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## THE PROMISE OF SERVICES-LED GROWTH IN UZBEKISTAN



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**THE PROMISE  
OF SERVICES-LED GROWTH  
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# Contents

<i>Acknowledgements</i>	8
<i>Abbreviations</i>	9
<b>Executive Summary</b>	10
<b>CHAPTER 1</b>	
<b>The Services Sector and Structural Transformation</b>	16
The contribution of the services sector to growth and jobs	17
Inside the black box of the services sector	21
<b>CHAPTER 2</b>	
<b>A Policy Agenda for Services: Contestability, Connectivity, and Capabilities</b>	30
Contestability: Trade restrictions and domestic market competitiveness	33
Connectivity: Enabling digital and physical connections	40
Capabilities: Enhancing worker skills and management practices in firms	43
<b>CHAPTER 3</b>	
<b>Strengthening the Linkages between Services and Other Sectors</b>	47
Weak linkages between services and other sectors	48
Telecommunications: The backbone for digitalizing the economy	53
Transportation and logistics: Facilitating trade in goods and movement of people	56
<b>CHAPTER 4</b>	
<b>Expanding Global Innovator Services</b>	63
The nascency of export-led growth in global innovator services	64
Raising the potential to compete in international markets	67
<b>CHAPTER 5</b>	
<b>Improving the Growth Prospects of Low-skilled Services</b>	71
The potential to improve the productivity of jobs	72
Export-led growth in tourism-related services	73
The use of technologies in low-skilled (non-tradable) consumer services	76
<b>CHAPTER 6</b>	
<b>Key Recommendations</b>	80
<i>References</i>	83
<b>ANNEX FOR CHAPTER 1: Decomposition Methodology</b>	85

## BOXES

1.1 Methodology for classifying services _____	22
1.2 Modes of services trade _____	23
1.3 Migration and trade in services _____	24
2.1 Measuring restrictions to services trade ____	34
2.2 Economic gains from reducing restrictions on services trade _____	36
2.3 Leveraging Uzbekistan's WTO accession process to reduce services trade restrictions ____	39
3.1 Financial services in Uzbekistan _____	51
4.1 Case studies of reforms driving growth in services _____	65

## FIGURES

1.1 Uzbekistan has sustained high rates of economic growth since 2017 _____	17
1.2 The services sector has been central to growth in overall employment and value added ____	18
1.3 The services sector is an important source of jobs for women in Uzbekistan _____	19
1.4 The services sector has been a source of productivity growth, but a large gap remains with the global frontier _____	20
1.5 Uzbekistan's services trade growth has been slower than goods trade, which is at odds with global trends _____	20
1.6 FDI inflows have been lower than in some comparator countries, but the services sector in Uzbekistan is increasingly a destination of FDI ____	21
1.7 Services subsectors differ by the degree to which they rely on skills, provide inputs to other sectors, and are traded internationally, and they can be grouped into four categories _____	22
1.8 Commercial presence (FDI) is the main mode through which services are imported, while cross-border supply is the main mode through which services are exported in Uzbekistan _____	24
B1.3.1 Emigration rates for high-skilled individuals are higher than for low-skilled individuals, especially among women _____	25
B1.3.2 Emigration rates are higher for high-skilled women than men _____	25
B1.3.3 Emigration rates are higher for low-skilled men than women _____	25
1.9 Uzbekistan's services sector is dominated by low-skilled services as well as social services – with little prominence of global innovator services – which is consistent with its level of per capita income _____	26
1.10 Within the services sector, female employment is mostly in social services and lower skilled services _____	27
1.11 Global innovator services are both the most productive services as well as the biggest drivers of productivity growth _____	28
2.1 Compared to global comparator countries, Uzbekistan underperforms on the policy dimensions of connectivity, capabilities, and contestability _____	32
2.2 Trade in services is characterized by major restrictions in most sectors, with some sectors virtually closed to competition _____	33
2.3 There are many businesses with state ownership in the services sector, including in subsectors where private provision can be effective _____	35
2.4 Services restrictions correspond to tariff equivalents of more than 25 percent for mode 1 trade and more than 15 percent for mode 3 trade _____	35
2.5 Liberalizing barriers to services trade in Uzbekistan is expected to increase GDP, trade and investment. _____	36
2.6 There are large impacts of services liberalization across all sectors, also outside of services. _____	37
2.7 Liberalizing services is expected to increase incomes of both unskilled and skilled workers _____	38
2.8 There are large gains in output and wages of liberalizing barriers to services trade in Uzbekistan _____	38
2.9 Uzbekistan has the highest trade costs compared to its regional peers and these have increased over the past two decades _____	40
2.10 Uzbekistan has experienced a decline in its logistics performance since 2018 with regard to infrastructure, tracking, tracing, and timeliness ____	41
2.11 Uzbekistan's overall logistics performance score lags regional comparators _____	41

2.12 The quality of Uzbekistan's broadband connectivity continues to lag comparator countries _____	42	3.10 Road transportation is the most important mode of transport by weight, while pipeline and rail transportation are important modes when looking at ton-kilometers _____	57
2.13 Prices of mobile broadband are lower than before, but affordability remains low compared to some peer countries and advanced economies _____	43	3.11 Postal services underperform compared to comparator peer countries _____	58
2.14 Uzbekistan's emphasis on advanced, technical education is developing a relevant skill base but this needs to be expanded _____	44	3.12 The transportation sector faces major restrictions when it comes to trade in services _____	59
2.15 There is a positive relationship between the adoption of structured management practices and labor productivity in the services sectors, but adoption is low _____	45	3.13 Air connectivity has grown in terms of frequency, cargo capacity, number of carriers, and the amount of city pairs covered _____	61
3.1 Most services are produced for domestic consumption _____	49	4.1 Uzbekistan's exports of global innovator services have accelerated in the past decade, but they account for a tiny fraction of total services exports _____	64
3.3 Many services jobs support exports through other sectors rather than direct exports _____	49	4.2 Average wages in global innovator services exceed those in manufacturing and this gap has widened in recent years _____	65
3.2 Manufacturing sectors rely very little on services as inputs for the production process _____	49	4.3 Wage costs among global innovator services in Uzbekistan are comparable to India and the Philippines _____	66
3.4 Exports by most sectors depend on services jobs through linkages _____	50	4.4 Inadequate worker skills are not a major constraint for businesses in Uzbekistan _____	67
3.5 The most prominent manufacturing sectors are less dependent on services _____	51	4.5 Global innovator services are characterized by higher levels of digital intensity _____	68
B3.1.1 Financial services only provide 0.5 percent of employment, but contribute to 2.8 percent of GDP _____	52	4.6 Global innovator services are highly restricted on cross-border delivery _____	69
B3.1.2 Roughly 16 percent of firms report that they are fully credit constrained, higher than the average for Europe and Central Asia _____	52	5.1 The gap in labor productivity between Uzbekistan and Russia was the highest among low-skilled consumer services, including hospitality and retail _____	72
B3.1.3 Restrictions to trade in financial services remain high, especially for cross-border supply of services _____	52	5.2 Tourism-related transportation and hospitality services are central to Uzbekistan's services exports _____	73
B3.1.4 The use of digital technologies for making payments is low in Uzbekistan compared to comparator countries _____	52	5.3 Slow growth in exports of travel-related services tracks the slow growth in the arrival of tourists from abroad _____	74
3.6 Trade in mobile and fixed-line telecommunications is characterized by major restrictions _____	53	5.4 The number of passengers carried by air transportation services relative to the size of the economy declined in Uzbekistan unlike in other developing economies in the region _____	74
3.7 Regulatory quality in the ICT sector is low compared to other countries, including in the region _____	54	5.5 Among hospitality services, there are few trade restrictions on accommodation services, but the opposite is true for the services of tour operators, agents, and guides _____	75
3.8 Uzbekistan has been lagging with respect to the adoption of mobile technologies _____	55		
3.9 The uptake of mobile services and fixed-line services such as broadband remains low _____	56		

5.6 Restrictions on foreign direct investment in retail services in Uzbekistan are low even compared with high-income countries in the region _____	76
5.7 Uzbekistan's secondary school enrolment rates are near universal but digital literacy is far from complete _____	77
5.8 The use of basic digital technologies is more widespread in certain business functions _____	78
5.9 Access to mobile internet is relatively low, especially in rural areas _____	79

## TABLES

ES.1 Policy recommendations along the dimensions of capabilities, connectivity, and contestability _____	15
2.1 Policy priorities for the three growth pathways _____	46
6.1 Policy recommendation along the dimensions of capabilities, connectivity, and contestability _____	82

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# Abbreviations

AVE	ad valorem equivalent
CGE	computable general equilibrium
FDI	foreign direct investment
GATS	General Agreement on Trade in Services
ICT	Information and Communications Technology
IT	Information Technology
ITU	International Telecommunications Union
LPI	logistics performance index
OECD	Organisation for Economic Co-operation and Development
SOE	state-owned enterprise
STRI	services trade restrictiveness index
WTO	World Trade Organization

# EXECUTIVE SUMMARY

## The services sector has been central to structural transformation in Uzbekistan

**In Uzbekistan, the services sector accounts for more than half of all jobs and it has been central to the process of structural transformation over the past three decades.** The services sector's share of total employment in Uzbekistan increased from 37 percent to 50 percent between 1991 and 2022, offsetting almost the entire decline in the agriculture sector's share. Similarly, the services sector's share of value-added rose from 35 percent to 44 percent over the same period, offsetting a substantial decline in the share of agriculture together with a smaller decline in the share of industry. However, in the last decade, while the services sector has continued to grow in terms of share in value added, its share in employment remained stagnant. As a corollary, labor productivity growth in the services sector between 2011 and 2021 exceeded that in both industry and agriculture, reversing a trend from previous decades when productivity growth was lower. Yet, large gaps in labor productivity growth in the services sector remain when compared to advanced economies.

**In the past decade, the growth of Uzbekistan's services exports has lagged behind its manufactures' exports while FDI greenfield announcements to both sectors have been even.** While growth in world commercial services trade exceeded growth in world goods trade between 2005 and 2021, the reverse is true for Uzbekistan. As a result, Uzbekistan has so far benefited less from the growth in services trade although its commercial services trade growth outpaced that of some regional peers. FDI flows to the services sector are increasing, as evidenced by a growing trend of greenfield announcements, which matched those in the manufacturing sector between 2020 and 2023.

**The growth of the services sector in the past five years was driven by social services, mostly reflecting increased public spending.** This report groups the services sector into four groups based on their skill intensity, the extent of their linkages with other sectors, and their tradability in international markets: low-skilled consumer services (e.g., retail, hospitality, administrative and support, and personal services), low-skilled enabling services (transportation, wholesale, and telecommunications), global innovator services (ICT, professional, and financial services) and social services (education, health, and public administration). Of these groups, social services accounted for three-fourths of employment growth in the services sector between 2017 – 2022. These services also experienced relatively high rates of labor productivity growth, which was largely driven by higher public spending on wages and salaries.

**Global innovator services are more productive but they employ few people while low-skilled services, including those which provide inputs to other sectors, have experienced little productivity growth.** Global innovator (ICT, professional, and financial) services — that are relatively skill-intensive, share greater linkages with other sectors, and are more traded internationally — have the highest levels of labor productivity (with ICT and financial services being more than 2.5 times as productive as manufacturing) as well as high levels of labor productivity growth (with ICT, professional, and financial services growing by 15, 10, and 8 percent annually, respectively, between 2017 – 2022). However, global innovator services account for only about 4 percent of total services employment. In contrast, low-to-medium skilled services, including retail, hospitality, transportation, and telecommunications, account for almost 60 percent of total services employment in Uzbekistan but have experienced little productivity growth. Of these, transportation and telecommunications services are important enablers for economic activity in other sectors of the economy.

**The promise of private sector-led services growth can be leveraged by strengthening linkages with other sectors, expanding the share of global innovator services, and improving the productivity of low-skilled services, with the first channel providing maximum economy-wide benefits.** The linkages between the services sector and the rest of the economy, especially the manufacturing sector, are weak. About 50 percent of the value of services output constitutes inputs to other economic activities, and services account for less than 10 percent of the inputs used in the manufacturing sector. Global innovator services account for less than 10 percent of total services exports in Uzbekistan. While this broadly conforms to the average for its level of per capita income, the corresponding shares are higher for countries, such as India, that have attained success at lower levels of per capita income. Expanding export-led employment in these services — where workers earn more than double than that in low-skilled services — has the potential to shift employment into better-paying jobs. There is also considerable scope to raise productivity in low-skilled services — relative to advanced economies — that account for around two-thirds of services employment.

## A policy agenda for services: connectivity, contestability and capabilities (3Cs)

**Uzbekistan can address these challenges and leverage the services sector to deliver growth and jobs through progress along three areas of policy action: connectivity, contestability, and capabilities (3Cs).** Uzbekistan's physical connectivity to markets is hindered by the relative inefficiency of its logistics performance. Uzbekistan ranked 88 out of 139 economies globally in the World Bank's 2023 Logistics Performance Index (LPI). It lags comparator countries, such as Georgia or Kazakhstan, in the overall logistics performance as well as in its tracking and timeliness components where its score has declined since 2018. On digital connectivity, in 2022, the share of individuals using the internet in Uzbekistan was roughly 83.1 percent, which is below the regional average of 86.1 percent and lower when compared to regional comparators such as Kazakhstan and Russia (which are above 90 percent). Furthermore, internet prices and internet speeds remain well below global frontier countries but also below most peer countries. The contestability of markets is limited by a range of trade restrictions across the services sector. The average Services Trade Restrictiveness Index (STRI) score for Uzbekistan is particularly high for cross-border supply, i.e., mode 1 trade (80.3 compared to 47.3 and 36.5, respectively, for modes 3 and 4), and higher than the corresponding scores for comparator countries such as Kazakhstan, Colombia, Peru, and Viet Nam. Cross-border supply is prohibited in 11 out of 31 sub-sectors in Uzbekistan. The monopoly of state-owned enterprises in many

services sectors, such as air and rail transportation, also poses challenges for market competition. Uzbekistan's emphasis on advanced, technical education and on the English language is developing a relevant skill base but this needs to be expanded. In 2022, tertiary enrolment rates in Uzbekistan — at 31.5 percent — were below the regional average of 80 percent and below those of its main regional comparators — Kazakhstan (64 percent) and Russia (83 percent).

**The expansion of global innovator services will require coordinated progress along connectivity, contestability, and capabilities where the establishment of Tashkent's IT Park marks a beginning.** Digital connectivity is a prerequisite for the cross-border delivery of ICT and professional services. So too are the capabilities of workers to match skill requirements and contestability that provides competition to domestic service providers. Global innovator services depend disproportionately more on digital connectivity because they use a higher share of ICT inputs. The speed and quality of broadband internet in Uzbekistan stands well below peer countries, which is particularly detrimental to digital-intensive professional and ICT services. On contestability, Uzbekistan is completely closed to the cross-border delivery of several professional services and highly restricted on the cross-border delivery of ICT services, which is largely indicative of data localization requirements. On capabilities, the share of university graduates with STEM-related degrees exceeds that in peer countries. However, the share of the population with standard ICT skills is about 8.5 percent in Uzbekistan, which is lower compared to regional peers such as Kazakhstan (24 percent) and Russia (16 percent). The recently established IT Park in Tashkent — with world class internet connectivity, tax-free access to imported ICT hardware and software, and a digital IT university — illustrates coordinated progress along the 3Cs.

**Connectivity is a pre-requisite for strengthening linkages between the services sector and the rest of the economy, and greater contestability will improve the returns to these linkages.** The infrastructure and services associated with transportation and telecommunications facilitate the physical and digital connectivity that can strengthen linkages between services and other sectors of the economy. These linkages mean that greater contestability in the services that provide inputs to other sectors in the economy, including manufacturing, has cascading productivity benefits. In the case of telecommunications, a large role of the state and onerous regulations limit competition in the sector, increase prices, and slow down the adoption of faster network technologies. In the case of transportation, licensing requirements, quotas, the presence of state monopolies, and restrictions to obtaining land limit the availability of transportation suppliers and increases the cost of transport. Services liberalization can greatly benefit downstream sectors, including manufacturing, with an estimated expansion of 16 percent in terms of output. Output in manufacturing sub-sectors such as pharmaceuticals, electronics, and machinery that require substantial intermediate inputs from the services sector is estimated to expand by 24, 30, and 23 percent, respectively. Capabilities matter less here owing to low to intermediate skill requirements.

**Better connectivity can improve the productivity of low-skilled services, while capabilities and contestability have a less prominent role.** For improving the productivity of low-skilled consumer services, advanced capabilities again matter less and Uzbekistan's near universal secondary school completion is largely sufficient. Contestability also matters less — because there are relatively few trade restrictions, such as in hospitality and retail services. Connectivity is therefore centerstage. While travel-related transportation and hospitality services currently account for more than three-fourths of Uzbekistan's services exports, growth in exports of travel-related services has been slow — even relative to other Central Asian countries — despite lower restrictions on the entry of foreign visitors. This reflects gaps in infrastructure investment that constrain passenger

transportation in Uzbekistan. The lack of connectivity also reflects low contestability, such as in air transportation services where the state-owned Uzbekistan Airways has a dominant position. Among non-tradable services such as retail, technology can drive productivity gains, but the lack of digital connectivity stands out; the share of firms in low-skilled services that use a website to communicate or transact with customers is around only 20 percent in Uzbekistan.

**On capabilities, the pool of skilled workers can be expanded through vocational training and fewer restrictions on migrants from abroad, even as the scale of advanced education increases over time.** Uzbekistan's emphasis on advanced, technical education is developing a relevant skill base but this needs to be expanded. Investments in higher education that increase tertiary enrolment rates can enable a sizable pool of skilled workers. At the same time, vocational training can accelerate the development of advanced ICT skills, such as through the Government of Uzbekistan's "One Million Uzbek Coders" training program. Fewer restrictions on mode 4 trade for highly skilled workers from abroad can also ease the skill gap. In Tashkent's IT Park, IT specialists and start-up founders are eligible for visas which are valid for up to three years. The movement of skilled persons from abroad can also facilitate the adoption of structured managerial practices among firms in Uzbekistan which is low compared to peer countries.

**On connectivity, investments in physical and digital infrastructure need to be scaled up, even as reforms that simplify logistics procedures and expand private sector participation can deliver benefits.** Investments in infrastructure across different modes of transportation — such as through the construction of new roads, railway lines, and airports — are especially important to bolster physical connectivity in "double landlocked" Uzbekistan. Similarly, investments are needed to improve the quality of broadband connectivity through more widespread coverage of faster forms of mobile internet, such as 4G/LTE. Regulatory reforms can also boost connectivity. Alongside further improvements in its customs procedures, Uzbekistan can particularly benefit from procedures that improve the tracking and tracing of consignments as well as the timeliness of shipments reaching their destination. Reforms that bolster private sector participation in transportation services, such as air travel, can also improve connectivity. Further, reforms that boost market contestability in telecommunication and transportation services can improve connectivity. These are discussed below.

**On contestability, reducing prohibitive trade restrictions on the cross-border delivery of global innovator services and introducing competition to state-owned businesses in telecommunication and transportation services are key.** Liberalizing restrictions on the cross-border delivery of several professional and ICT services — some of which are completely closed to mode 1 trade — can boost competition and enable the flow of commercial data that is becoming central to global production processes. Reforms that introduce market competition by reducing the role of state-owned enterprises (SOEs) in services sectors that provide important economy-wide inputs can also raise productivity. In telecommunication services, removing the international gateway monopoly of Uztelecom by encouraging entry of other companies is a case in point. In transportation services, rethinking the privileges afforded to JSC Uzbekistan Airways can increase competition on air travel routes. The same holds true for the national monopoly in rail services to increase competition in freight markets. Reducing restrictions on foreign direct investment in telecommunication and transportation services sector will be an important part of the sector's liberalization.

## The pursuit of regulatory reforms in the services sector can deliver large economic gains

**Regulatory reforms that improve contestability in the services sector will boost value added in the sector while also increasing real GDP and wages at the aggregate level.** It is estimated that Uzbekistan could expand by as much as 9 percent in terms of real GDP if restrictions on services trade are reformed to eliminate the most restrictive barriers and close the gap with the best performer by 50 percent (partial liberalization). Reforms to reduce restrictions on services trade that entirely close the gap with the best performer (full liberalization) could even result in a 17 percent increase in real GDP. All sectors of the economy can benefit from an opening of services trade. Services and manufacturing would expand in the range of 8 to 9 percent, respectively, with a partial liberalization of services restrictions and by close to 19 and 15 percent, respectively, if a full liberalization is simulated. The largest expansion will feature across the global innovator services — finance, communication, and insurance will expand by 23, 39, and 45 percent respectively. Furthermore, greater contestability in the services sector would increase real income by about 8 percent in a partial liberalization scenario and by 16 percent in a full liberalization scenario with wages of both skilled and unskilled workers increasing. Most of these gains are attributable to reducing restrictions on the cross-border delivery of services, i.e., mode 1 services trade.

**Uzbekistan’s prospective accession to the World Trade Organization (wto) provides an important entry point for the liberalization of the services sector.** The experience gained from the wto accession of other transition economies strongly suggests that the policies and market structures that underpin prevailing Uzbek restrictions in services will come under considerable scrutiny as the country pursues its wto accession. The success of its accession journey, and the likelihood of its completion within the next two years, may well hinge on the willingness and ability of Uzbek policy makers to embrace a sequence of reforms aimed at boosting the contestability of the country’s service economy. Doing so would also address prevailing hurdles to connectivity, both physical and digital, while also helping attract the larger doses of foreign capital (via mode 3 commitments on FDI), technologies, and talents (via mode 4 commitments on intra-corporate transferees and specialists) that the shift towards modern innovator services will require. Beyond aiming for an ambitious set of sector and mode-specific commitments under the General Agreement on Trade in Services (GATS), Uzbekistan can leverage its wto accession by advancing reforms in a host of complimentary areas, such as through plurilateral agreements on services domestic regulation, government procurement, and information technology.

**Policy actions that improve capabilities, connectivity, and contestability (see Table ES.1) are consistent with the Government of Uzbekistan’s stated objectives of leveraging the services sector as an engine of economic growth.** This is reflected in the provisions listed under Decree of the President of the Republic of Uzbekistan, dated 11 September 2023, on the “Uzbekistan 2030” Strategy. On capabilities, the stated objectives include, “providing modern knowledge and skills through the development of vocational education system” and “increasing enrollment in higher education and improving the quality of training specialists with higher education”. On contestability, the stated objectives include “implementing consistent transition of monopolistic sectors to market principles, increasing the private sector share in the economy, and creating the most favorable conditions for free activities of entrepreneurs”. On connectivity, the stated objectives include “providing stable and long-term sources of financing to infrastructure projects”.

**TABLE ES.1** Policy recommendations along the dimensions of capabilities, connectivity, and contestability

Objective	Policy recommendations	Priority
<b>Strengthen linkages between enabling services and other sectors</b>  <b>Key sectors:</b> Transportation and logistics, telecommunications  <i>(SEE CHAPTER 3)</i>	<b>Capabilities</b> <ul style="list-style-type: none"> <li>Investments in secondary education to emphasize socioemotional and interpersonal skills in school curricula.</li> <li>Vocational training for standard IT skills.</li> <li>Align standards more closely with international standards to encourage more entry of foreign businesses outside the immediate region.</li> </ul>	Medium
	<b>Connectivity</b> <ul style="list-style-type: none"> <li>Investments in infrastructure to bolster transportation and digital connectivity.</li> <li>Regulatory reforms to improve customs procedures, the tracking and tracing of consignments, as well as the timeliness of shipments reaching their destination. Reforms that bolster private participation in transportation and telecommunication services can also improve connectivity.</li> </ul>	High
	<b>Contestability</b> Telecom: <ul style="list-style-type: none"> <li>Remove the international gateway monopoly of Uztelecom; provide more competitive wholesale prices.</li> <li>Establish an independent regulator.</li> <li>Facilitate licensing arrangements for providers, including moving to a notification procedure rather than the current approval procedure.</li> </ul> Transportation: <ul style="list-style-type: none"> <li>Air: Increase competition of routes through gradual liberalization of the sector; rethink privileges afforded to JSC Uzbekistan Airways.</li> <li>Road: Re-assess quota system; facilitate operations of foreign transportation providers.</li> <li>Rail: Complete the unbundling of track infrastructure and passenger and freight service provision; increase competition on freight markets, starting with reducing the influence of the "master" freight forwarders.</li> <li>Warehousing: Expand opportunities for private sector firms to establish warehouses and logistics centers, including facilitating the establishment of warehouses near transportation hubs.</li> </ul>	High
<b>Expand the footprint of global innovator services</b>  <b>Key sectors:</b> IT, professional services, financial services  <i>(SEE CHAPTER 4)</i>	<b>Capabilities</b> <ul style="list-style-type: none"> <li>Investments in higher education that increase tertiary enrolment rates can enable a sizable pool of skilled workers over the medium term.</li> <li>Vocational training to accelerate the development of advanced ICT skills, such as through the Government of Uzbekistan's "One Million Uzbek Coders" training program as well as fewer restrictions on work visas for highly skilled workers from abroad, such as in Tashkent's IT Park.</li> </ul>	High
	<b>Connectivity</b> <ul style="list-style-type: none"> <li>Investments to improve the quality of broadband connectivity through more widespread coverage of faster forms of mobile internet, such as 4G/LTE.</li> </ul>	High
	<b>Contestability</b> <ul style="list-style-type: none"> <li>Reduce restrictions on cross-border delivery through relaxing data localization requirements, while striking a balance with privacy considerations.</li> </ul>	High
<b>Increase the productivity of low-skilled services</b>  <b>Key sectors:</b> Retail, hospitality, personal services  <i>(SEE CHAPTER 5)</i>	<b>Capabilities</b> <ul style="list-style-type: none"> <li>Investments in secondary education to emphasize socioemotional and interpersonal skills in school curricula.</li> <li>Vocational training for standard IT skills.</li> </ul>	Medium
	<b>Connectivity</b> <ul style="list-style-type: none"> <li>Investments to improve access to broadband connectivity in more remote areas.</li> </ul>	High
	<b>Contestability</b> <ul style="list-style-type: none"> <li>Simplify the process to obtain land leases and reduce restrictions on land ownership.</li> </ul>	Medium

Source: World Bank, based on findings in this report.

# CHAPTER 1

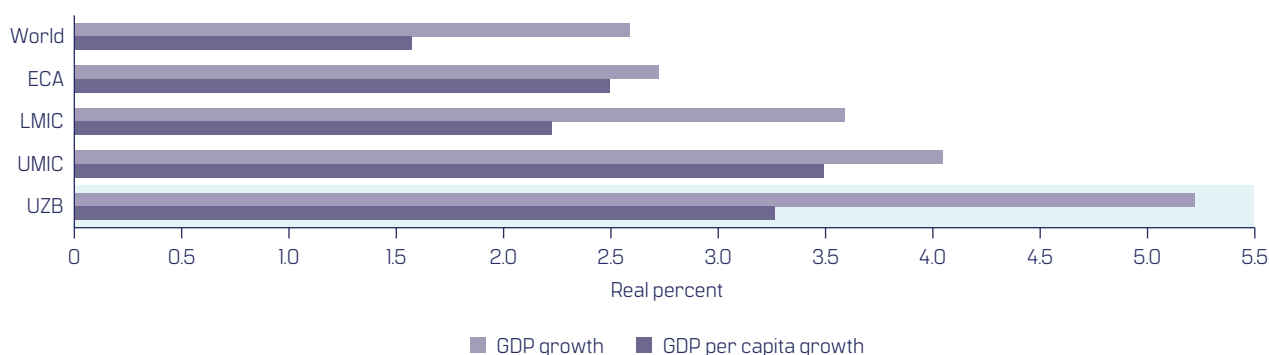
## **THE SERVICES SECTOR AND STRUCTURAL TRANSFORMATION**



**The economic transformation resulting from Uzbekistan’s transition to a market-based economy remains incomplete.** The reforms launched by the government in 2016 provided an impetus to Uzbekistan’s rate of economic growth, which averaged 5.2 percent per annum in the past six years (2017 – 2022). This exceeded the average for countries in Eastern Europe and Central Asia as well as for lower middle-income and upper middle-income countries (figure 1.1). However, employment growth in the past six years averaged only 0.5 percent per annum. This creates challenges for employment participation rates, especially given that growth in the working-age population averaged around 1.4 percent during the same period. Therefore, there is a need for policies that enable productivity-enhancing structural transformation to generate more and better jobs.

**FIGURE 1.1** Uzbekistan has sustained high rates of economic growth since 2017

Growth of GDP and GDP per capita, 2017 – 2022



Source: World Bank 2024, Uzbekistan Country Economic Memorandum, based on World Development Indicators (WDI).

Note: ECA = Europe & Central Asia, excluding high income countries; LMIC/UMIC = Lower/upper middle-income country.

## THE CONTRIBUTION OF THE SERVICES SECTOR TO GROWTH AND JOBS

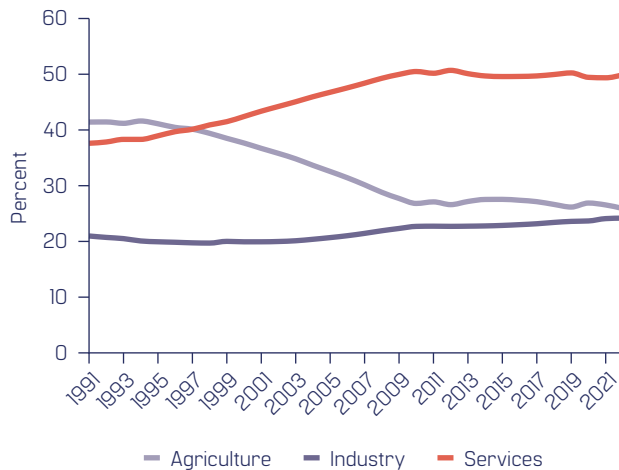
**The services sector has been central to the process of structural transformation in Uzbekistan in the past three decades.** Between 1991 and 2022, the services sector’s share of total employment increased from 37 to 50 percent, offsetting almost the entire decline in the agriculture sector’s share, with little change in the share of industry (figure 1.2, panel a). Similarly, the services sector’s share of value-added rose from 35 percent to 46 percent, offsetting a substantial decline in the share of agriculture together with a smaller decline in the share of industry (figure 1.2, panel b). The rising shares of the services sector in employment and GDP reflect its central role in driving economic growth in Uzbekistan. Over the past three decades the services sector accounted for more than half of both employment growth (figure 1.2, panel c) and value-added growth (figure 1.2, panel d) between 1991 and 2021. This pattern of structural transformation where the services sector has offset much of the decline in the share of the agriculture sector in both value added and employment was experienced — on average — across developing countries in the past decade (Nayyar, Hallward-Driemeier, and Davies 2021).

**In the last decade, the services sector continued to grow in terms of value added, but employment shares remained stagnant.** The contribution of the services sector to value added has increased from 42.9 percent to 46.2 percent between 2011 and 2022. The

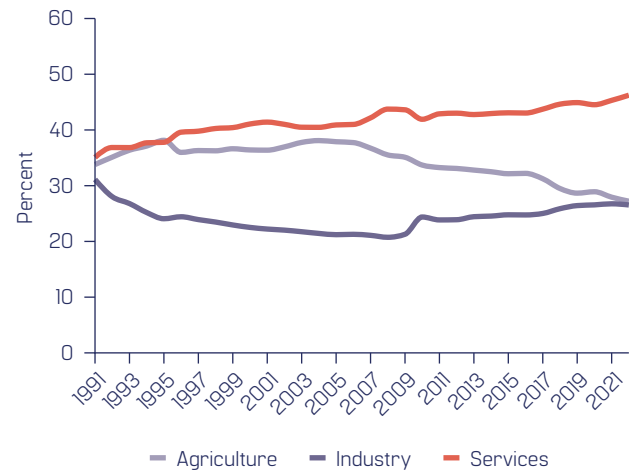
industrial sector saw a similar growth (from 23.9 percent to 26.5 percent), while the share of the agricultural sector declined. As a result of this, services were the largest contributor to value added growth in the last decade (figure 1.2, panel d). However, structural transformation in terms of employment changes was more limited. The share of the services sector remained at around 50 percent between 2011 and 2021. As a result, the contribution of the services sector to aggregate employment changes was close to zero (figure 1.2, panel c). The share of agriculture in total employment was also largely stagnant over the past decade, while the share of industry increased marginally.

**FIGURE 1.2** The services sector has been central to growth in overall employment and value added

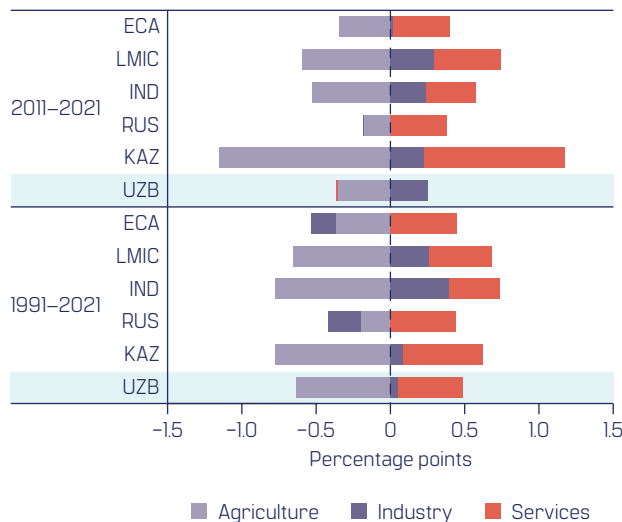
a. Share of employment, 1991–2022



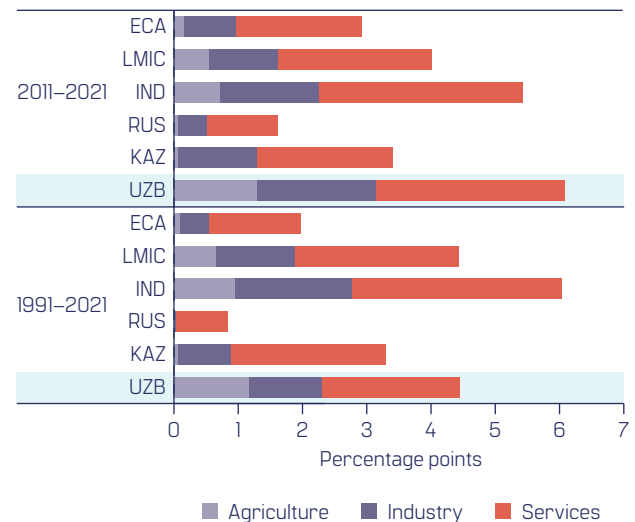
b. Share of value added, 1991–2022



c. Sectoral decomposition of employment changes, 1991–2021



d. Sectoral contributions to value added, 1991–2021



Source: Calculations based on World Bank WDI.

