNzI2NDM5MTEw.

[2] Please see World Bank 2021a.

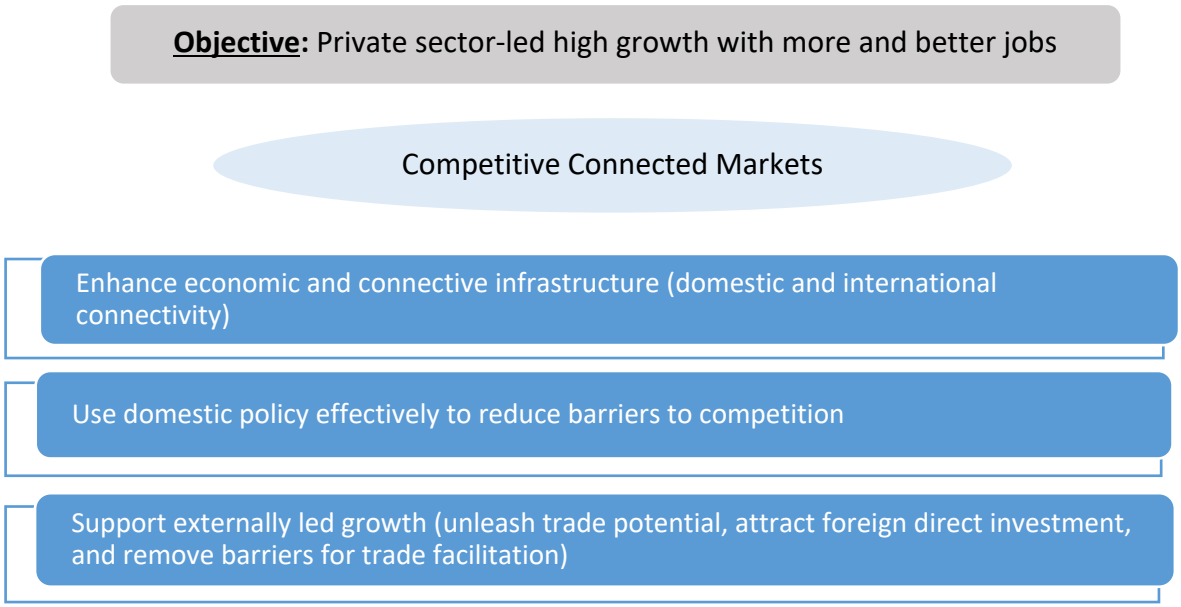
Uzbekistan's challenge is to complete the puzzle of productivity growth and inclusive and sustainable job creation by finding the missing pieces of the reform program that is already well under way.

With capital deepening, labor productivity has risen, but it remains a long way below that of higher income countries. Labor productivity increased by 5.3 percent per annum on average between 2017 and 2022. Labor productivity growth may arise due to TFP growth or capital deepening. With stagnant TFP, rising labor productivity has been driven by capital deepening. In level terms, industry is the sector with the highest labor productivity in Uzbekistan, followed by construction, while the service sector has the lowest productivity level. Differences remain large in sectoral labor productivity between Uzbekistan and the average for countries of the Organisation for Economic Co-operation and Development and UMICs. For instance, labor productivity in industry and services in Uzbekistan is only a third of the average for UMICs.

Decomposition within subsectors reveals modest structural transformation in the economy. Most labor productivity growth has occurred within sectors rather than through sectoral reallocation. During the pre-reform and reform periods, the majority of productivity gains came from within-sector improvements, indicating limited labor movement across sectors and minimal structural transformation. The productivity gains between sectors, however, have primarily been in the service sector, counterbalanced by losses in agriculture.

This report shows how to spur faster growth by improving the functioning of domestic markets and their integration into international markets (Figure 1). At its core, Uzbekistan's economic success needs to have a vital, dynamic, and growing private sector that creates jobs and forges new economic opportunities. Two conditions are essential for this private sector development. Firstly, integration of domestic markets results when government policies and interventions in factor markets, product markets and public infrastructure are considered crucial for this integration. Such policies determine a firm's production choices—what, how, and where to produce—and the distribution of goods within the country. These government actions should be carefully designed to facilitate the efficient allocation of resources across firms and sectors, and the flow of goods nationwide. Secondly, integration with external markets comes when trade barriers are lowered and costs minimized so that domestic firms can derive multiple benefits from this greater external market access. Newly opened export markets can offer huge potential to expand while lowering costs through economies of scale. Access to a broader range of low-cost, quality inputs can enable higher value and more competitive firms to operate, while competition from abroad will further boost the forces of private sector dynamism and innovation.

Figure 1: Private Sector-Led Growth



More Efficient Infrastructure Spending to Cut Business Costs and Raise Productivity

Uzbekistan's critical infrastructure sectors, such as electricity and transportation, are in dire need of modernization. The country's electricity grid suffers from substantial losses and its inefficiencies plague its transport network, hindering domestic cohesion and regional economic performance. On average, product prices vary by more than 50 percent between the costliest and least expensive province of Uzbekistan. This is not only about a lack of resources; it is about an inefficient allocation of resources within these sectors. The modeling, using a new spatial general equilibrium model of Uzbekistan, shows that even with the same infrastructure budget—if resources were used optimally in these two sectors alone—could result in large welfare gains of up to 40 percent for the country's population.

A fiscal analysis indicates a skewed allocation of infrastructure funds, with limited public funds directed to the electricity sector at the expense of road development. Modeling shows that optimal budget reallocation could substantially reduce transport costs, stimulate demand for tradable goods, and increase welfare gains through improved infrastructure investment. Roads are underfunded and electricity consumes an excessive share of the government budget, with funding in electricity and rail inefficiently allocated across national networks. Correcting for this would significantly cut transportation costs, lower tradable goods prices, and spur demand and productivity by allowing regions to focus on their most productive sectors.

The energy sector is starved of private investment in Uzbekistan, with the problem most acute in Tashkent where large demand and potential is being undermined by antiquated infrastructure. The energy sector is beset by various issues, including outdated infrastructure and frequent power outages, which are highly disruptive to businesses and households alike. The inadequacy of electricity supply is the third biggest impediment cited by businesses in Uzbekistan. A bespoke firm survey conducted for this report also emphasizes that interruptions in physical infrastructure are among the primary constraints faced by manufacturing and service firms. Approximately 40 percent of the electricity infrastructure is obsolete. Uzbekistan's electricity transmission and distribution losses are more than double those of high-income and even some middle-income countries. Uzbekistan's utility tariffs (electricity, gas, and water) are set below the actual cost of service provision, leading to delayed maintenance and insufficient investment. This artificially low price places a burden on the public budget and hampers private sector participation due to limited profitability opportunities, ultimately explaining the lack of funding in the system and poor performance of the energy system. The government has taken a significant step in this regard by initiating energy tariff reforms to achieve cost recovery levels for gas and electricity by 2026. To revitalize its electricity sector, Uzbekistan should concentrate investments in regions with high manufacturing and efficiency in energy service delivery, particularly Tashkent. Limited public spending should be rebalanced toward road and rail. Allocating the electricity investment budget to the most productive uses also is essential to improve the efficiency of public spending. Additionally, attracting more private investment in energy is essential to alleviate the pressure on public spending and improve the sector's efficiency.

To overcome the transportation challenges, Uzbekistan must address the underfunding of its road network, harmonize road and rail investments, and focus on multimodal transport integration to enhance governance in the sector. The road network in Uzbekistan is characterized by poor connectivity and maintenance, with 61 percent of roads still unpaved outside Tashkent city. The rail sector also requires strategic investment reallocation to bolster domestic and regional links, emphasizing service quality and efficiency. In Uzbekistan's transportation sector, significant challenges include substandard transport services, insufficient connectivity across regions, and inadequate investment in road maintenance. Maintenance varies widely, with only 16 percent of roads maintained in Jizzakh and up to 52 percent in Navoi. Without access to water-borne freight methods, Uzbekistan's rail network shoulders a heavy burden of cross-country and international freight, in addition to shorter-haul passenger services. The railway network, including Uzbekistan's prized high-speed rail line, needs a recalibration of investment toward long-haul route maintenance to improve national connectivity. Moreover, insufficient coordination among transport companies leads to redundant services and notable inefficiencies.

Improving infrastructure governance is also crucial. The government must tackle the fragmentation of infrastructure projects and enhance coordination among public agencies to ensure investments are aligned with the national development strategy. This will thereby achieve better value for money and reduce corruption risks in public procurement. Collaboration with sectoral counterparts to develop a new generation of network infrastructure is a crucial task moving forward. This process should be guided by robust economic and financial analyses across a comprehensive portfolio of individual investments. More systematic project proposal-level cost-

benefit analyses and appraisal assessments can determine the optimal financing modalities. Beyond enhancing the quantity and quality of forthcoming infrastructure investment flows to improve transport and energy service provisions, it is essential to focus on the whole-of-life operations and maintenance of these assets.

Streamlining Government Interventions for Enhanced Competition and Domestic Market Integration

Uzbekistan has made significant strides toward a market-oriented economy, but there is further to go to fully entrench competition in domestic markets. Progress has been punctuated by pivotal changes such as price and exchange rate liberalization, land ownership reforms, regulatory simplification, and new insolvency, investment, and competition laws. These reforms have been complemented by sector-specific improvements and privatization efforts. Combined, these measures have not only signaled Uzbekistan's dedication to fostering market dynamics and economic expansion but also have led to a notable increase in investment and the establishment of new businesses. Compared to similar economies, however, Uzbekistan's market conditions continue to be perceived as less competitive, underscoring the need for further pro-market reforms to enhance competitiveness.

A series of government policies and measures in place and the heavy presence of SOEs in competitive sectors still obstruct market functioning and hamper domestic market integration. The presence of SOEs, especially in sectors where private enterprises could compete, raises questions about market fairness and the need for state involvement. SOEs play a large role in the economy. World Bank analyses indicate that Uzbekistan has 2,023 centrally held, majority-owned SOEs with revenue equivalent to 32 percent of GDP. Four out of five of these SOEs operate in competitive sectors where the private sector is viable; examples include real estate service and manufacturing. While new oversight mechanisms and legislative reforms, including the new Privatization Law, aim to reduce and better regulate the state's market role, the privatization process for major SOEs is progressing only gradually. Moreover, the private sector's growth remains hindered by advantages bestowed on SOEs, such as favorable lending, de facto preferential treatment in procurement, low input prices, regulatory exemptions, and tax benefits. Eliminating the exclusive rights of SOEs and establishing a level playing field are also crucial for the World Trade Organization (WTO) alignment process. In this context, it is crucial to streamline state ownership, thereby catalyzing private sector growth. This can be achieved by expediting the privatization of SOEs in competitive markets, increasing the transparency of SOE subsidies, establishing fair compensation practices for SOEs performing public service obligations, and phasing out additional regulatory and policy advantages favoring SOEs. The government has signed a number of orders as part of the preparation process to meet the requirements for WTO accession in June 2024. This legislation removes the exclusive rights of several large state-owned companies, which represents significant progress toward creating a level playing field.

Many of the business support policies Uzbekistan offers could be better designed to have the intended impact and to avoid inefficient fiscal spending. An analysis of business support programs reveals 175 different measures launched between 2020 and 2022, of which 54 are COVID related.[3] all of these constitute a large cost to the budget in terms of explicit costs and foregone revenues. The analysis indicates that many of these programs may impair market functioning and competition among firms. They have vague eligibility criteria, risk providing overcompensation to beneficiaries, lack sunset clauses that could lead to temporary programs becoming permanent, and there is an insufficient budget transparency of them. The firm-level analysis shows that there are mismatches in support delivery, whereby firms frequently receive assistance that does not meet their needs and whereby some firms receive unneeded support. This leaves many deserving firms without any aid. The design and oversight of business support policies should be refined to reduce market distortions, boost program effectiveness, and enhance public financial management. While Uzbekistan has a framework for state aid control, certain aspects of it should be improved and accompanied by more robust enforcement.

The regulatory framework for shaping competition in markets, particularly in network sectors such as electricity, natural gas, telecommunications, and railways, needs further development. SOEs maintain a considerable market share in these sectors, and the lack or inadequate enforcement of pro-competitive regulations

[3] The analysis presented in Iootty, Pop, and Piernas (2023), and drawing from International Monetary Fund data, indicates that the total discretionary fiscal measures responding to COVID-19 in Uzbekistan in 2020 constituted 5.7 percent of GDP. Within this, 4.4 percent was allocated to additional spending and foregone revenue, targeting the health and nonhealth sectors. Out of the 4.4 percent of GDP, 3.3 percent was directed to nonhealth sectors, primarily supporting businesses through financial assistance (via revolving facilities and debt service deferrals at subsidized interest) and tax relief measures (e.g., reduction/suspension of social tax for individual entrepreneurs; tax rate for the usage of water resources for farmland; and tourism tax; among others). An extra 1.3 percent of GDP also was allocated to equity, loans, and guarantees to support businesses, including SOEs.

deters investment and precludes competitive market outcomes. For instance, statutory monopolies persist in various niches that, in theory, could support competition; for instance, in the transmission, distribution, and retail supply of electricity and natural gas. The new decree,[4] which removes the exclusive rights of some energy SOEs as of 2025, could enhance competition in the sector. Energy tariffs are undergoing liberalization efforts, but are still significantly below the level required for cost recovery. In the telecommunications and railway sectors, the absence of independent regulatory bodies undermines impartial oversight of Joint Stock Company (JSC) Uzbektelekom and the rail operator, JSC Uzbekiston Temir Yo'llari.

The state's role as a market referee that disciplines market participants is hindered by impediments to the effective enforcement of the Competition Law. The Competition Promotion and Consumer Protection Agency (CPCPC) faces challenges with its wide mandate and institutional structure that lacks operational autonomy and financial independence. The CPCPC's enforcement tools are underdeveloped, notably in its limited capacity to conduct thorough cartel investigations and implement corrective measures in mergers and anticompetitive conduct cases. While enacting the new Competition Law is a major milestone, secondary legislation to improve implementation will be further critical. A prime example of this is the vague definition of market dominance. In this context, to strengthen the State's capacity to act as a market referee to safeguard competition, it is crucial to address the CPCPC's extensive responsibilities, operational and budget autonomy, and enforcement prowess.

Trade Dynamics: Fueling Growth and Unlocking Potential

Since 2017, Uzbekistan has significantly opened its economy to foreign trade, with key measures such as exchange rate unification and tariff reductions. The ratio of trade to GDP has more than doubled since 2017, reaching 71.6 percent in 2022. Even so, trade performance remains below potential, with exports dominated by primary goods and limited global value chain integration. Uzbekistan holds an export potential of US$4.7 billion, primarily within the manufacturing sector, suggesting the opportunity to increase manufactured goods exports by as much as 70 percent. Only 6 percent of firms export, and service trade, while growing, is still modest at 15 percent of GDP.

Uzbekistan's trade competitiveness in goods faces several hurdles. This includes misaligned tariff policies with high rates on capital goods, high trade costs compared to peers, declining logistics performance, limited and costly transport corridors, and inadequate customs procedures. A comprehensive trade facilitation strategy is lacking. Uzbekistan stands among the top 20 most expensive countries in the world with which to trade—comparable to economies with a quarter of its GDP per capita.

Another significant constraint is the presence of restrictive regulations governing trade in services, particularly for cross-border transactions. Based on a new assessment for this report, the country's Services Trade Restrictiveness Index (STRI) score is higher than its peers, with prohibitions in several subsectors and SOEs holding monopolies in critical infrastructure sectors such as telecommunications. Restrictive practices in air freight and passenger services also disadvantage foreign companies.

Succeeding in its long-delayed WTO accession bid could yield large economic benefits for Uzbekistan. Although now accelerating, progress toward WTO accession has been stalled for long periods at a time since it began in 1994. Moreover, the country's regional integration efforts are hampered by limited Preferential Trade Agreements with narrow scope and depth, impacting only a small portion of its trade. Uzbekistan currently has such agreements with six countries, all former members of the Soviet Union. Trade with these countries accounts for 21 percent of Uzbekistan's imports and 17 percent of exports. Macroeconomic modeling for this report estimates that Uzbekistan's successful integration into the WTO could raise Uzbekistan's GDP by 10 percent and lower poverty rates by 1.6 percent—more if accounting for positive investment effects.

Uzbekistan could significantly increase its exports, particularly manufacturing, by further streamlining tariffs and addressing nontariff measures. Uzbekistan's tariff regime imposes higher rates on capital goods

[4] Presidential Decree of the Republic of Uzbekistan, June 3, 2024, No. UP-85, "On subsequent measures to further accelerate market reforms and to align national legislation of the Republic of Uzbekistan with the World Trade Organization Agreements."

relative to peer countries. Tariff peaks across the following five sectors are above 10 percent: hides and skins, footwear, food products, stone and glass, and minerals. Uzbekistan's exporters are burdened with elevated costs for their capital and intermediate inputs which, in turn, undermines their participation in global value chains. Simplifying the tariff schedule and eliminating tariff peaks will aid WTO negotiations and foster a more open trade environment.

Enhancing trade facilitation and improving logistics could also help Uzbekistan capitalize on trade opportunities. Approximately 80 percent of Uzbekistan's total overland trade is transported via rail and 75 percent of Uzbekistan's total merchandise trade by weight passes through Kazakhstan. Specific reforms on trade facilitation should include digitalizing trade processes, implementing a comprehensive trade facilitation performance framework, aligning clearance processes with best practices, and developing a Single Government Authorized Economic Operator program. Moreover, Uzbekistan can improve goods transport by utilizing underused transit routes through neighboring countries and strengthening regional cooperation. Short-term goals include better cooperation with Turkmenistan and Iran for port access, while medium-term objectives involve exploring joint ventures for corridor development and management.

Reforming service trade regulations is also important. Reforming service trade regulations could boost Uzbekistan's GDP by up to 9 percent, with partial reforms increasing exports, imports, and investments by 5 percent to 8 percent. Comprehensive liberalization could lead to even greater economic benefits and potentially lift over 300,000 people out of poverty. Sectoral reforms in the service sector should focus on reducing trade restrictiveness. Priorities include establishing an independent telecommunications regulatory authority, clarifying air transport licensing, reforming customs duty exemptions for aircraft maintenance, considering reforms to rail transport monopolies, and revising international road transport permit requirements.

In summary, Uzbekistan's economic transformation in recent years has been marked by significant progress, but the remaining challenges must be addressed to fully realize its economic potential. While the country has achieved respectable growth rates and embarked on ambitious reform programs, sustaining and accelerating this growth requires a multifaceted approach. Uzbekistan must prioritize reforms that will diversify growth drivers beyond capital accumulation for sustainability, stimulate private sector growth, and enhance trade dynamics domestically and internationally. By investing in infrastructure, improving regulatory frameworks, and fostering a competitive business environment, Uzbekistan will be able to unlock new opportunities for economic expansion and ensure long-term prosperity for its citizens (Table 1).

Table 1: Summary of Recommendations

Recommendation	Timeframe
Addressing Physical Infrastructure Gaps	
Concentrate electricity investments in regions with higher intrinsic productivity in manufacturing and energy-intensive services, such as Tashkent city and Qarshi.	Short-to-medium term
Improve road infrastructure between Tashkent city and regions with high connectivity, such as Samarkand and Navoi.	Medium-to-long term
Improve railway infrastructure connecting Karakalpakstan and Khorazm with more central regions, such as Navoi and Bukhara.	Medium-to-long term
Apply more systematic project proposal-level applied cost-benefit analysis and appraisal assessments.	Short-to-medium term
Streamlining Government Interventions for Enhanced Competition and Domestic Market Integration	
Accelerate the privatization of state-owned enterprises (SOE) in competitive sectors; establish a credible timeline to reach privatization goals; and increase transparency on sale processes.	Medium-to-long term

Recommendation	Timeframe
Foster competitive neutrality principles in markets: a. Implement cost allocation systems to separate commercial from noncommercial activities in accounts, with a methodology to determine appropriate compensation for SOEs undertaking public service obligations., with a methodology to determine appropriate compensation for SOEs undertaking PSOs; b. Require SOEs to earn a profit on commercial activities. c. Improve transparency of subsidies targeting SOEs and reduce off-budget and quasi-fiscal support to SOEs in infrastructure sectors. d. Remove other regulatory advantages conferred to SOEs (e.g., exemptions in Competition Law and Insolvency Law, and licensing requirements).	Short term
Develop and adopt by-laws ruling the procedures for notification, approval, and recording of state aid measures. Adopt guidelines clarifying the criteria to be applied by the Competition Promotion and Consumer Protection Committee.	Medium term
Establish independent sector regulators for telecommunications, railways, and air transport. Make the new energy sector regulator operational.	Medium term
Adopt secondary legislation and guidelines to strengthen the Competition Promotion and Consumer Protection Committee enforcement tools and competition framework by detailing various procedural aspects established by the Competition Law (e.g., dominance, the treatment of digital platforms, anticompetitive agreements, mergers, leniency).	Short-to-medium term
Trade Dynamics: Fueling Growth and Unlocking Potential	
Remove all tariffs on imports of staple foods and medicines. Review tariffs to reduce or eliminate tariff peaks of key inputs for domestic producers.	Short term
Establish a nontariff barriers and measures review process within the National Trade Facilitation Committee by a Presidential Act.	Short term
Implement green lanes at borders with Kazakhstan and planned network redundancy investments in rail border and tracking infrastructure.	Medium term
Advance trade automation and eliminate the remaining paper-based procedures. Expand the scope of the trade single window and strengthen governance for its implementation.	Short term
Streamline the two-step clearance process and promote pre-arrival processing and the immediate release of low-risk cargo at borders, thereby eliminating mandatory transit to inland terminals.	Short term
Implement the one-stop smart border solution with border authorities of neighboring countries.	Medium term
Reform Article 27 (1) of the Law "On Personal Data," July 2, 2019, requiring that all personal data of Uzbekistan nationals to be physically stored in the country.	Short term
Establish a legal requirement to publish draft measures or provide interested persons with an opportunity to comment on proposed measures affecting trade in services.	Medium term
Establish a clear World Trade Organization accession roadmap and secure donor support to ensure funding and qualifications are well targeted.	Short term
Include market access through preferential trade agreements in the national strategic plan to reinforce the depth of the agreements and sign new ones where economically viable.	Medium term

Chapter 1: Economic Growth, Productivity and Job Creation: Key Trends, 2010–22[5]

1. This chapter will provide an introduction to the key elements of Uzbekistan's recent economic journey to date and the challenges it must surmount for it to achieve sustained and inclusive growth. This analysis will be informed by that of the evolution of macroeconomic factors of production and the key ingredient of productivity. It will look at trends in outcomes and productivity by sector and take in firm-level survey data to present key challenges—many of which will be the subject of the rest of the report. The framework of this report parallels that of *The Promise of Services-Led Growth in Uzbekistan* report but extends its focus to the broader economy. The report concentrates on the challenges of harnessing the service sector to drive growth and employment, emphasizing progress across three key areas of policy action: connectivity, contestability, and capability (the 3Cs). This report follows a similar approach, building upon macro- and micro-level diagnostics within this sector (Box 1).

Box 1: The Promise of Service-Led Growth in Uzbekistan

In Uzbekistan, the service sector has been central to the structural transformation process, with its share of employment rising from 37 percent to 50 percent between 1991 and 2022. In a similar way the service share of value added has risen from 35 percent to 44 percent in the same period. However, while the growth in the share of service-sector value added has continued, its share of employment has stagnated. Consequently, labor productivity growth in the service sector between 2011 and 2022 has outpaced labor productivity in agriculture and industry.

As the service sector encompasses several subsectors distributed across skill intensities, linkages with other sectors of the economy and tradability in international markets as well as their potential to deliver scale, innovation and spillover. The service sector is grouped into low-skilled consumer services (e.g., retail, hospitality, administrative and support, and personal services; low-skilled enabling services (e.g., transportation, wholesale, and telecommunications); global innovator services (e.g., ICT, professional, and financial); and social services (e.g., education, health, and public administration). Growth in service sector employment has been driven by social and low-skilled services that accounted for around 98 percent of service sector employment growth between 2017 and 2022. Global innovator services are more productive, however, and provide more inputs to other sectors, although they currently comprise the smallest share of service-sector employment.

Attaining the promises of service-led growth requires strengthening service-sector linkages with other sectors, expanding the share of global innovator services, and increasing the productivity of low-skilled services. Meeting these three challenges to leverage the service sector for jobs and growth will require policy action that focuses on **connectivity, contestability, and capabilities; that is, the 3Cs**.

Regarding **connectivity**, investments in physical infrastructure (including digital infrastructure) will facilitate the linkages between the service sector and other sectors of the economy. These investments bolster physical connectivity and are crucial to improving Uzbekistan's logistics, especially since it is a doubly landlocked country. Since Uzbekistan's service exports are dominated by travel and hospitality-related services, investments in physical infrastructure also will facilitate the productivity of low-skilled services. Additionally, given the reliance of global innovator services on digital connectivity, investment in digital infrastructure can facilitate the expansion of global innovator services.

Regarding **contestability**, regulatory reforms targeting the removal of trade restrictions and reducing the dominance of state-owned enterprises to improve private participation can deliver significant benefits. Liberalizing restrictions on the cross-border delivery of several professional and ICT services will facilitate expansion of global innovator services. Reforms to increase market competition and eliminate state-owned enterprise dominance in those service sectors providing economy-wide inputs will help raise aggregate productivity across high- and low-skilled services.

As to **capabilities**, investments in higher education to bolster tertiary enrollment and completion rates will improve the pool of skilled workers. At the same time, technical and vocational training to accelerate the development of advanced ICT skills will facilitate expansion of global innovator services, which is highly skill intensive. Furthermore, reforms to reduce restrictions on the provision of services by foreign professionals will help to ease the skill gap.

Each one of the 3Cs does not exist in isolation; rather, the three work in tandem. Improving the contestability of markets, such as the transportation (e.g., air and rail) and telecommunication services, can improve connectivity. Similarly, improving contestability can drive innovation and the acquisition of knowledge, which can improve capabilities.

Improving connectivity, contestability, and capability through investments, reforms, and liberalization will deliver large economic gains for Uzbekistan as well as improve the welfare of its citizens by increasing GDP and real wages.

Source: World Bank, 2024b (forthcoming).

[5] In July 2024, the Statistical Agency of Uzbekistan revised GDP data from 2017 onwards to incorporate new information and improve accuracy. This report does not use the new GDP figures as the revision was completed very recently.

1.1 Appraising Uzbekistan's Growth Performance

2. Since 2010, Uzbekistan's economy has grown by 6.2 percent on average per annum, surpassing the upper as well as lower middle-income country (LMIC) averages. From 2010 to 2022, Uzbekistan's average growth rate of 6.2 percent significantly outpaced the average country growth rates of Europe and Central Asia (ECA) (excluding high-income countries) of 3.1 percent, LMIC at 4.4 percent, and upper middle-income counties (UMIC) at 4.9 percent (Figure 2). Growth was sustained until early 2017 through a centrally planned and investment-led economic strategy, primarily funded by natural resource rents. A major reform program since 2017, moreover, also has been supporting growth. Despite facing global uncertainties and external challenges, Uzbekistan has demonstrated economic resilience over the past five years. Growth also has been more stable than in other countries (Figure 3) and Uzbekistan was one of the few to continue to grow over the COVID-19 pandemic period.

Figure 2: Gross Domestic Product Growth
(percent)

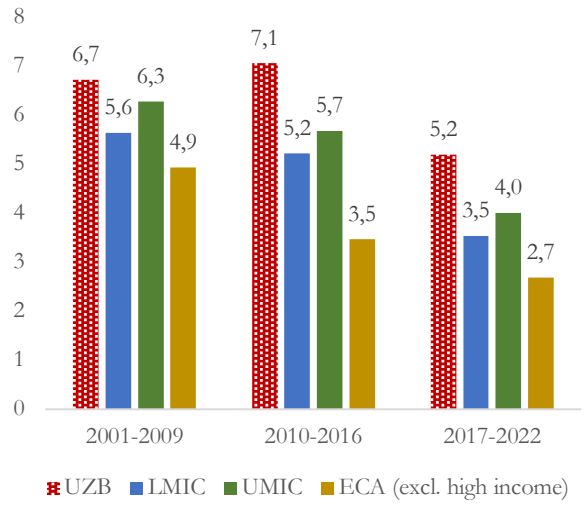
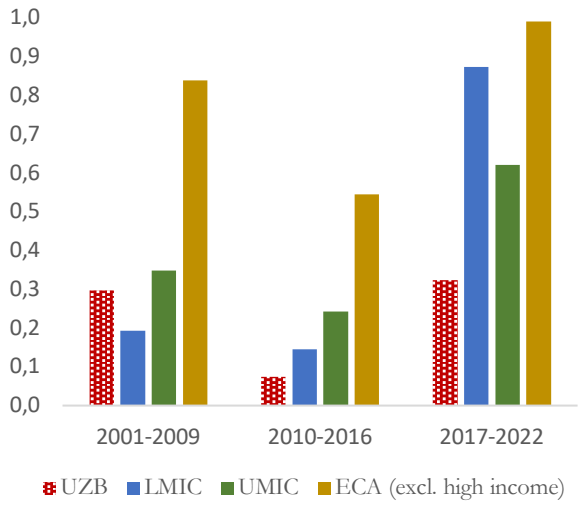


Figure 3: Volatility of Gross Domestic Product Growth
(constant 2015 US$, coefficient of variation)



Sources: World Development Indicators; World Bank staff calculations.
Notes: (i) ECA = Europe and Central Asia; LMIC = lower middle-income country; UMIC = upper middle-income country. (ii) Volatility is measured as the coefficient of variation, which is standard deviation divided by mean for period average growth of gross domestic product.

3. Despite substantial growth and reform efforts in the past six years, Uzbekistan's structural transformation remains incomplete, suggesting that the full benefits are yet to materialize. Average incomes per capita remain 50 percent below the average for UMIC countries, let alone high-income ones. One of the major transitions that most countries progress through in middle-income status is the mobilization of people from low-productivity, informal, and rural livelihoods into higher productivity jobs, mostly in the manufacturing and service sectors and often in urban areas. As a result, the agriculture sector tends to become smaller in terms of the share of economic output and employment in the economy. However, agriculture in Uzbekistan—although declining in recent years—remains prominent at 23 percent of gross domestic product (GDP) in 2022, the highest in the ECA region and well above the LMIC average of 15 percent (Figure 4). On the other hand, the share of the service sector is undersized and has not grown as a share over the last 12 years (Figure 5). In Uzbekistan, the share of manufacturing value added in GDP is 19.5 percent, which falls between the average for LMIC (15 percent) and UMIC (23 percent) in 2022.

Figure 4: Agriculture, Value Added (percent of GDP)

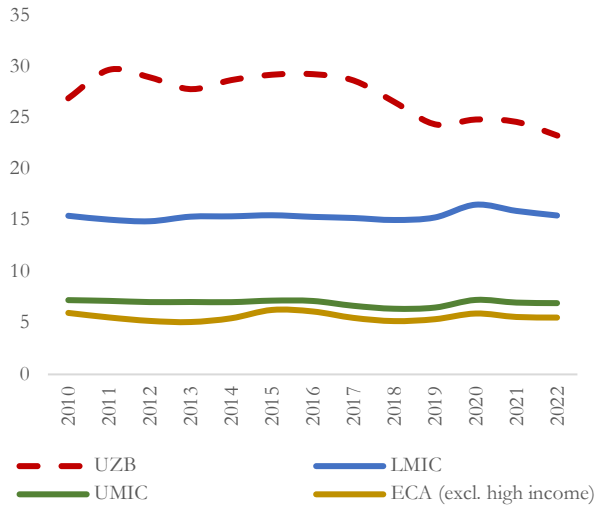
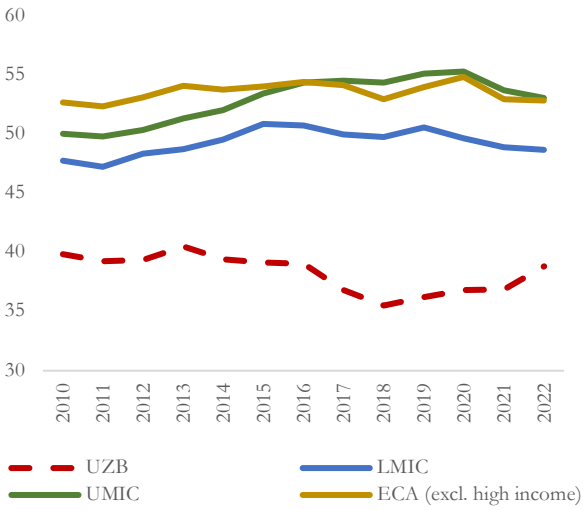


Figure 5: Services, Value Added (percent of GDP)

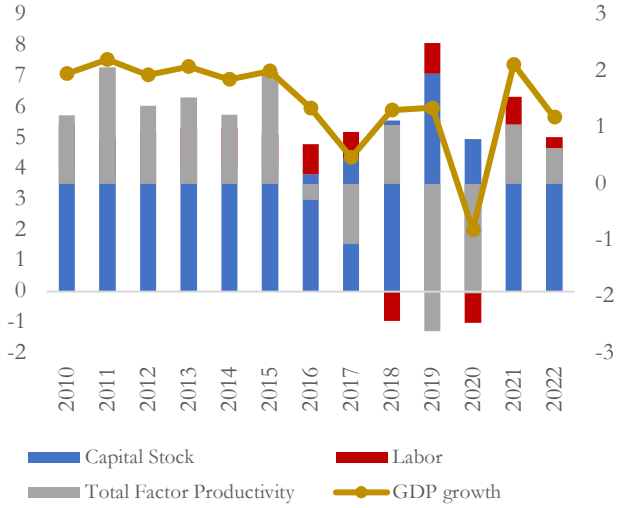


Source: World Bank's World Development Indicators.
Notes: GDP = gross domestic product; UZB = Uzbekistan; ECA = Europe and Central Asia; LMIC = lower middle-income country; UMIC = upper middle-income country.

4. This sustained growth performance has primarily depended on capital accumulation, but further investment will face declining returns unless part of a broader-based strategy. As Figure 6 shows, approximately two thirds of growth since 2010 can be ascribed to capital accumulation, becoming even more dominant since 2017. Investment rates, at 34 percent in the first half of the period and rising to 38 percent in the latter half, have been significantly above comparators (Figure 7). Foreign direct investment as well as state-led investment programs account for more of this investment surge in the latest period, but most continue to originate from other investment sources (Figure 8). The majority of total investment is allocated to machinery and equipment (almost half), while residential and nonresidential property collectively account for more than one-third of total investment (Figure 9). The share of investment allocated to Research and Development is notably low, constituting only 0.04 percent of total investment. The capital-to-output ratio increased from 1.9 during the period 2010–16 to 2.5 during that of 2017–22. Over the same period, the incremental capital output ratio[6] exhibited a slight rise from 1 in the period 2010–16 to 1.1 in that of 2017–22. This trend implies that the economy is beginning to face decreasing returns to more investment. Inefficient bureaucratic processes, lack of competition, high dominance of state-owned enterprises (SOE) and market distortions can hinder the effectiveness of investment in fostering growth (Chapter 3). Incomplete structural transformation of the economy also limits investment opportunities to traditional sectors, resulting in diminishing returns over time. Further, the lack of complementary inputs, such as human capital, will increasingly constrain investment-led growth.

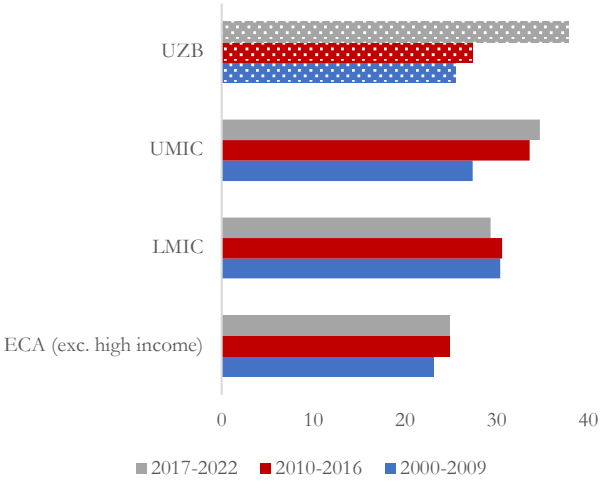
[6] This ratio evaluates the marginal impact of increased investment on generating additional economic growth in the economy.

Figure 6: Gross Domestic Product Growth by Factors of Production (percentage points)



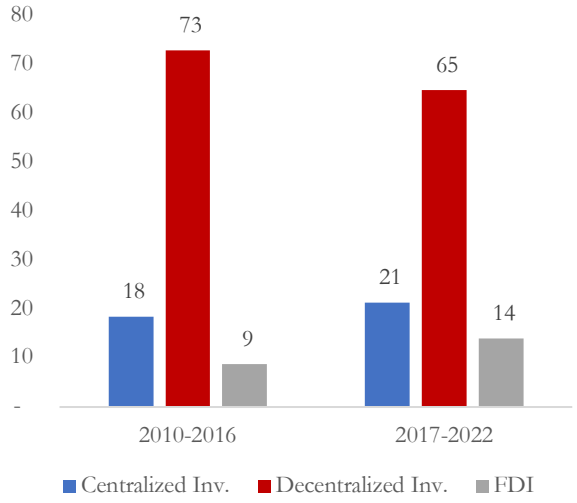
Source: World Bank staff calculations.
Note: Capital stock is estimated based on perpetual inventory method.

Figure 7: Gross Capital Formation (percent of GDP)



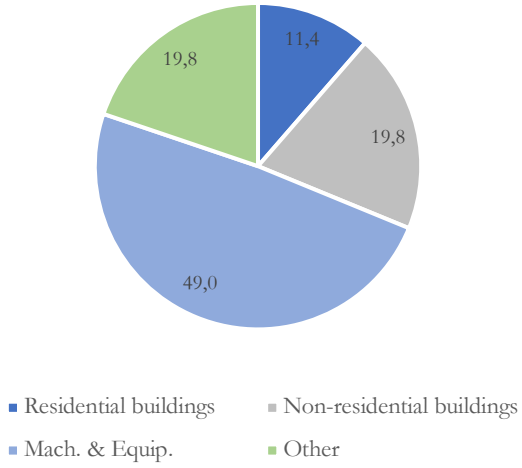
Source: World Bank's World Development Indicators.

Figure 8: Type of Investment
(share in total, percent)



Source: Uzbekistan Ministry of Economy and Finance and National Statistics.
Notes: (i) Centralized investment covers budget, state funds, Fund for Reconstruction and Development investments; (ii) decentralized investment covers enterprise and household investment; (iii) there is no classification of state-owned and private sector enterprise investment disaggregation; (d) FDI = foreign direct investment.

Figure 9: Share in Total Fixed Investment, 2019–22 Average
(in percent)

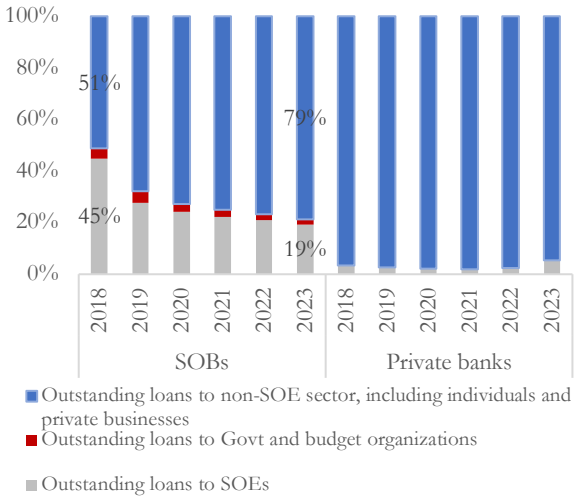


Source: Uzbekistan National Statistics.

5. Data suggest that investment is increasingly being made by the private, non-SOE sector. The share of outstanding loans to the non-SOE sector has been steadily increasing, indicating a rise in private sector investment. There are no official data on investment disaggregation by the private and public sectors. However, the data on the share of loans to SOEs, non-SOEs, government, and budget organizations can be considered as a proxy, signaling that the share of the private sector in total investment has been on an increasing trend over the reform period. The share of outstanding loans to the non-SOE sector—including individuals and private businesses—provided by public banks, recorded an increase of 28 percentage points to 79 percent in 2023 from 51 percent in 2018. Conversely, the share of outstanding loans to the SOE sector by public banks declined sharply to 19 percent in 2023 from 45 percent in 2018. On the other hand, the share of loans provided by private banks followed a relatively stable path (Figure 10). In terms of sectors, the largest share of commercial bank loans goes to the industry sector, although its share has significantly declined over the last five years. The share allocated

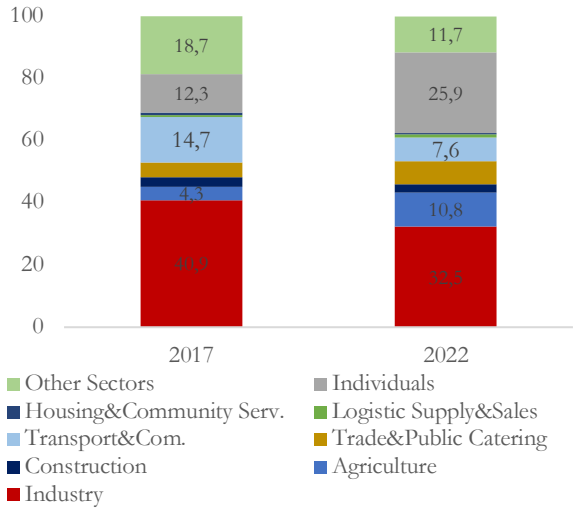
to the transport and communication sectors also has decreased considerably—almost halving. Conversely, the agriculture sector has more than doubled its share, rising from 4.3 percent in 2017 to 10.8 percent in 2022 (Figure 11).

Figure 10: Share of Loans to State- and Non-State-Owned Enterprises, Government, and Budget Organizations
(percent of total loans)



Source: Babasyan, Yungan, and Melecky (2023).
Note: SOB = State-owned bank; SOE = state-owned enterprise.

Figure 11: Commercial Bank Loans by Sector
(percent share)



Source: Central Bank of Uzbekistan, Haver Analytics.

6. Despite rapid population growth and the need for improved skills, employment and human capital have not contributed to growth in the last five years. Employment (formal and informal) growth has been anemic, averaging only 0.5 percent a year since 2017[7] (Figure 12). Employment is a pressing challenge which will need to be addressed going forward. The employment rate among individuals over 15 stood at 53.6 percent in 2022 and, for women, at only 37.3 percent in Uzbekistan, with neither having notably improved since 2017. Moreover, while standardized information on human capital, until now, has been lacking, the recently conducted Programme for International Student Assessment (PISA) (Figure 13) indicates low-quality human capital. The 2022 PISA indicates that 80 percent of students in Uzbekistan have not achieved a minimum level of proficiency in all three subjects (i.e., Mathematics, Reading, and Science). While the number of expected years of school is 11, this figure drops to 9.1 years for girls and 9.2 years for boys when adjusting for the quality of their learning (World Bank, 2024a). Successful transition economies, exemplified by Viet Nam and Estonia, have achieved notable improvements in test scores and workforce competitiveness by having prioritized education.

Box 2: Country Comparisons and Benchmarking in this Report

A range of comparisons against income and regional and country peers are made through this report. Uzbekistan is already on a trajectory of reform and has set its sights far higher than its current income status. As a result, while some comparison is made against those that are more "structural," such as averages for all lower middle-income countries, this report makes extensive use of comparisons that are more "aspirational." This benchmarks the incomes of Uzbekistan against the average of the (generally higher income) development Europe and Central Asia (ECA) countries and the averages for upper middle income countries.

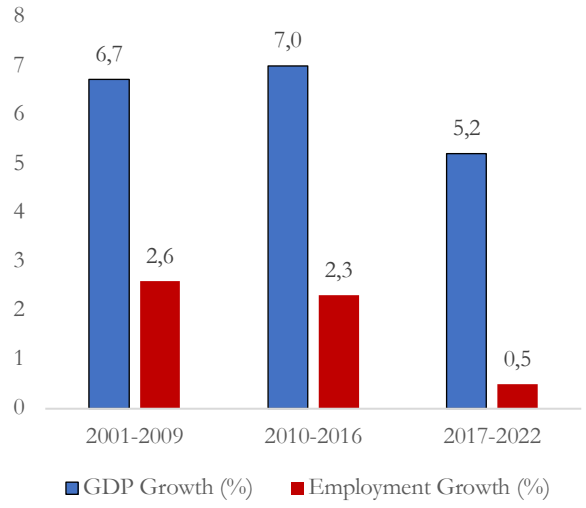
Peer countries have been selected based on broad relevant and aspirational criteria. The report uses a generally common set of comparator countries, namely, Armenia, Colombia, Kazakhstan, Malaysia, Peru, and Viet Nam. The six countries have broad similarities to Uzbekistan in terms of size, and have either achieved a higher income level or a sustained high growth rate for a sustained period of time, thus reflecting a number of policy examples that have contributed to their success. It is worth noting, however, that benchmarking alone is only indicative and therefore must be complemented with in-depth policy and situational analyses.

Source: World Bank staff elaboration.

[7] Part of the reason for this is the impact of the COVID-19 pandemic, which significantly disrupted the labor market. In 2020, employment contracted by 2.3 percent, followed by a rebound in 2021. Despite this uptick, the level of employment in 2021 remained below that of 2019.

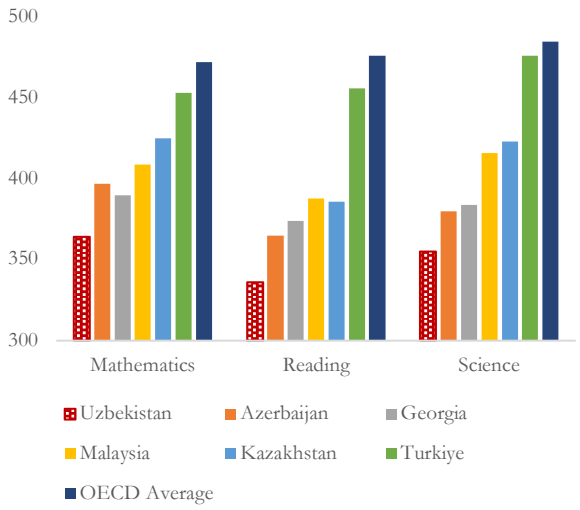
7. Human capital limitations[8] are likely hindering Uzbekistan's potential for increased investments and growth. While human capital will not be addressed in detail in this report, the *World Bank Public Expenditure Review* (World Bank, 2022c) provides detailed recommendations to raise health and education outcomes in Uzbekistan. Significant investments will be required to strengthen foundational skills, provide upskilling and reskilling opportunities, and enhance human capital for effective economic transformation. The World Bank's new service sector report (World Bank 2024b, forthcoming) on Uzbekistan-underscores the importance of firm and worker capabilities in enhancing productivity and growth, gauged by tertiary school enrollment and the proportion of the population with advanced digital literacy skills, crucial for fostering innovation and knowledge creation. A recent World Bank study (World Bank, 2021a) also shows that the productivity potential of children and young people in Uzbekistan will be about 40 percent below what could be possible had they had access to better education and health provision. One year of improved learning can be associated with 1 percent gain in GDP per capita growth rates. The education reform program in Uzbekistan, if focused on quality improvement, could yield a GDP that is—as students join the workforce—5 percent greater than without these reforms.

Figure 12: Gross Domestic Product and Employment Growth (%) and Capital to Output Ratio



Sources: Uzbekistan National Statistics; World Bank staff estimates.

Figure 13: PISA Results (2022), Score Points, Mean Performance



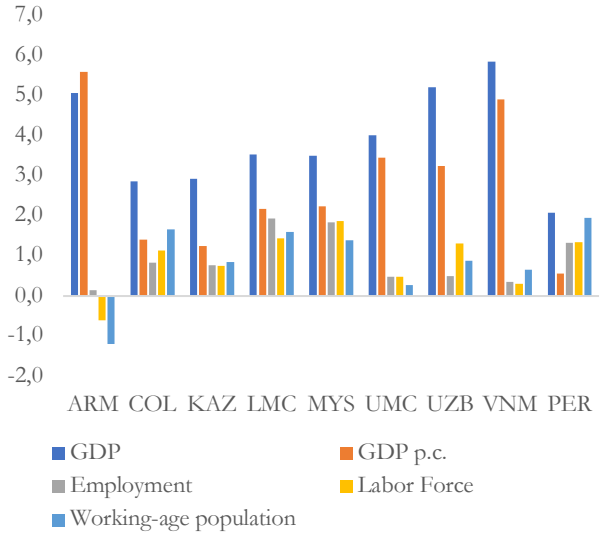
Source: Organisation for Economic Co-operation and Development.
Note: PISA = Programme for International Student Assessment.

8. Employment growth has not kept pace with the growth in GDP and working age population. Growth in Uzbekistan has not been accompanied by an increase in employment, as employment growth is outpaced by working age-population growth, with employment growth averaging 0.5 percent compared to working-age population growth at 0.9 percent (Figure 14). Among comparable countries, Malaysia stands out as a case in point where the labor force has expanded more rapidly than the working-age population. This is indicative of an increase in labor force participation with a corresponding increase in jobs. In Uzbekistan, growth in labor force has not matched its expanding working-age population, which has negative consequences for dependency ratios. Its age dependency ratio stands at 54.7 percent, comparable to the average for LMIC, but higher than the average for UMIC at 46.8 percent and the average for ECA (excluding high-income countries) at 51.4 percent.

[8] This report does not have a dedicated section on human capital constraints. The World Bank's *Education Excellence Towards Human Capital and Economic Growth in Uzbekistan* report (World Bank, 2021a) and The *Uzbekistan Public Expenditure Review: Better Value for Money in Human Capital and Water Infrastructure* (World Bank, 2022c) outline reform priorities for the education system to foster greater economic growth. The latter of the two publications emphasizes that the primary concerns in public education in Uzbekistan revolve around education quality and learning equity. The reforms need to broaden access to preschool and higher education, along with enhancing the quality of general secondary and specialized secondary education.

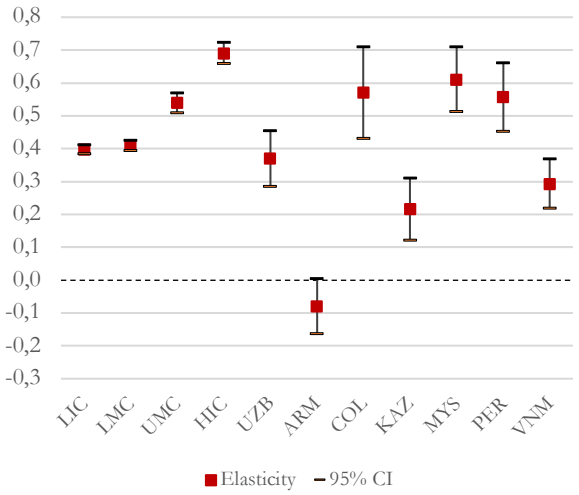
Similarly, employment elasticity reveals that economic growth in Uzbekistan leads to lower job creation than in most comparable countries, excluding Armenia, Kazakhstan, and Viet Nam (Figure 15).

Figure 14: Growth of Real Gross Domestic Product and Labor Market Demographics, 2017–22



Source: World bank staff estimation using data from WDI and Statistics Committee of Uzbekistan.
Note: Growth is estimated as compound annual growth rate.

Figure 15: Elasticity of Growth, 1991–2022



Source: World Bank staff estimates using Penn World tables 10.01.
Note: Elasticity calculated by regressing annual log employment levels on log GDP in 2017 U.S. using country fixed effects on a panel of 159 countries from 1991 to 2019.

9. Labor force participation rates in Uzbekistan have maintained a relatively stable pattern, whereas the age dependency ratio has experienced a slight increase over the past decade. Labor force participation rates have hovered around 60 percent in Uzbekistan, which is considerably low compared to similar countries such as Armenia, Kazakhstan, and Viet Nam. (Figure 16). This is largely attributed to low female participation rates in Uzbekistan. Conversely, the age dependency ratio is relatively high (Figure 17), driven by a significant share of the young population. The rising trend is a result of not only increasing old but also young age dependency ratios. However, the old dependency ratio in Uzbekistan (7.9 percent) is comparatively low compared to averages for LMICs at 9.3 percent and UMICs at 17.3 percent.

Figure 16: Labor Force Participation Rates, Ages 15 to 64

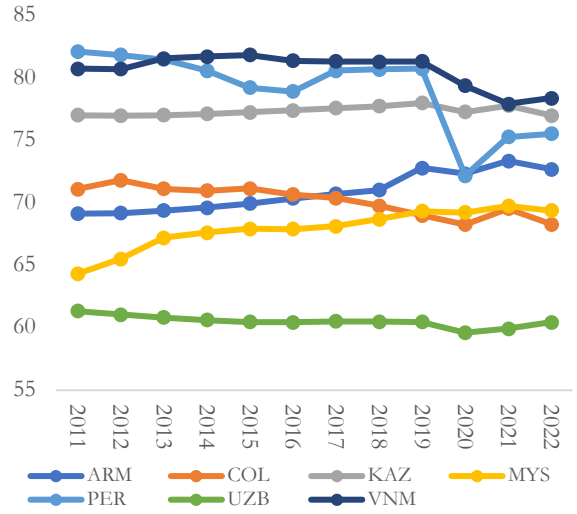
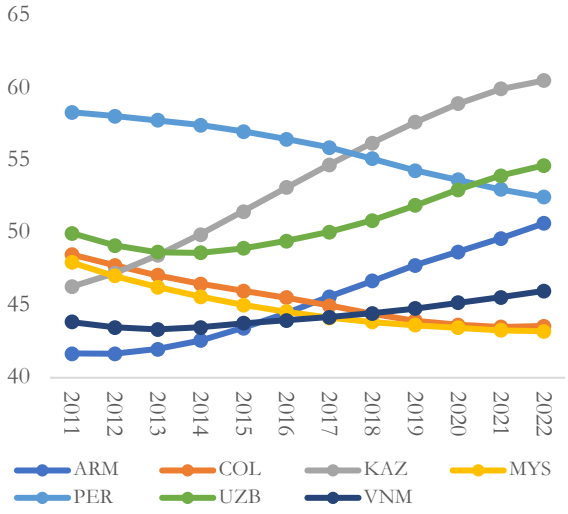


Figure 17: Age Dependency Ratio, Ages 15 to 64



Source: World Bank's World Development Indicators.

10. Low participation rates among females are reflected in the significant employment gender gap. Labor force participation rates for women in Uzbekistan are markedly lower than those for men, a trend not significantly different when compared to peer countries. Additionally, the employment of women is notably lower than that of men across their life cycle (Figure 18). Notably, the widest gap occurs during the ages of 55–59, coinciding with the retirement age in Uzbekistan.[9] Household budget surveys reveal that the main reason women choose not to work is due to household or caregiving responsibilities (approximately 75 percent of surveyed women), whereas men's primary reason is for study purposes (around 56 percent) (Figure 19).

Figure 18: Employment by Age and Gender
(in percent)

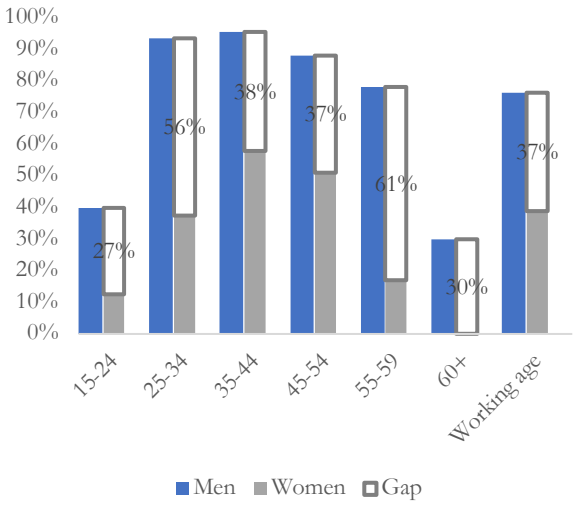
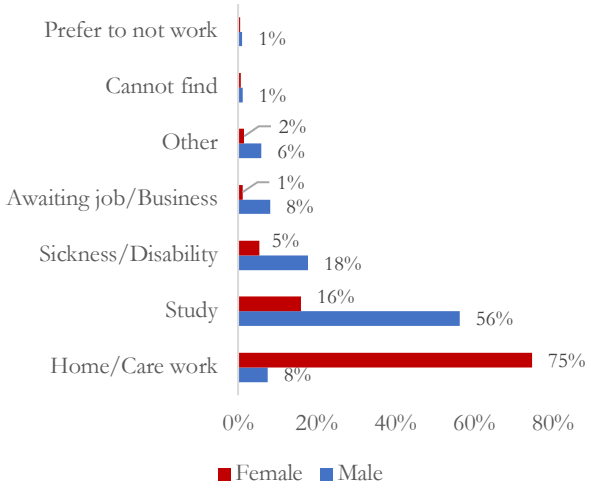


Figure 19: Reasons for Nonwork among the Unretired



Sources: World Bank (2024a); *Household Budget Survey of Uzbekistan, 2022*; and World Bank staff calculations.

11. The employment structure further reveals that only about half of the employed population are engaged as wage earners, with the other half in own-account jobs (Figure 20). This employment structure is not uncommon for Uzbekistan, as the share of waged workers in middle-income countries typically ranges from 25 percent at the lower end of income to about 75 percent at the upper end (Dino, Weber, and Aterido, 2018). As

[9] The retirement age for men and women in Uzbekistan is 60 and 55 years, respectively.

economies transition from low-income status, the increase in the share of wage employment is associated with a decrease in the agricultural share of employment (Dino, Weber, and Aterido, 2018), a trend also observed in Uzbekistan. The share of wage workers in employment has increased from 46 percent in 2000 to 54 percent in 2022, while the agricultural share of employment declined from 37 percent to 26 percent during the same period. There is a gender dimension to this trend, with more women employed as waged workers and more men being self-employed. This stands in contrast to Uzbekistan's main aspirational peers, where men and women alike are predominantly employed as wage workers (Figure 21).

Figure 20: Employment by Age and Gender
(in percent)

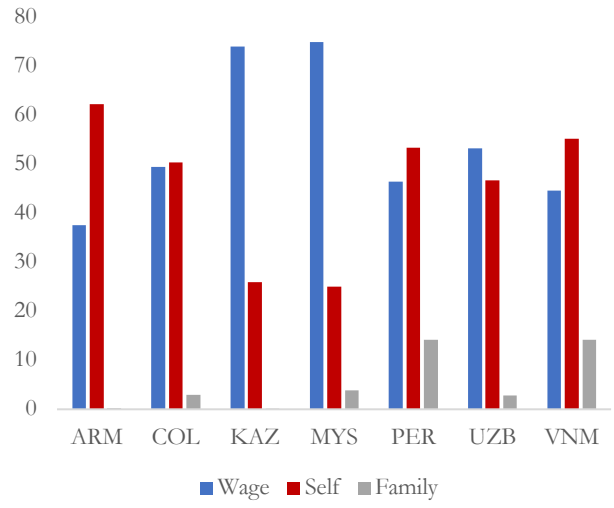
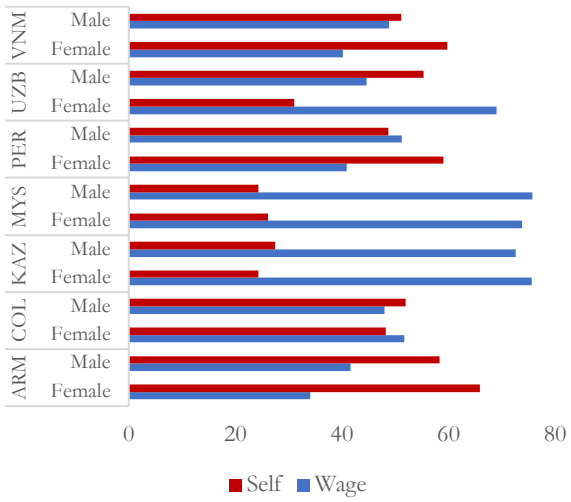


Figure 21: Gender Employment Structure, 2017–22



Sources: World Bank staff elaboration, based on World Development Indicators.

