

UZBEKISTAN PUBLIC EXPENDITURE REVIEW

Better Value for Money in Human Capital and Water Infrastructure



December 2022

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Better Value for Money in Human Capital and Water Infrastructure

December 2022

REPUBLIC OF UZBEKISTAN

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Weights and Measures Metric System

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Acknowledgments	1
Abbreviations and Acronyms	2
Executive Summary	3
Chapter 1. An Overview	5
1. Introduction and high-level findings of the report	5
2. Creating the fiscal space to implement effective sector-level changes	9
3. Summary of sector-level findings	14
Chapter 2. Health	25
Summary	25
Context and Recent Developments	25
Key Challenges	39
Policy Options	62
Chapter 3. Education	64
Summary	64
Overview	65
Structure of the education sector	71
Key findings and challenges	75
Policy Options	90
Chapter 4. Social Protection	92
Summary	92
Context and Recent Developments	92
Key Challenges	97
Policy Options	. 116
Chapter 5. Irrigation Water Management	.123
Summary	. 123
Context and Recent Developments	. 124
Key Challenges	. 126
Policy Options	. 135
Spotlight 1. Drinking Water Supply and Sanitation	.143
Summary	. 143
Context	. 143
Recent Developments	. 144
Key Challenges	. 146
Policy Options	. 147
Annex 1: Fiscal Reforms since the Last Uzbekistan PER (2019)	.150
Annex 2. Recent Developments: The Impact of COVID-19 on Public Finances	.155

Table of Contents

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Abbreviations and Acronyms

ALMP	Active Labor Market Program	MoH	Ministry of Health
CMU	City Medical Union	OOP	Out-of-Pocket
CRD	Chronic Respiratory Disease	OECD	Organisation for Economic Co- operation and Development
CVD	Cardiovascular Disease	O&M	Operations and Maintenance
ECA	Europe and Central Asia	OOSC	Out-of-School Children
ESP	Education Sector Plan	PHC	Primary Health Care
GDP	Gross Domestic Product	PISA	Programme for International Student Assessment
GER	Gross Enrolment Rate	PIRLS	Progress in International Reading and Literacy Study
GP	General Practitioner	RMU	Rayon Medical Union
GSE	General Secondary Education	SSVE	Secondary Specialized Vocational Education
HCI	Human Capital Index	SP	Social Protection
ISF	Irrigation Service Fee	SSN	Social Security Net
LAYS	Learning-Adjusted Years of Schooling	SDG	Sustainable Development Goal
LMIS	Labor Market Information System	TIMSS	Trends in International Mathematics and Science Study
MELR	Ministry of Employment and Labor Relations	TVET	Technical and Vocational Education and Training
MIC	Middle-Income Country	UFRD	Uzbekistan Fund for Reconstruction and Development
MoPE PPP PPP MoF	Ministry of Public Education Public-Private Partnership Purchasing Power Parity Ministry of Finance	WDI WHO WCA WMO	World Development Indicators World Health Organization Water Consumer Association Water Management Organization

Executive Summary

Uzbekistan's goal of achieving faster and more inclusive growth needs better human capital, physical infrastructure, and budgetary institutions. Developing Uzbekistan's human capital contributes significantly to higher labor productivity and economic growth; it is crucial for the absorption of ideas and technologies from around the world and for innovation. Physical infrastructure, such as drinking water, sewage, and irrigation, has a positive impact on better health and educational attainment, and increases land productivity, yield, and incomes. Stronger institutions ensure fiscal transparency, predictability, and efficient performance of the public sector. More efficient public expenditures on health, irrigation, preschool, general and higher education, and social protection can help Uzbekistan mobilize resources more efficiently to faster and more inclusive growth, poverty reduction, and sustainable development goals.

This second public expenditure review (PER) examines the effectiveness of government spending in Uzbekistan, with a particular focus on education, health, social protection, and water resources management. Fiscal policy and transparency reforms implemented recently in Uzbekistan have supported strong economic management through the reforms and helped realign public spending to new priorities emerging from Uzbekistan's ambitious transformation. Improvements in fiscal policy and public financial management have played an important role in creating a stable macroeconomic environment for reforms to continue. The focus of public finance reforms over the past few years has been to strengthen aggregate fiscal control, management, and oversight. After years of fiscal policy reforms in 2017–21, shifting sectoral focus on delivering better public services to more citizens is timely and much needed. There are significant opportunities to improve the quality of public services by making public spending at the sector level more effective, financially sustainable, and efficient. The emphasis of the government's reforms is now shifting toward improving public spending effectiveness and service quality at the sector level. This PER looks at several of the most critical services that citizens largely depend on the government for: health, education, social protection, and water.