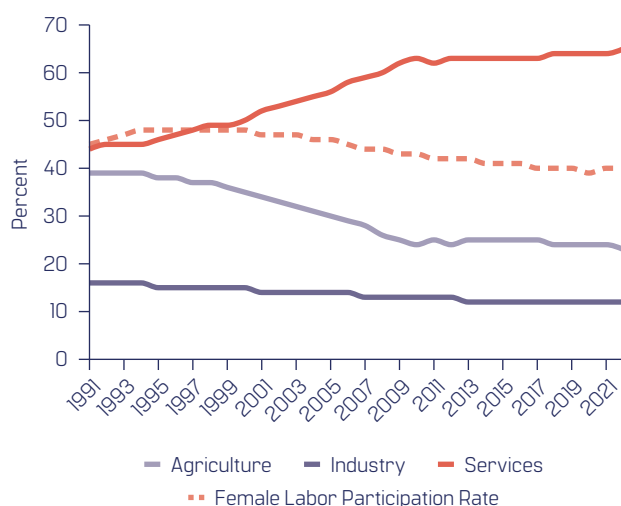
Notes: Decomposition is based on Shapley method. ECA refers to Europe and Central Asia, excluding high income countries.

**The services sector has accounted for much of the growth in female employment, and the decline in female labor force participation in the past decade coincides with the sector’s stagnation.** The services sector has been the major contributor to aggregate female employment growth in the past three decades; the contribution of agriculture and

manufacturing was negative during the same period (figure 1.3, panel a). The female labor force participation rate declined from 45 percent to 40 percent between 1991 and 2021. The share of women employed in agriculture and industry also declined during this period. The share of women employed in the services sector increased from 44 to 60 percent between 1991 and 2010 but largely stagnated thereafter (figure 1.3, panel b). In the past decade, the declining labor force participation rate of women is a consequence of the services sector being unable to absorb the declining shares of female employment in other sectors in the economy.

**FIGURE 1.3** The services sector is an important source of jobs for women in Uzbekistan

a. Labor force participation of women and sectoral shares of employment of women



b. Decomposition of the change in employment of women for Uzbekistan



Source: Authors' calculations based on World Bank WDI.

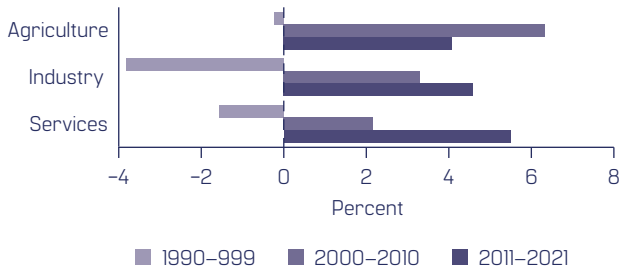
Notes: Decomposition is based on Shapley method.

**Labor productivity growth in services matched or exceeded that of other sectors, but large gaps with advanced economies remain.** Between 2011 and 2021, labor productivity growth (measured by value added per worker) in the services sector exceeded that in both industry and agriculture, reversing a trend from previous decades when productivity growth was lower (figure 1.4, panel a). As a result, the services sector has been the largest contributor to overall labor productivity growth. However, as employment shares in services sectors changed little, most of this contribution was due to “within-sector” productivity growth and not due to sectoral reallocations (figure 1.4, panel b). Nevertheless, differences in labor productivity in the services sector between Uzbekistan and the average for Organisation for Economic Co-operation and Development (OECD) countries remain large. Between 2011 and 2021, the labor productivity of the services sector in Uzbekistan was 14 times lower than that of OECD countries, four times lower than in Kazakhstan, three times lower than in Russia, and two times lower than in Georgia (figure 1.4, panel c).

**In the past decade, Uzbekistan’s services exports have grown slower than its manufactures exports, although world services exports have grown faster than goods exports over the same period.** Uzbekistan, for example, has so far benefited less from the growth in services trade. While growth in world commercial services trade exceeded growth in world goods trade between 2005 and 2021, the reverse is true for Uzbekistan (figure 1.5, panel a), although its commercial services trade growth outpaced that in some regional peer countries (figure 1.5, panel b).

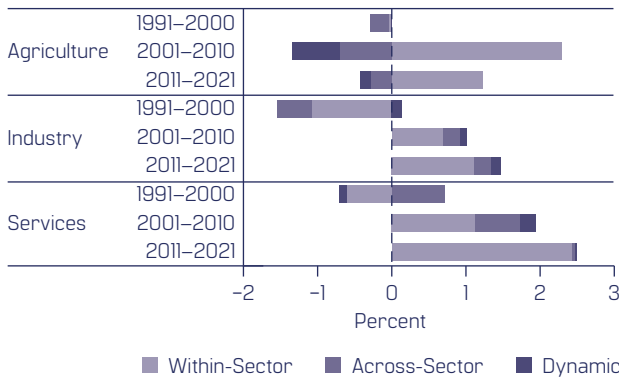
**FIGURE 1.4** The services sector has been a source of productivity growth, but a large gap remains with the global frontier

a. Sectoral average labor productivity growth



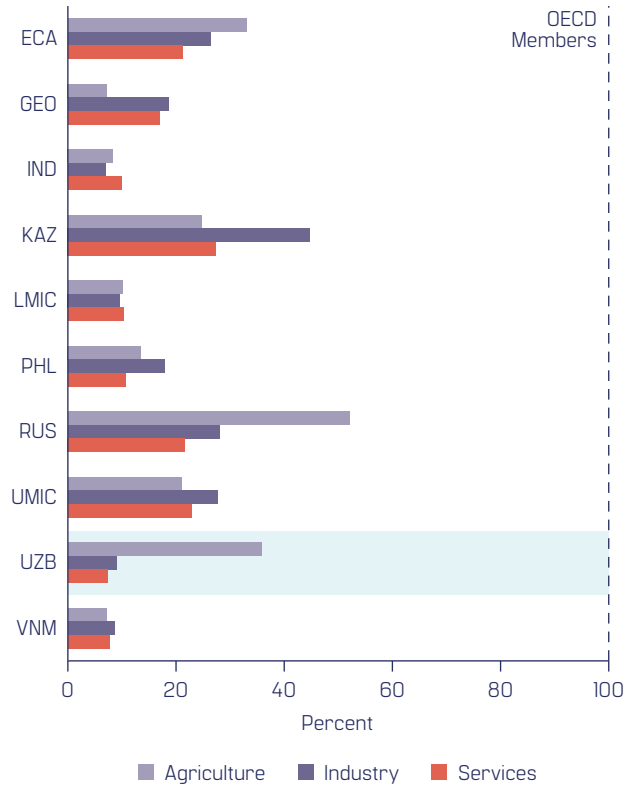
Source: Authors' calculations based on World Bank WDI.  
Notes: Labor productivity is estimated as value added per worker. Growth rates are average annual growth rates.

b. Annualized growth in value added per worker



Source: Calculations based on World Bank WDI.  
Notes: Decomposition is based on de Vries et al. (2015). See appendix for Equations.

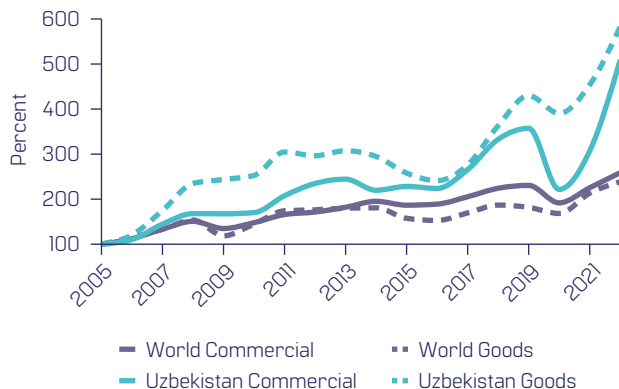
c. Labor productivity gaps, 2011-2021, relative to OECD countries (=100 percent)



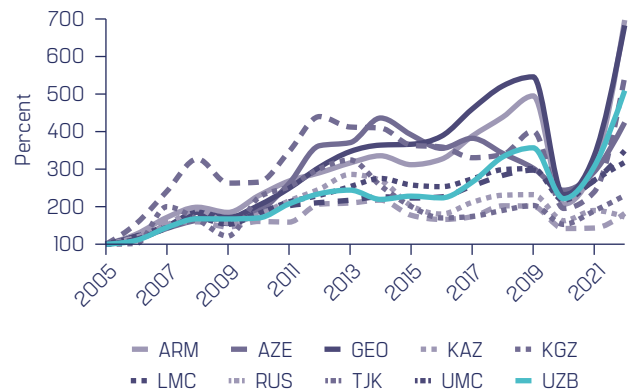
Source: Calculations based on World Bank WDI.  
Notes: Productivity decomposition is based on de Vries et al. (2015). See appendix for ECA refers to Europe and Central Asia excluding high income countries.

**FIGURE 1.5** Uzbekistan's services trade growth has been slower than goods trade, which is at odds with global trends

a. Total trade volume, 2005 - 2022 (2005 = 100)



b. Total trade volume, 2005 - 2022 (2005=100)

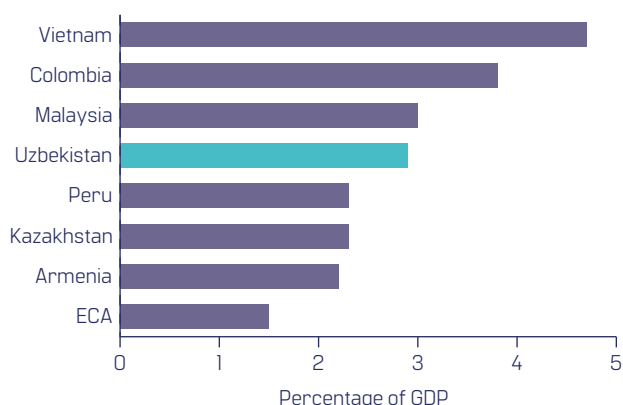


Source: Calculations based on World Bank WDI.  
Notes: Total trade volume is the sum of total exports and imports. Commercial services exclude government services not included elsewhere.

Foreign direct investment (FDI) inflows to the services sector have increased over the past decade, although there is ample scope for overall flows to increase further. Net inflows of FDI corresponded to 2.9 percent of GDP between 2017 and 2022, which is higher than the regional average for Europe and Central Asia (1.5 percent) and countries like Peru, Kazakhstan, and Armenia (see figure 1.6, panel a). They are nevertheless lower than in countries like Viet Nam (4.7 percent), Colombia (3.8 percent), and Malaysia (2.9). Data on FDI greenfield announcements suggest an upward trend of foreign investment into the services sector. Between 2020 and 2023, announced investments into services were at a similar level as the manufacturing sector, which faced a decline compared to earlier years (see figure 1.6, panel b). However, there is scope to increase FDI flows in services — which remain at low levels compared to FDI into utility sectors (electricity, gas, and water supply) — and to increase overall FDI.

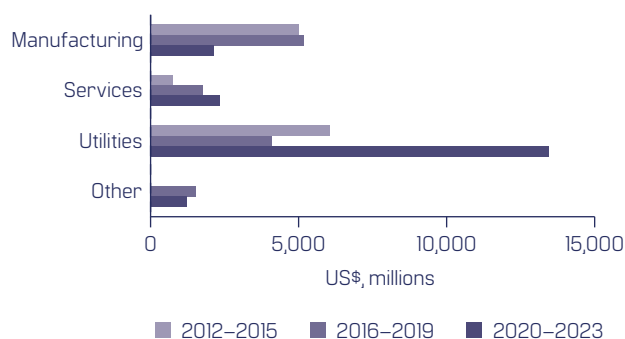
**FIGURE 1.6** FDI inflows have been lower than in some comparator countries, but the services sector in Uzbekistan is increasingly a destination of FDI

a. FDI inflows, average 2017–2022



Source: Uzbekistan Country Economic Memorandum (forthcoming) based on World Bank WDI.

b. FDI announcements in Uzbekistan, by sector



Source: Authors' calculations based on FDI Markets (Financial Times).

Notes: This data is based on FDI announcements captured in the FDI Markets database. Not all announcements necessarily materialize and not all materialized FDI is captured in this dataset. Investment amounts include estimated values. "Other" includes agriculture, mining, and construction.

## INSIDE THE BLACK BOX OF THE SERVICES SECTOR

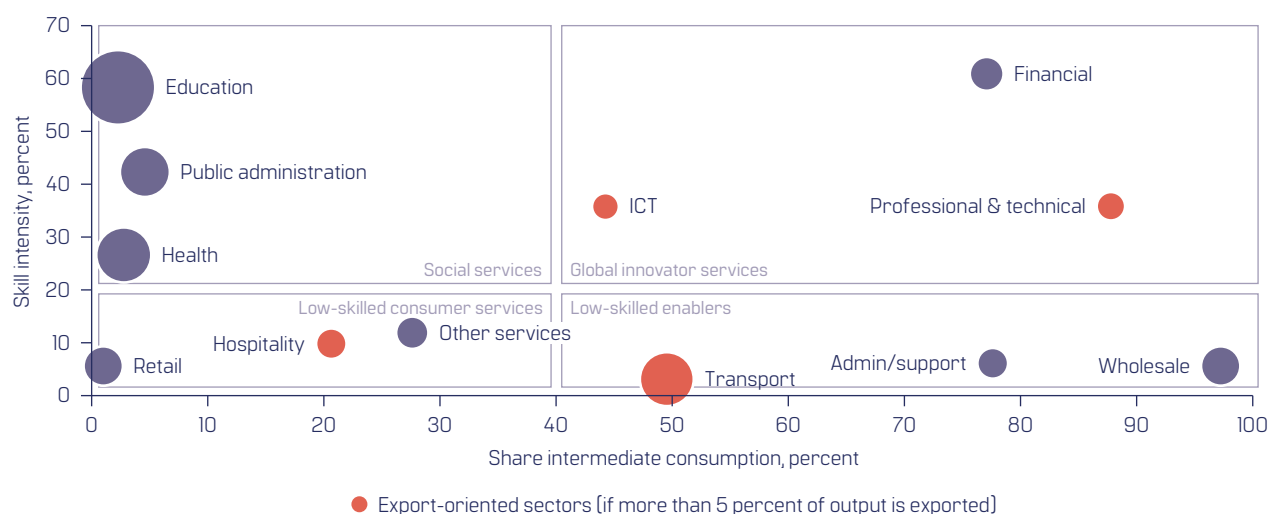
The services sector is a diverse set of economic activities — varying in skills, linkages with other sectors, and trade in international markets — with differences in their potential to deliver scale, innovation, and spillovers. The services sector comprises many economic activities, which differ in their skill intensity, the extent to which they are internationally traded, and the magnitude of their linkages with other sectors. These characteristics, respectively, create opportunities for innovation, scale economies, and spillovers that result in productivity gains.<sup>1</sup> This report classifies the services sector in four groups (see Box 1.1): *global innovator services* that are skill-intensive and enable other sectors through linkages (e.g. IT, professional, technical, and financial services); *low-skilled enabling services* that are less skill-intensive but highly linked to other sectors (e.g., transportation,

<sup>1</sup> Conventional wisdom was pessimistic because labor productivity in the services sector could not be readily increased, either through innovation and capital accumulation, owing to the “intrinsic role of labor,” or through economies of scale because the intensity of face-to-face interactions constrained service providers from reaching consumers beyond the local market (Baumol 1967).

telecommunications, support services, and wholesale); *low-skilled consumer services* that are less skill-intensive and mostly sell to final consumers (e.g. retail, hospitality, and personal services); and finally, *social services* that are mostly delivered by the public sector (e.g. health and education). Furthermore, global innovator services are highly traded internationally. Among low-skilled enabling services and low-skilled consumer services, transportation, and hospitality, respectively, are highly traded internationally. Figure 1.7 classifies different services subsectors in Uzbekistan based on their linkages with other sectors (on the horizontal axis), their skill intensity (vertical axis) as well as their tradability (coloring).

**FIGURE 1.7** Services subsectors differ by the degree to which they rely on skills, provide inputs to other sectors, and are traded internationally, and they can be grouped into four categories

Classification of services in Uzbekistan, by skill intensity, linkages, trade, and employment (2018)



Source: Authors' calculations based on ILOSTAT and Uzbekistan Input-Output Tables (prepared by the Statistics Agency under the President of the Republic of Uzbekistan).

Notes: Share of intermediate consumption is determined by the share of output for the domestic market that is sold to sectors (excluding gross capital formation). Skill intensity is the share of workers with tertiary education. Skill intensity for IT (which is not available in the data) has been assumed to be equal to financial services (in line with evidence from other countries). The size of the bubbles corresponds to employment levels in 2018. No separate employment data is available for retail and wholesale sectors or for non-ICT or ICT sectors and values have been estimated using output data.

### BOX 1.1 Methodology for classifying services

This report classifies the services sector into four groups, based on their skill intensity, their linkages with other sectors, and the extent that they are traded. These characteristics, which enable scale economies, innovation, and inter-sectoral spillovers result in different implications for productivity growth and inclusion. To classify services subsectors, this report uses three metrics: skill intensity, as measured by the share of workers in a sector with tertiary education (based on ILOSTAT data derived from labor force surveys); the share of output used as intermediate consumption (based on Input-Output Tables); and the share of output being exported (also derived from Input-Output Tables). Based on these three metrics services can be clustered in four categories:<sup>3</sup>

- IT, finance, and professional services are relatively skill intensive and play an important enabling role by providing inputs to other sectors. These **global innovator services (GIS)** are also

more traded internationally. Of the different modes through which services can be traded, "cross-border supply" (mode 1) is the most prominent mode of trade accounting for more than three-fourths of Uzbekistan's exports of IT, financial, and professional services. "Cross-border supply" implies services that are delivered remotely; i.e., without the movement of service providers or consumers. This offshorability mirrors trade in goods and therefore presents opportunities for gains from specialization.

- Transportation, administrative, and support services as well as wholesale trade play an important enabling role by providing inputs to other sectors in the economy, while also employing a large share of low-skilled workers. Of these **low-skilled enablers**, transportation services are also more traded internationally. Around three-fourths of Uzbekistan's exports

of transportation services are accounted for by “cross-border supply” (mode 1 trade), which is closely linked to the export of goods. The remaining one-fourth is accounted for by “consumption abroad” (mode 2 trade), which represents passenger transportation related to (tourism and other) travel (figure 1.8, panel a).

- Retail trade, hospitality, and personal services employ a large share of low-skilled workers but provide little by way of productivity-enhancing potential through linkages. Among these **low-skilled consumer services**, only hospitality (which includes hotels and restaurants) are relatively more traded across borders. Exports of hospitality services from Uzbekistan are entirely accounted for by “consumption abroad”

(mode 2 trade) resulting from tourism-related travel (figure 1.8, panel a).

- Finally, education, public administration, and health services are relatively skill-intensive and see relatively few linkages with other sectors. They are also less traded internationally. These **social services** are mostly delivered by the public sector.<sup>b</sup>

The telecommunication sector falls between the global innovator services and the low-skilled enablers categories. This sector relies on a mixture of high and low-skilled employment in terms of the delivery. It functions as an important network sector providing connectivity. For this reason, telecommunications will be grouped with the other, mostly low-skilled, enabling sectors in the policy discussion.

a. This classification slightly differs from the services classification used in Nayyar et al. [2021], which distinguishes between low-skilled tradable and low-skilled domestic services instead of low-skilled consumer services and low skilled enablers. For this report, the latter classification is used to take into account that exports of services in Uzbekistan are relatively small and that therefore the degree that services enable other sectors is a more key defining feature. In the taxonomy presented, the tradability of services subsectors is measured through export intensity. However, this does not preclude the importance of services imports, especially when these imports bring in foreign capital and expertise.

b. Social services – given the public nature of these services – are beyond the scope of this report.

**These services categories also vary in their mode of trade in international markets** (see Box 1.2 on the four “modes” of trade in services). In Uzbekistan, exports of global innovator services are mostly driven by cross-border supply (“mode 1”). Exports of low-skilled enabling services such as transportation and wholesale trade are also driven by cross-border supply (“mode 1”), largely through their linkages with goods-producing sectors. Exports of low-skilled consumer services such as hospitality are entirely driven by consumption abroad (“mode 2”) through tourism-related activities. There is also some evidence of “health tourism” and “education tourism”, albeit small (figure 1.8, panel b). These services exports are largely attributable to individuals seeking medical treatment from neighboring countries (Tajikistan, Kazakhstan, and the Kyrgyz Republic)<sup>2</sup> and students from South Asia enrolling at medical colleges.<sup>3</sup> The movement of natural persons (“mode 4”) ac-

### BOX 1.2 Modes of services trade

Under the World Trade Organization (WTO), the General Agreement on Trade in Services distinguishes international services 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 country, 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 country by establishing a presence, including through ownership or lease of premises, such as branches of foreign banks or international hotel chains.
- **Mode 4 (Movement of natural persons)** refers to cases where persons of one country, such as medical doctors and nurses, provide services directly to consumers in another country by entering the territory of another country (e.g., accountants, engineers, doctors, or teachers).

counts for a small

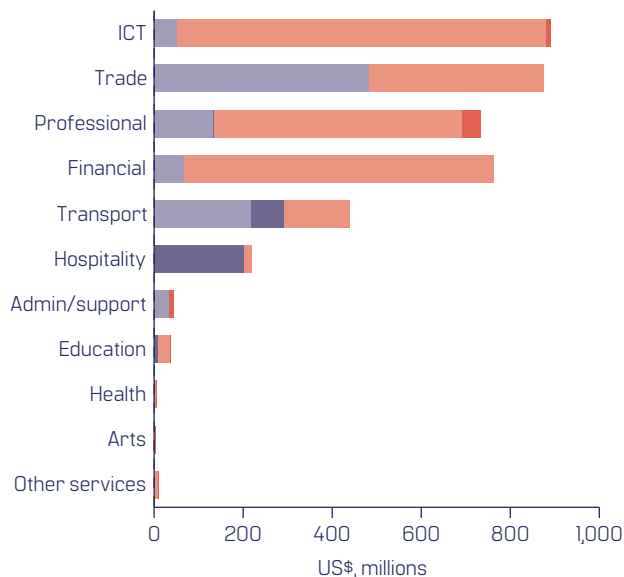
2 [https://www.akusherstvo.uz/conferences/uzbekistan-populyarnoe-napravlenie-medicinskogo-turizma?lang\\_is=set&lang\\_data=English](https://www.akusherstvo.uz/conferences/uzbekistan-populyarnoe-napravlenie-medicinskogo-turizma?lang_is=set&lang_data=English)

3 <https://medium.com/@digitaldreambbs/why-uzbekistan-has-become-the-top-choice-for-indian-students-to-study-mbbs-a7bcf8dc36b6>

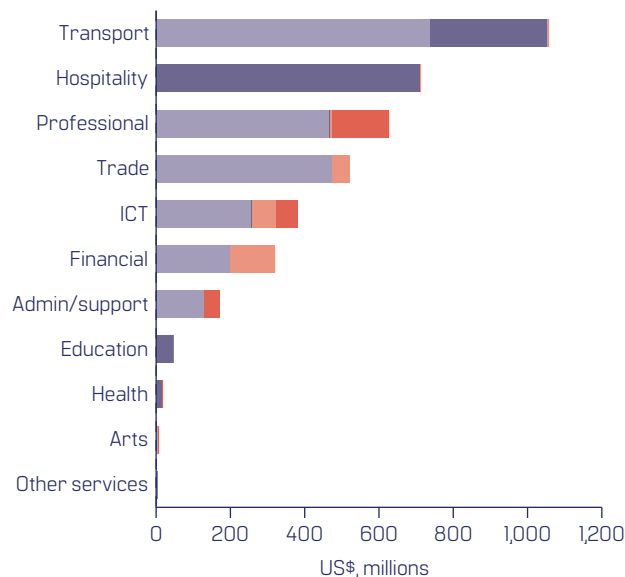
share of services exports among global innovator services, but such migration has important economic implications (see Box 1.3). In Uzbekistan, commercial presence through foreign direct investment (“mode 3” trade) represents two-thirds (66 percent) of the country’s services imports (figure 1.8, panel a). Such foreign investment and the potential for knowledge spillovers through linkages to other sectors can have cascading effects on domestic firms.

**FIGURE 1.8** Commercial presence (FDI) is the main mode through which services are imported, while cross-border supply is the main mode through which services are exported in Uzbekistan

a. Imports by mode of supply, Uzbekistan, 2017



b. Exports by mode of supply, Uzbekistan, 2017



Legend: ■ Cross-border supply ■ Consumption abroad ■ Commercial presence ■ Movement of persons

Source: World Trade Organization (WTO) Trade in Services by Mode of Supply (TiSMoS).

Notes: Modes of supply are defined using the General Agreement on Trade in Services (GATS) definition (see also Box 1.3). 2017 is the latest year in the WTO TiSMoS dataset.

### BOX 1.3 Migration and trade in services

**In Uzbekistan, emigration rates for high-skilled individuals are higher than for low-skilled individuals.** The share of high-skilled workers who migrated from Uzbekistan (11 percent) is higher than the corresponding share for low-skilled individuals (8 percent) (figure B1.3.1). The emigration rates from Uzbekistan for both high- and low-skilled individuals are below that of its peers. There is a gender component too; emigration rates for high-skilled women are comparable to emigration rates for high-skilled men. However, emigration rates for low-skilled women are lower than for low-skilled men. Further, emigration rates for high-skilled women are notably higher than the emigration rates for low-skilled women (figures B1.3.2 and B1.3.2).

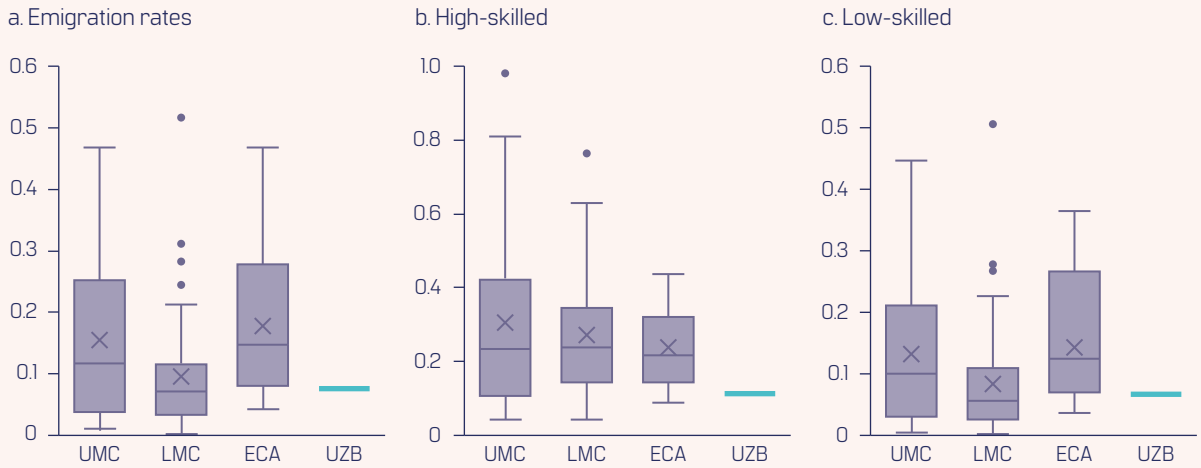
**There are employment and income gains associated with the emigration of high-skilled and low-skilled workers.** Migrant remittances account for roughly 11.8 percent of GDP (2022), which forms a significant source of consumption income. Reducing the

cost of remittances can have profound effect on remittance inflows. For example, Tajikistan and Viet Nam eliminated taxes on remittance inflows and they experienced higher remittance flows. Furthermore, by enabling the movement of workers to destinations where earnings are higher, mode 4 trade in services alleviates the pressure of underemployment and unemployment in labor markets especially in Uzbekistan.

**The migration of high-skilled individuals can bring long-term benefits to innovation through knowledge spillovers.** Even if the migration of high-skilled individuals depletes the immediate pool of high-skilled individuals within the country, there are gains over time, for instance, through knowledge transfers between the diaspora and domestic markets. Viet Nam currently has programs that invite diaspora to take part in the formation of their economic development plan.



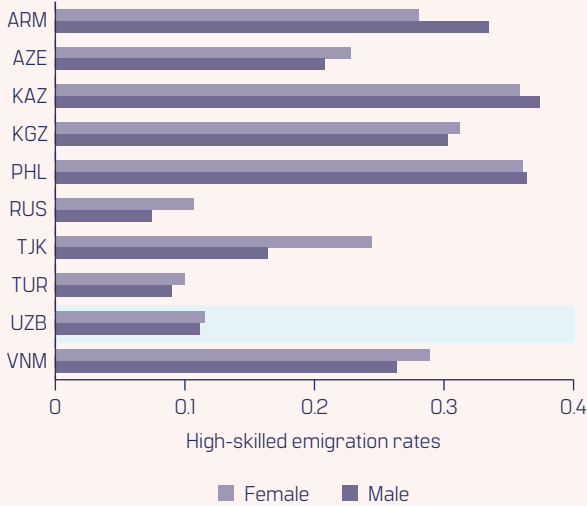
**FIGURE B1.3.1** Emigration rates for high-skilled individuals are higher than for low-skilled individuals, especially among women



Source: Calculations based on World Bank (2023).

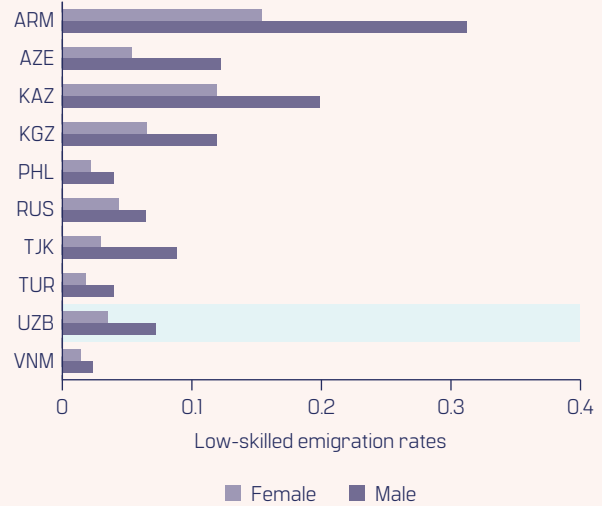
Notes: ECA refers to Europe and Central Asia excluding high income countries. Median rates for each group reported as 'X'.

**FIGURE B1.3.2** Emigration rates are higher for high-skilled women than men



Source: Calculations based on World Bank (2023).

**FIGURE B1.3.3** Emigration rates are higher for low-skilled men than women



Source: Calculations based on World Bank (2023).

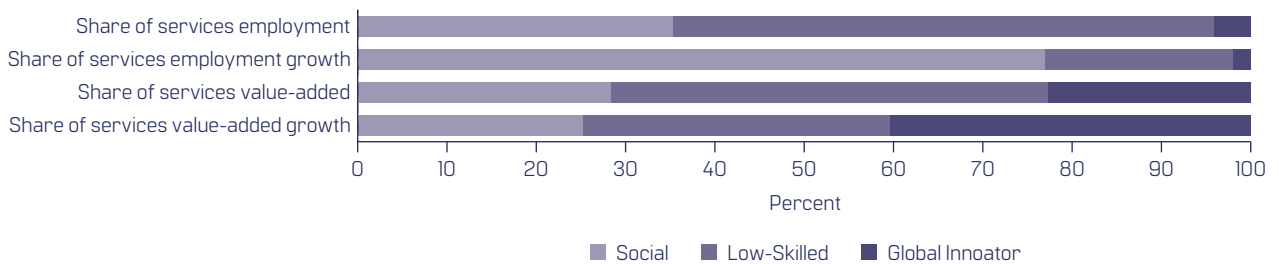
The composition of the services sector in Uzbekistan is skewed towards social services and low-skilled services. Social services, which include health, education and public administration, account for 35 percent of services employment and 25 percent of services value added. Low-skilled (enabling and consumer) services account for almost two-thirds of total services' employment and almost one-fourth of total services value added.<sup>4</sup> Global

4 The wholesale and retail sector accounts for the largest share of service sector employment. In this report's typology, wholesale and retail are classified in the categories of low-skilled enabler and low-skilled consumer services, respectively.

innovator services (finance, ICT, and professional services) contribute to 20 percent of services value added but only 4 percent of services employment (figure 1.9, panel a). The weight of global innovator services is notably higher in advanced economies in the region. For example, among high-income EU countries, low-skilled services and global innovator services, respectively, accounted for 50 percent and 14 – 25 percent of services employment (figure 1.9, panels b and c). These differences, in part, reflect differences in the structural transformation process across levels of economic development. However, even compared to countries with similar income levels, the share of global innovator services in services employment in Uzbekistan is low.