12. The services sector presently encompasses over 40 percent of jobs in Uzbekistan, yet many of these positions are concentrated in social services and low-skilled sectors. Uzbekistan's structural transformation is ongoing, marked by the shift of workers from agriculture to the service and industrial sectors. Given that the service sector absorbs the majority of jobs released by agriculture, it presents the prime opportunity for job creation. However, the current job structure within the sector is heavily skewed toward social and low-skilled roles. Social services, comprising health, education, and public administration, constitute 35 percent of service employment. Meanwhile, low-skilled services, such as transportation, administrative and support, wholesale and retail, hospitality, and personal, account for nearly two-thirds of total service employment and almost one-fourth of total service value added.

13. Similar to employment, total factor productivity (TFP) contributed little to growth during the reform period. The contribution of TFP was actually slightly negative over the reform period (Figure 5). In 2020, during the substantial economic slowdown caused by the COVID-19 pandemic, TFP made its most significant negative contribution to growth, lowering it by almost 2 percentage points as the economy grappled with the slow adjustment of capital stock. Over the past two years, however, it has begun to show modest signs of improvement. The structural reforms implemented since 2017 have the potential to further boost TFP growth, as these reforms are designed to have a lasting positive impact on overall productivity. Declining returns to capital, as highlighted above, may signal inefficiencies in the economy as well as have an adverse impact on TFP. There could be several other factors behind the weak performance of TFP, including inefficient use of factors of production, regulatory barriers, market distortions (as discussed in Chapter 3), human capital constraints (as discussed above), infrastructure deficiencies (as outlined in Chapter 2), technological constraints, and a low level of trade integration (as discussed Chapter 4).

1.2 Labor Productivity and Jobs

14. With capital deepening, labor productivity has risen, although it remains a long way below that of higher income countries. Labor productivity increased by 5.3 percent per annum on average between 2017 and 2022. Labor productivity growth may arise due to TFP growth or capital deepening. With stagnant TFP, as has been discussed, rising labor productivity has been driven by capital deepening. In level terms, industry is the sector with the highest labor productivity in Uzbekistan, followed by construction, while the service sector has the lowest productivity level (Figure 22). During the reform period, the construction sector saw the strongest increase (10.2 percent per annum) in labor productivity growth (Figure 23) while industrial labor productivity nearly doubled over the period. A Shapley decomposition[10] confirmed that labor productivity accounted for the vast majority of Uzbekistan's growth over the last decade (Figure 25). While average labor productivity has provided a consistent spur to growth, reductions in the employment rate and negative demographic changes over the 2017–22 period have partly offset this. Differences in sectoral labor productivity between Uzbekistan and the average for Organisation for Economic Co-operation and Development and UMIC countries remain large. For instance, labor productivity in industry and services in Uzbekistan is only a third of the average for UMICs (Figure 24).

Figure 22: Labor Productivity
(value-added per worker)

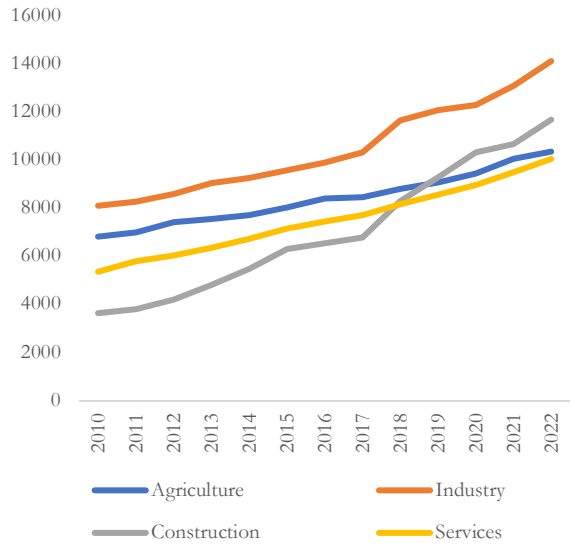
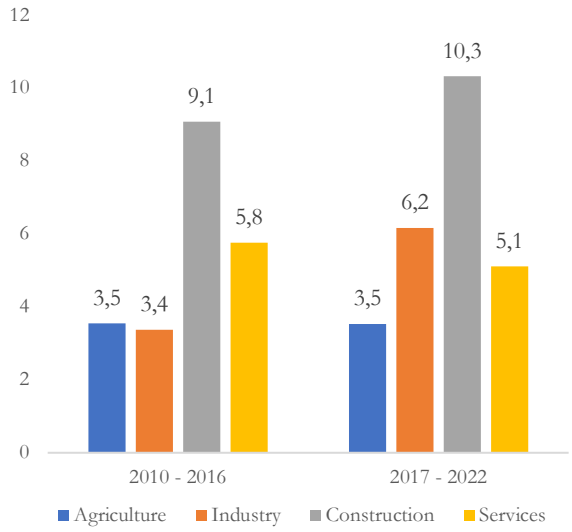


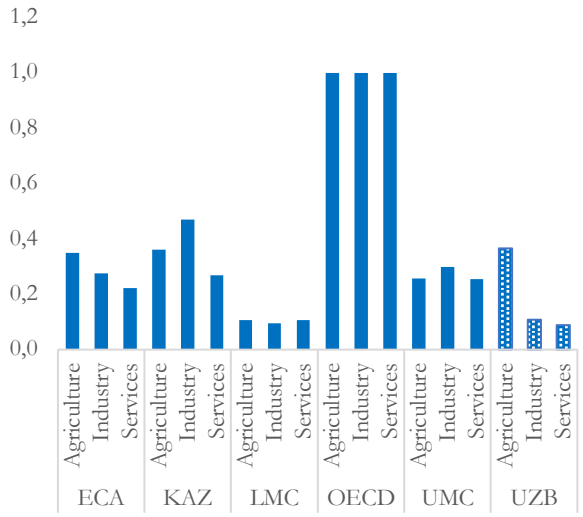
Figure 23: Average Growth Rate in Labor Productivity
(in percent)



Sources: Uzbekistan National Statistics; Haver Analytics.

[10] The Shapley decomposition method of economic growth was used to explore the drivers of this growth to identify the impact of changes in productivity, employment, and demographics. This method enables the decomposition of Uzbekistan's per capita output growth into four components: labor productivity growth, employment growth relative to the economically active population, growth in economically active population relative to working age population, and growth in the working age population relative to the total population.

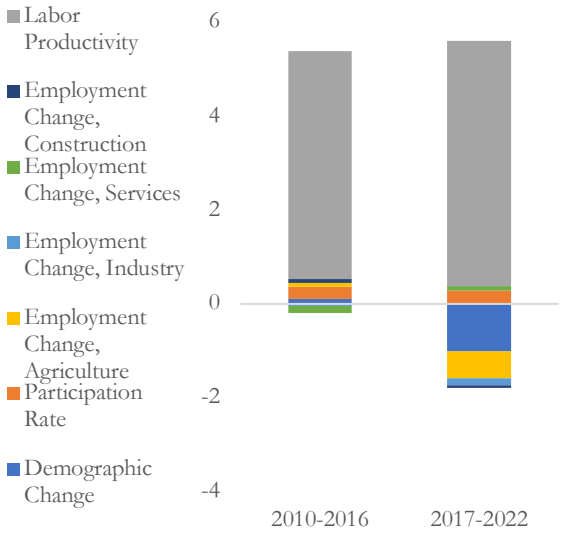
Figure 24: Labor Productivity Gap, 2017–22



Source: World Development Indicators.

Notes: (i) The ECA region covers countries excluding high income; (ii) the labor productivity gap is calculated as a ratio of labor productivity between specific country and the Organisation for Economic Co-operation and Development.; and (c) ECA = Europe and Central Asia; KAZ = Kazakhstan; LMC = low middle-income country; OED = Organisation for Economic Co-operation and Development; UMC = upper middle-income country; and UZB = Uzbekistan.

Figure 25: Shapley Decomposition of per Capita Growth



Source: Uzbekistan National Statistics; World Bank staff estimates.

15. Over time, labor productivity gaps between agriculture and other sectors (industry and construction) have widened while the gap between agriculture and services has shrunk. Large gaps in labor productivity can signal allocative inefficiency and suggest that a reallocation of labor from low to high productivity sectors could accelerate growth, even if productivity within the receiving sector remains weak. The labor productivity gaps have widened between agriculture and other sectors during the reform period in Uzbekistan as nonagricultural labor productivity growth has outpaced that of agriculture. Additionally, growth in per capita income has been driven primarily by increases in labor productivity. Without comparable job creation, employment and demographic change have not created dividends for Uzbekistan's growth; rather, they have hampered it (Figure 25).

16. The little employment growth reflected was concentrated in the service sector. Total employment saw only a slight increase of 0.5 percent per annum during the period 2017–22 compared to over 2 percent in that of 2010–16. This growth is entirely attributed to employment growth in the service sector. Over the period, the service sector[11] offset much of the decline in agriculture value added and employment (Figure 26). The construction and industry sectors made more minor contributions. Despite the relatively slow growth in industry employment, there was high value addition, resulting in strong labor productivity growth within the industry over the reform period.

17. Most labor productivity growth occurred within sectors and was not due to sectoral reallocation. In the pre-reform as well as reform periods, the majority of productivity gains stemmed from within-sector productivity growth (Figure 27). This signals limited movement of labor across sectors and little structural transformation. However, the between-sector productivity gains that have occurred in the services sector, offset by losses in agriculture. During the reform period, the service sector increased its share of total employment by 2.5 percentage points, accompanied by an average productivity growth of 5.1 percent. The new Uzbekistan Services report underscores the potential for greater contributions to growth and job creation by boosting the

[11] The share of the service sector in total employment increased by 2.5 percentage points in the reform period, standing at around 52 percent in 2022. The industry employment share marginally increased, and it is approximately 13 percent, while the employment shares of the agriculture and construction sectors are 25 percent and 9.5 percent, respectively.

productivity of low-skilled services and expanding innovative global services.[12] Credit growth has been highest among low productivity sectors, such as agriculture, during the reform period, indicating allocative inefficiencies in the economy.[13] Competition and business regulations influence the economy's capacity to reallocate resources to more productive firms and sectors, as well as to foster productivity growth across sectors. Chapter 3 delves deeper into the possible constraints of competition and business policies behind the limited structural transformation. Moreover, the low growth of productivity between sectors also could stem from insufficient economic integration, as discussed in detail in Chapter 4.

Figure 26: Labor Productivity vs. Employment Growth
(in percent)

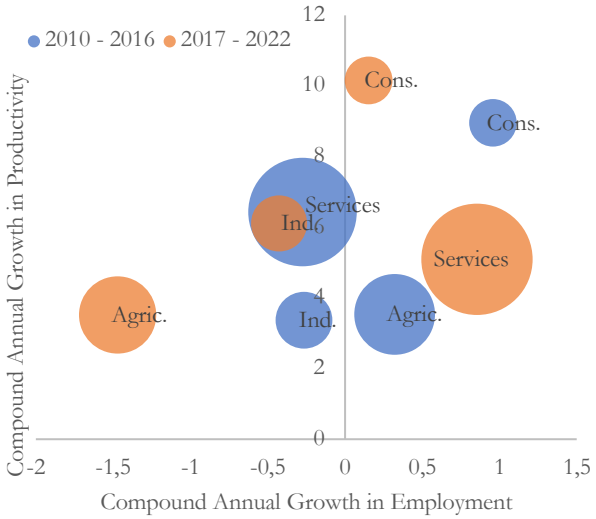
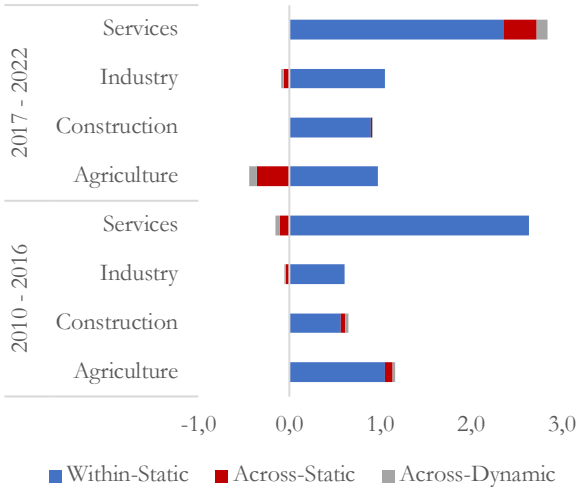


Figure 27: Decomposition of Labor Productivity Growth
(in percent)



Sources: Uzbekistan National Statistics; World Bank staff calculations.
Note: The size of the bubble is determined by the share of employment in the final period of the period range; that is, 2016 and 2022. The within-effect captures productivity growth within sectors, whereas the across-effect measures the productivity effect of labor reallocation across different sectors. The within-effect is positive when the labor productivity growth in sectors is positive. The across-effect measures the contribution of labor reallocation across sectors, being positive when labor moves from less to more productive sectors. The across-dynamic effect is positive (negative) if workers are moving to sectors that are experiencing positive (negative) productivity growth (de Vries et al., 2014).

18. Decomposition within subsectors confirms a modest structural transformation in the economy. In certain manufacturing subsectors (e.g., machinery and equipment, textiles and garments, and food), contrary to aggregate trends, sectoral reallocation appears to play a relatively significant role in driving productivity growth in the period 2017–22 (Figure 28 and Figure 29). More than half of productivity growth stems from sectoral reallocations. The negative contribution of the structural change component in the utilities and mining sectors pulls down the overall structural component of the total industry sector into negative territory. In service subsectors, sectoral allocation plays a relatively minor role, with the majority of the productivity increase originating from within-sector productivity growth.

[12] For details, see World Bank 2024b (forthcoming).
[13] During the period 2017–22, the agriculture sector received the lion's share of loans, with an average increase of 55 percent. In contrast, loans to the more productive sectors—industry, construction, and services—grew by an average of 30-40 percent.

Figure 28: Employment Growth vs. Productivity Growth
(in percent)

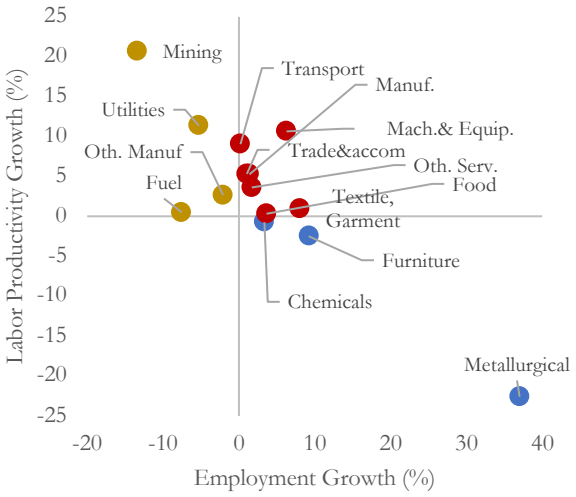
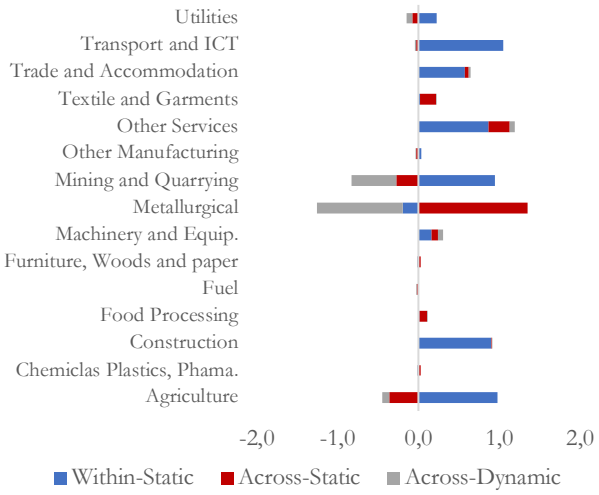


Figure 29: Decomposition of Labor Productivity Growth, 2017–22
(in percent)



Sources: Uzbekistan National Statistics; Haver Analytics; World Bank staff calculations.

1.3 Identifying Priorities for Action

This chapter has used macroeconomic analyses and firm surveys to shed light on pivotal policy domains instrumental in boosting Uzbekistan's productivity growth. Below are the key highlights of this chapter.

19. **Uzbekistan's growth has proven resilient and has surpassed that of LMICs and UMICs during the period 2017–22, despite facing global uncertainties and external challenges.** This can be attributed to robust macroeconomic policies and reform measures. However, achieving upper middle-income status by 2030[14] necessitates additional efforts to enhance supply-side capacity through structural reforms that foster allocative and productive efficiency while creating more jobs. Allocative efficiency can be supported through policies that address market failures (e.g., anticompetitive practices, price distortions, information asymmetries, inefficient subsidies). Productive efficiency is the extent to which an individual firm is optimizing output with its given inputs and is influenced by a range of factors including technology adoption, knowledge transfer, innovation, and human capacity. The effects are not automatic; they depend on market structure, overall investment climate, or rigidities that may exist in labor and capital markets (i.e., competitiveness and capability). The macro diagnostics signal some inefficiencies in the economy, summarized below.

20. **First, growth has been good but not great.** To measure up to its laudably ambitious reform goals and against some of the best transition stories worldwide, Uzbekistan needs to achieve even higher growth. To achieve upper middle-income status, the country needs to experience growth rates close to double digits.

21. **Second, the Uzbekistan economy is running on only one engine of growth; that is, capital accumulation, which is not sustainable.** Decomposing growth over the last five years, the entirety of it is driven by capital deepening, not total factor productivity, which raises concerns about the efficiency of capital utilization. There could be various reasons behind the low performance of TFP, including inefficient use of TFPs, regulatory barriers, market distortions (as discussed in Chapter 3), human capital constraints (as discussed above), infrastructure deficiencies (as outlined in Chapter 2), technological constraints, and low level of trade integration (as discussed Chapter 4). While the reforms completed so far may provide some greater returns over time, growth imbalances will require focused attention on a prioritized forward-looking reform agenda.

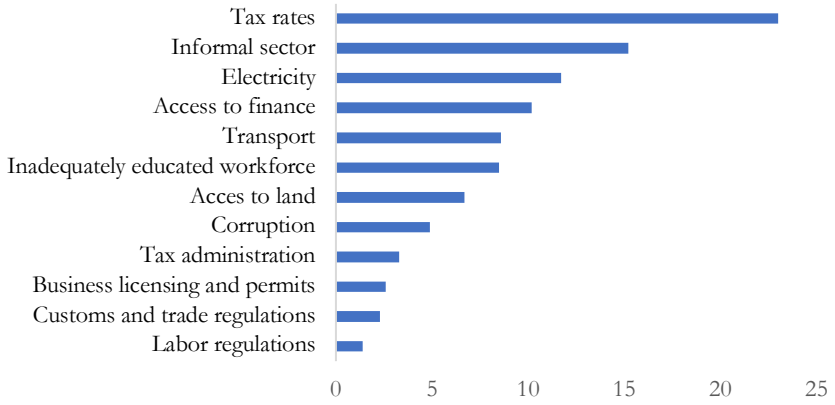
[14] Uzbekistan aims to become an upper middle-income country by 2030; that is, a doubling of gross national income per capita. To reach this target by 2030, Uzbekistan would need to grow at more than 10 percent on average. With growth at 7 percent, this target could be reached by 2033, with growth at 6 percent by 2036 and at 4 percent by 2038.

22. Thirdly, structural transformation remains highly constrained. Despite making good progress in labor productivity, the disparity in labor productivity between Uzbekistan and the average for countries of the Organisation for Economic Co-operation and Development and UMICs in the industry and service sectors remains significant. Between 2017 and 2022, the labor productivity of the industry and service sectors in Uzbekistan was around three times lower than the average for UMICs. In the pre-reform as well as reform periods, the majority of productivity gains originated from within-sector productivity growth. This indicates minimal labor movement across sectors, suggesting barriers to structural transformation. Specifically, within the industry sector, despite some advancements in the food, machinery, and textile sectors, the dominance of SOEs in extractive sectors hampers inter-sector productivity growth within the industry sector. In sum, the lack of structural transformation is evident, characterized by a stagnant reallocation of productive resources across sectors and firms. This stagnation suggests that the current economic structure may not be conducive to fostering innovation and competitiveness.

23. Lastly, and most concerningly, Uzbekistan's growth did not generate sufficient jobs. The kind of growth that is investment driven—especially in state-led areas and by SOEs in sectors that do not need much labor—has led to only anemic job creation, which is in stark contrast to Uzbekistan's rapid working age population growth. Uzbekistan's challenge is to complete the puzzle of productivity growth and inclusive and sustainable job creation by finding the missing pieces of the reform program that is already well under way.

24. The results of the World Bank Enterprise survey (2019) substantiate the challenges concerning resource efficiency in the economy as signaled by the macroeconomic diagnostics mentioned above. Access to inputs, finance, an inadequately educated workforce, infrastructure bottlenecks (energy, transport) (Chapter 2), regulatory burdens, informality, and high tax rates emerge among the most binding constraints cited by firms (Figure 30). The survey shows that monopolistic and oligopolistic market structures are widespread in Uzbekistan's manufacturing sector. In 2019, the proportion of Uzbekistan's formal private manufacturing firms perceiving their operations to be in monopoly, duopoly, or oligopoly markets was notably high, at 33 percent. The practices of the informal sector are cited as the second most significant obstacle to private sector development. Extensive literature confirms that competition from the informal sector can diminish the market share of formal firms and decrease productivity due to the supplementary costs of regulatory compliance borne by formal entities. Consequently, this can compel formal firms with the lowest productivity to exit the market (Amin et al., 2019). The following section will present fresh evidence on the binding constraints for firms in Uzbekistan.

Figure 30: Major Obstacles to Doing Business
(percent of respondents)

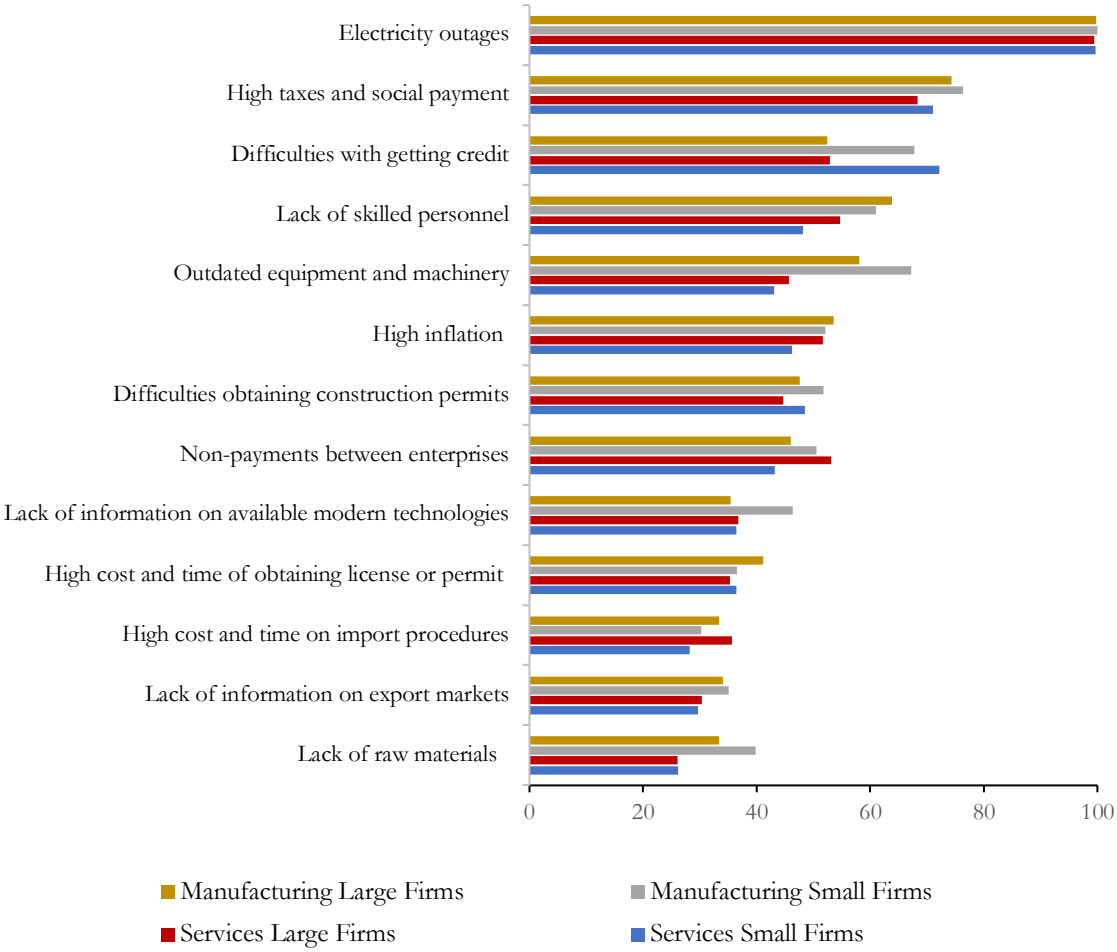


Source: World Bank (2019).

25. A new survey in 2023 confirms that electricity outages, high taxes and social payments, difficulties with getting credit, shortage of skilled personnel, and outdated machinery and equipment are major constraints for large and small enterprises in the manufacturing and service sectors alike. The top thirteen constraints, cited by manufacturing and services firms in 2023, are presented in Figure 31, with the top five most binding constraints being electricity outages, high taxes and social payments, difficulty in obtaining credit, shortages of skilled personnel, and outdated machinery and equipment. Credit constraints are especially important for small

firms, according to the survey. Firms continue to cite high taxes, nonpayment among firms, high inflation which raises inputs costs and wage demands, and access to raw materials as common constraints. One of the largest concerns for most small manufacturing firms in 2017 was the lack of skilled personnel, but less than half of large firms had this issue. In 2023, electricity outages emerged as the top constraint for service and manufacturing firms, while outdated machinery and equipment and lack of information on modern technologies gained importance, especially among small manufacturing firms. Conversely, the significance of import procedure costs and time decreased as a constraint to business since 2017. The skilled personnel shortages appear to have become more binding for all manufacturing firms, especially for large ones, with three out of five firms citing this issue.[15] Another issue of importance to manufacturing firms in 2023 was the lack of adequate information on export markets, along with difficulties in obtaining construction permits and expanding territory or accessing land. This may point to a nascent potential for firms to enter export markets (see Chapter 4 on constraints to global market integration) that are yet constrained by policies and a lack of experience to date. Manufacturing firms also faced significant infrastructure disruptions in 2023, including not only electricity outages (ranging from 28 days per annum for large firms to 42 days for small firms), but also natural gas shortages (22 to 29 days), internet downtime (17 to 44 days), water scarcity (29 to 70 days), and fuel interruptions (24 to 40 days).

Figure 31: Selected Results from the Survey of Manufacturing Firms and Service Firms, 2023
(percent of respondents)



Source: World Bank "Uzbekistan Productivity and Jobs" Survey (2023) conducted in the context of this report in manufacturing and services sectors.
Note: Selected constraints (percent of respondents) based on responses above 20 percent of all enterprises.

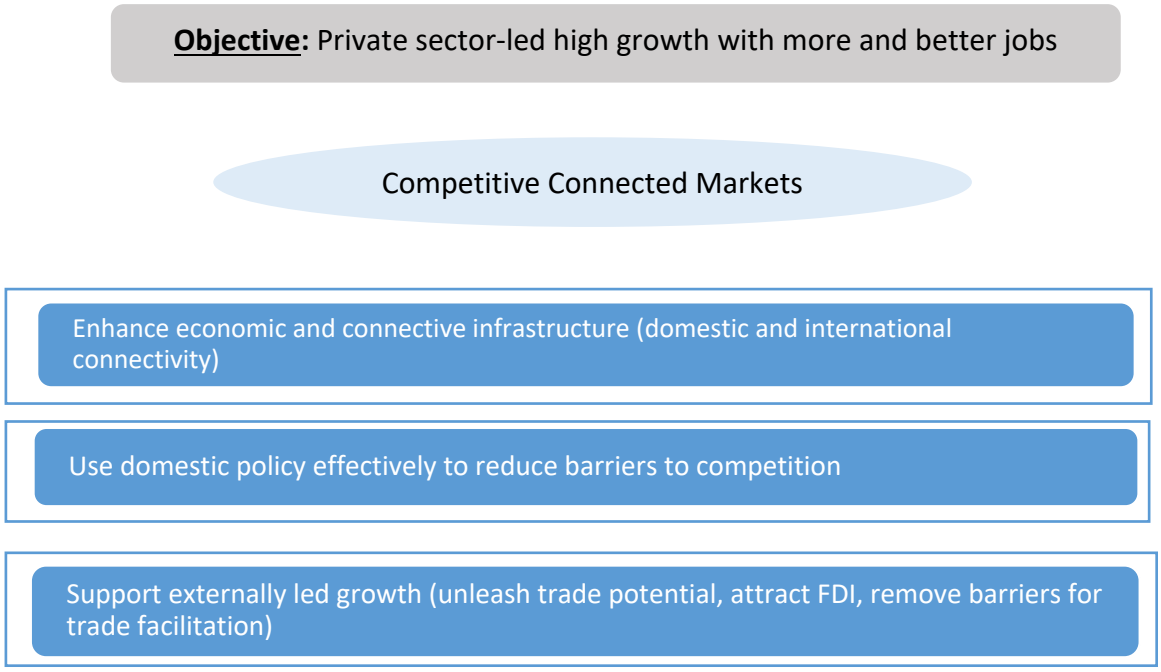
[15] In 2017, most manufacturing firms were concerned by the lack of foreign exchange for their current account operations. Authorities successfully addressed this issue so that in 2023, less than 20 percent of enterprises cited the lack of foreign exchange in requested amounts as a constraint. The nature of this constraint in 2023 appears to stem not from a misalignment of foreign exchange rates, but rather from problems arising from trade with Russia due to tightened Western sanctions and associated banking restrictions.

26. Based on insights from the macroeconomic and firm-level analyses, it is evident that there is urgent need to refine the functioning of markets to enable a more effective allocation of productive resources. Creating an environment where firms can thrive more efficiently is crucial to drive the economy's overall productivity. This entails implementing policy measures that will address any constraints, foster a dynamic and competitive business landscape, and ultimately contribute to sustainable economic growth.

27. To fully capitalize on the advantages of enhanced market functioning, it is essential to adopt a comprehensive strategy that not only refines the internal market dynamics but also actively seeks to deepen Uzbekistan's integration into the global trading system. This approach should take into consideration the dual benefits of nurturing a robust domestic market while embracing the global market so as to collectively drive significant productivity improvements across the board. By fine-tuning domestic market operations, firms within Uzbekistan can operate more efficiently by leveraging improved resource allocation and access to capital. In parallel, greater integration into international trade networks will afford firms access to higher-quality inputs and exposure to larger, more diverse markets. The synergy from bolstering internal market structures while engaging more deeply with global markets should stimulate a dynamic cycle of growth and innovation. As domestic firms become more competitive and capable on the international stage, they will contribute to a vibrant, resilient economy that will be well positioned to achieve and sustain long-term economic prosperity.

28. While building on these insights, the following sections highlight the critical constraints and reforms necessary to enhance Uzbekistan's domestic market as well as its global market integration (Figure 32**:**). Chapter 2 and Chapter 3 focus on domestic market integration, addressing the constraints to efficient resource allocation and private sector-led growth. Two key issues are explored: bottlenecks in economic infrastructure development and potential distortions created by government interventions, including business support measures and regulations that favor SOEs. Chapter 4 concentrates on external market integration, analyzing Uzbekistan's foreign trade of goods and services and identifying opportunities and constraints for further integration.

Figure 32: Private Sector-Led Growth



Chapter 2: Addressing Physical Infrastructure Gaps

29. Infrastructure is a key part of creating domestic markets and improving international connectivity. Good transport connectivity is fundamental for markets to operate well, making possible the exchange of goods at a limited cost over a larger area. At present, Uzbekistan exhibits extreme divergences in market prices across its territory—a clear sign that there are probative constraints in creating a single market within the country. On average, product prices vary by more than 50 percent between the costliest and least expensive province of Uzbekistan. This is understandably a prerequisite for capitalizing on the benefits of international trade, and improving international transport connectivity will be discussed in Chapter 4. Electricity shortages are a frequent occurrence, especially where the business demand is greatest: in the Tashkent region. In this context, it is unsurprising that according to an enterprise survey in 2019 (World Bank, 2019), infrastructure deficiencies in electricity and transport alike are among the most frequently cited constraints of businesses in Uzbekistan and they exceed the averages of lower middle-income and upper middle-income countries (Figure 33 and Figure 34). The results of the recent survey conducted in 2023 also confirm these challenges for the manufacturing and service sectors (Section 1.3).

Figure 33: Share of Firms that State Electricity as the Biggest Obstacle to Doing Business
(in percent)

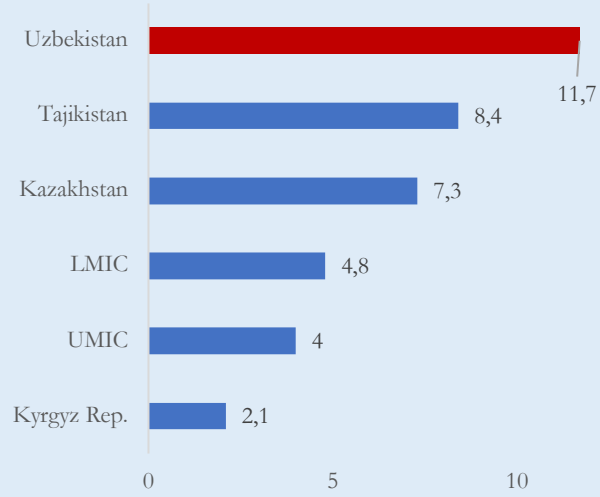
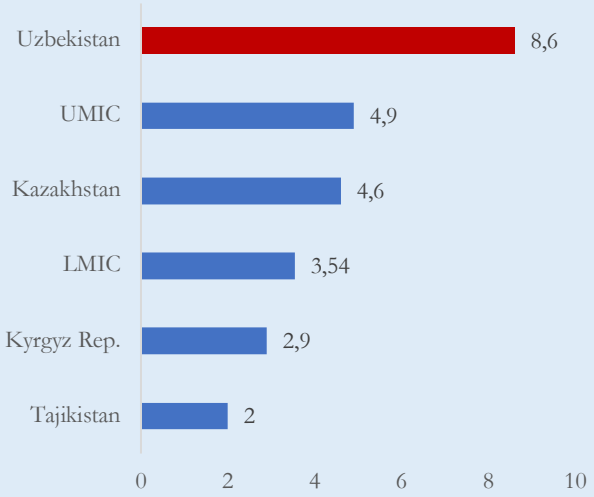


Figure 34: Share of Firms that State Transport as the Biggest Obstacle to Doing Business
(in percent)



Sources: World Bank (2019).

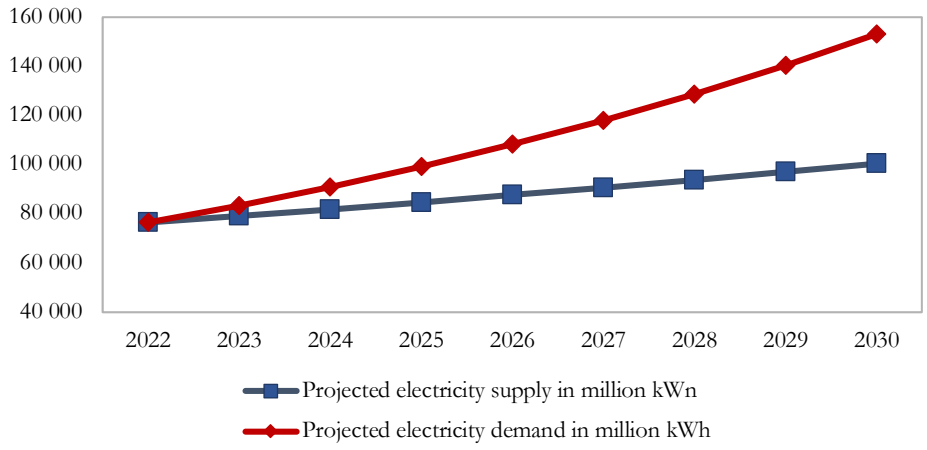
30. Infrastructure investment can play a crucial role in enhancing competitiveness and fostering economic growth. Sound transport infrastructure, such as roads and railroads, can have a significant economic impact, as it facilitates better market integration and market access (Donaldson and Hornbeck, 2016) and reduces the costs of trading (Allen and Arkolakis, 2014). Reliable electricity infrastructure lowers barriers to entry and accelerates firm growth and productivity (Lee, Miguel, and Wolfram, 2017). Economic gains from infrastructure investment are particularly significant in low- and middle-income economies. The railroad network constructed by the British government in India significantly increased trade flows and raised real income by 16 percent through gains from trade (Donaldson, 2015; 2018). Cities in Sub-Saharan Africa that are better connected to the port area experienced increases in real income of 7 percent relative to otherwise identical cities with lower connectivity to the port (Storeygard, 2016). The expansion of the electrical grid has greatly increased the number and size of manufacturing firms in Indonesia (Kassem, 2021). However, unreliable power supply has greatly depressed firm investment (Reinikka and Svensson, 2002) and productivity (Allcott, Collard-Wexler, and O'Connell, 2016). In the long term, improved reliability of power supply in Sub-Saharan Africa could have led to increases of between 16.8 to 30.7 percent in output per worker, largely through firm expansion and firm entry channels (Fried and Lagakos, 2023). Infrastructure investments in electricity and transportation networks deliver even larger economic gains due to sizeable infrastructure investment complementarities (Moneke, 2019; Perez-Sebastian, Serrano Quintero, and Steinbuks, 2023).

31. This chapter analyzes how infrastructure investment in Uzbekistan can be reshaped across regions and sectors to significantly improve country welfare. Section 2.1 and Section 2.2 describe the context and the governance of Uzbekistan's two key infrastructure sectors: electricity and transport networks. Section 2.3 describes the results of model simulations that highlight the need for improved planning and better coordination among public agencies regarding infrastructure projects. Section 2.4 discusses implications of improved infrastructure policies for prices, competitiveness, and welfare, while the last section provides specific policy recommendations.

2.1 Infrastructure Sector Context

32. Uzbekistan's two largest infrastructure pillars—namely, the electricity and transportation networks—remain underdeveloped, hampering domestic integration and regional economic development. Most electricity-generating plants and transport structures were constructed during the Soviet times more than 30 years ago. Since then, there has been a lack of improvement and adjustment for demographic and economic change. Electricity transmission and distribution losses are more than twice those of high-income and some middle-income countries. Despite Uzbekistan's potential to one of the main transit nodes in Central Asia, the poor quality of transport services, under-investment, insufficient pro-competition regulation, and inefficient planning undermines its connectivity and extensive road and railroad network.

Figure 35: Projected Electricity Shortages, 2023–30

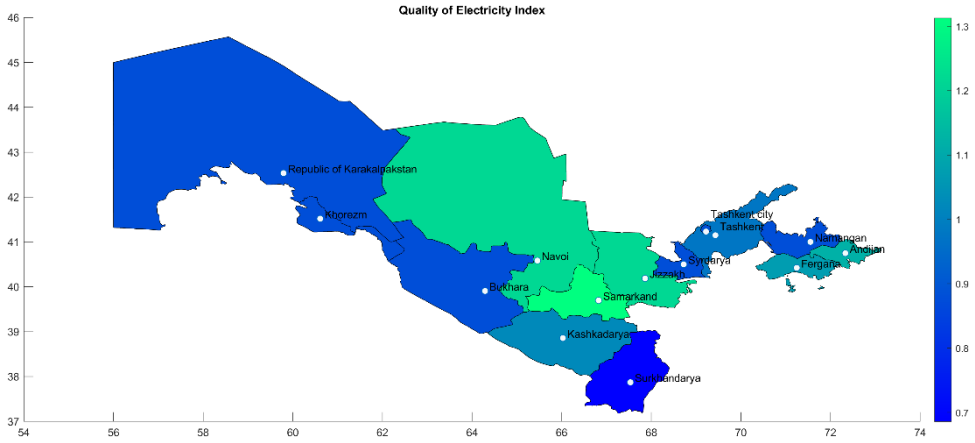


Source: World Bank staff estimates based on World Bank's Least-Cost Generation Expansion Plan.
Note: kWh= kilowatt-hour.

33. Electricity supply is heavily subsidized—reliant on Uzbekistan's now-dwindling natural gas production—while leaving the sector starved of capital investment and beset with out-of-date infrastructure. A lack of modernization and maintenance of the energy system has posed a challenge in meeting the rapidly growing demand for electricity. Uzbekistan has significant potential in renewable energy, but it is highly dependent on fossil fuels. This has led to a depletion of its own natural gas resources, which presently comprise 83 percent of energy production and more than 80 percent of the electricity mix. The explosive nature of growth in demand in Uzbekistan has exacerbated underlying problems. Electricity demand exceeded supply by 8 percent in 2023, resulting in severe electricity outages. Poor governance, inadequate maintenance, and equipment well beyond its useful service life have put a further strain on the system. Nearly 40 percent of the country's electricity-generating infrastructure has exceeded its useful lifespan, leading to frequent power outages. Distribution losses ranging from 6 percent in Navoi to over 20 percent in Jizzakh, in addition to transmission losses up to 5 percent in 2022, signal a need for reconstruction, modernization, and installation of power transmission lines and substations. Furthermore, demand for electricity is set to grow further, doubling over the coming decade, according to World Bank estimates. Thus, in the absence of investment to reduce the losses and improve energy efficiency, Uzbekistan faces a threat of severe electricity shortages of up to 60 percent of the projected demand for electricity by the end of the coming decade (Figure 36). The quality of power supply varies significantly across

regions, indicating relatively better quality of electricity in the central regions of Uzbekistan, such as Navoi, Samarkand, and Jizzakh, and poorer quality elsewhere, notably in Tashkent city which has the highest energy intensity in the country (Figure 36). Furthermore, insufficient pro-competition regulation stymies improvements in efficient and private sector participation (see Section 3.2.3 for more detail).

Figure 36: Index: Quality of Electricity, 2019



Source: World Bank staff calculations based on World Bank's Enterprise Survey Data 2019.

34. The existing network infrastructure in Uzbekistan for energy and transport results from past investment choices and ongoing operations and maintenance (O&M) performance. Businesses and households are directly affected by the physical infrastructure and associated costs. Recognizing the current services offered by this infrastructure is crucial for identifying areas of improvement in public and private infrastructure. Examining the current infrastructure at the territorial and sector levels exposes considerable gaps.

35. Under the Soviet economic model, connectivity in Uzbekistan was prioritized to the North, to connect the major Russian cities, but domestic connectivity in Uzbekistan, which runs 1,500 kilometers (km) East-West, was neglected. As a result, Uzbekistan's existing road network lacks spatial and inter-regional connectivity. The country's Soviet legacies have played a significant role in the development of its transport network, which consists of a long spinal corridor connecting the country within and with neighboring countries. The road network structure has been constructed and inherited from the Soviet Union, prioritizing Uzbekistan's capacity to join Soviet supply chains through the present-day Russian Federation, rather than domestic connectivity, thereby significantly increasing transportation costs within the country. This has meant that existing transport corridors are mainly oriented toward the North, leaving inadequate and inefficient transport corridors for the West, East, and South. Improving domestic integration remains critical to facilitating trade and economic development throughout Uzbekistan.

36. Insufficient investments in road maintenance result in higher transport costs and higher prices for tradable goods, leading to economic losses. The road network suffers from the slow pace of routine maintenance and increased congestion, given the lack of optimization in recent decades. Uzbekistan has a wide road network spanning 42,695 km, with 3,981 km of international roads, 14,100 km of national roads, and 24,614 km of local road functions (State Committee for Roads). Many of these roads are unpaved (dirt and gravel), ranging from between 49 percent and 75 percent of the total road length, excluding the capital, Tashkent city (Figure 37). Most roads in the country lack maintenance, with the share of roads maintained as of January 1, 2023, ranging from between 16.32 percent in Jizzakh to 52.41 percent in Navoi (Figure 38). The poor quality of transportation results in elevated transportation costs.

Figure 37: Pavement of Road Networks
(by pavement type)

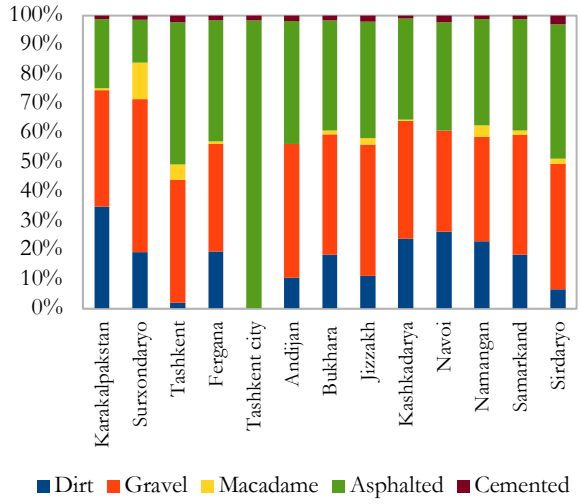
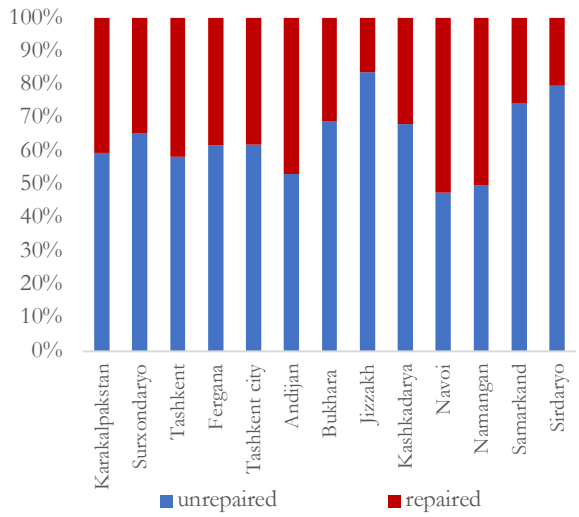


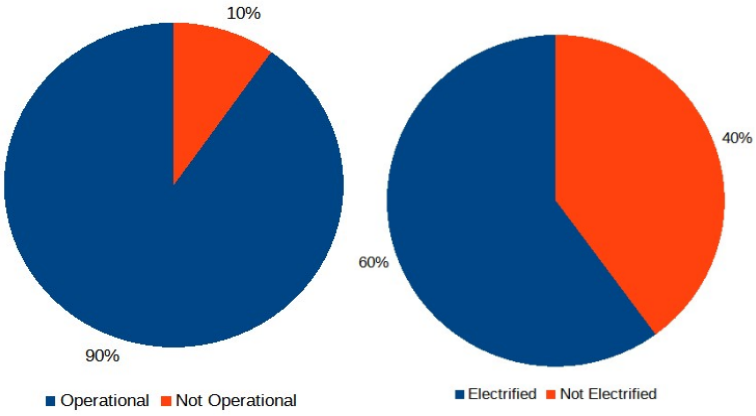
Figure 38: Share of Repaired Roads
(as of January 1, 2023)



Sources: Uzbekistan State Committee for Roads.

37. The poor quality of the railroad network (including high-speed rail) necessitates a reallocation of investments in maintenance over long-haul routes. Moreover, it requires modernization of the railway asset management practices of Uzbekistan's railways, in order to ensure the railroad network maintains its current market share. Uzbekistan's extensive railroad network, managed by the state-owned company, O'zbekiston Temir Yo'llari (UTY), serves as a main corridor within the Central Asian region. Just over half of internal cargo traffic (54 percent of ton/km in 2021) is international freight. This analysis abstracts from the international transit corridor use and focuses on domestic connectivity. The length of the network is 5,240 km, of which 4,300 km are considered operational, 3,148 km of railways are electrified, and 1,929 km of electrified railroads are operational (Figure 39). Despite its extensiveness, the rail network has been constructed and maintained to facilitate international trade and, like road, neglects the need to facilitate links within the country. Reallocating investments to improve long-haul routes may lead to significant domestic trade gains, particularly by investing in links connecting the west and east of Uzbekistan (Figure 40).

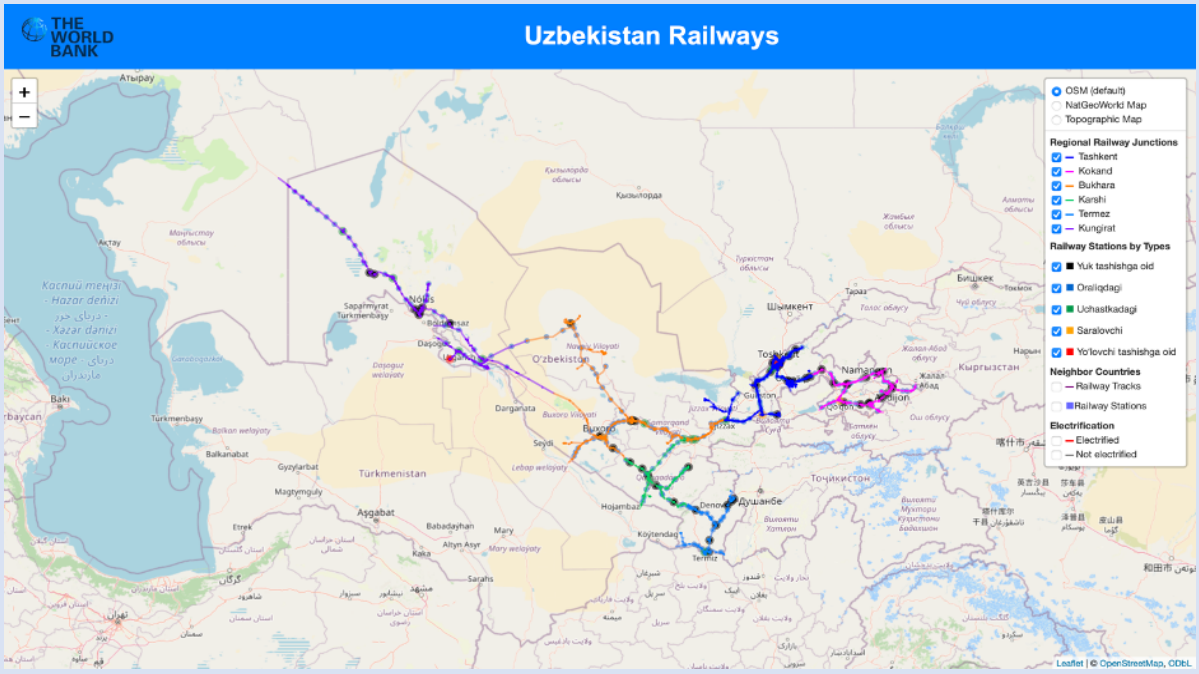
Figure 39: Electrified and Operational Railroad Network



Source: World Bank staff calculations.

Box 3: Modernizing Uzbekistan's Physical and Digital Railway Network Infrastructure

Open-source data suggests that the extent of Uzbekistan's freight and passenger railway network is currently 9,433 km and has 346 stations. This represents different levels of track state and traffic services operating on this network infrastructure. The railway network is critical for not only domestic but also regional trade, as well as passenger connection movements. Uzbek railways is currently undergoing a major process of governance restructuring aimed to improve its services and ensure that they are on a sustainable economic footing. This also includes improving its digital information assets. Having better information not only on physical assets but also on operating traffic also sets the basis for improving service delivery for passenger and freight services alike. This is expressed in such tangible resources as real time passenger travel and booking applications as well as freight services tracking. Having better geospatial rail infrastructure data also is vital to address such challenges as climate change mitigation and adaptation, including to tackle the risks for service disruptions and building system resilience.



Source: Geospatial Rail Asset Database; Open Street Maps.

2.2 Infrastructure Sector Governance

38. The Government's recent consolidation of transport regulation with the Roads Committee marks a significant positive step, enabling a more effective multimodal transport integration. The management and planning of road projects are undertaken by the Roads Committee (Avtomobil Yo'Llari Qo'Mitasi), overseen by the Ministry of Transport. As of 2019, the Ministry of Transport has been granted oversight of all transport modes, allowing a transition from unimodal toward more integrated multimodal planning. Previously, transport sectors were managed by self-regulating state-owned enterprises (SOE), including the State Committee for Automobile Roads, JSC Uzbekiston Temir Yo'llari (Uzbekistan Railways), and the National Air Company, Uzbekistan Airways.

39. Despite recent administrative reforms, the public investment mandate remains fragmented, particularly between state and privately budgeted projects. The merging of the Ministry of Economy and Poverty Reduction with the Ministry of Finance in 2022 aimed, among other things, to improve the organization and information flow within state-budgeted infrastructure projects. However, a further challenge is the need for coordination with privately-funded projects, including from foreign direct investments and public-private partnerships. Currently, these projects are consolidated in the annual investment program once they have secured financing, leading to inefficiencies and duplication of services.

40. Opaque criteria for prioritizing public infrastructure projects risks inefficient investment planning and misalignment within the country's high-level development goals, as defined in the

"Uzbekistan 2030" Strategy. The lack of definition for economic efficiency, priority, and feasibility as criteria for project prioritization (as stated in Resolution No. 16) hampers appropriate project prioritization, as well as the development of necessary infrastructure projects.[16] Moreover, de facto prioritization of investment projects is ad hoc. As such, it depends on the availability of funding opportunities instead of data-driven methodological assessments. Thus, an investment program results in a list of projects with available funding rather than necessity- and knowledge-driven, coordinated infrastructure planning, potentially reinforcing inefficient infrastructure investments.

41. A lack of well-defined methodologies for quality assurance of the projects and limited tools to support prioritization impede value-for-money of infrastructure investments. A cabinet resolution[17] defines the project selection criteria for a public infrastructure project to receive state funding. Infrastructure projects should be evaluated, taking into account the potential for creating new jobs, the project's cost efficiency, the level of importance, and the number of the population served, among other factors. However, there is no clearly defined methodological assessment of the indicators based on a full business case methodology or cost-effectiveness/cost-benefit analysis. Some critical criteria to assess the project's value for money, such as cash-flow estimates, are missing. Such a lack of value-for-money assessment in conjunction with the lack of investment prioritization may lead to further inefficient public spending.

42. Implementation of the public procurement framework still needs improvement, including ensuring improved transparency and efficiency, as well as lowering corruption risks. Overall, the public procurement framework is structurally sound. Information about public procurement, however, is scattered across multiple platforms and requires close monitoring. The centralization of procurement contracts has experienced significant delays. Moreover, a lack of oversight for subcontractors of certain strategically important "turnkey" projects threatens transparent and efficient public procurement and may foster corruption and collusion practices.[18]

43. Uzbekistan's public infrastructure investment and asset governance must be strengthened to support achieving balanced growth policy objectives. Credible longer- and medium-term plans setting out key priorities and risks are a starting point for meeting these objectives. Transport, road, and rail can also be approached through a more integrated multi-modal perspective. Many countries also have framed these plans through a green transition lens; that is, strengthening complementary networks will shift to lower emissions and cost-effective transport modalities. Key network prioritization choices in road and rail involve the further development and O&M of road and rail trunk networks and feeder networks. Institutional roles and responsibilities for these outcomes do not only implicate national agency and SOE governance but also sub-national actors. To deliver on these objectives, institutions for infrastructure governance will need to be strengthened to deliver on the gaps identified by the analysis of existing data (World Bank, 2023a).

2.3 Modeling Results

44. Modeling analysis reinforces the need for improved planning and better coordination among public agencies regarding infrastructure projects. The new, cutting-edge quantitative spatial equilibrium model with endogenous public infrastructure spending is applied to evaluate sources and the degree of misallocation in infrastructure investments in the electricity and transport networks. The model estimates optimal infrastructure investments across sectors and regions, accounting for the impacts of the quality of electrical and transportation networks on sectoral productivity and trade costs (Box 4). Two scenarios are considered and presented for welfare analysis, namely, (i) fully optimal and (ii) constrained budget allocation between electricity, roads, and railroads. The latter scenario is in line with the presence of fixed budget plans for ministries managing investments and

[16] Resolution of the Cabinet of Ministers No. 16 of 2023 on 'Measures to Further Improve the System of Investment Program Formation of the Republic of Uzbekistan and Increase its Effectiveness.'
[17] Cabinet Resolution 206, "Additional Measures for the Development of Social and Production Infrastructure Development Programs and Improvement of the State Investment Management System," dated April 21, 2022.
[18] Law of the Republic of Uzbekistan. "About Public Procurement." Passed by the Legislative Chamber on December 1, 2020. Information is available at https://lex.uz/docs/5382983#.

infrastructure projects, even though improvements in transport networks are complementary to investments in electricity. When infrastructure investment decisions are taken separately across sectors, the gains from infrastructure complementarities still need to be considered. This signifies the essentiality for joint decision-making and coordination of infrastructure investments.

45. Simulations result in significant gains from infrastructure reallocation. Quantitative analysis signals the need to reallocate investment from:

- a fiscal perspective, optimizing budget expenditures and agency coordination; and
- a spatial perspective, achieving inter-regional reallocation of infrastructure investments, considering intrinsic regional productivities and the efficiency of transport links.

Box 4: Model Description

The multisector economic geography model with endogenous public infrastructure is applied to Uzbekistan (Perez-Sebastian, Serrano-Quintero, and Steinbuks (2023). The model comprises 14 regions and assumes free labor mobility across regions in the long run. Transport network and transportation costs are estimated by calculating the least-cost path links between regions, considering geographical barriers, roads, and railroad characteristics. Road and railroad transport costs are assumed to aggregate as weak substitutes. A given amount of electricity is available in every region, which consumers can use as a service and firms can use as a production input.

The Household Problem:

Households maximize utility from an aggregated product of the agriculture, service, and manufacturing sectors, as well as the electricity service and the amenities of their location. Consumption for each household comprises an aggregate bundle of all economic sectors produced in all locations. Households supply labor inelastically and earn wages. Their budget constraint equalizes earnings, wages, and expenditures on electricity services and consumption of other products across all sectors, locations, and product varieties. Household utilities are equalized across all locations due to free labor mobility.

The Firm Problem:

Firms operate competitively across locations and three sectors of the economy: agriculture, manufacturing, and services. A firm's labor and electricity inputs in specific sector and location reflect sector-specific electricity intensity. In other words, more (less) electricity intensive sectors allocate a higher (lower) share of expenditures to electricity. Each firm has sector-location-specific productivity with an exogenous productivity component and production externalities in labor and electricity to capture technology and labor spillovers (congestion or knowledge spillovers) in production.

The Government Problem:

The central government has an exogenous budget to allocate investments in electricity and transport networks, considering the variable unitary costs of improving electricity transmission costs and the variable unitary costs of maintaining transport infrastructure. The government maximizes social welfare by choosing how much to invest in electricity and how much to invest in the transportation network (i.e., roads and railroads). This is subject to budget constraints, free labor mobility, and electricity, as well as labor and goods market clearing conditions.