The key finding of this PER is that there is significant scope to improve value for money from sector-level public spending, and for public spending to have a higher impact on the outcomes sought from Uzbekistan's economic and social transformation. Value for money is seen as an appropriate framework for measuring performance in sectoral public expenditures, because value for money reflects not only the cost of providing a service but also the benefits achieved by providing it. Uzbekistan's reforms efforts in these sectors over the last several years paid off by positive outcomes¹. In education, the coverage of children by preschool education increased from 27 percent in 2016 to 70 percent in 2022 and coverage of population by higher education increased from 9 percent in 2016 to 38 percent in 2022. However, about 50 percent of high school graduates are entering labor market without having any profession. In social protection, the number of beneficiaries increased from 0.6 million people in 2019 to 1.2 million in 2020 during the COVID pandemic, and to over 2 million by the end of 2022. In healthcare, the government is further expanding the access of people to the qualified medical services, gradually introducing of the state health insurance system since 2023 and continue urging people

¹ Address by the President of Uzbekistan Shavkat Mirziyoyev to the Oliy Majlis and the People of Uzbekistan on December 20, 2022.

to lead a healthy lifestyle. In water management infrastructure, there is huge loss of water while bringing it to the irrigated fields that could be reduced by increasing investment in water saving, increasing operations and maintenance spending, better water accounting system and establishing economic incentives for farmers to safe irrigation water. In addition, pumping stations could be modernized based on the renewable energy facilities. To increase value for money in these sectors, Uzbekistan should do more spending in health, social protection, and water infrastructure; better within-sector budget allocations; better quality of services in each sector, especially in education at all levels; a stronger public investment framework; more fairness in public services provision across the country in provinces and districts; and more data and evidence on the quality of outcomes being delivered.

A clear strategy to restore fiscal balance and rebuild fiscal buffers will be important for increasing spending on health, social protection, and irrigation and water supply and sanitation infrastructure. Both shifting government priorities before the pandemic and the COVID-19 pandemic in 2020 triggered the emergence of a structural budget deficit. The slow progress of reforms to reduce the state's subsidies on economic production and reduce tax and customs expenditures is slowing the process of fiscal rebalancing and consolidation. Structural reform agenda advances to tackling more complex issues, such as state-owned enterprises (SOEs) and financial sector reforms, factor market liberalization, and ambitious spending plans to improve human capital, infrastructure, and well-being. The need for spending increases in health, social protection, and irrigation infrastructure and operations and maintenance is likely to require a further 2-3 percent of GDP per year in additional spending. It will help accelerate sector-level outcomes but will also further increase fiscal pressures. While some of these additional resources could be found through better prioritization of overall public spending, reduction of high and growing wage bill as a share of total public expenditures, and reduction of high tax and customs expenditures, the limited discretionary fiscal space imposed by the forthcoming measures to limit the overall budget deficit will increase fiscal management challenges for policymakers in the medium-term.

Accelerating reforms in the following four areas could help create the additional fiscal space needed to strengthen sector performance while also putting Uzbekistan's public finances on a more sustainable footing: (1) increasing fiscal space for sector spending through the reform, demonopolization and privatization of SOEs; (2) improving the impact of capital spending through better public investment management; (3) ensuring fiscal sustainability through more disciplined deficit and debt management; and (4) creating room for more private sector-led economic growth by reducing inefficient spending, for example, by less policy-based lending and the removal of unproductive subsidies and tax and customs preferences to SOEs.

Chapter 1. An Overview

1. Introduction and high-level findings of the report

This second Uzbekistan public expenditure review (PER) examines the effectiveness of government spending, with a particular focus on education, health, social protection, and water resources management. The PER builds on an earlier review, published in 2019, which focused on the strategic architecture of public spending. It explores how public spending translates to service delivery outcomes in several critical public sectors: health, education, social protection, and water resource management. The analysis on water also complements a more in-depth public expenditure review of Uzbekistan's agriculture sector that was published in 2021. These sectors were prioritized by the government and the World Bank because the effectiveness of public spending in these areas is critical to the ambitious economic and social transformation under way. Improving the performance of these sectors—within a sustainable fiscal envelope—is among the government's highest reform priorities. The need for better public services in these sectors has also become more important following the COVID-19 pandemic.