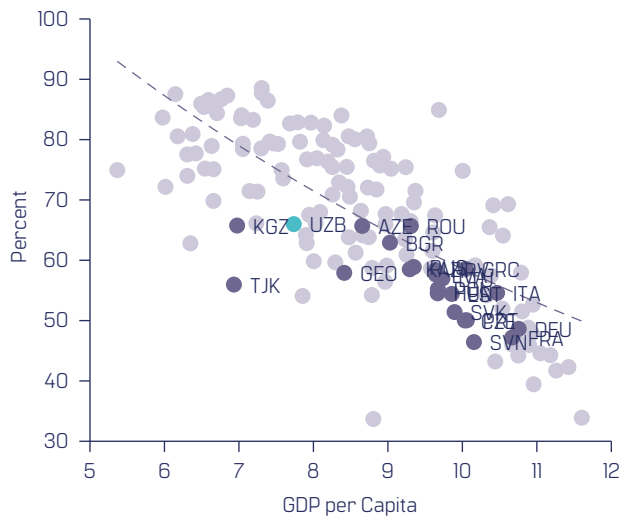
**FIGURE 1.9** Uzbekistan’s services sector is dominated by low-skilled services as well as social services –with little prominence of global innovator services – which is consistent with its level of per capita income

a. Shares in levels and growth of services employment and value-added, by services sub-sectors



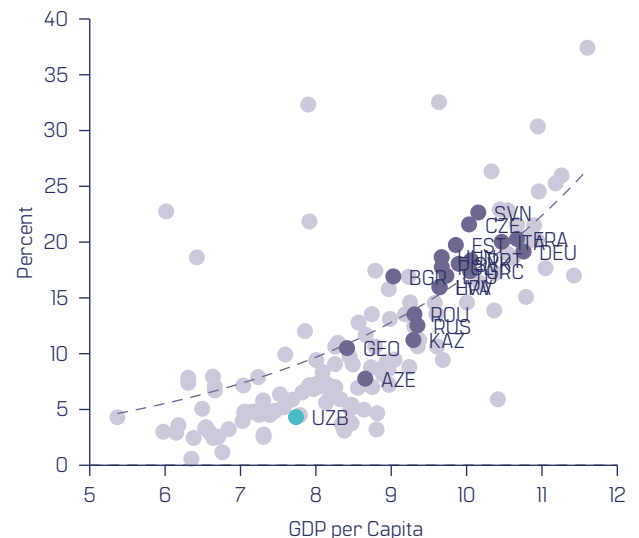
Source: Authors’ calculations based on ILO and the Statistics Committee for the Republic of Uzbekistan.  
 Notes: Shares are averages over the period 2017 – 2022. Global innovator services include telecommunications.

b. Share of services employment in low-skilled services



Source: Calculations based on ILOSTAT.  
 Note: Includes both low-skilled consumer and low-skilled enabler services (excluding telecommunications).

c. Share of services employment in global innovator services



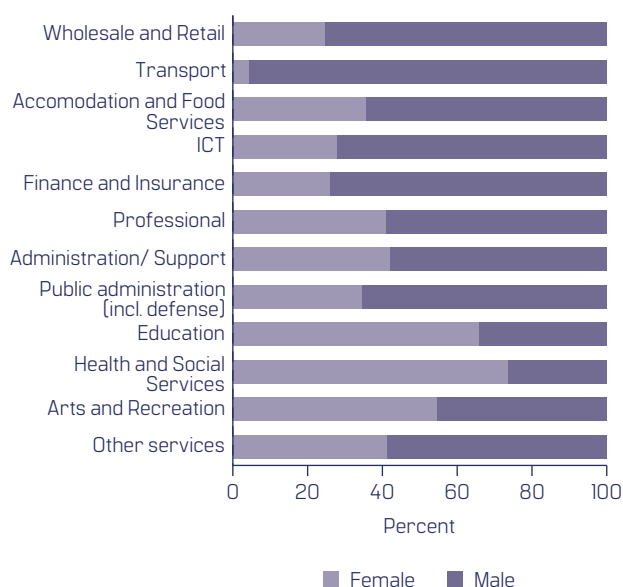
Source: Calculations based on ILOSTAT.  
 Note: Global innovator services include telecommunications.

**Furthermore, the composition of female employment is concentrated in low (to medium)-skilled services.** With the exception of the education sector, female employment is concentrated in low- to medium-skilled services, such as health and arts and recreation. The share of women among all workers employed in global innovator services is less than 40 percent (ICT, and finance and insurance) (figure 1.10, panel a). Further, the distribution of workers with advanced levels of education that earn higher wages within these

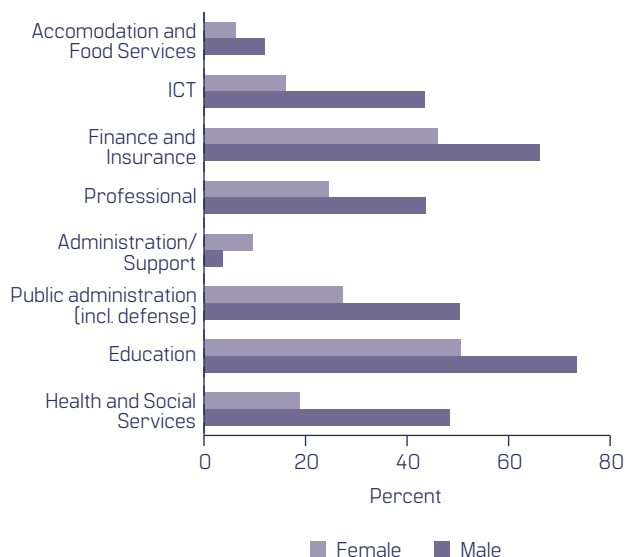
sectors is skewed towards men. For example, within ICT services, more than 40 percent of men have an advanced level of education while the corresponding share is less than 20 percent for women (figure 1.10, panel b).

**FIGURE 1.10** Within the services sector, female employment is mostly in social services and lower skilled services

a. Gender employment distribution across services, 2020



b. Gender distribution of advanced educated workers in services, 2020



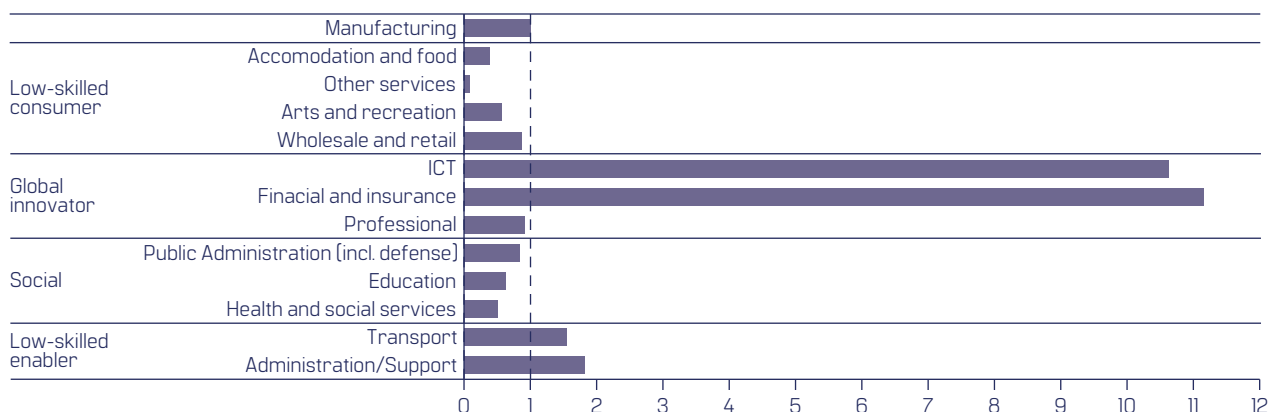
Source: ILO.

Much of the growth in the services sector was driven by social services, mostly reflecting increased public spending, and global innovator services, where few people work. Productivity levels and productivity growth show a similar level of importance of global innovator services. Global innovator services have the highest levels of labor productivity (with ICT and financial services being more than 2.5 times as productive as manufacturing) and high levels of labor productivity growth (with professional services growing by 25 percent annually between 2017 – 2022) (figure 1.11). Unsurprisingly, therefore, global innovator services accounted for around 40 percent of value-added growth in the past five years. However, these services made a negligible contribution to employment growth during the same period (figure 1.9, panel a). In contrast, low-skilled (enabling services and consumer) services remain at low productivity levels and were characterized by low levels of productivity growth. Between 2017 and 2022, social services, such as public administration and health, were characterized by productivity growth that matched the manufacturing sector (figure 1.11, panel b). Social services also accounted for three-fourths of growth in services employment during this period (figure 1.9, panel a). This growth of the social services sector reflects an increase in government expenditure over the past five years.

Therefore, the challenge for private sector-led growth in the services sector entails strengthening linkages with the rest of the economy, expanding the size of global innovator services, and improving the productivity of low-skilled services. This report outlines three policy priorities to address these challenges for growth in the services sector, focusing on market contestability, physical and digital connectivity, and worker and firm capabilities. Chapter 2 presents this policy framework and highlights some of the cross-cutting constraints across the services sector. The subsequent chapters will dive

**FIGURE 1.11 Global innovator services are both the most productive services as well as the biggest drivers of productivity growth**

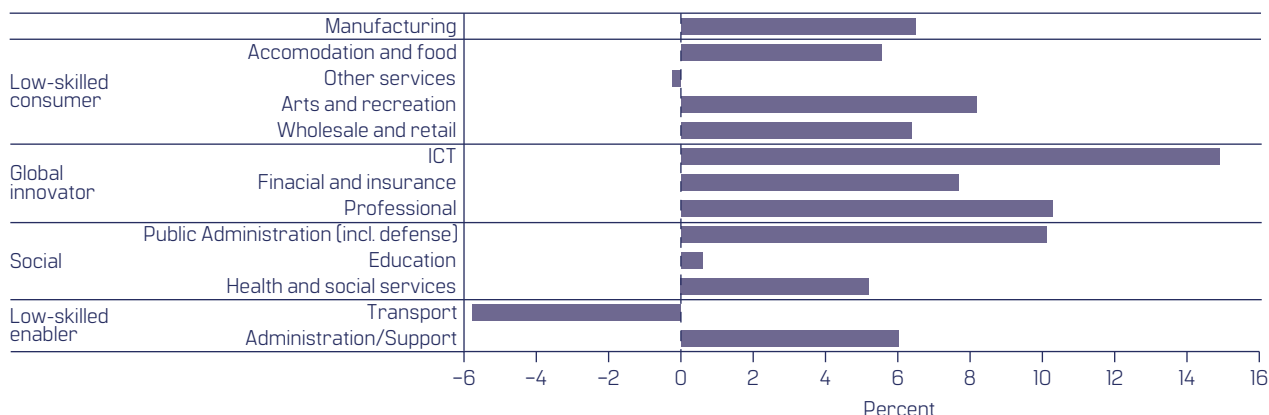
a. Average value added per worker, 2017 – 2022, relative to manufacturing (=1)



*Notes:* Relative value-added per worker is calculated as value-added per worker for each sector is divided by that of manufacturing, before the average is computed over the years. ICT includes telecommunications.

*Source:* Data on employment is obtained from ILO and the Uzbekistan Statistics Agency under the President of the Republic of Uzbekistan. Value-added data is obtained from Statistics Agency.

b. Average growth in value added per worker, 2017 – 2022



*Notes:* Growth rate in value added per worker is estimated annually for each year before averaging over the period. Value-added data for several subsectors (including professional, public administration, administration and support, education, health and arts and recreation) begins in 2017 while the others begin in 2016. ICT includes telecommunications.

*Source:* Data on employment is obtained from ILO and the Uzbekistan Statistics Agency under the President of the Republic of Uzbekistan. Value-added data is obtained from Statistics Agency.

deeper on how these policy priorities might vary by the three challenges to the services sector's growth. Chapter 3 will focus on the opportunities to strengthen the linkages between services and other sectors in the economy, with a specific focus on low-skilled enabling services. Chapter 4 relates to expanding the share of global innovator services, which have higher levels of productivity owing to their tradability and skill content. Chapter 5 relates to improving the productivity of low-skilled consumer services. Some of these services are not subject to international specialization, and owing to the importance of physical proximity, will continue to employ large numbers of people.

**Addressing these challenges to accelerate the development of the services sector is consistent with the stated objectives of the Government of Uzbekistan.** The resolution of the President of the Republic of Uzbekistan, dated May 11, 2021, emphasizes the need to

transform the service sector into an important driver of economic growth. Furthermore, the provisions listed under Decree of the President of the Republic of Uzbekistan, dated 11 September 2023, on the “Uzbekistan 2030” Strategy are consistent with the three challenges around private sector-led growth in the services sector outlined above. Here are some examples. With respect to strengthening linkages between services with the rest of the economy, there is the stated aim of “enhancing integration of the Republic of Uzbekistan in global transportation and logistics chains and increasing capacity of the national transportation system”. With respect to expanding the size of global innovator services, there is the stated aim of “transforming the country into a regional ‘IT-НУВ’ through development of digital technologies”. On improving the productivity of low-skilled services, there is the stated aim of “increasing the number of tourists through establishing broad conditions for development of tourism in Uzbekistan”.

# CHAPTER 2

## **A POLICY AGENDA FOR SERVICES: CONTESTABILITY, CONNECTIVITY, AND CAPABILITIES**

The productivity benefits of scale, innovation, and spillovers associated with the services sector can be realized through progress along three areas of policy action: contestability, connectivity, and capabilities (3Cs). The increased scope for scale, innovation, and spillovers has a primary mapping to each of the 3Cs even though this mapping is not always unique. The closest one-for-one associations are between scale and connectivity, innovation and capabilities, and spillovers and contestability. First, scale economies result from access to larger markets which, in turn, is closely linked to (international) trade opportunities. Physical and virtual (digital) connectivity is a pre-requisite to boost services trade, both directly as well as indirectly through linkages with other sectors. Second, innovation in the services sector derives from combining labor with human capital, ICT capital, and increasingly even intangible capital. This places a premium on the capabilities of firms and workers. Third, services play an enabling role in the wider economy because they provide intermediate inputs to other sectors. This makes contestability even more important because productivity benefits from greater competition can have benefits throughout the value chain.

Improvements in contestability, connectivity, and capabilities (3Cs) encompass multifaceted policies that cover a wide range of areas. Policy areas relevant to the growth of the services sector vary from skills upgrading and competition policy to trade opening.

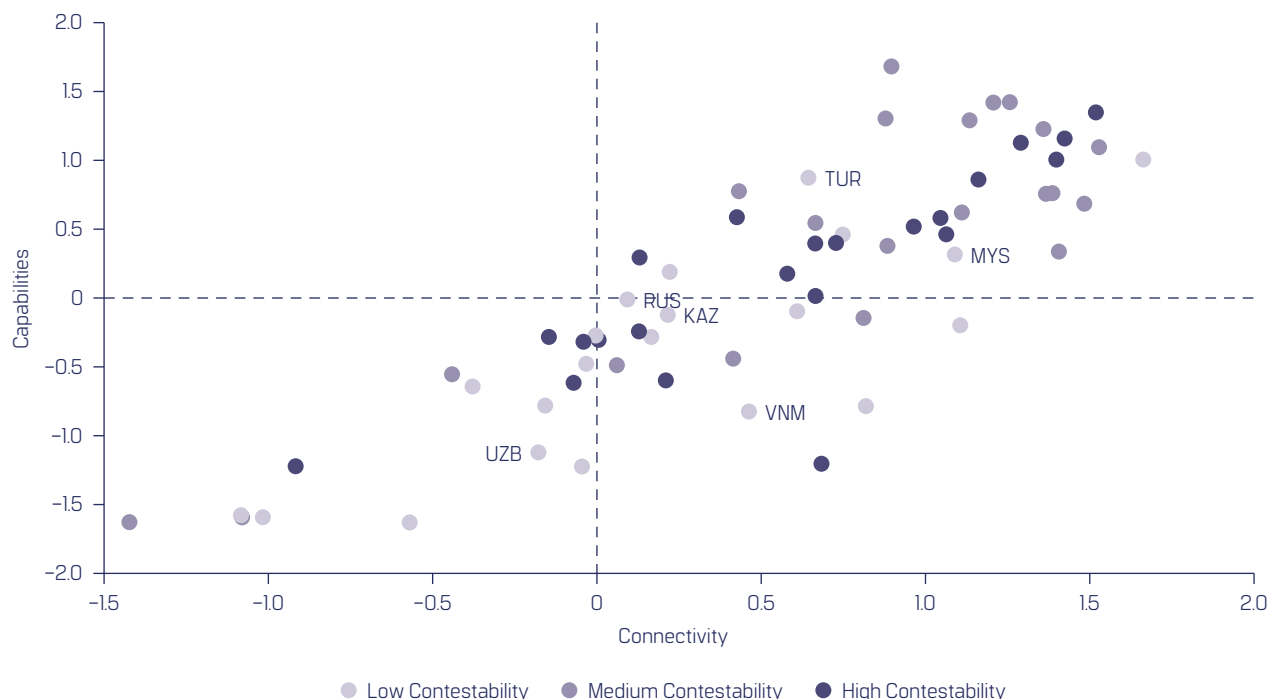
- **Contestability** — The focus here is on restrictions to competition and trade. Policies restrict the entry of foreign expertise and capital in the services sector. This includes, for example, data-related regulations, licensing requirements for service providers, and limits on foreign direct investment. In fact, many of the restrictions to services trade are “behind-the-border” restrictions that also impact domestic services providers. The role of competition policy to level the playing field with state-owned enterprises is also an important consideration.
- **Connectivity** — The development of ports, roads, airports, and warehousing matters for accessing growth opportunities beyond the local market. Such transportation infrastructure is itself part of the services sector and can expand opportunities for trade in goods as well as for trade in services when it involves the movement of people. The same holds true for digital connectivity as the diffusion of digital technologies has reduced the importance of geographical proximity between service providers and consumers.
- **Capabilities** — The focus here is on improving the skills of workers and the competencies of firms. Improving training and skills development is central to raising productivity while also enabling more workers to move to better-paying services. This does not mean that all the needed skills are “high end.” Basic digital skills, such as how to use email and the internet, rely on foundational cognitive skills, such as literacy and numeracy, as well as “soft” skills that foster adaptability, problem solving, and initiative. Management capabilities and organizational practices also matter for technology adoption and innovation.

There is considerable scope for Uzbekistan to improve along the three policy areas of contestability, connectivity, and capabilities. To illustrate how Uzbekistan performs relative to comparator countries across the 3Cs, figure 2.1 aggregates relevant indicators to measure each of the 3Cs. Contestability is summarized by the World Bank’s services trade restrictiveness index (STR1) which measures policies that impose barriers on international trade transactions. Connectivity combines the World Bank’s logistics performance index with the coverage of broadband connectivity that measure the necessary physical and digital infrastructure for access to larger markets. Capabilities combine tertiary school enrollment with the share of the population with advanced digital literacy

skills. These measure digital and other advanced technical skills that foster innovation and knowledge creation. Uzbekistan ranks below comparator countries along the dimensions of connectivity and capabilities. The gap with respect to capabilities is larger when compared to regional peers. On contestability, Uzbekistan is placed in the lowest tercile of countries in a global sample, but so too are its comparators (figure 2.1).

**FIGURE 2.1** Compared to global comparator countries, Uzbekistan underperforms on the policy dimensions of connectivity, capabilities, and contestability

Country Distribution in the Space of Connectivity, Capability and Contestability



*Source:* Elaboration based on World Bank-WTO Services Trade Policy Database [see also Borchert, Gootiiz, and Mattoo 2014], International Telecommunications Union's ICT Indicators Database; and World Development Indicators.

*Notes:* Country data are for the 2018–2022 taking latest available year. Each of the 3Cs is described by a summary measure that aggregates relevant indicators. "Contestability" consists of the average STRI score excluding construction. "Capabilities" comprises the use of standard ICT skills<sup>a</sup> and tertiary school enrollment rates. "Connectivity" combines the logistics performance index score and the percentage of individuals using the internet. The "capabilities" and "connectedness" indexes based on their mean z-score value between the two indicators. For "Contestability" they are categorized as high, medium, or low in contestability based on partitioning the z-scores from the STRI into terciles.

a. This measure is based on the average of four indicators which include the share of individuals: using basic arithmetic formula in a spreadsheet; connecting and installing new devices; finding, downloading, installing and configuring software; and creating electronic presentations with presentation software [in some cases, only two of the indicators are present].

**Bringing about improvements along the dimensions of contestability, connectivity, and capabilities is consistent with the stated objectives of the Government of Uzbekistan.** This is reflected in the provisions listed under Decree of the President of the Republic of Uzbekistan, dated 11 September 2023, on the "Uzbekistan 2030" Strategy. On capabilities, the stated objectives include, "providing modern knowledge and skills through the development of vocational education system" and "increasing enrollment in higher education and improving the quality of training specialists with higher education". On contestability, the stated objectives include "implementing consistent transition of monopolistic sectors to market principles, increasing the private sector share in the economy, and creating the most favorable conditions for free activities of entrepreneurs". On connectivity, the stated objectives include "providing stable and long-term sources of financing to infrastructure projects".

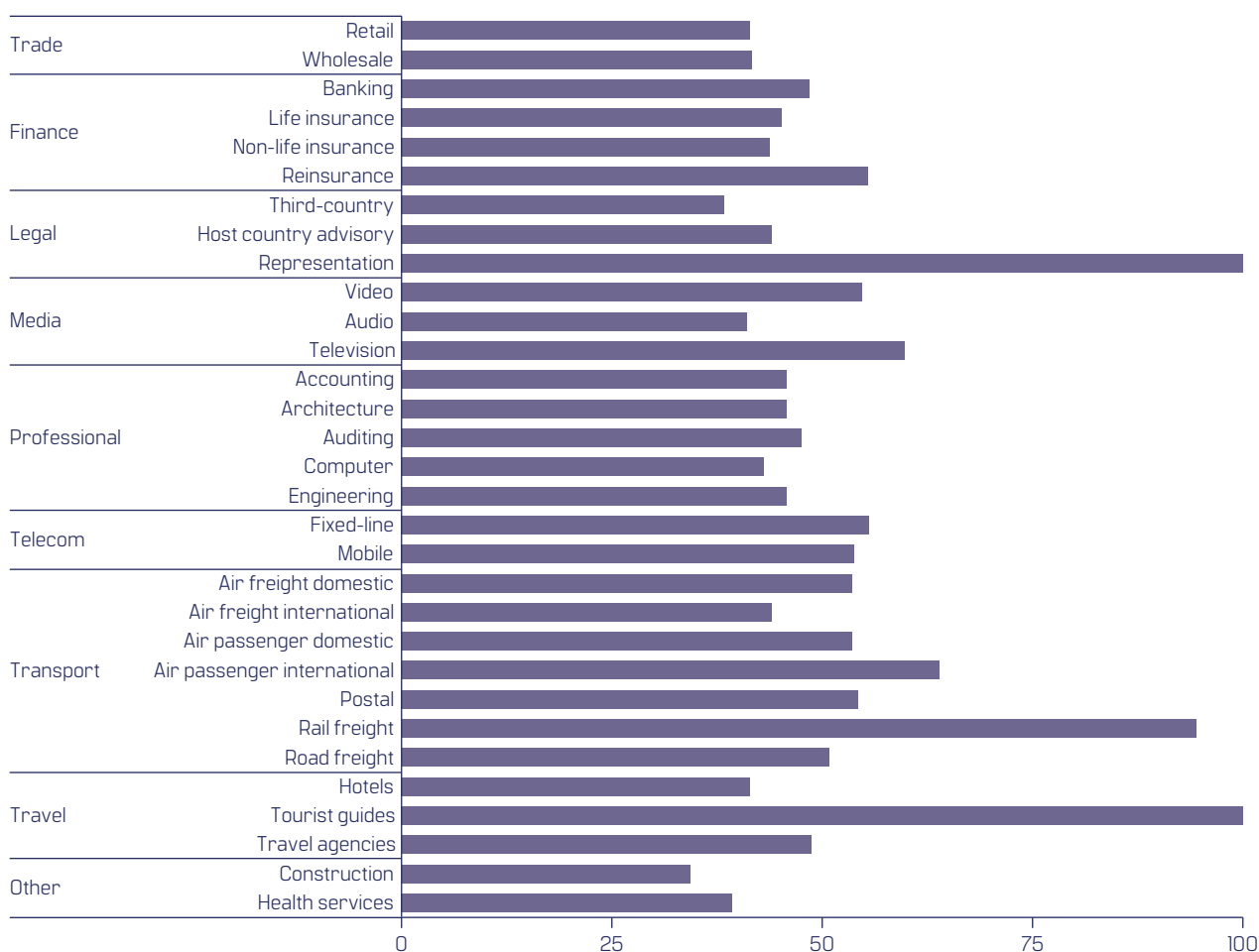


## CONTESTABILITY: TRADE RESTRICTIONS AND DOMESTIC MARKET COMPETITIVENESS

Regulatory barriers to services trade in Uzbekistan are significantly high and not a single services subsector can be considered as being “open” to trade. Most services are classified as having “major restrictions” to trade (with STRI scores around 50), highlighting the pervasiveness of services trade restrictions across all services subsectors (figure 2.2). Not a single services sector in Uzbekistan has an STRI score below 30, which would correspond to being “open” to trade in services.<sup>5</sup> Only four sectors — sound recording, health services, hospitality, and third-country legal representation — are classified as having

**FIGURE 2.2** Trade in services is characterized by major restrictions in most sectors, with some sectors virtually closed to competition

STRI Scores for all services sectors in Uzbekistan



Source: WTO-WB Services Trade Policy Database and Services Trade Restrictions Index (STRI).

Note: The index scores can be interpreted as follows: 0 – completely open; 25 – virtually open with minor restrictions; 50 – major restrictions; 75 – virtually closed; 100 – completely closed.

<sup>5</sup> In its policy dialogue with client countries, the World Bank generally considers STRI scores above 25 as warranting closer scrutiny. Scores close to or above 50 are considered to be highly restrictive and indicative of major obstacles to the entry and operation of foreign services and services suppliers.

“minor restrictions”. The most restricted sectors, with scores close to 100 (“closed”), include legal representation, rail freight, and tourist guide services.<sup>6</sup>

**Restrictions on services trade in Uzbekistan are largely attributable to restrictions on cross-border delivery.** The average STRI score for Uzbekistan is particularly high for cross-border supply; i.e., mode 1 trade (80.3 compared to 47.3 and 36.5, respectively, for modes 3 and 4), and higher than the corresponding scores for comparator countries such as Kazakhstan, Colombia, Peru, and Viet Nam.<sup>7</sup> This is due to the cumulative effect of horizontal measures which apply to all sectors as well as sector-specific policies. Cross-border supply is prohibited in 11 out of 31 sub-sectors in Uzbekistan.

**Services trade restrictions are particularly high in sub-sectors that provide intermediate inputs to the rest of the economy.** Sectors with high restrictions include those with significant impacts on economy-wide performance such as financial services, transportation, telecommunications (fixed and mobile), professional, and ICT services, all scoring closer to or above 50 (“major restrictions”). Because of the key intermediation role services play as inputs into other goods and service-producing activities, evidence of highly restrictive STRI scores point to potentially damaging economy-wide impacts.

**The presence of state-owned enterprises across many services subsectors, especially those with few market failures, poses challenges for contestability.** The World Bank Business of the State (BoS) database suggests that 60 percent of businesses with at least 10 percent state ownership (1,227 entities) in Uzbekistan are operating in the services sector. Furthermore, of the 19 largest SOEs, seven are in the services sector. While state ownership often responds to market failures (e.g., natural monopolies), 87 percent of business with state ownership (1,069 entities) in the services sector can be found in subsectors where there is little rationale for state-owned enterprises.<sup>8</sup> This includes professional and technical services (349 entities), wholesale and retail (223 entities), real estate (171 entities), and ICT (157 entities) (figure 2.3). The participation of the state in markets where private sector delivery is viable can affect competitive neutrality if state-owned enterprises are afforded unfair advantages. In addition, many sectors with a high state presence lack an independent regulator, meaning that the sector is typically regulated by the ministries directly, potentially creating a conflict of interest. This is discussed further in the sectoral deep dives in later chapters.<sup>9</sup>

### BOX 2.1 Measuring restrictions to services trade

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. The STRI constitutes 35 online questionnaires which cover 34 sub-sectors and which are populated by national law firms and consultants and reviewed by a WTO-WB team. It ranges from 0 to 100, where 0 indicates that none of the restrictions underlying the index are applied, and 100 means that the sector/mode is completely closed to foreign services and service suppliers. It primarily focusses 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 services supply and Services Sectoral Classification List (MTN.GNS/W/120).

6 There are also several restrictions that affect foreign providers across all services sectors. Foreign service suppliers are required to establish a local company, which is more costly than having a branch or representative office that are not recognized as legal entities. There is also scope to improve public consultation processes, transparency, and due process to provide certainty to businesses. Currently, there is no legal requirement to publish draft measures or give interested persons an opportunity to comment in Uzbekistan. Such lack of regulatory transparency may act as an impediment to foreign service suppliers even in the absence of formal legal restrictions to foreign participation.

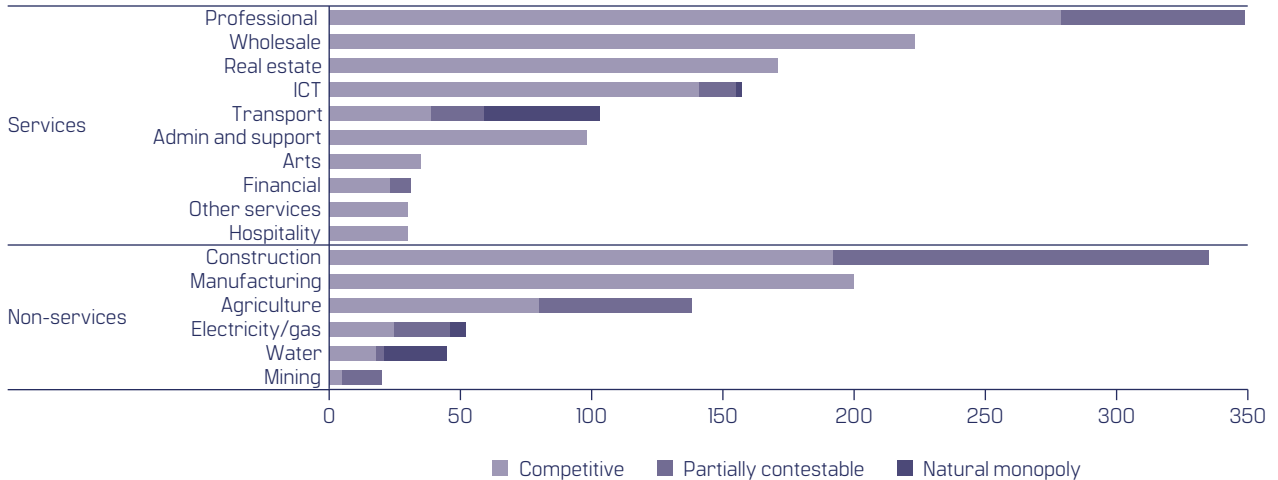
7 These were selected as peers due to similarity in economic structure, level of economic development, and geography.

8 This classification uses the methodology of Dall'Olio et al. (2022).

9 Forthcoming isoe assessment for Uzbekistan.

**FIGURE 2.3** There are many businesses with state ownership in the services sector, including in subsectors where private provision can be effective

Number of businesses with at least 10 percent state ownership in Uzbekistan, 2019



Source: World Bank Businesses of the State (BOS) database, as of November 2022.

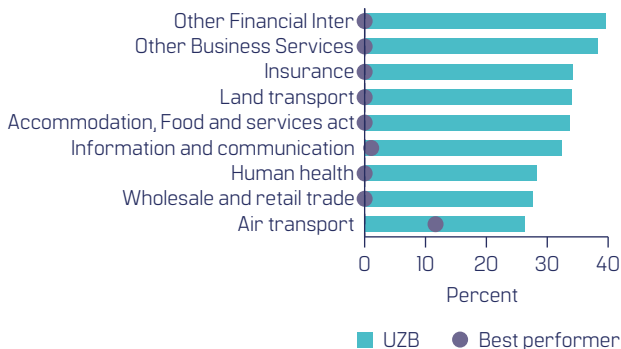
Note: SOEs are classified based on their activities at the NACE-4-digit level, based on the sectoral classification of Dall’Olio et al. (2022).

## The benefits of services trade liberalization

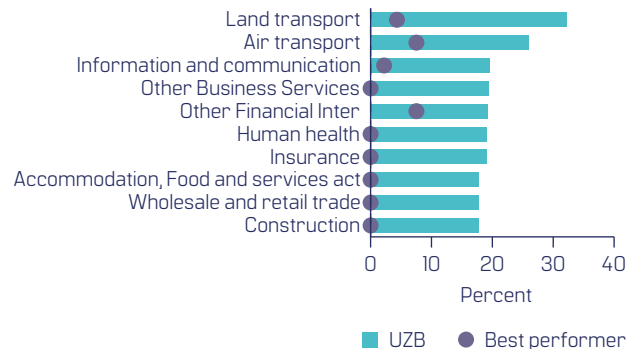
Restrictions on services trade are substantially higher than tariff barriers on goods. On average, the ad-valorem tariff equivalents (AVEs) derived from the services trade restrictiveness index are in the range of 30 percent for mode 1 and about 20 percent for mode 3 trade (figure 2.4). For the least restricted countries, AVEs<sup>10</sup> are as low as 1 to 2 percent. In

**FIGURE 2.4** Services restrictions correspond to tariff equivalents of more than 25 percent for mode 1 trade and more than 15 percent for mode 3 trade

a. Tariff equivalents, mode 1 (cross-border delivery)



b. Tariff equivalents, mode 3 (commercial presence)



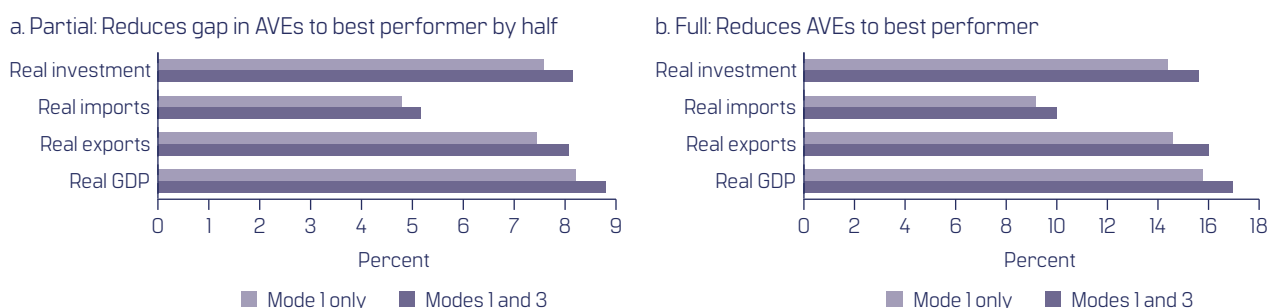
Source: World Bank staff calculations.