Transport and Electricity Network:

The government can improve the quality of electricity infrastructure through investments on a regional level. Transport costs have "iceberg" representation across regions, tallying shipping costs of intermediate regions implied by the least-cost path, while also accounting for geographic barriers and the level of investments in the transportation network. Transportation costs are estimated for roads and railroads and are aggregated as weak substitutes.

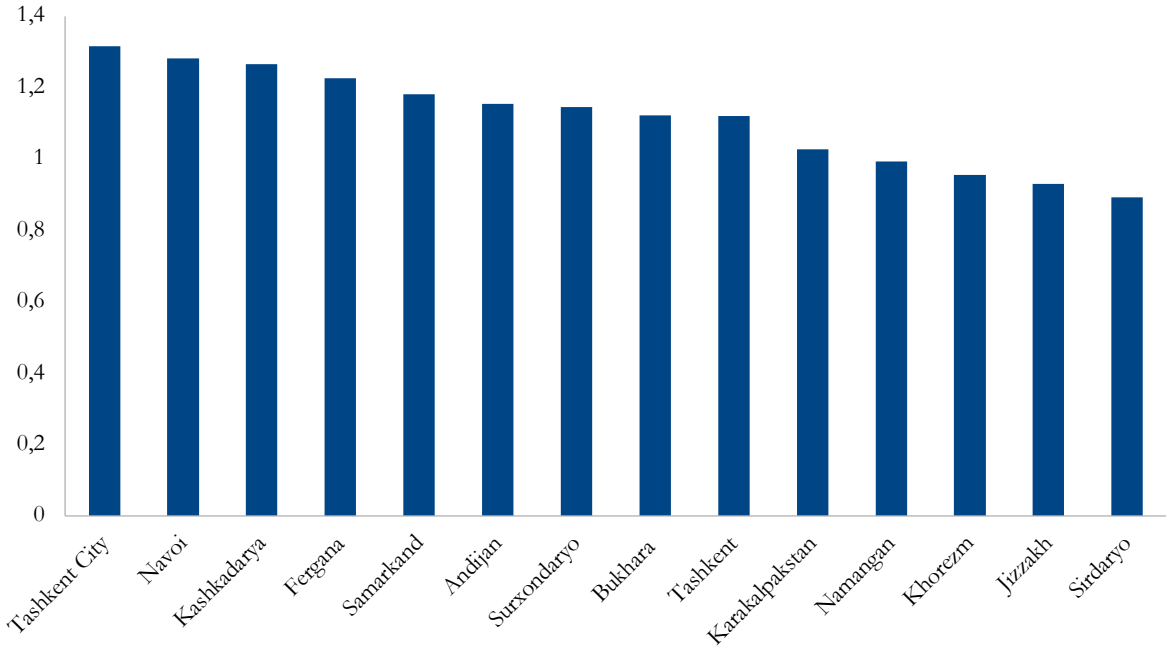
Optimal infrastructural investment is calculated considering the fully optimal outcome and the coordination outcome, with fixed budget allocations as observed in data and solving for the constrained optimal outcome. Budget allocations from the Presidential Decree[1] are considered. These amount to electricity investments accounting for 52.37 percent of the budget allocated to electricity, road, and railroad investments; 13.23 percent to roads; and 34.4 percent to railroad projects.

[1]Resolution. President of the Republic of Uzbekistan. "On measures to Implement the Investment Program of the Republic of Uzbekistan for 2023–25." For further information, see https://lex.uz/docs/6329453#.

46. The model identifies significant spatial and fiscal misallocations in public spending. Figure 40 shows that most regions experience significant productivity gains when infrastructure investment is allocated at optimal levels. These productivity gains arise from the reallocation of investment from sectors with more productive activities within regions and to the more productive regions, thus leading to significant economic gains. Navoi and Tashkent city are

regions with the highest productivity in electricity-intensive sectors, manufacturing and services. Alleviating infrastructural constraints in Navoi and Tashkent city, therefore, will result in the highest productivity gains.

Figure 40: Implied Change in Regional Total Factor Productivity
(following infrastructure investment reallocation)

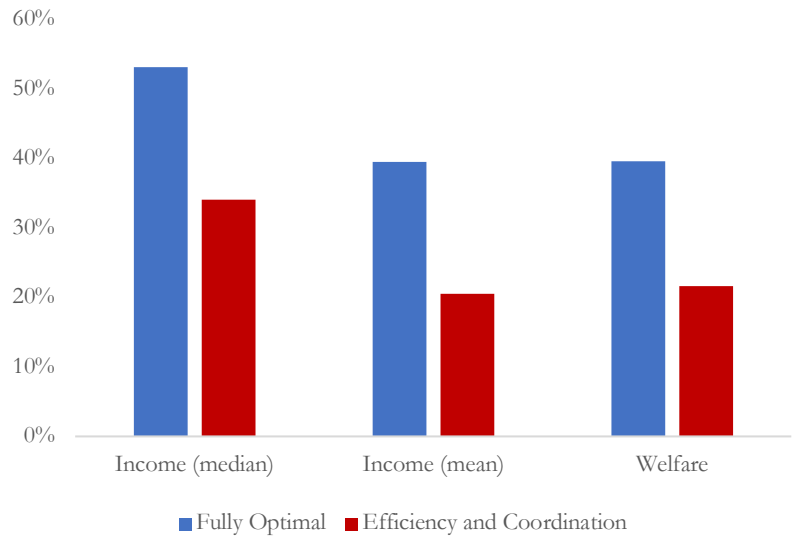


Source: World Bank staff calculations.
Notes: (i) TFP= total factor productivity; (ii) regional TFPs are weighted by sectoral employment shares.

2.4 Implications for Prices, Welfare, and Firm Competitiveness

47. Sizeable welfare gains occur from reallocating infrastructure investments across regions. Model simulations suggest that even when keeping current budget expenditures across infrastructure types, reallocating investments across regions and sectors can lead to large welfare gains, estimated to be 22 percent. In this scenario, household incomes also might rise by between 20 percent and 34 percent (Figure 41, red columns). These large welfare gains largely occur from increases in real wages and falling prices, resulting from higher firm productivity and lower transportation costs in response to more efficient infrastructure placement. Figure 42 presents changes in sectoral and regional prices attributed to each infrastructure type. Most of the price reduction is due to improvements in the transportation network. This is a supply-side effect as improvements in roads and railroads directly reduce transportation costs, while also reducing the price of inputs. However, improvements in electrical infrastructure lead to an increase in prices for some regions, especially in the service sector, highlighting the demand-side effect. As the quality of the electricity supply improves, firm productivity increases, leading to higher wages, greater demand for goods and services and, hence, higher prices. The supply-side effect dominates when simultaneously implementing two reforms, thus highlighting the importance of improvements in road networks for welfare gains.

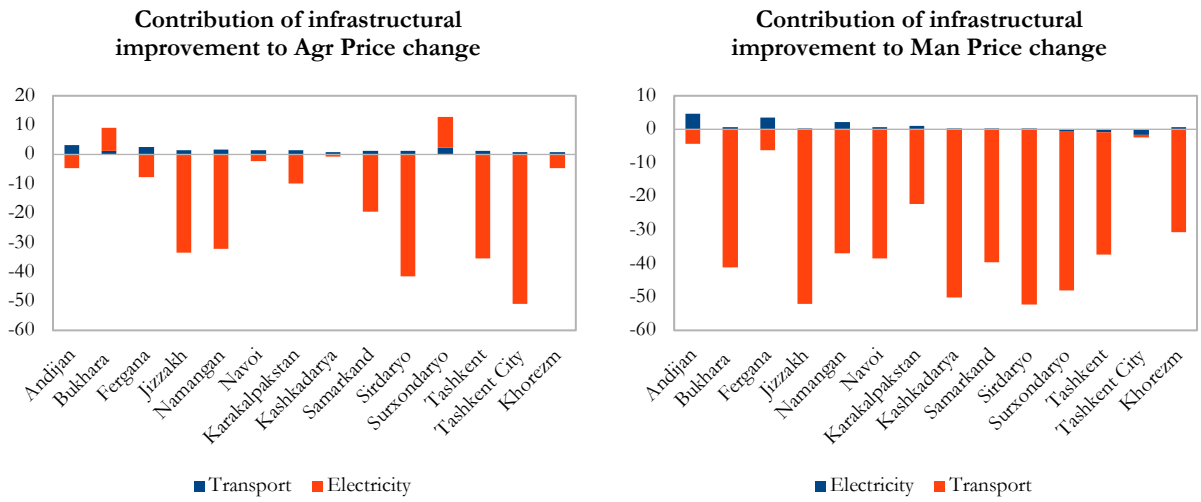
Figure 41: Model: Implied Welfare Changes

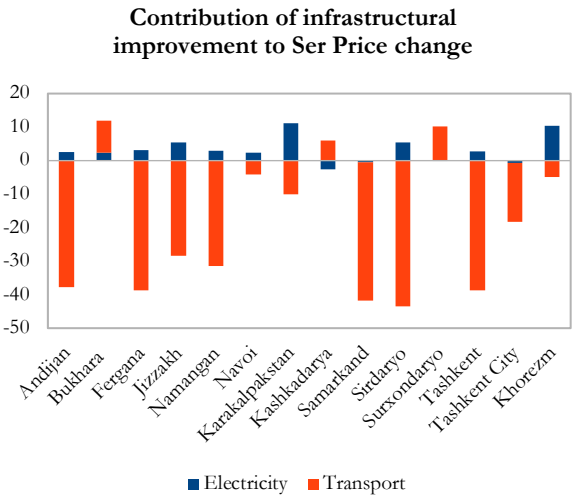


Source: World Bank staff calculations.

48. Transportation infrastructure improvements result in stronger and better specialization across regions. Improvements in transport infrastructure directly impact transportation costs. However, the magnitude of price changes depends on the degree of gains from trade experienced by each region. For example, for agricultural goods, the most sizeable price change is experienced by Tashkent city (Figure 42). Investments in transportation links between Tashkent city and the more agriculture-intensive regions (e.g., Kashkadarya) allow Tashkent city to allocate more resources to a sector with the highest intrinsic productivity (manufacturing). For its part, Kashkadarya can improve specialization in the agriculture sector. Improvements in transportation links between these regions allow for lower prices at destinations for agricultural goods for Tashkent city and manufacturing goods in Kashkadarya. Compared to other regions, Fergana has experienced such a sizeable reduction in the price of manufacturing goods because its manufacturing productivity is relatively advanced. This signifies gains from specialization and trade for other less manufacturing-intensive regions, all resulting from better connectivity with Tashkent city. Thus, price changes may significantly improve firm competitiveness and allow for more specialized trade between regions. Improving connectivity with Tashkent city, the most manufacturing-intensive location, leads to price reductions of manufacturing goods of up to 50 percent for some regions, as well as sizeable welfare gains from increases in real wages. It also leads to potential productivity improvements from stronger firm competition.

Figure 42: Contribution of Infrastructure Improvements to Regional Prices





Source: World Bank staff calculations.

2.5 Policy Recommendations

49. Assessing the potential for welfare improvements by reallocating infrastructure investments is crucial. A comparison of current and model-implied optimal fiscal budget expenditures on different infrastructure types highlights gross underspending in road networks and over-investment in electricity (Figure 43 and Figure 44). There is also a significant spatial misallocation vis-á-vis investment in power infrastructure (Figure 45). The model points to a need to improve the electricity infrastructure of Tashkent city, a region with the highest manufacturing productivity. Reprioritization of budget expenditures for electricity and transport infrastructure could lead to large welfare gains. Coordinated investments in electricity and transport which, together, address constraints lead to even larger gains; that is, improvements in electrical infrastructure increase firm productivity although, in the presence of inter-regional trading costs, gains to electricity reforms would be otherwise limited. Likewise, improvements in transportation networks would lead to significant increases in trade between regions but, without adequate electrical supply, firms could not fully take advantage of the opportunities. This is especially important for regions specializing in energy-intensive sectors such as manufacturing. Consistent with findings for other low- and middle-income countries, such as Ethiopia (Moneke, 2019) and Brazil (Perez-Sebastian, Serrano-Quintero, and Steinbuks, 2023), the model highlights significant complementarities between infrastructure types, emphasizing the need for more coordinated investments.

50. The model analysis highlights major under-investment in road networks. In the fully optimal scenario, the share of budget expenditures allocated to road infrastructure is five times its current allocation. Improving road infrastructure would achieve a significant reduction in transportation costs and reduce the price of tradable goods. This would consequently increase the demand for these goods from other regions and allow regions to specialize in sectors with the highest productivity.

Figure 43: Current Share of Fiscal Expenditures on Electricity and Transport Network

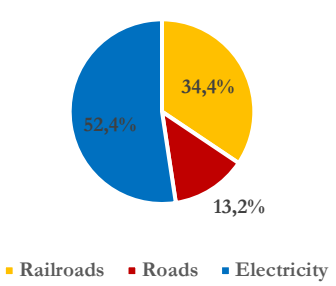
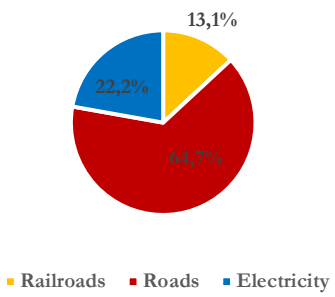


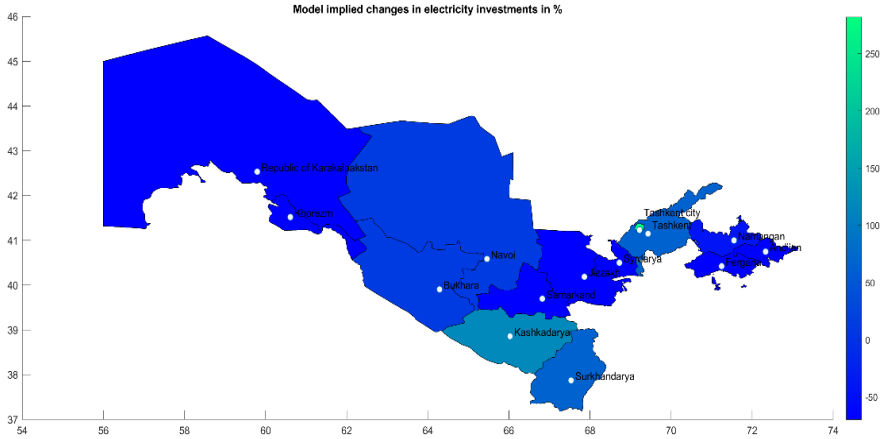
Figure 44: Model: Implied Share of Fiscal Expenditures on Electricity and Transport Network



Source: Presidential Decree on Investment Program, 2022.

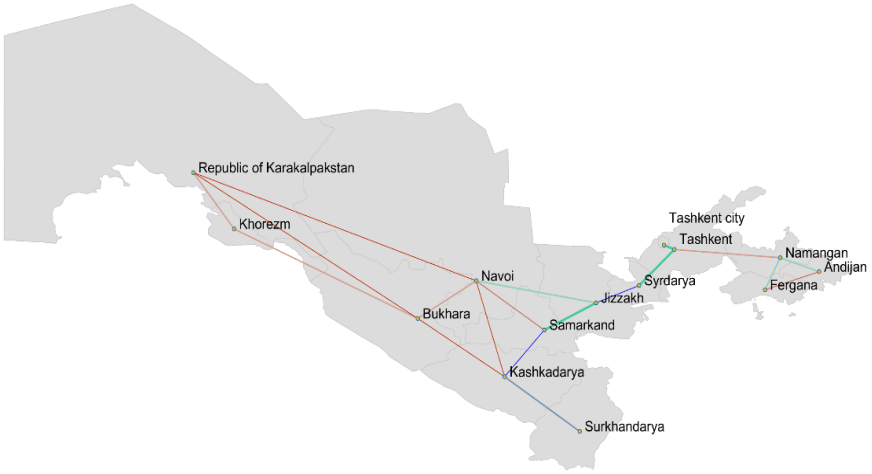
51. Tashkent city, the country's most manufacturing-intense region, needs more investment in power infrastructure. Simulations of optimal electricity investment across regions show an almost 250 percent upside compared to current electricity investments in Tashkent city (Figure 45). This allows Tashkent city to increase its manufacturing productivity, reduce the price of manufacturing goods, and facilitate inter-regional trade.

Figure 45 : Model: Implied Changes in Electricity Investments



Source: World Bank staff calculations.
Note: The green section shows a recommended increase in electricity investments relative to current investments, whereas the blue sections represent a recommendation to decrease investment in electricity relative to current investments.

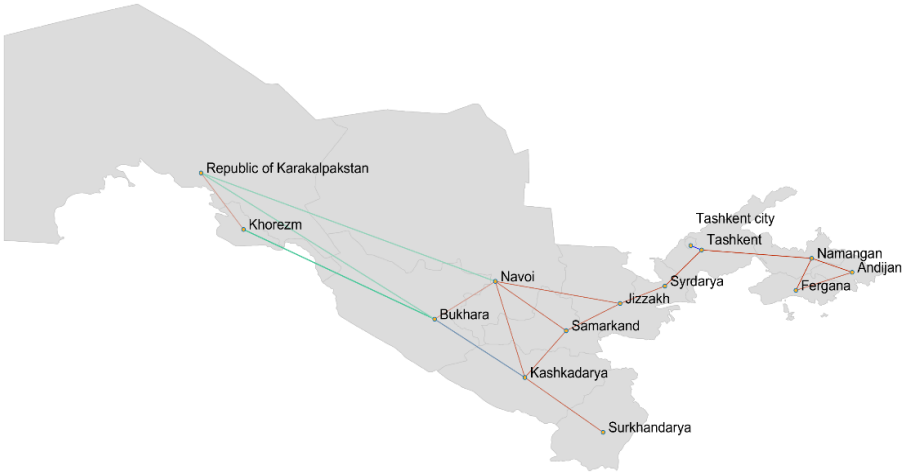
Figure 46: Model: Implied Relative Investments in Roads



Source: World Bank staff calculations.
Note: The red color represents over-investment in transportation links, suggesting a decrease in transport investment relative to the current share of investments. The green color represents under-investment in transport links, suggesting an increase in investment relative to the current share of investments. The blue color indicates no need to change relative investments in the links.

52. Prioritize road investments for shorter-haul routes between Tashkent and the more central regions, Samarkand–Navoi. Figure 46 shows the recommended reallocation of investment in roads across existing links. The optimal allocation prioritizes investment in public roads for relatively shorter routes, thereby connecting Tashkent city to the rest of the regions. It also would facilitate better connections between other regions.

Figure 47: Model: Implied Relative Investments in Railroads



Source: World Bank staff calculations.
Note: The red color represents over-investment in transport links, suggesting a decrease in transport investment relative to the current share of investments. The green color represents under-investment in transport links, suggesting an increase in investment relative to the current share of investments. The blue color indicates no need to change relative investments in the links.

53. Public railroad investments are preferred over longer routes, thus connecting Karakalpakstan–Khorezm and Navoi–Bukhara. Figure 47 plots recommended investments in railroads across existing links, emphasizing the reallocation to routes in the western regions of the country. This also is consistent with the evidence of a modal shift toward railroads over the long-distance routes.

Table 2: Summary of Policy Recommendations on Infrastructure Development

Reforms	Priority	Responsible actor
Reform Objective: Improving Electricity Infrastructure		
Concentrate electricity investments in regions with higher intrinsic productivity in manufacturing and energy-intensive services, such as Tashkent city and Qarshi.	Short-to-medium term	MEF, MoT
Reform Objective: Improving Transportation Infrastructure		
Increase the infrastructure budget allocated to road investments and maintenance.	Short-to-medium term	MEF, MoT
Coordinate investments for roads and railroads: prioritize short-haul roads and long-haul railways.	Medium-to-long term	MEF, MoT
Improve road infrastructure between Tashkent city and regions with high connectivity, such as Samarkand and Navoi.	Medium-to-long term	MEF, MoT
Improve railway infrastructure connecting Karakalpakstan –Khorezm with more central regions, such as Navoi–Bukhara.	Medium-to-long term	MEF, MoT
Reform Objective: Improving Public Infrastructure Governance		
Conduct economic and financial analysis across a more comprehensive portfolio of individual investments	Short term	MEF, MIIT
Apply more systematic project proposal-level applied cost-benefit analysis and appraisal assessments	Short-to-medium term	MEF, MIIT
Decrease electricity investment as a share of the total budget for infrastructure investments, while increasing the efficiency of public investment expenditures.	Short-to-medium term	MEF, MIIT
Improve coordination between government agencies managing investments in electricity and transportation infrastructure.	Medium-to-long term	MEF, MIIT

Source: World Bank staff elaborations.
Notes: MEF = Ministry of Economy and Finance; MoT = Ministry of Transport; and MIIT = Ministry of Investment, Industry, and Trade.

54. The model application highlights opportunities to improve the level and allocation of Uzbekistan's network infrastructure investments. Translating these opportunities into reality requires considering several analytical and operational factors. It is essential for policymakers in Uzbekistan to thoroughly understand the current infrastructure, service accessibility, pricing, and sustainable business models. Given their

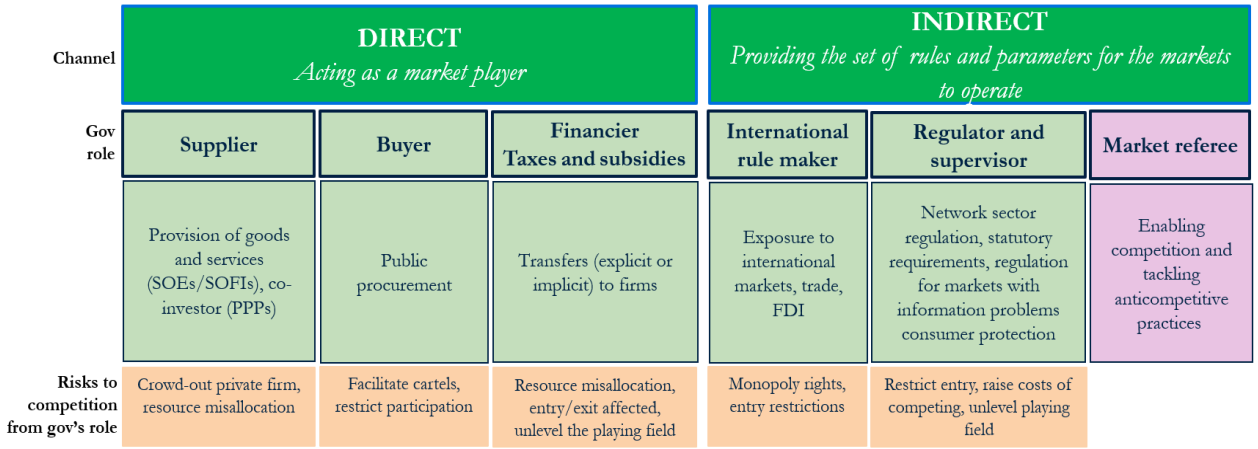
importance for successful overall and regional development and dependence on securing significant public and private investment flows, a strategic medium- to longer-term perspective is urgently needed to progressively address the revealed gaps over time. The model highlights the optimal solutions that may be difficult to achieve. An additional and significant cost to the economy and specific subregions will be disruptions to services, including owing to adverse environmental shocks. Policymakers also, therefore, will need to factor in the future resilience of the system. Underinvestment and poor maintenance will increase the risk of such damage and losses. Spending inputs may not reflect the actual operational outcomes. Greater attention to the efficiency of actual investment projects and ongoing O&M will be critical for not only designing but also delivering actual measures over time. Institutional investments into better public infrastructure investment and asset governance across the public sector will be vital to address, on a sustainable basis, not only the challenges but, above all, the opportunities raised by this analysis (World Bank, 2023a).

55. A crucial task for Uzbekistan's economy and finance authorities will be to collaborate with sectoral counterparts to generate a new generation of network infrastructure. This process will be informed by robust economic and financial analysis conducted across a more comprehensive portfolio of individual investments. It will necessitate the application of more micro-level methodologies and data to validate key findings from the more aggregate model. More systematic project proposal-level applied cost-benefit analysis and appraisal assessments also will need to address the question of the most optimal financing modalities. Beyond enhancing the quantity and quality of forthcoming infrastructure investment flows for better transport and energy service provisions, the whole-of-life O&M of these assets will be critical. The majority of energy and transport infrastructure stocks remains a public sector responsibility, including that of SOEs. Therefore, timely information about the extent and state of these stocks is critical, including refining prioritization and sequencing measures based on a more robust evidence base.

Chapter 3: Streamlining Government Interventions for Enhanced Competition and Domestic Market Integration

56. Governments intervene in markets for various reasons, influencing market functioning and competition in multiple ways. Government interventions can directly or indirectly impact the incentives for firms to enter, compete, and expand, impacting market efficiency and the distribution of resources across different firms and sectors (Figure 48). Direct interventions involve the government's participation in providing goods and services through state-owned enterprise (SOE) operations and as a purchaser in public procurement processes. Indirectly, governments influence market dynamics by providing subsidies to firms for development goals, imposing taxes, or setting rules that affect firm's exposure to international markets. Regulatory oversight is another indirect method whereby governments set (ex ante) rules affecting market entry and competition between firms. Additionally, governments enforce antitrust rules post-entry to prevent anticompetitive practices. While these interventions are often essential and justified, they also can distort market functioning, with the associated risks outlined in Figure 48.

Figure 48: How Governments Shape Market Functioning and Competition: A Framework



Source: Adapted from World Bank's Markets and Competition Policy Assessment Toolkit.
Notes: SOE = state-owned enterprise; SOFI = state-owned finance institutions; PPP = public-private partnership; and FDI – foreign direct investment.

57. Against this backdrop, this chapter delves into the latest insights on Uzbekistan's competition environment, dissects the government interventions impeding market efficiency, and pinpoints policy reform opportunities to dismantle competition barriers. The chapter unfolds in three sections. Section 3.1 contextualizes the problem, summarizing the pro-market reforms taken so far and evaluating Uzbekistan's present competition stance. Section 3.2. considers the root causes, focusing on specific government actions that obstruct market dynamics and competition, including the roles of government as a provider of goods and services (particularly through SOEs), a financier through subsidies, and a regulator and market referee.[19] Section 3.3 offers targeted policy recommendations to address these challenges and improve the competitive environment.

3.1 The Problem Context: Pro-Market Reforms Adopted So Far and the Current State of Competition

58. Since 2017, the Government of Uzbekistan (GoU) has launched an ambitious pro-market reform program. Initial measures have focused on transitioning from a command-and-control economy to one driven by the decisions of firms and households. These efforts began with eliminating some price controls and the liberalization of exchange rate regimes. In 2017, Uzbekistan initiated a significant shift with the deregulation and adjustment of prices for numerous goods and services. Over subsequent years, the country gradually reduced the

[19] The role of government as an international rule maker is addressed in Chapter 4.

number of price-regulated items from 21 in 2018 to 16 by October 2023.[20] The liberalization of the exchange rate regime accompanied this shift. Exchange rate liberalization saw the administrative cessation of rate setting and a devaluation of the official exchange rate in 2017. Notably, legal entities, individual entrepreneurs, and farmers with foreign exchange income gained the ability to purchase unlimited foreign currency.

59. Additional transformative reforms have been implemented at the economy-wide level to further enhance market functioning. Key initiatives include the liberalization of land use, particularly through legislation that simplifies the privatization of nonagricultural land, while efforts are underway to enhance land tenure security for agricultural land. The business environment is benefiting from reduced administrative barriers and streamlined licensing processes, as evidenced by the adoption of the "silence is consent" principle for online business activity licensing and the modernization of insolvency laws to align with international standards. The investment climate is set for improvement with the revision of the Investment Law to define foreign direct investment better and strengthen investor protections. Finally, the competition policy framework has been significantly overhauled with the establishment of the Competition Promotion and Consumer Protection Committee (CPCPC) and the enactment of a new Law on Competition, empowering the CPCPC with greater enforcement powers, including the imposition of financial penalties for anticompetitive practices (see Box 5 for further details).

60. Efforts to open specific and strategic markets are underway. Reforms have specifically focused on strategic, SOE-dominated, vertically integrated sectors, where challenges such as underinvestment, inefficiency, below-cost pricing, and a lack of competition were particularly pronounced (Box 5).

Box 5: A Brief Recap of Pro-Market Reforms: 2017–23

1) Economy-wide

- **Land use**: In 2019, a new Law on State Registration of Rights to Real Estate was enacted, promoting private ownership of nonagricultural land. Agricultural land remains state-owned, with foreign entities limited to leases; ongoing reforms aim to improve land tenure security and update the Land Code.
- **Business regulations**: Presidential Decree No. 60-44 (August 2020) reduced the number of activities requiring licenses and permits and canceled certain licenses and permits through the "regulatory guillotine." Decree of the Cabinet of Ministers No. 80 enabled online licensing for 28 business activities, using the "silence is consent" principle.[1]
- **Insolvency framework**: A new Insolvency Law was enacted in April 2022, incorporating international best practices to facilitate efficient capital allocation and encourage restructuring of viable firms.
- **Investment framework**: The current Investment Law of 2019 is being revised to address shortcomings, aiming to improve the investment framework and enhance protections and services for foreign investors in Uzbekistan.
- **Competition policy framework**: Establishes the Antimonopoly Committee in 2019 and, in 2023, development of the Competition Promotion and Consumer Protection Committee. The new Law on Competition, effective October 2023, replaces the 2012 law. It grants the Committee greater authority, including the ability to impose financial penalties, and introduces new criteria for dominance as well as clearer merger control requirements.

2) Opening specific markets

- **Energy**: Unbundling services and creating an independent regulator to oversee sector regulation, licensing, and tariff regulations. The establishment of joint stock companies (JSC) JSC Thermal Power, JSC National Electric Grid, and JSC Regional Electrical Power Networks—as per Presidential Decree No PP-4249 of March 27, 2019—has been a key outcome of these reforms, along with tariff increases for legal entities to progress toward cost recovery by 2026.
- **Railways**: Strategic restructuring of JSC Uzbekiston Temir Yo'llari (Uzbekistan Railways) to enhance competition and modernize fare structures, per Presidential Resolution No. 329 of October 2023. The reform involves reorganizing UTY's operations into distinct segments, divesting noncore functions, and transitioning the Ministry of Transport to a governance role, paving the way for an independent board to oversee Uzbekistan Railways.
- **Chemicals**: Presidential Decree No. 169 of October 2023 initiates the unbundling of Uzkimyosanoat to separate regulatory functions from commercial operations, aiming to create a market-friendly environment in Uzbekistan's chemical sector. The decree facilitates the transfer of Uzkimyosanoat's regulatory, policymaking, and shareholding responsibilities to government entities, setting the stage for the privatization of key chemical sector assets, including the sale of JSC FerganaAzot and the planned restructuring and privatization of NavoiAzot.

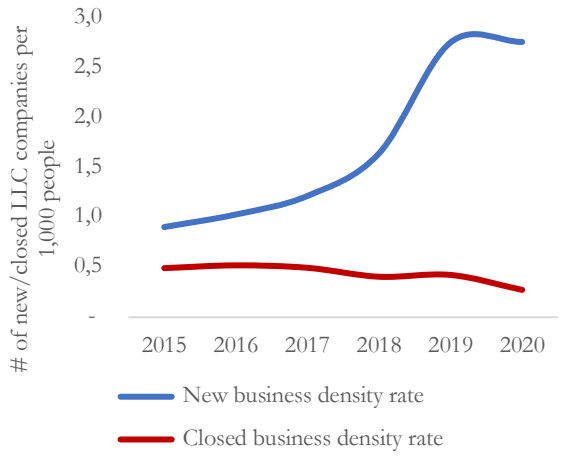
Source: World Bank staff elaboration based on World Bank Development Policy Operations.
[1] The principle of "silence is consent" dictates that applications for licenses must be promptly reviewed and responded to within a specified timeframe. Failure to respond within this timeframe makes licensure automatic.

[20] Uzbekistan maintains price regulations for socially significant and strategic goods, such as cotton, grain, fertilizers, and coal.

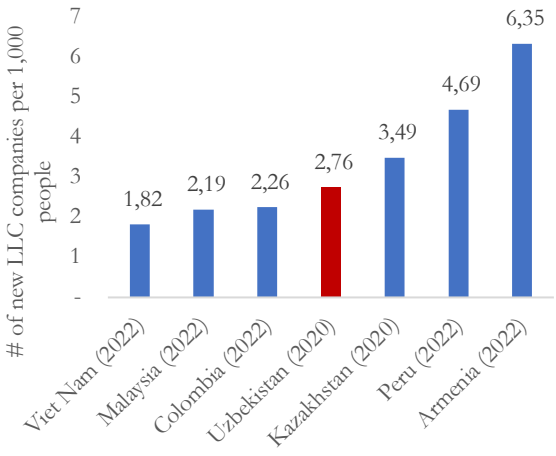
61. While the impacts of these pro-market reforms have yet to be assessed, there have been noticeable improvements in basic market outcomes, including in business entry. Pro-market reforms have coincided with a significant rise in the formal entry of private firms. Since the commencement of reforms in 2017, the business density rate, representing the number of newly registered private corporations per 1,000 working-age people (ages 15–64), jumped from 1.2 in 2017 to 2.7 in 2020—the latest year with available data (Figure 49a). Despite these positive changes, Uzbekistan still trails some of its peers regarding the entry of new firms (Figure 49b). Moreover, the exit density rate has remained relatively unchanged during the same period, suggesting that the departure of inefficient private firms is not occurring as would be expected in a healthy market environment. It should be noted, however, that the potential benefits of Uzbekistan's new Insolvency Law in 2022 are not captured here, as Uzbekistan's data only extends to 2020.

Figure 49: Business Dynamism

(a) Entry and exit density rates in Uzbekistan, 2015–20



(b) Entry density: Uzbekistan vis-á-vis peers (latest available year)

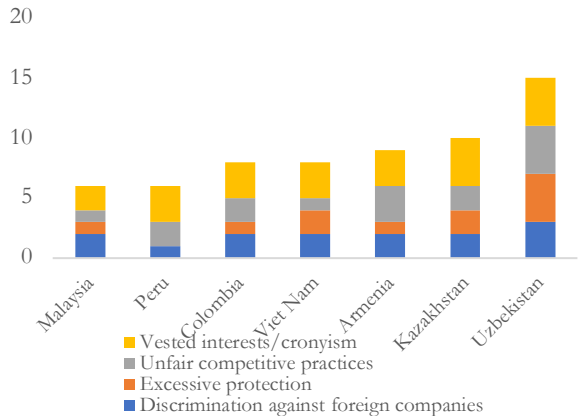


Source: World Bank staff elaboration based on World Bank Entrepreneurship Dataset.
Note: The new business entry density is the number of newly registered formal, private limited-liability firms per 1,000 working-age people (ages 15–64) per annum. The closed business density rate is defined as the number of closed, registered formal, private limited-liability firms per 1,000 working-age people (ages 15–64) per annum.

62. Furthermore, market conditions in Uzbekistan are perceived to be less competitive than in comparator countries, highlighting the need for additional competition-enhancing reforms. Despite efforts since 2017, the fundamentals of market-based competition in Uzbekistan still lag those of comparator countries. According to the latest data from the Economist Intelligence Unit, firms in Uzbekistan perceive that their ability to operate may be impaired by government rules that impede competition based on merit (Figure 50). Uzbekistan ranks last compared to its six strategic peers. Similarly, the Bertelsmann Transformation Index (BTI)[21] places Uzbekistan last on the fundamentals of market organization, reflecting major restrictions arising from state interventions that prevent entry or create an unlevel playing field (Figure 51). At the same time, it is worth noting the improvements since 2018, when the BTI score was only half the current value, therefore indicating a significant positive change.

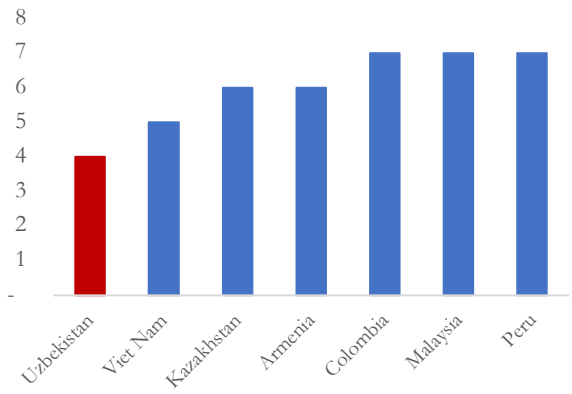
[21] BTI indicators rely on perceptions and are derived from expert responses to specific questions. Regarding the indicator for "market-based competition," the inquiry posed was: "To what extent have the fundamentals of market-based competition evolved? This includes aspects such as the minimal significance of administered pricing, currency convertibility, absence of substantial entry and exit barriers in product and factor markets, the freedom to initiate and withdraw investments, and the absence of discrimination based on ownership (state/private) and size?"

Figure 50: Uzbekistan vis-á-vis Peers: Competition-Related Risks for Business, 2023
(0 (very little risk) to 16 (very high risk) score)



Source: World Bank staff elaboration based on Economist Intelligence Unit Risk Tracker data from 2023.
Note: The graph aggregates four indicators, each scored on a scale from 0 (very little risk) to 4 (very high risk).

Figure 51: Uzbekistan vis-á-vis Peers: Fundamentals of Market-based Competition, 2024
(worst (1) to best (10) score)



Source: World Bank staff elaboration based on the 2024 Bertelsmann Transformation Index, available at https://bti-project.org/en/methodology.

3.2 Exploring the Root Causes: How Government Interventions Continue to Obstruct Market Functioning

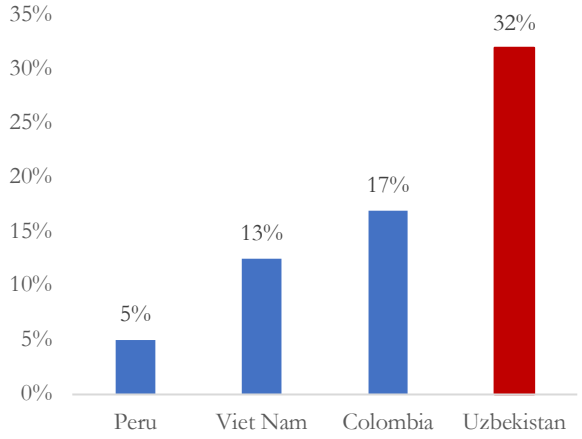
3.2.1 The State as Supplier: The Large Footprint of State-Owned Enterprises and Their Preferential Treatment Unlevel the Playing Field

63. Uzbekistan lacks a systematic public and official record of SOEs. The World Bank's Global Business of the State (BOS) dataset helps fill this gap and reveals a large SOE portfolio in terms of employment and revenue in the economy. As highlighted in Uzbekistan's recent Integrated State-Owned Enterprises Framework (iSOEF) analysis (World Bank, 2023c), official data concerning Uzbekistan's SOEs are inaccessible and incomplete. Key information, such as aggregate financial data and the overall economic impact of SOEs, is severely limited and is not publicly accessible. According to the BOS database, the main data source used for the iSOEF analysis and for this chapter, the GoU—through its central government—had direct control and majority ownership of over 2,023 SOEs in FY2019. These SOEs have played a pivotal role in the economy, employing over 529,600 individuals.[22] The entities are also relevant in terms of revenues; indeed, they collectively generated US$18.44 billion in operating revenues,[23] equivalent to 32 percent of gross domestic product (GDP) in 2019.[24] This is substantially higher than comparator countries (Figure 52). Considering minority stakes and subsidiaries—excluding those held by local governments— employment figures escalated to 666,800 individuals and operating revenue reached US$27 billion in the same year. This represents a substantial 47 percent of the nation's GDP. Among the 2,023 SOEs directly overseen by the central government, a select few of considerable size (each with operating revenues exceeding US$100 million) contribute significantly to GDP and formal employment. Notably, in 2019, 19 of these large SOEs

[22] The World Bank BOS database was selected as the main source of information to determine the size and composition of the SOE portfolio. It contains firm-level information on companies with confirmed ownership links to the state. The BOS database includes all entities that are (i) owned directly or indirectly by the State, with 10 percent or more participation; (ii) capable of generating a profit or other financial gain for their owners; (iii) recognized by law as legal entities separate from their owners, who enjoy limited liability; and (iv) set up for purposes of engaging in market production. Based on these criteria, the BOS dataset identified 3,815 SOEs in Uzbekistan in FY2019. If the sample is restricted to SOEs that are majority-owned and directly held by the central government, the number drops to 2,203 SOEs.
[23] Operating revenues captures those revenues from primary business activities for each SOE and excludes exceptional payments or passive income.
[24] Of the 2,023 SOEs, revenue data is available for 804 (i.e., 1,219 are missing), and employment data is available for only 1,121 (i.e., 902 are missing).

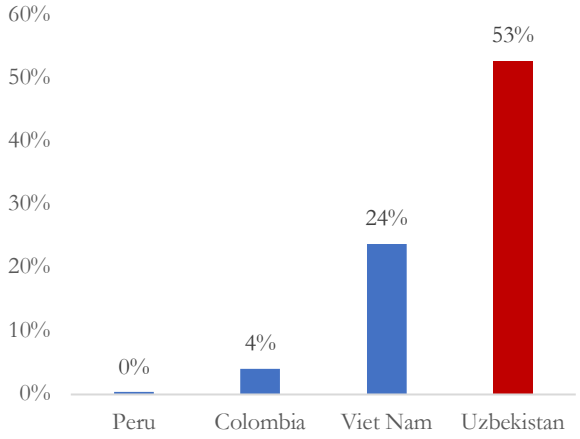
generated more than US$100 million in operating revenues, cumulatively amounting to US$15.9 billion. This sum accounts for 86 percent of the total revenue from all SOEs, which translates to 27 percent of the GDP.

Figure 52: Uzbekistan vis-á-vis Peers: State-Owned Enterprise Revenues as a Share of Gross Domestic Product, 2019



Source: World Bank staff elaboration based on World Bank's Business of the State (BOS) database.
Notes: (i) Armenia and Malaysia are not included in the World Bank BOS dataset. (ii) Uzbekistan figures are computed based on state-owned enterprise revenue information available for 804 majority directly and centrally owned.

Figure 53: Uzbekistan vis-á-vis Peers: Share of Markets (NACE Four-Digit) with State-Owned Enterprise Presence, 2019

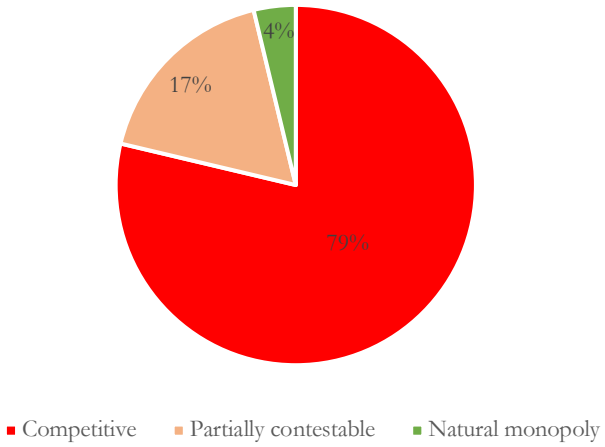


Source: World Bank staff elaboration based on World Bank's Business of the State (BOS) database.
Note: Total number of majority directly and centrally owned state-owned enterprises in Uzbekistan = 2,023.

64. SOEs are found across various sectors with a notable presence in activities classified as competitive; that is, sectors where private sector operations are viable. According to the BOS dataset, majority-owned SOEs in Uzbekistan span multiple sectors. More than half of all markets (measured as NACE four-digit activities) in Uzbekistan have an SOE presence; this prevalence is significantly higher than that observed in peer countries as depicted in Figure 53.[25] Following the taxonomy developed by Dall'Olio et al. (2022), which is based on industrial technological features and market failures, the data shows that 79 percent of centrally owned SOEs (in terms of the number of firms) in Uzbekistan are in sectors classified as competitive (Figure 54); that is, sectors where private sector operations are viable,[26] casting doubt on the necessity for state involvement in these areas.[27] Partially contestable sectors account for the second largest proportion, accounting for 17 percent of mapped SOEs. Within the category of competitive sectors, around 23 percent of SOE revenues are in manufacturing (e.g., automobile, food, and beverage manufacturing), 3 percent in construction activities (e.g., building and utility construction), 2 percent in wholesale and retail sectors, and 2 percent in the competitive professional, scientific, and technical service sector (e.g., architecture, engineering, and legal services).

[25] Remarkably, Uzbekistan has the highest percentage of markets with an SOE presence across all countries mapped by the BOS dataset; only four have more than 20 percent of their markets with an SOE presence: Uzbekistan at 53 percent, Ukraine at 44 percent, Russian Federation at 35 percent, and Viet Nam at 24 percent.
[26] According to the taxonomy, competitive sectors comprise activities that can be efficiently provided by the private sector (with little to no entry barriers and are commercially viable for multiple firms to operate). Partially contestable sectors are those whose activities exhibit market failures (such as externalities) that may lead to under-provision of service. Finally, natural monopolies comprise activities that are not economically viable for more than one operator (due to high entry barriers, scale economies, or subadditivity cost structures).
[27] When narrowing down the analysis to majority-owned SOEs within the dataset with available revenue information (804 firms), the distribution is as follows: 36 percent of revenues originate from competitive sectors, 46 percent from partially contestable sectors, and 19 percent from natural monopoly sectors.

Figure 54: Distribution of State-Owned Enterprises by Sector Taxonomy, 2019



Source: World Bank staff elaboration based on World Bank's Business of the State (BOS) database.
Note: Total number of majority of directly and centrally owned SOEs = 2,023.

65. The GoU recognizes the heavy SOE footprint and has implemented legislative measures to reduce it. These measures, however, have had limited impact, particularly in terms of privatization efforts. In an effort to diminish state participation in key economic areas, the GoU has enacted a series of reforms. Nevertheless, the outcomes, especially in terms of privatization, have been modest, with efforts mainly targeting smaller entities and the sale of real estate assets. This poses a challenge to the ambitious goals outlined in Uzbekistan's 2030 Strategy, which aims to reduce the number of SOEs from over 2,000 to fewer than 400 by 2030, as well as increase the private sector's contribution to GDP to 85 percent. The modest progress in privatization can be somehow attributed to various implementation hurdles (Box 6).

Box 6: Recent State-Owned Enterprise Reform Efforts and Privatization Challenges

The GoU has acknowledged the need to reduce state involvement in crucial economic sectors. To this end, it has implemented various reforms to rationalize the role of state-owned enterprises (SOE). Notable measures include the following:

- 2019: Formation of the State Assets Management Agency[1] to oversee and prepare SOEs for privatization.
- 2020: Implementation of the "Rule of 5," under Presidential Decree No.6019, limiting new SOEs and requiring approvals by the Competition Promotion and Consumer Protection Committee and the State Assets Management Agency.[2]
- 2021: Introduction of the SOE Ownership Strategy to shrink the SOE portfolio and improve corporate governance.
- 2022: Presidential Decree No. 123 to privatize SOEs in competitive markets and restrict new SOE establishments. Presidential Decree No.101 tasked SOE UzAssets Investment Company with pre-sale preparation for privatizing large SOEs.
- 2023: Presidential Resolution No.83 transferred 32 strategic SOEs to the Agency of Strategic Reforms, then back to the Ministry of Economy and Finance, which superseded the Ministry of Finance following the public administration reform of 2022. The Law on State Property Management further limits state ownership, retaining only strategic, security-related, or natural monopoly entities. Presidential Decree No. 102 set privatization targets, including public tenders and initial public offerings for SOEs and real estate.
- 2024: The Privatization Law was enacted; it standardizes privatization processes and enhances transparency and governance.

Despite these efforts, concrete results from privatization efforts were modest. Despite some privatization progress, results have focused on smaller entities and the selling of real estate assets. For example, from 2020 to August 2023, 3,326 real estate assets and 365 small SOEs were privatized, totaling US$932.8 million and US$1.47 billion, respectively.

Restrained progress in privatization is due to unclear strategies and timelines. The Government of Uzbekistan issues periodic privatization plans—usually through decrees—often lacking detailed and feasible timelines and clear division of responsibilities. As a compounding factor, the lack of a clear strategy for the future privatization of large SOEs under the control of the Ministry of Economy and Finance poses an additional hurdle. Many of these enterprises are not ready for initial public offerings due to their inadequate operational efficiency, transparency, and corporate governance, with UzAssets facing challenges in making them market-ready.

Source: World Bank staff elaboration.
[1] In 2019, the State Assets Management Agency was established to manage ~400 central government-owned SOEs.
[2] The committee and agency are required to review and approve proposals for new SOEs, requiring the committee's consent prior to their establishment. These provisions also are incorporated into the final version of the Competition Law adopted in 2023.

66. Despite privatization efforts, significant deficiencies remain in implementing the competitive neutrality framework in Uzbekistan, implying that SOEs receive preferential treatment which unlevel the playing field for private sector operations. In Uzbekistan, the extensive presence of SOEs, even in sectors suitable for private participation, highlights the critical need to uphold competitive neutrality.[28] The assessment conducted under Uzbekistan's iSOEF report, and complemented in this chapter, unveils deficiencies in implementing the competitive neutrality framework. This implies that certain rules and policies provide preferential treatment to SOEs, creating an imbalance in the playing field between private and public operators.

De jure preferences of state-owned enterprises

67. Uzbekistan's SOE framework lacks clear guidelines for separating commercial and public service activities, compensating public service obligations (PSO); also, there is no obligation for a specific rate of return for all SOEs. The 2021 SOE Ownership Strategy addresses vital concerns related to promoting competitive neutrality. For instance, it defines SOE commercial activities as those "aimed at increasing profits in an open and competitive market under conditions of fair competition or effective operation in a regulated market." Second, it asserts that "SOEs should distinguish between commercial and non-commercial activities, reporting on them separately every quarter." Third, it commits to introducing "clear and transparent mechanisms" for compensating SOEs associated with PSOs. Finally, the 2021 SOE Ownership Strategy pledges to transform all

[28] Competitive neutrality means that rules and policies are applied to ensure that SOEs and private businesses compete on a level playing field.

commercial SOEs into joint stock companies (JSC) or limited liability companies by 2025. Despite these commitments, these crucial aspects were not transformed into legal obligations and adopted in practice. Notably, they were not incorporated into the Law on State Property Management approved by the Senate in June 2022 and promulgated in 2023. As a result, no established methodologies guide the determination of compensation for SOEs undertaking PSOs, leading to a lack of clarity. Additionally, there is an absence of cost allocation methodologies for SOEs, thereby increasing the risk of cross-subsidization between commercial and noncommercial activities. The obligation for SOEs to earn a specific rate of return is limited to majority-held JSCs, and there is no comprehensive ownership regulation mandating a positive rate of return.

68. Moreover, SOEs are privy to certain regulatory exemptions. The 2022 Law on Insolvency removes several exemptions for SOEs. Nevertheless, some exceptions persist: SOEs that anchor to entire towns benefit from extended grace periods for external management to address solvency issues.[29] Moreover, specific types of SOEs are exempt from standard licensing requirements based on their legal status, such as State Unitary Enterprises. Finally, the Competition Law of 2023 allows SOE mergers without CPCPC approval if authorized by the President.

De facto preferences of state-owned enterprises

69. Despite no formal legal advantages for SOEs in procurement, opaque practices and certain legal clauses may unintentionally favor them. Private sector operators consistently report nontransparent public procurement practices. For example, there are few legal provisions in the current procurement legal framework that allow for direct contracting in exceptional cases, such as when purchasing from sole providers in sectors with natural monopolies or when dealing with price-regulated goods and services - scenarios that predominantly benefit SOEs. Additionally, the design of tender specifications can inadvertently favor larger organizations, thereby providing an implicit advantage to established SOEs. This is evident when tenders stipulate the delivery or construction of multiple items or services by a single supplier, a requirement that generally matches the profile and resources of sizable SOEs and their extensive corporate networks.

70. SOEs also have benefitted from preferential access to land. In the past, SOEs have leveraged their state ownership to access inputs at significantly reduced costs or even access to land free of charge. For example, in the chemicals sector, a Resolution issued in 2022 allocated vacant land to a 49 percent government-owned joint venture for soda ash production.[30] This joint venture was exempted from land deposit payments and was supported by various government agencies funding the necessary engineering and communications works. While such preferences have historically been present, given the extensive chemical sector reforms as described in Section 3.1, it remains to be seen whether they persist, thus necessitating further analysis.

71. Moreover, lax corporate governance rules can exacerbate the SOE advantages bestowed through de jure and de facto preferences. Inadequate corporate governance standards may exacerbate the negative impacts of de jure and de facto regulatory preferences. Where corporate governance rules are lax, SOEs have fewer incentives to improve performance. This, in turn, translates into an indirect advantage relative to private sector firms. SOEs operating under lax governance rules have less transparency and accountability, which may give them more flexibility in the decision-making process when compared with private peers. In Uzbekistan, recent reforms have addressed certain aspects of SOE corporate governance. However, the widespread effects of these reforms have yet to materialize fully, indicating that SOEs still possess an indirect advantage over their private counterparts. The largest 32 SOEs in Uzbekistan, under the jurisdiction of the Ministry of Economy and Finance (MEF), have

[29] Before the enactment of the new Insolvency Law, there were instances where SOEs bypassed standard insolvency procedures or received ad hoc emergency interventions for bailout purposes. Presidential Resolution No. 3253 (2017) pardoned uncollectible debts for specific SOEs in the gas and fertilizer sectors as part of a broader restructuring of "fundamental sectors." JSC Uzbekneftegaz underwent debt restructuring through the Uzbekistan Fund for Reconstruction and Development in 2018. With the new Insolvency Law now approved, it will be essential to scrutinize whether preferential treatment of SOEs continues in future insolvency proceedings.

[30] Resolution of the Cabinet of Ministers No. 279 of May 2022 "On Measures for the Implementation of the Investment Project to Increase the Production of Soda Ash up to 250 thousand Tons per year in the Period of 2022–2025 at the Joint Venture LLC Kungrad Sodium Plant."

made strides in disclosing and auditing their financial statements.[31] The majority of Uzbekistani SOEs, however, continue to prepare their financials according to national accounting standards, which do not necessarily provide a true and fair view of their financial position. On a positive note, reforms initiated in 2020 to bolster independent directorships are beginning to yield results, as evidenced by the appointment of independent board members to some of the largest SOEs.[32] Despite these advancements, there are areas that require further enhancement. Specifically, there are no established rules for the nomination and dismissal of Chief Executive Officers, and government representation on SOE boards tends to be based on role rather than expertise, which is at odds with the best practices being adopted internationally. Performance monitoring systems have been initiated and applied to some of the 32 largest SOEs,[33] but disclosures remain limited. Overall, further reform is necessary to align SOE board procedures with international standards, addressing issues such as varied qualifications among supervisory board members, limited autonomy in strategic decisions, and constraints in appointing management and Chief Executive Officers. Challenges also exist in systematic financial information availability, SOE aggregate reporting, and the full transition to International Financial Reporting Standards, which requires capacity building. If SOEs are retained, improving their governance and ensuring competitive neutrality is essential for better SOE performance and reduced negative impact on private investment.

Financial benefits granted to state-owned enterprises

72. SOEs receive financial benefits through tax exemptions, ad hoc subsidies, and below-cost input prices. According to the iSOEF analysis, in 2021 SOEs received on-budget, explicit government subsidies amounting to approximately 0.1 percent of GDP. It is worth noting that this figure may be underestimated due to the absence of a consolidated table detailing revenues and expenditures across all budget funds, disaggregated into specific economic categories. Additionally, a significant volume of resources regularly flows to SOEs through tax benefits, estimated at around 3.1 percent of GDP in 2021. More recent data for 2023 reveals that SOEs received a substantial amount of tax benefits. A quick assessment based on data from the Tax Committee under the Cabinet of Ministers[34] shows that only 15 large SOEs received US$1.09 billion with value-added tax benefits during that year, representing approximately 1.3 percent of GDP (Table 3). Financial support to SOEs also involves ad hoc, top-up subsidies as needed. Many nonfinancial SOEs provide goods and services at below-cost prices, establishing a complex system of cross-subsidization, particularly in the utilities sectors. As noted, there is a notable lack of a methodology for calculating PSOs, and SOEs are not required to achieve market-consistent returns on their sales of assets, goods, and services.

Table 3: Value-Added Tax Exemptions Granted for Large State-Owned Enterprises, 2023

Name of State-Owned Enterprise	Foregone Revenues with Zero VAT Rate (US$ millions)
JSC Navoyi Mining and Metallurgy Combine	580.052
JSC Almalyk Mining and Metallurgy Combine	177.330
JSC Uzbekistan Airways	123.395
JSC Uzbekistan Railways	65.896
JSC Uzauto Motors	56.182
SE Navoiyuran (uranium)	44.913
JSC Uztelecom	0.003
JSC Uzbekistan Airports	14.766
LLC Uzbekistan GTL (energy)	7.856
JSC Uzbekistan National Electric Networks	6.986
JSC Uzgastrade	5.884
JSC Uzbekneftegas	4.017
JSC Uzbekistan Metallurgy Combine	3.686

[31] By the close of 2023, the 32 large SOEs had disclosed their financial statements and subjected them to audit processes.
[32] As of March/April 2024, 28 independent directors have been chosen to fill 38 seats on the boards of 22 large SOEs overseen by the MEF. these appointments are in the final stages, having received all requisite endorsements and now pending only the MEF's concluding signature.
[33] According to MEF data, 22 strategic SOEs published their statements under international financial reporting standards as of April 2024.
[34] Data available from the Open Data Portal of Republic of Uzbekistan at https://data.egov.uz/eng/data/61641e6aec71c8d08438430c

Name of State-Owned Enterprise	Foregone Revenues with Zero VAT Rate (US$ millions)
LLC Uzbekistan Airways Technics	2.591
SE Uzaeronavigation	5.152
Total	**1,098.709**

Source: World Bank staff elaboration based on data from the Tax Committee under the Cabinet of Ministers.
Note: VAT = value-added tax; JSC= joint stock company; LLC= limited liability company; SE= state enterprise.

73. SOEs also benefit from specific lending sources unavailable to private companies, particularly preferential lending through state-owned banks (SOB). Preferential lending is extended through state-owned banks, utilizing funds from the Uzbekistan Fund for Reconstruction and Development (UFRD) and long-term, sovereign-guaranteed loans obtained from international financial institutions. Since its establishment in 2006, the UFRD has been pivotal in financing industrial development by providing concessional loans to SOEs. However, this support comes at a considerable cost to the efficiency and stability of the financial sector. Directed lending predominantly occurs through a complex mechanism involving the transfer of UFRD equity and debt to SOBs, which subsequently provide concessional financing to SOEs, either in domestic or foreign currency. The UFRD has increasingly recapitalized banks and restructured large SOE loans since 2017, emerging as the dominant shareholder and lender within the banking system by mid-2019, accounting for approximately two-thirds of preferential lending through banks. In end-2019, in its first important attempt to detach the banking system from the previous SOE-centric model, the government implemented a critical reform that stopped the practice of direct on-lending of UFRD funds through SOBs to SOEs. In contrast, most SOB loans to SOEs - using UFRD resources - were transferred from the SOB balance sheets back to the UFRD. As a result, the share of SOB's outstanding loans to SOEs in total credit decreased from 45 percent in 2018 to 21 percent in 2022. It is worth highlighting that SOBs continue to lend to SOEs, although they do not use funds from the UFRD to finance them. Overall, the share of outstanding preferential loans amounted to 39 percent of total state commercial banking loans in 2023.