Uzbekistan's goal of achieving faster and more inclusive growth needs better human capital, physical infrastructure, and budgetary institutions. Uzbekistan has ambitious aims of halving poverty by 2026 and becoming an upper-middle-income country by 2030. This requires growth to be much faster and more inclusive than it has been since the country's independence. Engineers and skilled workers and service providers in Uzbekistan are just as scarce as uninterrupted electricity, clean drinking water, and access to centralized sewage in rural and urban areas, while the budgeting process remains inefficient and disconnected from desired results in these and other areas. More and better-quality preschool, general secondary, and higher and secondary specialized education, and expanded access to basic healthcare for a rapidly growing population are necessary ingredients for a workforce that can drive economic growth. Improvements in irrigation, drinking water and sanitation, and other physical infrastructure will similarly enable faster growth and job creation.

More effective public investments are also critical to ensuring the resilience of Uzbekistan's economy to climate change risks—especially water shortages. Uzbekistan's climate vulnerabilities are particularly acute in agriculture and water resource management. In the agriculture sector, climate change is significantly increasing risks to water availability, and the incidence of pests and diseases. Droughts are likely to become more frequent due to decreases in river runoffs from the Amudarya and Syrdarya rivers and their tributary inflows. Some communities, particularly in areas near the Aral Sea, are already vulnerable to climate change due to reduced water availability, harsher climate, higher land salinity, lower agricultural productivity and food insecurity, and poorer drinking water quality, sanitation conditions, and health outcomes. The measures proposed in this PER would respond to the impact of climate change through lower and more efficient water usage and climate-smart technology adoption in agriculture, water supply and sanitation, and strengthened social assistance to climate-vulnerable communities.

Fiscal policy and transparency reforms have supported strong economic management through the reforms, and helped realign public spending to new priorities emerging from Uzbekistan's ambitious transformation. Improvements in fiscal policy and public financial management have played an important role in creating a stable macroeconomic environment for reforms to continue.² In just three years, nearly all off-budget spending-which was estimated to be more than half of total public spending in 2018-has been fully integrated into the annual consolidated budget that is approved and overseen by parliament.³ Better aggregate fiscal information has helped realign public spending to new government priorities arising from the reforms, and minimize the human and economic fallout of the COVID-19 pandemic. As the social protection chapter of this PER shows, the number of households receiving low-income allowances has more than tripled, from about 0.5 million households in 2017 to about 2 million households in 2022-consistent with the government's emphasis on accelerating poverty reduction and expanding social safety nets. Spending on public education, health, and water and sanitation has increased in response to greater emphasis on improving human capital outcomes and on minimizing losses from COVID-19. Higher capital spending in these sectors in recent years also marks a shift from the past, where capital expenditures were heavily prioritized toward centrally planned industrial policy projects. To balance these spending increases, reforms to limit new public debt and maintain overall fiscal discipline have helped reduce off-budget spending and curtail non-priority public investments.

After years of aggregate fiscal policy reforms, a sectoral focus on delivering better public services to more citizens is timely and much needed. There are significant opportunities to improve the quality of public services by making public spending at the sector level more effective, financially sustainable, and efficient. The focus of public finance reforms over the past few years has been to strengthen aggregate fiscal control, management, and oversight. The emphasis of the government's reforms is now shifting toward improving public spending effectiveness and service quality at the sector level. This PER looks at several of the most critical services that citizens largely depend on the government for: health, education, social protection, and water. Here, the main finding of this PER is that there is significant scope to improve value for money from sector-level public spending, and for public spending to have a higher impact on the outcomes sought from Uzbekistan's economic and social transformation.

Five cross-cutting policy recommendations emerge from the sectoral analyses of this PER:

1. More spending. The sectoral chapters of this PER on health, social protection and irrigation find that higher budget allocations in each sector are needed to achieve improved outcomes. Although public spending in Uzbekistan's health and water sectors has increased in recent years, the level remains low in comparison with regional and income peers. Out-of-pocket expenses paid by Uzbekistan's population are higher than nearly all regional and income comparators. Increased public spending on water resource management is insufficient to the enormity of public investments needed to modernize dated infrastructure: nearly three-quarters of core irrigation infrastructure requires repair or reconstruction, and a quadrupling of annual capital spending is needed to fully modernize water infrastructure in Uzbekistan. Although social assistance spending has increased, as has the number of beneficiaries, spending remains low by regional and

 $^{^{2}}$ Annex 1 of this PER provides an overview of how fiscal policy reforms have progressed since the last PER (2019).