10 Collected STIRIS for many countries can be used to calculate ad-valorem equivalents (AVEs) of these services trade regulatory costs based on a structural gravity estimation. These measures can be interpreted comparably to 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 services sectors and the rest of the economy of reforming such barriers to services trade. AVEs for all services sectors with available STIRIS were calculated and aggregated into model sectors and mode of supply.

Uzbekistan, the average tariff protection on goods is in the range of 7 percent on a Most-Favored Nation (MFN) basis. There are tariff peaks, however, for example for beverages and tobacco and clothing (both around 30 percent). This suggests that services barriers are in the range of these tariff peaks on goods.

Uzbekistan has much to gain in terms of output, trade, and investment from reforming regulations that impose restrictions on services trade, especially through cross-border delivery. Results from a simulation exercise (see Box 2.2) show that the economy could expand by as much as 9 percent in terms of real GDP if services restrictions are reformed to eliminate the most restrictive barriers and close the gap with the best performer (partial liberalization) by 50 percent (figure 2.5). If the gap with the best performer is closed entirely (full liberalization), there could be as much as 17 percent increase in real GDP. The liberalization of mode 3 trade, i.e., foreign direct investment, brings few additional gains. Real exports, imports, and investment in Uzbekistan could also increase in the range of 5 to 8 percent from partially reforming services barriers.<sup>11</sup>

**FIGURE 2.5** Liberalizing barriers to services trade in Uzbekistan is expected to increase GDP, trade and investment.



Source: World Bank staff calculations.

### BOX 2.2 Economic gains from reducing restrictions on services trade

We employ a Computable General Equilibrium (CGE) model to estimate the economic gains from removal of services restrictions identified in the STRI. In the simulation exercise, we assume full liberalization of the services sector. We estimate the impacts on intersectoral gains as well as gains to wages and welfare. The framework employed has two key elements: a multi-region, multi-sector computable general equilibrium (CGE) model and a global dataset. The CGE model refers to the GTAP model, which is based on standard economic theory.<sup>a</sup> Standard comparative static simulations allow labor, capital, and other primary factors to reallocate across sectors, while their economy-wide availability is held fixed. To include potential effects on economic growth, the simulations discussed here allow the availability of economy-wide capital to expand or contract because of the simulated changes in trade policy. In addition to the model, a global database is used that permits CGE simulations for Uzbekistan in a global model for the first time. The model is calibrated over a well-documented global database which combines bilateral trade for 65 sectors with individual

country input-output (I-O) databases. This refers to the GTAP database with base year 2017 (version 11) just released in 2023, with Uzbekistan identified as a separate region.<sup>b</sup> The identified sectors cover the whole economy in each model region and 23 regions.<sup>c</sup>

In addition to removing distortions, opening to trade in services can result in significant productivity gains for the services sector and other sectors of the economy that rely on services inputs. The empirical literature provides ex-post evidence that opening to trade can result in productivity gains that enhances 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 using sectors (the input channel). Estimates of such productivity responses to reduced trade costs focus on manufacturing liberalization where an elasticity of tariffs changes to firm-level productivity gains has been measured.<sup>d</sup> The same economic effect likely holds for the case of services, while similar estimates building on tariff

11 Much of these gains relate to the liberalization of restrictions in mode 1 services trade.

equivalents for services trade restrictions are less available.<sup>e</sup> Yet evidence on the connection between services trade reform and productivity gains in manufacturing can be found in the literature.<sup>f</sup>

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.<sup>g</sup>

a. The structure of the model is discussed in Corong et al. (2017).

b. Aguiar et al. (2022).

c. These regions include: Uzbekistan, China, EU27, Russia, Korea, Kazakhstan, United States, Türkiye, ECA neighbors (Belarus, Kyrgyzstan, Tajikistan, Turkmenistan, Armenia, Azerbaijan, and Georgia), Japan, India, Ukraine, the UK, Switzerland, Iran, Afghanistan, and seven regional aggregates for other partners.

d. See, for example, Amity and Konings (2007), Khandelwal and Topalova (2011), and Fielor and Harrison (2023).

e. Evidence of a positive link between services trade liberalization and increases in productivity in the services sector includes Papaioannou (2018), and Fu, Wang, and Yang (2023).

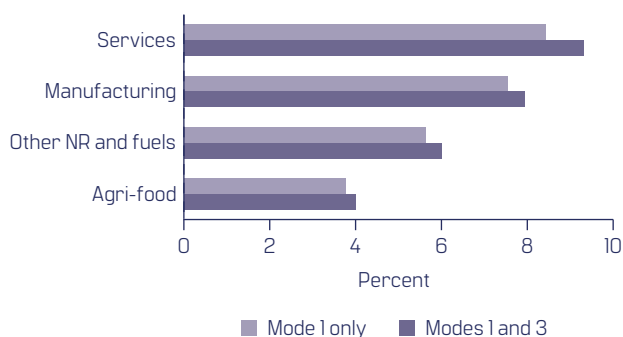
f. See, for example, Arnold, Javorcik, and Mattoo (2011), Shepotylo and Vakhitov (2012), and Arnold, Javorcik, Lipscomb, and Mattoo (2016).

g. Specifically, total factor productivity is assumed to increase by 0.3 percent for each percent point reduction in tariff equivalents.

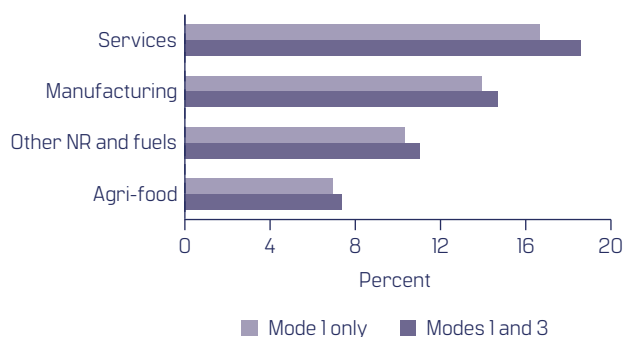
**All sectors of the economy can benefit from an opening of services trade, including the manufacturing sector.** Services and manufacturing output would expand in the range of 8 to 9 percent with a partial liberalization of services restrictions. These sectoral expansions are amplified (for example to close to 15 and 19 percent for manufacturing and services, respectively) if a full liberalization is simulated (figure 2.6). As with the case of economy-wide estimates, the majority of the expansion in sectoral output relates to the liberalization of the restrictions in mode 1 trade. Within the manufacturing sector, industries such as motor vehicles and chemicals would see the largest expansions. Within the services sector, global innovator services and hospitality services would see the largest expansions (figure 2.8, panel a).

**FIGURE 2.6** There are large impacts of services liberalization across all sectors, also outside of services.

a. Partial: Reduces gap in AVEs to best performer by half



b. Full: Reduces AVEs to best performer

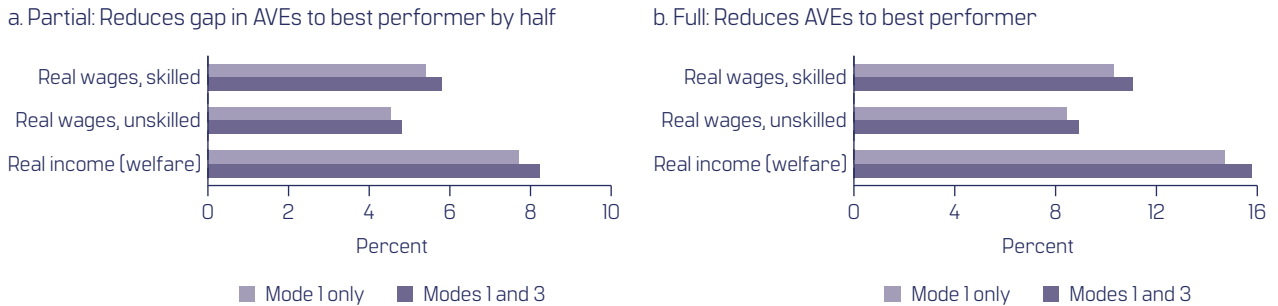


Source: World Bank staff calculations.

**The liberalization of the services sector in Uzbekistan is also projected to increase real incomes.** Real incomes would increase by about 8 percent in a partial liberalization scenario and by 16 percent in a full liberalization scenario (figure 2.7). Wages of both skilled and unskilled workers would go up in all considered scenarios. Without accompanying productivity effects, the effects between skilled and unskilled workers are very close to each other at 0.8 and 1 percent, respectively. The wage gap, however, expands marginally in favor of skilled workers (at 11 percent versus a 9 percent increase) when productivity gains are linked to services liberalization.

**The largest real income gains from reforms to services trade restrictions are expected in wholesale and retail trade, ICT, other business services, and financial services.** This ranking of services with respect to real income gains reflect their contribution to aggregate value added or in providing inputs to other sectors. Reforms are expected to have the

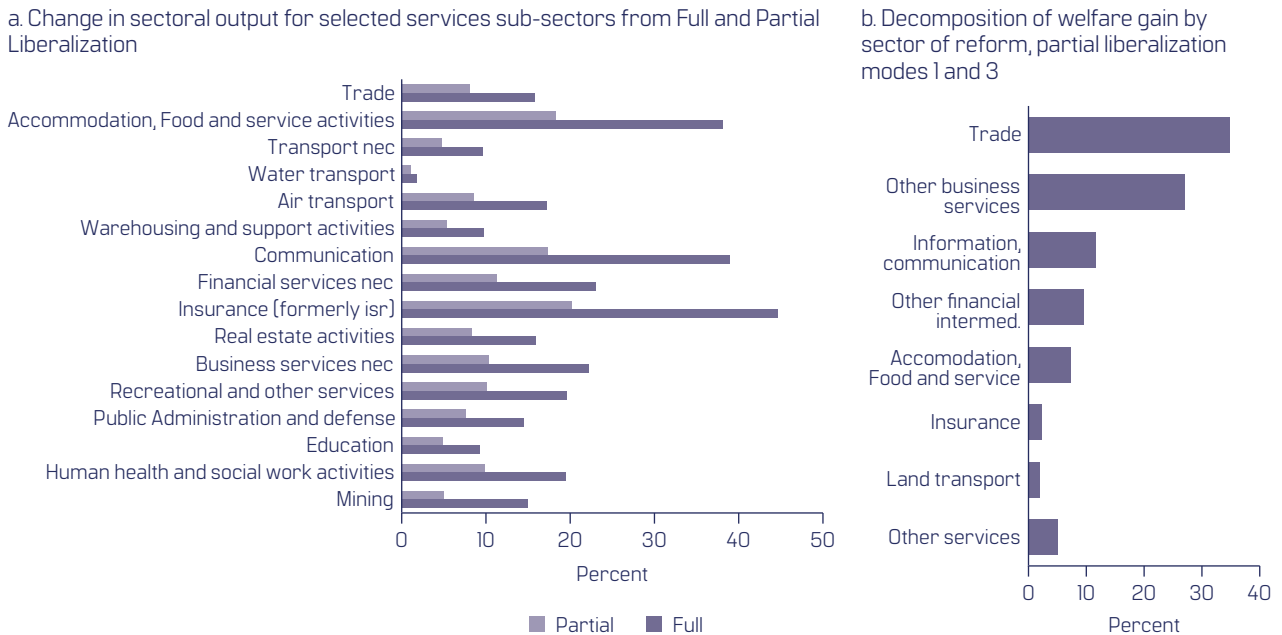
**FIGURE 2.7 Liberalizing services is expected to increase incomes of both unskilled and skilled workers**



Source: World Bank staff calculations.

largest effect in the retail and wholesale services, which play an important role in facilitating trade in goods. In addition, lower retail prices for consumers can benefit households. The other sectors with large, expected impacts include business services (professional services and administrative services), followed by ICT and financial services (figure 2.8, panel b).

**FIGURE 2.8 There are large gains in output and wages of liberalizing barriers to services trade in Uzbekistan**



Source: World Bank staff calculations.

Note: Welfare in the model is measured by the equivalent variation and includes consumer purchasing power improvements.

Uzbekistan’s wro accession process provides an entry point in making commitments towards liberalizing the services sector. The wro accession for Uzbekistan has been on-going since 1994 but has seen a recent acceleration. The country formally resumed accession in 2020 and commitments towards liberalizing services sectors — which requires many “behind the border” regulatory reforms — are a crucial part of the negotiations. The potential benefits of wro accession suggest high impacts from the resulting liberalization of services trade (Box 2.3). The anticipated growth in Uzbekistan, under the market liberalization scenario, is expected to be driven predominantly by the liberalization of services

trade, which accounts for about 80 percent of the increase. The implementation of trade facilitation (which improves the efficiency of transportation and logistics services)<sup>12</sup> and the facilitation of foreign direct investment (“mode 3” of services trade) will play an important role in boosting the benefits, increasing the gains in real GDP from approximately 10 percent (under market access liberalization only) to about 22 percent (with complementary trade facilitation and investment growth).

### BOX 2.3 Leveraging Uzbekistan's WTO accession process to reduce services trade restrictions

Uzbekistan's quest to accede to the World Trade Organization, a priority the government has on numerous occasions recently reaffirmed with a view to joining the world trade body by the time of its next Ministerial meeting in early 2026, offers a ready-made setting in which to address the prohibitively high level of policy restrictiveness found in the country's service sector.

The experience gained from the WTO accession of other transition economies strongly suggests that the policies and market structures that underpin restrictions in Uzbekistan's services sector will come under considerable scrutiny as the country pursues the WTO accession process. The success of its accession journey, and the likelihood of its completion within the next two years, may well hinge on the willingness and ability of policy makers to embrace a sequence of reforms aimed at boosting the contestability of the country's service economy. Doing so would also address prevailing hurdles to connectivity, both physical and digital, while also helping attract the larger doses of foreign capital (via mode 3 commitments), technologies and talents (via mode 4 commitments on intra-corporate transferees and specialists) that the shift towards modern innovator services will require.

Beyond aiming for an ambitious set of sector and mode-specific commitments under the General Agreement on Trade in Services (GATS), Uzbekistan can leverage its WTO accession by advancing reforms in a host of complimentary areas. By joining the

WTO, Uzbekistan would automatically assume the Trade Facilitation Agreement (TFA) obligations, and this would stand to improve its logistics performance and border management, a critical issue in a country suffering from double “landlockedness”. Furthermore, joining plurilateral disciplines on services domestic regulation (SDR)<sup>a</sup> – as Comoros and Timor-Leste recently did upon joining the WTO – can reduce trade costs and ensure that Uzbek rules governing licensing, accreditation, and technical standards in services pursue legitimate public policy objectives in a manner that minimizes adverse effects on cross-border trade and investment. Other accession-related steps to boost market contestability and improve overall governance include joining the WTO's Government Procurement Agreement (GPA),<sup>b</sup> a plurilateral pact that covers state purchases of both goods and services,<sup>c</sup> as well as signing onto the updated Information Technology Agreement<sup>d</sup> with a view to boosting the ICT services sector by eliminating tariffs on a wide range of ICT goods that are central to the supply and use of global innovator services. Finally, given the predominance of mode 3 trade (commercial presence) in services, Uzbekistan should signal its readiness to join the plurilateral agreement on Investment Facilitation for Development (IFD)<sup>e</sup> when it comes into force. As with plurilateral disciplines on services domestic regulation, the IFD aims to boost the friendliness of signatories' investment climates by facilitating FDI inflows and reducing the red tape associated with establishing a commercial presence.

a. In December 2021, 67 WTO members adopted a Declaration announcing the successful conclusion of negotiations on services domestic regulation aimed at increasing transparency, predictability, and efficiency of procedures for authorization of service providers. Since February 2024 and following the conclusion of certification procedures under the GATS, the disciplines have entered into force for 46 WTO members that collectively account for an estimated 92 percent of world trade in commercial services. Implementation of the disciplines is expected to lower trade costs by over USD 125 billion worldwide.

b. See [https://www.wto.org/english/tratop\\_e/gproc\\_e/gp\\_gpa\\_e.htm](https://www.wto.org/english/tratop_e/gproc_e/gp_gpa_e.htm)

c. The WTO estimates that services account for roughly 50 percent of non-defense procurement expenditures.

d. The Information Technology Agreement (ITA) was concluded by 29 participants at the Singapore Ministerial Conference in December 1996. Since then, the number of participants has grown to 82, representing about 97 percent of world trade in IT products. The participants are committed to completely eliminating tariffs on IT products covered by the Agreement. At the Nairobi Ministerial Conference in December 2015, over 50 members concluded the expansion of the Agreement, which now covers an additional 201 products valued at over \$1.3 trillion per year.

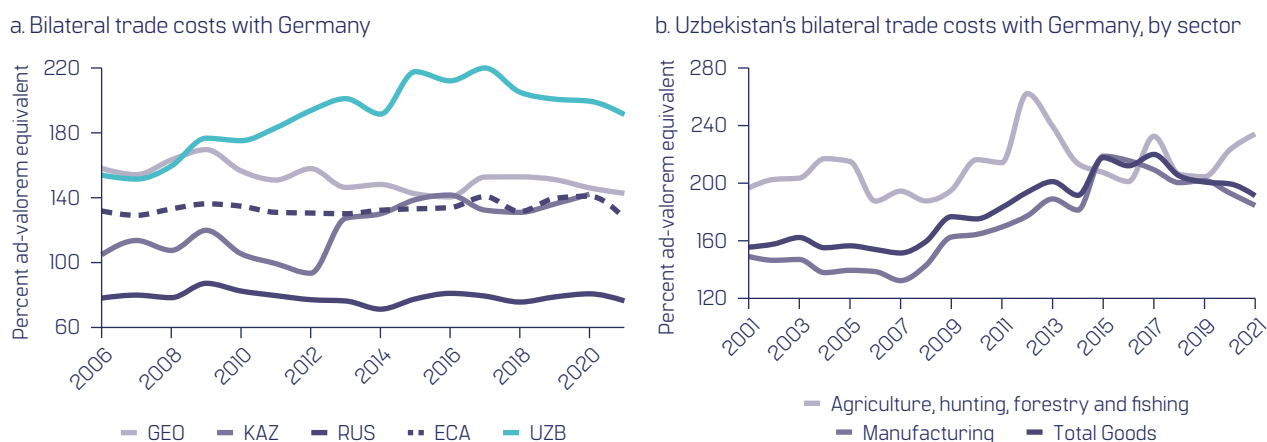
e. Originally launched in spring 2017 by a group of developing and least-developed WTO members, the Investment Facilitation for Development (IFD) Initiative aims to develop a global agreement on IFD to improve the investment and business climate and make it easier for investors in all sectors of the economy to invest, conduct their day-to-day business, and expand their operations. The 124 WTO members participating in the Initiative finalized the IFD Agreement in November 2023. This plurilateral agreement is open for all WTO members to join. Unlike multilateral agreements, plurilateral agreements under the WTO are binding only on those members accepting their terms.

12 Uzbekistan's accession to the wto will comprise the Trade Facilitation Agreement (that entered into force in February 2017), which is an important step forward in facilitating the movement of goods across borders.

## CONNECTIVITY: ENABLING DIGITAL AND PHYSICAL CONNECTIONS

**Trade costs in Uzbekistan are among the highest in the world.** Trade costs — that measure the price difference between domestic trade and international trade in the same type of goods — in Uzbekistan are among the top 20 countries worldwide, and comparable to economies with one fourth of its GDP per capita.<sup>13</sup> Over the last two decades, Uzbekistan has the highest trade costs compared to its regional peers — including Kazakhstan, Armenia, Georgia, and the regional average for Eastern Europe and Central Asia (excluding high income countries) (figure 2.9, panel a). And these trade costs have especially increased for manufactured goods during this period (figure 2.9, panel b). These high trade costs are linked, at least in part, to Uzbekistan’s geography of being one of only two countries in the world that are “double-landlocked” (i.e., surrounded by countries that are also landlocked). Better logistics can ease the costs of geographical distance. International evidence suggests that a 10 percent improvement in logistics performance leads to a 2.3 percent increase in trade flows (Arvis, Duval, and Shepherd 2013).

**FIGURE 2.9** Uzbekistan has the highest trade costs compared to its regional peers and these have increased over the past two decades



Source: ESCAP-World Bank Trade Costs Database.

Note: ECA refers to Europe and Central Asia excluding high income countries

**Uzbekistan’s physical connectivity to markets is hindered by the relative inefficiency of its transportation and logistics services.** Despite improvements in its customs procedures as well as capacity of organizing competitively priced shipments in recent years, Uzbekistan has experienced a decline in its logistics performance since 2018 with regard to infrastructure, tracking, tracing, and timeliness (figure 2.10). Uzbekistan ranks 88 out of 139 economies globally in the World Bank’s 2023 Logistics Performance Index (LPI). Furthermore, compared to peer countries, Uzbekistan’s performance on customs procedures, international shipments, and logistics competence is comparable to those of Georgia or Kazakhstan, but falls behind in the overall logistics performance score as well as in its tracking and timeliness components (figure 2.11).<sup>14</sup> According to an Enterprise Survey

<sup>13</sup> World Bank-ESCAP International Trade Costs Database

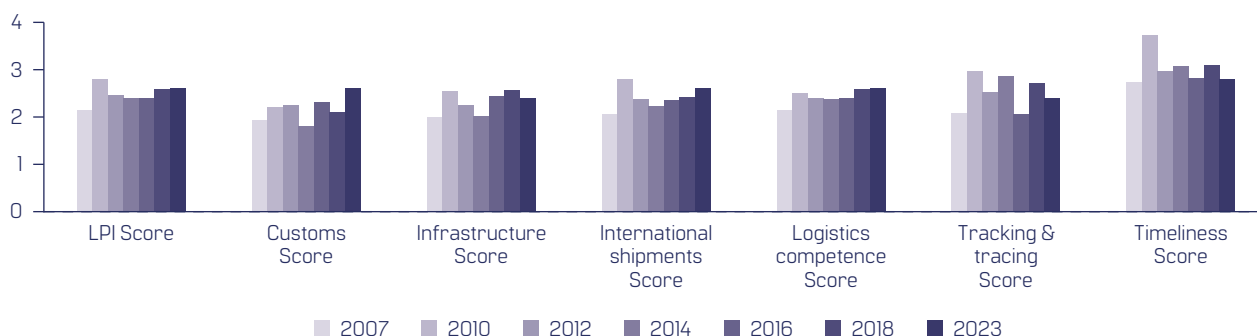
<sup>14</sup> The former reflects the level of transparency and availability of real-time information for tracking shipments; the latter refers to the ability of shipments to reach a destination within the scheduled or expected delivery time.



conducted in Uzbekistan in 2019, approximately 22.2 percent of firms (whose direct exports constitute 10 percent or more of their sales) identify customs and trade regulations as a major or severe obstacle to exporting. In comparison, 13.3 percent of firms in Europe and Central Asia and 7 percent of firms across the world report customs and trade regulations as a major obstacle in their business.

**FIGURE 2.10** Uzbekistan has experienced a decline in its logistics performance since 2018 with regard to infrastructure, tracking, tracing, and timeliness

Uzbekistan's Logistics Performance Index, 2007–2023

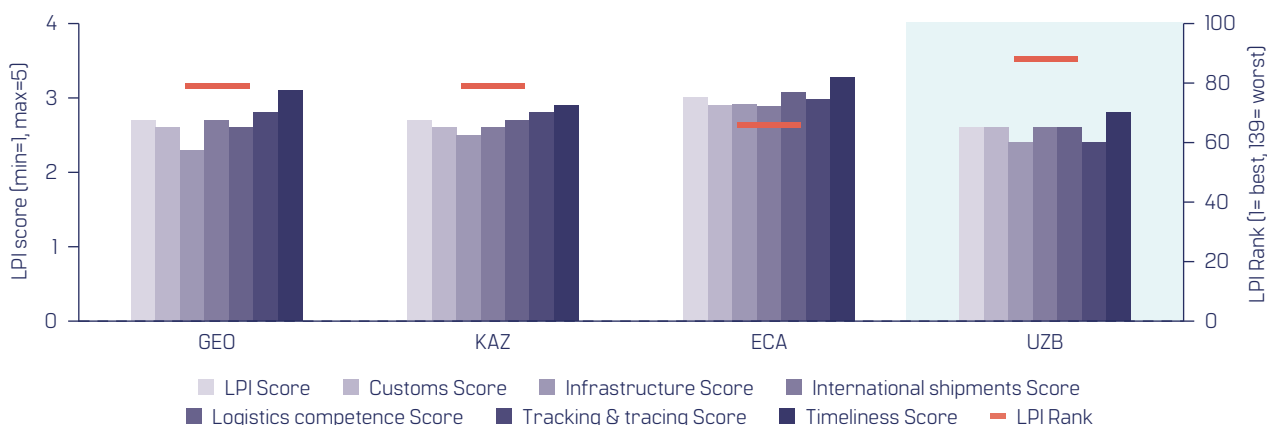


Source: World Bank Logistics Performance Index.

Note: Minimum score = 1; maximum score = 5

**FIGURE 2.11** Uzbekistan's overall logistics performance score lags regional comparators

Uzbekistan and comparators in the Logistics Performance Index, 2023



Source: World Bank Logistics Performance Index.

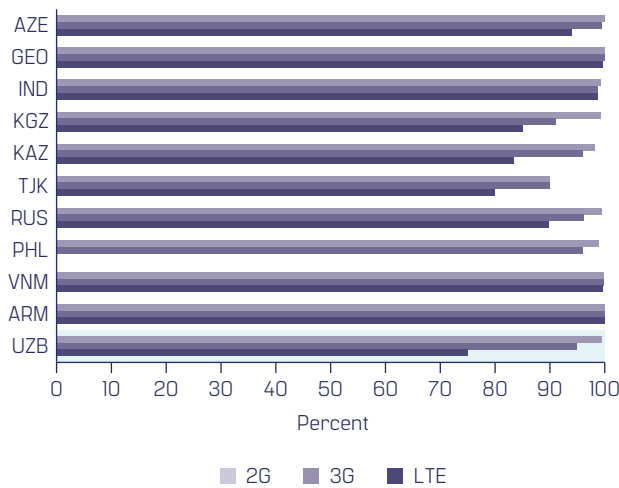
**Digital connectivity has been increasing in Uzbekistan, yet the use of digital technologies is not universal.** The International Telecommunications Union (ITU) estimates that the proportion of individuals using the Internet has increased significantly, from 15.9 percent to 76.6 percent between 2010 and 2021. People mainly use mobile services to gain access to the internet: 71 percent of the population relies on mobile networks for accessing the internet, while only 24 percent makes use of fixed broadband networks. The digital divide between urban and rural areas also remains, especially for fixed broadband services. In 2022, 80 percent of people in urban areas used the internet, while the corresponding share in rural areas was 74 percent. Further, only 14 percent of people in rural areas had access to fixed broadband internet compared with 32 percent in urban areas. Although

there have been efforts to extend fixed broadband services to rural areas through building the fiber optic infrastructure, mobile access remains the most important source of access to the internet for many people.

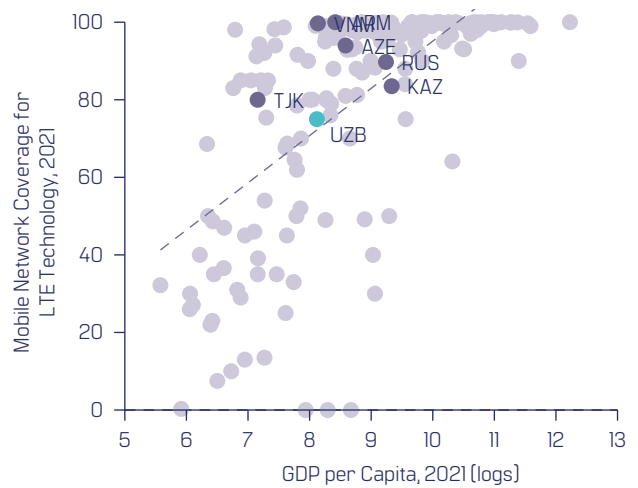
**The quality of broadband connectivity also continues to lag.** The coverage of slower telecommunication technologies, 2G and 3G, is similar as regional peers. However, the coverage of faster forms of mobile internet, such as 4G/LTE, remains lower compared to peer countries (figure 2.12, panel a) as well a broader set of countries at similar levels of per capita income (figure 2.12, panel b). Uzbekistan is also in the global bottom half in terms of internet speed. Tests conducted by SpeedTest rank Uzbekistan 99<sup>th</sup> for the speed of mobile access (out of 145 countries) and 90<sup>th</sup> for fixed broadband (out of 181 countries).<sup>15</sup> Mobile download speeds are low compared to other countries in region and of similar incomes (figure 2.12, panel c), while fixed broadband download speeds are at similar levels as neighboring countries but still fall below the global frontier (figure 2.12, panel d).

**FIGURE 2.12** The quality of Uzbekistan's broadband connectivity continues to lag comparator countries

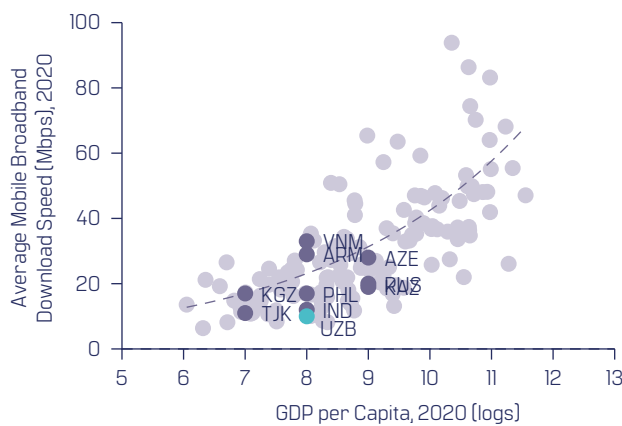
a. Coverage of 2G, 3G, and LTE, 2021



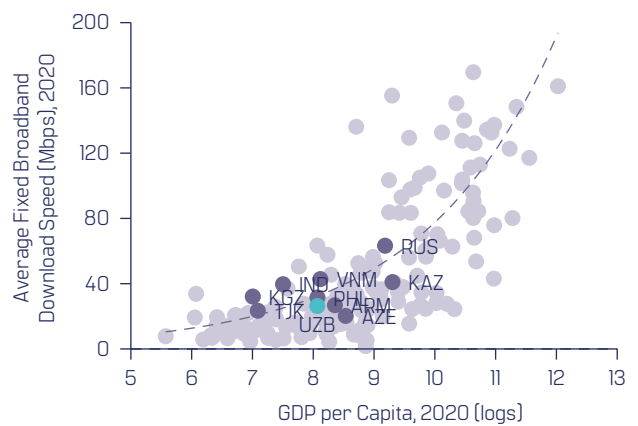
b. Coverage of 4G/LTE against income level, 2021



c. Mobile broadband download speed, 2020



d. Fixed broadband download speed, 2020



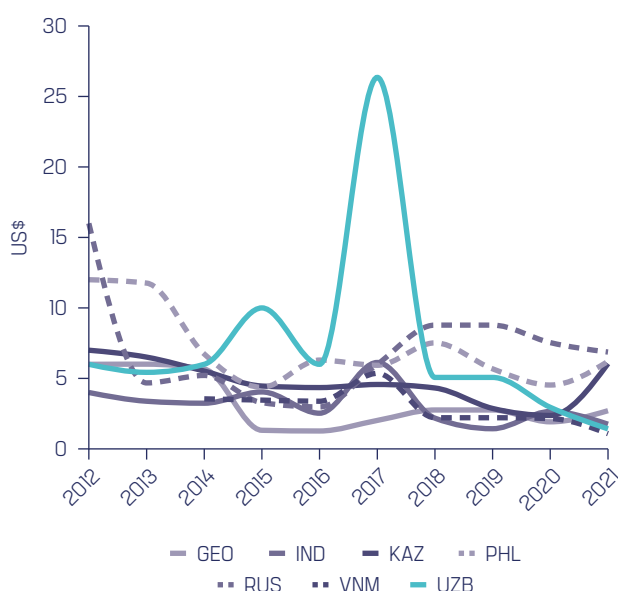
Source: International Telecommunications Union (ITU) and World Bank WDI

15 Source: Ookla Speedtest Global Index, November 2023.

Further, prices for telecommunication-related services are lower than before but remain high compared to some peer countries and advanced economies. Costs of telecommunication services used to be very high in Uzbekistan. Recently, prices have been decreasing, and this was achieved without any price controls. Nevertheless, scope remains to further increase affordability both compared to peer countries such as India and Viet Nam but also compared to advanced economies (figure 2.13). The relatively high price of telecommunication services is attributable, at least in part, to the lack of competition in the sector in Uzbekistan.

**FIGURE 2.13** Prices of mobile broadband are lower than before, but affordability remains low compared to some peer countries and advanced economies

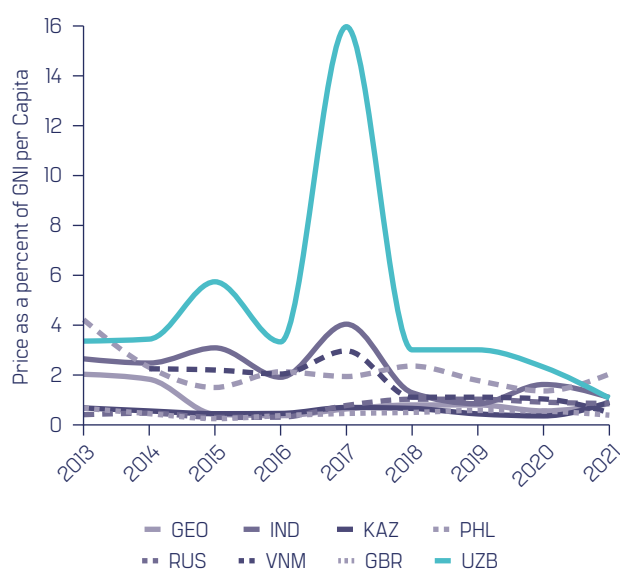
a. Price of mobile broadband



Source: International Telecommunications Union (ITU).

Notes: Prices are measured for 1GB of data between the period 2012–2016. From 2017, prices are for 1.5GB of data.

b. Affordability of mobile broadband



Source: International Telecommunications Union (ITU).