Box 7: Case Study: Impact of State Presence and Preferential Treatment in the Automotive Sector in Uzbekistan

The disproportionate influence of the state, coupled with state preferences and support, can result in sectors becoming heavily shielded from competition, leading to significant distortions in market dynamics. An emblematic example is provided by the automotive sector, where a complex interplay exists among state involvement, regulatory restrictions, and financial support to the domestic auto producer. As the largest automotive manufacturer in Central Asia, Uzbekistan is pursuing ambitious growth through its Uzbekistan 2030 strategy. The country's car industry has historically been closely linked to major multinational corporations, engaging in joint ventures with state-owned UzAvtosanoat. Notable partnerships include those with the Korean Daewoo Motor Company and the American General Motors. UzAuto Motors JSC currently commands a significant market share, holding approximately 95 percent.

The dominance of various Chevrolet models manufactured by UzAuto (formerly General Motors Uzbekistan) characterizes the Uzbek automobile market. According to the World Bank's Business of the State database, 16 state-owned enterprises within the automotive sector are majority-owned, and the second highest revenues by sector are in the manufacture of motor vehicles (following mining of other nonferrous metal ores). Imposing high customs and excise duties on foreign car imports, however, has limited competition for domestic manufacturers. In 2020, the Competition Promotion and Consumer Protection Committee investigated UzAuto for alleged anticompetitive behavior. Moreover, criticism has been directed at UzAuto for selling cars at higher prices to Uzbek consumers than those intended for export. Indeed, although the sector benefits from affordable access to inputs, consumers bear the brunt of inflated prices. For instance, the Chevrolet Malibu sells for US$9,000–10,000 more in Uzbekistan than in South Korea, factoring in import costs. Also, the company faces accusations of abusing its monopoly power, involving practices such as selling incomplete cars, delayed deliveries, and imposing additional fees.

Recognizing the need for reform, the government has announced its intention to transform UzAvtosanoat by boosting production and fostering competition within the automotive sector. These reform efforts aim to address market dominance, anticompetitive practices, and pricing concerns, thereby benefiting industry players and consumers.

Source: World Bank staff elaboration based on BOS dataset (SOE revenue); Galdini (2022); Automotive Logistics (2023); Donaev (2023); Kun.uz (2022a); Kun.uz (2022b).

74. The combination of these preferential treatments afforded to SOEs indicates that market institutions and equitable market rules have yet to be fully established in Uzbekistan and underscores the necessity for a

more strategic and methodical approach to SOE reforms. Studying the successful experiences of countries that have implemented SOE reforms can provide valuable insights. For specific steps and strategies, one can look to the example set by Serbia, as detailed in Box 8. Annex 5 discusses the example of Peru. Overall, to foster successful SOE reforms, it is imperative to establish clear ownership and accountability, underpinning these with robust market institutions and regulations that ensure a level playing field. The strategic integration of private sector participation is pivotal, contingent upon the existence of good governance, competitive selection processes for private partners, and the dismantling of any rules that unfairly benefit SOEs. Privatization is not a one-size-fits-all solution for reducing the SOE footprint. More broadly, the modalities of private involvement can vary, ranging from complete divestiture to public-private partnerships (PPP) and management contracts that maintain state ownership. The sequencing of SOE reforms should be strategically aligned with sector characteristics and financial health. Loss-making SOEs in competitive markets should be considered for liquidation, while profitable and efficient ones could be divested. In sectors that are partially contestable, the focus should be on enhancing corporate governance and considering debt restructuring for failing SOEs, followed by potential divestiture. For those that are performing well, the introduction of management or service contracts with clear performance metrics is advisable. Underperforming SOEs, due to insufficient incentives, may benefit from PPPs or management contracts with defined Key Performance Indicators. SOEs that operate as natural monopolies require careful management of PSOs to ensure they fulfill their service delivery mandates effectively.

Box 8: Case Study: The Serbian Experience of State-Owned Enterprise Reforms

From 2013 to 2018, Serbia embarked on significant reforms of its state-owned enterprise (SOE) portfolio, with a focus on privatization of all commercial SOEs (with some caveats). The 2008 global financial crisis exposed structural weaknesses in Serbia's economy, necessitating fiscal consolidation and a shift toward a market economy. By 2014, real gross domestic product had not yet recovered to pre-crisis levels, highlighting the urgency of these reforms. Serbia's SOEs encompassed approximately 1,200 companies employing around 260,000 people, representing 15 percent of the formal workforce.

The government prioritized resolving the SOE portfolio in competitive sectors due to the high costs of maintaining the firms and their negative impact on market competition. Many of these SOEs enjoyed protection from enforcement, leading to significant unpaid taxes and utility bills as well as receiving targeted subsidies. State support for SOEs included direct subsidies and tolerance for unpaid taxes and inputs from other SOEs, with indirect support amounting to over EUR 300 million annually. Control of support measures was key to align incentives.

To restart privatizations after a prolonged halt, the government considered bankruptcy as a viable option for many companies. The removal of protection from bankruptcy was a key reform to incentivize the resolution of remaining SOEs, leading to privatizations or bankruptcies for most companies in 2015 and 2016.

Efforts were made to improve governance and ownership frameworks for retained SOEs, focusing on utilities governed by the Law on Public Enterprises. Amendments to enhance corporate governance were introduced, such as requiring independent board members and establishing Audit Committees. For large public utilities, support primarily came through guaranteed loans, not only for infrastructure projects but also for liquidity purposes. Significant changes also were introduced to improve efficiency and financial management, especially with regard to the gas and railroad companies.

Serbia established or reformed several cross-sectoral institutions, including the Ministry of Privatization and Economic Reconstruction, National Employment Service, Commission for Protection of Competition, and Commission for State Aid Control. Horizontal regulations, such as the Privatization Law and Bankruptcy Law, were updated to streamline the privatization process. The 2014 Labor Law modernized employment regulations, aligning them with European Union standards. Sectoral regulations in energy and telecommunications also aimed to liberalize markets, although implementation has faced challenges.

Serbia's experience with SOE reforms offers several lessons:

1. **Estimate true costs and landscape**: Accurate assessment of the status quo is crucial.
2. **Introduce credible timelines**: Establishing and adhering to realistic timelines ensures accountability and progress.
3. **Align incentives**: Addressing soft budget constraints and aligning incentives with reform goals is essential.
4. **Design mitigation measures**: Secure funding and actively communicate social mitigation measures to manage negative impacts effectively.

Source: World Bank staff elaboration based on case studies prepared for World Bank (2023d).

3.2.2 The State as Financier: Flawed Business Support Programs and Weak State Aid Control Framework

75. As with many countries, Uzbekistan provides financial support to businesses for different objectives, but the scale of this support remains unquantified. These programs also risk causing market distortion. Uzbekistan offers various forms of support to businesses to achieve various development objectives and to mitigate economic shocks and emergencies. Although these programs are justified in their goals, they also risk causing market distortions (see Box 9 below for a brief discussion). There is no official "budget line" information with an aggregate amount of business support measures in Uzbekistan nor is there a repository of individual state initiatives supporting business. The macro data from the International Monetary Fund (IMF) for Uzbekistan shows substantial government spending to support business activity, particularly during the COVID-19 crisis.[35] In 2020, Uzbekistan's fiscal measures amounted to 5.7 percent of GDP, with 4.4 percent for additional spending and revenue loss, including 3.3 percent for nonhealth sectors aiding businesses through financial and tax relief. Another 1.3 percent of GDP went to equity, loans, and guarantees for businesses, including state-owned enterprises. While this data provides a broad overview, a more detailed analysis of the micro effects of these measures is necessary to understand their impact on market dynamics and the risk of market distortions.

Box 9: State Support to Business: Objectives, Risks, and Best Practices in Design Principles

State support to businesses, as defined by the WTO, includes any selective financial advantage given by the state to firms, including state-owned enterprises and private companies. This support is typically justified by development objectives (e.g., job creation, improved access to services), market failure corrections (e.g., underinvestment in research and development and access to finance for small and medium enterprises), or emergency responses, such as the COVID-19 pandemic. However, such support carries risks, including inefficiencies in public spending—as other areas of public spending may have higher returns—and market distortions.[1] Impact on the market depends on the support's design and type. Taxpayer funds given to companies can disrupt fair competition, leading to overproduction or the survival of inefficient firms, and may discourage investment by competitors (i.e., crowding out effect). Misuse of public resources for anticompetitive practices is another concern. As per the World Bank (2023d), the design of support measures is key to minimizing market distortions. Best practices for introducing competition criteria when granting state support measures to businesses are summarized below:

- State-support measures should not be granted to firms with significant market power, as they have a greater potential for distortion by affecting the incentives of other competitors to invest and enter the affected market.
- State-support measures should not be granted to cover running costs (or operating aid) that firms should bear alone.
- State-support measures should not be granted in markets with overcapacity, as the artificial maintenance of the status quo will only delay the necessary adjustments.
- State-support measures should refer to eligible costs (i.e., what costs can be paid with the state-support measure) and maximum amounts to make them more effective.
- State-support measures should prevent cross-subsidization through increased transparency and separation of accounts or activities in different firms.
- Rules limiting the magnitude and duration of state support and the ability of the same recipient to be regularly granted state support should be introduced.

Source: World Bank staff elaboration; adaptation from World Bank Markets and Competition Policy Assessment Toolkit.
[1] From an economic standpoint, market distortions can happen because the provision of support measures influences the recipient's cost structure (fixed and variable) while creating a wedge between the prices perceived by the beneficiary firm and the underlying costs. It affects the decisions of firms on what to produce, how to produce it, and how much to charge for it. As a result, beneficiary firms can artificially increase their market power, regardless of their efficiency and competitiveness levels, to the disadvantage of firms that have not received the same support (Pop, Iootty, Bruhn and Ortega, 2021).

76. A mapping exercise from a supply-side perspective identified several business support programs launched in Uzbekistan between 2020 and 2022, including emergency and regular programs. Qualitative analyses of these programs offer a few insights into their design features and highlight the potential risks of market distortion. To address the knowledge gap at the aggregate level, Iootty, Pop, and Piernas (2023) undertook the pioneering task of mapping the business support measures granted in Uzbekistan following a supply-side approach; that is, using micro-level information about the business support programs offered by the government. The analyses relied on official government information, specifically legislative acts, as the main source of information to identify the main business support schemes granted by government

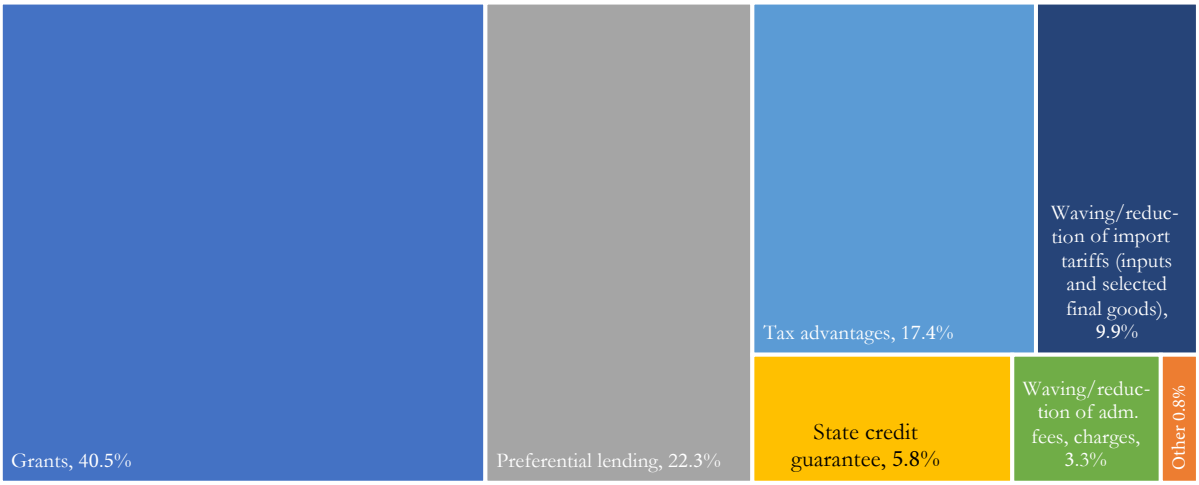
[35] IMF's Database of Country Fiscal Measures in Response to the COVID-19 Pandemic

entities in the country from 2020 to 2022. The mapping exercise identified 175 support measures, encompassing two main types: 54 emergency schemes tied to the COVID-19 response crisis (initiated between March 2020 and December 2021) and 121 schemes unrelated to the COVID-19 response crisis (initiated from January 2020 to December 2022).[36] All these 175 measures were then categorized based on various criteria, including measure type, policy objective, funding authority, targeted sector, targeted beneficiary size and ownership, selection method, budget allocation, and start and end dates.

77. The results indicate that non-emergency programs took primarily the form of grants, posing inherent market efficiency risks. Out of the 175 mapped measures, Iootty, Pop, and Piernas (2023) focused on the 121 schemes unrelated to COVID-19 (i.e., nonemergency programs) offering insight into the more permanent features of the country's business support framework. Between 2020 and 2022, the primary forms of non-COVID business assistance were grants (40.5 percent), preferential loans (22.3 percent), and tax benefits (17.4 percent), as depicted in Figure 55. Sector-wise, nearly half of these initiatives, approximately 49 percent, were directed at the agriculture, forestry, and fishing industries. Although grants provide immediate financial support, their use in non-emergency contexts, as observed in this study, raises concerns about market distortions. This is due to the absence of repayment obligations for grant recipients. Without precise targeting to businesses in genuine need, clear performance objectives, and temporal restrictions, such grants may lead to market imbalances and inefficiencies.

78. The risks of market distortions are heightened by the fact that many support measures lack crucial information such as budget allocation, expiration clauses, and clear criteria for selection. Nearly half of the non-COVID-19 support programs mapped in the period lack explicit expiration dates, suggesting they may become permanent fixtures. Also, while most (66 percent) of these support measures required an application process, the selection criteria remain opaque. For approximately 75 percent of the identified support measures, there is no information on budget allocation, eligible costs, or limits on support intensities. Moreover, public information regarding the disbursements to beneficiary businesses under each program is lacking. The combination of these features presents significant risks to market distortions, including discretionary authority use, misallocation of support, and entrenchment of temporary measures, all of which potentially lead to market imbalances and the unwarranted perpetuation of uncompetitive firms.

Figure 55: Business Support Measures (Unrelated to COVID-19) Launched, 2020–22
(share of measures, by type of instrument)



Source: Iootty, Pop and Piernas (2023).
Note: These measures do not relate to the COVID-19 pandemic. Shares are counted by type of instrument.

[36] Within this timeframe, the mapping exercise relied on the legislative database as the main information source. A keyword search, including terms such as "coronavirus," "COVID-19," and "pandemic," was conducted. Identified legislative acts were reviewed to understand their objectives and identify any state support measures for inclusion in the table of Covid-related support measures. For non-Covid measures, keywords such as "state-aid," "state-support," "support," "exemption," "subsidy," and "reduction" were used. The team examined each identified legal act to understand its objectives and determine the scope of any support measure. Acts without a link to Covid were classified as non-Covid state support measures.

79. Using micro-level data, a complementary analysis—from the demand side—examined business support programs from the recipients' perspective during the period 2020–22. Results show that many private firms faced the period without any support. Medium and larger firms, however, were more likely to benefit among those that did receive aid, with common measures being payment deferrals and fiscal exemptions. The methodology applied for the empirical analysis from the demand side (i.e., from the recipient's perspective) and drawing from the World Bank Business Pulse Survey dashboard (World Bank, 2022a) is detailed in Box 10. Econometric results indicate a higher probability of larger firms receiving public support, with large firms 1.5 times more likely to get assistance than micro firms (Figure 56(a)). On average, only 28.53 percent of private firms received support, leaving about 71.5 percent without aid during the period, coinciding with the COVID-19 crisis. Payment deferrals and fiscal exemptions were the most common support types (Figure 56(b)). Agriculture, mining, health, and financial services sectors had higher support access. Lack of awareness was the primary barrier to accessing support, especially for smaller firms, followed by the complex and opaque application processes.

Box 10: Demand-Side Analysis of Business Support Measures Granted in the Period 2020–22: A Firm-Level Assessment in the Private Sector

The lack of industrial census data in Uzbekistan precludes an ex post impact evaluation of selected programs to gauge their effectiveness and influence on market outcomes, such as allocative efficiency. Consequently, a representative survey of firms serves as a viable alternative. The World Bank Business Pulse Survey (BPS) database provides such a platform.

Implemented in over 40 countries, the BPS aims to measure the impact of the COVID-19 pandemic on the private sector. As such, it provides a representative sample of formal private micro, small, medium, and large businesses across various sectors, including agriculture, manufacturing, retail, services, and construction. The BPS data captures critical dimensions of business performance, such as sales revenues, liquidity, labor adjustments, and technology adoption. Importantly, the survey also collects information on business support programs, including the preferred type of support and whether the firm received any support from local or national authorities, as well as reasons for not receiving support. In Uzbekistan, three rounds of the BPS were conducted in August–September 2020 (1,886 respondents), May–July 2021 (1,008 respondents), and March–May 2022 (1,017 respondents). With these features, the BPS dataset allows for an assessment of the need for policy support and the availability of public support among private firms in the period 2020–22, which overlaps with the COVID-19 crisis.

Drawing from this dataset, the analysis aims to answer three questions, as follows:

1) **What is the proportion of firms that received support?** To answer this, the analysis entailed an estimation of the average predicted probabilities of firms receiving support, conditional on several attributes. These come from probit estimations that control for size, sector, and round of the survey. Computations use sampling weights. The regression equations used are as follows:

$$Yi = \alpha + \beta Wi + \delta n + \delta g + \delta t + ei$$

Where Yi is a dummy variable that denotes if firm i received government support or not, δn and δg denote size and sector fixed effects, and δt denotes the survey round.

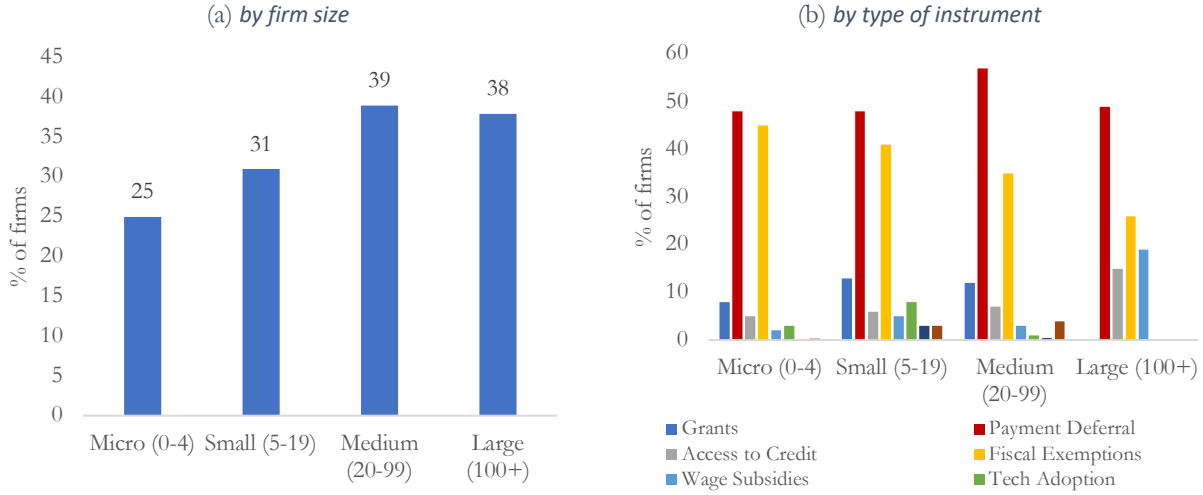
2) **Was there any mismatch between demand and support received by businesses?** The analysis unfolds in two stages. Initially, a probit model is estimated for each policy instrument type (payment deferrals, tax exemptions, wage subsidies, and access to credit), incorporating controls for group size, sector of activity, and the shock reported by the firm (e.g., supply, demand, or both). Notably, the BPS questionnaire enables the capture of two types of economic shock: a demand shock (reduction of sales) and a supply shock (an increase in the price of production factors). Following the estimation of the probit model, the second stage involves conducting a Shapley decomposition to gauge the relative contribution of each regressor variable (size, sector, and type of shock). **Figure 57** illustrates the results of this decomposition exercise, normalized to 1 and excluding the contribution of fixed effects.

3) **Was there any mistargeting in terms of those firms that received support having been the ones that suffered the most economic shocks from the COVID crisis?** To shed light on the relationship between the type and magnitude of shock experienced by firms during the COVID-19 crisis and their access to public support, the analysis entailed an estimation of the average predicted percentage of firms that received public support from separate probits that control for size, sector, and round of survey, in addition to fixed effects for the type of shock reported (including no shock). Computations used sampling weights. **Figure 58** shows the results. Only wave one data (for 1,000 firms) was used for this graph, since the shock variables were available only for this sample subset.

Source: World Bank staff elaboration.

[1] In Uzbekistan, the sample frame draws from the following strata: region, size of the company (small (0-19 workers) and medium (more than 20 workers) companies) and sector (i.e., manufacturing, agriculture, services, and trade).

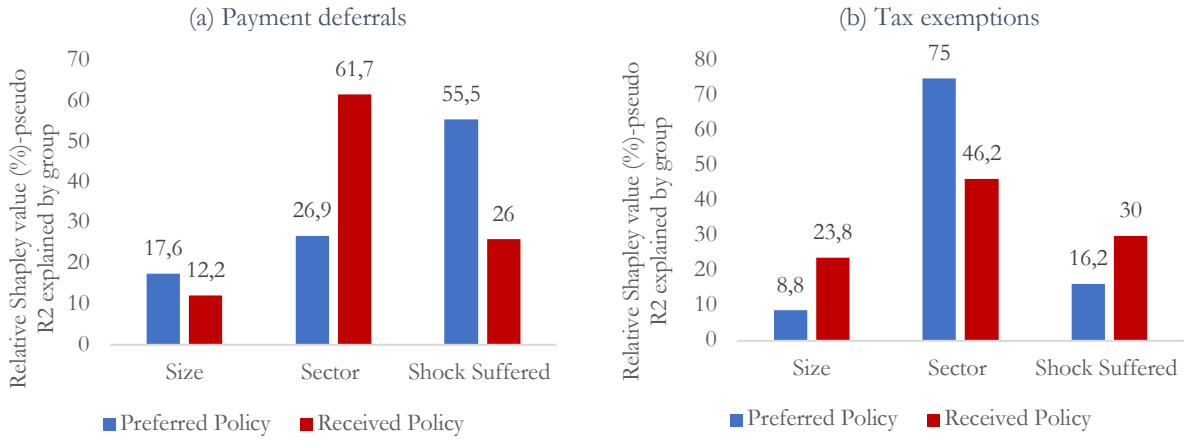
Figure 56: Average Predicted Probability of Private Firms Receiving Any Business Support Measures, 2020–22



Source: World Bank staff calculation using Business Pulse Survey data.
Notes: Average predicted probability from probit estimations that control for size, sector, and round of the survey. Computations use sampling weights. See Box 6 for further methodological description.

80. Evidence also indicates a potential mismatch between the demand for support and the support received by private firms, suggesting that the latter may not align with their needs. Econometric analysis reveals a discrepancy between the types of support firms receive and their preferences. Shapley's decompositions in Figure 57 below show that despite payment deferrals and fiscal exemptions being the most common support received, they were not the preferred options for many firms.[37] The mismatch is largely attributed to sectoral differences and the specific economic shocks firms faced. The divergence between the support demands of firms and what they obtain could stem from limited policy availability due to fiscal limitations, complex application procedures, or nontransparent selection influenced by political connections.

Figure 57: (Mis)match between Demand for and Support Received by Private Firms, 2020–22: Shapley Decomposition Results



Source: World Bank. staff calculation using Business Pulse Survey data (wave one only).
Note: Results from Shapley-Owen decompositions show the proportion of the R-squared (Pseudo R-squared), explained by different groups of variables in the probit regression and used to identify the variables that contribute the most to explaining differences in preferences and access to policy.

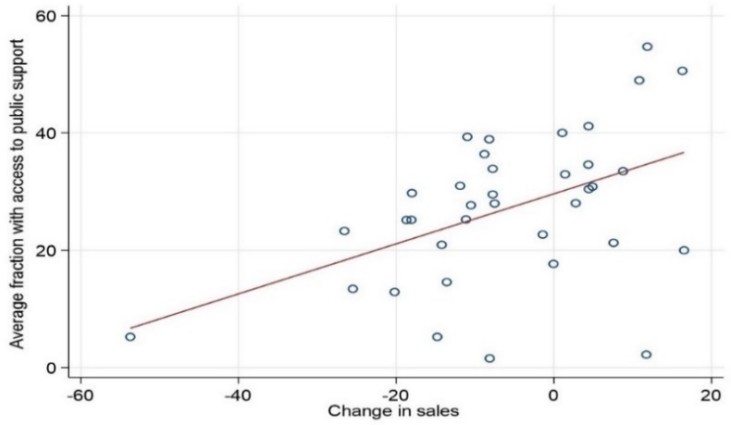
81. Additionally, the analysis reveals evidence of mistargeting, indicating that several private firms received support without a genuine need and thus potentially leading to the misuse of public resources. Contrary to

[37] It is important to note that Shapley's values do not indicate the direction of the effect but rather highlight the factors that contribute the most. The larger the difference between the "preferred policy" and "received policy" bars, the more significant the mismatch between supply and demand for policy support. The categories of "size/sector/shock suffered" reveal the primary sources of mismatch, as indicated by the extent of the gap.

expectations, sectors such accommodation and food services, hit hardest by the pandemic, were less likely to receive policy support. Data show a misalignment in support allocation, with a positive correlation between average sector sales decline and support access (Figure 58(a)). The positive slope suggests a misalignment in the targeting of support. Furthermore, econometric results indicate that many firms unaffected by the pandemic still received support, with nearly 41 percent of such firms accessing aid (Figure 58(b)).[38] This pattern of support distribution suggests potential issues in policy targeting, possibly due to the urgency of response or access barriers, including a lack of awareness and complex application processes.

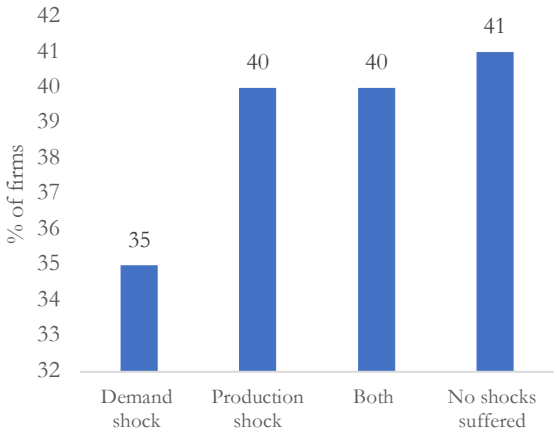
Figure 58: (Mis)targeting of Support Programs Deployed to Private Firms, 2020–22

(a) Scatterplot of (sector average) sales change and (sector average) access to support measures

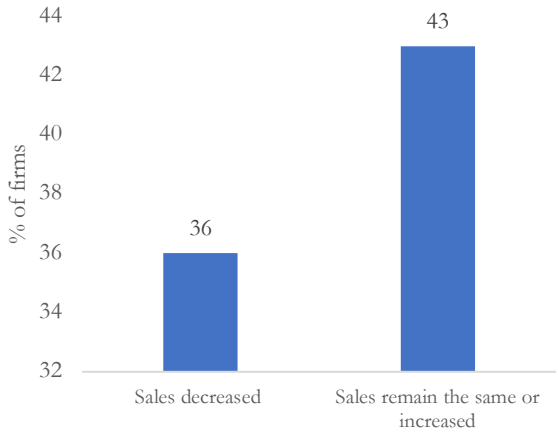


Source: World Bank staff calculation using Business Pulse Survey data.
Note: These are binned scatterplots, and each represents a particular sectoral average.

b) Probability of private firms receiving any business support measures



(c) By the magnitude of the shock suffered



Source: World Bank staff calculation using Business Pulse Survey data.
Notes: The average predicted percentage of firms that received public support from separate probits that control for size, sector, country, and wave, in addition to fixed effects for the type of shock reported (including no shock). Computations used weights equal to the inverse of the number of observations in each country. Only wave one data (for 1,000 firms) were used for this graph since the shock variables were only available for this subset of the sample.

82. When taken together, the analysis from the supply as well as the demand side highlights critical issues in Uzbekistan's business support programs, suggesting potential market distortions. Concerns

[38] Figure 58(b) illustrates this, highlighting that while there is no significant difference in the probability of receiving public support for firms facing different types of shocks (35 percent for firms facing demand shocks only, 40 percent for firms facing supply shocks only, and 40 percent for firms facing both), there is a non-negligible positive likelihood of nearly 41 percent for firms that reported not having experienced any shock. Additionally, firms that reported no change or reported an increase in sales had a 43 percent probability of receiving government support, which is not far from the 36 percent probability for firms that experienced a reduction in sales.

arise over the design of these measures, which may have reinforced the dominant position of firms or propped up inefficient ones. Moreover, the mismatch between the needs of firms and the support received, along with instances of unwarranted aid, points to the necessity for more targeted and effective policy interventions.

83. In this context, the robust implementation of state aid control becomes imperative to effectively mitigate market distortions, enhance the efficiency of support measures, and optimize the use of fiscal resources. To address market distortion risks, many countries have introduced, as part of their competition legislation, rules that discipline the granting of support measures to businesses and that will ensure fair competition in the market. There are different approaches to enforcing these rules, including ex ante control (before support is granted) and ex post control (after support is granted). In some countries, only public administrations can enforce these rules. In contrast, private enforcement is allowed in others, meaning that private parties can bring cases before national courts to challenge state support measures that they believe are anticompetitive. At the regional level, the most developed framework to control state support measures for businesses is that of the European Union (EU). The EU's framework includes ex ante and ex post control, allowing for public and private enforcement. Outside the EU, few countries have control regimes for state support measures; for instance, Moldova and the United Kingdom. At the international level, the World Trade Organization Agreement on Subsidies and Countervailing Measures sets rules for government subsidies and remedies for harmful subsidized trade (Box 11).

Box 11: State Aid Control Framework: Examples from Other Jurisdictions.

At the regional level, the most developed framework to control state support measures has been established by the European Union (EU), which is ex ante and ex post and includes public and private enforcement. This system, a pioneer in establishing supranational control of state support measures, has served as a model for other national and regional systems. The EU system, based on the principle of compulsory prior notification of all new aid measures to the European Commission, has been instrumental in maintaining a healthy competitive environment within the EU internal market. An EU Member State may not put its aid measure into effect until the Commission has reached a decision (this is known as the standstill obligation).

Outside the EU, few countries have control regimes for state support measures, such as the United Kingdom (post-Brexit) and some candidate and neighboring countries of the EU (i.e., Moldova). In Moldova, the Law on State Aid No.139 of June 15, 2012, introduced the obligation for public authorities to notify the Moldovan Competition Council of all new state support measures before they have been implemented. The Competition Council is set to approve proposed subsidies that align with the rules established under the State Aid Law. One of the implementing acts of this Law, the Regulation on the Notification Form, Examining Procedure, and Decision-Making on State Aid, provides a detailed explanation of the examining procedure of the proposed state support measures. This regulation further stipulates that the Competition Council is open to grievances from individuals who believe they are impacted by illegal "state aid." In the United Kingdom, the EU State Aid law rules largely ceased to apply after the Brexit implementation period. In June 2021, the United Kingdom adopted its Subsidy Control Act 2022, which proposes that the Competition and Market Authority have subsidy control functions and provides for establishing a subsidy advice unit within the Authority.

At the international level, the discipline on state support measures with the widest multilateral reach is the one derived from the Agreement on Subsidies and Countervailing Mechanisms (SCM Agreement), entered into by all World Trade Organization (WTO) Members at the end of the Uruguay Round. The SCM Agreement allows Member States to impose countervailing duties to counteract any state support programs that another Member State provides, which could potentially affect trade by supporting the manufacturing, production, export, or transportation of goods. Unlike EU regulations, the SCM Agreement narrowly focuses on subsidies relating to goods[1] and is concerned with trade implications rather than competition distortions. Member States can challenge such subsidies at the WTO's dispute resolution forum.[2] In contrast to the EU system, which includes preemptive control of subsidies, the SCM Agreement has a more restrictive scope, dealing only with direct specific subsidies on products. All WTO Members and Uzbekistan, the latter of which is in the process of joining the WTO, are subject to this Agreement. The benefits of accession to the WTO and harmonizing with WTO rules are discussed in Chapter 4.

Source: World Bank staff elaboration.
[1] Article 1 of the SCM Agreement.
[2] Article 4 of the SCM Agreement.

84. Although Uzbekistan has a state aid control framework in place, it is currently incomplete and inadequately enforced, signaling clear opportunities for enhancement. The 2023 Competition Law (Article 23) empowers the CPCPC to regulate state support to businesses, explicitly prohibiting measures that undermine competition. This article requires the CPCPC to scrutinize business support measures to gauge their potential impact on competition, disallowing those with a negative forecasted impact. The current framework, however, presents certain

ambiguities that necessitate attention. Firstly, it lacks a clear methodology for the CPCPC to perform an ex-ante evaluation of the proposed program impact on competition. Secondly, there are no established regulations that outline the review process, including the notification and approval procedures for proposed measures Moreover, there is no exhaustive inventory of existing state-support measures.[39] To fortify the existing state aid control framework, a fourfold strategy is paramount to (i) formulate guidelines that define the criteria that the CPCPC will use to guide the decision; that is, guidelines that will encompass the concept of state aid support, potential justifications such as market failures, and analytical steps for preliminary assessment; (ii) establish by-laws that dictate the notification procedures by granting authorities, CPCPC endorsements or rejections, and documentation of state aid measures; (iii) create a state support registry, managed by the CPCPC and granting authorities; and (iv) conduct periodical ex post evaluations of existing support programs to detect any unintended consequences, establish evidence of causality, and consider if alternative strategies might have yielded improved outcomes.[40] The triumph of the state aid control system will ultimately rely on seamless collaboration between the granting authorities and the CPCPC.

3.2.3 State as Regulator and Supervisor: Inadequate Network Sector Regulations for Private Sector Entry and Expansion

85. Pro-competitive network sector regulation can lower the cost and improve the quality of key utilities, such as energy and telecommunications, influencing the productivity growth of firms using these inputs; however, Uzbekistan's regulations continue to impact competition in network sectors. Regulations facilitating the entry and operation of new players encourage market participants to pursue efficiency, leading to cost reductions, enhanced service quality, and technological advancements. Additionally, regulations can safeguard against anticompetitive behavior. Improving competition and productivity in key input network sectors, such as energy and telecommunications, has a multiplier effect since pro-competition regulations also influence the productivity growth of firms that use these inputs. However, certain regulations continue to impact competition in network sectors, with infrastructure remaining underdeveloped (as highlighted in Section 2.1).

86. In the electricity sector, the entry of private operators in the generation segment is limited to PPPs. At the same time, distribution and retail supply remain bundled, although competition is feasible, and tariffs are set below full cost recovery, thus hindering private sector attractiveness. Electricity generation, transmission, and distribution are dominated by three SOEs (Table 4). Electricity generation is theoretically open to competition, except for hydropower. However, private entry is predominantly facilitated through PPPs. To foster greater competition, measures should be implemented to encourage more diverse and competitive entry models beyond PPPs. For example, direct investment could be fostered through feed-in tariffs for renewable developments. Legal and operational unbundling has been achieved with the establishment of three independent undertakings active in power generation, transmission, and distribution,[41] enabling the possibility of fair access to the grid for all electricity generators. Further separation between distribution and retail supply would enable competition and efficiency improvements in retail supply. Lastly, tariffs are currently set at levels insufficient for cost recovery, hindering investment and sustainability. In September 2023, electricity tariffs were set at a 61 percent cost recovery rate. The establishment of an independent energy regulator, consolidating regulatory functions, promises greater efficiency and transparency in the market.[42] The independent regulator is not yet operational, however, and the practical impacts of its action remain to be seen.

[39] The Tax Committee under the Cabinet of Ministers recently launched a website providing information about tax and customs benefits extended to SOEs and private entities in 2023. (https://data.egov.uz/eng/data/61641e6aec71c8d08438430c). The available data includes the beneficiary entity's name, type of tax benefit granted (such as value-added tax, land tax, and corporate income tax), and corresponding benefit amount. Although this initiative marks a significant milestone in transparency, it is currently incomplete. Notably, there is a lack of information on other widely used forms of support provided to firms, such as preferential lending and grants. Additionally, crucial details, such as the duration of each tax benefit and the specific line ministry responsible for granting the incentive, are not included.

[40] The ex-post evaluation could emulate the EU model, examining the measure's proportionality (whether or not the support provided is the minimum necessary); appropriateness (whether or not there are more effective alternatives); efficiency; and direct and indirect impacts (including impacts on markets). The findings from such an ex-post assessment would underscore the significance of performing ex ante as well as ex post evaluations.

[41] JSC Thermal Power, JSC National Electric Grid, and JSC Regional Electrical Power Networks.

[42] Established by the Decree of the President, September 28, 2023, No. PR-166.

Table 4: Key Players in Electricity Markets

Segment	Largest Players	State Ownership of the Largest Players	Market Share of the Largest Player in the Segment
Generation	JSC Thermal Power	100 percent state-owned	75 percent of electricity generation.
Transmission	JSC National Electric Grid	100 percent state-owned	Statutory natural monopoly for the export and import of electricity. It operates the main electric power networks, performs functions of the single buyer of generated electricity, and provides transmission of electricity within the country, as well as cross-country transit.
Distribution and retail supply	JSC Regional Electrical Power Networks	100 percent state-owned	Statutory natural monopoly.

Source: World Bank staff elaboration.

87. **In the natural gas sector, tariffs are set at levels insufficient for cost recovery, impacting investment and market sustainability.** Further, the retail supply segment is a statutory monopoly, even though competition is theoretically possible. Four unbundled SOEs dominate the natural gas market (Table5). Tariffs are currently set at levels insufficient for cost recovery, impacting investment and market sustainability. In September 2023, natural gas tariffs were set at a 43 percent cost recovery rate. The absence of liberalized prices deters profit-driven private sector involvement in supplying natural gas to Uzbek firms and the population.[43] Retail supply is a statutory monopoly,[44] although this is a market in which competition is viable. Enabling entry in this segment would facilitate efficiency gains and a wider range of products for consumers.

Table 5: Key Players in Natural Gas Markets

Segment	Largest Players	State Ownership of the Largest Players	Market Share of the Largest Player in the Segment
Generation	JSC Uzbekneftegaz	99.9 percent state-owned	62 percent of natural gas production.
Transmission	JSC Uztransgaz	99.5 percent state-owned	85 percent of natural gas production, statutory monopoly.
Distribution	JSC Uzgaztrade	100 percent state-owned	87 percent of natural gas production, designated as a single buyer (statutory monopoly) of natural gas from domestic producers and distribution to retail sales, as well as a single operator of imports and exports of natural gas.
Retail supply	JSC Hududgaztaminot	100 percent state-owned	100 percent of natural gas production, statutory monopoly.

Source: World Bank staff elaboration.

88. The telecommunications sector faces barriers that stifle competition and digital progress. This is due to the absence of spectrum auctions and unregulated access conditions. The Ministry for Development of Information Technologies and Communications has a dual role in not only policy-making but also overseeing Joint Stock Company (JSC) Uzbektelecom. This creates a conflict of interest that impedes fair

[43] According to IMF data, natural gas subsidies (including explicit and implicit subsidies) in Uzbekistan are much higher as a percentage of GDP than in other countries. In 2021, subsidies for natural gas in Uzbekistan were 15 percent of GDP, up from 4 percent in 2020. In contrast, countries such as Armenia, Colombia, Kazakhstan, Malaysia, Peru, and Viet Nam had natural gas subsidies of only 1 percent or close to zero in 2021.

[44] Decree of the President of Uzbekistan No. PP-4388.

market practices. An independent regulator is necessary to ensure fair and transparent regulation of the sector.[45] Spectrum auctions are needed to gain the full benefits of competition in the mobile market. Furthermore, where pro-competition regulation exists, such as for infrastructure sharing and access to passive infrastructure, the lack of clear guidelines limits their effectiveness. The sector is further stifled by the absence of separation between JSC Uzbektelecom's fixed-line local access and retail activities, unregulated prices for wholesale fixed-line products and mobile call termination, and a statutory monopoly on international gateways, all which limit the development of a competitive fixed-line network.

Table 6: Key Players in Telecommunications Markets

Segment	Key Players in the Market/Structure of the Market	State Ownership of the Largest Player	Market Share of Key Players in the Segment
Fixed line network	JSC Uzbektelekom	96.4 percent state ownership	Statutory monopoly in international connectivity
Retail fixed line			86 percent market share
Mobile	• 5 mobile network operators • 1 mobile virtual network operator • Unitel: largest player • JSC Uzbektelekom: state-owned player.	• Unitel: no state ownership • JSC Uzbektelekom: 96.4 percent.	• Unitel: 54 percent • JSC Uzbektelekom: 12 percent (3rd largest player).

Source: World Bank staff elaboration.
Note: JSC = joint stock company.

89. The railway sector operates as a statutory monopoly without competition regulation, and it has no independent regulator. Railway transport operates as a statutory monopoly under JSC Uzbekiston Temir Yo'llari (UTY), which manages infrastructure and transport services (Table 7). Authorities have mandated reorganization efforts, including separation into three business units (freight, passengers, infrastructure), as well as the outsourcing of noncore activities. It is not clear, however, which noncore activities will be outsourced and divested. Therefore, it is impossible to confirm whether outsourcing will extend competition to all activities of the rail sector that are viable for competition. The sector also lacks an independent regulator, with regulatory functions currently being performed by the Ministry of Transport.[46] Recent government initiatives, however, aim to clarify the ministry's responsibilities and establish a roadmap for increased private sector participation, thus strengthening competition and supporting the economy's long-term decarbonization. This will be achieved by promoting railway transport as a sustainable alternative to carbon-intensive modes, such as roads and aviation.

Table 7: Key Player in the Railway Sector

Segment	Largest Players	State Ownership of the Largest Player	Market Share of the Largest Player in the Segment
Freight Passengers	JSC Uzbekiston Temir Yo'llari	100 percent state-owned	Statutory monopoly
Infrastructure			

Source: World Bank staff elaboration

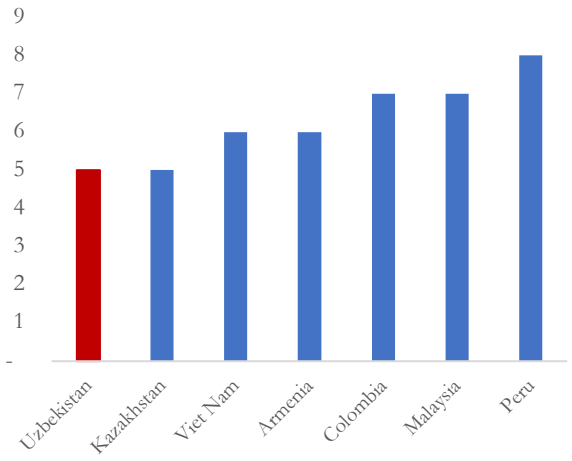
3.2.4 State as Market Referee: Institutional Constraints, Inadequate Enforcement Tools and Legislative Flaws

90. Uzbekistan's competition policy implementation is widely perceived as deficient. The effectiveness of the State in acting as a market referee and disciplining market players depends on a well-crafted competition law, the

[45] A draft decree of the President "On introduction of the institute of independent market regulators and measures to improve the regulation of natural monopolies" has been submitted to the Cabinet of Ministers to prescribe the institutional framework to establish an independent regulator in telecommunications, as well as in natural gas, railway transport, air transport, and road infrastructure.
[46] A draft decree prescribes the framework to establish an independent regulator in railway transport. As of 2019, the Roads Committee (Avtomobil Yo'Llari Qo'Mitasi) has been granted oversight of all transport modes, allowing a transition from unimodal toward more integrated multimodal planning.

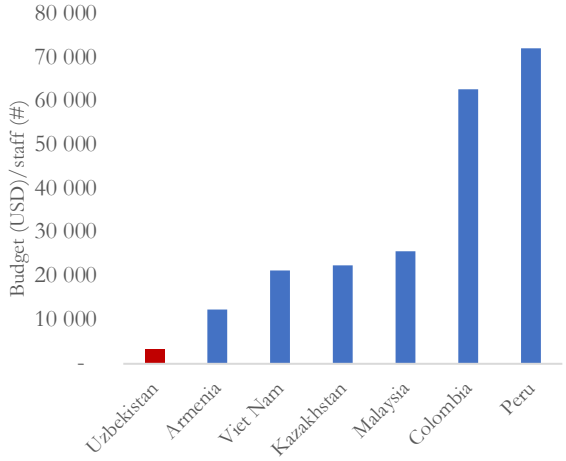
institutional setup of the competition authority, and the advocacy efforts of the competition authority.[47] A survey by the OECD (2023) reveals that the private sector perceives significant deficiencies in competition policy implementation. Over half of the firms surveyed expressed dissatisfaction with the institutional framework and measures against market concentration and cartels. A notable 67 percent raised concerns about market dominance control. The Bertelsmann Transformation Index confirms Uzbekistan's poor performance in policy implementation (Figure 60).[48]

Figure 59: Anti-monopoly Policy and Enforcement: Uzbekistan vs. Peers, 2024 (worst (1) to best (10) score)



Source: World Bank staff elaboration based on the 2024 Bertelsmann Transformation Index, available at https://bti-project.org/en/methodology.

Figure 60: Uzbekistan vis-á-vis Peers: Allocated Budget per Staff in Competition Authorities, 2021 (US$)



Sources: World Bank's Competition Agency Indicators built using Competition Authority Annual Reports and websites; and OECD Annual Reports by Competition Agencies on recent developments.

91. A few factors contribute to the perceived underperformance. First, the efficacy of CPCPC enforcement is limited, partly due to its broad mandate and low budget-to-staff ratio, which might prevent staff from thoroughly investigating cases. In 2023, the CPCPC's extensive activities included assessing 140 mergers; investigating 653 cartels; conducting 182 market analyses; conducting 614 impact assessments of draft legal acts; cancelling 717 anticompetitive orders and other rulings of ministries, agencies, and local authorities; and detecting 587 abuses of dominance cases. Compared to the average annual cartel case closures of other countries—1.9 in Peru, 4.6 in Colombia, and 0.8 in Malaysia—the CPCPC's volume is extremely high, suggesting a potential trade-off between the number of cases handled, the depth and materiality of the investigation, and the depth of the analyses.[49] Moreover, the authority's mandate is wide, including not only core competition tasks but also price regulation and oversight of public procurement.[50] This wide scope of work is not unusual on a global scale, and the funding allocated to the CPCPC appears to be in line with what similar bodies receive in other peer countries. However, the CPCPC's staffing levels are notably high.[51] Without comprehensive data on how staff are distributed among the authority's diverse responsibilities or on their qualifications, there's a risk that some functions may be undersupported or that personnel may lack the necessary experience to fulfill their roles. A more pressing concern is the potential for staff to operate with insufficient resources, compromising their ability to carry

[47] Specifically, the State's effectiveness as a market referee hinges on three pillars: (i) a comprehensive competition law to deter and penalize anticompetitive behavior, ensure fair mergers, and foster pro-competition policies; (ii) an autonomous and capable competition authority, shielded from undue influence and equipped with stable funding for enforcement and research; and (iii) proactive advocacy by the authority to instill competition principles economy-wide, educate stakeholders, collaborate with government entities via clear Memorandums of Understanding (MoU), and eliminate restrictive regulations, all while preserving its independence and trustworthiness.

[48] BTI indicators are perception-based and draw from expert answers to specific questions. For the indicator on "market-based competition," the following question was asked: "To what extent do safeguards exist to prevent the development of economic monopolies and cartels, and to what extent are they enforced (including the existence of antitrust or competition laws and enforcement)?"

[49] These high numbers reported by the CPCPC might be due to different definitions. Specifically, regarding cartel investigations, the figures from Uzbekistan are likely not representative of hardcore cartel investigations.

[50] In 2022, the CPCPC analyzed 346 regulated prices and tariffs and reviewed 31,926 tenders.

[51] The total number of staff at the CPCPC is 342, of which 232 staff has law enforcing powers. The number of staff is significant in comparison to peers in numeric order: Viet Nam has 34 staff, Peru has 46 staff, Malaysia has 67 staff, Armenia has 86 staff, Colombia has 148 staff, and Kazakhstan has 517 staff.

out their duties effectively. This supports the hypothesis that the multitude of cases and investigations managed by the authority, as mentioned earlier, may not be conducted with the necessary thoroughness and substance. Furthermore, this situation could weaken the CPCPC's focus on enforcing the Competition Law.[52] Increasing the budget and possibly reallocating more staff to focus on core competition tasks could significantly improve the CPCPC's capacity to protect market competition in Uzbekistan.

92. Second, there are institutional shortcomings relating to the CPCPC, particularly concerning its perceived external independence. The 2019 Presidential Decree No. 5630[53] poses risks to the CPCPC's autonomy and operational efficacy. The Competition Law's silence on the appointment and dismissal criteria, as well as the absence of a fixed term for the Chairman, leaves the agency vulnerable to political interference. Aligning with global norms, the process should be transparent, based on objective qualifications, and include a set term with conflict-of-interest disclosures. Additionally, the CPCPC's budget structure, partly funded by fines, could bias enforcement actions, as it may incentivize the pursuit of penalties. To preserve the agency's independence, it is advisable to secure a stable budget from the National Treasury and redirect fine revenues back to it, reserving only merger fees for the CPCPC. Regulatory amendments in these areas would reinforce the agency's perceived independence.

93. Third, enforcement tools applied by the CPCPC are limited. The Competition Law empowers the CPCPC to request information but omits the authority for unannounced inspections, a key tool for detecting clandestine cartels by capturing critical evidence. Additionally, the Law fails to authorize remedies for mergers and anticompetitive practices, thereby constraining the agency's capacity to preemptively address potential competitive harm with structural or behavioral conditions. Enhancing the CPCPC's enforcement tools will likely necessitate amendments to the primary Competition Law or the law governing business inspections, as opposed to being addressed through secondary legislation alone. Furthermore, the efficiency of CPCPC activities can be enhanced by enabling settlements and leniency programs, which would allow for quicker identification and resolution of concerns.

94. Lastly, the new Law on Competition, while an improvement, still suffers from poorly defined fundamental concepts, which could lead to unfavorable market outcomes. A prime example is the ambiguous definition of market dominance. The new Competition Law in Uzbekistan defines dominance based on a firm holding a 40 percent market share, implying an automatic presumption of dominance. This contrasts with international practices where such a presumption can be contested, considering the broader economic context. To align with these practices, it would be prudent to revise the Law or its secondary rules to incorporate additional criteria for determining dominance, such as competitor market positions, barriers to market entry/exit/expansion, financial independence, persistence of market power, and buyer power. This is crucial since the merger control rules under the new Law are founded on a dominance test, prohibiting mergers that create or strengthen dominance. Transitioning to an effects-based approach for dominance would enable the CPCPC to concentrate on cases with the most significant potential to impede competition. While secondary legislation is in progress to elucidate the new Law's provisions, including dominance and the regulation of digital platforms, mergers, and anticompetitive agreements, it is expected that some issues, such as establishing a rebuttable dominance presumption or bolstering enforcement tools, may require amendments to the primary Law itself, beyond the scope of secondary legislation.

3.3 Policy Recommendations

95. Since initiating market-oriented reforms in 2017, Uzbekistan has made strides toward a more market-friendly economy. The journey, however, is incomplete. The current competition landscape remains underdeveloped when compared to relevant peers. This indicates a pressing need for continued reform efforts.

[52] At the same time, as it faces a wide mandate, the CPCPC may lack influence in the design of pro-competition regulation through advocacy due to an absence of Memorandums of Understanding. This hampers the promotion of competitive dynamics, especially in certain sectors. To address this, Memorandums of Understanding with the new energy regulator and regulatory line ministries are essential. Without these agreements, competition may be stifled by regulations that protect existing interests, are discriminatory, or block new entrants.
[53] Decree No. UP-5630 on Measures to Organize the Activities of the Antimonopoly Committee of the Republic of Uzbekistan, 2019.

The in-depth analysis conducted in this chapter reveals that government interventions in certain areas remain a barrier to competition and, by extension, to the seamless integration of domestic markets.

96. To achieve a truly integrated and effective domestic market, it is imperative to recalibrate the government's role across four critical dimensions: as supplier, financier, regulator, and referee. The following table provides a detailed blueprint for potential reforms in each of these spheres, setting the stage for a more competitive and integrated market environment in Uzbekistan.

Table 8: Summary of Policy Recommendations to Strengthen Competition

Reforms	Priority	Responsible actor
Reform Objective: Rationalizing State Ownership		
Improve SAMA's aggregate reporting on the state-owned enterprise (SOE) portfolio, including legal status, state ownership share, economic size, and sector distribution.	Short term	MEF, SAMA
Accelerate the privatization of SOEs in competitive sectors; establish a credible timeline to reach privatization goals; and increase transparency on sale processes.	Medium to long term	MEF, SAMA
Foster competitive neutrality principles in markets: • Implement cost allocation systems to separate commercial from noncommercial activities in accounts, with a methodology to determine appropriate compensation for SOEs undertaking public service obligations., with a methodology to determine appropriate compensation for SOEs undertaking PSOs; • Require SOEs to earn a profit on commercial activities. • Improve transparency of subsidies targeting SOEs and reduce off-budget and quasi-fiscal support to SOEs in infrastructure sectors. • Remove other regulatory advantages conferred to SOEs (e.g., exemptions in Competition Law, Insolvency Law, and licensing requirements).	Short term	Presidential Administration, line ministries, MEF, SAMA, CPCPC
Leverage the CPCPC role in the creation of SOEs to minimize potential market distortions (e.g., adoption of ex ante subsidiarity analysis and certainty that CPCPC decision is legally binding)	Short term	CPCPC
Clearly define the responsibilities of agencies overseeing SOEs (SAMA, ASR, line ministries) to eliminate ambiguity in governance and enhance SAMA's capacity to oversee the SOE portfolio and lead decision-making processes for SOEs under its purview.	Short term	MEF, SAMA
Integrate corporate governance principles into SOE performance management and board operations to improve accountability and performance. Ensure strategic SOEs disclose ownership policies; environmental, social, and governance practices; and audited financial statements.	Short to medium term	MEF, SAMA
MEF and SAMA to publish an annual report, detailing SOE debt liabilities, quasi-fiscal deficits, and subsidies received.	Medium term	MEF, SAMA
Reform Objective: Streamlining Design and Control of Business Support Policies		
Develop and adopt guidelines clarifying the criteria to be applied by CPCPC (including notion of state aid support, possible justifications (market failures), and analytical steps to be used for ex ante assessment).	Short term	CPCPC
Develop and adopt by-laws ruling the procedures for notification, approval, and recording of state aid measures.	Medium term	CPCPC
Establish a state support inventory (to be managed by CPCPC/granting authorities). Consider making this registry available online and open to the public.	Short term	CPCPC
Select a few subsidy programs for an ex post evaluation process in collaboration with relevant ministries. The CPCPC can partner with these ministries to spearhead this exercise.	Medium term	CPCPC
Reform Objective: Building Institutions and Rules to Protect and Foster Competition		
Establish independent sector regulators for telecommunications, railways, and air transport.	Medium term	Presidential Administration, line ministries, CPCPC
Make the new energy sector regulator operational.	Short term	Line ministries, CPCPC
Adopt pro-competition regulation in network sectors, as follows: • Establish a functioning wholesale market in electricity. • Establish a functioning wholesale market in telecom and develop spectrum auctions.	Long term	Line ministries, new sector regulators, CPCPC

Reforms	Priority	Responsible actor
• Complete unbundling in railways.		
Adopt secondary legislation and guidelines to strengthen CPCPC enforcement tools and competition framework by detailing various procedural aspects established by the Competition Law (e.g., dominance, treatment of digital platforms, anticompetitive agreements, mergers, and leniency).	Short to medium term	Presidential Administration, line ministries, CPCPC
Refocus CPCPC mandate to core competition tasks (e.g., cartel investigations, merger reviews, competition advocacy).	Short term	CPCPC
Strengthen the CPCPC operational independence (e.g., clear rules on engagement and dismissal of key officials, rules to prevent conflicts of interest, cooling off periods, and objective criteria for appointment, among others).	Short to medium term	Presidential Administration, line ministries, CPCPC
Strengthen the capacity of CPCPC staff to enforce the Competition Law (e.g., training on core competition tasks).	Short term	CPCPC

Notes: SAMA = Uzbekistan State Asset Management Agency; MEF = Ministry of Economy and Finance; CPCPC = Competition Promotion and Consumer Protection Committee; ASR = Agency of Strategic Reforms.

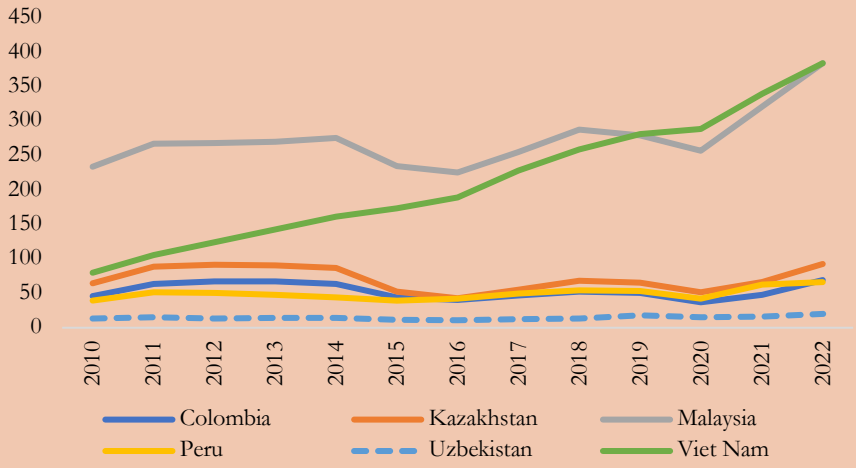
Chapter 4: Trade Dynamics: Fueling Growth and Unlocking Potential

4.1 Introduction

97. Greater international openness has been, and will continue to be, integral to Uzbekistan's economic growth trajectory. Rapid growth from 2017 to 2019 followed pivotal economic reforms, such as foreign exchange liberalization and elimination of export controls. These changes marked the beginning of Uzbekistan's opening to the global economy. With the reform program still in progress, trade emerges as a critical area for further development. Indeed, now is the opportune time to launch a new phase of pro-integration reforms that could catalyze sustained high growth. Such reforms should aim to enhance trade competitiveness, increase resilience to international shocks, and promote logistics, transit, and trade-based economic activities.

98. Trade has not been fully leveraged to catalyze growth in Uzbekistan. Between 2005 and 2022, Uzbekistan's exports of goods and services increased by a factor of 3.6 times; that is, from US$5.57 billion to US$20.10 billion. Meanwhile, countries such as Viet Nam, embracing an export-led growth strategy, experienced an astounding surge, with exports increasing over 10-fold from US$36.71 billion in 2005 to US$384.19 billion in 2022. As such, Uzbekistan records the lowest export figures among its peers (Figure 61). The country's trade performance has been underwhelming, with exports growing by an average of only 7.8 percent annually since 2005, whereas Viet Nam's exports, in comparison, grew at an average rate of 14.8 percent. Nonetheless, since 2017, Uzbekistan's export growth has stepped up a notch, aligned more closely with Viet Nam's, and has outpaced some peers. Openness to trade is recognized as an important driver of improved growth and development outcomes.[54]

Figure 61: Uzbekistan vis-á-vis Peers: Growth of Exports, 2005–22
(US$ billion)



Source: United Nations Conference on Trade and Development.