³ Uzbekistan: Public Expenditure Review, World Bank (2019).

international standards (Figure 1.1). As the subsequent section of this overview outlines, more spending in these areas can still come from within a sustainable fiscal envelope, and opportunities to reduce spending in other areas.

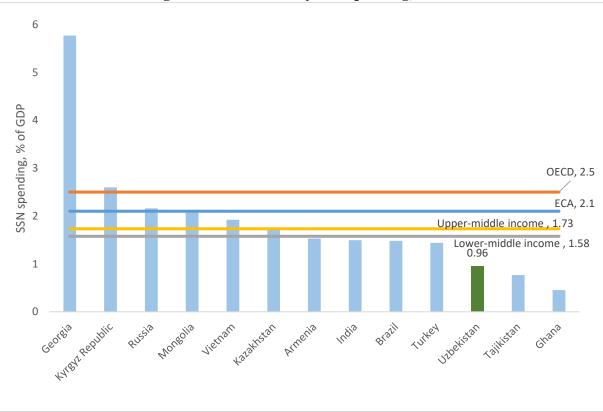


Figure 1.1. Social Safety Net Spending, 2019

Source: World Bank staff calculations.

Note: ECA = Europe and Central Asia; OECD = Organisation for Economic Co-operation and Development; SSN = social safety net.

2. Better within-sector budget allocations. Uzbekistan has the lowest share of non-wage recurrent spending in education (for example, spending on materials and operational maintenance) among income and regional comparators (Figure 1.2). Similar spending in health also appears too low. Social protection spending is heavily tilted to social assistance, while active labor market program spending is low relative to international comparisons, and to the ambitious employment and jobs creation agenda envisaged under the government's reform strategy. Operations and maintenance (O&M) spending in the irrigation sector is almost entirely for electricity payments, with little left for infrastructure maintenance.

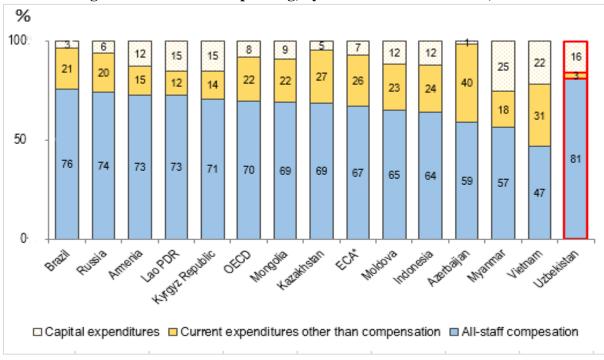


Figure 1.2. Education Spending, by Economic Classification, 2019

Source: Uzbekistan authorities and World Bank staff estimates using executed budget from the Mof of Uzbekistan; World Bank EdStats; OECD Education at a Glance database.

Note: *Countries like Georgia, Tajikistan, Turkmenistan, and Ukraine are not included, due to lack of data. ECA = Europe and Central Asia; OECD = Organisation for Economic Co-operation and Development.

- **3.** A stronger public investment framework. Although capital spending has increased in sectors studied in this PER, investment decisions remain fragmented and delinked with the operational and maintenance costs. These weaknesses have led, for example, to an excessive dependency on costly pump irrigation methods over gravity-based irrigation, or to the insufficiency of capital investments in health infrastructure over the past decade, even as capital spending in other areas increased. Despite significant increases in education capital spending, budgets for school asset maintenance are exceptionally low in Uzbekistan.
- **4. More fairness in public services provision across the country.** Per capita health and education spending varies substantially across different regions of Uzbekistan, despite the heavy level of centralized budgeting and spending on public services. The differences do not follow predictable patterns—such as being dependent on the level of geographical dispersion or regional income levels—suggesting that there is room for more equitable budget allocations across regions, based on the needs of citizens (Figure 1.3).
- 5. More data and evidence on the quality of outcomes being delivered. Although efforts are being made to establish standardized educational assessments in Uzbekistan, the lack of quality educational achievement data is one of the biggest barriers to improving the performance of public expenditure on education. Although spending on social assistance—especially low-income allowances—has increased several-fold since 2017, more information about the quality of targeting is needed to ensure that historic expansions in Uzbekistan's safety net spending is resulting in wider coverage for the poorest citizens.