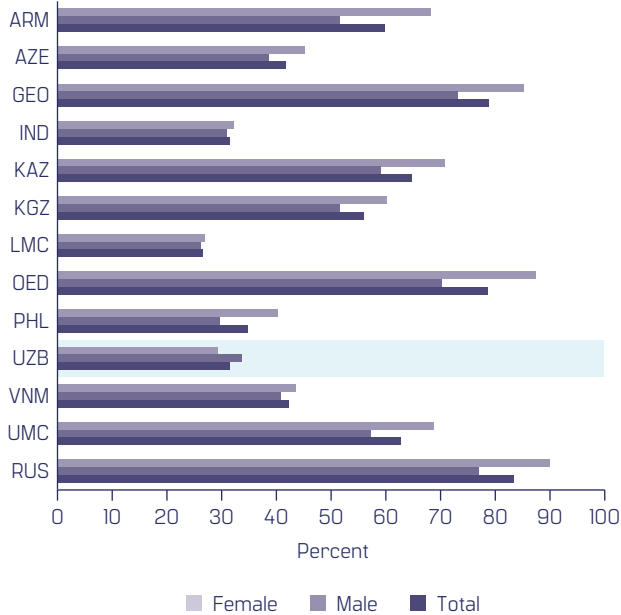
Notes: Affordability is defined as the price as a percentage of GNI per capita. Prices are measured for 1GB of data between the period 2012–2016, from 2017 prices are for 1.5GB of data.

## CAPABILITIES: ENHANCING WORKER SKILLS AND MANAGEMENT PRACTICES IN FIRMS

Uzbekistan's emphasis on advanced, technical education is developing a relevant skill base but this needs to be expanded. Uzbekistan's tertiary enrolment rates lag most developing economies in the Central Asia region (figure 2.14, panel a). With a population of over 36 million, almost as large as the other four Central Asian countries combined, skill development would create a sizable pool of skilled workers. However, while the critical mass of individuals completing higher education remains low, the share of university graduates in Uzbekistan that completed degrees in science, technology, engineering, and management (STEM)-related fields exceeds that in other developing economies in the region as well as peer countries outside the region such as Viet Nam (figure 2.14, panel b). And with the exception of Kazakhstan, the share of the population with advanced ICT skills is similar to other peer countries (figure 2.14, panel c).

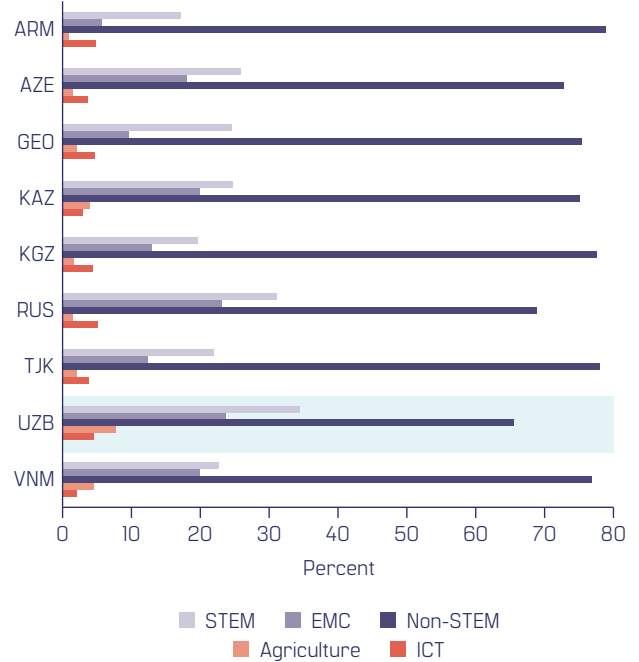
**FIGURE 2.14** Uzbekistan's emphasis on advanced, technical education is developing a relevant skill base but this needs to be expanded

a: Tertiary enrolment rates (gross)



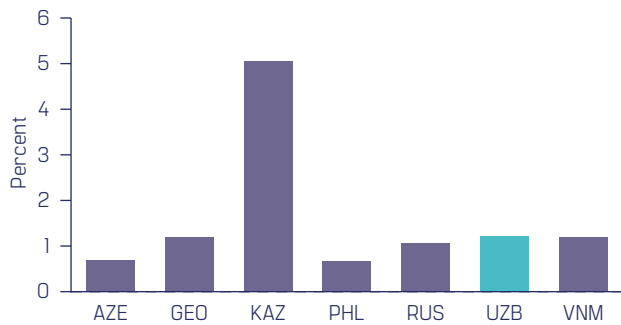
Source: World Bank, World Development Indicators (WDI).  
 Notes: Data period is for 2022 excluding Kazakhstan, Russia, and Philippines where latest data available is for 2020, 2019 and 2021, respectively. LMC and UMC are lower and upper middle income country aggregates. OED is OECD aggregate. Tertiary enrolment rates refer to the ratio of total enrollment, regardless of age, to the population of the age group that officially corresponds to the tertiary education level.

b: Percentage of graduates in different fields



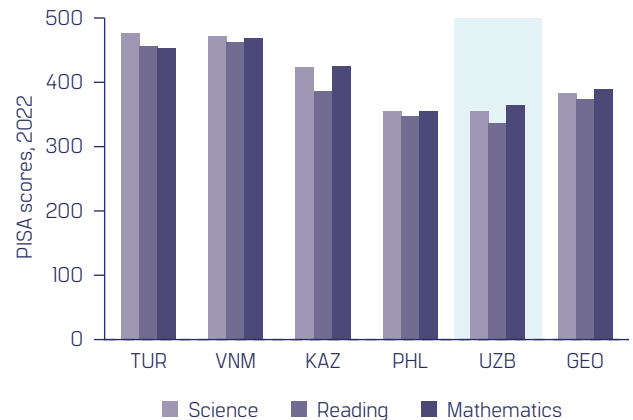
Source: World Bank, Educational Statistics Database  
 Notes: Data is for 2019 excluding Russia, Tajikistan, and Viet Nam, where most recent data is from 2018, 2017, and 2016, respectively. STEM represents Science, Technology, Engineering and Mathematics. EMC represents Engineering, Manufacturing and Construction.

c. Percentage of individuals with advanced ICT Skills



Source: International Telecommunications Union (ITU).  
 Notes: Data period is latest data available and runs from 2018 – 2022. The indicator that captures the percentage of population in a country with advanced ICT skills measures the percentage of the population capable of "writing a computer program using a programming language".

d. PISA Scores across Science, Mathematics and Reading



Source: OECD Programme for International Student Assessment (PISA) 2022.

**The adoption of structured managerial practices among services firms in Uzbekistan is low compared to peer countries as well as compared to firms in the country’s manufacturing sector.** Structured managerial and organizational practices are important determinants of firm-level productivity and have been documented to be low for manufacturing firms in Uzbekistan (Bloom, Schweiger, and Van Reenen 2012). Firm-level evidence from the World Bank Enterprise Survey suggest that the adoption of structured

managerial and organizational practices is low in Uzbekistan (figure 2.15, panel a).<sup>16</sup> The measured practices in the Enterprise Survey include whether firms set targets for their production, whether these targets are monitored, whether incentives are used to motivate employees, and how firms deal with problems in the production process.<sup>17</sup> There is a positive relationship between the adoption of structured management practices and labor productivity in services sectors in Uzbekistan (figure 2.15, panel b). And this relationship is stronger for the services sector than for the manufacturing sector.

**FIGURE 2.15** There is a positive relationship between the adoption of structured management practices and labor productivity in the services sectors, but adoption is low

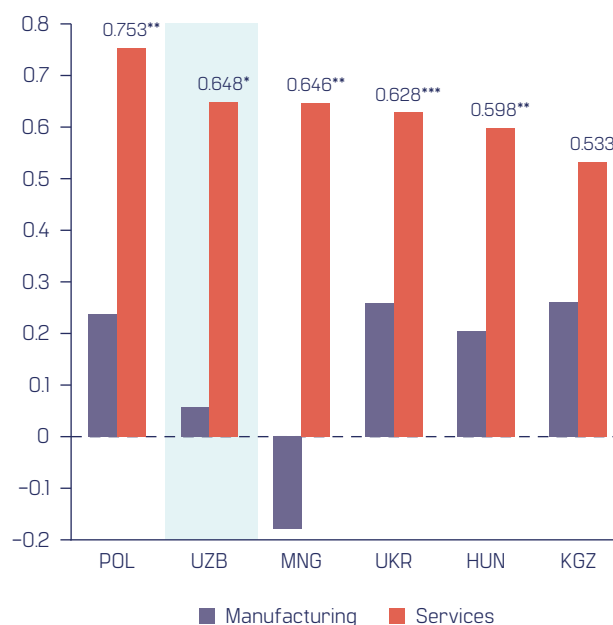
a. Index of structured management practices adoption, 2017–2019



Source: Calculations based on World Bank Enterprise Survey data.

Notes: The index is calculated based on self-reported adoption of managerial practices, and include practices around operations, monitoring, the setting of targets and the use of incentives.

b. Coefficient of regression of labor productivity on management practices



Source: Calculations based on World Bank Enterprise Survey data (see Nayyar et al. 2021).

Note: labor productivity is measured by the logarithm of sales per employee, in USD. Stars indicate statistical significance levels (\* p = 0.10, \*\* p = 0.05 and \*\*\* p = 0.01).

**The 3Cs matter for leveraging growth opportunities across the services sector but can be assigned differential weights for the three challenges associated with the three sector categories.** For expanding the share of global innovator services, digital connectivity is a prerequisite for exporting. So too are the capabilities of workers to match skill requirements and contestability that provides competition to domestic service providers. For strengthening linkages between services and other sectors of the economy, connectivity

16 Analysis of structured managerial practices — based on the World Management Survey methodology — within manufacturing firms suggest that the adoption of such practices was the lowest in Uzbekistan (Bloom, Schweiger, & Van Reenen 2012).

17 The questions in the Enterprise Survey are adapted from the Management and Organizational Practices Survey (mops), which has been administered by the US Census Bureau. Although the practices covered are similar to the World Management Survey (wms), the most prominent data collection effort around structured management practices, the mops and Enterprise Surveys, depend on self-reported answers instead of scoring by an independent evaluator. Self-reported answers can be more inaccurate and also introduce cultural differences in responses (e.g., similar to those seen with innovation questions, see Cirera & Muzi 2020). Bloom et al. (2019) highlight that within the US, there is a high correlation between wms and mops scores.

is important as the physical and digital infrastructure associated with transportation and telecommunication services is a fundamental economy wide-enabler. These linkages also mean that greater contestability in these sectors has cascading productivity benefits. Capabilities matter less owing to lower skill requirements. For improving the productivity of low-skilled consumer services, capabilities again matter less. And so too does contestability in largely non-traded services with few state-owned enterprises. Digital connectivity is the policy lever which matters most to incorporate the productivity benefits of technology adoption (Table 2.1).

**TABLE 2.1** Policy priorities for the three growth pathways

Focus sectors	Key subsectors	Connectivity	Contestability	Capabilities
<b>Enabling services:</b> Strengthen linkages between services and other sectors <i>(CHAPTER 3)</i>	Transportation and logistics, telecommunications	High	High	Medium
<b>Global innovator services:</b> Expand footprint <i>(CHAPTER 4)</i>	IT, professional services, financial services	High	High	High
<b>Low-skilled services:</b> Increase productivity <i>(CHAPTER 5)</i>	Retail, hospitality, personal services	High	Medium	Medium

# CHAPTER 3

## **STRENGTHENING THE LINKAGES BETWEEN SERVICES AND OTHER SECTORS**

Services play an important enabling role by providing inputs to other sectors in the economy, including manufacturing, creating multiplier effects. They play a crucial role in the production process of goods or other services. For example, a goods exporter relies on transportation and logistical services to transport their products across borders. Technology adoption by firms typically also requires services inputs, such as ICT or engineering services. This creates multiplier effects: evidence shows that increasing the price and quality of the services through reforms has a significant positive impact on manufacturing productivity (Arnold et al. 2016; Arnold et al. 2011; Bas and Causa 2013; Francois and Woerz 2008).

This chapter highlights that the linkages between the services sector and other sectors are weak — and that significant restrictions exist in enabling services, such as telecommunications and transportation. The services sectors that play an enabling role are the telecommunications sector, transportation services, administrative and support services, wholesale, and global innovator services. The analysis of services trade restrictions presented in the previous chapter already highlighted that many of these sectors face high restrictions. This chapter provides a deep-dive on two low-skilled enabling sectors that face high restrictions: telecommunications and transportation services. The analysis of trade restrictions on global innovator services — which also provide inputs to the rest of the economy — is provided in the next chapter.

## WEAK LINKAGES BETWEEN SERVICES AND OTHER SECTORS

In Uzbekistan, services mostly serve final consumers and play only a small role in providing inputs to other sectors. Of the services worth 176 trillion sum consumed in 2018, 81 trillion were consumed by final consumers, 29 trillion were exported, and 67 trillion were used as intermediate consumption by other sectors in the economy (figure 3.1).<sup>18</sup> This implies that close to half of services (46 percent) value output is accounted for by domestic consumption. Of those services that provide inputs to other economic activities rather than final consumers, most of these inputs are provided to other services sectors.

Compared globally, the input-output linkages between the services and manufacturing sectors are weak. Services account for less than a tenth (9 percent) of the inputs used in the manufacturing sector in Uzbekistan (figure 3.2). The corresponding share in higher-income countries and in many regional peer countries is much higher, ranging from 40 percent in the United States and 35 percent in Germany (35 percent) to 31 percent in Russia. The share of global innovator services providing inputs is also low in Uzbekistan: only 1.6 percent of inputs in the manufacturing sector are from global innovator services (professional, technical, financial, and ICT services). This is considerably lower than in other countries. For example, in the United States, 9 percent of manufacturing inputs are from global innovator services sectors.<sup>19</sup>

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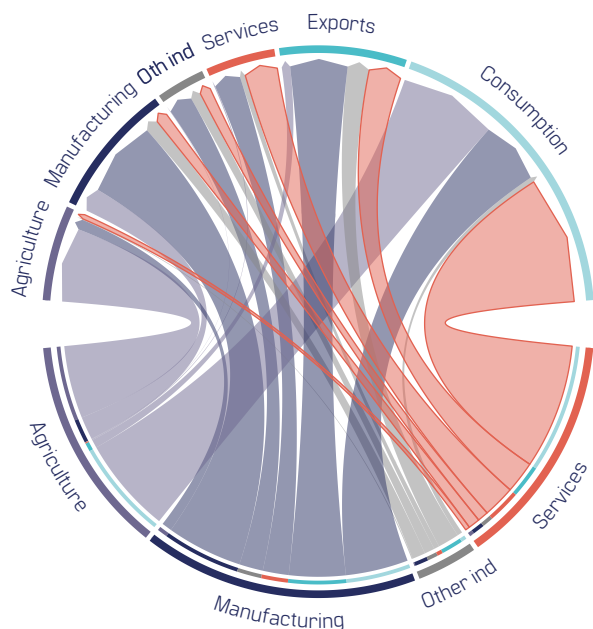
18 This figure includes consumption of services imports, which are valued at 23 trillion sum. Consumption figures exclude gross capital formation (which includes the accumulation of inventories), which represent another 16 trillion sum.

19 Percentages are based on calculations from OECD input-output tables, available through STATOEC.D.



**FIGURE 3.1** Most services are produced for domestic consumption

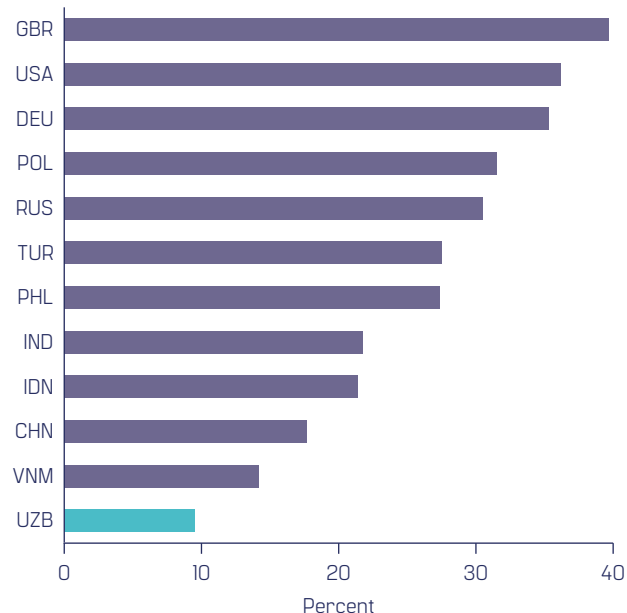
Graphical representation of input-output table, 2018



Source: Calculations based on the Input-Output Tables, prepared by the Statistics Agency under the President of the Republic of Uzbekistan.  
 Note: Input-output tables present the flows between sellers and purchasers, by sector. The thickness of the arrow represents the size of the flow. "Other ind" includes mining, construction, and utilities.

**FIGURE 3.2** Manufacturing sectors rely very little on services as inputs for the production process

Share of services as inputs for manufacturing, 2018

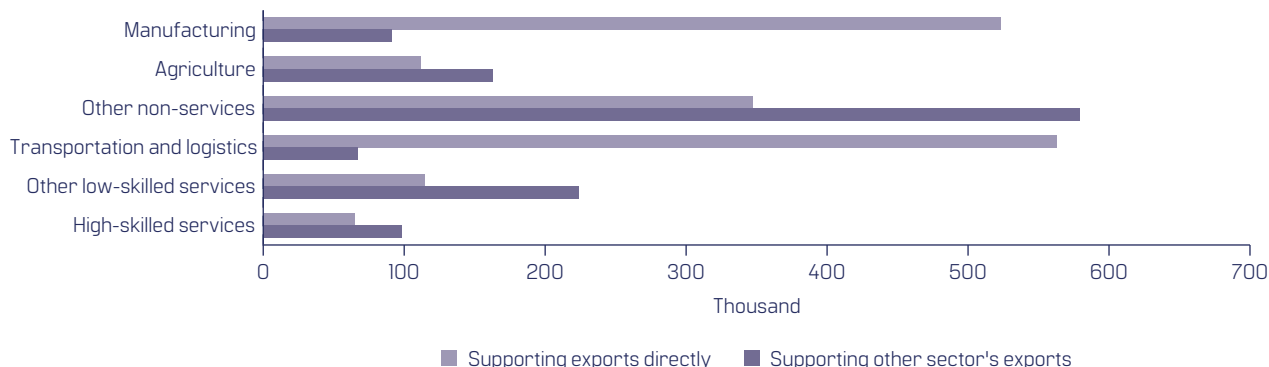


Source: Calculations based on OECD Input-Output Tables and Uzbekistan Input-Output Tables, prepared by the Statistics Agency under the President of the Republic of Uzbekistan.  
 Note: The share is calculated by calculating services inputs as share of total intermediate consumption by manufacturing sectors.

**Nevertheless, the services providing inputs still play an important role in jobs, including through enabling exports.** Outside of transportation services, 563,000 jobs in the services sector are estimated to be associated with exports. Of these, only 180,000 services jobs are involved in direct exporting, while another 389,000 jobs are associated with exports through forward linkages (figure 3.3). For certain services subsectors, the number

**FIGURE 3.3** Many services jobs support exports through other sectors rather than direct exports

Number of jobs associated with exports (forward linkages), 2018



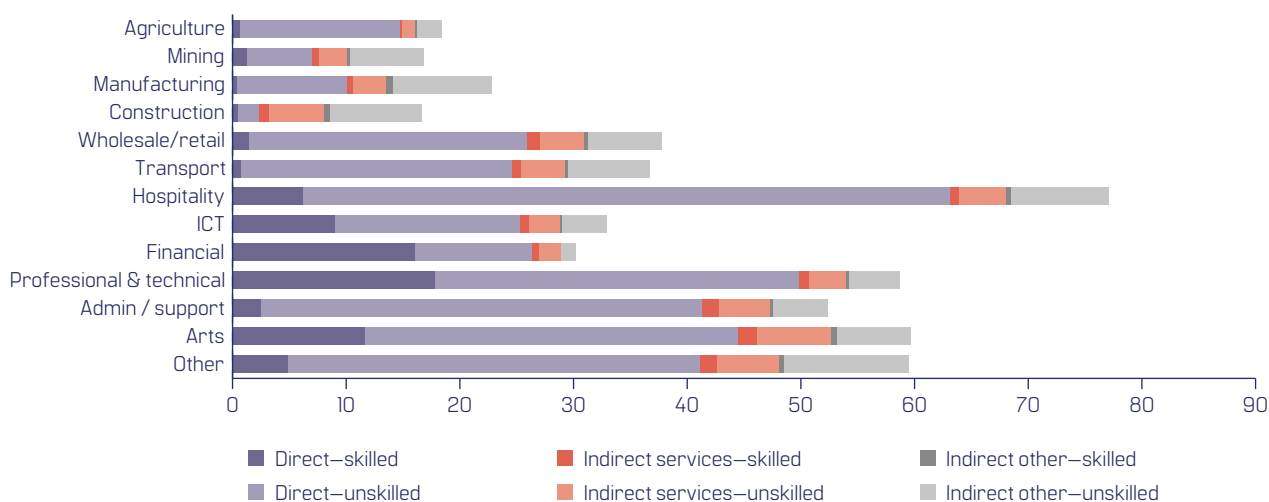
Source: Calculations based on ILOSTAT and the Input-Output table for Uzbekistan, prepared by the Statistics Agency under the President of the Republic of Uzbekistan.  
 Note: This figure shows forward linkages; the amount of jobs involved in the exports of other sectors.

of jobs associated with indirect exports exceeds that of direct exports. For example, of the 73,000 jobs associated with exports in professional services, roughly two-thirds of them (48,000 jobs) are accounted for indirect exports.

**Despite weak linkages with manufacturing, there are still many (unskilled) services jobs associated with manufacturing exports.** For every 10 jobs in manufacturing involved in exports, there are another four jobs in the services sector. Many of these jobs are less dependent on skills: of the four jobs in the services sector associated with the exports of the manufacturing sector through input-output linkages, three are conducted by workers with less than tertiary education. In fact, across most exporting sectors, the services jobs that are linked to these exports tend to be of workers with less than tertiary education (figure 3.4). This also holds true for some of the knowledge-intensive services sectors, such as ICT services, which depend on less-skilled services like administrative and support services for their exports. This highlights that linkages are an important aspect of job creation.

**FIGURE 3.4 Exports by most sectors depend on services jobs through linkages**

Number of jobs per billion sum exports (backward linkages), 2018



Source: Calculations based on ILOSTAT and the Input-Output table for Uzbekistan, prepared by the Statistics Agency under the President of the Republic of Uzbekistan.  
Note: This figure shows backward linkages; the amount of jobs from other sectors involved in the export of the listed sector.

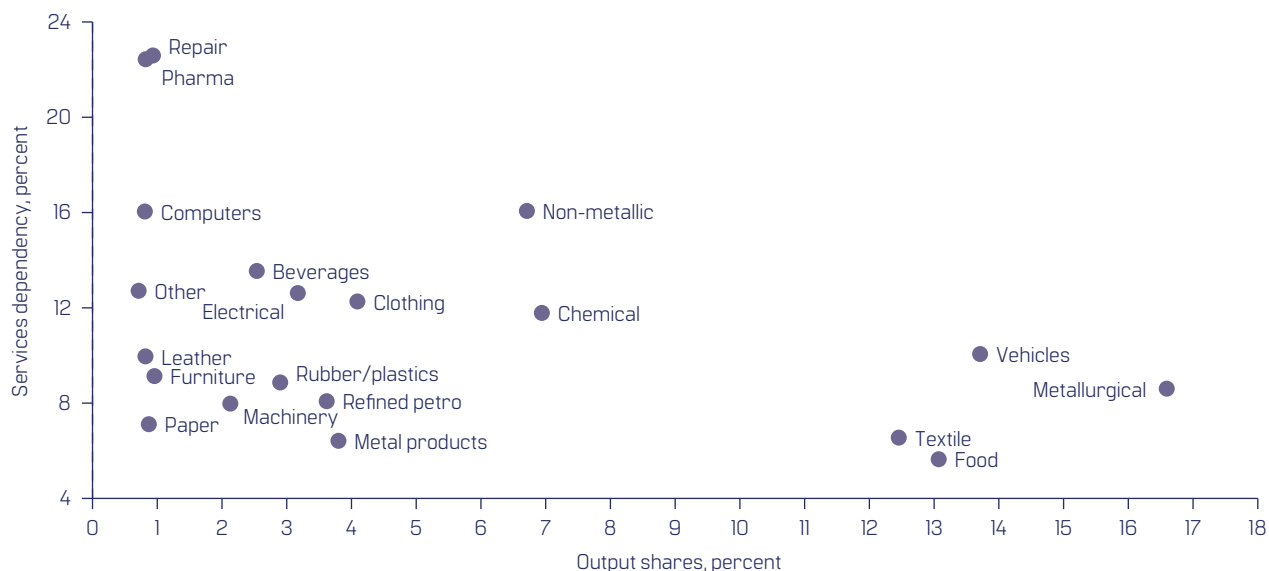
**The weak linkages between services and other sectors can be driven by demand-side and supply-side factors.** Demand-side factors refer to constraints among those sectors that buy services inputs. Whether a sector relies on inputs of services sectors depends to a large extent on factors like the technology and knowledge intensity of the production process (e.g., whether engineering services are needed for production), the role of technologies (e.g., whether software and other IT services are needed) and the role of trade (e.g., whether logistical services are needed for sourcing inputs or selling products). Supply-side factors refer to constraints among the services sectors that are providing inputs. If the quality of the services on offer is not high enough or the price not competitive, firms that buy services will have to find alternatives (e.g., switching to another technology, importing services, or providing them in-house).

**The low knowledge intensity of the manufacturing sector in Uzbekistan limits the demand for services.** The four largest manufacturing subsectors, which consist of the metallurgical industry, vehicles production, food production and textile production, are not

very services-intensive in their production. For each of these industries, 10 percent or less of their inputs are from services sector firms (figure 3.5). The output shares of more services-intensive industries — such as the production of pharmaceuticals and the production of computers and other electronic equipment — are relatively low. Shifting production into these higher value-added industries will increase demand for services inputs. Similarly, improving the technological sophistication of manufacturing and other firms can increase demand for knowledge-intensive services, for example, ICT services to develop software and engineering services to implement new machinery.

**FIGURE 3.5** The most prominent manufacturing sectors are less dependent on services

Manufacturing output shares and their services dependency, 2018



Source: Calculations based on the Input-Output table for Uzbekistan, prepared by the Statistics Agency under the President of the Republic of Uzbekistan.

Note: Services dependency is the share of inputs that belong to services sectors. Output shares are determined by the total production of that sector (and might differ from value added shares).

**On the supply side, many of the services sectors that enable growth in other sectors face restrictions, limiting the multiplier effect of services.** As later sections will show, the price level of certain enabling services, such as telecommunications and transportation services, is high and the quality on offer could be improved. This could prevent firms in other sectors from becoming more productive by using more sophisticated technologies or prevent the development of higher value-added activities. Trade barriers could make this worse. Given that not all required services might be available in Uzbekistan, such barriers might prevent firms from obtaining the services they need to increase their productivity from other countries (see Box 3.1 on financial services).

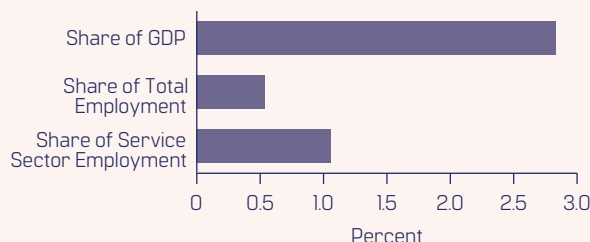
### BOX 3.1 Financial services in Uzbekistan

Financial services in Uzbekistan are classified as global innovator services as they are more knowledge-intensive, provide a higher share of their output as intermediate inputs to other sectors, and are more traded internationally. The financial sector contributes to 2.8 percent of GDP and has been employing, on average, 73 thousand workers

between 2017 – 2022 (corresponding to 0.5 percent of overall employment and 1.1 percent of employment in services sector) (Figure B3.11). The sector plays an important economy-wide enabling role by providing firms with access to credit and consumers with banking services, while also offering insurance and related financial services.

### FIGURE B3.1.1 Financial services only provide 0.5 percent of employment, but contribute to 2.8 percent of GDP

Financial sector share in GDP and employment 2017 – 2022



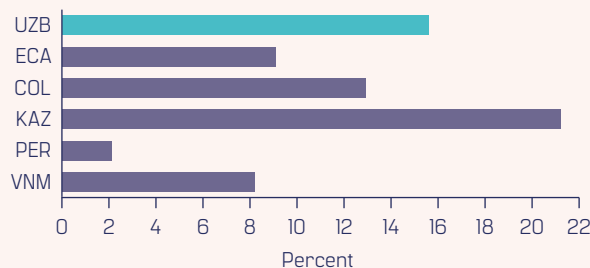
Source: ILO and Employment Yearbook published by State Statistics Committee of Uzbekistan.

Notes: Share of employment and GDP averaged over the period. Financial sector here refers to finance and insurance activities.

There is significant scope to improve access to financial services in Uzbekistan. Compared to the regional average in Europe and Central Asia, firms report difficulties in accessing credit, with 16 percent of firms reporting that they are fully credit constrained (Figure B3.1.2) and another 11 percent of firms reporting that they are partially credit constrained. The share of the population with a bank account (44 percent in 2021) is also lower than the regional average (90 percent) and in comparator countries such as Kazakhstan (81 percent).<sup>a</sup>

### FIGURE B3.1.2 Roughly 16 percent of firms report that they are fully credit constrained, higher than the average for Europe and Central Asia

Share of firms indicating that they are fully credit constrained



Source: World Bank Enterprise Survey data.

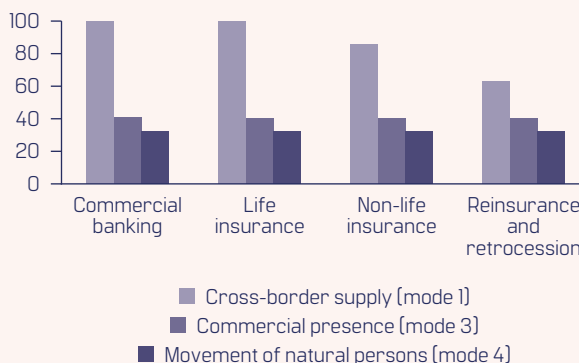
Note: Data for Uzbekistan relates to 2019, for other countries the most recent year with available data.

Restrictions to trade and investment in the financial sector remain substantial. The sector is virtually closed for cross-border supply of services (mode 1) and sees substantial restrictions to foreign direct investment (mode 3) (Figure B3.1.3). These restrictions relate to foreign ownership requirements (which is restricted for foreign ownership outside of foreign banks, international financial institutions, and credit organizations), more stringent minimum capital requirements, and differential licensing procedures (compared to national providers).

a. These figures relate to the percentage of the population aged 15 years and older with a financial account at a bank or other financial institution. The source of these figures is the World Bank's Findex Database, 2021.

### FIGURE B3.1.3 Restrictions to trade in financial services remain high, especially for cross-border supply of services

Services trade restrictions in the financial sector, by mode of supply, 2022



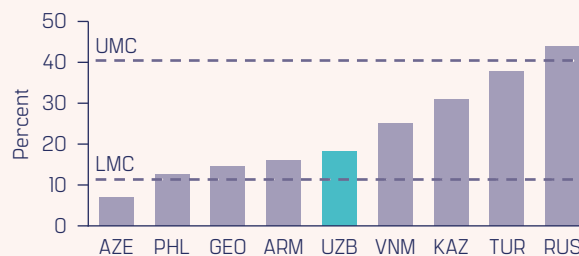
Source: WTO-WB Services Trade Policy Database and Services Trade Restrictions Index (STRI).

Note: The index scores can be interpreted as follows: 0 – completely open; 25 – virtually open with minor restrictions, 50 – major restrictions, 75 – virtually closed, 100 – completely closed.

There is also scope to increase digitalization of the sector. The use of digital technologies for financial payments is low in Uzbekistan, with less than 20 percent of account holders accessing their account digitally for payments (Figure B3.1.4). Growth in digital payments is indicative of an expanding digital economy and enables the growth in other aspects of the digital economy, including e-commerce. Digital payments can also contribute to financial inclusion, especially for those in remote areas without access to formal banking services or those receiving remittances informally.

### FIGURE B3.1.4 The use of digital technologies for making payments is low in Uzbekistan compared to comparator countries

Percentage of individuals using an account to make digital payments



Source: World Bank Digital Findex, 2017.

Notes: Digital Findex, data is for 2017. Use here refers to individuals with a financial institution account and they used a mobile phone or the Internet to make a payment, make a purchase, or to send or receive money through their financial institution account. ISO-3 Digit codes for countries reported.

## TELECOMMUNICATIONS: THE BACKBONE FOR DIGITALIZING THE ECONOMY

Telecommunications services are an important sector providing connectivity to the economy, but the sector is characterized by limited contestability and there is scope to improve capabilities. Telecommunications services provide the essential infrastructure required for digital transactions and communications. Nevertheless, it is also a sector where there is scope for increasing contestability by creating a more level playing field for telecommunication providers. As a services sector, it is relatively capital intensive and increasing connectivity will require the adoption of more sophisticated technologies, requiring adequate capabilities.