99. Trade can contribute to Uzbekistan's economic growth and enhanced productivity through a number of different channels. For instance, exports enable countries to import foreign technologies and knowledge, as well as create employment and labor income, thus raising domestic demand. Exports also require inputs. The higher the proportion of intermediate goods provided by domestic suppliers, the higher the indirect impact of exports on employment and labor incomes. Domestic suppliers to exporters are also likely to benefit from technological spillovers. They may also be induced to upgrade skills and innovation to meet productivity, efficiency, and sophistication requirements demanded by global buyers. As such, they will be subject to stringent requirements of quality, cost, and reliability, all of which are further likely to boost their productivity.

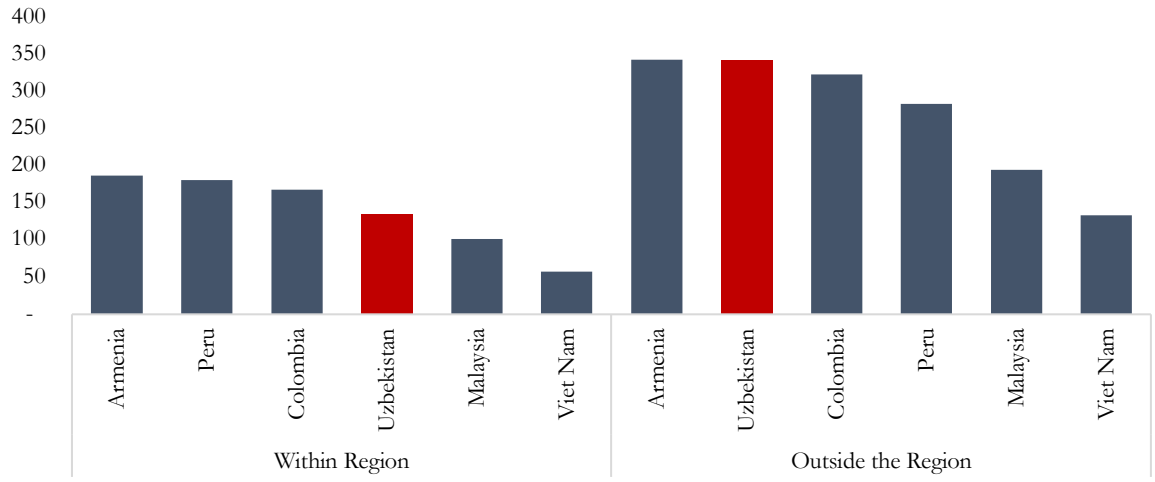
[54] Dollar and Kraay (2002; 2004); Papageorgiou, Michaely, and Choksi (1991); and Winters, McCulloch and McKaz (2004).

100. Opportunities to drive export growth also exist via integration into global value chains (GVC) and regional value chains (RVC). The production of export goods has become increasingly unbundled, and countries positioning to become more integrated into the global economy are increasingly looking toward GVCs and RVCs. Both represent a new path for trade, whereby a country does not need the capability to actually produce an entire export good. Rather, it can contribute a segment of its production process. GVCs and RVCs also represent a new path for development by enabling joint learning and technology dissemination that can boost productivity and economic upgrading. For example, this was the case for Bangladesh, Cambodia, and Viet Nam (World Bank., 2020a).

101. Regional trade integration can present a significant opportunity for the development of value chains, foreign direct investment (FDI) attraction, export growth, and socioeconomic stability. By aligning quality standards and regulations, Central Asian countries can take advantage of a larger market and position themselves for regional investments in different segments of the value chains. Moreover, regional trade flows are also important, since they lay the groundwork for economic growth, job creation, and access to markets where firms know how to operate, as well as for more socioeconomic stability at the regional level when regional cooperation is well endorsed by all parties.

102. Trade is hampered by an unfavorable regulatory, policy, and business environment which add up to significantly high costs of trade. A summary measure of trade costs[55] (Figure 62) includes all frictions that induce trade flows to be less than normal. It shows that trade costs in Uzbekistan, as well as outside the region, are much higher than those of peer countries, except for Armenia. Tariffs, para-tariff changes, logistics inefficiencies, and nontariff measures also can contribute to higher trade costs. High cost and time of import procedures and lack of information on export markets were cited as significant constraints by one-third of all manufacturing firms in the 2023 enterprise survey (Section 1.3).

Figure 62: Uzbekistan vis-á-vis Peers: Higher Trade Costs Outside the Region, 2021
(ad valorem equivalent)



Source: Economic and Social Commission for Asia and the Pacific/World Bank Trade Cost Database 2021.
Notes: Regions are defined as Europe and Central Asia (high income for Armenia and Uzbekistan); East Asia and the Pacific (for Malaysia and Viet Nam); and Latin America and the Caribbean (for Peru and Colombia). Data for Kazakhstan is not available for 2021.

103. This chapter investigates the role of trade as a channel for inclusive economic growth and resilience. It addresses the following questions: How can trade act as an engine for economic growth? What are the key stylized facts concerning Uzbekistan's trade structure? Why is trade not gaining the anticipated momentum? Finally, how can Uzbekistan actualize its trade opportunities?

104. The chapter is structured as follows: Section 2 examines Uzbekistan's trade performance by presenting five stylized facts. Section 3 identifies the main constraints to trade competitiveness and highlights potential trade

[55] Economic and Social Commission for Asia and the Pacific (ESCAP)-World Bank Trade Cost database. https://www.unescap.org/resources/escap-world-bank-trade-cost-database.

opportunities in a world without constraints. Section 4 assesses how Uzbekistan can materialize its trade opportunities by addressing the key constraints. Finally, Section 5 provides policy recommendations.

4.2 An Overview of Uzbekistan's Trade Performance in Five Facts

105. What are the key stylized facts concerning Uzbekistan's trade structure? This section highlights a series of stylized facts concerning trade in Uzbekistan.[56] These facts help to understand where the country stands in terms of trade in goods and services. More specifically, they look at the country's export performance and diversification, as well as trade and FDI inflows. The following five facts provide an overview of Uzbekistan's trade structure:

Fact 1: Exhibits volatile export growth, marked by low FDI inflows and limited participation in GVCs.

Fact 2: Slow progress in trade of goods.

Fact 3: Low levels of diversification of export goods and destination markets.

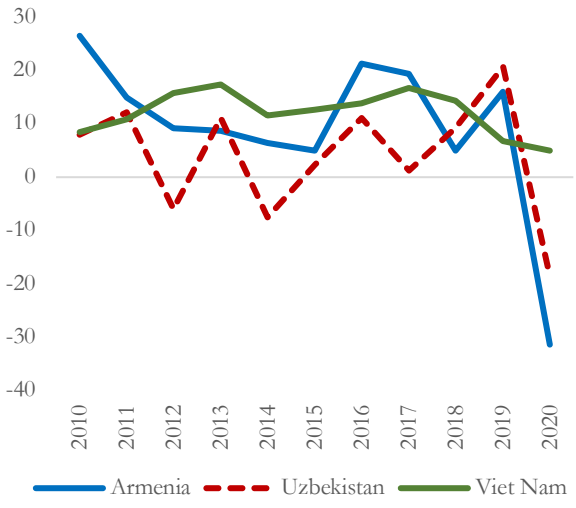
Fact 4: Underperformance of trade in services.

Fact 5: Low number of firms participating in export activities and weak integration of firms in global markets.

4.2.1 Volatile Exports, Low Foreign Direct Investment, and Limited Participation in Global Value Chains

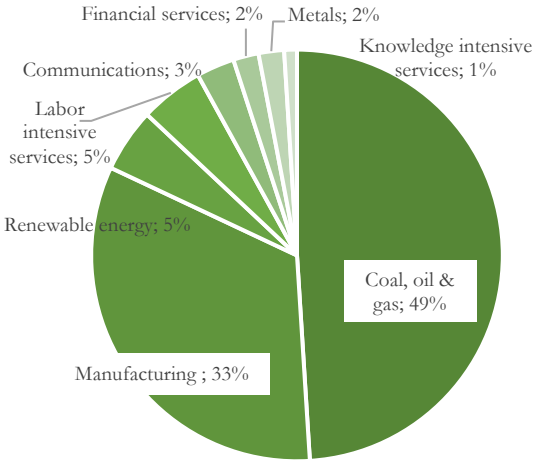
106. Uzbekistan's export growth has been volatile over the years, characterized by low FDI flows and little integration in GVCs to drive economic transformation. Export growth for goods and services in Uzbekistan was volatile, with some years experiencing negative trends, but it remained positive from 2017 until 2020, when it reversed due to the impact of Covid-19. By comparison, countries such as Viet Nam and Armenia have shown a lower degree of volatility and positive rates throughout, except for 2020; that is, during the COVID-19 crisis (Figure 63). Between 2017 and 2022, FDI inflows into Uzbekistan averaged 2.9 percent annually (Figure 65). This rate is also below that of Uzbekistan's aspirational peers; however, it exceeds the average of certain regional counterparts. Greenfield FDI in Uzbekistan has been predominantly propelled by substantial investments in the coal, oil, and gas sectors (Figure 64), surpassing the levels observed in other nations such as Viet Nam (World Bank, 2020a). (The GVC share of gross trade stands at 37.5 percent for Uzbekistan—among the lowest when compared to its peers (Figure 66).

Figure 63: Volatile Export Growth
(annual growth in percent)



Source: World Bank's World Development Indicators.

Figure 64: Greenfield Foreign Direct Investment Is Primarily in the Coal, Oil, and Gas Sector, Followed by Manufacturing

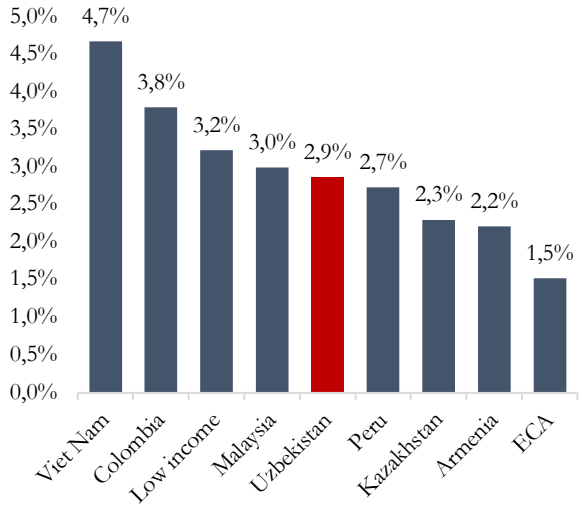


Source: World Bank staff calculations based on FDI Markets.

[56] This section provides a quantitative analysis based on the methodology tools from Farole and Reis (2012).

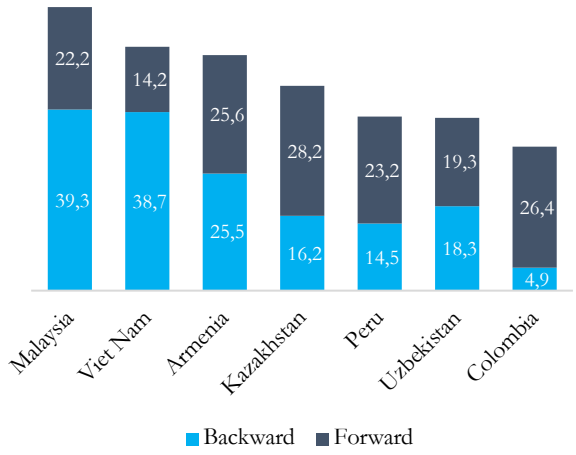
107. Uzbekistan's participation in GVCs is relatively low, mainly due to its export of primary commodities rather than engagement in more advanced manufacturing and services. According to the World Bank's GVC taxonomy (refer to Annex 6 for a comprehensive definition), Uzbekistan falls into the "limited commodities" category, as does Colombia among peers, whereas countries such as Viet Nam and Malaysia have progressed up the GVC ladder to engage more in manufacturing and services. The country's exports exhibit a slightly higher forward GVC participation of 19.3 percent versus an 18.3 percent backward participation, which is characteristic of commodity-driven GVC participation (Figure 66).

Figure 65: Foreign Direct Investment Flows: Uzbekistan Lower than Some Aspirational Peers
(Average 2017–22, FDI inflows (percent of gross domestic product))



Source: World Bank's World Development Indicators.
Note: ECA= Europe and Central Asia.

Figure 66: Global Value Chain Integration: Uzbekistan Relatively Weak vis-á-vis Peers
(GVC participation, percent share of gross trade)



Source: Eora Global Supply Chain Database.

108. At the sectoral level, Uzbekistan's integration could be enhanced by exporting more complex products to foreign markets for further processing (backward participation). The GVC assessment focuses on four sectors that are significant for global and regional trade. These sectors include textiles and metals, where Uzbekistan historically has held a comparative advantage, as well as other manufacturing products as the country integrates into new value chains. Additionally, the assessment considers sectors such as foodstuffs as well as light manufacturing such as beverages. Across the four selected sectors—textiles, metals, beverages, and various manufacturing products—Viet Nam and Malaysia have a much higher share of backward integration compared to Uzbekistan (Figure 67). Countries that establish themselves in manufacturing and service GVCs usually see higher backward participation, which reflects incoming GVC inputs, enabling them to scale up their own exports (World Bank, 2020a). The findings suggest that Uzbekistan could improve its export complexity through stronger participation in backward value chains and overall GVC participation. Currently, it lags behind its aspirational peers, such as Viet Nam and Malaysia, which are well-integrated into the global marketplace. For comparison, Malaysia's GVC participation rate of 63.2 percent, including a substantial portion of backward linkages, highlights its rapid economic development and effective GVC integration.

Figure 67: Uzbekistan vis-á-vis Peers: Backward Global Value Chain Participation in Key Sectors, 2021
(GVC participation, % share of gross trade)

Source: Eora Global Supply Chain Database.

4.2.2 Slow Progress in Terms of Trade in Goods

109. Despite an uptick from 2017, trade flows still fall short of expectations given the country's economic growth. Following the implementation of reforms after 2017, such as the liberalization of foreign exchange and elimination of export controls, Uzbekistan's trade in goods as a share of gross domestic product (GDP) underwent a favorable transformation, especially driven by imports (Figure 68). When examining the period 2005–22 for other countries, such as Viet Nam and Armenia, the growth of trade in goods as a share of GDP was much higher, at 48.8 percent and 27.8 percent, respectively. This compared to a negative 7.9 percent for Uzbekistan (Figure 69).

Figure 68: Significant Increase in Trade Openness since 2017

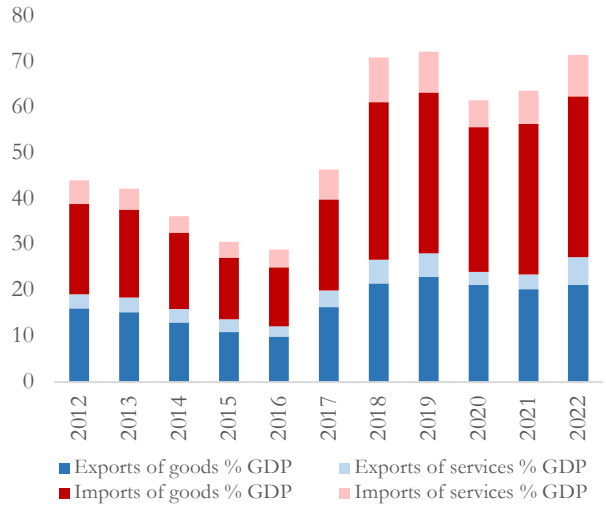
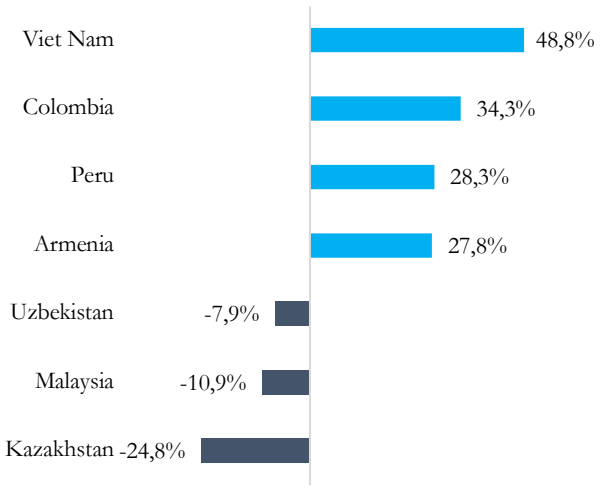


Figure 69: Uzbekistan vis-á-vis Peers: Negative Trade in Goods Growth Rates, 2005–22
(percent growth rate)



Source: World Bank's World Development Indicators.

110. Exports trends have been driven by primary goods. The country's key export sectors include minerals, vegetables, textiles, clothing, stone/glass, and metals (Table 9). The textiles and clothing sector has witnessed an increase in its revealed comparative advantage. Its proportion of total exports, however, has decreased from an average annual share of 18.3 percent between 2013 and 2017 to 13.7 percent in the period 2018–22. A similar decline in export share also was observed in the vegetable sector, while the main contributors to export growth have been minerals, metals, and stone/glass.

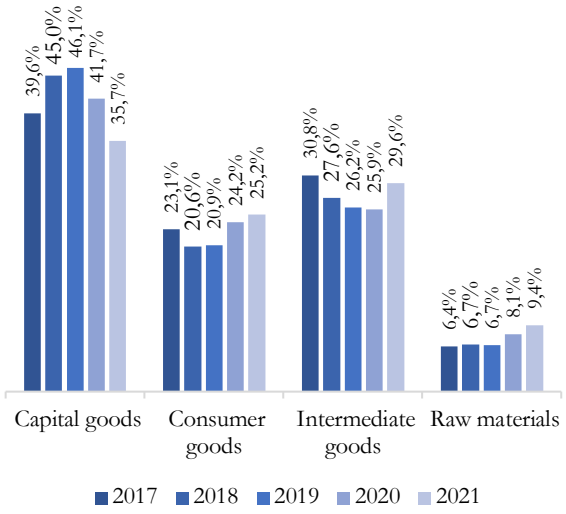
Table 9: Main Export Sectors

	Average 2013–17			Average 2018–22		
Sectors	**(1) Value**	**(2) % of total**	**(3) RCA**	**(1) Value**	**(2) % of total**	**(3) RCA**
01-05 Animals	24,226	0.3	0.1	37,424	0.2	0.2
06-15 Vegetables	791,587	9.0	2.1	1,107,336	7.4	2.5
16-24 Foodstuffs	76,754	0.9	0.2	141,001	0.9	0.4
25-27 Minerals	995,160	11.4	0.6	1,426,894	9.5	0.7
28-38 Chemicals	665,872	7.6	0.7	846,574	5.6	0.6
39-40 Plastics/Rubber	301,481	3.4	0.6	489,775	3.3	0.9
41-43 Hides, Skins	52,116	0.6	0.7	35,646	0.2	0.5
44-49 Wood	29,595	0.3	0.1	64,569	0.4	0.2
50-63 Textiles, Clothing	1,605,799	18.3	3.5	2,050,116	13.7	4.1
64-67 Footwear	14,660	0.2	0.2	18,959	0.1	0.2
68-71 Stone/Glass	2,587,502	29.6	4.9	6,550,704	43.7	11.3
72-83 Metals	941,983	10.8	1.3	1,480,263	9.9	1.7
84-85 Machinery	182,267	2.1	0.1	286,150	1.9	0.1
86-89 Transportation	326,471	3.7	0.3	281,580	1.9	0.3
90-97 Miscellaneous	159,604	1.8	0.2	170,188	1.1	0.2
Grand Total	**8,755,077**	**100.0**	**15.6**	**14,987,179**	**100.0**	**24.0**

Source: World Integrated Trade Solution (mirrored) data.

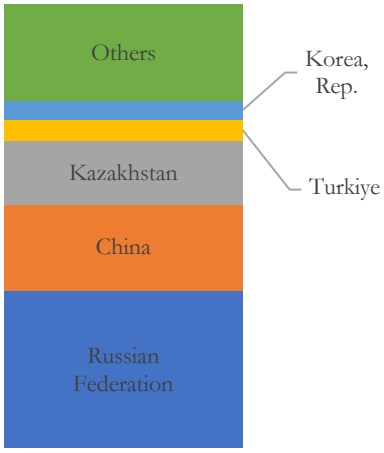
111. Uzbekistan's high import share of intermediate, capital, and raw material goods is supporting increased domestic and international competitiveness. Uzbekistan's intermediate import share was 29.6 percent in 2021, and its capital import share was 35.7 percent (Figure 70). Both categories are important for improving export competitiveness and productivity. The primary sources of intermediate imports for Uzbekistan are China, Kazakhstan, and the Russian Federation, (Figure 71). This underscores the significance of regional trade. Although export growth is essential, the strategic import of goods is equally important to strengthen export capabilities and support economic diversification.

Figure 70: Composition of Key Imports
(percent share of total imports)



Source: World Integrated Trade Solution (mirrored) data; and Broad Economic Category trade data classification (products).

Figure 71: Intermediate Imports from China and the Russian Federation
(percent share of total imports)



Source: World Integrated Trade Solution data; and Broad Economic Category trade data classification (markets).

4.2.3 Low Levels of Diversification in Terms of Exported Products and Destination Markets

112. The number of products exported by Uzbekistan, as well as destination markets reached, are lower than its peers. Although the number of products exported grew from 620 to 1,237 between 2010 and 2021, this is still far less than its peers (Figure 72). Most comparator countries export 1,500 to 3,500 products from the over 6,000 Harmonized System Code Categories. From 2010 to 2021, the number of Uzbekistan's export destinations increased marginally, from 77 to 83. This figure is the lowest among peer countries, with some reaching over 130 markets. The exception is Armenia, which had access to 66 markets in 2021 (Figure 73). Finally, the Herfindahl-Hirschman Index, a measure of product and market concentration, indicates a high level of concentration in exported products and markets for Uzbekistan (Figure 74 and Figure 75). When compared to its peers, however, Uzbekistan's product and market concentration levels are average, as most peer countries also have experienced increased product and market concentration in recent time.

Figure 72: Uzbekistan vis-á-vis Peers: Number of Products Exported Among the Lowest, 2022
(number of products)

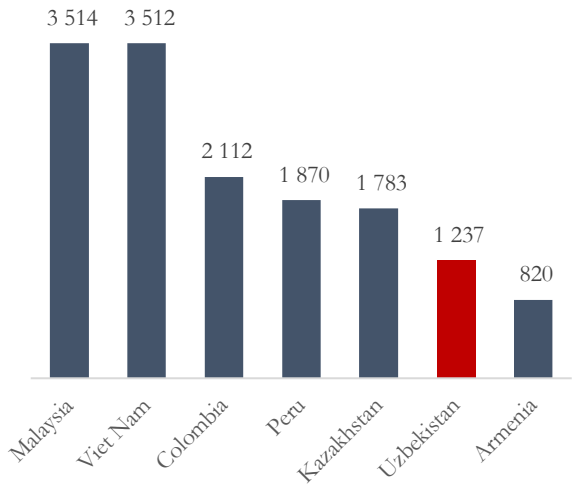
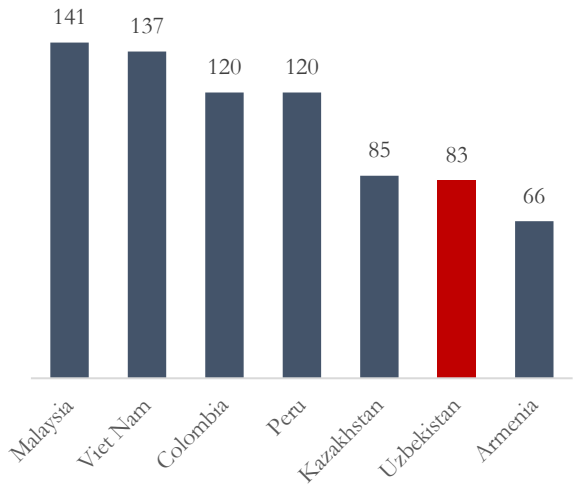


Figure 73: Uzbekistan vis-á-vis Peers: Low Number of Export Markets Reached, 2022
(number of markets)



Source: World Integrated Trade Solution (mirrored) data.

Figure 74: Uzbekistan vis-á-vis Peers: More Concentrated in Terms of Products Exported, 2022
(Herfindahl-Hirschman Index)

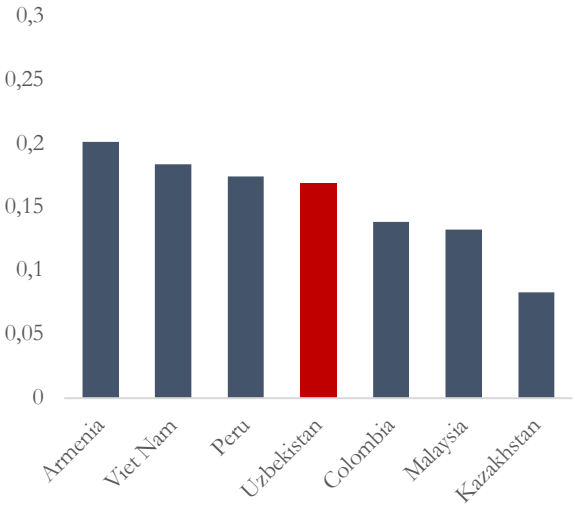
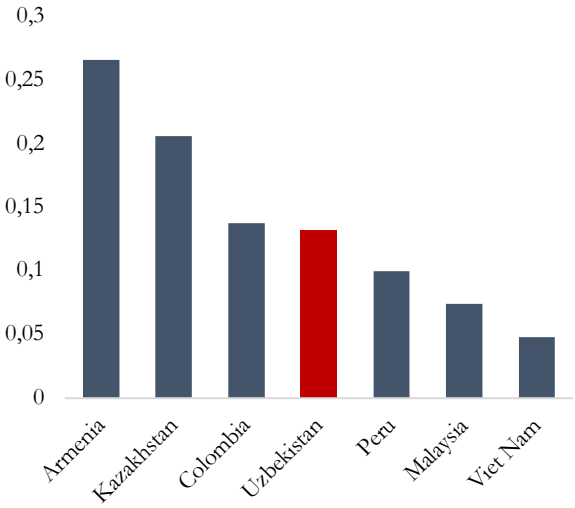


Figure 75: Uzbekistan vis-á-vis Peers: Slightly Less Concentrated in Terms of Markets, 2022
(Herfindahl-Hirschman Index)

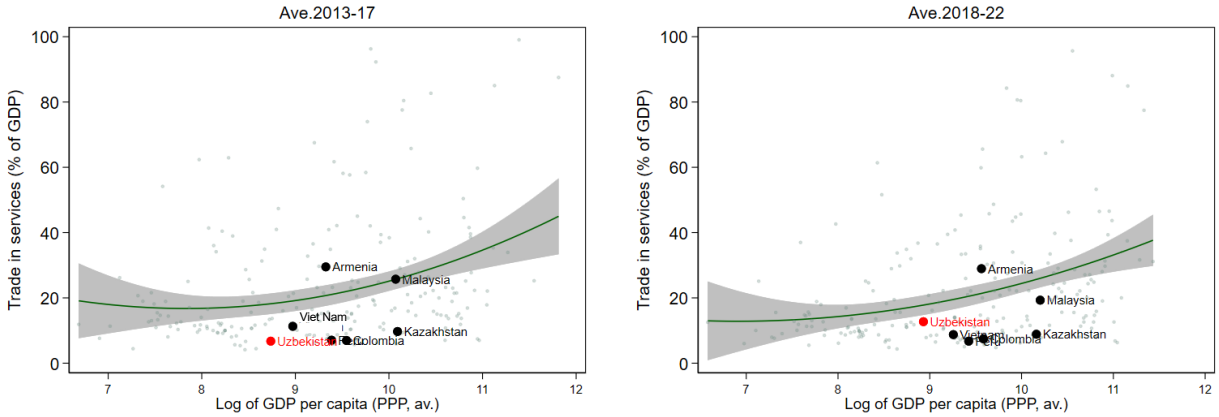


Source: World Integrated Trade Solution (mirrored) data.

4.2.4 Underperformance in Terms of Trade in Services

113. Uzbekistan's trade in services, a key driver for investment and export competitiveness, is underperforming, given its current level of economic development. In 2022, Uzbekistan exported US$4.8 billion (Figure 77) and imported US$7.3 billion (Figure 78). Travel and transportation services have been the mainstay of not only exports but also of imports. However, a diverse mix of services, including insurance, financial, intellectual property, and other business services, accounted for 31.5 percent of total services exports in 2022. Nevertheless, the scale of service trade remains below where it could be (Figure 76). Beyond their direct impact on economic diversification, services are fundamental to the trade in goods, serving as its backbone—particularly for a doubly landlocked country as is Uzbekistan.

Figure 76: Improvements in Trade Openness



Source: World Bank's World Development Indicators.
Notes: (i) Trade openness is the ratio of exports plus imports over gross domestic product. Empirically, the relationship between trade openness and per capita income is linear. The curve shows the average of trade openness, conditional on a given per capita income. The grey band represents the 95 percent confidence interval. The year 2022 should be cautiously interpreted, as not all economies have reported their imports statistics for this year. (ii) PPP = purchasing power parity.

Figure 77: Export of Services by Category
(US$ millions at current prices)

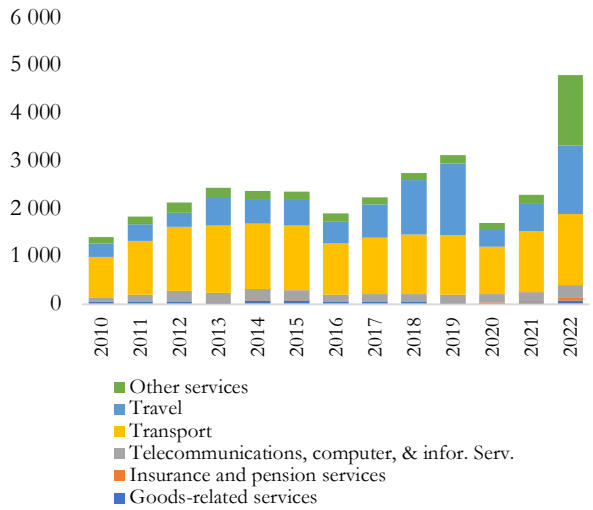
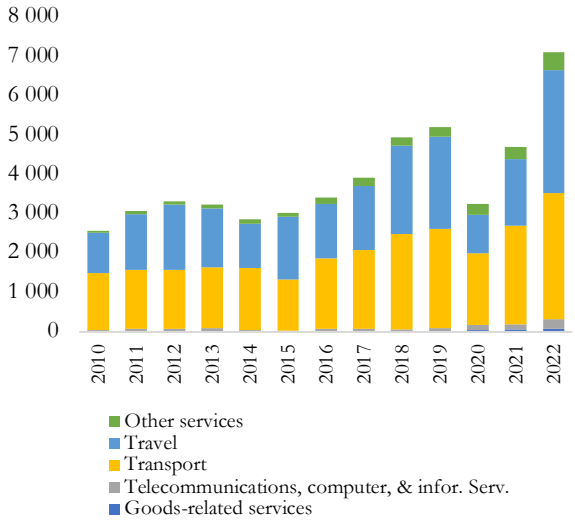


Figure 78: Import of Services by Category
(US$ millions at current prices)

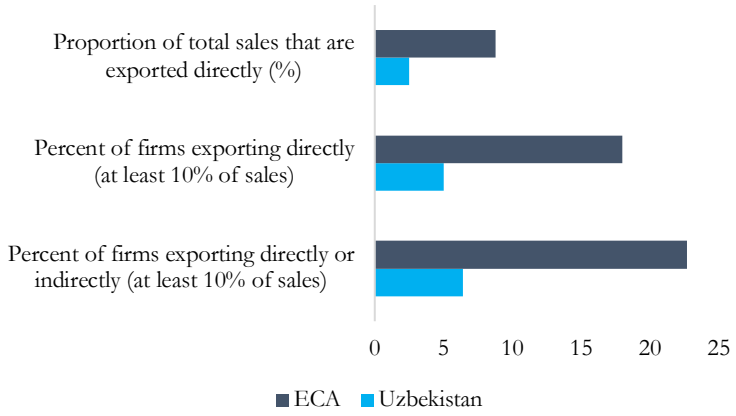


Source: UN Trade and Development statistics.

4.2.5 Low Number of Exporting Firms and Weak Integration into Global Markets

114. Only a limited number of firms engage in exporting activities. In Uzbekistan, approximately 6.4 percent of firms export at least 10 percent of their sales, either directly or indirectly (Figure 79). This is significantly below the Europe and Central Asia (ECA) average of 22.7 percent. It also is the second lowest among its peers, with only Kazakhstan having a lower percentage, at 5.7 percent. The proportion of total sales that firms in Uzbekistan export directly stands at 2.5 percent. However, Uzbekistan outperforms in terms of export efficiency, with the number of days required to export being the lowest in the region (at 3.7 days) compared to the ECA average of 4.7 days.

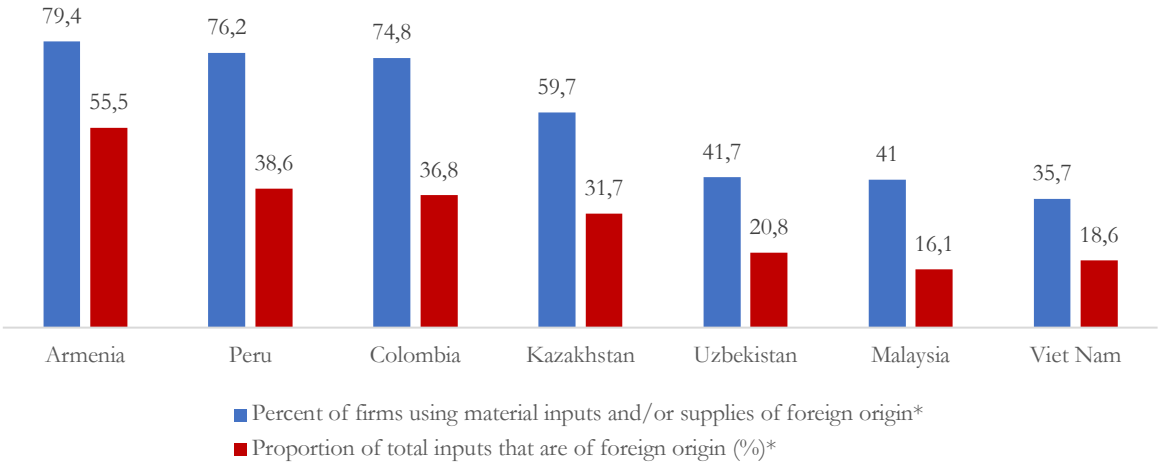
Figure 79: Limited Number of Exporting Firms Compared to Europe and Central Asia Average
(% share)



Source: World Bank Enterprise Survey (2019).
Note: ECA = Europe and Central Asia.

115. Too few firms have access to foreign inputs in Uzbekistan. Only about 41.7 percent of Uzbek firms utilize foreign inputs, a figure significantly lower than that of their peers (Figure 80). Furthermore, the share of inputs from foreign origins stands at 20.8 percent, which is less than that of peer countries. Generally, deeper integration into complex value chains tends to correlate with a greater proportion of inputs sourced internationally (Gereffi, Humphrey, and Sturgeon, 2005; World Bank, 2020a). Imported inputs can enhance technology transfers, leading to stronger domestic and export competitiveness. To this extent, multinational companies can facilitate technology transfer and acquisition, allowing domestic suppliers to become more competitive and integrate into GVCs (Amador and Cabral, 2016).

Figure 80: Comparison of Relatively Low Share of Foreign Inputs
(percent of firms)



Source: World Bank Enterprise Survey (2019).

4.3 Constraints to Uzbekistan's Trade Competitiveness

116. Why is trade not gaining the anticipated momentum? This section investigates Uzbekistan's main trade competitiveness challenges which, if addressed, could unleash the country's export growth. They also could enhance the role of trade in the country's overall macroeconomic stability and environment, as well as economic resilience and inclusiveness.

4.3.1 Misalignment of Tariff Policies

117. In Uzbekistan, the tariff regime imposes higher rates on capital goods relative to peer countries, alongside notable tariff peaks in diverse sectors. These high tariffs adversely affect Uzbekistan's export performance, thus raising the cost of importing essential items used in the production of exports. For example, Uzbekistan has more highly weighted most-favored nation tariffs on capital goods than other peers (Figure 81). However, over time, there has been progress. Additionally, they shield domestic enterprises from foreign competition, potentially inhibiting their progress toward greater competitiveness and the acquisition of new knowledge through importation. The practice of importing plays a crucial role in introducing firms to innovative products, technologies, and processes, which can then drive learning and innovation. Such effects often are examined within the framework of technology spillovers and absorptive capacity. Finally, tariff peaks across the following five sectors are visible and are above 10 percent: hides and skins, footwear, food products, stone and glass, and minerals (Figure 82). In the absence of a duty drawback system, Uzbekistan's exporters are burdened with elevated costs for their capital and intermediate inputs which, in turn, undermines their participation in GVCs. This is particularly pertinent in manufacturing exports.

Figure 81: Uzbekistan vis-á-vis Peers: Most-Favored Nation Weighted Tariffs—Higher for Capital Goods
(% most-favored nation weighted average)

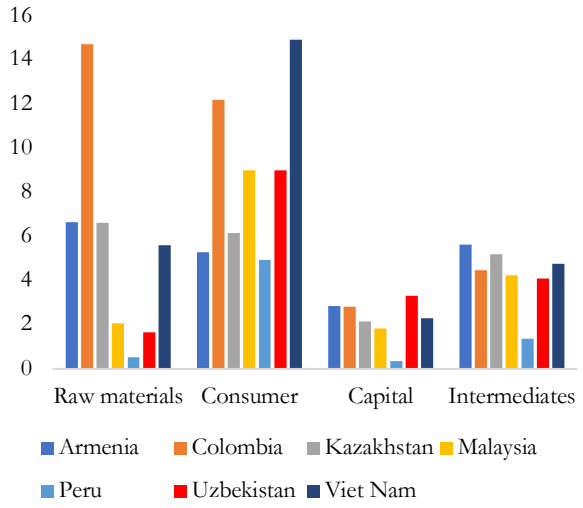
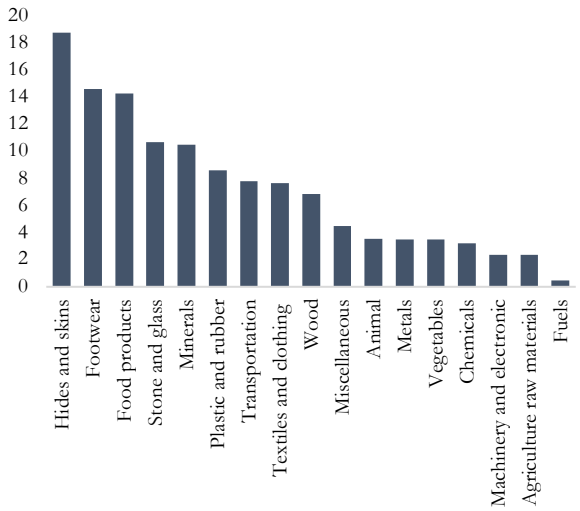


Figure 82: Five Sectors with Tariff Peaks above 10 Percent
(% most-favored nation weighted average)



Source: World Integrated Trade Solution.

4.3.2 High Trade Costs and Low Logistics Performance

118. Uzbekistan stands among the top 20 most expensive countries to trade with in the world, comparable to economies with one-fourth of its GDP per capita. The trade costs[57]—in this case bilateral trade costs with Germany—are assessed to compare Uzbekistan with peers over time and sector. The results show that Uzbekistan's trade costs exceeds those of its peers (Figure 83). It also shows a divergent trend; that is, costs for agricultural goods are on the rise whereas those for manufactured goods are on the decline (Figure 84).

[57] Economic and Social Commission for Asia and the Pacific (ESCAP)-World Bank International Trade Costs Database. This measure of trade costs is truly comprehensive in the sense that it includes all additional costs involved in trading goods internationally with another partner (i.e., bilaterally) relative to those involved in trading goods internationally (i.e., internally or domestically) using the gravity model.

119. Such elevated trade costs have a negative effect on the competitive edge of Uzbekistan's firms engaged in international markets and integrated into GVCs. Better logistics and trade facilitation can ease the cost of geographic distance and supply chain unreliability, especially for a doubly landlocked country as is Uzbekistan. Better logistics performance, in turn, can translate into lower trade costs and more competitive exporting firms. A 10 percent improvement in logistics performance can lead to a 2.3 percent increase in trade flows (Arvis, Duval, and Shepherd 2013).

Figure 83: Uzbekistan vis-á-vis Peers: Bilateral Trade Costs with Germany
(%, ad-valorem equivalent)

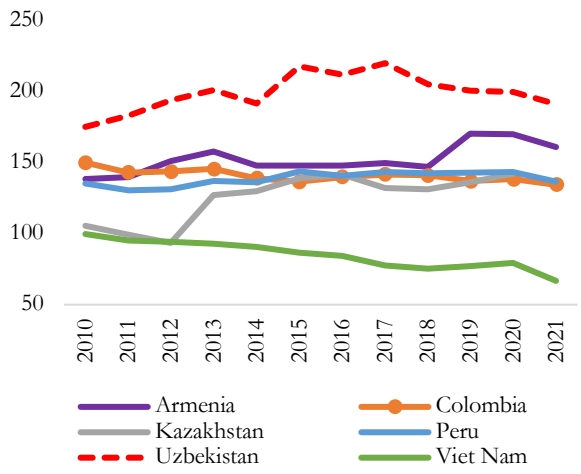
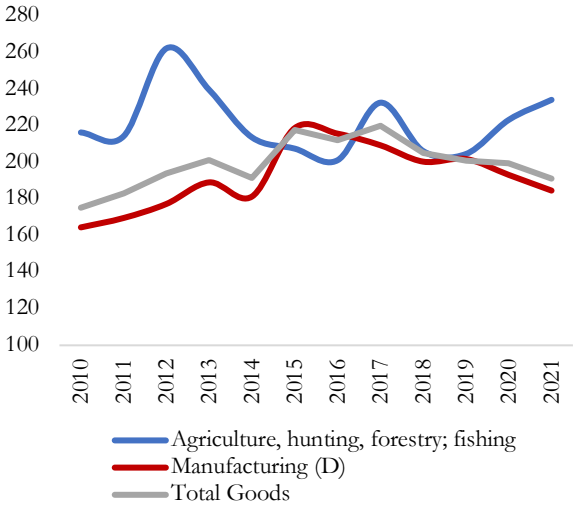


Figure 84: Uzbekistan's Bilateral Trade Costs with Germany, by Sector
(%, ad-valorem equivalent)

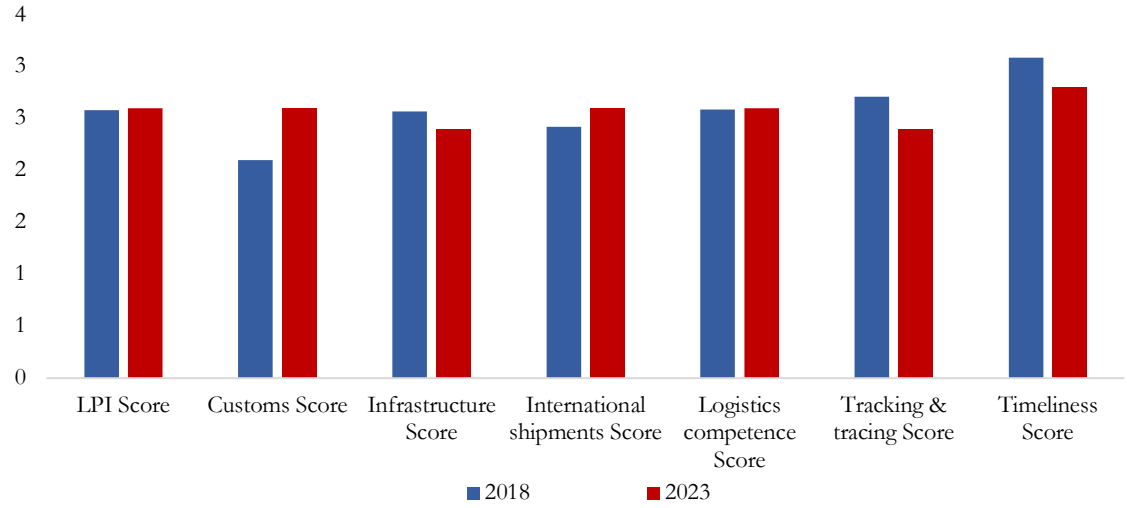


Source: Economic and Social Commission for Asia and the Pacific (ESCAP)-World Bank International Trade Costs Database.

120. Uzbekistan's efforts to facilitate trade in the past few years have led to improvements in customs procedures, as well as its capacity to competitively organize international shipments. The survey of manufacturing firms in 2023 confirms improvement in import customs procedures compared to 2017 survey results (Section 1.3). Despite these advancements, there remain obstacles to export growth, particularly in key areas such as infrastructure, tracking, tracing, and timeliness. These are areas where Uzbekistan has experienced a decline in its Logistics Performance Index (LPI)[58] (Figure 85). These challenges also prevent the country from fully capitalizing on its potential to serve as a central logistics hub within the region.

[58] Logistics Performance Index: The World Bank's international LPI provides a perception-based measure of a county's logistics performance in six areas crucial to trade, namely: (i) the efficiency of customs and border management clearance; (ii) the quality of trade and transport infrastructure; (iii) the ease of arranging competitively priced shipments; (iv) the competence and quality of logistics services; (v) the ability to track and trace consignments; and (vi) the frequency with which shipments reach consignees within scheduled delivery times. The international LPI relies on an online survey distributed among logistics professionals who are best positioned to assess how countries perform. In 2023, the LPI ranked 149 economies.

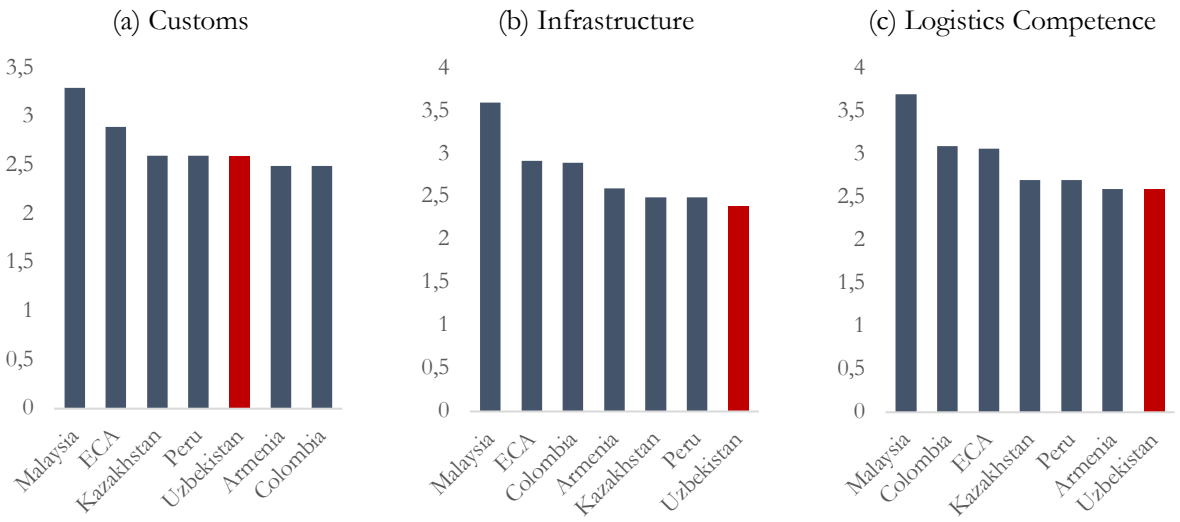
Figure 85: Declining Logistics Performance for Infrastructure, Tracking and Tracing, and Timeliness
(Logistics Performance Index scores)



Source: Logistics Performance Index.
Note: LPI = Logistics Performance Index.

121. Uzbekistan's results are comparable to those of Armenia and Kazakhstan, but they fall significantly behind other peers in three categories: (i) customs, (ii) infrastructure, and (iii) logistics competence. Regarding customs, Uzbekistan is lagging its aspirational peers, but remains similar to its regional peers, thereby highlighting its dependence on transit through Kazakhstan. However, there is also a need for regional cooperation improvements (Figure 86A). Regarding infrastructure, the results reflect the overall dependence of the export sector on road transport, mainly because it Uzbekistan is landlocked but also because trade takes place with markets that require mainly road transport due to their proximity (including China, Kazakhstan, Russia, and so on) (Figure 86B). Finally, regarding logistics competence, the results reflect trucking, forwarding, and customs brokerage, which are key for trade, including transit trade. These areas can play a key role in transforming Uzbekistan into a logistics hub (Figure 86C).

Figure 86: Uzbekistan vis-á-vis Regional and Aspirational Peers: Logistics Performance Results
(LPI Scores)



Source: Logistics Performance Index.
Note: ECA = Europe and Central Asia.

Source: Logistics Performance Index.

Source: Logistics Performance Index.

4.3.3 Lack of Alternative Trade Corridors

122. Trade costs for Uzbekistani firms are notably high, and options for alternative corridors are limited and costly. Uzbekistan, being a doubly landlocked country with high trade costs, faces significant

challenges in identifying and assessing its potential for alternative trade routes. Furthermore, the transit of containers through Russia has been reduced significantly as a result of Russia's invasion of Ukraine,[59] which has led to substantial cost increases for Uzbekistan's exports. According to private sector representatives, the transit times for cargo from Uzbekistan to Europe have increased from 20 to 35 days, and the cost almost tripled. In this regard, Uzbekistan has introduced compensation measures to Uzbekistan exporters to cover up to 70 percent of related transportation costs from April 1, 2022, to April 1, 2023.[60] Approximately 80 percent of Uzbekistan's total overland trade is transported via rail (Figure 87) while approximately 75 percent its total merchandise trade by weight passes through Kazakhstan. Furthermore, a single rail border crossing at Sary-Agash accounts for 50 percent of the country's total trade volume (Figure 88) (Saslavsky, forthcoming).

Figure 87: Share of Total Overland Trade
(by mode and point of entry/exist, 2023; percent share)

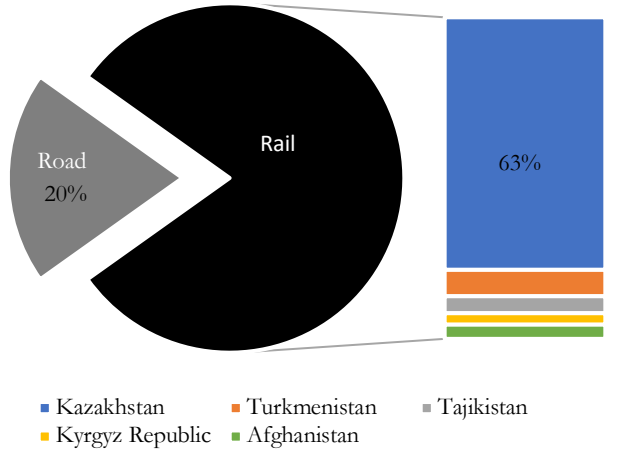
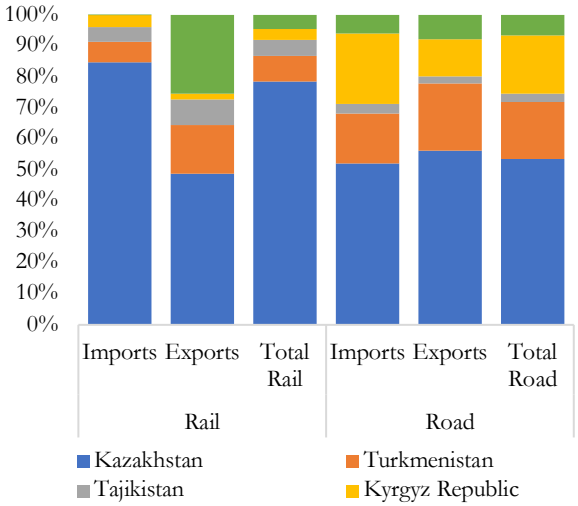


Figure 88: Share of Overland Trade
(by mode of transport and point of entry/exit, 2023; percent share)



Source: World Bank, based on Uzbekistan Railways JSC and Customs Service of Uzbekistan (Saslavsky, forthcoming).
Note: This excludes pipeline flows. Air freight is excluded as it is theoretically not affected by the fact that the country is landlocked.

123. Alternative trade routes remain costly and difficult to operationalize. An assessment of logistics operators indicates that alternative corridors incur relatively higher costs (Figure 89). They also present challenges in operationalization due to the extended time ranges required per corridor (Figure 90). For an in-depth analysis of Uzbekistan's alternative trade corridors, along with their strengths and weaknesses, see Box 12. The key challenges pertain to environmental and institutional barriers, diversification of trade routes, and sources of logistics frictions (Table 10).

[59] Container transit fell by about 18 percent from January to September 2022, including a 35 percent drop for transit from China to Europe.
[60] Presidential Decrees on Measures to Support Exports (UP-97 of April 6, 2022, and UP-268 of December 21, 2022).

Figure 89: Relatively High Cost of Alternative Corridors
(Total price range per corridor, US$)

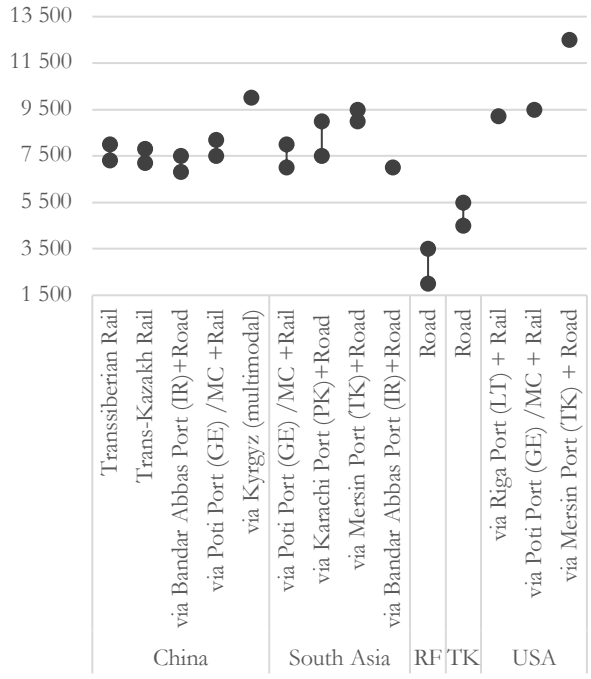
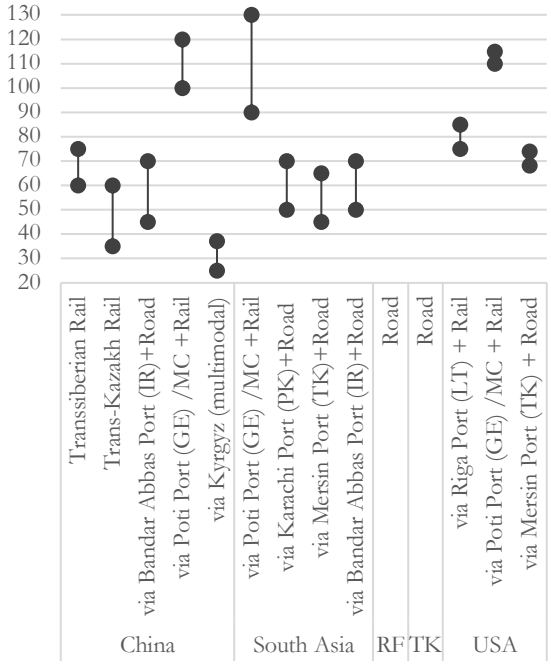


Figure 90: Relatively High Transit Time per Corridor
(Total lead time range per corridor, days)



Source: World Bank, based on information obtained from logistics operators.
Notes: Road prices are in U.S. dollar per full truckload; Sea/Rail/Road are in U.S. dollar per Forty-Feet Equivalent Unit. The figures show the minimum and maximum ranges given by responders. The ranges are not adjusted for sample size. Ranges take into consideration shipment size and type; volume; rate agreements with carriers; and seasonality and routing. TK is the country International Organization for Standardization (ISO) code for Türkiye; likewise, RF is the international standard country code for the Russian Federation.

Table 10: Key Trade Logistics Challenges

Environment and Institutions	Diversification of Trade Routes	Source of Logistics Frictions
• Latent demand for more complex services seemingly exists; supply and willingness to pay may not. • Legacy organization and legal framework compounds problems. • Quality regulation missing except for supranational legislation (for example, International Road Transport,TIR) • Standards for most logistics professions are missing. • The human resource formation system is focused on transport services • Institutional capacity strengthening and maturity of sector policymaker.	• Change of perception in risks due to global and regional events (health, conflict). • Large exposure to Kazakhstan as a transit country. • Single rail border crossing handles roughly 60 percent of merchandise trade. • Major alternative physical outlets – none emerge as unequivocal champion. • Multi-faceted approach: obtain as much as possible from existing choices and balance participation in new initiatives. • Commercially-oriented partnerships.	• Nascent visibility / digitalization of supply chain. • Access and service bottlenecks in Kazakhstan and China. • International transit facilitation issues in Iran, Kazakhstan and Turkmenistan. • Market access to European Union (EU) by road increasingly complex after Russia's invasion of Ukraine. • Compliance issues reduce choice for shippers (for example, sanctions). • Turkmenistan is still not reliable, especially at interchange points.

Source: World Bank, Trade Logistics Survey.

Box 12: Limited Trade Corridor Alternatives amid the Russian Federation's Invasion of Ukraine

Accessing alternative trade corridors is a complex challenge that cannot be easily overcome in the short term. Uzbekistan's reliance on Kazakhstan as a transit country has been a significant impetus for exploring different physical routes to international markets. While alternatives such as the Karakalpakstan border crossing exist, they require a detour of roughly 3,000 kilometers. From a resilience standpoint, the dependence on a limited number of physical nodes, which concentrate all trade volumes, presents substantial risks of disruption. Additionally, concerns regarding the pricing of rail services through Kazakhstan remain pertinent.

Land corridor choices vary according to speed, cost, and reliability of hauling Uzbekistan's foreign trade with China. The Trans-Kazakh and Trans-Siberian Railway are two common choices when it comes to moving goods to and from China, Uzbekistan's largest trading partner. The former railway shows larger variability in transit times (30 days versus 15 days), seemingly caused by rail and border capacity issues in Kazakhstan and China. There is also an issue of traction service unreliability. According to freight operators, the dependence on Kazakhstani transit raises. Rates are subject to swift changes, despite rail route subsidies in China. The multimodal rail-road corridor via the Kyrgyz Republic seemingly offers shorter transit times, yet at a higher cost. Road transport to and from China is hampered by fragmented border clearance procedures and limited access to the Khorgos Free Economic Zone, where Kazakhstani road carriers are seemingly prioritized.

Road freight market access conditions have tightened, affecting trade with Europe. Bilateral road permits to Europe are in short supply since the Russian invasion of Ukraine. Mandatory route detours, administrative costs of operating older equipment, and obligatory transloading areas have doubled transit times to roughly 15–20 days, thus adding costs for shippers. Railway is not viable other than for bulk shipping, due to much higher transit times without any cost advantage. Moreover, there are fewer options for trans-Atlantic trade, following the rationalization of global shipping lines calling at Russian ports. The most feasible alternative for trans-Atlantic trade is through Baltic or Turkish ports, with the latter at a significant cost premium.