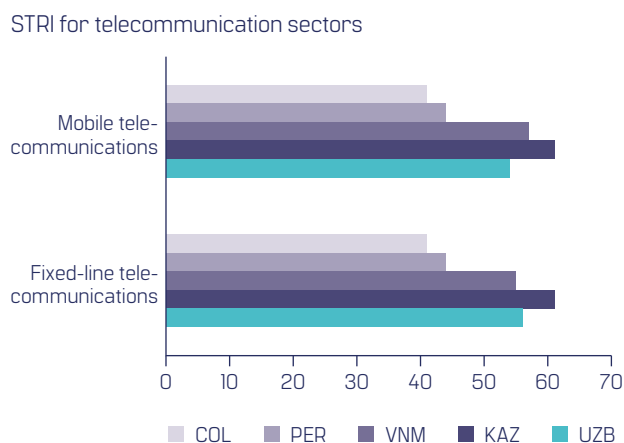
### Contestability

As highlighted in the previous chapter, there are significant restrictions to services trade in the telecommunication sector. The World Bank-wto Services Trade Restrictiveness Index classifies both mobile telecommunication services and fixed-line telecommunications as having “major restrictions” (figure 3.6). These restrictions are at similar levels as found in Kazakhstan and Viet Nam, but significantly higher than in countries like Colombia and Peru. The trade modelling presented in Chapter 2 also suggests that the largest gains from services liberation can be expected in the information and communication sector (about 12 percent of economy-wide welfare gains; figure 2.8, panel b).

The telecommunications landscape is characterized by limited competition, with strong government presence. The government-owned joint stock company (JSC) Uztelecom is the main telecommunications company in Uzbekistan and it owns more than 95 percent of the fiber optic backbone and middle-mile infrastructure in the country. There are many internet service providers (around 30 – 40 licensed providers), with the COVID-19 pandemic period having been pivotal in increasing demand for such services. Uztelecom also provides internet services through their UzOnline subsidiary, and in rural areas, UzOnline is often the main option for fixed network connections available.

The mobile market has multiple players, but three of them have partial or full government ownership. There are several mobile network operators (MNOS), including uzMobile, Mobiuz, uCELL and Unitel (operating as Beeline). Three of these operators are state-owned or have government ownership through a joint venture: uzMobile is a wholly owned subsidiary of Uztelecom, Mobiuz is slated for privatization but is currently owned by the Ministry of Information Technologies and Communications (MITC), and uCELL is in joint ownership between the Government of Uzbekistan and Russian investors. Unitel is the only mobile network operator that is fully in private hands and is owned by the Russian company Veon (with a registration in the Netherlands). No spectrum auction has ever taken place.

**FIGURE 3.6** Trade in mobile and fixed-line telecommunications is characterized by major restrictions

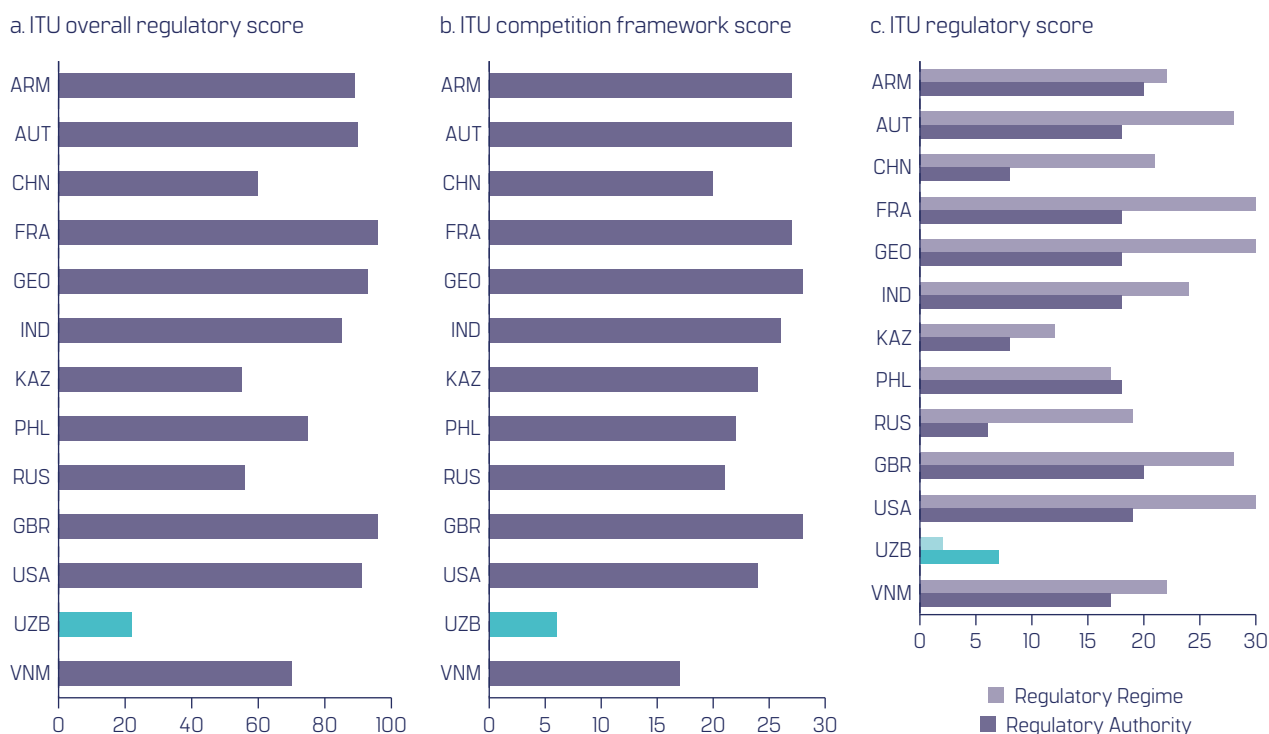


Source: WTO-WB Services Trade Policy Database and Services Trade Restrictiveness Index (STRI).

Note: The index scores can be interpreted as follows: 0 – completely open; 25 – virtually open with minor restrictions, 50 – major restrictions, 75 – virtually closed, 100 – completely closed.

Uzbekistan scores poorly in measures of regulatory quality and overall competition for telecommunication services. Data from the International Telecommunication Union (ITU) Regulatory Tracker suggest that Uzbekistan’s telecommunications sector is considerably more regulated compared to peer countries, both with respect to the competition framework and the regulatory regime and authority framework (figure 3.7). The competition framework score measures the level of competition in the provision of ICT services, which ranges from the provision of broadband to restrictions on foreign participation in the ownership of domestic infrastructure. The regulatory authority and regime score assess the level of accountability and monitoring across the ICT sector. This ranges from the presence of a competition authority to an independent regulator with autonomy in decision making and enforcement. The low score for Uzbekistan reflects the absence of an independent regulator for telecommunications.

**FIGURE 3.7** Regulatory quality in the ICT sector is low compared to other countries, including in the region



Source: International Telecommunications Union (ITU).

Notes: Data is based on ITU Regulatory Tracker scores for 2020. The overall ITU regulator score is the aggregate score of 50 indicators that comprise of 4 sub-categories. The regulatory regime and authority score assess the efficiency and existence of the regulatory authority. The competition framework score assesses the level of competition in telecoms market as well as the participation and ownership of foreign firms in domestic markets. See [www.itu.int/go/track-er](http://www.itu.int/go/track-er) for greater details on all indicators.

**The market is dependent on the state-owned Uztelecom for international gateway access.** Uztelecom has a de facto monopoly for providing international gateway access to internet providers and mobile network operators. Providers depend on wholesale prices set by Uztelecom in order to provide internet access to their customers. In 2018, liberalization of the international gateway was identified as an objective under the “Strategy on Innovation Development”, but this was never realized. Security concerns have been given as a reason for limiting entry to this sector.<sup>20</sup> Uztelecom and their subsidiaries also re-

20 USAID (2022).

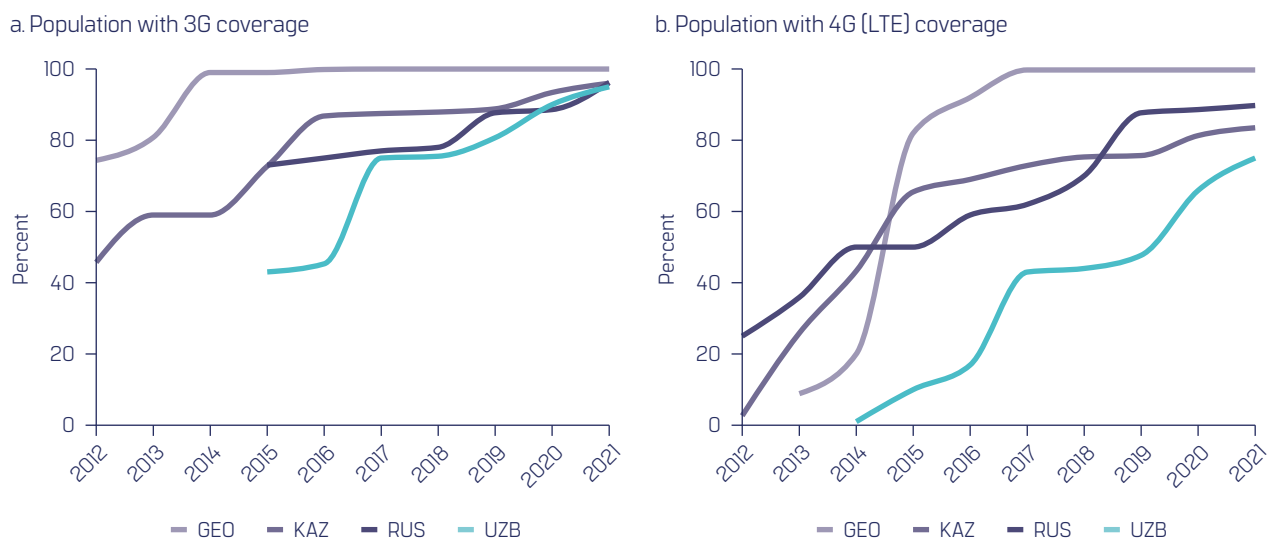
ceive preferential treatment that includes the procurement of telecom equipment without tender, facilitated access to land plots, and streamlined processes to place antennas in the country.

**Licensing procedures are also onerous.** Currently, for a provider to offer new products or services, approval of the Republican Council on Radiofrequency under the MTRC is required to obtain a license. Some of the licensing requirements can be difficult for providers to meet, leading to potential arbitrary interpretations. For example, license requirements include a “mandatory provision of services for consumers in rural areas, sparsely populated and hard-to-reach areas”, which can be costly and difficult to meet for new operators. In addition, there are criteria that could be grounds for revocation or decline that are described too broadly or can be arbitrarily interpreted, for example, requirements on ensuring the “established quality standards”, participation in national programs for the development of telecommunications, and adherence to national security requirements. International best practice for new market entry is a notification procedure instead of licensing.

## Capabilities

**In terms of capabilities, the telecommunications sector relies on continuous technological improvements, but Uzbekistan has been a slow adopter.** Uzbekistan has been a slow adopter of more sophisticated technologies in telecommunications. For example, the introduction of 4G (LTE) in Uzbekistan happened in 2015, which was several years behind other countries in the region, including Georgia, Kazakhstan, and Russia (figure 3.8). Even after its introduction, the coverage of 4G among mobile phone users was slower than in other countries, essentially lagging coverage rates in regional countries by about three years. A similar pattern of slow coverage increase was seen with the adoption of 3G in the early 2010s.

**FIGURE 3.8** Uzbekistan has been lagging with respect to the adoption of mobile technologies

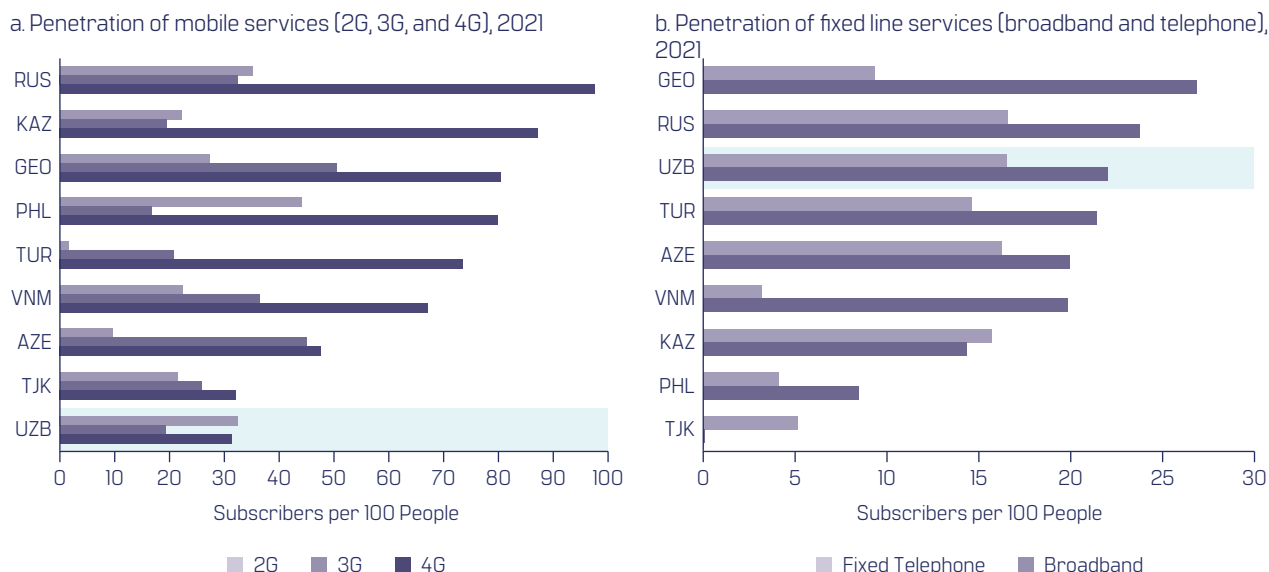


Source: International Telecommunications Union (ITU).

**Even though coverage has increased, the uptake of mobile services — including 3G and 4G — remains poor in Uzbekistan.** While coverage of 3G is now among universal and 4G coverage increasing, the uptake of these technologies remains low compared to other

countries (figure 3.9, panel a). The diffusion of fixed services has also been low, with the penetration of fixed line broadband services (at 22 percent of the population with a fixed broadband subscription) remaining low (figure 3.9, panel b).

**FIGURE 3.9** The uptake of mobile services and fixed-line services such as broadband remains low



Source: Calculations based on Telegeography (2021) and World Bank WDI.

**Technical specifications that apply in Uzbekistan often do not conform to global standards.** Technical specifications needed for obtaining a license in Uzbekistan adhere to regional standards rather than global standards. For example, the 2017 Technical Regulation of Uzbekistan on telecommunications equipment relies heavily on the GOST standards, which have their origins in the Soviet Union and are currently maintained by the Commonwealth of Independent States (CIS), and the telecommunication standards under GOST do not always align with global standards. The reliance on GOST standards gives companies from the region, especially Russian companies, an advantage, but can also preclude the adoption of technical standards that are on the global frontier.

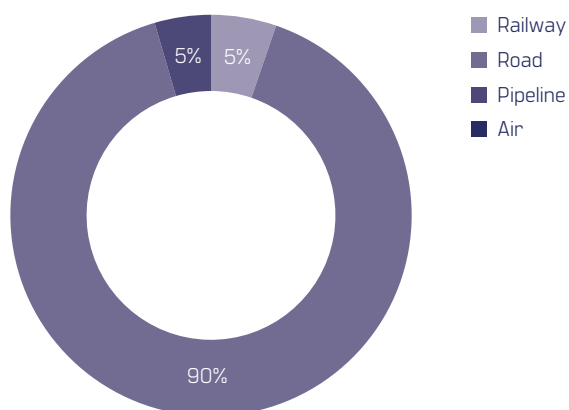
## TRANSPORTATION AND LOGISTICS: FACILITATING TRADE IN GOODS AND MOVEMENT OF PEOPLE

Transportation and logistics services is another important enabling sector in the economy, facilitating the movement of people and goods within and outside the country. In Uzbekistan, road transportation is the most common form of transportation for goods, with roughly 90 percent of goods transported in this way, followed by rail and pipeline transportation (both 5 percent) (figure 3.10, panel a). When correcting for the distances covered, road transportation accounts for only 27 percent of domestic freight, while the share of pipeline and rail transportation become much higher. Pipeline transportation accounts for 40 percent of ton-kilometers and rail transportation accounts for a third of ton-kilometers (figure 3.10, panel b). This suggests that road transportation is important for shorter distances.

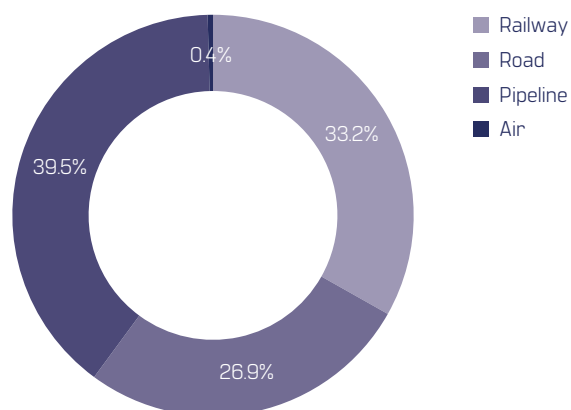


**FIGURE 3.10** Road transportation is the most important mode of transport by weight, while pipeline and rail transportation are important modes when looking at ton-kilometers

a. Transport shares, by weight, 2022



b. Transport shares, by ton-kilometers, 2022



Source: Uzbekistan Statistics Agency under the President of the Republic of Uzbekistan  
 Note: A ton-kilometer is cargo weight multiplied with the distance travelled.

## Connectivity

Transportation and logistics services are a prerequisite for strengthening physical connectivity to markets but the sector in Uzbekistan underperforms compared to regional peers. As highlighted in the previous chapter, the World Bank's Logistics Performance Index (LPI) ranks Uzbekistan behind regional peer countries like Georgia and Kazakhstan, especially with regard to the tracking and tracing (reflecting the level of transparency and availability of real-time information for tracking shipments) and timeliness components (reflecting the ability of shipments to reach a destination within the scheduled or expected delivery time). Several hurdles stand in the way: Third-party logistics (3PL) is roughly one third of that in Kazakhstan and one tenth of Türkiye. Regulations are fragmented and unevenly applied.

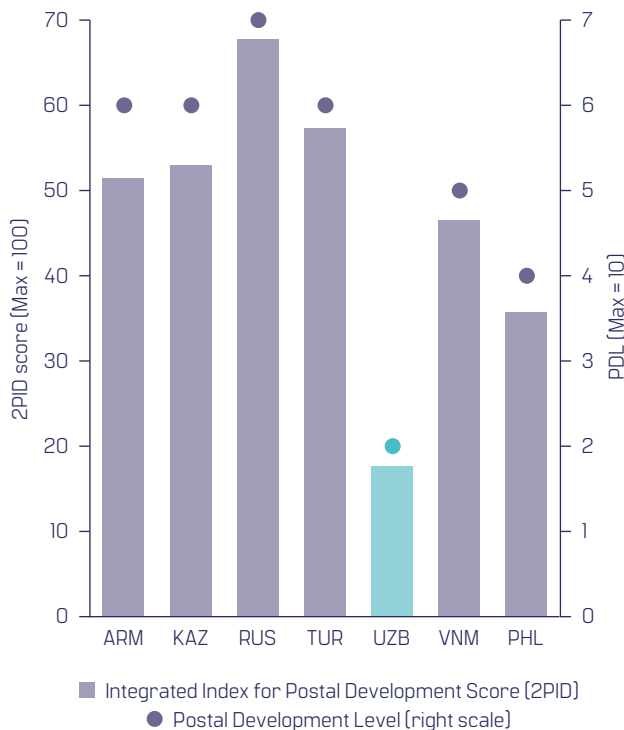
As a double land-locked country, access to trade corridors is important for Uzbekistan. The current main trade corridor is through Kazakhstan. About 75 percent of Uzbekistan's total merchandise trade in weight enters and exits the country through Kazakhstan. The Trans-Kazakh (TKR) and Trans-Siberian Railway (TSR) are two common choices when it comes to moving goods to and from China, Uzbekistan's largest trading partner. The TKR shows larger variability in transit times (30 days versus 15 days), which is partially driven by rail and border capacity issues in Kazakhstan and China. Corridors towards the South can provide maritime access for Uzbek goods but still face operational constraints. Transit through Afghanistan has been foreclosed for Uzbek trucks and requires transshipment, adding delays and costs for traders. Alternatively, Iranian ports come as less expensive and have been long used by Uzbek traders. However, the sanction regime, difficult access to banking, costly road tolls, and administrative issues (difficulties in obtaining road permits, mandatory use of local brokers to handle formalities) harm transit development.

Postal services in Uzbekistan are less effective than in comparator countries, with consequences for digital development, particularly e-commerce. E-commerce shipments, both domestic and international, are dependent on postal services. Domestic supply chain efficiency is crucial for e-commerce. The last mile in the domestic supply chain depends

significantly on the quality and competency of logistic services. Cross-country data from the Universal Postal Union (UPU) indicates poor performance of Uzbekistan across the Reliability, Relevance, Resilience, and Reach dimensions, which capture the quality of service, connectivity, market competitiveness, and sustainability, respectively (figure 3.11, panles a and b). Addressing the issues in postal services within Uzbekistan is relevant for growth of the digital economy, specifically for e-commerce, as e-commerce companies and consumers prioritize the predictability and timeliness of deliveries.<sup>21</sup>

**FIGURE 3.11** Postal services underperform compared to comparator peer countries

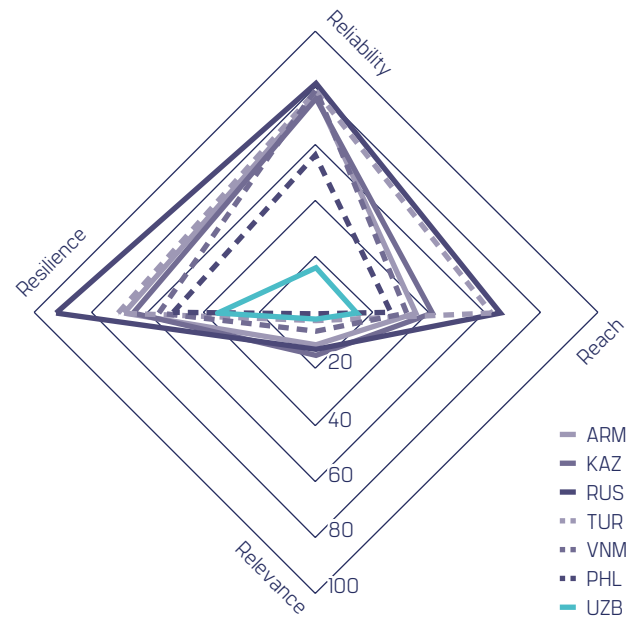
a. UPU Integrated Index for Postal Development, 2022



Source: Universal Postal Union (UPU) data for 2022.

Notes: 2PID is the aggregated of the Integrated Index for Postal Development. The country's postal development level (PDL) based on the 2PID score. Countries are classified into 10 levels. The highest score is 10. The lowest score is 1.

b. UPU components for the Index for Postal Development, 2022



Source: Universal Postal Union (UPU) data for 2022.

Notes: 2PID is the aggregated of the Integrated Index for Postal Development. Reliability captures the development of quality of service from a speed and predictability perspective. Reach captures the level of postal connectivity of the country with the rest of the world from an outbound perspective. Relevance captures the relative success of different postal business models and activities from a demand perspective. Resilience captures the estimated postal capacity to overcome economic, social, technology and environmental shocks in a sustainable way.

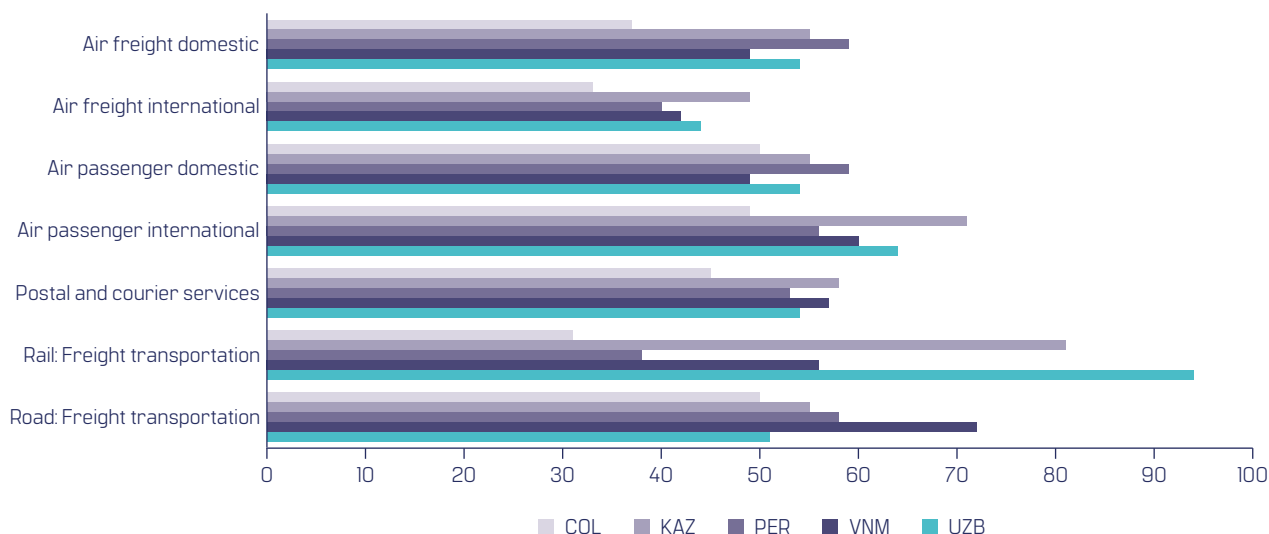
## Contestability

**The transportation and logistics services sectors are characterized by limited contestability of markets.** As highlighted in the previous chapter, the transportation sector faces major restrictions when it comes to services trade (figure 3.12). For the transportation of goods, limitations exist for transportation by rail (which is dominated by the national railway company and privileged freight forwarders), international transportation by road, as well as warehousing. Each segment of the transportation services subsector is characterized by contestability issues.

21 See World Bank, 2022, "Digital Economy in Southeast Asia."

**FIGURE 3.12** The transportation sector faces major restrictions when it comes to trade in services

Services Trade Restrictiveness Index (STRI) for the transportation subsectors, 2018



Source: WTO-WB Services Trade Policy Database and Services Trade Restrictions Index (STRI).

Note: The index scores can be interpreted as follows: 0 – completely open; 25 – virtually open with minor restrictions; 50 – major restrictions; 75 – virtually closed; 100 – completely closed.

## RAIL

Rail transportation services are provided by Uzbekistan Temir Yo'llari (UTY). The UTY joint stock company has a statutory monopoly in the sector. The length of the network is 4,669 kilometers, of which about half is electrified. A high-speed passenger line operates between Tashkent and Bukhara, with speeds up to 250 km/h. Freight transport by rail mostly focuses on cargo that cannot be easily transported by road, including bulk cargo and dangerous chemicals. Rail is not deemed to be competitive for time-sensitive cargo, high value cargo, consumer products, and perishables.<sup>22</sup>

Efforts have been on-going to modernize the rail sector, including splitting the ownership of track infrastructure and the provision of rail services. UTY currently operates both the passenger and freight trains in the country as well as owns the track infrastructure. The World Bank through its Development Policy Lending Operation (DPO) supported reforms of the rail sector that involved the liberalization of the railway market through the restructuring of the SOE rail operator — UTY. Rail services have now been decoupled — separating freight, business, and passenger units with mandated outsourcing of non-core activities in the business unit. Furthermore, the reforms now outline specific responsibilities for public sector participation with a roadmap that details private sector participation in the rail sector.

International cargo transportation remains the monopoly of UTY, who contracts out allocation to several freight forwarders. UTY has contracts with several “master” freight forwarders, who reserve capacity on freight trains (called “railway codes”) and act as intermediaries. Other freight transporters do not interact with UTY directly but must buy

22 CAREC Program (2021).

“codes” from this small group of intermediary freight forwarders, opening the possibility of monopolistic practices. Prices for freight are deemed to be high.<sup>23</sup> Other constraints reported include difficulties in obtaining connections from non-public tracks to public tracks.

## ROAD

**Contestability in road freight transport is affected by various regulations establishing quotas and fees for foreign carriers.** About 500 international road carriers are estimated to be active in Uzbekistan. However, permits and licenses are needed for transporting bulky and heavy cargo as well as for international freight transportation. There are quotas on permits for cross-border transportation. These quotas are determined by economic means tests and are based on forecasts of transportation needs for the next year. There are fees in place for international transport, with preferential rates offered to some of the neighboring countries. For transport vehicles of Tajikistan, fees vary between \$100 and \$200 (depending on weight); for those of Turkmenistan the fees vary between \$50 and \$150 (depending on weight); and for Kazakh and Kyrgyz vehicles there is a fixed fee of \$300. Cabotage — the provision of transportation services between two places in Uzbekistan by a foreign carrier — is not allowed. Visas for drivers are limited to 12 months for most nationals.

**Import tariffs on imported cargo vehicles used to be high until recently.** These high import tariffs posed additional barriers for road carriers to expand their fleets. A resolution introduced by the President in 2021 allows for the duty-free importation of certain trucks, trailers, and semi-trailers. In addition, imports of certain trucks, trailers, and semi-trailers from European Union countries are exempt from mandatory certification. These incentives are scheduled to lapse in January 2025.

**Intercity passenger transportation by road is regulated, including the pricing of tickets.** The largest player in intercity coach transportation is UzAutoTrans Service LLC, which is a state-owned company and owns about a third of the market share. There are more than 10 additional private-owned companies offering domestic routes. Licenses for domestic transportation can be obtained by any qualifying company. Prices are regulated, with maximum fares set by regional governments. Similar to freight transportation, cabotage by foreign carriers is not allowed.

## AIR

**Air connectivity in Uzbekistan has improved considerably in the last 10 years.** Recent policy reforms in the aviation sector have improved access to international markets, both for passengers and shippers. The unbundling of the sector, and more open market access policies to attract new air carriers and open routes, have improved virtually in all fronts. The country has more than doubled the frequency of international passenger flights and the available cargo capacity since 2017. Widebody passenger aircraft capacity (which is well compatible to develop air cargo) and frequency also increased overall. Additionally, the number of international city pairs connected from Uzbekistan has also expanded twofold, and the number of choices in terms of air carriers has increased even further (figure 3.13).

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23 See also CAREC Program (2021).

**Uzbekistan Airways is the national air carrier and used to be combined with the airport authority, JSC Uzbek Airports.** JSC Uzbekistan Airways was established in 1992 following the breakup of the Soviet Union, taking over the Uzbekistan operations from Aeroflot. The airline is fully government owned. Until 2019 it belonged to a single entity with JSC Uzbekistan Airports, the operator of the national airports. Both companies remain fully controlled by the state. JSC Uzbekistan Airways also receives preferential treatment and is exempt from custom duties (except for VAT and custom fees) for imports of parts and other equipment.<sup>24</sup>

**There is little competition from other carriers.** There are no other domestic airlines. The other carriers are all foreign carriers, whose operations are regulated through bilateral air services agreements (BASAs) between Uzbekistan and other countries. A regional airline, Silk Avia, was set up by the government, with the aim of being privatized. Instead, the company was acquired by a subsidiary of JSC Uzbekistan Airways. There are several “mode 3” (foreign direct investment) restrictions around licensing requirements that may be applied in a discriminatory manner, including requirements for local recognition of pilot licenses, mandating that the main place of activity and aircraft base is within Uzbekistan, and the requirement of transferring certain regulatory powers to Uzbekistan from the state of original registration.

**The Ministry of Transport plays a strong role in determining routes, with legislation allowing it to influence routes by private carriers.** All flights to or from Uzbekistan require permission from the Uzbekistan Civil Aviation Agency under the Ministry of Transport. Legislation specifies that flights by foreign carriers on routes that are also operated by the national air carrier are subject to approval by Ministry of Transport.<sup>25</sup> In addition, legislation also specifies that only if there is deemed to be “sufficient demand” on a particular route, a line might be operated by several designated carriers.<sup>26</sup>

**There are other aspects that increase ticket prices, including regulated prices for aviation fuel.** An estimated 30 to 40 percent of the ticket prices are determined by aviation fuel costs.<sup>27</sup> There is a monopoly on the provision of aviation fuel, with prices set by the Ministry of Transport, resulting in prices that are higher than world prices. Uzbekistan Airways can buy fuel independently from these arrangements. In addition, a 12 percent VAT is charged on fuel, contrary to the international practice of zero-rated VAT charged to international airlines.

**FIGURE 3.13** Air connectivity has grown in terms of frequency, cargo capacity, number of carriers, and the amount of city pairs covered

Growth in air connectivity, international passenger services (2017=100)



Source: World Bank based on OAG.

<sup>24</sup> Source: Services Trade Policy Database.

<sup>25</sup> Point 7 of the Annex to the Order of the Head of the State Inspection of the Republic of Uzbekistan on Surveillance over safety of flights No.144 of 28 December 2009 states that “the performance of international flights by other carriers on routes operated by the main carrier of the Republic of Uzbekistan is considered by the Ministry of Transport.” See also, <https://lex.uz/docs/1588106>.

<sup>26</sup> Point 8 of the aforementioned Annex.

<sup>27</sup> Based on a press conference by Ulugbek Bektoshev, head of the Air Transport Development Department within the Ministry of Transport. <https://uza.uz/uz/posts/samolyet-narkhlari-kimlar-uchun-arzonlashadi-25-11-2019>

**There are projected benefits to liberalization of the sector.** A 2020 World Bank study modelled that liberalization could result in close to a 20 percent reduction in fares (saving US\$81 million for air travelers), increase the number of country pair routes by 27 percent, increase traffic by 15 percent, and boost gross domestic product by US\$51 million, mostly through increased tourism, trade, and investment.<sup>28</sup>

## WAREHOUSING

**Until recently, establishing warehousing facilities was subject to extensive licensing requirements.** These requirements, set by the customs authorities, were lifted in 2020, making space for modern logistics terminals. Nevertheless, there remain only a few warehouses and logistics centers that are privately run. There is especially a need for well-equipped warehouses to export perishables such as fruit and vegetables.

**Restrictions to obtaining land are another constraint for the establishment of warehouses.** There is no private ownership of land in Uzbekistan, although the property built on land can be owned. Land leases cannot exceed 25 years for non-residents, and 100 years for residents. The allocation of non-agricultural land is done through auctions by local authorities, although the process is not always transparent. For logistics centers, it is especially important to be located close to infrastructure (roads and railways) and be able to obtain land rights there. Insecure land rights and difficulties in obtaining them is an important impediment for investment.

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<sup>28</sup> World Bank, 2020. Building Blocks for Integrated Transport and Logistics Development. Report No: AUS0000970

# CHAPTER 4

## **EXPANDING GLOBAL INNOVATOR SERVICES**

## THE NASCENCY OF EXPORT-LED GROWTH IN GLOBAL INNOVATOR SERVICES

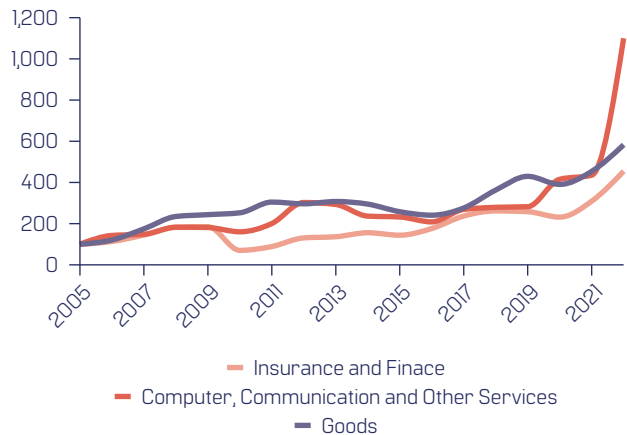
The share of global innovator services in Uzbekistan’s services exports is negligible, especially when compared to countries at similar or lower levels of per capita income. While Uzbekistan’s exports of ICT services have caught up with exports of goods during the last decade (figure 4.1, panel a), the share of global innovator services in Uzbekistan’s services exports is less than 10 percent. This largely conforms to the average for its level of per capita income (figure 4.1, panel b). Unsurprisingly, the corresponding share in many high-income EU countries is higher because the share of knowledge-intensive services in total services exports rises with per capita income. However, many developing economies have successfully diversified their export baskets by specializing in a range of IT, professional, scientific, and technical services: computer programming, software development, BPO, accounting, and architectural and engineering services. For example, global innovator services accounted for more than half of all services exports in Costa Rica, Ghana, India, Pakistan, and the Philippines — a share considerably higher than the average for their levels of per capita income — in 2017. Countries that have leveraged the potential of services-led growth, such as India and the Philippines, have benefited from the liberalization of the services sector (see Box 4.1).

Global innovator services have provided opportunities for export diversification and gains for specialization in developing economies through offshoring. This success is attributable, in large part, to the offshoring of ICT and professional services to lower-cost destinations. Much like global value chains for manufactured goods, the production of these services is fragmented across countries, such as when preliminary architectural designs and tax returns are put together in one country and finalized and delivered to customers in another (World Bank 2020b). This labor cost arbitrage is reflected in the inverse relationship between the share of cross-border delivery (mode 1 trade) in total exports of ICT and professional services and per capita GDP. Service providers in developing economies with English-language skills, such as India, the Philippines, and Ghana have particularly benefited (Nayyar and Davies 2023).

The offshoring of global innovator services can be an important source of better jobs in Uzbekistan. The export of global innovator services through mode 1 trade, that is digital delivery, is not affected by the geographical challenge of Uzbekistan being landlocked. It therefore presents, in principle, a path to reduce the country’s dependence on physical trade routes and yet diversify its export basket away from gold, copper, textiles, and agricultural goods. Digitalization has provided a new impetus

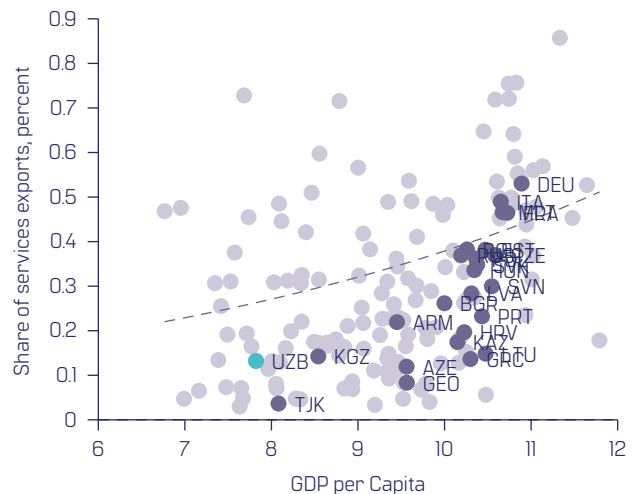
**FIGURE 4.1** Uzbekistan’s exports of global innovator services have accelerated in the past decade, but they account for a tiny fraction of total services exports

a. Uzbekistan total trade volume by sector, 2005 – 2022 (2005 = 100)



Source: Elaboration using World Bank WDI data.

b. Share of global innovator services in total services exports, 2017



Source: World Trade Organization (WTO) TisMos.



**BOX 4.1 Case studies of reforms driving growth in services**

Examples from other countries have shown that growth in services sectors is possible through pursuing complementary sets of reforms:

**India.** India has become a global hub for outsourcing IT services due to its large pool of skilled and English-speaking workforce and cost-effectiveness, which has been supported by favorable government policies. The exports of ICT services expanded from US\$5 billion in 2000 to US\$144 billion in 2022. In the same period, the share of ICT outsourcing as part of total exports of goods and services grew from 8 percent to 19 percent in 2022 (World Bank WDI). The growth of the sector was supported by a series of reforms and measures that facilitated investment, the regulatory environment, and reduced red tape around the imports of inputs. Another important related reform was the liberalization of the telecommunications sector, which provides crucial connectivity services to the IT sector. These reforms reduced the costs associated with access to the internet due

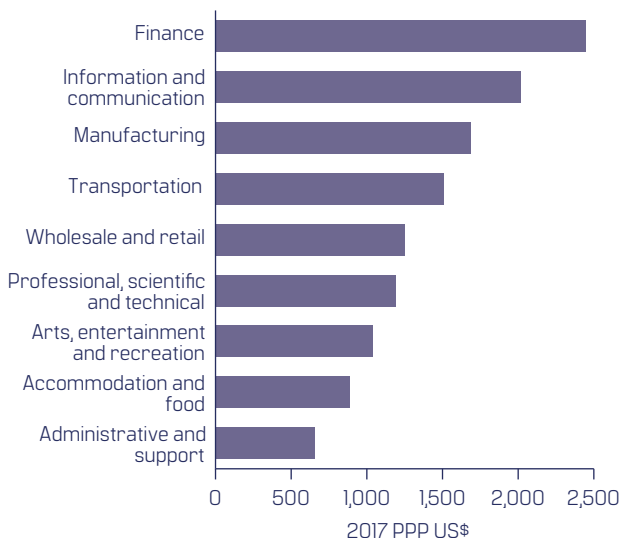
to the entry of both foreign and domestic private providers. The reforms were embedded in a set of larger reforms of the telecommunications sector, which until the early 1990s were dominated by state ownership, waiting lists, and high costs. The cost of accessing the internet is now relatively low by international comparison.

**Philippines.** In the Philippines, the Business Process Outsourcing (BPO) sector has been an important driver of growth and economic transformation. The country is a global hub for BPO and is the second largest provider after India, focusing mostly on back-office functions such as human resources, IT, and finance as well as front-office customer support services. The BPO sector is characterized by high entry rates and is one of the most liberalized sectors in the country. The removal of FDI restrictions played an important role in driving the growth of the sector, drawing in large amounts of foreign investment. Liberalization of the telecom sector has also helped lowering costs in the sector.

to the growth of these global innovator services. The share of these digitally deliverable services in total services exports increased steadily between 2005 and 2019 in both developing and advanced economies (Nayyar and Davies 2023). The growth of these services also presents an opportunity for better jobs. The average earnings of workers employed among the global innovator services in Uzbekistan is higher compared to other sectors in the economy (figure 4.2, panel a).<sup>29</sup> And these global innovator services have experienced larger average wage increases compared to industry in Uzbekistan (figure 4.2, panel b).

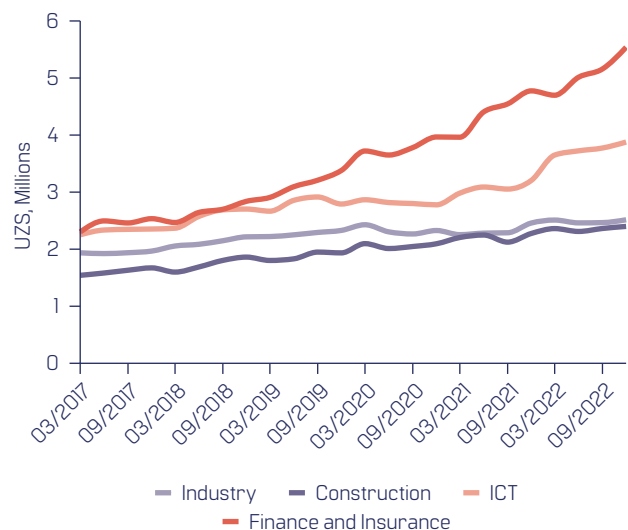
**FIGURE 4.2 Average wages in global innovator services exceed those in manufacturing and this gap has widened in recent years**

a. Average monthly earnings in Uzbekistan, by sector, 2019



Source: International Labour Organization (ILO).

b. Real wages in selected sub-sectors in Uzbekistan



Source: Haver Analytics.

29 This reflects, at least in part, a skill premium because the sector employs a share of workers who have completed tertiary education.

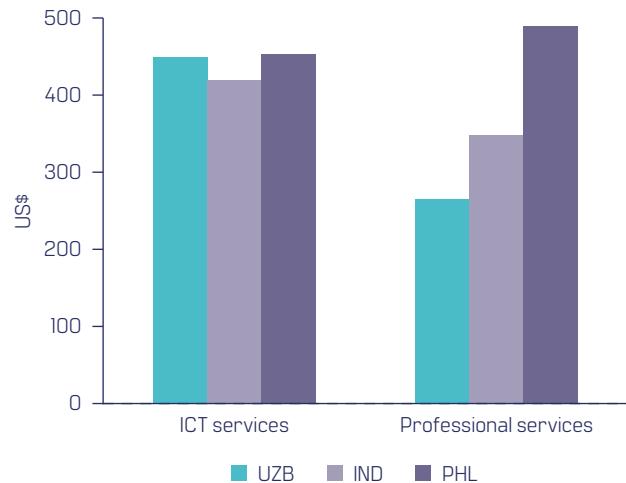
Global innovator services also enable exports in other sectors through linkages and in this way supports jobs indirectly in other sectors. As highlighted in Chapter 3, linked services sectors — which includes global innovator services — enable growth in other sectors. There are more jobs in global innovator services that enable exports in other sectors than jobs that are associated with direct exports of global innovator services (98,000 jobs against 65,000 jobs, see figure 3.3). Sectors that especially benefit from global innovator services include manufacturing, retail, and administrative and support services. Growth of global innovator services can therefore have multiplier effects throughout the economy.

The scale of the challenge for Uzbekistan to expand their presence in the global market for global innovator services is not insurmountable. The value of Uzbekistan's digitally deliverable exports was only US\$265 million in 2019. The Government of Uzbekistan aims to increase the country's ICT exports to US\$5 billion by 2030, which would surpass the current export value of agricultural goods and textiles. This reflects the country's objective to leverage knowledge-based IT services as the biggest driver of export-led growth after gold. While the growth target may seem ambitious, it represents only a tiny fraction of the IT outsourcing market in the United States, which is currently the main destination (80 percent of export value in 2022) of Uzbekistan's ICT exports. United States' imports of these digitally deliverable services were US\$311 billion in 2019. Uzbekistan's growth potential in the sector could thus be realized by increasing exports to its (currently) biggest destination market as well as by entering new markets. In terms of (wage) cost competitiveness in the sector, Uzbekistan is not very different from global powerhouses such as India and the Philippines in the case of ICT services. In fact, wages for professional, scientific, and technical services in Uzbekistan are lower than those in India and the Philippines (figure 4.3).

The establishment of Tashkent's IT Park by the Government of Uzbekistan represents a launchpad for the country's global innovator services by strengthening the 3Cs. The IT Park already has over 1,300 residents employing over 20,000 people. The number of foreign firms has grown from just 12 in 2019 to almost 200. IT Park residents currently export US\$300 million worth of IT services with a target to exceed the one billion US dollar threshold in 2025. The digital connectivity for IT Park residents is world-class. For strengthening capabilities, Tashkent's IT Park also runs 200 IT centers, offers several online courses in mathematics, data science, programming, and artificial intelligence (AI), and operates the Digital IT University — the first one in Central Asia. Contestability is also a factor. Residents pay no value added tax on imported ICT hardware and software. In addition, no work permits are required; investors, IT specialists, and start-up founders are eligible for IT visas which are valid for up to three years. Firms also have access to a one-stop-shop helping them with tax registration, bank accounts, and office space. There are fiscal incentives too, which foreign firms are also eligible for. Residents neither pay corporate income tax, nor make social security contributions. They also receive free rent of an office outside Tashkent for one year, free technical equipment for up to 50 employees, up to 15 percent coverage of salary per employee, and training grants of up to 50 percent. Broader progress on the 3Cs can further improve the sector's prospects.

**FIGURE 4.3** Wage costs among global innovator services in Uzbekistan are comparable to India and the Philippines

Average monthly earnings, 2019



Source: International Labour Organization (ILO).

# RAISING THE POTENTIAL TO COMPETE IN INTERNATIONAL MARKETS

## Capabilities

**Uzbekistan’s emphasis on advanced, technical education is developing a relevant skill base.** As highlighted in Chapter 2, the share of university graduates in Uzbekistan that completed degrees in STEM-related fields exceeds that in other developing economies in the region as well as peer countries outside the region. The government has developed a comprehensive approach to change curriculums and create specialized institutes so that graduates are not just users but also generators of IT-related knowledge and technologies. More than 50 universities now have specialized IT courses, and 20 universities are wholly focused on IT-related education. The government has also liberalized the higher education sector in the country by allowing the entry of foreign universities, which has created competition and raised standards. About 1.2 million individuals have completed the Government of Uzbekistan’s “One Million Uzbek Coders” training program and over a million more are signed up.

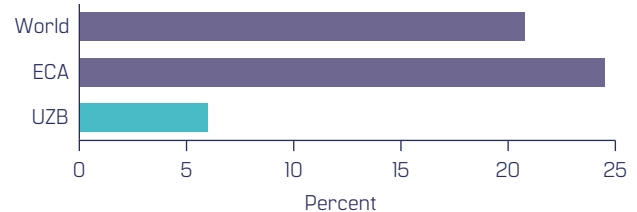
**The growing emphasis on the English language is also contributing to creating relevant skills.** English is fast becoming the second language of choice of the 36 million people, 60 percent of whom are under 30 years old. More than 5 million Uzbeks speak English. Uzbekistan launched the English-Speaking Nation Program in 2017, spending tens of millions of dollars on raising proficiency in the language. The country’s more than 30,000 English language teachers receive US-funded training, and government officials are paid a premium if they speak English.

**However, the pool of skilled workers needs to be expanded, including through drawing on foreign expertise.** As highlighted in Chapter 2, with a population almost as large the other four Central Asian countries combined, Uzbekistan can create a sizable pool of skilled workers, but tertiary enrolment rates lag peer countries in the region. To draw on foreign expertise, Uzbekistan has introduced special three-year multiple entry IT visas while also simplifying the process of obtaining residency permits. In addition, one consequence of the war in Ukraine has been an influx of highly trained IT professionals from Russia and Belarus, driven by sanctions and the exit of global IT companies. In fact, Tashkent’s IT Park launched its relocation program for these tech migrants backed by local businesses. This relocation program provides credit cards and sim cards, housing assistance, help finding jobs for spouses and registration of children at schools, as well as a “One Stop Shop” to deal with red tape, recruit personnel, and find offices.

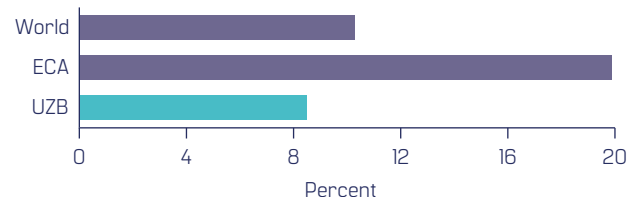
**Firms, on average, across sectors, report that inadequate worker skills are currently not a major constraint for businesses in Uzbekistan.** Only 6 percent of firms in Uzbekistan identified an inadequately educated workforce as a major constraint to their performance. The corresponding shares for countries covered in the World Bank’s enterprise surveys were 24.5 percent, on average, in Eastern Europe and Central Asia and 20.9 percent, on average, globally (figure 4.4, panel

**FIGURE 4.4 Inadequate worker skills are not a major constraint for businesses in Uzbekistan**

a. Share of firms identifying an inadequately educated workforce as a major constraint, 2019



b. Share of firms choosing inadequately educated workforce as their biggest obstacle, 2019



Source: World Bank Enterprise Survey.

a). Similarly, 8.5 percent of firms in Uzbekistan identified an inadequately educated workforce as the biggest constraint to their performance relative to 19.9 percent, on average, in Eastern Europe and Central Asia and 10.4 percent, on average, globally (figure 4.4, panel b).

## Connectivity

**Global innovator services are among the more digital-intensive sectors and therefore depend disproportionately more on digital connectivity.** ICT services include a wide

range of digital activities, including custom computer programming services, software publisher services, telecommunications services, Internet publishing, and data processing services including cloud computing. These ICT services are very much dependent on other ICT services as inputs (figure 4.5). Other global innovator services are also relatively ICT services intensive.<sup>30</sup> This is consistent with evidence from advanced economies which shows that telecommunications, information services, business services, computer programming services, engineering services, advanced data analytics, advertising and market research, and R&D services are among the main ICT-using sectors. For example, the most data- and software-intensive sectors in the United States are internet and telecommunications services (Van der Marel 2019). Digital connectivity therefore matters most for growth opportunities in these ICT-intensive sectors.

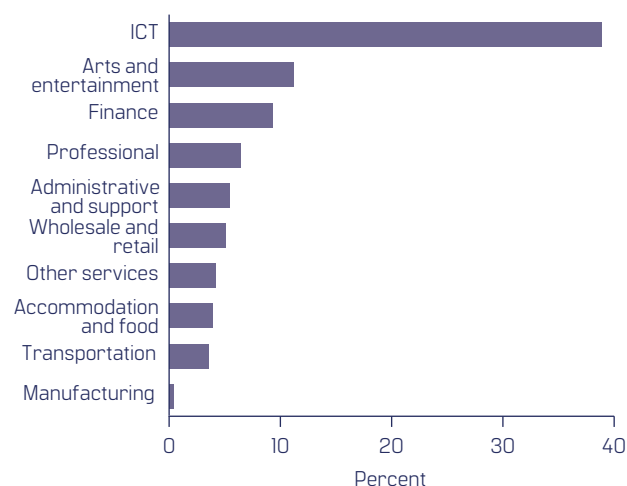
**However, the quality of digital connectivity continues to lag.** As highlighted in Chapter 2, the coverage of faster forms of mobile internet, such as 4G/LTE, as well as internet speeds remain low compared to peer countries.

## Contestability

**Uzbekistan's ICT services sector is highly restricted on cross-border delivery compared to peer countries and this is largely indicative of data localization requirements.** Uzbekistan's STRI for IT services is higher than comparator countries, including Colombia, Peru, Kazakhstan, and Viet Nam for mode 1 trade (figure 4.6). Much of this reflects data localization requirements (applied across sectors) in Uzbekistan that impede the ability of foreign service suppliers to transfer data across borders and operate efficiently. This is likely to be particularly restrictive for data-intensive services. Therefore, all entities processing personal data of Uzbek citizens are required to ensure that the databases which collect, analyze, and store such data be physically located in the country.<sup>31</sup> These data-localization requirements have been enforced from time-to-time by blocking access to social

**FIGURE 4.5** Global innovator services are characterized by higher levels of digital intensity

Share of ICT services in total inputs, 2018



Source: Calculations based on the Input-Output table for Uzbekistan, prepared by the Statistics Agency under the President of the Republic of Uzbekistan.

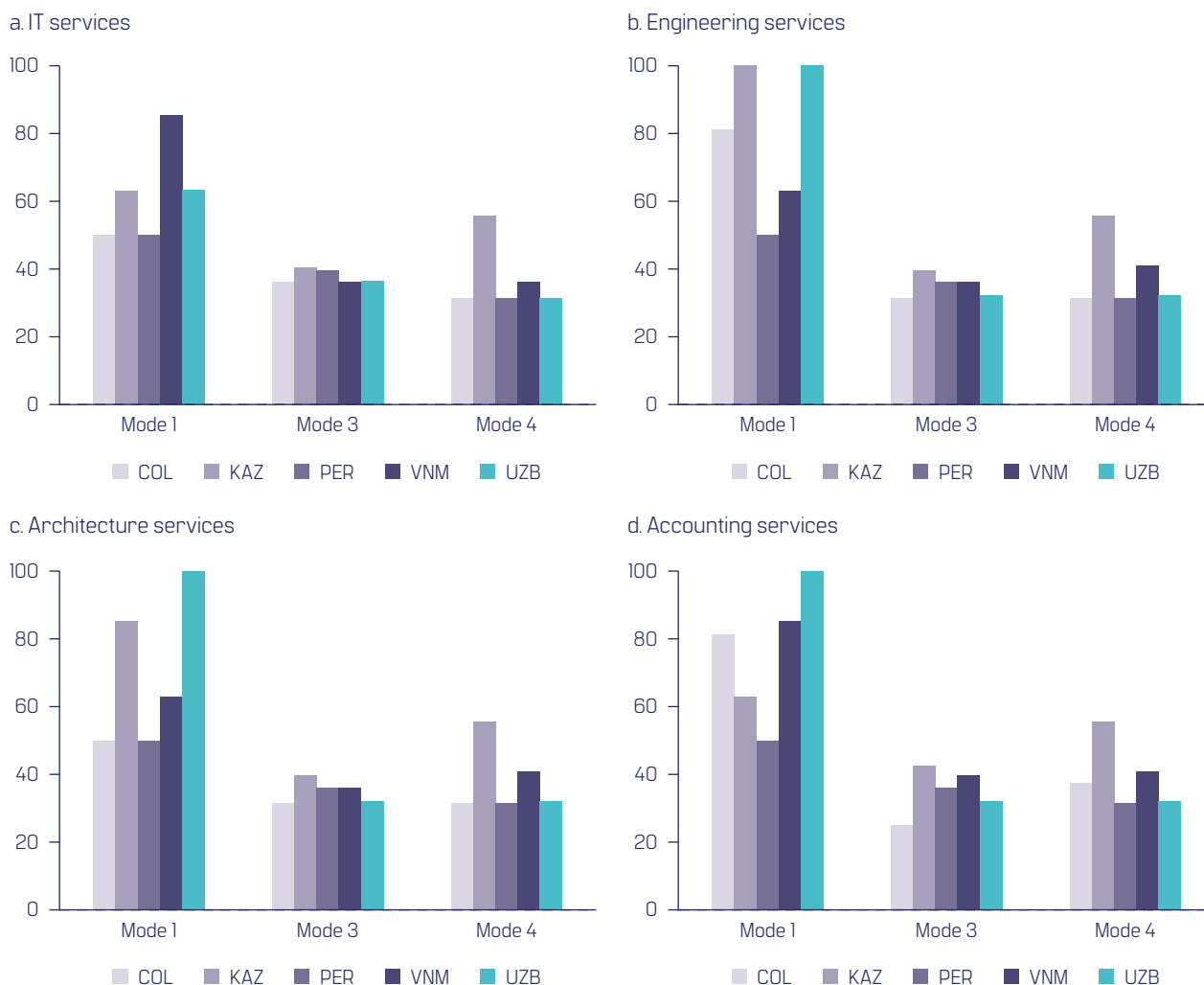
<sup>30</sup> Arts, entertainment, and recreation services are the second most ICT service-intensive sector after the ICT services sector itself.

<sup>31</sup> Article 27 (1) of the Law "On personal data" 02.07.2019 N<sup>o</sup>547: <https://lex.uz/docs/4396428>. Resolution of the Cabinet of Ministers "On approving certain normative legal acts in the area of processing of personal data" of 05.10.2022 No.570: <https://lex.uz/ru/docs/6225462>

media websites in the country.<sup>32</sup> Data-localization requirements have been demonstrated to reduce the total volume of trade in digital services.<sup>33</sup> Foreign service suppliers located outside Uzbekistan must utilize data centers in Uzbekistan, thereby making it impossible for foreign companies to operate exclusively online. Lastly, such restrictions may reduce productivity of foreign service suppliers by impeding access to efficient data storage options, such as cloud computing, and disincentivize foreign investment.<sup>34</sup> As a result, policy priorities include the implementation of international best practices around data storage and transfers that focus on laws on privacy protection while allowing international trade.

**FIGURE 4.6** Global innovator services are highly restricted on cross-border delivery

Services trade restriction index (STRI), by mode of supply, 2022



Source: WTO-WB Services Trade Policy Database and Services Trade Restrictions Index (STRI).

Note: The index scores can be interpreted as follows: 0 – completely open; 25 – virtually open with minor restrictions; 50 – major restrictions; 75 – virtually closed; 100 – completely closed.

32 Uzbekistan Restricts Access to Several Social Media Sites, RadioFreeEurope RadioLiberty (July 3, 2021): <https://www.rferl.org/a/uzbekistan-restricts-social-media/31339492.html>

33 World Bank, 2021, World Development Report: Data for Better Lives.

34 Mathias Bauer et al., 2014, “The Costs of Data Localisation: Friendly Fire on Economic Recovery”, ECIPE Occasional Paper (No. 3/2014): [https://ecipe.org/wp-content/uploads/2014/12/OCC32014\\_\\_1.pdf](https://ecipe.org/wp-content/uploads/2014/12/OCC32014__1.pdf)

**Uzbekistan's IT services sector is relatively less restricted in terms mode 3 and mode 4 trade.** On mode 3 services trade (reflecting FDI), foreign suppliers that are registered as legal entities are eligible for all benefits in Tashkent's technological park — created just three years ago — which now hosts more than 650 companies. This includes tax exemptions, duty-free access to ICT hardware and software, a special three-year IT visa for investors, one-stop legal registration, as well as office space and accommodation assistance. On mode 4 services trade (movement of natural persons), Uzbekistan has introduced special three-year multiple entry IT visas while also simplifying the process of obtaining residency permits, although there is 15 percent wage subsidy for Uzbek employees in Tashkent's IT Park.

**For professional services such as architecture, engineering, and accounting, Uzbekistan is completely closed to cross-border delivery, i.e., mode 1 trade.** In other words, commercial presence is required for foreign companies to supply these services. For example, persons supplying auditing services in the Republic of Uzbekistan must register as a legal entity in the form of a business partnership, society, production cooperative, unitary enterprise, and any other form envisaged by law, except for a Joint Stock Company. Similarly, architectural service providers for providing design, documentation, and advisory services are subject to licensing as legal entities incorporated in Uzbekistan.

**The inflow of foreign capital and foreign expertise faces fewer restrictions among professional services.** As highlighted in Box 3.1, access to capital and financing remains an important constraint for firms. Foreign capital can provide an important source. There are few limits for foreign investment (mode 3) in existing locally incorporated companies, except that foreign shares cannot exceed 49 percent in publicly controlled design engineering firms. On mode 4 services trade, there continue to be some restrictions. National employees must be not less than 50 percent of the legal consultants in a consulting legal firm. And if there is only one legal consultant in the firm, she or he must be a national of Uzbekistan.<sup>35</sup> Similarly, at least one partner or director in an accounting or auditing firm must be a locally licensed professional. There are exceptions to licensing requirements in order to attract foreign investment and qualified foreign professionals. For example, engineering projects from foreign service suppliers can apply for a “fast track” approval which does not require licensing for engineering design, procurement, and construction projects fully financed from state budgets.

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35 The Decree of the President On Measures for fundamental increase of effectiveness of the institution of advocates and expansion of independent advocates No.5441 of 12 May 2018: <https://lex.uz/docs/3731058> The Resolution of the Cabinet of Ministers On providing legal consulting services by commercial organizations No. 675 of 17 August 2018: <https://lex.uz/acts/3908803>

# CHAPTER 5

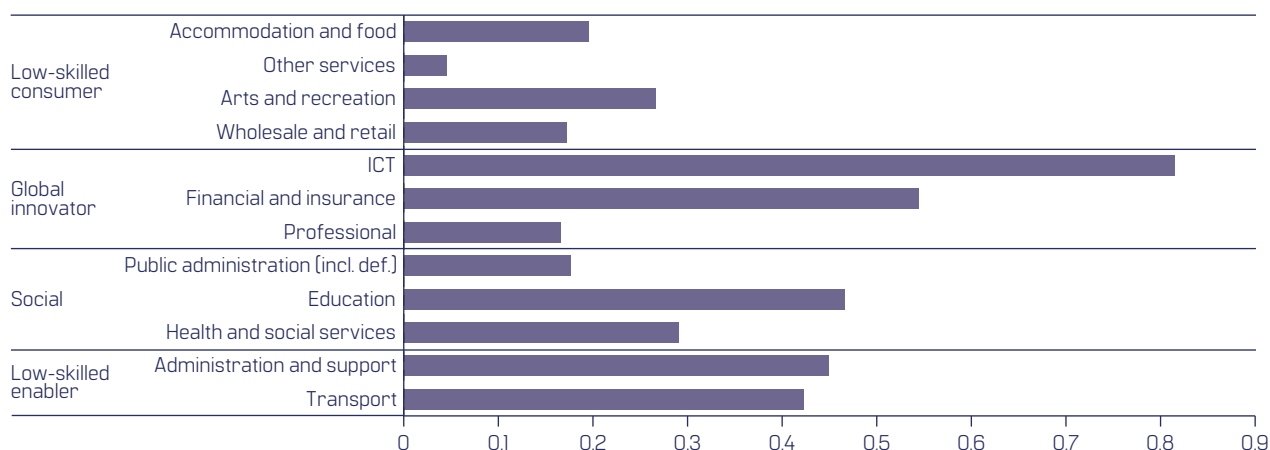
## **IMPROVING THE GROWTH PROSPECTS OF LOW-SKILLED SERVICES**

## THE POTENTIAL TO IMPROVE THE PRODUCTIVITY OF JOBS

Low-skilled consumer services are typically characterized by limited productivity and earning prospects relative to global innovator services, but there is considerable room to catch up with advanced economies. Low levels of labor productivity in low-skilled consumer services, relative to global innovator and low-skilled enabling services, is reflected in the preponderance of small enterprises that account for more than 95 percent of all firms in the sector.<sup>36</sup> However, low-skilled services are characterized by significantly higher levels of productivity in higher-income economies where they also employ a sizeable share of the workforce. For example, the gap in labor productivity between Uzbekistan and Russia was the highest among low-skilled consumer services, including hospitality services and (wholesale and) retail trade (figure 5.1). And although these gaps are potentially discouraging, they indicate a potential for services in LMICs that is yet unrealized.

**FIGURE 5.1** The gap in labor productivity between Uzbekistan and Russia was the highest among low-skilled consumer services, including hospitality and retail

Average labor productivity gaps relative to Russia (=1.0), 2017 – 2022



Source: Elaboration based on Haver Analytics and International Labour Organization (ILO) data.

Notes: Labor productivity is estimated as value-added per worker. The labor productivity gap is estimated as a ratio of the value-added per worker in Uzbekistan relative to Russia. Averages are estimated after relative labor productivity gaps have been collected for each year. All value-added data for both Russia and Uzbekistan are expressed in constant USD.

**There are growing opportunities for scale and innovation among low-skilled services through trade and technology adoption.** Among low-skilled services, transportation and hospitality services are highly traded internationally owing to tourism-related travel and they provide opportunities for export-led growth. Even among non-tradable low-skilled services, such as retail, there are opportunities for businesses to achieve greater scale and innovation than before owing to the emergence of new business models linked to the diffusion of digital technologies. We will consider tourism-related transportation and hospitality services as well as retail services as examples to illustrate these new opportunities.

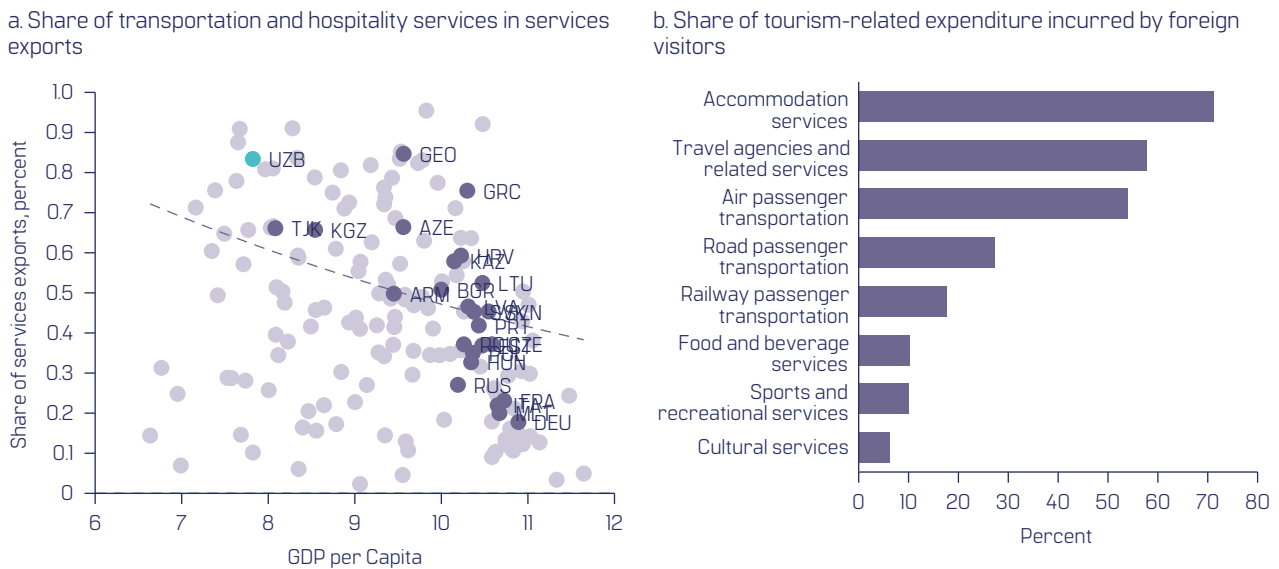
36 Based on data from the Statistics Agency under the President of the Republic of Uzbekistan.