The Middle Corridor provides a (limited) backup alternative for Uzbek trade. The Middle Corridor has significantly increased its throughput since the Russian invasion of Ukraine. Roughly 20 percent of all traffic using the Middle Corridor belongs to Uzbekistan. The corridor has limited capacity, especially in crossing the Caspian Sea. Limited competition, unreliable sailing schedules and the prioritization of energy products prolong transit times and discourage its use.

Corridors toward the South can provide maritime access for Uzbekistan's goods, but still face operational constraints. The Karachi and Gwadar ports in Pakistan would provide the shortest access to global shipping networks, but at a cost premium. Transit through Afghanistan has been excluded for Uzbekistan's trucks and requires transshipment, thus adding delays and costs for traders. Informal toll roads, the unavailability of cargo insurance in Afghanistan, administrative fees, and dismal infrastructure add to unpredictable closures on the border with Pakistan at Torkham. Alternatively, Iranian ports are less expensive and have long been used by Uzbekistan's traders. However, the sanctions regime, difficult access to banking, costly road tolls, and administrative issues impede transit development possibilities. Access by rail to the Bandar Abbas seaport in Iran is curtailed by operational inefficiencies at the border with Turkmenistan, where a gauge exchange is necessary. The new port of Chabahar, Iran, built and operated by India, has been seemingly spared from the sanctions, but it is still missing a rail connection. Another gauge exchange is needed to proceed to Karachi, Pakistan, or Gwadar, Pakistan, from Iran. As for the connection with Türkiye through Turkmenistan, transit via Iran and the Van Lake rail ferry crossing in Türkiye are still cited as key impediments.

Among these different transit options, there is no clear, superior option. **Building redundancy comes at a cost, and the whole-of-economy net benefits are difficult to quantify**. Developing alternative trade outlets to the South and East entails risks and would require significant capital investments. However, some of the dividends and costs cannot be easily accrued using traditional cost-benefit analyses. For instance, there are questions about how to assess gains from flexibility (keeping options open) or how to approximate the value-at-risk for the entire economy, when and if systemic disruptions should occur. Ultimately, there is no precise answer to what the "optimal" level of exposure to different physical outlets for trade should be. Improvements on the margin, however, might become notably valuable, especially those that do not require large and greenfield investments.

Source: Saslavsky (forthcoming).

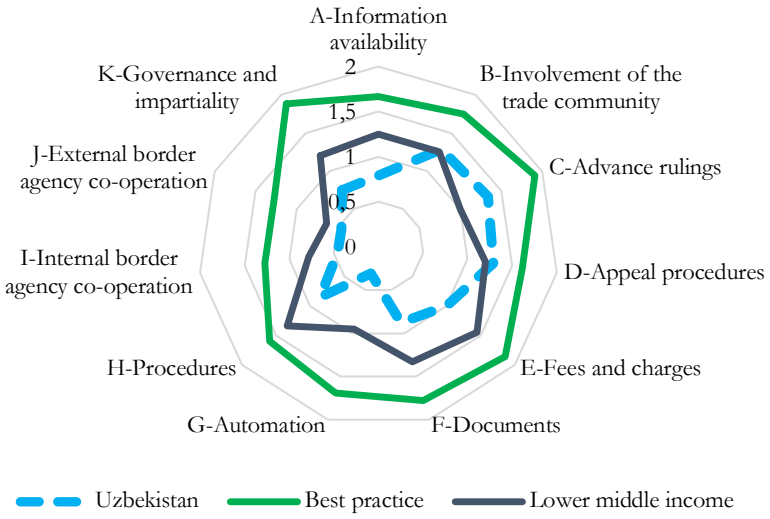
4.3.4 Trade Facilitation: Falling Short of International Best Practices

124. Trade facilitation practices currently fall short of international best practices, leading to elevated trade costs that erode the competitiveness of the private sector, particularly for exporters. Uzbekistan's trade facilitation indicators reveal a performance that falls short of international best practices, with several metrics also falling below the average for lower middle-income countries (Figure 91). This underperformance is particularly evident in areas such as fees and charges, documentation requirements, automation of trade processes, procedural efficiency, and internal as well as external border coordination. Governance issues further compound these challenges, indicating a need for comprehensive reforms to enhance Uzbekistan's trade facilitation systems.

Addressing these deficiencies is crucial for improving the country's trade competitiveness and fostering a more conducive environment for international commerce.

125. This situation is exacerbated by the absence of high-level coordination to advance the trade facilitation agenda, with the National Trade Facilitation Committee having been established only in October 2023. Uzbekistan has consistently pursued an ambitious trade facilitation reform agenda in recent years to improve the business environment and implement the World Trade Organization's (WTO) Trade Facilitation Agreement provisions.[61] Despite this ambitious, ongoing agenda with a set timeline, the implementation has been partial and at times misaligned with the actual business or operational practices, indicating room for further enhancement. The reform efforts have been predominantly driven by Uzbekistan's Customs Department, which suggests a narrow focus that may not encompass the broader trade facilitation landscape, as well as the lack of an effective strategy to coordinate border management. Institutional arrangements and cooperation for trade facilitation, along with agreements for transit facilitation, are identified as critical aspects Uzbekistan also is lagging vis-á-vis its peers (Figure 92).

Figure 91: Trade Facilitation Indicators below Best Practices



Source: Organisation for Economic Co-operation and Development.

[61] Some of the most relevant achievements so far include (i) the digital transformation of the customs clearance process, including an initial version of a customs-centered Trade Single Window (singlewindow.uz), an information system for processing transit declaration (E-Transit), the electronic queue (www.e-navbat.customs.uz), and publication of a trade information portal (www.uztradeinfo.uz); (ii) the adoption of modern technologies to improve security and expedite border procedures, such as nonintrusive inspection equipment, automatic plate readers, and surveillance video cameras; and (iii) advancing the modernization of customs, based on a roadmap of projects and initiatives approved by a 2020 Presidential Directive, which includes the accession of the country to the World Customs Organization, Revised Kyoto Convention in early 2021, publication of new regulations and initial registration of traders as Authorized Economic Operators, initial development of post-clearance audit procedures, revision of customs escort regime, and introduction of the customs electronic risk management system at border posts.

Figure 92: Uzbekistan Lags in Institutional Arrangements, Cooperation, and Transit Facilitation

Source: United Nations Global Survey on Digital and Sustainable Trade Facilitation database. (https://www.untfsurvey.org/)
Note: LLDC = landlocked developing country.

126. Customs procedures continue to lag behind peers, posing a significant challenge for exporters. According to a 2019 World Bank Enterprise Survey[62] in Uzbekistan, even though the number of days required to clear imports remains low (about 10 days) (Figure 93)—as does the number of days to clear exports (3.7 days) (Figure 94)—approximately 22.2 percent of firms (specifically those whose direct exports constitute 10 percent or more of their sales) identify customs and trade regulations as a major or severe obstacle to exporting (Figure 95). By contrast, only 13.3 percent of firms in ECA consider customs and trade regulations to be the primary impediment to their business operations.

Figure 93: Uzbekistan vis-á-vis Peers: Relatively Short Import Clearance (number of days)

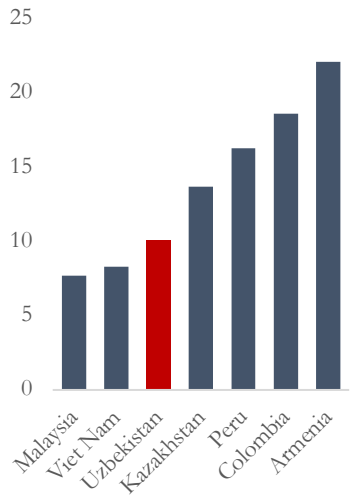


Figure 94: Uzbekistan vis-á-vis Peers: Relatively Short Export Clearance (number of days)

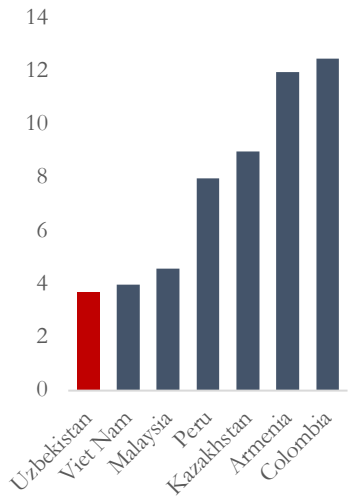
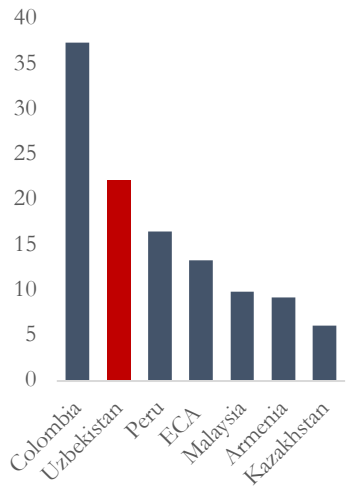


Figure 95: Uzbekistan vis-á-vis Peers: Customs Still an Issue (percentage of firms)



Source: World Bank Enterprise Survey (2019).
Note: According to a large number of firms in Uzbekistan, customs is still an issue.

127. The 2023 Time Release Study (TRS)[63] identified various opportunities to improve border performance in Uzbekistan. The study found average clearance times of 7 days, 16 hours, and 53 minutes for road imports and 3 days, 17 hours, and 41 minutes for rail imports. These were largely impacted by the existing two-step clearance process with mandatory presentation of goods at an inland terminal before release—even for low-risk cargo. This performance lags other economies that fully have implemented international best practices, with clearance times within hours or even minutes (Table 11). Table 12 highlights the potential areas of work

[62] https://www.enterprisesurveys.org/en/enterprisesurveys
[63] Time Release Study 2023, World Bank.

identified by the 2023 TRS study where Uzbekistan could make progress to achieve more high-performance borders. It also provides the status of the country in each of these areas. The implementation of recommendations identified in the TRS could significantly decrease clearance times for Uzbekistan. Successful examples regarding how the implementation of reforms identified in the TRS have contributed to decreases in customs clearance times in countries such as the Kyrgyz Republic, Kosovo, and Serbia (Box 13).

Table 11: Time Release Reports of Select Countries

#	Country	Year of Study	Average Time to Clear Imports
1	Serbia	2022	10 hours and 1 minute
2	Brazil	2020	54 hours and 53 minutes
3	Bangladesh (Banglabandha BCP/Burimani BCP)	2017	6 hours and 34 minutes/5 hours and 11 minutes
4	Kyrgyz Republic	2021	11 hours and 30 minutes
5	Tajikistan	2017	22 hours and 5 minutes
6	Montenegro	2021	15 hours and 32 minutes

Source: World Bank staff computation based on 2023 Time Release Studies.

128. Uzbekistan still lacks a comprehensive trade facilitation strategy and implementation roadmap, supported by an effective trade facilitation performance monitoring framework. Trade facilitation modernization demands coordination and alignment among the various ministries and border agencies, as well as effective cooperation with neighboring countries to manage border operations. It also requires robust consultation and engagement on the part of the private sector. The successful implementation of reforms requires a proper sequencing of projects, securing synergies and complementarities of initiatives, and careful planning of investments to manage and sustain changes. A performance monitoring framework also is essential for guiding and evaluating the reforms, confirming effectiveness, and enhancing accountability and transparency. Uzbekistan is not yet regularly publishing average times for releasing goods, updating WTO Trade Facilitation Agreement Gap Assessments, nor submitting qualitative satisfaction surveys of the private sector concerning their provision of services to process trades.

Table 12: Key Opportunities for Achieving High-Performance Borders

	Key Elements of a High-Performance Border	Current Status
Single window	A fully electronic single window allowing electronic submission of applications for licenses, permits, certificates and other authorizations (LPCOs), and electronic notification once approved.	Uzbekistan already operates a national electronic single window, led by the Customs Administration, but still with a limited number of agencies and LPCOs available. Border procedures are still based on paper checklists with stamps.
Separate clearance from release	Goods for free circulation should be released at or before arrival, provided there is no requirement for inspection. The required LPCOs have been obtained and checked, and duties and taxes have been paid or action taken to ensure their collection.	Goods are released only after customs clearance.
No mandatory inland transit for imports	There should be no mandatory requirement for all goods to travel to an inland terminal. In line with the separation of clearance and release, goods not required for inspection should be released at the border. An inland terminal can be used if there is a need to conduct inspections away from the border.	All imported goods are required to be transported to an inland terminal for clearance and release. This applies to all risk categories.
Deferred payment	Deferred payment allows compliant traders with a significant volume of import declarations to pay duties and taxes for goods declared over a specified period after the goods are released (e.g., a period of 14 days). For businesses, this increases the efficiency of payment handling, reduces bank charges, and frees working capital.	Deferred payment is primarily available for trusted traders certified as Authorized Operator Programs (AEO).

	Key Elements of a High-Performance Border	Current Status
Risk-based inspections with a random element	Physical/document inspections should be based on risk and be complemented with random risk profiles. Risk profiles should be regularly updated as part of the risk management cycle.	Based on the data provided to the 2023 Time Release Study, 100 percent of road imports are subject to physical and/or documentary inspection. This slows the release of goods due to the volume of inspections required.
Single government Authorized Operator Program	A single compliance management program should include customs and cross-border regulatory agencies (CBRA). All parties involved in the international movement of goods should be eligible to join the program. Such an extended AEO program should provide additional trade facilitation measures relating to imports, exports, and/or transit to operators who meet specified customs and CBRA compliance criteria. Information about the program should be easily accessible to encourage participation.	The current AEO program pertains to customs only.
Coordinated border management and international cooperation	Most agents and traders should only be required to deal with one agency at the border, representing the whole of the government. Support should be provided by other CBRAs only when necessary. The coordination of border management should also be extended to neighboring jurisdictions, eventually through one-stop border arrangements.	There are several CBRAs at the border. Initial CBRA documentary inspections for road imports and exports are conducted at the Border Customs Post, followed by any inspections at the inland terminal. For rail, documentary and physical inspections are undertaken at the inland terminal. There is limited coordination and sharing of information with Kazakhstan.

Source: World Bank staff elaboration

Box 13: Case Studies: Successful Reform Implementation Identified in the Time Release Study[1]

Time Release Studies (TRS) enable customs authorities and cross-border regulatory agencies to quantify bottlenecks in the clearance and release processes through the collection of time-release data. Such data effectively measures the efficiency of the border agencies and private sector stakeholders involved in the control process, including from the time the cargo arrives at the border until the physical release of the goods. Based on this detailed and comprehensive diagnostic, the relevant authorities can improve the quality of services provided and identify other potential corrective actions for areas that may cause unnecessary delays.

Case Study 1: Kyrgyz Republic

A TRS was conducted of the Kyrgyz Republic in 2018. It suggested that its Customs Administration standardize procedures across locations and introduce a trusted trader regime. The Customs Administration initiated the implementation of these and other improvements. At the same time, the phytosanitary and veterinary agencies were trained on how to develop risk-based controls to further reduce clearance times. A second TRS conducted in 2021 revealed that road import times were reduced to under 12 hours (compared to close to 20 hours in 2018) (GoKR, 2021).

Case Study 2: Kosovo

Following the recommendations from the 2016 TRS, Kosovo established an Authorized Operator Program, which reduced clearance time for companies certified by the Authorized Operator Program from 24 hours (or more) to less than 3 hours due to the new status. Overall, import processing times have been reduced for all traders by 50 percent at borders and over 30 percent at inland terminals between 2016 and 2021.

Case Study 3: Serbia

In Serbia, a TRS conducted in 2017 recommended the harmonization of clearance procedures with neighboring countries to help the business community. An agreement between Serbia and North Macedonia was signed to establish a joint border crossing for international road traffic at Presevo/Tabanovce. In 2021, the exit controls of customs and border police were performed upon entry into each country. As a result, the waiting time for trucks has been reduced from 26 to 10 minutes for exports, as confirmed in a second TRS conducted in 2021 (GoS, 2017).

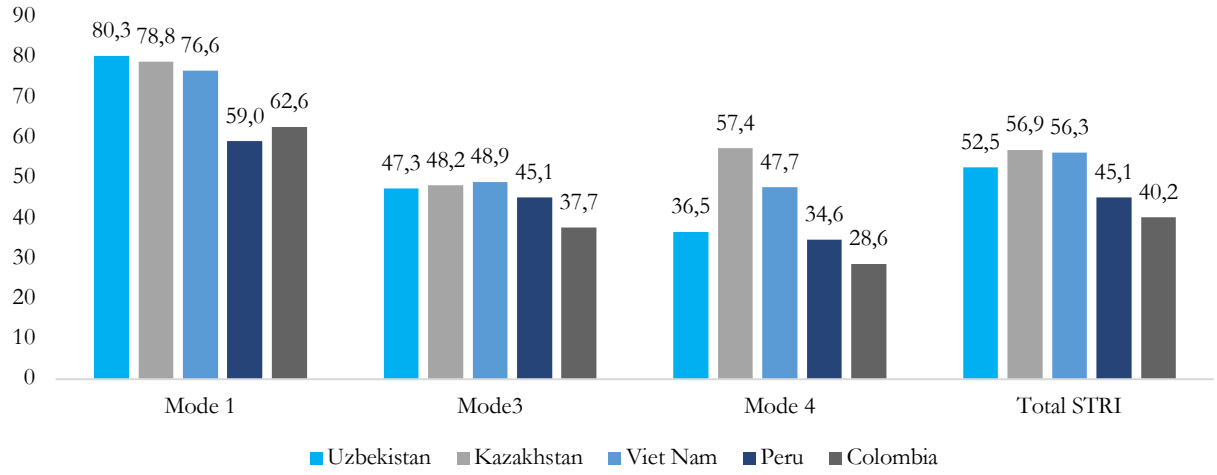
[1] World Bank staff compilation.

4.3.5 Trade in Services: Facing Significant Restrictions

129. Uzbekistan's regulations for trade in services are significantly restrictive in cross-border (Mode 1) transactions and moderately restrictive when compared to its peers. According to the World Bank/WTO Services Trade Restrictiveness Index (STRI) (see Annex 7 for methodology), Uzbekistan's average score for Mode 1 is higher than that of all its peers. The STRI score for the movement of natural persons (Mode 4), however, is lower than those of Kazakhstan and Viet Nam (Figure 96). Furthermore, with respect to its commercial presence (Mode 3), Uzbekistan's STRI scores are approximately equal to those of Kazakhstan and Viet Nam, but higher than those of Colombia. The peer countries—Colombia, Kazakhstan, Peru, and Viet Nam—were selected for comparison due to their similarities in economic structure, level of economic development, and geographic characteristics. Some peer countries, such as Armenia and Malaysia, do not have STRI data.

130. The highly restrictive score in Mode 1 for Uzbekistan is the result of horizontal measures, which affect all sectors, as well as sector-specific policies. Notably, cross-border supply is prohibited in 11 of the 31 subsectors, including key areas such as professional, telecommunications, and financial services.[64] Policies that govern cross-border data flows also contribute to elevated STRI scores across Mode 1, Mode 3, and Mode 4; that is, the requirement for all personal data of Uzbek nationals to be physically stored within the country.

Figure 96: Uzbekistan vis-á-vis Peers: Average STRI Scores Moderately Restrictive, Particularly for Mode 1
(STRI score)



Source: World Bank/World Trade Organization Services Trade Policy Database and Services Trade Restrictiveness Index (STRI).
Note: 0 – completely open; 100 – completely closed.

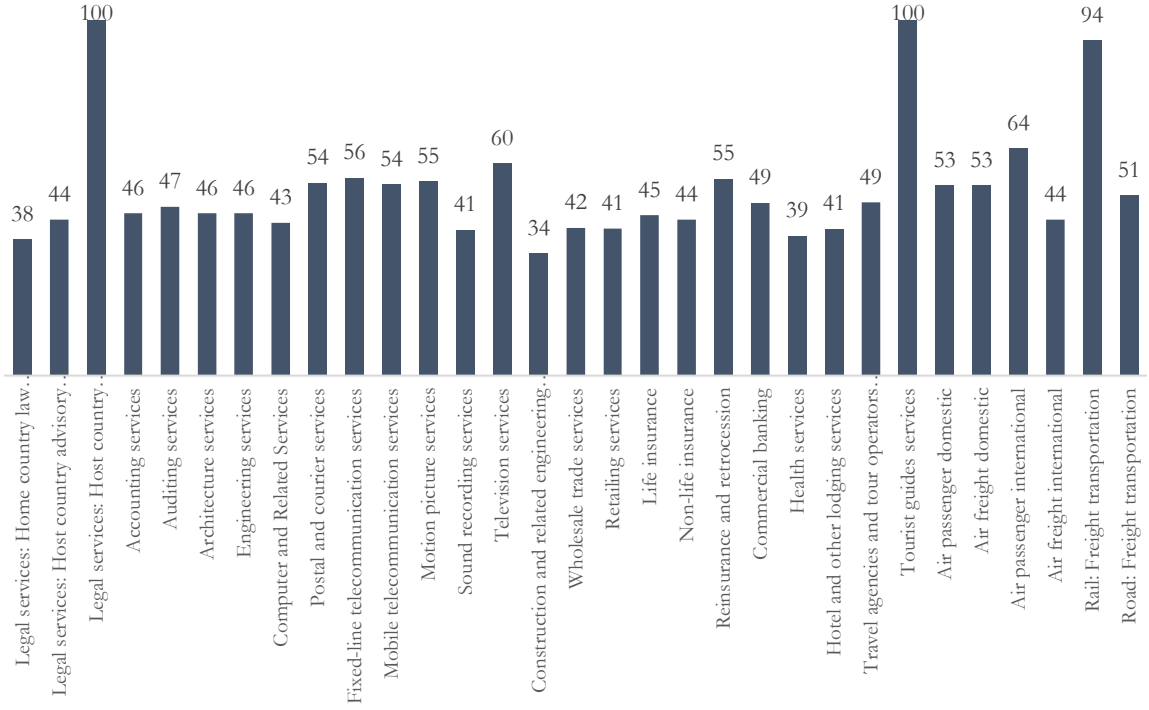
131. In Uzbekistan, horizontal regulations that affect all sectors present significant challenges for businesses operating within the country. These regulations include stringent data localization requirements that hinder the cross-border supply of services and limit access to efficient data storage solutions. Additionally, local presence and legal entity establishment requirements apply to most industry sectors. A particularly pressing concern is the absence of independent regulatory bodies in sectors dominated by state-owned enterprises such as telecommunications, rail, and air transport. This lack of oversight is compounded by the absence of established procedures for prior notice and public commentary before the enactment of new regulations. Box 14 provides a more detailed view of two sectors: telecommunications and transportation. Box 14 also highlights the challenges and potential of digital trade in Uzbekistan, aiming to foster growth, job creation, and innovation.

132. Policies governing tourist guide services, domestic legal representation, and rail freight in Uzbekistan are among the most trade restrictive. Conversely, regulations pertaining to construction, healthcare, hotel operations, and sound recording services are notably more liberalized (Figure 97). The high level of restrictions for tourist guides and domestic legal representation services stems from licensing regulations that

[64] The STRI covers 34 sectors, including three maritime transport subsectors. Since Uzbekistan is a land-locked country, the three maritime transport subsectors have been excluded.

allow Uzbek nationals to exclusively practice in these fields.[65] Additionally, Joint Stock Company Uzbekrailways maintains its position as the sole national operator for rail passenger and freight services, effectively monopolizing the market and impeding access for potential competitors.[66]

Figure 97: STRI Scores for all Service Sectors
(STRI score)



Source: World Bank/World Trade Organization Services Trade Policy Database and Services Trade Restrictiveness Index (STRI).
Note: 0 – completely open; 100 – completely closed.

Box 14: Sector-Specific Comparison of Service Restrictiveness: Telecommunications and Transportation

Reforms in Uzbekistan's telecommunications and transport service sectors, which are currently relatively restrictive, could lead to significant economic gains for the country. Global innovators and low-skill tradable services, such as businesses, telecommunications, finance, and transportation, have a higher potential for growth (Nayyar et al., 2021). These services are more likely to act as inputs for manufacturing and other service industries, thereby amplifying their growth potential. Moreover, when compared to Peru and Colombia, Uzbekistan's regulations in these sectors are notably more restrictive (Box 14.1).

Case 1: Telecommunications Services

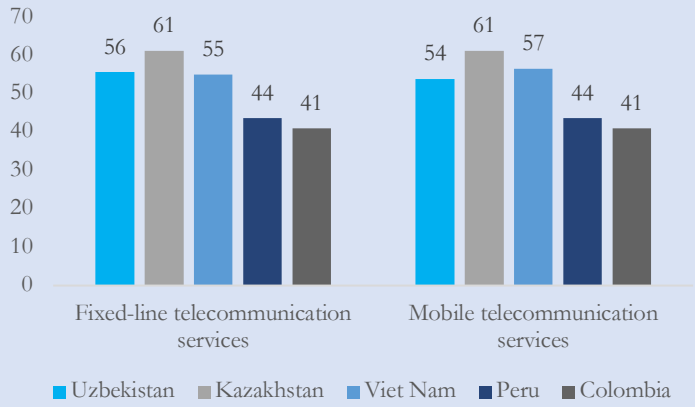
State-owned enterprises (SOE) have a monopoly over critical infrastructure for fixed and mobile telecommunication services in Uzbekistan, leading to more restrictive Services Trade Restrictiveness Index scores in this sector as compared to Peru and Colombia. Joint Stock Company (JSC) Uzbektelecom, an SOE, exclusively owns and operates the international gateway. As such, it has the power to permit access to international telecommunications networks.[1] An international gateway is the facility through which electronic communications (voice, data, and video) can be sent between domestic networks of one country and another, either through a cable or a satellite system (ITU, 2024). Since private service suppliers are compelled to utilize the infrastructure of the SOE, they may face impediments in setting prices for retail services.[2] For instance, disagreements relating to costs to be paid by private enterprises for the use of the publicly owned telecommunications infrastructure are to be appealed, in the first instance,

[65] Article 3, 12 of the Law on Advocature, No. 349 of 27 December 1996 № https://lex.uz/acts/58372; Chapters 2, 3, 4 of Annex 9 (Regulation on the procedure for issuing a qualification certificate to a guide-interpreter, lead tour guide, or instructor-guide) to the Resolution of the Cabinet of Ministers "On measures to create favorable conditions for development and rehabilitation of the sphere of tourism in Uzbekistan" of July 10, 2020, № 433. https://lex.uz/ru/docs/4937140.

[66] Annex 27 (Permit for railway rolling stock to enter public railways) to the Resolution of the Cabinet of Ministers "On Unified procedures for issuance of certain permission documents via special electronic system" of February 22, 2022, No. 86 https://lex.uz/ru/docs/5876002 Annex 11 (Licensing of passenger and cargo transportation activities in domestic and international railway transport) to the Resolution of the Cabinet of Ministers No. 80 of 21.02. 2022 "On unified procedures of licensing certain types of activities via special electronic system." https://lex.uz/RU/DOCS/5870213Article 4 of the Law on natural monopolies of August 19, 1999, № 815-I https://lex.uz/acts/79387.

to the Ministry of Digital Technologies. Furthermore, while access and use of public telecommunications services is mandated, interconnection or access agreements are not publicly available. JSC Uzbektelecom also has an exclusive right to provide telecommunications services to the Government of Uzbekistan,[3] which reduces opportunities for private enterprises. The government has previously recognized the importance of liberalizing access to the international gateway;[4] however, this has not been realized. The monopoly privileges granted to the SOE reduce competition in the telecommunications sector and impede additional foreign investment.

Box 14.1: Uzbekistan vis-á-vis Peers:
STRI Telecommunications Service Scores



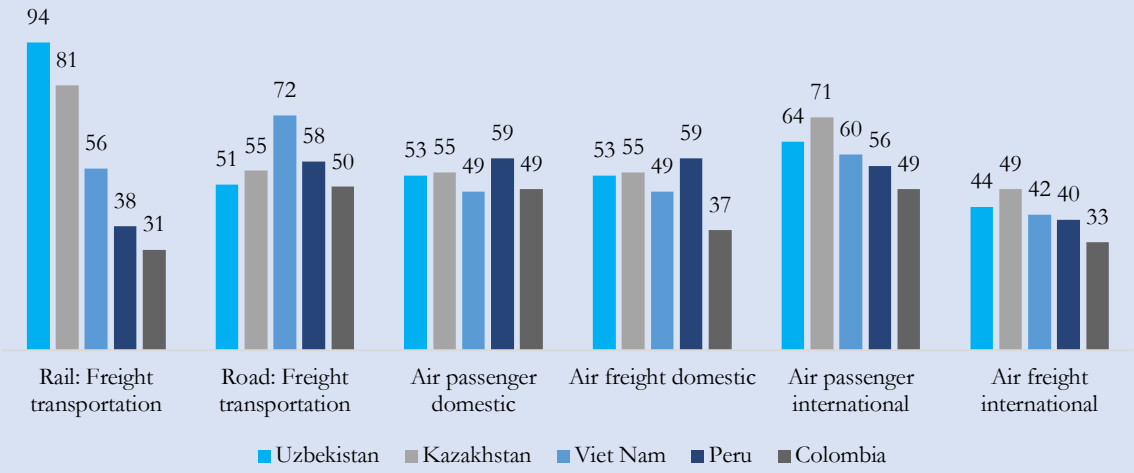
Source: World Bank/World Trade Organization Services Trade Policy Database and Services Trade Restrictiveness Index (STRI).
Note: 0 – completely open; 100 – completely closed.

Case 2: Transportation Services

International air freight and passenger services in Uzbekistan, along with domestic air services, are subject to restrictive practices that favor local companies over their counterparts, and they are more restrictive than their peers, except for Kazakhstan. JSC Uzbekairways, the national carrier, benefits from customs duty exemptions—except for value-added tax and customs fees—for the import of technical equipment used for aircraft maintenance.[5] Additionally, the airline is afforded preferential rates for various fees, including landing fees, passenger facility charges, and boarding fees when compared to foreign airlines (World Bank, 2020b). This preferential treatment may inadvertently limit foreign competition within the aviation sector.

Road freight is less restrictive, but rail freight in Uzbekistan is among the most restrictive when compared to peers. Rail freight transportation services are subject to a government monopoly. Joint Stock Company (JSC) Uzbekrailways is the monopoly for all railway services in Uzbekistan. Currently, customers of JSC Uzbekrailways do not directly deal with the company. Instead, they first contact a freight forwarder who, in turn, contacts a "code agent." It is not clear what additional value is added by a code agent in the current arrangement (World Bank, 2020b). Furthermore, Uzbekistan may consider introducing regulations relating to third-party access to rail network, as well as costs for the utilization of infrastructure to make use of private sector participation in the sector.

Box 14.2: Uzbekistan vis-á-vis Peers: STRI Transportation Service Scores
(STRI score)



Source: World Bank/World Trade Organization Services Trade Policy Database and Services Trade Restrictiveness Index (STRI).

Note: 0 – completely open; 100 – completely closed.

[1] Point 2 of the Resolution of the Cabinet of Ministers "On additional measures towards privatization of the JSC Uzbektelecom" of September 29, 2004, № 453 https://lex.uz/acts/358365 See at Line 41-42: https://antimon.gov.uz/en/open-data/the-state-register-of-business-entities-that-occupy-a-dominant-position-in-the-product-or-financial-market.

2 Resolution of the Cabinet of Ministers "On formation of costs for production and realization of products and services and procedures for formation of financial results" No.54 of February 5, 1999.https://lex.uz/acts/265675. Order of the Minister of Digitalization and Communication on "Rules for supplying telecommunication services" No.208 of June 30, 2020: https://lex.uz/docs/4962057.

3 Point 2 of the Resolution of the Cabinet of Ministers "On additional measures towards privatization of the JSC Uzbektelecom" of September 29, 2004, № 453 https://lex.uz/acts/358365 See at Line 41-42: https://antimon.gov.uz/en/open-data/the-state-register-of-business-entities-that-occupy-a-dominant-position-in-the-product-or-financial-market.

4 Resolution of the President On additional measures on development of local airlines. No.412 of October 26, 2022, https://lex.uz/ru/docs/6252611 Resolution of the President On measures to transform and support enterprises of civil aviation No. 5100 of 30 April 2021 https://lex.uz/docs/5400434.

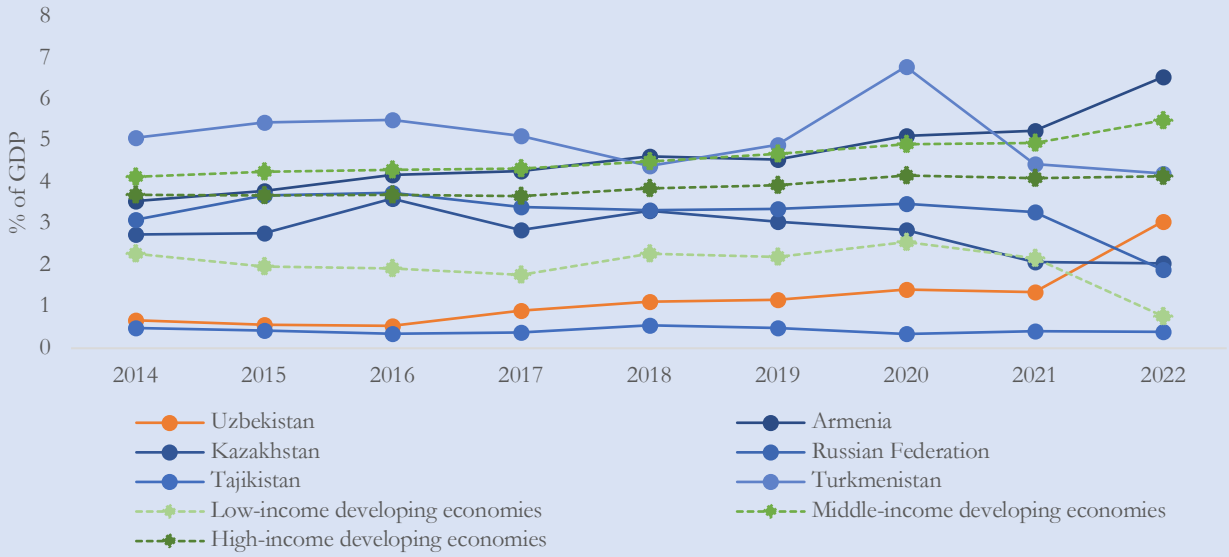
5 Strategy on Innovation Development of Uzbekistan issued as a Decree of the President No.5544 of September 21, 2018, https://lex.uz/ru/pdfs/3913186.

Box 15: Digital Trade for Growth

For Uzbekistan to compete and benefit from digital trade at an international level, it must improve in three distinct dimensions. These include the access to efficient and effective digital infrastructure (fast, affordable, and reliable); the skills and capabilities required to engage in productive utilization of digital technologies; and the operation of domestic digital markets at internationally competitive levels (World Bank, forthcoming).

Uzbekistan has been actively working to enhance its digital infrastructure and promote digital trade; however, there is still a long way to go in fully realizing its potential. Digital connectivity is a prerequisite to boost service trade, directly as well as indirectly, through linkages with other sectors. By embracing digital trade, Uzbekistan can unlock new opportunities for economic growth, job creation, and innovation while also empowering businesses of all sizes to thrive in the global digital economy. Uzbekistan has been investing in improving its digital infrastructure, including internet connectivity and mobile networks, to support digital trade activities. There is still a long way to go, however, and the quality of digital connectivity continues to lag. The coverage of faster forms of mobile internet, such as 4G/LTE, as well as internet speeds, remain low compared to peer countries (World Bank, forthcoming). Trade in digitally delivered services as a share of gross domestic product in Uzbekistan (3.1 percent) is among the lowest in the subregion and is well below the global average for developing countries, including—until 2021—low-income countries (Box 15.1).

Box 15.1: Uzbekistan vis-á-vis Peers: Trade in Digitally Delivered Services



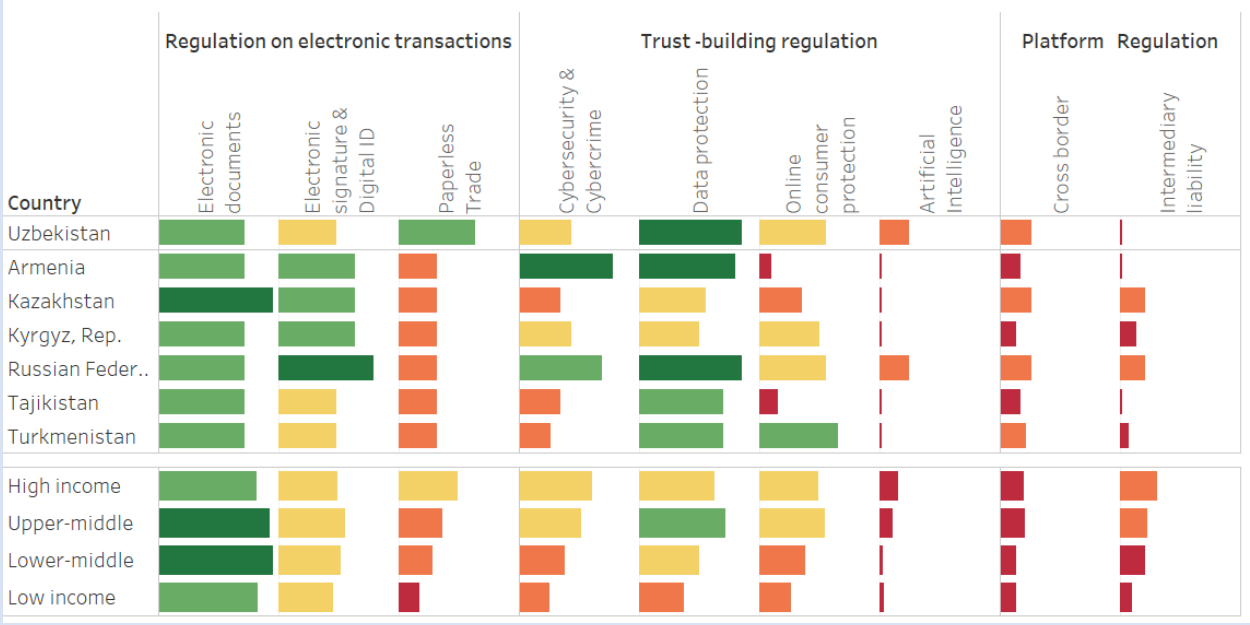
Source: Statistics of the United Nations Trade and Development (UNCTAD Stat).

In recent years, Uzbekistan has adopted a number of policies to close this gap and position itself as a potential hub for IT development in Central Asia. The launch of the Technopark in Tashkent aims to create an enabling environment for information technology production.[1] The IT Park framework provide a series of advantageous conditions to its residents, such as tax breaks and exemptions[2] and an IT-Visa initiative[3] for skilled IT professionals, thus enhancing Uzbekistan's appeal to global investors.

Uzbekistan also has introduced significant updates in its broader legal framework for digital trade. These updates include the adoption of critical amendments and introductions to laws such as the E-commerce Law, Cybersecurity Law, and the Law on Digital Electronic Signatures, among others. These laws address vital aspects of digital services, such as

electronic transactions, data protection, consumer rights online, and cybersecurity, aligning with international standards. These regulatory efforts position Uzbekistan as one of the regional leaders in terms of regulatory "readiness," featuring some of the most advanced regulations in key areas (e.g., data protection, electronic documents, and paperless trade). Box 15.2 reflects this progress across various policy areas.

Box 15.2: Uzbekistan vis-á-vis Peers: Regulatory Readiness in Key Policy Areas for Digital Trade

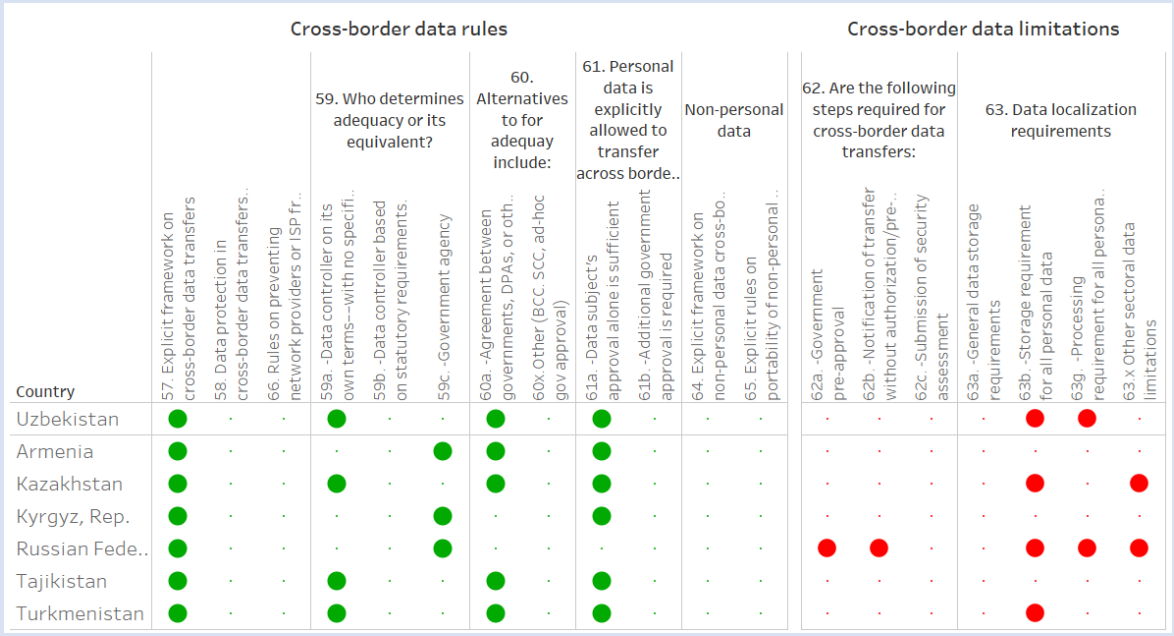


Source: World Bank (forthcoming). Digital Trade in Uzbekistan. Background note.

Uzbekistan's 2019 Law on Personal Data features one the most modern frameworks for data protection in the region, limiting data processing to its intended purposes and ensuring the safety of personal data. This includes key features such as special rules for biometric information and other sensitive data. Empirical analyses (World Bank, 2021b) suggest that the adoption of strong safeguards for personal data fosters growth in digital transactions and cross-border trade in digital services by increasing consumer trust in digital markets.

This promising landscape for digital trade, however, faces challenges in Uzbekistan's data governance framework. Uzbekistan does not maintain explicit restrictions to cross-border data, and allows such transfers based on a determination of adequacy by the data processor or explicit consent by the data subject—both measures of easy compliance. However, Uzbekistan does require the use of local facilities for storage and the processing of personal data. These measures introduce heavy costs for foreign firms to offer services in Uzbekistan, as they are mandated to build or rent domestic data centers. This negatively impacts the competitiveness of domestic firms as they seek to benefit from more advanced and cost-effective digital services but potentially finding only limited offer. In addition to the permanent storage of personal data in Uzbekistan, the law on personal data also calls for various data processing steps to be taken, also in Uzbekistan (Box 15.3). This data processing requirement is particularly burdensome as it may entail not only greater costs, but also a hard ceiling in the growth of the sector, since a small domestic IT-sector may not be able to serve the growing demand. Uzbekistan is the only country in the region that copies this provision from the Russian Federation's data governance regulation; however, this requirement is much more burdensome for Uzbekistan, given the small size and early development of IT sector, especially when compared with Russia.

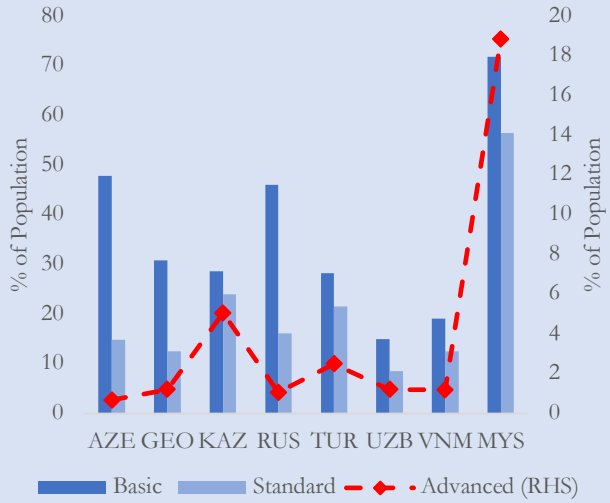
Box 15.3: Uzbekistan vis-á-vis Peers: Regulatory Measures for Cross-Border Data



Source: World Bank (forthcoming) Digital Trade Regulation Readiness.

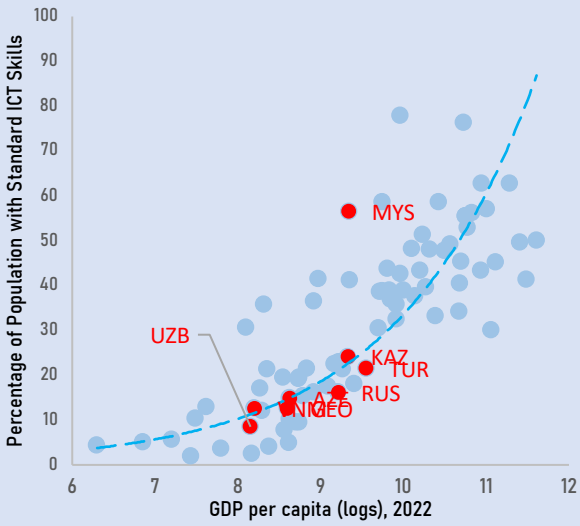
Uzbekistan's framework is also missing explicit provisions on the liability of platforms for content or activities by their users ("intermediary liability"). Lack of provisions specifically oriented to digital platforms leads to court decisions to fill the gaps with old, general liability provisions, often with odd or suboptimal results as they apply other rules and principles not tailored to the digital context. Explicit regulations on intermediary liability also increase transparency and predictability, hence reducing costs for digital business and strengthening users' rights.

Box 15.4: Uzbekistan vis-á-vis Peers: Digital Skills Poor



Source: World Bank staff elaboration based on International Telecommunications Union data. Digital skills are a combination of several indicators that range from being able to open emails to being able to write complex computer programs.

Box 15.5: Uzbekistan vis-á-vis Peers: Standard Skills are below Countries of Similar Income Level



Sources: World Bank staff elaboration based on International Telecommunications Union (ITU) and World Bank World Development Indicators (WDI) data.

Uzbekistan's digital skills are poorer than those in the subregion, with only about 15 percent, 8 percent, and 1 percent of the population possessing Basic, Standard, and Advanced Information and Communication Technologies (ICT) skills, respectively (**Ошибка! Источник ссылки не найден.**). Developing digital skills are essential in supporting participation in digital trade. The range of these skills allow for market participation and development of innovative products and business ideas. Therefore, addressing the digital skills divide is crucial in driving inclusivity of digital trade, in conjunction with the efforts for infrastructure development and regulatory improvements. Integrating ICT training into educational and vocational training, as well as collaborating with industries on skills development can help bridge the digital skills divide and enable workers to attain digital skills relevant to domestic and international labor markets. Similarly, providing micro, small, and medium enterprises with tailored digital skill training

programs can be instrumental in increasing digital trade participation by these enterprises and integrating them into global value chains, directly as well as indirectly through service provisions for other larger companies.

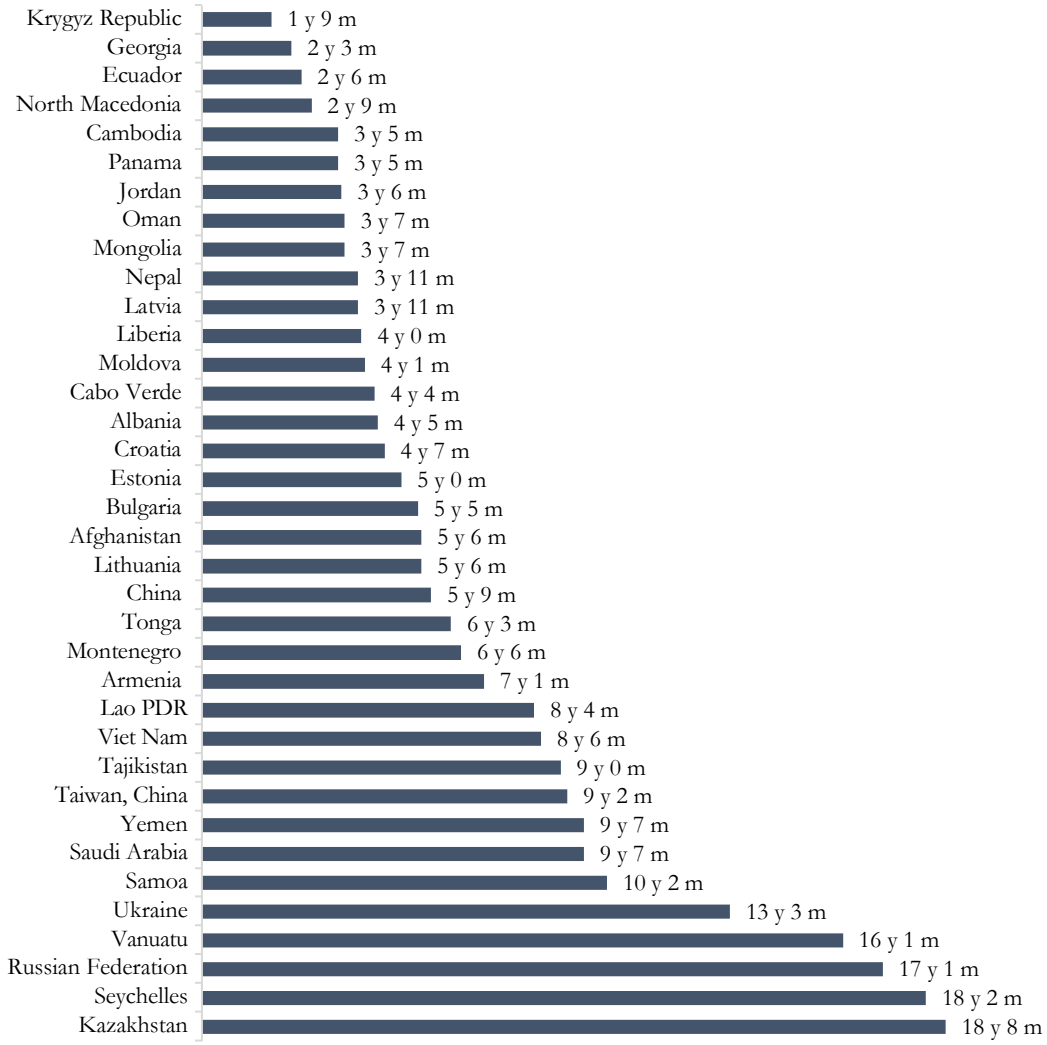
[1] Clause 2 of the Resolution of the Cabinet of Ministers of July 15, 2019, №589 "On the procedure for organizing the activities of the Technology Park of software products and information technologies" (Resolution №589).
[2] Tax benefits for Technopark residents: Until January 1, 2028, residents are exempt from (i) paying all types of taxes and mandatory contributions to state trust funds, as well as social tax; (ii) paying customs duties (except for customs duties) for equipment, components, parts, assemblies, technological documentation, and software imported for their own needs that are not produced in the Republic of Uzbekistan; (iii) personal income tax—a fixed rate of 7.5 percent on income in the form of salary received before January 1, 2028 by employees under labor contracts with Technopark residents; (iv) corporate tax—0 percent; (v) real estate tax—0 percent; and (vi) until January 1, 2025, the income tax rate on dividends of the founders of Technopark residents who are nonresidents of Uzbekistan—5 percent. Residents are obliged to transfer to the deposit account, on demand of the Directorate of the Technopark, a 1 percent deduction from total income.
[3] Advantages of IT-Visa: Obtaining education and medical services on the conditions provided for citizens of Uzbekistan; residing in any region of Uzbekistan without the obligation to re-register at the place of residence; and purchasing real estate of any value. These conditions also apply to family members of those who hold IT-Visa.

4.3.6 Slow Accession Progress to World Trade Organization Membership as well as Shallow Trade Agreements

133. The process of Uzbekistan's accession as a member of the WTO has accelerated recently but has been hindered by coordination gaps, inefficient resource allocation, and a high turnover of government officials. These issues have slowed the accession process and necessary domestic reforms. A clear roadmap is absent, underlining the need for improved coordination to facilitate the process and align domestic reforms with WTO rules. Creating an inventory and roadmap for technical assistance, along with periodic negotiation updates, is crucial for improved effectiveness. On average, the accession process takes approximately 6 years and 7 months (Figure 98). However, Uzbekistan's WTO accession process has been ongoing since 1994. Nevertheless, Uzbekistan has made some progress recently. From 1994 to 2020, the working party on Uzbekistan's accession has met, albeit only three times. The country formally resumed accession in 2020, launching its fourth meeting. These meetings have now increased in frequency and have occurred every year since, with two meetings taking place in 2023. With a renewed interest in concluding the accession process, the country also appointed a Chief Negotiator in June 2023.[67] Box 16 provides a summary of the benefits observed from WTO accession in various countries, detailing how such integration reduces constraints to trade competitiveness and enhances the overall economic environment.

[67] The 8th meeting of the Working Party on Uzbekistan's WTO accession took place in Geneva on May 24, 2024. The Uzbekistan delegation held an informal session on agricultural support and bilateral negotiations with 10 countries. They also detailed changes in national legislation since the 7th meeting.

Figure 98: Examples of Time Length for the Process of Accession to World Trade Organization Membership Status



Source: World Trade Organization.

Box 16: Benefits of Accession to the World Trade Organization

There is evidence of a positive impact on economic growth and trade from joining the World Trade Organization (WTO), with the level of impact determined by the depth of a country's commitments. WTO membership may boost economic growth in the years following accession, provided the candidate country has been subject to rigorous accession procedures and is deeply committed to adhering to internal trade liberalization regulations. An econometric model (Tang and Wei, 2009) covering 135 countries concluded that WTO accession increases a developing country's economic growth rate by about 2 percentage points for approximately five years; that is, if the country were subject to rigorous accession procedures. As with economic growth in general, the impact of WTO accession on trade flows tends to be positive, with benefits likely to be higher the more a country commits to its own trade liberalization.[1]

The WTO accession process can be an important tool for economic development by requiring a country to undertake substantial policy and institutional reforms so as to align it with membership requirements and expectations. Acceding countries undergo structural and trade-liberalizing reforms that can trigger further economic development and help secure their integration into the global economy. The critical elements of these reforms are typically established on a country-by-country basis, depending on the initial strengths and weaknesses of acceding countries. Therefore, it is crucial that countries undertake WTO accession in parallel with other complementary market-oriented reforms.

Reforms relating to WTO accession go beyond the trade liberalization of goods to include service liberalization and other regulatory changes. Among other things, WTO regulations focus on areas relating to intellectual property

(IP), local content requirement, taxation, customs administration, technical barriers to trade and sanitary and phytosanitary measures, competition, and government procurement (Haddad, Hollweg, and Portugal-Perez, 2015). For example, Montenegro implemented a number of reforms, including (i) developing an entire legal framework for the technical barriers to trade; (ii) implementing sanitary and phytosanitary measures and IP rights; (iii) creating new and modern institutions, such as national institutes for metrology and standardization, as well as a regulatory agency for IP; and (iv) eliminating price controls on most products. Countries that have joined the WTO since 1995 have combined, notified, and enacted more than 7,000 items of legislation to bring their laws into line with WTO requirements. Some transition economies that have joined the WTO have changed more than a hundred regulations, including 112 in Armenia, 155 in the Kyrgyz Republic, 170 in the Lao People's Democratic Republic, 141 in Tajikistan, and 139 in Viet Nam. Acceding countries undertake a larger number of reforms than other countries not yet under the accession process.[2]

Creating a predictable and transparent legal framework improves the business environment for trade. The tariff commitments undertaken by countries that have joined the WTO in the past 20 years cover virtually all products (i.e., 99.9 percent of products, compared to an average of 74 percent for original WTO members). The tariff commitments, or bindings, of these newer members—which apply to all participants in the multilateral system—are, on average, three times lower (an average of 13.8 percent) than those of original WTO members (45.5 percent). As a result, WTO bindings in newer member states create a more predictable and transparent business environment than those in older members. This has resulted in the faster growth of exports and imports after joining the WTO. Based on trade statistics for a sample of acceding countries (Albania, Armenia, Bulgaria, Cambodia, China, Ecuador, Jordan, Lithuania,N.Macedonia,Moldova, Mongolia, Nepal, and Panama), the export of goods grew at a faster rate for at least five years post-accession.

Similarly, implementing private investment reforms fosters competitiveness and attracts foreign direct investment (FDI). Reforms aimed to improve the environment for private investment tend to significantly increase inward FDI. For example, FDI increased by 565 percent between 2007 and 2014 in Cambodia, and it increased by 128 percent between 2002 and 2014 in Taiwan, China (UNCTAD, 2015). There is also evidence from a sample of 10 countries (Armenia, Cambodia, China, Ecuador, Jordan, Oman, Panama, Saudi Arabia, Tonga, and Viet Nam) that shows a dramatic increase in FDI in the year prior to joining the WTO, as well as strong growth thereafter.

Joining the WTO would send a clear signal to investors and traders about the country's commitment to a more open economy and greater transparency, and it could be an important mechanism to unlock reforms. WTO membership terms and commitments are important for strengthening multilateral trade rules, as well as for helping acceding governments undertake domestic reforms. The reform process enables countries to enact market-oriented reforms that could be difficult to implement under pressure from domestic special interest groups under normal circumstances. For example, Liberia used the WTO process to implement domestic trade reforms that increased competition and contestability in domestic markets, inducing the ability of incumbents to innovate and improve their productivity. For domestic firms, trade integration increases the size of the market and exposes them to international competition, expertise, and new technologies that can increase productivity and competitiveness as well as diversify the economy.

WTO membership is positively related to institutional improvements, as it requires members to adopt rules to enhance the transparency of regulations and policies, promote the rule of law, and reduce corrupt practices. According to indicators, such as the International Country Risk Guide and the World Bank Country Policy and Institutional Assessment, almost all acceding countries improved their policy and institutional quality measures significantly between the time of their early WTO negotiations and the time of accession, with the largest improvements generally among countries with lower initial indices (Haddad, Hollweg, and Portugal-Perez, 2015). New members are required to put in place appropriate mechanisms for notifying members of policy or regulatory changes, which increases transparency in the multilateral trading system. WTO members also need to establish institutions and policies to enforce the new legal framework. This could involve making regulations more transparent, promoting the rule of law, creating an independent judicial system, and reducing incentives for rent-seeking behavior. For example, Azerbaijan is working on simplifying its regulatory procedures and improving the efficiency of government agencies. Evidence from transition economies that acceded to the WTO prior to 2000 (i.e., Bulgaria, Estonia, the Kyrgyz Republic, Latvia, and Mongolia) suggests that the majority of these countries improved their corruption indices (Drabek and Bacchetta, 2004).

Finally, WTO accession countries have performed well on various macroeconomic indicators. The biggest positive impact of membership has been to the external competitiveness of countries, as almost half of all member economies became more open after joining the WTO. Also, one-quarter improved their export diversification. New members have improved their economies by being able to better control inflation, contain the fiscal deficit, and attract FDI, as well as attain faster economic growth (Kireye, 2016). The average gross domestic product growth rate of new

members (among those that joined after 1995) was about a 1 percentage point higher than that of original members (those that joined before 1995). During the same period, the growth rates for trade in goods and services among new members were higher than for original members, thus increasing their shares of global trade.