## EXPORT-LED GROWTH IN TOURISM-RELATED SERVICES

Travel-related transportation and hospitality services currently account for more than three-fourths of Uzbekistan’s services exports. This conforms to a global trend where low-skilled services make up larger shares of total services exports in countries with lower levels of per capita income (figure 5.2, panel a) and they have enabled several lower-income countries to diversify their exports away from volatile primary sectors. Uzbekistan’s exports of transportation and hospitality services are driven, at least in part, by tourism-related travel. In Uzbekistan, foreign visitors account for more than half of all tourism-related expenditures across accommodation services, travel agencies, and related reservation services, as well as air transportation services (figure 5.2, panel b).

**FIGURE 5.2** Tourism-related transportation and hospitality services are central to Uzbekistan's services exports



Source: World Trade Organization (WTO).

Source: Uzbekistan Statistics Agency under the President of the Republic of Uzbekistan.

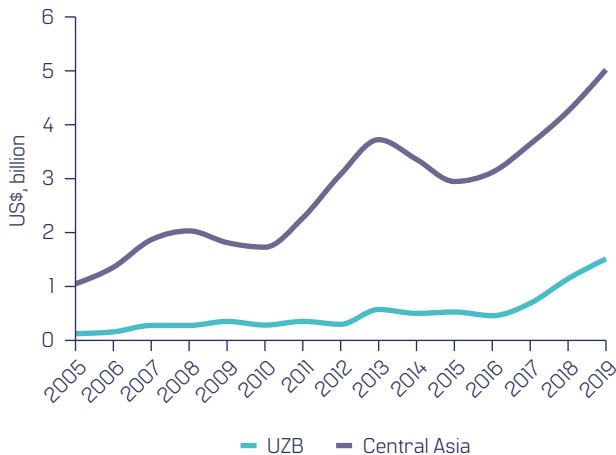
However, growth in exports of travel-related services has been slow, even relative to other Central Asian countries, despite lower restrictions on the entry of foreign visitors. Exports of travel-related services in Uzbekistan have grown slower compared to other Central Asian countries between 2005 – 2015, but there has been some catch-up since then (figure 5.3, panel a). This can be traced to the relatively slow growth in tourist arrivals during this period (figure 5.3, panel b). Visa requirements for tourism-related travel in Uzbekistan have been simplified for citizens of over 50 countries. There are no visas required for EU nationals while US nationals can obtain e-visas. The government continues its policy on simplifying visa requirements for 101 economically stable and safe states, including through the introduction of electronic visas. The market for tourism-related travel in Uzbekistan is also largely limited to the personal travel segment which, in turn draws on several UNESCO World Heritage Sites in the country.<sup>37</sup> The share of business

37 Uzbekistan has more than 7,000 objects of cultural heritage, with 209 of them located in four “open museum” cities, such as “Ichan kala in the city of Khiva”, “Historical center of the city of Bukhara”, “Historical center of the city of Shakhrisabz”, and “Samarkand city”: <https://whc.unesco.org/en/statesparties/uz>

and professional-related travel has declined from 20 percent in 2005 to less than 2 percent in 2019. This may be indicative of constraints on “connectivity” and “contestability” because the demand for business-related MICE (meetings, incentives, conferences and events) tourism is more responsive to the price of travel given the possibility of choosing locations worldwide.

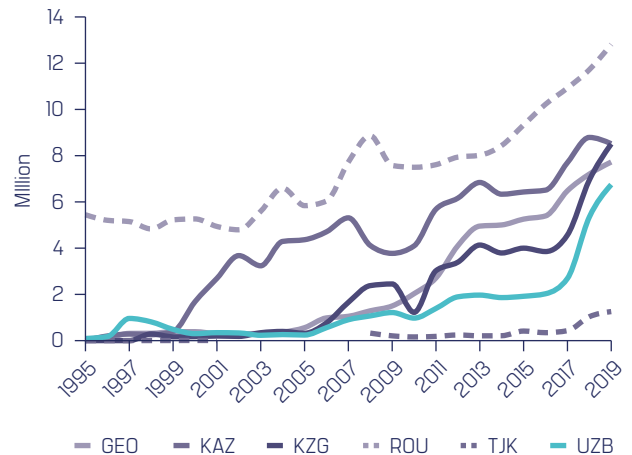
**FIGURE 5.3** Slow growth in exports of travel-related services tracks the slow growth in the arrival of tourists from abroad

a. Exports of travel-related services



Source: UNCTADstat.

b. Inbound tourist arrivals



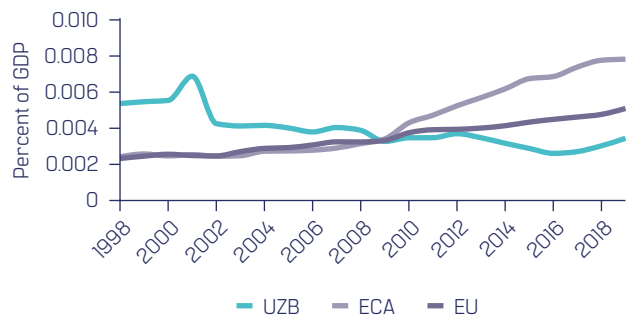
Source: UN World Tourism Organization.

## Connectivity

There is considerable scope for improving passenger transportation logistics in Uzbekistan. The number of passengers carried by air transportation services — which is the primary mode of entry for foreign visitors — relative to the size of the economy, declined in Uzbekistan between 2001 and 2016 (with a marginal increase since) (figure 5.4). This is in sharp contrast to other developing economies in the Eastern Europe and Central Asia region. Passenger connectivity through air travel in Uzbekistan is hindered by limited providers and a limited offering of destinations. While Tashkent Airport is served by 39 passenger airlines, the only airline providing services in many other cities is Uzbekistan Airways, the national air carrier. Rail connectivity remains a national monopoly. This reflects gaps in transportation infrastructure across different modes of travel. There is a need to attract large international air carriers, invest in low-cost domestic air transportation, construct new railway lines, expand the use of high-speed electric trains, as well as construct new roads of national and regional significance connecting tourist centers. Such infrastructure investment must leverage public-private partnerships.

**FIGURE 5.4** The number of passengers carried by air transportation services relative to the size of the economy declined in Uzbekistan unlike in other developing economies in the region

Air transport, passengers carried



Source: International Civil Aviation Organization, Civil Aviation Statistics of the World and ICAO staff estimates.

Note: ECA refers to Europe and Central Asia excluding high income countries.

## Contestability

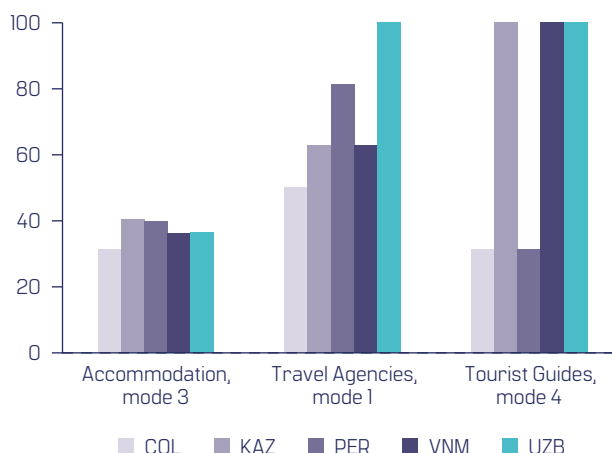
**The lack of competition in the air transportation sector is pricing out travel-related services.** For passenger transportation services, as highlighted in Chapter 2, high airline prices make Uzbekistan less of a tourist destination. High airline prices are associated with the state-owned Uzbekistan Airways having a national monopoly.

**There are few trade restrictions among accommodation and food services.** Uzbekistan's hospitality services subsector has fewer restrictions on foreign direct investment compared to peer countries (figure 5.5). Several world-renowned hotel chains have established their presence in Uzbekistan. This includes the Hyatt Regency, Lotte City Hotel, Hilton, Intercontinental, Marriott, and Radisson across the cities of Andijan, Urgench, Tashkent, and Jizzakh. However, establishing hospitality services remains challenging due to laws around land ownership. Obtaining land leases can be a lengthy and complicated process — as land ownership is restricted — and leases on land are subject to renewal as explained in Chapter 2.

**Tour agents and tour operators are subject to particularly stringent licensing requirements that impede competition.**<sup>38</sup> Foreign tour operators/agents can't provide cross border services in Uzbekistan without registering as a legal entity; i.e., Uzbekistan is completely closed to mode 1 trade in these services (figure 5.5). However, foreign tour agencies that register in Uzbekistan as a legal entity (via incorporation with the local company) can work business-to-business, although they cannot provide services directly to consumers (as it is a competition for local tour agents). There are no restrictions for foreign natural persons to work, practice, consult for tour operators if they have the right to work, but only through employment with local tour companies.<sup>39</sup> In addition, providing tour guide services is restricted to Uzbekistan residents. For those foreign nationals who are resident it is difficult to comply with the licensing requirements, which include prior local diplomas (middle school or higher institution and additional courses on guides/excursion) and requirements for all courses and examinations to be taken in the Uzbek language (Chapters 2, 3, 4 of Annex 9 of the Regulation).<sup>40</sup>

**FIGURE 5.5** Among hospitality services, there are few trade restrictions on accommodation services, but the opposite is true for the services of tour operators, agents, and guides

STRI, tourism-related services



Source: World Bank and World Trade Organization.

38 Annex 5 (tourism activity) 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/5870213>

39 Annex 20 (Permits for work including foreigners) to the Resolution of the Cabinet of Ministers “On Unified procedures for issuance of certain permission documents via special electronic system” of 22.02.2022 N° 86: <https://lex.uz/ru/docs/5876002>

40 The Law on tourism, Annex 5 (tourism activity) of 18.07.2019, N° 549: <https://lex.uz/docs/4428101> 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/5870213>; Annex 9 (Regulation on the procedure for issuing a qualification certificate to a guide-interpreter, lead tour guide and 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 10 July 2020, N° 433: <https://lex.uz/ru/docs/4937140>

## THE USE OF TECHNOLOGIES IN LOW-SKILLED (NON-TRADABLE) CONSUMER SERVICES

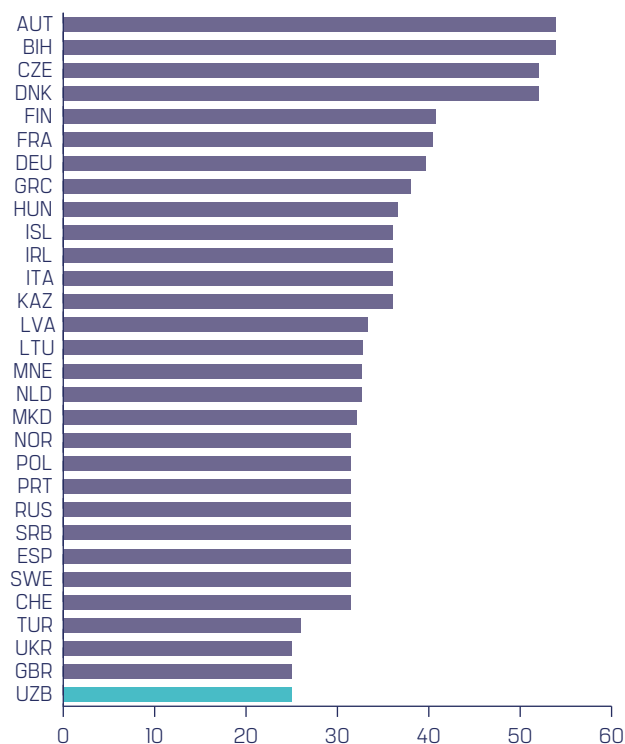
There are possibilities to increase the productivity of low-skilled non-tradable services through greater scale and innovation. Low-skilled services, such as retail trade, that are neither directly exported nor indirectly exported through linkages with tradable sectors can still benefit from international trade through FDI inflows. FDI can change business models in these low-skilled services by operating a larger scale, thereby increasing productivity. The use of digital technologies is also associated with higher levels of labor productivity in the retail services sector. Online platforms and mobile applications reduced the costs of searching for, matching, and tracking information, e.g., food or grocery delivery and ride-sharing through Yandex and digital payments through startups such as Uzum and Click. Similarly, basic software and mobile phone apps have enabled small or informal firms in the retail sector to improve their input sourcing, inventory management, product pricing, and payment systems. For example, Billz provides mobile phone-enabled software solutions for accounting, client management, loyalty, and cashback management to retail store businesses. The demands on worker capabilities to use these technologies are not stringent. Not everyone using a smartphone needs to know how to code, but they do need basic cognitive skills such as literacy, numeracy, and familiarity with digital technologies starting at a young age.

### Contestability

Uzbekistan's relatively low restrictions on foreign direct investment in retail services provides an opportunity for productivity gains through the establishment of modern business models. For retail services, trade restrictions in developing economies are most commonly applied through limits on FDI. FDI has played an important role in expanding larger-scale retail; the 100 largest global retailers operate, on average, in 12 countries (Bronnenberg and Ellickson 2015). Compared with small, informal corner stores, these chain stores achieve scale not only through larger establishments but also through establishments in multiple locations. These large chains can also negotiate higher discounts from suppliers through bulk purchases. The reallocation of market share from small-scale retail stores to larger supermarkets has been a major source of productivity gains in the United States (Foster, Haltiwanger, and Krizan 2006). This expansion of large-scale retail through FDI has been associated with productivity gains in developing economies too. For example, foreign entry of supermarkets in Mexico significantly lowered prices (Iacovone et al. 2015; Atkin, Faber, and Gonzalez-Navarro 2018). Similarly, retail multinational companies in Romania had productivity-enhancing impacts on local suppliers and pay higher wages than domestic retailers (Javorcik and Li 2013). Uzbekistan stands poised to benefit from such FDI given its low restrictions on “commercial presence” in retail services compared with both high- and middle-income countries in the region (figure 5.6).

**FIGURE 5.6** Restrictions on foreign direct investment in retail services in Uzbekistan are low even compared with high-income countries in the region

Services Trade Restrictiveness Index (STRI), Retail services, Mode 3



Source: World Bank and World Trade Organization.

## Capabilities

Uzbekistan’s sizable pool of middle-skilled workers places it in a good position to adopt basic digital technologies, although digital literacy needs greater emphasis from an early age. While digitalization places the improvement of workforce skills at the forefront, the needed skills are not necessarily “high end.” The ability to use smartphones and the internet relies on foundational cognitive skills, such as literacy and numeracy. The near universal completion of secondary schooling in Uzbekistan, provides the foundation for building these skills (figure 5.7, panel a). This near universal completion of secondary schooling is reflected in the education levels of workers employed across Uzbekistan’s services sector, including in low-skilled services such as retail.<sup>41</sup> However, digital literacy remains incomplete (figure 5.7, panel b). Exposing children at a young age to basic digital technologies, such as how to use email and word-processing software, while also encouraging lifelong learning is important here.

**FIGURE 5.7** Uzbekistan’s secondary school enrolment rates are near universal but digital literacy is far from complete



Source: World Bank, World Development Indicators.  
 Notes: Data period is for 2021 excluding Kazakhstan and Russia where latest data available is for 2020 and 2019, respectively. LMC and UMC are lower and upper middle income country aggregates. OED is OECD aggregate. ISO 3-digit codes are reported for countries.

Source: International Telecommunications Union (ITU).  
 Notes: Data is based on an average of 4 ITU indicators. These indicators include “Using copy and paste tools within a document”, “Transferring files between a computer and other devices”, “Sending e-mails with attached files”, and “Transferring files between a computer and other devices”. The data is based on the latest data period available for each country, which covers 2018 – 2022. ISO 3-digit codes are reported for countries.

**School curricula should also emphasize socioemotional and interpersonal skills.** Beyond digital literacy, socioemotional and interpersonal skills play an especially important role in low-skilled services, such as retail, that are characterized by a high degree of customization and the simultaneity of production and consumption that necessitates a close relationship with consumers. It is precisely these skills that slow down the automation of

41 Based on ILOstat.

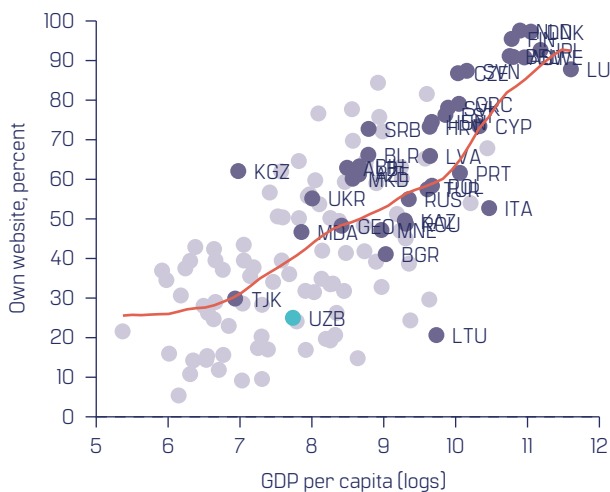
waiters in restaurants or hosts at event venues. The intangibility of many services, which often precludes the writing of complete contracts, also emphasizes these interpersonal skills where trust between the supplier and the buyer is crucial.

## Connectivity

The extent of unexploited potential here is underscored by the low use of even the most basic digital technologies in Uzbekistan. For example, the share of firms in low-skilled services that use a website to communicate or transact with customers is around 20 percent. This is lower than all other countries in the region. It is also considerably lower than the average for its level of per capita income. The comparison with the Kyrgyz Republic is illustrative, where at even at a lower level of per capita income, the share of enterprises using websites in low-skilled services is as high as 60 percent (figure 5.8, panel a). The use of online platforms in Uzbekistan is more consistent with its level of per capita income with respect to digital payment systems that are extremely relevant for small retailers and other informal enterprises in low-skilled services. However, at around 40 percent, the share of individuals making or receiving digital payments is lower than several countries at similar levels of per capita income (figure 5.8, panel b).

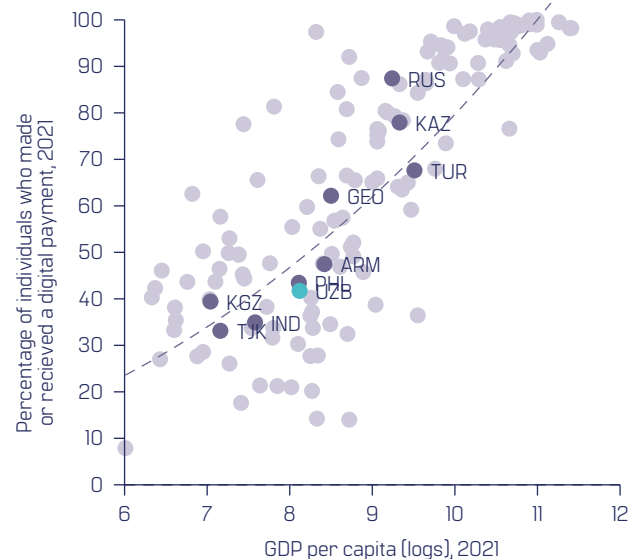
**FIGURE 5.8** The use of basic digital technologies is more widespread in certain business functions

a. Share of low-skilled services firms with their own website, latest available year 2009–2021



Source: Calculations based on World Bank Enterprise Surveys.  
Notes: The World Bank Enterprise Survey only includes firms with 5 or more employees. Uzbekistan data relates to 2019.

b. Individuals making or receiving digital payments, 2021



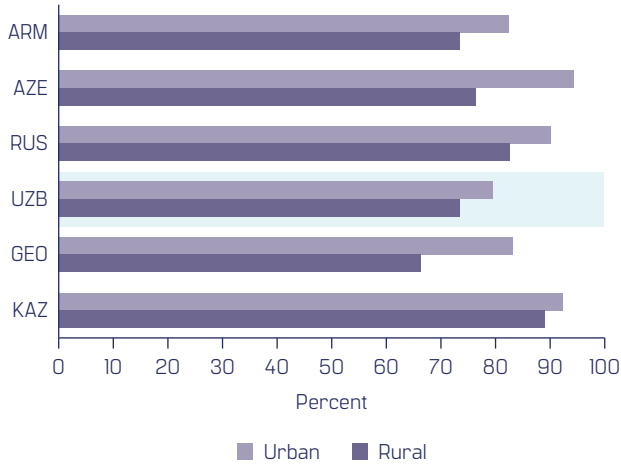
Source: World Bank, WDI and Global Findex Database.

The low shares of digital technology use in low-skilled services may reflect gaps in the availability of affordable internet service, as well as information and financial constraints. Unlike global innovator services which tend to agglomerate in large cities and clusters such as the Tashkent IT Park, low-skilled services are non-tradable and therefore dispersed across the country including in remote areas where internet connectivity is weaker (figure 5.9, panel a). There might also be information gaps among small enterprises in these services where management practices might be few and far between. Business owners need to know how to take advantage of the potential that new technologies bring, and policy support can help overcome the information gaps on the returns to technology acquisition. However, not all small informal enterprises have the capabilities to take

advantage of relevant training and other business advisory services. Learning from industry leaders or larger enterprises that geographically proximate has been shown to have effects in other countries. The lack of access to finance is also likely to be a constraint for small and micro enterprises to invest in these technologies. In Uzbekistan, even the ownership of mobile phones, which is the basic requisite for using digital apps, is not universal (figure 5.9, panel b).

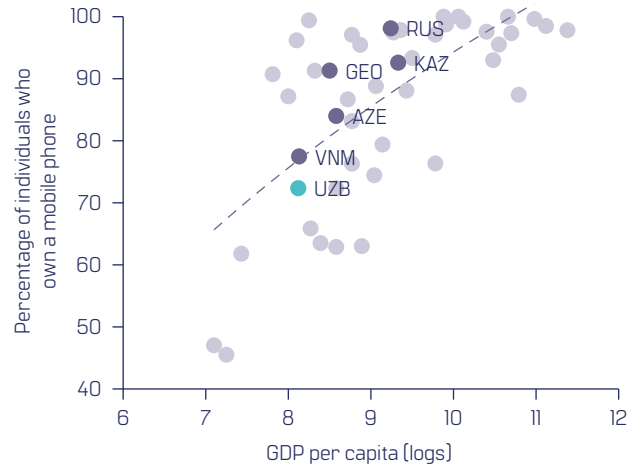
**FIGURE 5.9** Access to mobile internet is relatively low, especially in rural areas

a. Share of individuals using the Internet by location, 2021



Source: International Telecommunications Union (ITU).  
Notes: ISO 3-Digit codes are reported for countries.

b. Share of individuals who own a mobile phone, 2021



Source: International Telecommunications Union (ITU).  
Notes: ISO 3-digit codes for individual countries are displayed.

# CHAPTER 6

## **KEY RECOMMENDATIONS**



**The services sector in Uzbekistan can better contribute to growth and jobs by improving its linkages with other sectors, expanding global innovator services, and improving the productivity of low-skilled services.** First, a range of services provide important inputs for the rest of the economy, including goods producing sectors. Improving these linkages between enabling services such as telecommunications, transportation, and professional services and other sectors such as agriculture and manufacturing can facilitate gains from trade in activities where Uzbekistan has a comparative advantage. Second, a shift in the composition of Uzbekistan's services sector towards the global innovator services can help the country reap the benefits of trade and innovation associated with ICT and professional services. Third, even with economic diversification, a sizeable share of Uzbekistan's labor force will continue to be employed in low-skilled services where digital technologies are bringing new growth opportunities.

**Improving the contestability of key enabling services is fundamental to maximizing the impact of the services sector on economy-wide productivity.** Telecommunication and transportation services that enable a range of downstream economic activity are stifled by regulatory restrictions and the preponderance of state-owned enterprises in Uzbekistan. Improving competition is therefore of utmost importance, such as through the removal of the international gateway monopoly of Uztelecom and phasing out the privileges afforded to JSC Uzbekistan Airways. Connectivity also matters, such as through greater public-private partnerships to increase investments in roads and warehousing facilities.

**Consistent progress on all the 3Cs is important for expanding global innovator services.** As data-intensive sectors, improvements in the coverage, speed, and affordability of broadband internet in Uzbekistan is an essential prerequisite. The lack of contestability in the cross-border delivery of these services, largely due to data localization requirements in Uzbekistan, is an additional constraint. The stock of Uzbekistan's capabilities is reasonably good, but there needs to be a concerted effort to bolster tertiary education rates and strengthen management practices in large firms.

**Connectivity is key to capturing productivity gains in low-skilled consumer services.** Improvements in transportation connectivity is a prerequisite for tourism-linked hospitality services, while improvements in digital connectivity can bring productivity gains to non-tradable services such as retail. Rates of secondary education completion are near universal in Uzbekistan, but capabilities matter to the extent that digital literacy remains weak. Contestability also matters in particular segments of hospitality services, owing to restrictions on land ownership.

**Unleashing the potential of the services sector will require structural reforms that improve contestability across different services markets.** In many cases this means leveling the playing field. For many of the enabling services sectors, this requires a rethink of the role of the state in the sector as there is a large presence of businesses with state ownership. For global innovator services, increased digitization requires a rethink of data regulations to allow cross-border provision of such services. For low-skilled services, tourism provides an opportunity, but reforms around land restrictions and cross-border delivery are needed to encourage growth in this sector. Table 5.1 summarizes key policy recommendations by sector, based on the sectoral deep-dives presented in this report.

**TABLE 6.1** Policy recommendation along the dimensions of capabilities, connectivity, and contestability

Objective	Policy recommendations
<p><b>Strengthen linkages between enabling services and other sectors</b></p> <p><b>Key sectors:</b> Transportation and logistics, telecommunications</p> <p><i>(SEE CHAPTER 3)</i></p>	<p><b>Capabilities</b></p> <ul style="list-style-type: none"> <li>Investments in secondary education to emphasize socioemotional and interpersonal skills in school curricula.</li> <li>Vocational training for standard IT skills.</li> <li>Align standards more closely with international standards to encourage more entry of foreign businesses outside the immediate region.</li> </ul> <p><b>Connectivity</b></p> <ul style="list-style-type: none"> <li>Investments in infrastructure to bolster transportation and digital connectivity.</li> <li>Regulatory reforms to improve customs procedures, the tracking and tracing of consignments, as well as the timeliness of shipments reaching their destination. Reforms that bolster private participation in transportation and telecommunication services can also improve connectivity.</li> </ul> <p><b>Contestability</b></p> <p><b>Telecom:</b></p> <ul style="list-style-type: none"> <li>Remove the international gateway monopoly of Uztelecom; provide more competitive wholesale prices.</li> <li>Establish an independent regulator.</li> <li>Facilitate licensing arrangements for providers, including moving to a notification procedure rather than the current approval procedure.</li> </ul> <p><b>Transportation:</b></p> <ul style="list-style-type: none"> <li><b>Air:</b> Increase competition of routes through gradual liberalization of the sector; rethink privileges afforded to JSC Uzbekistan Airways.</li> <li><b>Road:</b> Re-assess quota system; facilitate operations of foreign transportation providers.</li> <li><b>Rail:</b> Complete the unbundling of track infrastructure and passenger and freight service provision; increase competition on freight markets, starting with reducing the influence of the "master" freight forwarders</li> <li><b>Warehousing:</b> Expand opportunities for private sector firms to establish warehouses and logistics centers, including facilitating the establishment of warehouses near transportation hubs.</li> </ul>
<p><b>Expand the footprint of global innovator services</b></p> <p><b>Key sectors:</b> IT, professional services, financial services</p> <p><i>(SEE CHAPTER 4)</i></p>	<p><b>Capabilities</b></p> <ul style="list-style-type: none"> <li>Investments in higher education that increase tertiary enrolment rates can enable a sizable pool of skilled workers over the medium term.</li> <li>Vocational training to accelerate the development of advanced ICT skills, such as through the Government of Uzbekistan's "One Million Uzbek Coders" training program as well as fewer restrictions on work visas for highly skilled workers from abroad, such as in Tashkent's IT Park.</li> </ul> <p><b>Connectivity</b></p> <ul style="list-style-type: none"> <li>Investments to improve the quality of broadband connectivity through more widespread coverage of faster forms of mobile internet, such as 4G/LTE.</li> </ul> <p><b>Contestability</b></p> <ul style="list-style-type: none"> <li>Reduce restrictions on cross-border delivery through relaxing data localization requirements while striking a balance with privacy considerations.</li> </ul>
<p><b>Increase the productivity of low-skilled services</b></p> <p><b>Key sectors:</b> Retail, hospitality, personal services</p> <p><i>(SEE CHAPTER 5)</i></p>	<p><b>Capabilities</b></p> <ul style="list-style-type: none"> <li>Investments in secondary education to emphasize socioemotional and interpersonal skills in school curricula.</li> <li>Vocational training for standard IT skills.</li> </ul> <p><b>Connectivity</b></p> <ul style="list-style-type: none"> <li>Investments to improve access to broadband connectivity in more remote areas.</li> </ul> <p><b>Contestability</b></p> <ul style="list-style-type: none"> <li>Simplify the process of obtaining land leases and reduce restrictions on land ownership.</li> </ul>

Source: World Bank, based on findings in this report.

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## ANNEX FOR CHAPTER 1:

**DECOMPOSITION METHODOLOGY****DECOMPOSING CHANGES IN ANNUALIZED VALUE-ADDED PER CAPITA**

Changes in aggregate value added per worker between periods  $t_0$  and  $t_1$  can be decomposed as (see McMillan and Rodrik, 2011):

$$\Delta w = \sum_{i=1}^n \Delta w^i \times \theta_{t_0}^i + \sum_{i=1}^n \Delta \theta^i \times w_{t_1}^i$$

Where:

$\Delta w$  = Change in value added per worker

$\Delta w^i$  = Change in value added per worker in sector  $i$

$\theta_{t_0}^i$  = Share of employment in sector  $i$  in total employment, year  $t_0$

$\Delta \theta^i$  = Change in share of employment in sector  $i$  in total employment

$w_{t_1}^i$  = Value added per worker in sector  $i$  in year  $t_1$

The first term is the sum of changes in value added per worker in sector  $i$ ,  $i = 1 \dots n$ . The Second term can be interpreted as the change in value added per worker due to inter-sectoral employment changes (i.e., net movements of workers between sectors). This equation only estimates the static effects as it only considers the differences in productivity level across sectors, without any consideration on how productivity growth differs. The inter-sectoral reallocation (i.e., structural change) can therefore be further decomposed into a “static” and a “dynamic portion” (see de Vries et al., 2015):

$$\Delta w^i = w_{t_1}^i - w_{t_0}^i \quad \text{and} \quad \Delta \theta^i = \theta_{t_1}^i - \theta_{t_0}^i$$

$$\Rightarrow \Delta w = \underbrace{\sum_{i=1}^n (w_{t_1}^i - w_{t_0}^i) \times \theta_{t_0}^i}_{\text{Within-Sector}} + \underbrace{\sum_{i=1}^n (\theta_{t_1}^i - \theta_{t_0}^i) \times w_{t_0}^i}_{\text{Static Reallocation}} + \underbrace{\sum_{i=1}^n (w_{t_1}^i - w_{t_0}^i) \times (\theta_{t_1}^i - \theta_{t_0}^i)}_{\text{Dynamic reallocation}}$$

Where:

$\Delta w$  = Change in value added per worker

$w_{t_0}^i$  = Value added per worker in sector  $i$  in year  $t_0$

$w_{t_1}^i$  = Value added per worker in sector  $i$  in year  $t_1$

$\theta_{t_0}^i$  = Share of employment in sector  $i$  in total employment, year  $t_0$

$\theta_{t_1}^i$  = Share of employment in sector  $i$  in total employment, year  $t_1$

“Static reallocation” shows that workers are moving to sectors with higher productivity growth regardless of whether it is rising or falling. “Dynamic reallocation” measures the joint effects of changes in employment and sector productivity growth. “Dynamic reallocation” is positive if workers are moving to sectors with positive productivity growth.

## DECOMPOSING SECTOR CONTRIBUTIONS TO VALUE-ADDED GROWTH

Each sector's contribution to Value-added Growth is calculated as growth of employment/value-added in each sector,  $i$ , times its average share in total employment/value-added evaluated at the mid-point between the beginning ( $t1$ ) and the end ( $t2$ ) of the period considered:

$$\dot{Y}_{t0,t1}^i = \left[ \left( \frac{Y_{t1}^i}{Y_{t0}^i} \right)^{\frac{1}{t1-t0}} - 1 \right] \times \left[ 0.5 \times \left( \frac{Y_{t0}^i}{Y_{t0}} + \frac{Y_{t1}^i}{Y_{t1}} \right) \right]$$

$$Y = \{V\}$$

Where:

- $\dot{Y}_{t0,t1}^i$  = Growth of value-added in sector  $i$ , between  $t0$  and  $t1$
- $Y_{t1}^i$  = value-added in sector  $i$  in year  $t1$
- $Y_{t0}^i$  = value-added in sector  $i$  in year  $t0$
- $Y_{t0}$  = Total value-added in year  $t0$
- $Y_{t1}$  = total value-added in year  $t1$

## DECOMPOSING CHANGES IN EMPLOYMENT (USING LABOR FORCE EMPLOYMENT RATE) – SHAPLEY METHOD

Decomposing Changes in Employment per Labor Force Employment Rate – by Sector. To understand way in which each sector contributed to the change in employment rate, we can decompose the employment rate:

$$\frac{E}{L} = \sum_{i=1}^n \frac{E^i}{L}$$

Here,  $E$  is the total employment,  $E^i$  is the total employment in sector  $i$ , and  $L$  is the total labor force. Then it is straight forward to obtain how changes in employment rate  $\Delta E$ , is decomposed. This is given by:

$$\frac{\Delta E}{\Delta L} = \sum_{i=1}^n \frac{\Delta E^i}{\Delta L}$$

Where,  $\Delta E$  is the change in total employment,  $\Delta L$  is the change in total labor force, and  $\Delta E^i$  is the change in total employment in sector  $i$ . One can interpret  $\tilde{E} \equiv \frac{\Delta E}{\Delta L}$  as the employment rate and  $\tilde{E}^i \equiv \frac{\Delta E^i}{\Delta L}$  as the employment rate in sector  $i$ .