Source: World Bank staff elaboration.

[1] Taking into account, among other things, pre-existing preferential trade relationships, the length of the accession process, and the nature and depth of commitments made during accession, Rose (2004) estimates an empirical model to assess the impact of WTO membership on trade flows. Although Rose (2004) finds weak evidence to this effect, a subsequent analysis has found a more robust relationship (Tomz, Goldstein, and Rivers, 2007).

[2] This is based on prior actions in the context of the World Bank's development policy financing that supports reforms in the areas of economic management, public sector governance, rule of law, financial and private sector development, and trade (Haddad, Hollweg, and Portugal-Perez, 2015).

134. Moreover, in addition to WTO accession, Uzbekistan's integration through Preferential Trade Agreements (PTA) is weak and is characterized by limited depth and scope, thus affecting only a modest proportion of its trade. In conjunction with its commitment to join the WTO, Uzbekistan could enhance its integration with foreign partners through the expansion and deepening of its PTA network. The agreements in place are generally shallow and lack comprehensive coverage of provisions that could potentially enhance trade relations. Currently, imports from PTA partners constitute 23.4 percent of Uzbekistan's total imports, and exports to these partners account for 22.2 percent (Table 13). The influence of these agreements on export activity is relatively minimal, with an overall impact of 2.5 percent. Notably, the PTA with Russia stands out, contributing a 2 percent increase to exports and a 0.15 percent boost to Uzbekistan's GDP, thus making it as the most significant among the existing agreements.

Table 13: Uzbekistan's Trade Agreements: Shallow, with Limited Impact on Trade and Gross Domestic Product

Agreement Name	Entry into Force	Number of Partners	Depth	Share of Imports from PTA Partners (%)	Share of Exports to PTA Partners (%)	Impact on Exports (%)	Impact on GDP (%)
Russian Federation – Uzbekistan	1993	1	Shallow	19	16	2	0.13
Commonwealth of Independent States	1994	3	Shallow	2.4	1.2	0.19	0.01
Ukraine – Uzbekistan	1996	1	Shallow	1	1	0.19	0.01
Kyrgyz Republic – Uzbekistan	1998	1	Shallow	1	4	0.081	0.005

Source: World Bank staff calculation based on the Center for Prospective Studies and International Information-International Trade Database at the Product Level (CEPII-BACI) dataset (Gaulier and Zignago, 2010).
Note: PTA = preferential trade agreements; GDP = gross domestic product.

4.3.7 Addressing Constraints and Unlocking Export Potential

135. Uzbekistan's export potential can be realized by identifying competitive sectors and value chains, coupled with addressing domestic constraints and moving away from government support and protection of certain industries. The computation of export potential is based on observable characteristics, such as past export values. This implies that sectors receiving government support or protection, and showing high export values, might also have an overstated export potential. Unlocking this potential involves focusing on competitive segments of the value chains that Uzbekistan could integrate, rather than relying on government policies that may not be fiscally sustainable. To harness this export potential, Uzbekistan could benefit from addressing some of the constraints as outlined in the Section 4.4.

136. In a world without restrictions and market distortions, Uzbekistan would have an export potential of US$4.7 billion, mainly in the manufacturing sector.[68] Based on its observable characteristics, Uzbekistan is well positioned to enhance its manufactured goods exports by an impressive 70 percent. This increase would elevate export values to US$12 billion, a significant increase from the US$7.3 billion average recorded between 2016 and 2019 (Figure 99). In the agriculture sector, Uzbekistan has successfully closed the export gap, with exports in agricultural products between 2016 and 2019 exceeding the expected potential by US$360 million (Figure 100). Annex 8 describes the methodology regarding trade potential.

Figure 99: Uzbekistan vis-á-vis Peers: Manufacturing Export Potential
(US$ millions)

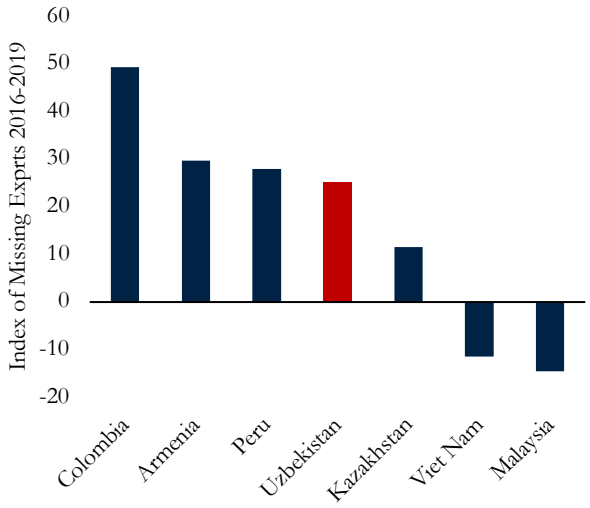
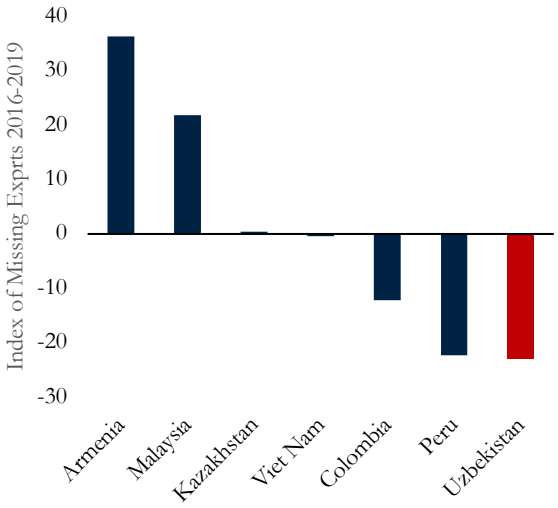


Figure 100: Uzbekistan vis-á-vis Peers: Successful Closure in Gap in Agricultural Product Exports
(US$ Millions)

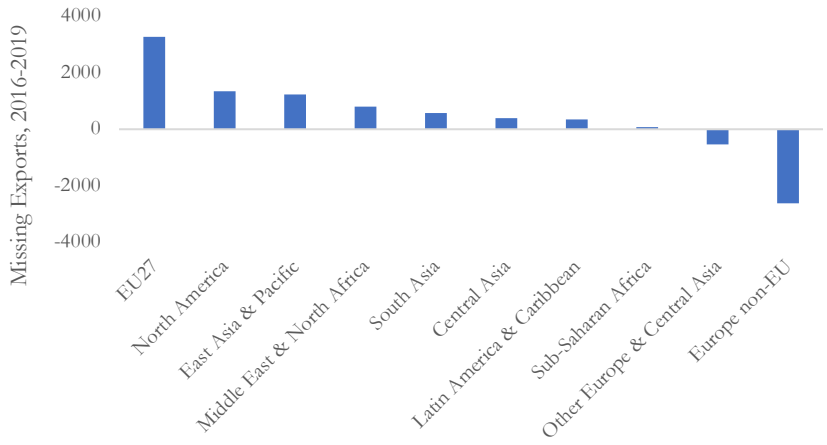


Source: World Bank gravity estimates.

137. Uzbekistan's manufacturing exports show significant gaps, mainly with the 27 countries of the European Union (EU27) and North America, while export potential for agricultural products is lower. In terms of manufacturing exports, Uzbekistan outperforms in non-EU countries, including Norway, Switzerland, and the United Kingdom, as well as smaller nations, such as Gibraltar, Monaco, and San Marino. Uzbekistan's manufacturing exports have a potential market worth over US$3.3 billion in the EU27; US$1.3 billion in North America; and an additional US$2 billion in other regions (Figure 101). Agricultural exports exhibit lower export potential and are limited to only a few regions, mainly South Asia. As noted, Uzbekistan is overperforming in terms of total agricultural exports. South Asia has the largest missing exports, with around US$100 million, followed by the EU27 with US$60 million (Figure 102). For more details about export potential by country and destination, see Box 17.

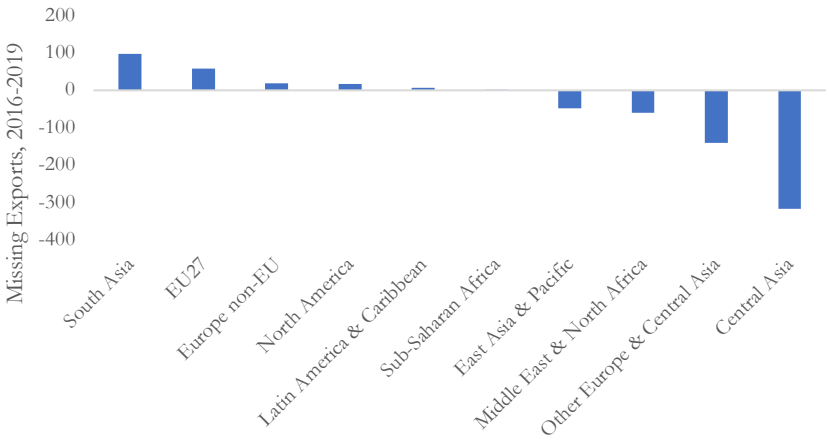
[68] The background Note on trade potential in Uzbekistan was prepared by Alen Mulabdic.

Figure 101: Unrealized Manufacturing Export Potential with the EU27, North America, and East Asia and the Pacific
(US$ millions)



Source: World Bank gravity estimates.
Note: EU = European Union.

Figure 102: Unrealized Agricultural Export Potential—Mainly in South Asia and EU27
(US$ millions)

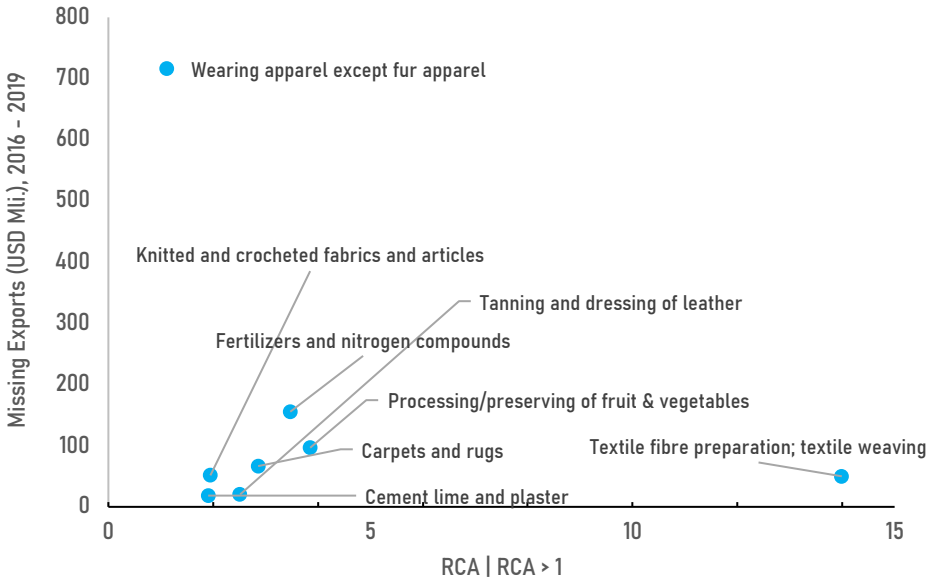


Source: World Bank gravity estimates.
Note: EU = European Union.

138. Wearing apparel, fertilizers, fruit and vegetable processing, and textiles are Uzbekistan's most promising sectors to unlock its untapped export potential, based on its current export specialization. To determine the most promising sectors in the short or medium term, consideration is given to those sectors where Uzbekistan holds not only a comparative advantage but also is lacking in exports. In this context, Uzbekistan has a slight comparative advantage in wearing apparel exports, which has approximately US$700 million in missing exports (Figure 103). Other promising sectors include fertilizers and nitrogen compounds with US$155 million and fruit and vegetable processing with about US$100 million in missing exports.

139. Within the wearing apparel sector, the analysis identifies the United States, Germany, the United Kingdom, Japan, and Italy as the most important destination markets to maximize export opportunities. Similarly, for the processing of fruits and vegetables, Italy, Japan, the United Kingdom, and the United States are the primary destinations of interest. Regarding fertilizers, large emerging markets, such as Brazil, China, India, and Pakistan, represent a substantial portion of the missing exports.

Figure 103: Most Promising Product Exports
(US$ million / RCA > 1)

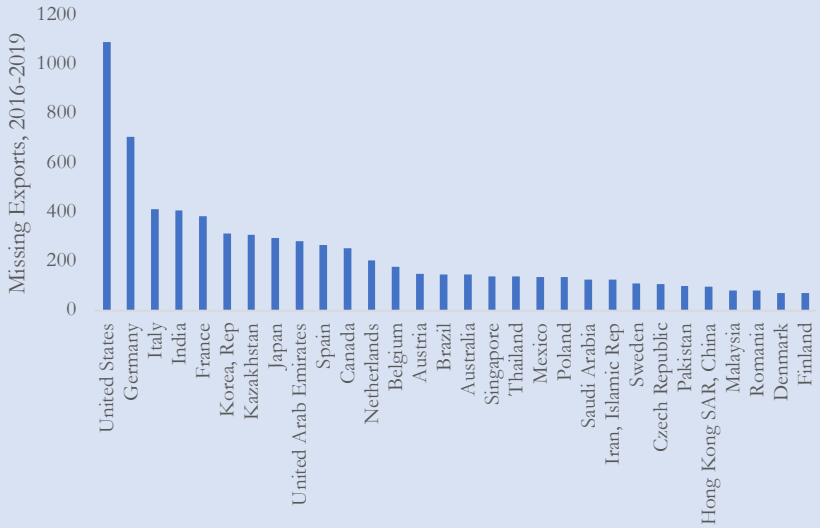


Source: World Bank gravity estimates.
Note: RCA = Revealed Comparative Advantage.

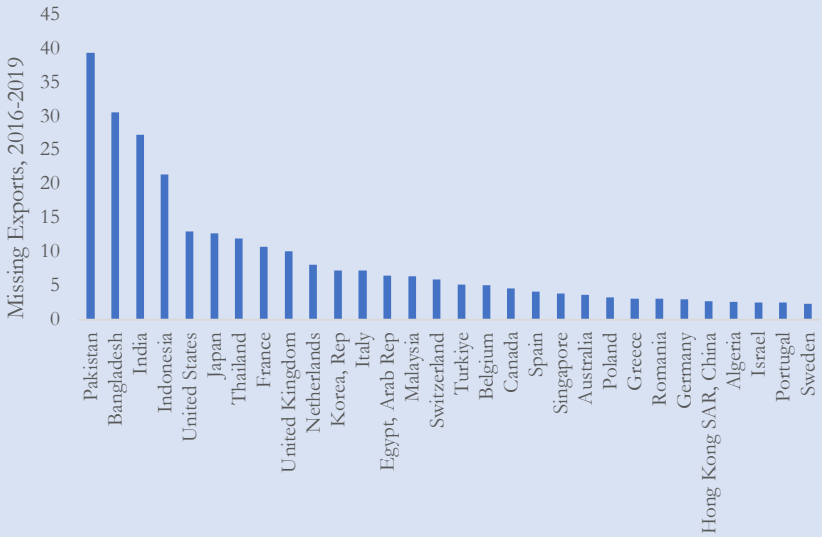
Box 17: Export Potential by Sector and Country Destination

In terms of countries, the United States is the most important destination for manufactured goods, with over US$1 billion in missing exports from 2016 to 2019. Other important destinations include Germany, India, and Italy, which account for US$1.5 billion of missing exports (**Ошибка! Источник ссылки не найден.**). Regarding agricultural exports, the opportunities are more limited. Bangladesh, Indonesia, and Pakistan emerge as the top destinations in terms of missing exports. However, each of these destinations presents export opportunities ranging from only US$20 to US$40 million (Box 17.2).

Box 17.1: Over US$1 Billion in Missing Manufacturing Exports to the United States
(US$ millions)

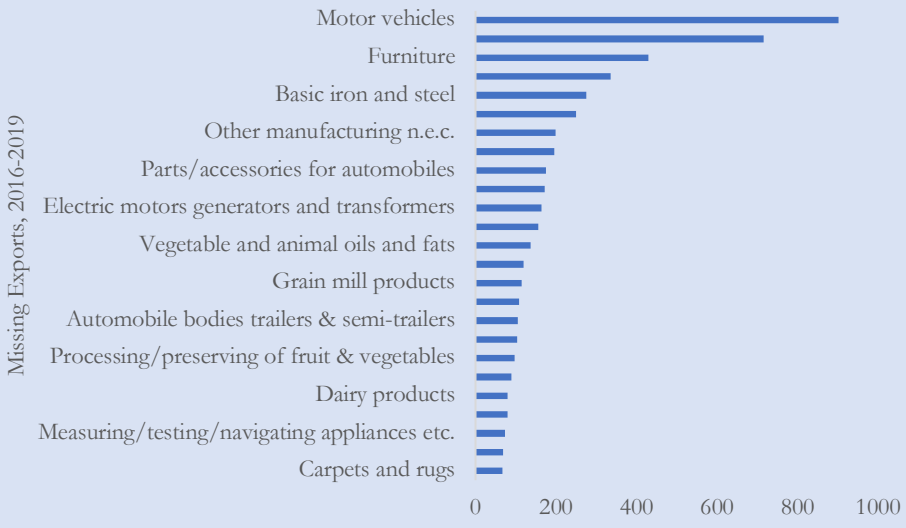


Box 17.2: Limited Missing Agriculture Exports with Bangladesh, India, Indonesia, and Pakistan
(US$ millions)

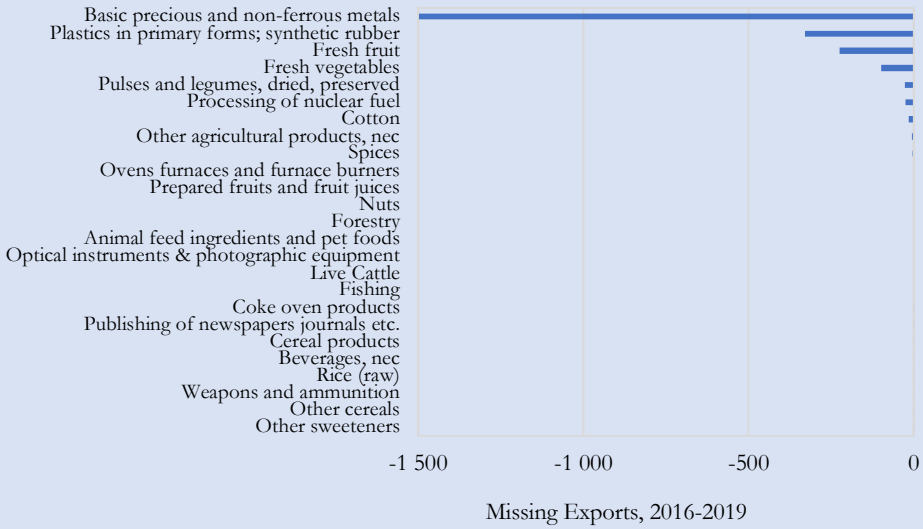


Sector-level results indicate that Uzbekistan has significant export potential in motor vehicles and wearing apparel, while excelling in agricultural products such as fertilizers, vegetables, animal oils, and dairy products. The model estimates that motor vehicles, alone, have a potential export value of nearly US$1 billion, with an additional US$1 billion potential in wearing apparel and furniture (Box 17.3). The analysis suggests, however, that Uzbekistan is already exporting more than expected in some manufacturing sectors, such as plastics, synthetic rubber, and nonferrous metals (Box 17.4). Regarding agricultural goods, Uzbekistan has performed well in exporting fresh fruits, vegetables, and legumes (Box 17.4).

Box 17.3: Uzbekistan: Considerable Potential in Manufacturing and Agriculture (US$ millions)



Box 17.4: Over-Exports in Precious Metals, Plastics, and Some Agricultural Products
(US$ millions)



Source: World Bank staff calculations.

140. Unleashing Uzbekistan's export potential in green products can help increase competitiveness and trade integration for a successful, private sector-led, green transition. Uzbekistan has considerable potential for green exports. Global trade gravity modeling by the World Bank indicates that Uzbekistan has a sizable green export potential of US$500 million per annum, equivalent to around 2.5 percent of today's exports of goods and services.[69] By export destination, Uzbekistan has the greatest potential to export green goods to Europe and the East Asia region, although North America and Central Asia also have considerable potential (Figure 104). By product, the highest green export potential lies in exports of machinery and electrical appliances used for green purposes (Figure 105).

Figure 104: Missing Exports by Region, 2016–19
(US$ million)

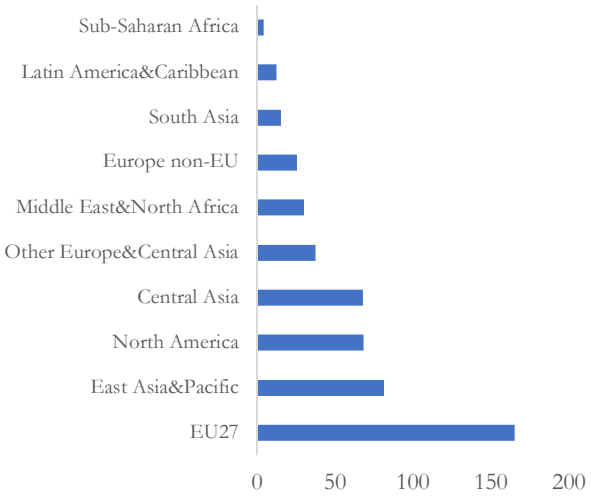
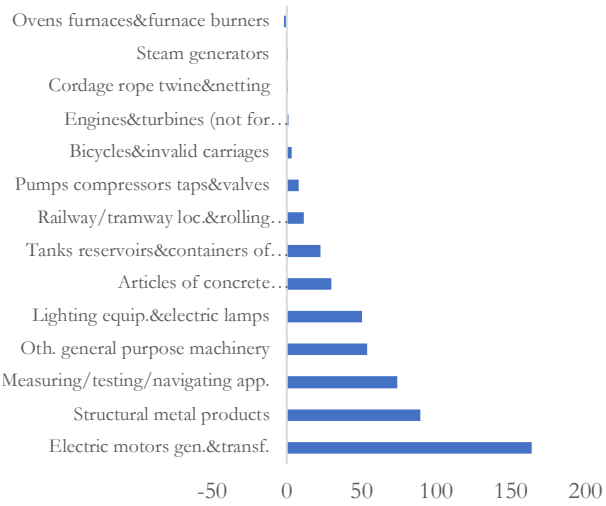


Figure 105: Missing Exports by Product Type, 2016–19
(US$ million)



Source: World Bank staff calculations based on Mulabdic and Yasar (2021).

[69] The green potential is calculated by estimating gravity model equations across 118 manufacturing sectors, using data from 149 countries for the period 2000-19, while controlling for observable characteristics such as geography and level of development. A sector is defined as green if at least a quarter of the HS6 digit codes within it are classified as green products. These products are identified using data from Mealy and Teytelboym (2022) and include the products listed by the Organisation for Economic Co-operation, WTO, and Asia-Pacific Economic Cooperation as having environmental benefits. In this study, the WTO list only includes products that have received broad endorsement from member countries, while the Uzbekistan Country Climate and Development Report (World Bank, 2023b) included the full list of potentially green products, including those supported by individual countries.

141. The demand for green technologies is expected to rise, presenting opportunities for Uzbekistan to reach its green trade potential; however, this comes with challenges and necessitates cooperation at the regional or global levels. Recent shifts in the global trade environment and trade fragmentation, coupled with climate mitigation policies in destination markets and a consumer shift toward more sustainable consumption, as well as the worldwide transition to a low-carbon economy, are likely to boost the demand for green technologies. This trend can offer opportunities as well as risks. Uzbekistan has the potential to become part of these green value chains; however, trade fragmentation among global players could distort the trade and investment environment. To unleash the potential, trade and investment policies would need to create an attractive environment for FDI in the green sector. Moreover, Uzbekistan would benefit from conducting an in-depth assessment of the country's comparative advantages in the green trade sector by identifying segments within the value chains, considering that green technologies often involve complex systems made up of various components in various locations across the world.

4.4 Realizing Trade Opportunities

142. How can Uzbekistan realize its trade opportunities? Overcoming the primary barriers to trade competitiveness is crucial for Uzbekistan to boost its economic growth and integration in GVCs. If these challenges are not addressed, exporters and importers will not be able to venture into new markets or diversify their offerings — nor will they strive to enhance their productivity and competitiveness. Identifying and leveraging the various avenues available to Uzbekistan is essential to realize its trade opportunities and enhance its participation in GVCs.

143. Improving trade competitiveness is a medium- to long-term agenda, and the full realization of Uzbekistan's export potential will be achieved only if complementary reforms enhance firm productivity. The reforms that are proposed in this chapter should not be taken in isolation. They must be accompanied by an effort to improve the domestic business environment and enhance competition in domestic markets, thus leading to improvements in firm productivity and capabilities. In this regard, government reform efforts in privatization and competition regulation are needed. Policies also should focus on reforming institutions, developing financial markets, increasing technological readiness and market size, and facilitating business sophistication. This will help to encourage entrepreneurial activity and increase investment in the country.

4.4.1 Trade Policy and WTO Accession

144. Uzbekistan stands to benefit from the simplification of its tariff structure and the elimination of tariff peaks. Current tariff policies are characterized by a lack of transparency and minimal coordination with WTO negotiation teams. Despite the tariff reductions implemented in 2017, there remains scope for Uzbekistan to streamline its tariff schedule further. This simplification will not only foster long-term stability but also will facilitate smoother WTO negotiations. Engaging in thorough consultations with the private sector is essential to identify and subsequently remove tariff peaks that increase costs to access inputs and capital goods for Uzbekistan's firms. Several reforms aimed at harmonizing and reducing customs tariffs are anticipated to significantly lower the tariffs.

145. Uzbekistan could adopt a more simplified and transparent tariff structure, thus providing long-term stability and enhancing tariff discipline. The country should focus on reducing tariff peaks, particularly on intermediate capital and environmental goods. The goal should be a substantial reduction or total elimination of such tariffs to foster trade and support environmental sustainability. Additionally, it is crucial for Uzbekistan to adopt a nonprotectionist tariff policy that promotes fair trade and economic growth, steering clear of measures that could impede international trade relations and market dynamics.

146. Streamlining nontariff barriers and measures (NTM) in close collaboration with the private sector is essential to bolstering the competitiveness of Uzbekistan's businesses in the global export market. The government should conduct a comprehensive assessment and aim to streamline these measures, which could lead to a significant opportunity to enhance trade efficiency. An initial review of the country's NTMs to identify and subsequently revise or remove particularly restrictive ones will foster a more open and effective trade environment, thus directly benefiting Uzbekistan's integration into international commerce.

147. Finalizing the WTO accession is crucial for more than just market access; it represents a commitment to a broad array of domestic reforms and complementary trade policies, leading to a positive impact on economic growth and poverty. Beyond facilitating access to goods markets, WTO membership encompasses an extensive range of trade reforms, including trade in services, intellectual property rights, trade facilitation, and reduction of NTMs. This integration into the global trade system will connect Uzbekistan's firms to international markets, as well as foster a domestic pro-competitive environment, thereby laying the groundwork for a more integrated, efficient, and competitive economy.

148. Uzbekistan's WTO accession is anticipated to boost its GDP by 10 percent—and potentially more—with investment effects, while also reducing national poverty by up to 1.6 percent.[70] Box 18 underscores the anticipated substantial economic gains and poverty reduction from WTO accession. These are based on three distinct scenarios, each building upon the other such as (i) market access liberalization for goods and services; (ii) market access liberalization in conjunction with trade facilitation measures; and (iii) market access liberalization and trade facilitation measures combined with investment effects. For more details about these scenarios and the methodology, refer to Box 19 and Annex 9, respectively.

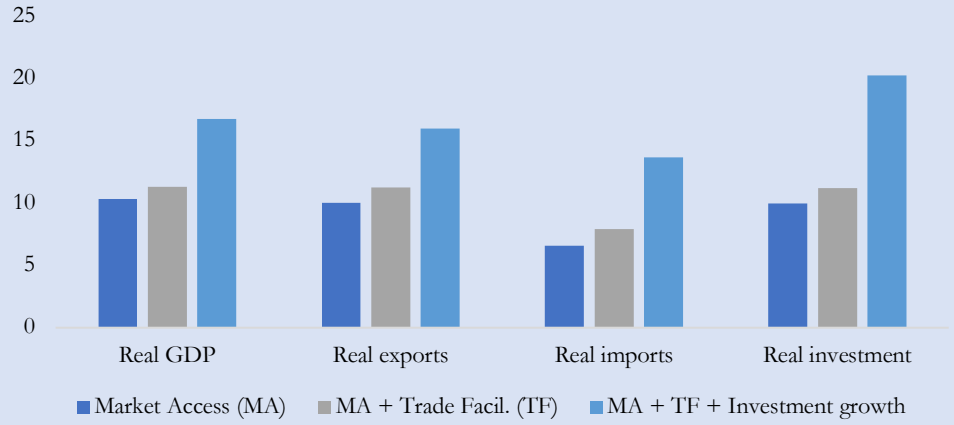
149. Uzbekistan stands to gain considerably from joining the WTO, with the overall benefits depending on the extent of reforms implemented. The country's real GDP could rise by up to 10.3 percent, primarily driven by service trade liberalization—which would account for 80 percent of this growth—and tariff reductions. The impact of WTO accession on GDP could potentially be doubled in a scenario whereby the country undertakes a series of international obligations that will boost investment. Market access and trade facilitation commitments alone could lift up to 330,000 people out of poverty. These figures could rise to 550,000 individuals in overcoming poverty if the potential benefits of WTO accession on capital formation are considered.

[70] Simulated scenarios of WTO accession for Uzbekistan as estimated by Signoret and Tsigas (2023).

Box 18: Accession to the World Trade Organization: Impact on Uzbekistan's Economy and Poverty

Opening trade in goods and services is projected to positively impact Uzbekistan's economy, potentially increasing real gross domestic product (GDP) by approximately 10.3 percent; this could increase to 20.3 percent if the potential investment effects of World Trade Organization (WTO) membership are considered. Under the market liberalization scenario, anticipated growth in Uzbekistan is expected to be driven predominantly by the liberalization of trade in services, which accounts for about 80 percent of the increase, with the remaining growth due to tariff reductions. Additionally, implementation of trade facilitation measures is likely to further augment economic benefits, contributing an estimated additional 1.3 percentage points to the growth engendered by market access commitments. Furthermore, WTO accession is set to boost investment, significantly amplifying the economic impact. The estimated increase of investment could enhance real GDP growth by an additional 49 percent, resulting in a total GDP growth of 20.3 percent over scenarios that only consider market access and trade facilitation. This underscores the critical importance of capital formation in Uzbekistan's growth and development, which could nearly double (Box 18.1).

Box 18.1: World Trade Organization Accession: Economy-Wide Effects under Various Scenarios
(in percent)

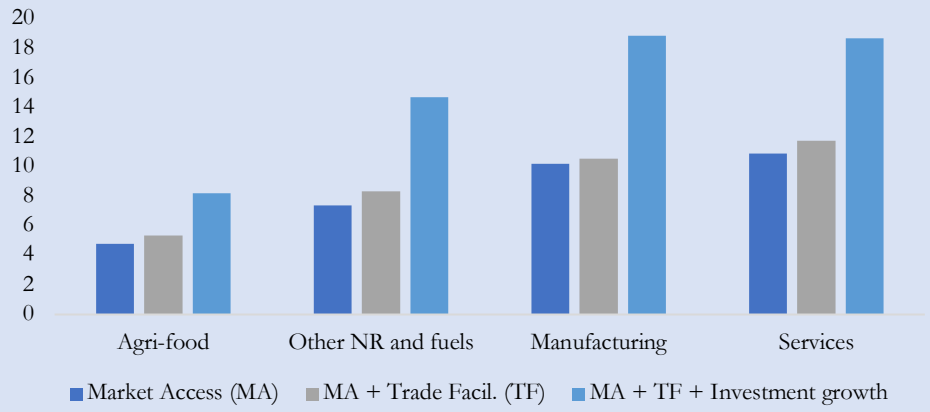


Source: Computable General Equilibrium modeling framework.
Note: GDP = gross domestic product.

Uzbekistan's accession to the WTO is anticipated to have a positive effect on all key sectors of its economy, with services and manufacturing expected to benefit the most, and agriculture to a lesser degree. Under market access and trade facilitation reforms, the service sector could see an output increase of approximately 12 percent. When the investment growth effects of WTO membership are considered, manufacturing is projected to become the fastest-growing sector, with industries, such as motor vehicles and chemicals, leading in dollar terms (Box 18.2). In the service sector, substantial growth is anticipated in traditional areas such as wholesale, retail, and construction, as well as in modern services, including banking and other business services. Agriculture is forecast to grow at a slower pace, with increases ranging from 5 percent to 8 percent, depending on the scenario. The most significant expansions are expected in cattle, fruits, and vegetables.

Box 18.2: World Trade Organization Accession: Services and Manufacturing Sectors—Largest Beneficiaries

(*in p*ercent)

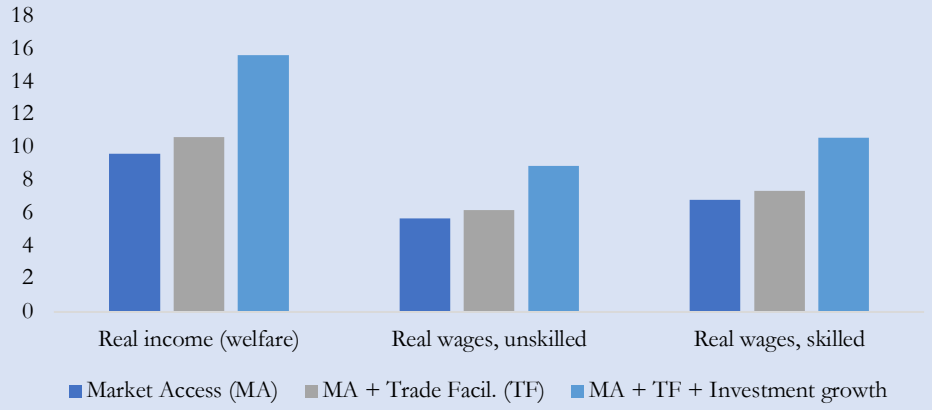


Source: Computable General Equilibrium modeling framework.

Uzbekistan's accession to the WTO is projected to enhance welfare and wages, paralleling increases in real GDP, with the economic transformation favoring higher-skilled workers. Wage growth is expected across all labor categories, with projected increases of between 6 percent and 11 percent, varying by labor type and scenario. Skilled workers are likely to experience comparatively greater returns (Box 18.3).

Box 18.3: WTO Accession: Positive Effect on Real Wages, Especially for Skilled Workers

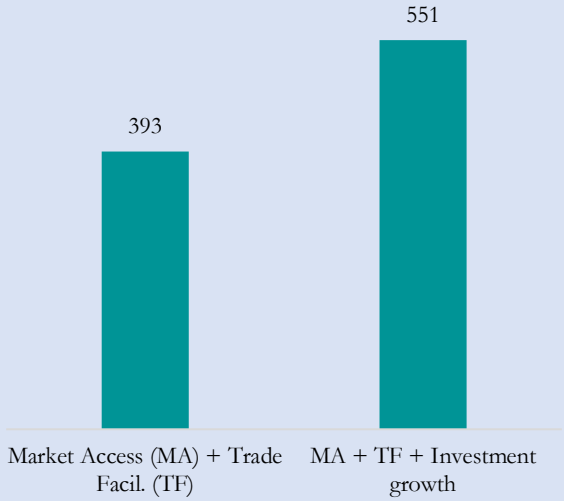
(in percent)



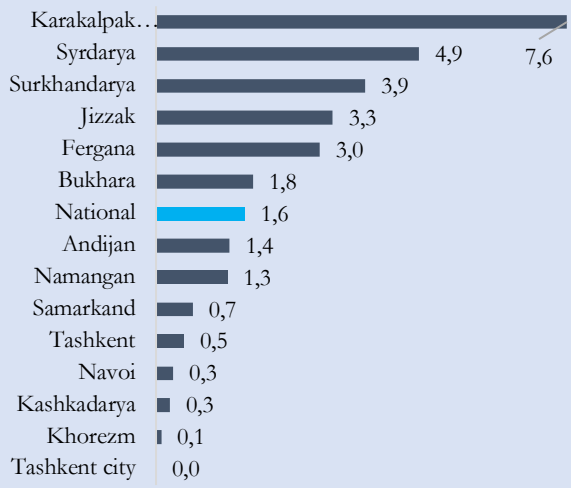
Source: Computable General Equilibrium modeling framework.

WTO accession could reduce poverty in Uzbekistan by 400,000 to 550,000, or 1.6 percent of the population, depending on the depth of the reforms implemented. Specifically, a scenario that includes commitments to greater market access and trade facilitation is projected to decrease the poverty count by 393,000. In contrast, a scenario that also accounts for the potential effects of investment growth could further reduce the number of people living in poverty by up to 551,000, which equates to 1.6 percent of the national population compared to a baseline scenario where Uzbekistan does not join the WTO (Box 18.4). Notably, the greatest reductions in poverty are likely to occur in regions with initially high poverty rates, such as Karakalpakstan and Syrdarya (Box 18.5). Despite the substantial impact on poverty levels, the Gini index, a measure of income inequality, is expected to experience only a slight increase, edging up from 38.6 percent to 38.7 percent.

Box 18.4: Poverty Reduction as a Result of Accession to the World Trade Organization: Scenarios
(million in population)



Box 18.5: Decrease in Poverty Rates by Country Regions as a Result of Accession to the World Trade Organization
(in percent)



Sources: World Bank staff estimates based on Computable General Equilibrium modeling framework and the Uzbekistan Income Distribution Dynamics model.
Note: Estimation is based on the background note prepared by Osorio-Rodarte (2024).

Box 19: Modeling Scenarios

To assess the potential economy-wide and sectoral impacts of the various World Trade Organization (WTO) accession scenarios, this analysis employs a global computable general equilibrium framework. This framework utilizes a global database that identifies Uzbekistan as a distinct model region for the first time. The policy scenarios simulated in this study contemplate varying degrees of reform in relation to the breadth of accession commitments, aiming to evaluate their potential cumulative effects. These scenarios encompass the following areas:

1. **Commitments to market access.** Under this scenario, barriers to goods and services are liberalized. The extent of new market access for goods assumed reflects a relatively modest cut of 20 percent on existing tariff rates, given already significant tariff liberalization by the country. Regarding services, higher barriers to trade remain in place, and the liberalization assumes that the country would use negotiations under the WTO accession process to potentially eliminate some of the most distortive restrictions and cut ad valorem equivalents by 50 percent.[1]
2. **Trade facilitation measures.** When joining the WTO, the country also would make commitments at a minimum with respect to the provisions in the Trade Facilitation Agreement. This has the potential to lower trade costs for traded goods, with possibly differentiated impacts by type of good as well as bilateral partner. To reflect that, bilateral trade costs for agriculture and manufacturing are introduced in the model baseline. They are then reduced by ex post estimates of trade cost reductions for agriculture and manufacturing arising from the Trade Facilitation Agreement, based on a structural gravity estimation.[2]
3. **Investment effects.** This scenario adds the potential effects of adopting a range of international obligations that would result in institutional upgrading, including aspects of transparency, good governance, nondiscriminatory treatment, pro-competition, and ancillary improvements in the business climate associated with WTO membership. Beyond being a vehicle for advancing domestic reforms, WTO membership can help make these changes less susceptible to policy reversals. It also can signal to investors greater predictability and adherence to disciplines and rules. This is captured in this scenario by an acceleration in investment beyond those taking place from the response to trade policies.

[1] Specifically, this reflects the partial liberalization of the analysis of service trade reform (Mode 1 and Mode 3), where Uzbekistan reduces the gap in ad valorem equivalents relative to the best performer by half.
[2] Bilateral trade costs are taken from the World Bank-Economic and Social Commission for Asia and the PacificTrade Cost (ESCAP) database. The estimated impact from trade facilitation measures is drawn from Beverelli et al. (2023).
[3] In modeling this, the scenario considers the impact of WTO membership in altering the country-risk premium. See, for example, the treatment of European Union enlargement by Baldwin, Francois, and Portes (1997). Econometric estimations of the response of investment-to-GDP to WTO membership in Chemutai and Escaith (2017) show significant variability. An average effect in that work suggests an increase of 0.85 percentage points in such a ratio. A reduction in the country-risk premium for Uzbekistan is assumed so that the growth in real investment accelerates by about 3 percent above the growth of real GDP to achieve the higher ratio.

4.4.2 Reduced Cost of Transporting Goods

150. Reducing the cost of transporting goods across borders can significantly assist Uzbekistan in realizing its trade opportunities, encompassing not only its goods but also its services. Facilitating seamless trade flows and lowering trade costs enhances regional and global integration for Uzbekistan. At the same time, it also diminishes its dependence on a limited number of markets and commodities. This, in turn, creates opportunities for firms in more intricate sectors, such as agro-processing and light manufacturing. The integration into GVCs often entails goods crossing borders multiple times, underscoring the importance of trade logistics and facilitation reforms. Indeed, these are essential steps toward exporting more complex products, as well as trade in service reforms, which constitute the backbone of trade in goods.

151. Trade facilitation also will play a crucial role in enhancing the flow of goods in and out of Uzbekistan. The National Trade Facilitation Committee needs to formulate a multiyear trade facilitation and logistics strategy. It should include enhanced engagement with the private sector and provide a clear roadmap of projects and initiatives with adequate resource allocation and accountability. The trade facilitation strategy should consider specific reforms, already identified as follows:

- Complete the digital transformation of trade and border processes, eliminating any remaining paper-based procedure. Reassess the scope of the trade single window and strengthen governance for its implementation.
- Adopt a comprehensive trade facilitation performance framework, based on the regular publication of time release studies, updates of the WTO Trade Facilitation Agreement Gap Assessments, qualitative satisfaction surveys of the private sector, and a mechanism for conducting a trade regulatory impact assessment.
- Review the 2-step clearance process to align with international best practices. Remove mandatory inland transit from imports. Adopt pre-arrival processing and immediate release for low-risk cargo at the borders.
- Expand the usage of deferred payment and separate clearance from release, improving institutional capacities for risk management and post clearance audit at customs and other border agencies.
- Explore the development of an Authorized Economic Operator Program.
- Develop and introduce a comprehensive plan to implement a one-stop border solution. This should be done in coordination with the border authorities of neighboring countries and with the needed investment in border infrastructure and technology (smart borders).

152. Uzbekistan can better exploit existing, yet underused, alternatives. Since the Russian invasion of Ukraine, access to the Caspian Basin has become more valuable. Infrastructure already exists, and the needed upgrade investments are brownfield. Toward the East and South, international transit through China also is emerging as an opportunity for bilateral trade, as well as access to Pakistan's seaports. Improving the operationalization of the multimodal corridor through the Kyrgyz Republic (e.g., through digitalization) and improving the access conditions of current cross-border road service agreements with Afghanistan, China, and Pakistan is needed to allow international transit to Pakistan's ports using two alternative routes (via Afghanistan and via China).

153. Increased cooperation with Turkmenistan would bring considerable dividends for Uzbekistan. The current corridor options through Kazakhstan present market entry risks due to vertical integration of various infrastructure and logistics services, as well as added vulnerability in the face of disruptions. Turkmenbashi is one clear example of a case where closer cooperation can help Uzbekistan diversify its trade routes and improve its access to Caspian shipping. This could be achieved through joint ventures or cooperation agreements concerning landside and marine activities. Transit through Turkmenistan, however, presents operational challenges, from border closures, due to difficulties in obtaining road freight transport permits, to underdeveloped infrastructure and shipping services that limit the use of block trains. Existing dialogue can benefit from the impetus of initiatives, such as the Organization of Turkic States.

154. Looking ahead, Uzbekistan also would benefit from a denser corridor network. Other Caspian ports in Iran might provide access to the Black Sea or Türkiye by rail. Once Azerbaijan and Iran interconnect their rail networks, additional alternatives will improve the choice for shippers. These initiatives might require synchronization with political developments that are beyond the control of Uzbekistan, such as the normalization of relations between Iran and Europe. Scenario planning would be useful to weigh the risk of investing in alternatives that become idle.

155. Logistics is crucial for a doubly landlocked country as is Uzbekistan. There are five pillars encompassing policy reforms in the transport and logistics sector, as follows:

1) **Development of strong institutions** for logistics, with a clear human relations development strategy.
2) **Improvement in the regulatory and legal environment**.
3) **Development of a modernization program for the freight industry**, which is currently lagging in Uzbekistan. Alignment of state-owned enterprise policies and cargo development involving institutional strengthening, regulatory and legal reforms, market reform, and sector organization.
4) **Enhancement of the business environment and digitalization** of rail, road, and air cargo, along with cross-border cooperation.
5) **Improvement in infrastructure service delivery**, including green facilities at the borders, planned network redundancy investments in rail border and track infrastructure, and participation in investments to streamline the middle corridor.
6) **Regional cooperation.**

4.4.3 Ease Restrictiveness in Trade of Services

156. Ease restrictiveness in the trade of services relating to horizontal and domestic regulations, as well as at the sectoral level. Reducing the restrictiveness of the service sector is an important reform that can support growth of trade in services, as well as trade in goods. It also can have spillover effects in terms of knowledge and competitiveness in the domestic economy, as well as for firms that produce for the domestic market. Horizontal reforms refer to cross-border trade flows, digital trade, and domestic regulations for trade in services overall. At the sectoral level, the main reforms to be undertaken in Uzbekistan are in telecommunications, air transport, rail transport, and international road transport. For more details, see Box 20.

Box 20: Horizontal and Sectoral Reforms for Uzbekistan's Service Sector

Horizontal reforms:

- Cross-border data flows: Consider reforming Article 27 (1) of the Law "On personal data," July 2,.2019, requiring that all personal data of Uzbekistan nationals be physically stored in the country.
- This is a barrier that significantly impairs the opportunity for Uzbekistan to leverage possibilities to develop digitally traded services.
- Regarding domestic regulation, consider establishing a legal requirement to publish draft measures or provide interested persons with an opportunity to comment on proposed measures affecting trade in services.

Sectoral reforms:

- **Telecommunications:** Consider the establishment of an independent regulatory authority for telecommunications. Such an authority can properly monitor the effective competition of new entrants, considering the dominant position of Joint Stock Company (JSC) Uzbektelecom. For such a purpose, the government may consider using the World Trade Organization telecommunications reference paper as guidance.
- **Air transport:**
  - Consider clarifying potential discriminatory licensing requirements to obtain a certificate for air operations.
  - Consider reforms to ensure that existing exemptions for customs duties on imports for technical inputs for the maintenance of aircrafts, equipment, parts, technical documentation, as well as software for JSC Uzbek airways are available to other services providers.
- **Rail transport:** Consider reforming the existing statutory monopoly for international and internal cargo rail transportation of national operator, JSC Uzbekrailway.
- **International road transport:** Consider eliminating quotas and introducing economic needs test requirements for permits to provide international road transport.

157. Uzbekistan has much to gain from reforming regulations affecting service provisions that serve as barriers to trade; as such, it could experience an increase in GDP by up to 9 percent. The economy as a whole also could expand by as much as approximately 9 percent in terms of real GDP, if service regulations are reformed to eliminate the most restrictive barriers, thus closing the gap with the best performer by 50 percent (Figure 106). A reduction in Mode 1 restrictions alone could lead to a real GDP expansion of just over 8 percent. Further liberalization across both modes of supply would moderately enhance this increase in real output. The most significant gains from reforms to cross-border trade (Mode 1) are due to the larger initial distortions in this type of service provision, as well as the low initial levels of FDI in services—despite the absence of prohibitive initial barriers. Real exports, imports, and investments also are projected to rise by 5 percent to 8 percent for Uzbekistan as a result of partially reforming service barriers. Even more substantial effects on the real economy could be observed (e.g., up to a 17 percent increase in real GDP) under the most comprehensive service trade reform scenario (full liberalization) as shown in Figure 107. For additional details concerning sectoral impacts and real wages, refer to Box 21. The methodology is outlined in Annex 9.

Figure 106: Economy-Wide Effects of Partial Liberalization of Barriers to Trade in Services
(in percent)

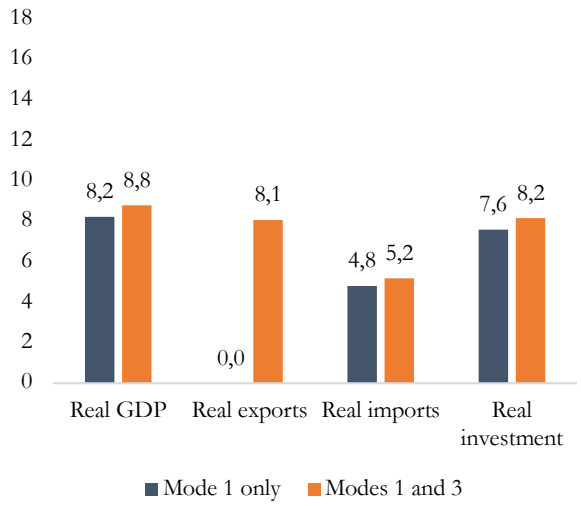
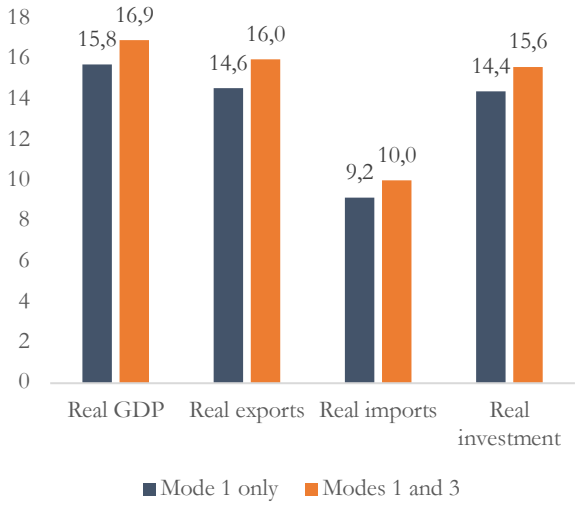


Figure 107: Economy-Wide Effects from Full Liberalization of Barriers to Trade in Services
(in percent)



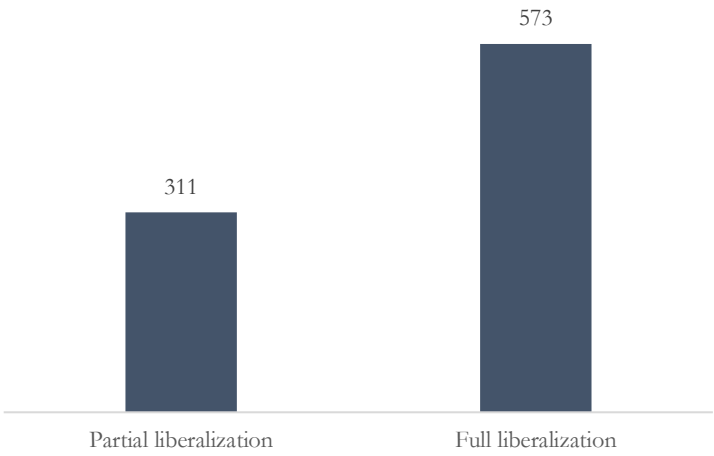
Sources: Computable General Equilibrium modeling framework.
Note: See Annex 9 for tariff equivalents by service and mode of supply.

158. In addition to removing distortions, the opening to trade in services can result in significant productivity gains for the service sector and other sectors of the economy that rely on service inputs. The empirical literature provides ex post evidence that the opening to trade can result in productivity gains that will enhance the economic gains arising from the removal of allocative inefficiencies. These gains can occur in the sector being directly reformed (the output channel), as well as productivity gains in the using sectors (the input channel). Estimates of such productivity responses to reduced trade costs focus on manufacturing liberalization, where an elasticity of tariff changes to firm-level productivity gains has been measured (e.g., Amiti and Konings, 2007; Fieler and Harrison, 2023; and Topalova and Kahndelwal, 2011). The same economic effect likely holds in the case of services. However, similar estimates, building on tariff equivalents for service trade restrictions, are less available.[71] Yet, evidence concerning the connection between service trade reform and productivity gains in manufacturing can be found in the literature (e.g., Arnold, Javorcik, and Mattoo, 2011; Arnold, Javorcik, Lipscomb, and Mattoo, 2016; and Shepotylo and Vakhitov, 2015). The ex-ante estimates in this analysis adopt these productivity channels by assuming productivity gain responses to trade opening within the range of those documented in the literature.[72]

159. Liberalizing restrictions to trade in services could lift 311,000 people out of poverty. The scenario of service liberalization with a partial scope for trade in services provided by Mode 1 and Mode 3, could lift 311,000 people from poverty (defined as living below a poverty line of US$3.65 per day in purchasing power parity terms). This reduction in poverty is relative to a baseline scenario without such a liberalization reform. An upper-bound scenario, where restrictions in the trade in services are fully liberalized relative to the best performer, could almost double these effects on poverty reduction. In that scenario, as many as 573,000 Uzbekitani nationals could be lifted out of poverty (Figure 108).

[71] Evidence of a positive link between service trade liberalization and an increase in productivity in the service sector includes Fu, Wang, and Yang (2023) and Papaioannou (2018).
[72] Specifically, total factor productivity is assumed to increase by 0.3 percent for each percent point reduction in tariff equivalents.

Figure 108: Poverty Reduction from Liberalizing Service Trade
(measured at PPP US$3.65/day poverty line, thousands of people)

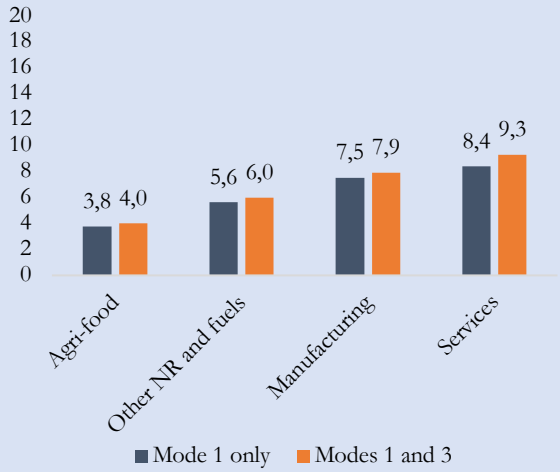


Source: World Bank staff estimates based on Computable General Equilibrium modeling framework and the Uzbekistani Income Distribution Dynamics model.
Notes: (i) The estimation is based on the background note prepared by Osorio-Rodarte (2024). (ii) PPP = purchasing power parity.

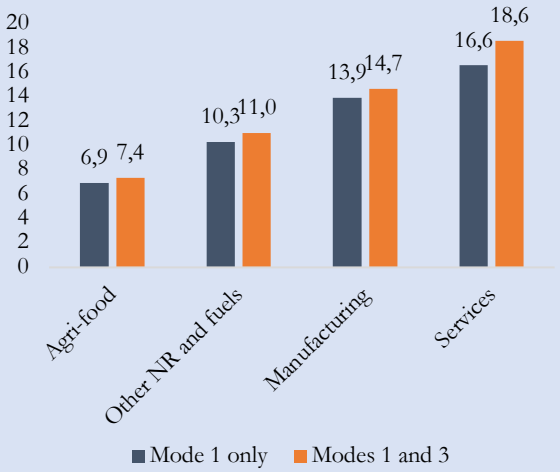
Box 21: Liberalization of Trade in Services: Partial and Full Scenarios and Sectoral Effects

All sectors of the economy can benefit from an opening of trade in services, particularly outside the services in the manufacturing sector. An opening of the trade in services is associated with significant sectoral output expansions and productivity gains, leading to considerable growth across all sectors. With a partial liberalization of service restrictions, the service and manufacturing sectors are expected to grow in the range of 8 percent to 9 percent (Box 21.1). In the manufacturing sector, industries such as motor vehicles and chemicals are projected to experience the largest expansions. These sectoral expansions are further amplified in scenarios of full liberalization, with potential growth of close to 15 percent and 19 percent for manufacturing and services, respectively (Box 21.2). The majority of the expansion in sectoral output is linked to the liberalization of the more substantial restrictions in Mode 1. Additionally, the sectoral output gains are modestly enhanced by liberalizing restrictions in Mode 3, with the service sector, in particular, benefiting from more pronounced gains as foreign direct investment is attracted by lower barriers to commercial presence.

Box 21.1: Sectoral Output Effects from a Partial Liberalization of Barriers to Trade in Services
(in percent)



Box 21.2: Sectoral Output Effects from a Full Liberalization of Barriers to Trade in Services
(in percent)

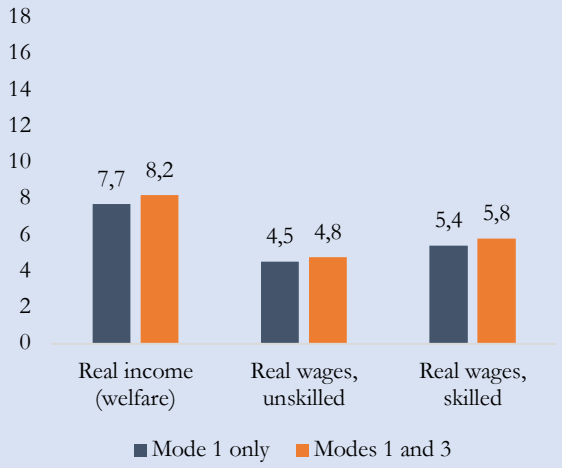


Source: Computable General Equilibrium modeling framework.
Note: NR= Natural resources

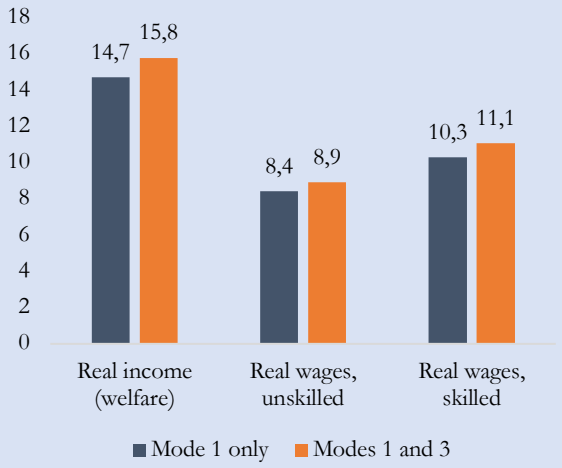
The liberalization of services in Uzbekistan would increase socioeconomic welfare and real wages. Across the economy, real income would increase in all scenarios, with the largest expansion again in the case where both modes of service trade are liberalized (Box 21.3 and Box 21.4). In that case, household welfare would increase by about 8 percent in a partial liberalization, which can be as high as 16 percent in the upper limit case of a full liberalization. The wages of

skilled and unskilled workers would increase in all the considered scenarios. Although the effect on wages for skilled and unskilled workers is positive, it tends to favor the relatively more skilled worker (with gains of 4.8 percent and 5.8 percent, relatively, in the case of partial liberalization).

Box 21.3: Welfare and Wage Effects from a Partial Liberalization of Barriers to Trade in Services
(in percent)



Box 21.4: Welfare and Wage Effects from a Lull Liberalization of Barriers to Trade in Services
(in percent)



Source: Computable General Equilibrium modeling framework
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4.4.4 Improve Regional Integration

160. Uzbekistan's strategic approach to trade policy could significantly benefit from a focus on deep integration, extending beyond foundational WTO adherence. By pursuing trade policies that foster deep integration, Uzbekistan can enhance its competitiveness, mitigate trade policy uncertainty, and bolster domestic reforms that surpass commitments made to the WTO. Such deep agreements are instrumental in promoting internal reforms that are not covered by the WTO's mandate. It is recommended that these initiatives be undertaken in the medium term, using existing WTO commitments as a starting point for further negotiation and policy development.

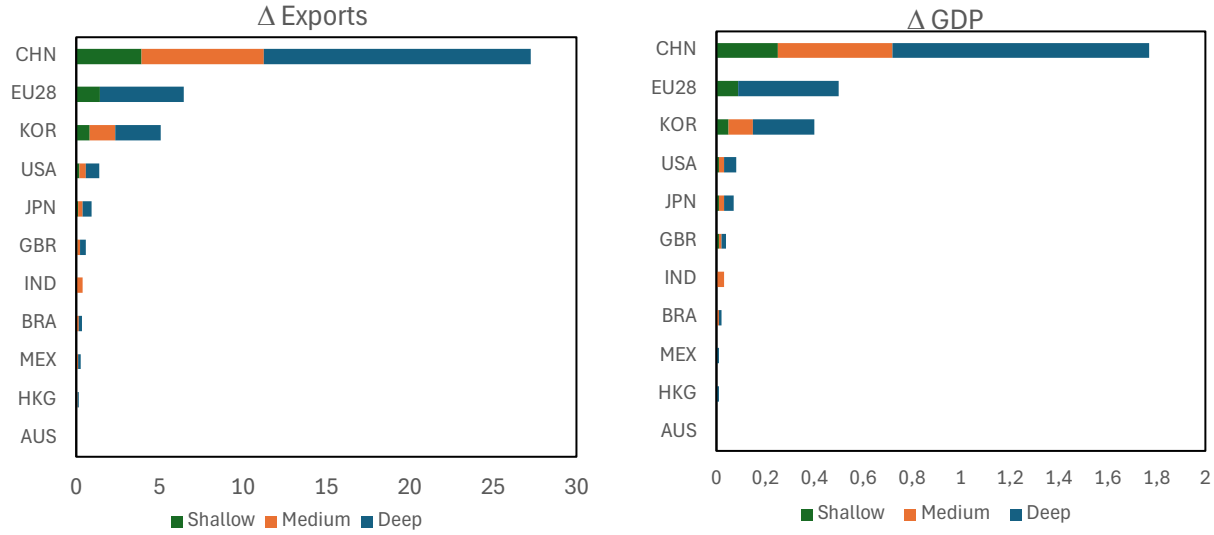
161. Uzbekistan's trade agreements, characterized by their shallow depth, present an opportunity for economic improvement through deepening, even if modest and without productivity enhancement.[73] The most pronounced gains could be realized by expanding the agreements with Russia, which could lead to a 6.25 percent increase in total exports and a 0.4 percent growth in GDP. Similarly, deepening trade relations with Ukraine and the Kyrgyz Republic also could be beneficial, with projected increases in total exports of 0.61 percent and 0.58 percent, respectively, as well as a 0.04 percent rise in GDP for both. These projections highlight the potential economic advantages of intensifying existing trade agreements.

162. Uzbekistan's pursuit of strategic trade agreements with major economies such as China, the European Union, and Korea offers a promising avenue for bolstering economic growth. The potential impact of a deep trade agreement with China suggests a considerable enhancement of Uzbekistan's export capacity, with an anticipated average increase of 16 percent, alongside a GDP growth of 1.05 percent (Figure 109). Engaging in similar comprehensive trade agreements with the European Union and Korea also could yield positive outcomes, with expected export growth of 5 percent and 2.73 percent, respectively, as well as corresponding GDP increases of 0.4 percent and 0.25 percent, respectively (Figure 109). These projections highlight the substantial economic benefits that such agreements could deliver, despite their current absence from the political debate. For a detailed explanation of the methodology used to select these potential PTA partners, refer to Annex 7.

[73] The background note on Uzbekistan's regional integration was prepared by Espitia, Rocha, and Santoni, (2023).

163. Finally, in terms of logistics and connectivity, Uzbekistan's regional cooperation could be advanced through several policy actions. Firstly, strengthening cooperation with Turkmenistan and Iran is crucial to improving transit options and accessing ports and shipping, an objective that should be pursued in the short term. Additionally, Uzbekistan should consider formal participation in the Middle Corridor Organization. In this regard, it could explore the potential for a joint venture with Turkmenistan and Kazakhstan, which could be realized in the short to medium term. Lastly, in the medium term, Uzbekistan could evaluate the feasibility of adopting a model similar to the commercially oriented joint ventures that have been successful in corridor organizations in other regions. This approach could facilitate more effective collaboration with neighboring countries in developing and managing transport corridors.

Figure 109: Ratifying New Preferential Trade Agreements: General Equilibrium Effects on Gross Domestic Product, 2019
(percentage points for different levels of depth)



Source: Calculation based on the World Bank's Deep Trade Agreement dataset.
Notes: Percent change compared to the baseline in total exports and gross domestic product of participating countries. It is assumed that sigma = 6. The reference country for the normalization is Tonga. Notice that Δ GDP = Δ gross domestic producer prices - Δ consumer prices.

4.5 The Way Forward

164. For Uzbekistan to materialize its trade opportunities, key reforms must be undertaken.

Table 14: Summary of Policy Recommendations to Boost External Integration

Key Areas	Priority	Responsible Actor
Reform Objective: Streamlining Trade Policy on Tariffs and Nontariff Barriers and Measures (NTM)		
(a) Tariffs		
Create a tariff committee to improve transparency regarding tariffs to support fair trade and economic growth.	Short term	Prime Minister's Office
Remove all tariffs on imports of staple foods and medicines with a government act or law.	Short term	Ministry of Investment, Industry, and Trade; Ministry of Economy and Finance
Streamline tariffs to reduce or eliminate tariff peaks of key inputs for domestic producers.	Short term	Ministry of Investment, Industry, and Trade; Ministry of Economy and Finance
(b) NTMs		
Establish an NTM review process within the National Trade Facilitation Committee by a Presidential Act.	Short term	Ministry of Investment, Industry, and Trade; Ministry of Foreign Trade
Create a steering committee within the National Trade Facilitation Committee to streamline NTMs.	Medium term	Prime Minister's Office

Key Areas	Priority	Responsible Actor
Reform Objective: Streamlining Trade Policy on Tariffs and Nontariff Barriers and Measures (NTM)		
Reform Objective: Reducing Trade Costs		
Develop strong institutions and a regulatory environment for the transport and logistics sector.	Short term	Ministry of Transport; Ministry of Investment, Industry, and Trade (Customs Service)
Develop a modernization program for the freight industry and align state-owned enterprise policies and cargo development.	Short term	Ministry of Transport
Enhance the business environment and digitalization of rail, road, and air cargo, along with cross-border cooperation.	Medium term	Ministry of Transport, Customs Service
Implement green lanes at borders with Kazakhstan and planned network redundancy investments in rail border and tracking infrastructure.	Medium term	Prime Minister's Office; Ministry of Transport; Customs Service; and relevant inspection agencies
Reform Objective: Improving Trade Facilitation		
Develop a multiyear trade facilitation strategy and performance framework.	Short term	Prime Minister's Office; Ministry of Investment, Industry, and Trade; Customs Service
Advance trade automation and eliminate remaining paper-based procedures. Reassess the scope of the trade single window and strengthen governance for its implementation	Short term	Customs Services; National Trade Facilitation Committee
Review the two-step clearance process and promote pre-arrival processing and immediate release of low-risk cargo at borders, thereby eliminating mandatory transit to inland terminals.	Short term	Customs Service, National Trade Facilitation Committee
Improve institutional capacities for risk management and post clearance audit at customs and other border agencies, expand deferred payments, and implement the separation between release and clearance.	Medium term	Customs Service, National Trade Facilitation Committee
Implement the one-stop smart border solution with border authorities of neighboring countries.	Medium term	Prime Minister's Office; Ministry of Investment, Industry, and Trade; Customs Service
Reform Objective: Boosting Trade in Services		
1. Reform Article 27 (1) of the Law "On personal data" July 2, 2019, requiring that all personal data of Uzbekistan nationals to be physically stored in the country.	Short term	State Personalization Centre under the Cabinet of Ministers
2. Establish a legal requirement to publish draft measures or provide interested persons with an opportunity to comment on proposed measures affecting trade in services.	Medium term	Prime Minister's Office; Ministry of Investment, Industry, and Trade; Ministry of Economy and Finance
3. Undertake reforms in the telecommunications sector and air transportation.	Medium term	Ministry of Digital Technologies; Ministry of Transport
Reform Objective: World Trade Organization (WTO) Membership		
4. Establish a strong, quality WTO accession team.	Short term	Prime Minister's Office
5. Establish a clear roadmap and secure donor support to ensure funding and qualifications are well targeted.	Short term	Ministry of Investment, Industry and Trade, Ministry of Economy and Finance
Reform Objective: Improving Trade Integration through Preferential Trade Agreements		
6. Prepare a clear strategy complementary to the WTO accession process.	Short term	Ministry of Investment, Industry and Trade, Ministry of Economy and Finance
7. Include market access through preferential trade agreements in the national strategic plan to reinforce the depth of the agreements and sign new ones where economically viable.	Medium term	Ministry of Investment, Industry and Trade, Ministry of Economy and Finance

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Annex 1. Methodologies Used for Uzbekistan's Gross Domestic Product per Capita Growth Decomposition Analysis

Gross domestic product (GDP) per capita was decomposed into the contributions made by (i) aggregate productivity growth and employment growth by different sectors of the economy and (ii) demographic changes.[74] The Shapley methodology permits the linking of changes in average income per capita to labor market factors, including the quality and quantity of jobs (as measured by labor productivity and employment rates). It differentiates these from factors that affect income per capita but are not directly related to the labor market, such as changes in the average number of dependents per worker.

The Shapley methodology involves six steps:

- **Step 1**: Decompose the growth of GDP per capita (proxied by value added per capita in the agriculture, industry, construction, and service sectors) into changes in the employment rate, output per worker, and demographic factors.[75]
- **Step 2**: Decompose overall changes in employment into changes in employment by sector.
- **Step 3**: Decompose changes in output per worker into changes in output per worker within sectors and changes due to the relocation of workers between sectors.
- **Step 4**: Analyze each sector's role in the aggregate effect of employment reallocation across sectors.
- **Step 5**: Examine the role of capital and total factor productivity in aggregate changes in output per worker.
- **Step 6**: Combine the results of the previous steps to determine how each factor affects per capita growth.

Growth in aggregate output per capita can be described by growth in its components using the following identity:

$$\frac{Y}{N} = \frac{Y}{E} * \frac{E}{L} * \frac{L}{A} * \frac{A}{N}$$

or

$$y = w * e * p * a$$

where

Y = Total output
N = Population
E = Employment
L = Economically active population
A = Working-age population (ages 15+)

where

y = Output per capita
w = Output per worker
e = Employment rate
p = Participation rate
a = Working-age population/total population

[74] The World Bank's Jobs Generation and Growth Decomposition Tool, which uses Shapley decompositions, is applied. The objective of growth accounting is to show how employment and productivity growth, as well as the sectoral relocation of labor, contribute to overall growth. It is not intended to explain why such a pattern occurred. The total change in GDP per capita can be described as the sum of (i) employment rate changes; (ii) changes in aggregate output per worker (split into (a) changes within sectors, and (b) employment reallocation between sectors); and (iii) changes in the demographic structure of the population. Due to statistical discrepancies, the sum of value added from each sector does not always add up to the total value added. Similarly, the sum of employment from each sector does not always add up to total employment. In line with the approach used in the World Bank's World Development Indicators database, this discrepancy is included in the service sector, which is why the data series is named "Services, etc."

[75] The employment elasticity of growth reflects changes in the level of employment, not changes in employment rates. It reveals nothing about the actual extent of job creation, since a country that grew by 1 percent and experienced a 1 percent increase in employment would have the same employment elasticity as a country that grew by 10 percent and experienced a 10 percent increase in employment. Moreover, the employment elasticity does not account for demographic change, even though population growth frequently offsets increases in employment. Improvements in income and progress in poverty reduction do not depend on the absolute number of employed workers, but on the share of employed workers in the working-age population or the labor force, and positive employment elasticity may be consistent with rising unemployment rates. This is especially important in developing countries where population growth tends to play an important role in labor force growth. Finally, it should be noted that value addition does not include taxes and subsidies, while GDP does, but the difference between GDP and the sum of value added of all economic sectors is significantly small.

Annex 2. A Brief Description of Methodology of World Bank Enterprise Surveys

The World Bank Enterprise Surveys are firm-level surveys of business environment conducted globally for 49 countries. The surveys take place approximately once every five or six years, and their methodology is described here: https://www.enterprisesurveys.org/en/methodology. The surveys cover a broad range of topics including access to finance, corruption, infrastructure, crime, competition, labor, obstacles to growth, and performance measures. Results of the 2019 World Bank Enterprise Survey on Uzbekistan is provided here: https://www.enterprisesurveys.org/en/data/exploreeconomies/2019/uzbekistan.

In Uzbekistan, the 2019 survey had a sample size of 1,239 firms in six manufacturing sectors (food processing, textiles, garments, rubber and plastics, nonmetallic minerals, and other manufacturing) and two services sectors (retail trade and other services) with small, medium, and large firms located in 10 regions (Tashkent city, provinces of Tashkent, Samarkand, Andijan, Surkhandarya, Qashkdaria, Fergana, Navoi, Jizzah, and Republic of Karakalpakstan).

Who conducts the surveys? Private contractors conduct the Enterprise Surveys on behalf of the World Bank and under its supervision. Surveys are usually carried out in cooperation with business organizations and government agencies promoting job creation and economic growth, but anonymity is never compromised. The mode of data collection is face-to-face interviews (in-person).

Who is surveyed? Survey questions are answered by business owners and top managers, chief accountants, and human resource managers. The World Bank 2019 surveys cover a broad range of topics relating to the business environment, including access to finance, corruption, infrastructure, competition, and performance.

What is asked? The standard firm survey questionnaire covers over 15 topics, including firm characteristics, gender participation, access to finance, and annual sales, among others. See the questionnaire here. Over 90 percent of the questions are fact-based, while the remaining 10 percent assess respondent opinions on obstacles to their firm's growth and performance.

Sampling, weights, and frame: The Sampling Note provides the rationale for the sample sizes. Ideally, the survey sample frame is derived from the universe of eligible firms obtained from the economy's statistical office. Sometimes the master list of firms is obtained from other government agencies such as tax authorities. In a few cases, the sample frame is created via block enumeration, where the World Bank "manually" constructs a list of eligible firms after (i) partitioning an economy's cities of major economic activity into clusters and blocks and (ii) randomly selecting a subset of blocks that will then be enumerated.

The complementary survey in Uzbekistan, referred to as the "Uzbekistan Productivity and Jobs Survey," was developed by the Macroeconomics, Trade, and Investment team in Uzbekistan, with the purpose of identifying the main constraints on labor productivity growth, technology absorption, and job creation, not only in the manufacturing sector but also in the service sector. This survey was conducted in 2014, 2017 and 2023 and based on the 2013 questionnaire (large manufacturing firms), the 2017 questionnaire (large and small manufacturing firms), and the 2023 questionnaire (large and small firms in the manufacturing and service sectors). The purpose of this survey is to analyze key country- and sector-specific constraints to labor productivity growth, technology absorption, and job creation.

For the firm survey in 2023, the total sample size was 1,985 enterprises, including 1,119 manufacturing firms in five subsectors and 866 service enterprises in six subsectors of the services sector, including micro and small firms (denoted here as "Small"), medium-size firms, and large-size firms (denoted here as "Large") in all 14 administrative regions/territories of Uzbekistan. The manufacturing subsectors are as follows: machinery building industry, chemical and petrochemical industry, food processing industry, light industry (including textile, garment, and furniture industries), and construction materials industry. The service subsectors are as follows: transportation and storage, information and communication, financial and insurance, accommodation and catering, wholesale and retail trade, and professional, scientific, and technical activities.

The national definition of firm sizes changed in January 2019 based on the number of employees (e.g., under 50 employees for micro firms and 51–100 employees for small firms) and the annual revenue (up to UZS 1 billion for micro firms and from UZS 1 billion to UZS 10 billion for small firms). The same questionnaire was used to conduct surveys in 2023 and 2017.

Table A2.1: Sample Size of the World Bank "Uzbekistan Productivity and Jobs Survey" of manufacturing and services firms conducted in 2023 Required for 90 Percent Confidence Interval (margins of error: 7.5 percent, by sector and size)

	Services												Manufacturing										
Province	**Wholesale, Retail Trade Services**		**Accommo-dation, Catering Services**		**Transpor-tation, Storage Services**		**Information, Communicati on Services**		**Financial, Insurance Services**		**Professional, Scientific, Technical Activities**		**Light Industry**		**Machinery Building Industry**		**Chemical, Petrochemical Industry**		**Food Processing Industry**		**Construction Materials Industry**		**Total Services and Manufacturing Firms**
Size	**1***	**2***	**1***	**2***	**1***	**2***	**1***	**2***	**1***	**2***	**1***	**2***	**1***	**2***	**1***	**2***	**1***	**2***	**1***	**2***	**1***	**2***	
Tashkent city	3	7	22	29	28	34	55	53	49	49	65	56	17	8	33	20	36	9	14	13	15	16	631
Tashkent province	13	17	13	6	12	5	8	1	7	0	7	2	11	11	12	7	17	5	12	12	13	13	204
Bukhara province	8	6	12	3	2	3	4	1	6	1	5	3	6	4	4	1	5	1	8	3	4	1	91
Navoi province	8	5	6	0	6	3	4	0	2	0	4	3	5	1	4	0	4	3	7	1	6	3	75
Samarkand province	15	13	15	4	7	4	8	1	8	0	7	6	9	8	6	2	8	2	13	7	12	2	157
Fergana province	14	3	10	0	18	0	8	0	12	5	3	0	13	8	7	0	8	0	11	2	18	0	140
Andijan province	9	5	6	1	8	4	6	0	7	1	5	1	16	9	14	10	8	2	8	2	9	2	133
Namangan province	9	7	5	1	7	1	5	0	6	0	4	3	13	8	11	2	6	2	8	3	9	2	112
Syrdaria province	4	2	3	0	3	0	2	0	2	0	1	0	3	4	3	0	2	2	3	2	2	3	41
Djizzakh province	5	3	5	0	3	0	3	0	2	0	3	2	4	3	3	1	3	2	6	2	5	2	57
Kashkadaria province	11	9	8	1	8	4	6	0	4	0	4	2	7	5	7	1	6	2	9	4	8	1	107
Surkhandaria province	8	3	6	1	6	3	4	0	2	0	3	3	5	3	3	0	4	1	6	3	8	2	74
Khorazm province	8	6	6	0	7	3	5	0	4	0	4	3	7	4	8	1	4	0	8	3	7	0	88
Karakalpakstan Rep.	6	2	5	0	6	2	4	0	5	1	3	2	4	3	4	0	5	3	8	6	5	1	75
Target sample size	121	88	121	45	121	67	120	55	116	55	120	84	121	81	118	45	118	31	121	64	121	46	1979
Total required sample size (rounded by cell)	121	88	122	46	121	66	122	56	116	57	118	86	120	79	119	45	116	34	121	63	121	48	1985

Source: World Bank "Uzbekistan Productivity and Jobs Survey" of manufacturing and services firms conducted in 2023.

Weights

	Services												Manufacturing									
Province	Wholesale, Retail Trade Services		Accommo-dation, Catering Services		Transporta-tion, Storage Services		Information, Communica-tion Services		Financial, Insurance Services		Professional, Scientific, Technical Activities		Light Industry		Machinery Building Industry		Chemical, Petrochemical Industry		Food Processing Industry		Construction Materials Industry	
Size	1*	2*	1*	2*	1*	2*	1*	2*	1*	2*	1*	2*	1*	2*	1*	2*	1*	2*	1*	2*	1*	2*
Tashkent city	889	4	235	2	130	2	77	2	21	2	90	3	157	3	32	2	30	1	153	2	178	2
Tashkent province	1056	4	232	2	124	2	75	1	21	0	97	4	165	3	33	2	31	1	147	2	168	2
Bukhara province	1083	4	232	2	108	2	77	1	22	1	88	4	172	3	34	2	32	1	151	2	157	1
Navoi province	989	3	216	0	125	2	70	0	23	0	85	3	152	4	33	0	31	1	142	3	169	1
Samarkand province	1055	3	231	2	134	2	81	1	21	0	91	3	168	3	33	2	30	2	144	2	176	2
Fergana province	998	3	237	0	128	0	75	0	20	2	100	0	158	3	32	0	29	0	151	3	171	0
Andijan province	1074	4	220	1	129	2	73	0	23	1	87	4	163	3	33	2	31	1	156	3	181	2
Namangan province	1031	4	254	1	135	3	77	0	21	0	99	3	165	3	32	2	30	1	147	2	170	2
Syrdaria province	1036	4	222	0	110	0	78	0	21	0	132	0	137	3	29	0	37	1	168	2	190	2
Djizzakh province	1088	3	241	0	149	0	73	0	24	0	82	3	142	3	32	1	35	1	147	3	171	2
Kashkadaria province	999	4	221	2	121	2	74	0	19	0	101	3	169	3	33	1	30	1	155	2	179	1
Surkhandaria province	972	4	241	1	122	2	79	0	19	0	102	3	170	3	29	0	28	1	154	2	171	2
Khorazm province	1020	4	249	0	136	2	70	0	21	0	99	3	159	3	32	1	33	0	147	2	178	0
Karakalpakstan Republic	1093	4	236	0	139	2	86	0	21	1	104	3	175	3	32	0	31	1	143	2	179	1
Total population (weighted)	124762	315	28432	71	15579	147	9341	99	2445	97	10894	267	19415	242	3826	69	3551	41	18072	132	21025	73	258895

Source: National Statistics Agency of Uzbekistan, total number of enterprises in sectors as of March 1, 2023. *Notes:* 1* - merged microfirms + small firms, 2* - merged medium + large firms

Annex 3. Peru's Experience of State-Owned Enterprise Reform

From 1970 to 1990, state-owned enterprises (SOE) in Peru saw substantial growth, controlling between 15 percent and 20 percent of gross domestic product (GDP), 28 percent of exports, and 26 percent of imports by the end of the 1980s. Peru then faced a severe macroeconomic crisis in the period 1989–90, where GDP fell by 12 percent and the fiscal deficit reached -9 percent.

The privatization process formally began in September 1991 with the Law for the Promotion of Private Investment in State Companies. Initial tasks included a comprehensive census of companies and compiling of information to incorporate them into the privatization program. Each company's potential for liquidation or continued operation with the aim of privatization was assessed. Options included selling asset packages, existing shares, new share issues, joint ventures, financial leasing, and management contracts.

SOE restructuring included legal, financial, and administrative reorganization, as well as rationalization of expenses and personnel. Prices and tariffs were adjusted to reflect real costs. The government also assumed substantial liabilities of the companies before privatization, including US$1.46 billion in external and internal debt and over US$200 million in tax debt. Obligations to the banking system and public sector were transferred to the Central Government, and voluntary retirement programs were implemented to improve SOE financial results.

Public auction was the primary method for transferring company control and ensuring transparency and competitiveness. Transferring control was essential for giving strategic operators the freedom to make the necessary business decisions to enhance competitiveness and viability. Directors with private sector management experience were recruited to oversee the privatization processes, each tailored to the specific situation of each company or group of companies. Despite similar general problems, such as weak equity and financial situations as well as fragile competitive positions, privatization strategies nevertheless were customized.

From 1992 to 1996, the dynamic and firm privatization process transferred nearly 160 SOEs to the private sector, generating US$8.1 billion in revenues and US$6.8 billion in investment commitments. From 1997 to 2000, however, the government's attitude toward privatization became hesitant, causing the process to stall. SOE reform initially focused on privatization, peaking between 1993 and 1996, followed by concessions in the 2000s.

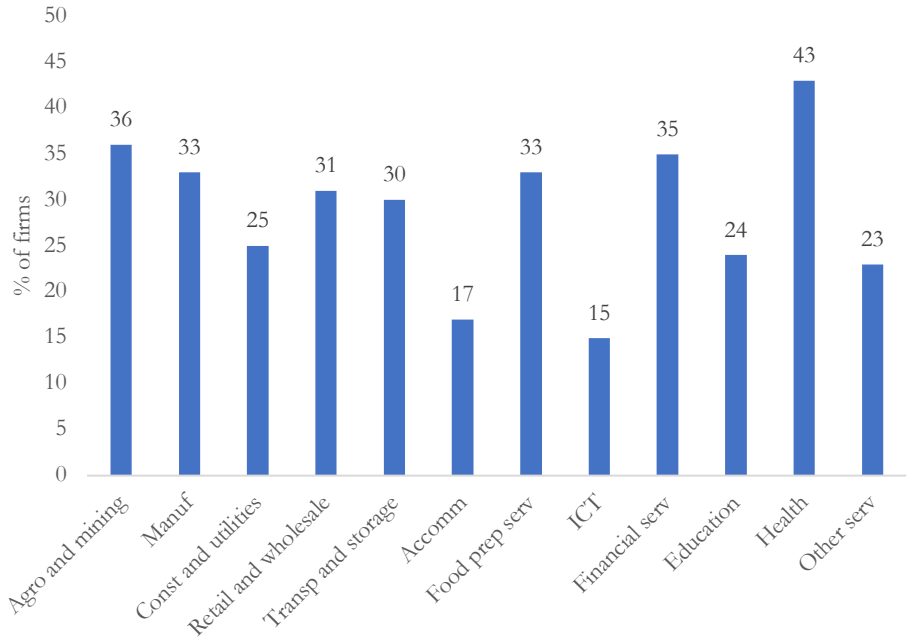
Key reforms included the introduction of the subsidiarity principle and competitive neutrality through constitutional reforms, sending strong disciplinary signals. Initially, strong accountability of remaining SOEs weakened over time. Sectoral regulations removed price controls and subsidies, introduced free rates in competitive sectors, regulated tariffs in network industries, and established sector and market regulators.

Social mitigation measures, such as retirement incentives and labor training programs for former SOE workers, were considered but played a minor role. The privatization process aimed to reduce opposition through citizen participation in equity, business promotion for small- and medium-size enterprises, and worker participation in equity.

The Peruvian SOE reform experience highlights several lessons. A well-planned sequencing strategy is crucial, balancing momentum with institutional maturity. Concessions required a mature institutional setup, with credible regulators to oversee tariffs and contracts. Effective reform necessitates a mix of immediate impactful actions and a long-term vision for future reforms. Governance arrangements (i.e., advantages) can stop for a period (de jure with de facto implications) and then reappear (de facto), but the signaling of prohibiting them still matters. Managing social impacts is essential, as society's tolerance for reforms can diminish over time.

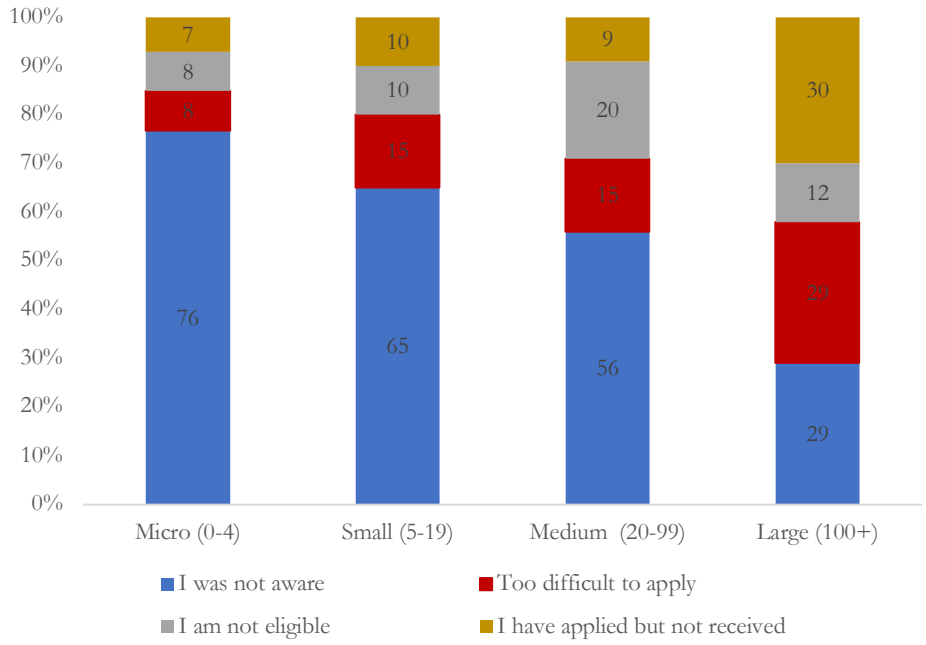
Annex 4. Business Support Program in Uzbekistan: Additional Figures

Figure A4.1: Uzbekistan: Average Predicted Probability of Receiving Any Business Support Measures (During COVID-19 Onset)
(by sector)



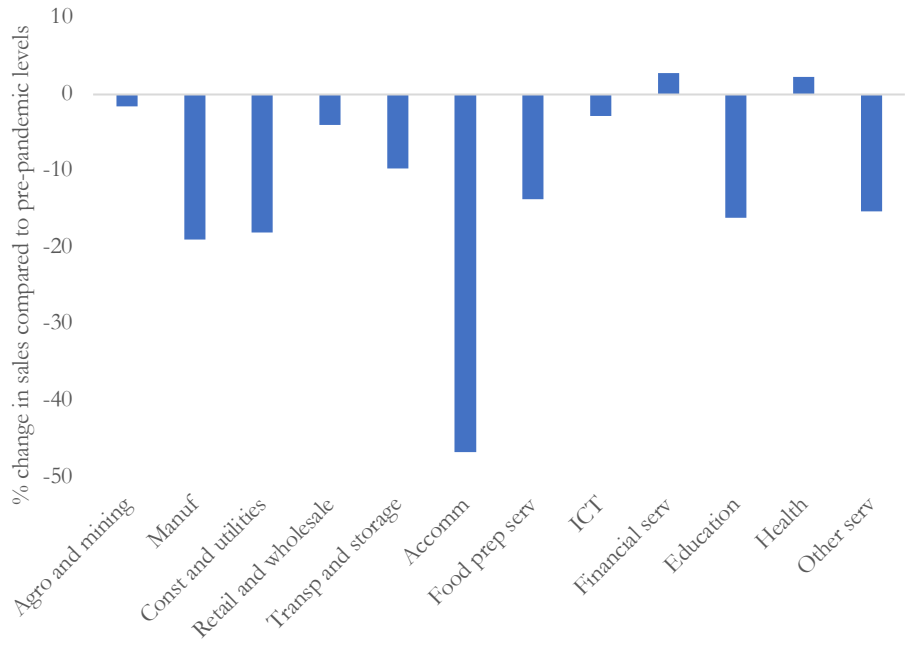
Source: World Bank staff calculation using its Business Pulse Survey data.
Notes: Average predicted probability from probit estimations that control for size, sector, and round of the survey. Computations use sampling weights. See **Ошибка! Источник ссылки не найден.**for further methodological description.

Figure A4.2: Uzbekistan: Main Reasons for Not Receiving Business Support Measures (During COVID-19 Onset)
(by firm size)



Source: World Bank. staff calculation using its Business Pulse Survey data.

Figure A4.3: Uzbekistan: Average Drop in Sales Compared to Pre-Pandemic Level
(in percent by sector)



Source: World Bank staff calculation using its Business Pulse Survey data.

Annex 5. Definitions of Global Value Chain Taxonomy Groups

The rules take into account country size because smaller countries naturally rely on trade to a relatively greater extent. The following taxonomy groups are defined sequentially:

1. **Commodities:** Manufacturing share of total domestic value added in exports is less than 60 percent, as well as the following:
   - Small countries: Backward manufacturing is less than 20 percent.
   - Medium-size countries: Backward manufacturing is less than 10 percent.
   - Large countries: Backward manufacturing is less than 7.5 percent.

These criteria ensure that manufacturing is a small share of exports and that backward linkages in manufacturing are limited.

This group is further subdivided as follows:

- Low participation: Primary goods' share of total domestic value added in exports is less than 20 percent.
- Limited commodities: Primary goods' share of total domestic value added in exports is equal to or greater than 20 percent but less than 40 percent.
- High commodities: Primary goods' share of total domestic value added in exports is equal to or greater than 40 percent.

These criteria define countries according to their export dependence on manufacturing.

2. **Innovative activities (based on remaining countries)**
   - Small countries: Intellectual property (IP) receipts as a percentage of gross domestic product (GDP) are equal to or greater than 0.15 percent and research and development intensity is equal to or greater than 1.5 percent.
   - Medium-size and large countries: IP receipts as a percentage of GDP are equal to or greater than 0.1 percent and research and development intensity is equal to or greater than 1 percent.

These criteria split groups into those that spend a relatively large share of GDP on research and receive a large share of GDP from IP.

3. **Advanced manufacturing and services (based on remaining countries)**

Share of manufacturing and business services in total domestic value added in exports is equal to or greater than 80 percent, as well as the following:

- Small countries: Backward manufacturing is equal to or greater than 30 percent.
- Medium-size countries: Backward manufacturing is equal to or greater than 20 percent.
- Large countries: Backward manufacturing is equal to or greater than 15 percent.

4. **Limited manufacturing (rest of sample)**

Annex 6. Methodology on Services Trade Restrictiveness

The Services Trade Restrictiveness Index (STRI) is the methodology jointly developed by the World Bank and the World Trade Organization (WTO) to conduct regulatory audits. It primarily focuses on market entry and operational measures (with an identification of discriminatory treatment of foreign providers/services) and covers aspects of domestic regulation, data protection policies, and competition law. Like the WTO General Agreement of Trade in Services, the STRI adopts the four modes of service supply and Services Sectoral Classification List (MTN.GNS/W/120) (see below). The STRI constitutes 35 online questionnaires which cover 34 subsectors that are populated by national law firms and consultants and reviewed by a WTO-World Bank team. It ranges from 0 to 100, where 0 indicates that none of the restrictions underlying the index is applied, and 100 means that the sector/mode is completely closed to foreign services and service suppliers. Information collected through the STRI is publicly accessible through the Services Trade Policy Database on the I-TIP Services platform. It currently covers 129 economies, and data for Uzbekistan, along with 132 other economies, will be soon publicly accessible through the Services Trade Policy Database.

Service Trade Agreements and Classifications

Under the World Trade Organization (WTO), the General Agreement on Trade in Services distinguishes international service supply by the following four "modes:"

- **Mode 1 (Cross-border supply)** covers services that flow from the territory of one country into the territory of another, such as distribution and e-commerce services.
- **Mode 2 (Consumption abroad)** refers to cases where a service consumer moves to another country to obtain a service, such as tourism and medical services.
- **Mode 3 (Commercial presence)** refers to cases where a service supplier of one country provides a service to consumers in another by establishing a presence, including through ownership or lease of premises, such as branches of foreign banks or international hotel chains.
- **Mode 4 (Presence of natural persons)** refers to cases where persons of one country, such as medical doctors and nurses, provide services directly to consumers in another by entering the territory of that country (e.g., accountants, engineers, doctors, or teachers).

Source: World Bank 2024b (forthcoming). The Promise of Services-Led Growth in Uzbekistan

Annex 7. Methodology on Trade Potential

The gravity model has become a workhorse tool for the empirical analysis of international trade. The model has been widely used to estimate the impact of geography and institutions on trade flows since the first application by Tinbergen (1962). In its simplest form, which is derived from the physical gravity equation, trade increases proportionally with the economic size of exporters and importers and decreases with physical distance. Countries tend to trade more with large or nearby partners than with small or distant ones. Over time, several other determinants that impede or promote trade among countries have been included, such as policy variables for the presence of trade agreements or historical characteristics such as colonial history that determine bilateral frictions.

The gravity model can be used to assess how much trade is expected for each country pair based on their observable characteristics. Using information on trade flows and comparing them to predicted flows obtained from a gravity regression can be used to evaluate country export performance and to quantify the amount of missing export flows. These results should be interpreted with caution, since country performance depends on the variables included in the gravity regression. For instance, two countries may have high values of missing trade because of political reasons and, were controls to be included for political tensions in the model, the estimated missing exports could disappear. In other words, the gravity model provides an empirical benchmark based on the variables included in the regression, which assumes that countries behave as the "average" country in the sample.

To quantify Uzbekistan's missing exports, a gravity equation is estimated, using trade data at the sector level over the period 2000–19. As is standard in the gravity literature, a Poisson Pseudo Maximum Likelihood estimator is applied to estimate the following gravity equation for each industry:

$$
\begin{aligned}
X_{ijt}^{k} = exp\Big(&\beta_1 I\big(RTA_{ijt}\big) + \beta_2\, ln\big(Dist_{ij}\big) + \beta_3 I\big(Contig_{ij}\big) + \beta_4 I\big(Lang_{ij}\big) + \beta_5 I\big(Colony_{ij}\big) + \beta_6\, ln(Output_{ikt}) \\
&+ \beta_7\, ln\big(Expenditure_{jkt}\big) + \beta_8 I(Resource\ Rich_i) + \beta_9 I\big(Resource\ Rich_j\big) \\
&+ \beta_{10}\, ln(Rem\ Exp_{ikt}) + \beta_{11}\, ln(Rem\ Exp_{ikt}) + \beta_{12}\, ln\left(\frac{K_{it}}{L_{it}}\right) + \beta_{13}\, ln\left(\frac{K_{jt}}{L_{jt}}\right) + \beta_{14}\, ln(GDPpc_{it}) \\
&+ \beta_{15}\, ln\big(GDPpc_{jt}\big) + \beta_{14} I(Exp\ Landlocked_i) + \beta_{15} I\big(Imp\ Landlocked_j\big) + \beta_{16} I(Exp\ Island_i) \\
&+ \beta_{17} I\big(Imp\ Island_j\big) + \beta_{18} I(Int'l\ Border)\Big) + \varepsilon_{ijt}
\end{aligned}
$$

where X_{ij}^{k} are bilateral exports from country i to country j in sector k, RTA_{ijt} comes from Mario Larch's Regional Trade Agreements Database from Egger and Larch (2008) and is an indicator variable that takes value of 1 if i and j have a trade agreement in year t, $Dist_{ij}$ is the geographical distance between i and j, $Contig_{ij}$ is a variable that takes value of 1 for country-pairs that share a border, $Lang_{ij}$ is a binary variable equal to 1 if i and j share the same language, and $Colony_{ij}$ captures the presence of any colonial ties. $Output_{ikt}$ ($Expenditure_{ikt}$) is the total output (expenditure) by exporter (importer) in sector k at time t. Exports are from the International Trade and Production Database for Estimation (ITPD-E). Other control variables come from CEPII's gravity database.

Additional controls include per capita gross domestic products of exporting and importing countries to account for the level of development that can affect their level of trade. These variables are sourced from the World Bank's World Development Indicators. Also included are controls for factor endowments: natural resources and capital per worker (Chor, 2010; Romalis, 2004). To control for the presence of resource-rich countries, data from the World Bank is applied to construct variables equal to 1 if average rents from oil, coal, and minerals exceed 10 percent of gross domestic product for the period 2000–18. As in Levchenko and Zhang (2014) variables are constructed for capital stock per worker based on Penn World Tables 10.1 data.

To control for the unobservable multilateral resistance terms, "remoteness indexes" for trade (Baier and Bergstrand, 2007; Wei, 1996) were constructed**.** A popular alternative to this method requires the inclusion of exporter-year and importer-year fixed effects. Fixed effects account for multilateral resistance terms and any country-specific time determinants of trade. However, a Poisson Pseudo Maximum Likelihood model with fixed

effects imposes a perfect fit for each country's total exports and imports, implying that country total flows would always be perfectly predicted and never depart from their potential.

The predicted export flows are used, obtained by estimating the gravity equation above to evaluate country export performance, given their observable characteristics. Export flows are aggregated at the country level to calculate the aggregate index of missing exports, defined as follows:

$$Index\ of\ Missing\ Exports_{i,t} = \left(\frac{\sum_k \sum_j \hat{X}_{ijk,t} - \sum_k \sum_j X_{ijk,t}}{\sum_k \sum_j \hat{X}_{ijk,t} + \sum_k \sum_j X_{ijk,t}}\right) * 100$$

The index of missing exports varies between -100 and 100. The maximum value of the index is obtained when observed flows are equal to 0, but the model predicts positive flows. In contrast, the minimum value (i.e., -100) is obtained when the predicted value equals 0 and positive flows are observed.

To better understand the importance of specific destination markets, a closer look is taken of the deviations of observed exports from the predicted ones. The dollar value figures of "missing exports" provide a better measure of opportunities and are more informative in case the government plans activities to promote exports to specific countries (e.g., trade events). Specifically, missing exports are defined as follows:

$$Missing\ Exports_{UZB\ j,t} = \sum_k \hat{X}_{UZB\ j,t} - \sum_k X_{UZB\ jk,t}$$

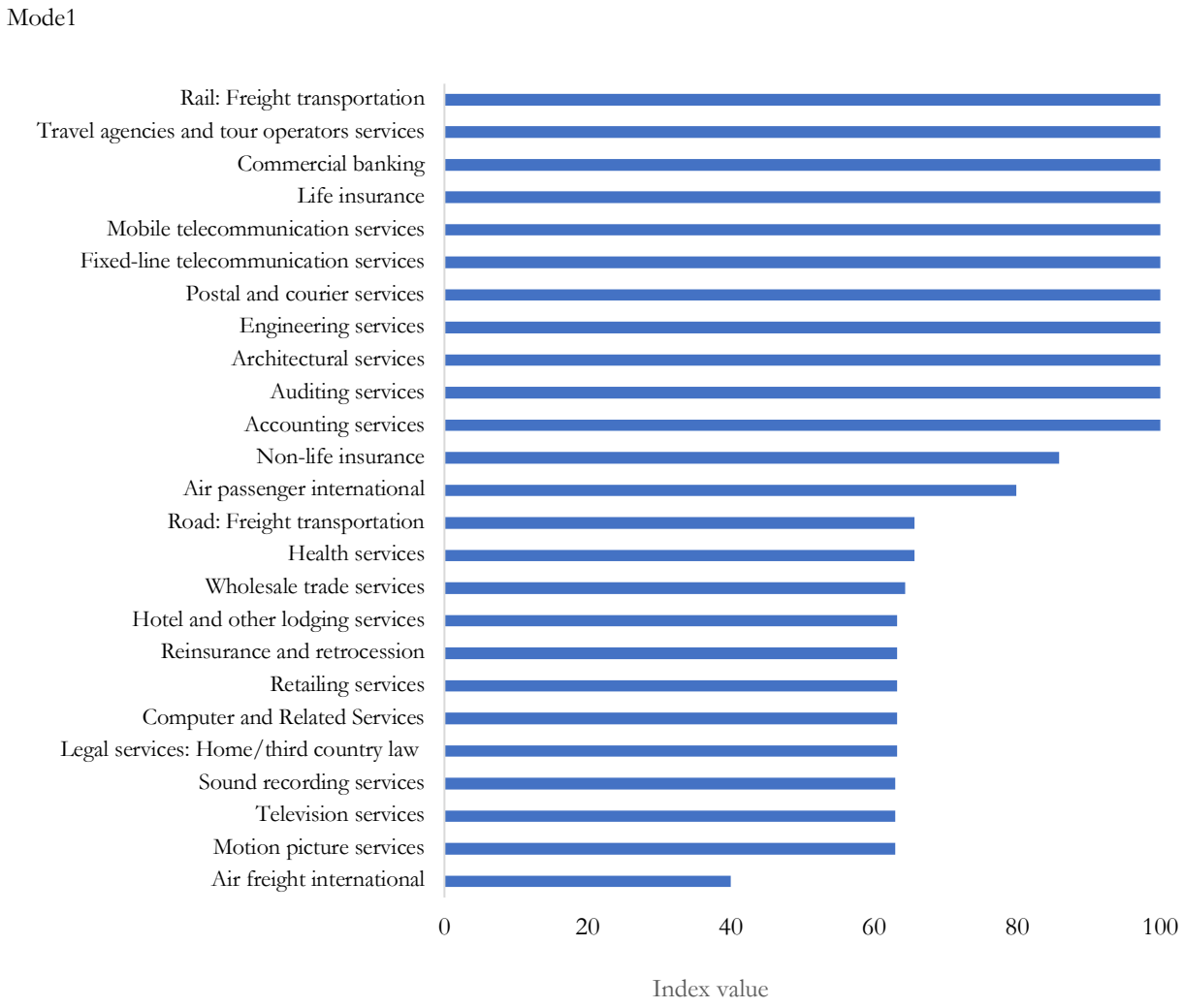
Source: Adapted from Mulabdic and Yasar (2021).

Annex 8. Methodology on Service Liberalization Based on Computable General Equilibrium Modeling

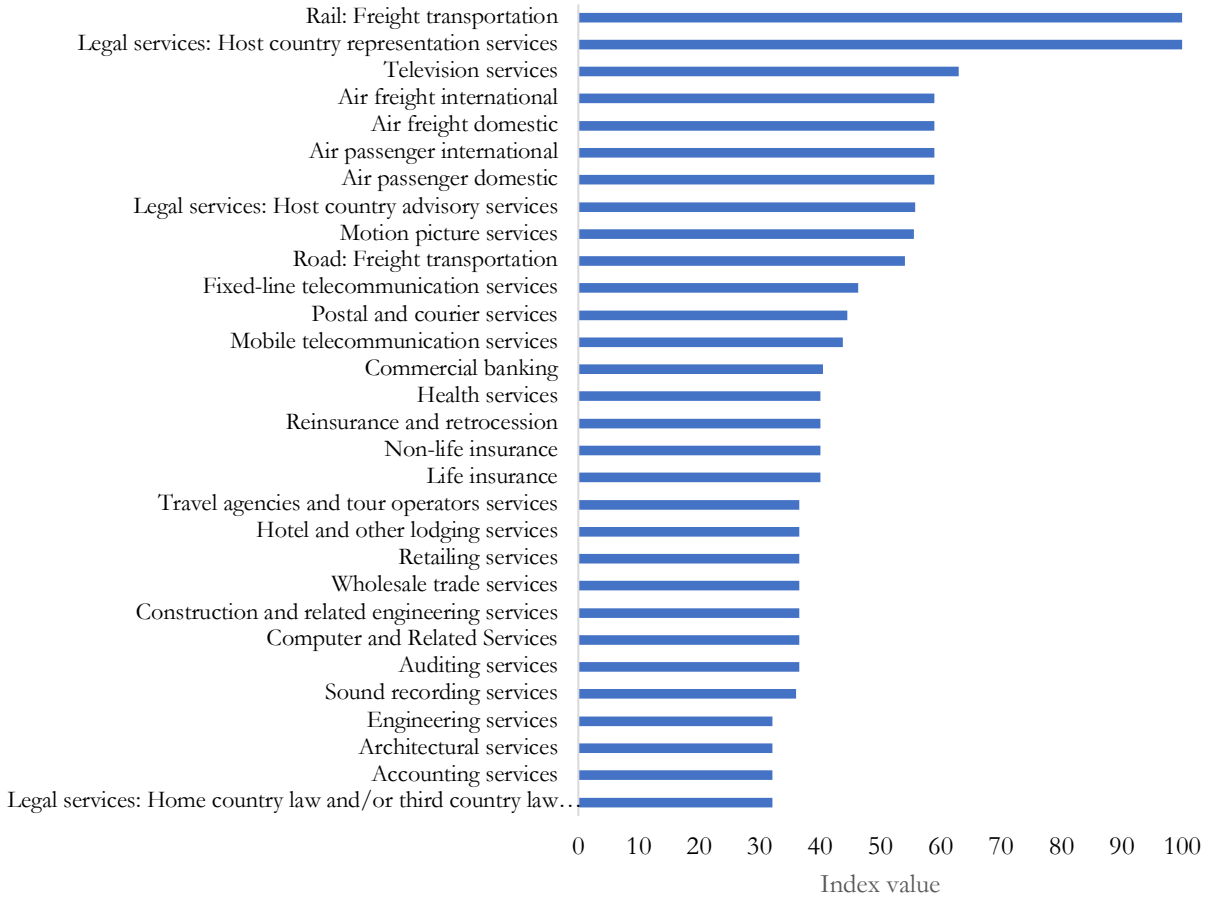
Regulatory barriers to the service trade in Uzbekistan are significantly large. Based on recently collected data from the World Bank-World Trade Organization Services Trade Policy Database, Uzbekistan maintains a number of policies that significantly restricts the provision of foreign services or effectively makes such trade prohibitive in a number of sectors. An index of these policy barriers, the Services Trade Restrictions Index (STRI), which can range from zero (not restrictive) to 100 (most restrictive or closed) shows the largest restrictions for the provision of services across borders, or Mode 1 (Figure A8.1). In this mode of supply, 11 of the sectors with STRI scoring show the maximum value of 100, including rail transport, travel services, financial, telecom, and a number of professional services. Another 11 sectors show elevated values above the 50 mark and only one sector (air freight) is below that midpoint.

Barriers to the provision of services via commercial presence are relatively less restrictive than in cross-border trade. In Mode 3, the largest values for the STRI focus on the transport sector (i.e., freight rail, air transport) and legal services. Regulations in these sectors can be considered to be prohibitive or significantly restrictive. Most other service subsectors with STRI values are below a midpoint of 50, with about two-thirds of listed sectors falling into this category, including several professional business services that show relatively minor restrictions if provided via commercial presence.

Figure A8.1: Uzbekistan: Regulatory Restrictiveness in the Trade of Services
(by mode of supply)



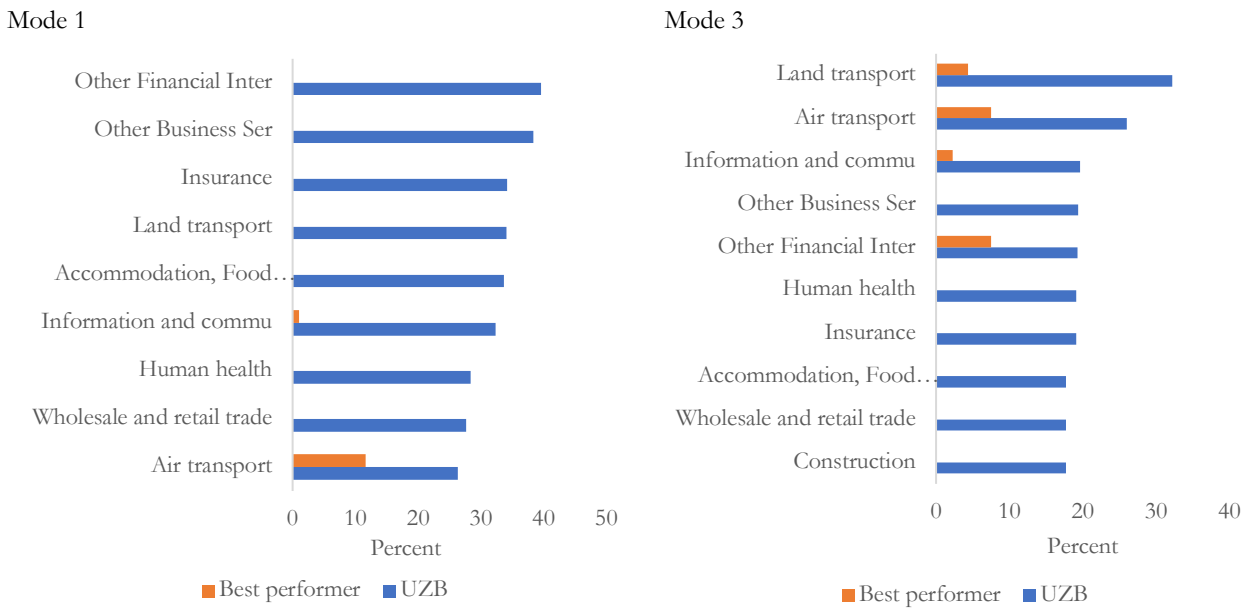
Mode 3



Source: World Bank-World Trade Organization Services Trade Restrictions Index.

Derived tariff-equivalents for the barriers to services show high increased trade costs for trade in services—significantly more distortive than tariff barriers to goods. Collected STRIs for a large number of countries can be used to calculate ad valorem equivalents (AVE) of these service trade regulatory costs, based on a structural gravity estimation. These measures can be interpreted comparably to that of the effect of tariffs on raising the trade costs of imported services by mode of supply; and their removal can be used to analyze the likely economic effects for the service sectors and the rest of the economy of reforming such barrier to the service trade. AVEs for all service sectors with available STRIs were calculated and aggregated into model sectors and mode of supply. As with the STRI values, the highest tariff equivalents are in Mode 1 in the sector containing other financial intermediations (banking), other business services (many professional services), insurance, and land transportation (rail and road freight). On average, tariff equivalents are in the range of 30 percent for Mode 1 and about 20 percent for Mode 3 (Figure). In contrast, the best performer in the entire cross-section of countries has AVEs in the range of 1 percent to 2 percent on average. Another point of comparison is the average tariff protection on goods in Uzbekistan, which is in the range of 7 percent on a most-favored nation basis. There are tariffs peaks, however; for example, beverages and tobacco as well as clothing peak at approximately 30 percent); so that barriers to services are in the range of these tariff peaks on goods.

Figure A8.2: Uzbekistan: Tariff-Equivalents for Trade in Services
(trade by mode of supply and best performer)



Source: World Bank staff elaborations.

Annex 9. Methodology on Deep Trade Agreements

The main advantages of the "structural gravity model" are that (i) it is very intuitive, since it is based on Newton's law of universal gravitation; (ii) it is firmly grounded in economic theory; and (iii) when applied to data, the gravity model shows strong predictive power. The typical structural gravity equation is given by:

$$X_{ij,t} = exp(\pi_{i,t} + \chi_{j,t} + Gravity\ Controls) + \varepsilon_{ij,t} \quad (1)$$

where the $X_{ij,t}$ refers to the value of international exports from origin i toward market j in year t. The right-hand side of the equation includes the theoretical consistent determinant of bilateral trade flows as prescribed by the structural gravity approach.

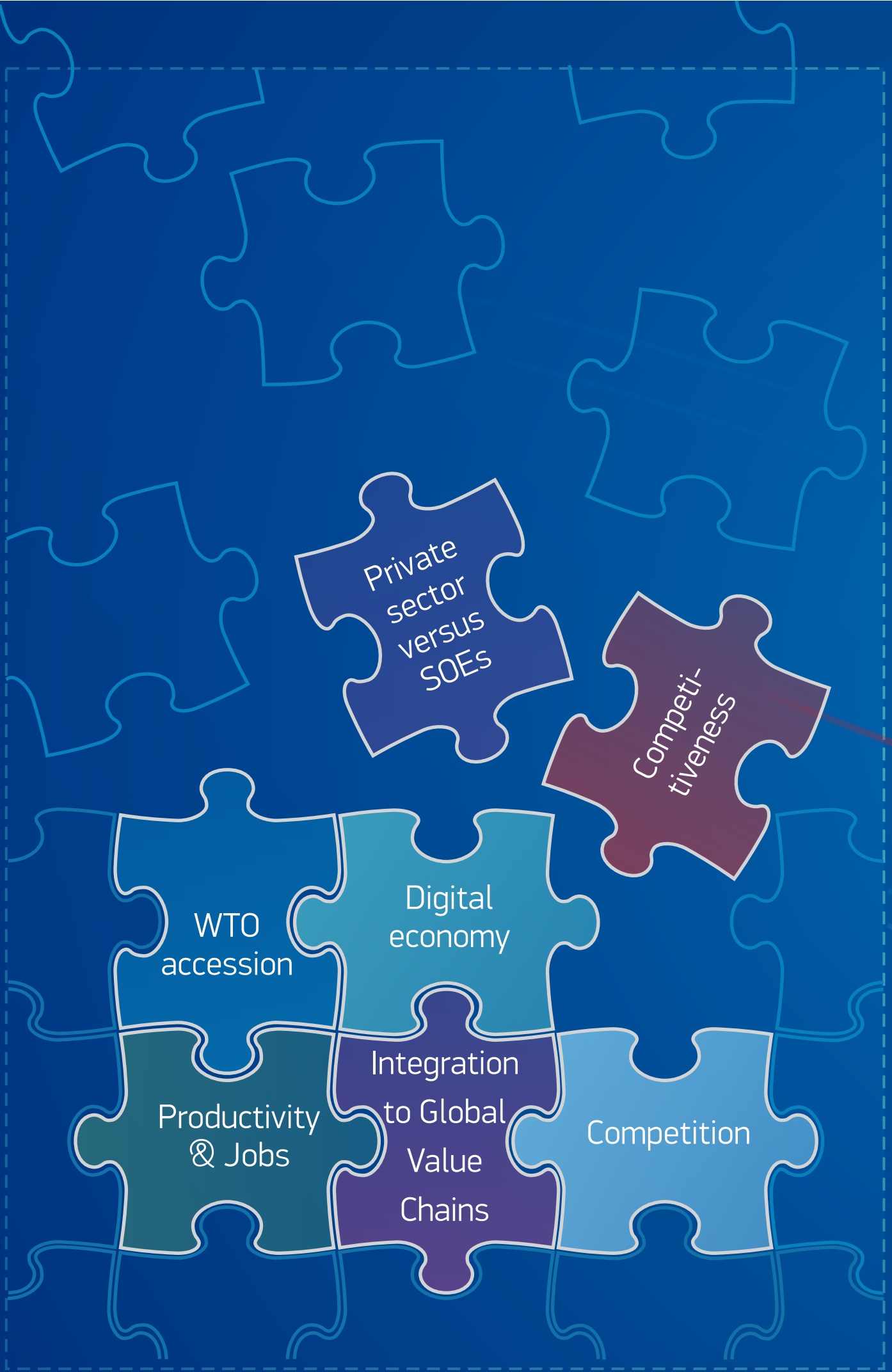
The matrix includes variables to capture country-pair trade frictions determined by geography (the -log- of bilateral distance, and common border), history (a dummy variable for common language, and a dummy variable for historical ties), as well as trade policy (a dummy variable for preferential trade agreements). These are the determinants of the intensity of bilateral trade flows, given the competitiveness of the exporting country (i.e., supply side) and the market size and degree of competition at destination (i.e., the demand side).

On the supply side, the term captures the export capabilities of country i and year t. As shown in Costas et al. (2012), it can be interpreted as a theoretically consistent index of revealed competitiveness. This property is exploited in the main text.

Finally, is a capture of the demand components (market size and degree of competition) at destination market j, representing an idiosyncratic error term. The above equation is defined at the aggregate level (i.e., total exports of country i to county j in year t), but it only takes into account the products exported by the selected country. In doing so, each country is ranked according to its competencies, as revealed by the number and type of products exported.

The estimation is done using a Poisson Pseudo-Maximum Likelihood estimator (as is standard practice in the literature) over a 10-year period. The advantage of using panel data is to control for unobservable supply shocks at the product level on the exporter side (this is the exporter x times fixed effect in the product level equation) and for unobservable demand shocks at the product level in the destination country (respectively, the importer x time fixed effect).

For the full methodology on the endogenous selection of preferential trade agreements, their counterfactuals, and their clusterings, one should refer to the background note of Espitia, Rocha, and Santoni (2023).


Private sector versus SOEs
Competi-tiveness
WTO accession
Digital economy
Productivity & Jobs
Integration to Global Value Chains
Competition