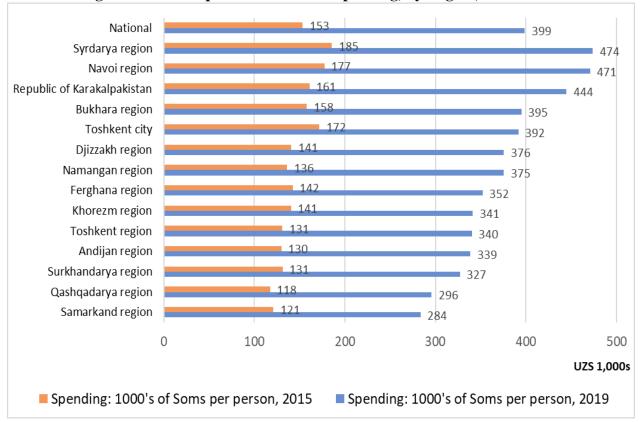


Figure 1.3. Per Capita Public Health Spending, by Region, 2015 and 2019

Source: World Bank staff elaboration based on data from the MoF of Uzbekistan. *Note:* The national average includes central-level spending, while the regional averages do not include it.

2. Creating the fiscal space to implement effective sector-level changes

Shifting government priorities and the COVID-19 pandemic triggered the emergence of a structural budget deficit. The sharply negative economic and social effects of COVID-19 in 2020, and the lingering impact of the pandemic that continues today, have affected fiscal strategy in several ways.⁴ First, necessary anti-crisis spending to protect lives and livelihoods has led to the formation of a substantial budget deficit after nearly two decades of nearly balanced on-budget spending. In 2020, the wider budget deficit was partially offset by slower off-budget public investment spending and execution (due to lockdowns and supply chain constraints). Continued pressures on the budget from the costs of pandemic management and from the fallout of the war in Ukraine are likely to delay the government's plan of consolidating its overall fiscal position. As the sector-level analyses in this PER shows, shifting government priorities have also led to other structural spending increases—most notably through large higher health and education sector wages, expansions in public investment spending on human capital and irrigation, and through permanent expansions in social assistance coverage and amounts. These spending increases have played a critical role

⁴ Annex 2 of this PER provides a more detailed overview of fiscal developments since the last PER (2019).

in buffering vulnerable populations and will be important in reversing the declining standards of health, education, and social protection in Uzbekistan over the past two decades.

The policy recommendations of this PER, especially those involving spending increases, will help accelerate sector-level outcomes, but will also further increase fiscal pressures. Spending increases in health, social protection, and irrigation infrastructure and O&M spending are likely to require a further 2-3 percent of GDP per year in additional spending. While some of these additional resources could be found through better prioritization of overall public spending, a high wage bill and the limited discretionary fiscal space imposed by the overall debt ceiling and forthcoming measures to limit the overall deficit will increase fiscal management challenges for policymakers.

The slow progress of reforms to reduce the state's spending and subsidies on economic production is slowing the process of fiscal rebalancing and consolidation, but Uzbekistan has sufficient fiscal buffers to absorb the structural deficit in the medium term. A credible consolidation strategy to restore fiscal balance is important for the next phase of Uzbekistan's market transition. In the most recent joint IMF-World Bank Debt Sustainability Analysis, the paths of external and public debt (in the baseline scenario) are expected to be about 6-8 percentage points of GDP higher than under pre-crisis projections. Largely due to anti-crisis measures, total external debt rose more quickly than pre-crisis projections—from 42.5 percent of GDP at end-2019 to 57.8 percent of GDP at end-2021. Total external debt and public and publicly guaranteed debt are expected to peak in 2022 at about 61 and 34 percent of GDP, respectively, and public and publicly guaranteed debt is projected to stabilize at about 31 percent of GDP by 2026. Underdeveloped domestic capital markets will lead to most of this debt being externally financed. Although Uzbekistan has ample buffers to absorb these increases, a clear strategy to restore fiscal balance and rebuild buffers will be important as the structural reform agenda advances to tackling more complex issues such as state-owned enterprise (SOE) and financial sector reforms, factor market liberalization, and ambitious spending plans to improve human capital and well-being.

Accelerating reforms in four areas could help create the additional fiscal space needed to strengthen sector performance while also putting Uzbekistan's public finances on a more sustainable footing.

Priority 1: Increasing fiscal space for sector spending through the reform and privatization of state-owned enterprises

Large amounts of fiscal support to state-owned enterprises could be better used to improve public service outcomes. Total fiscal support to SOEs was estimated at about one-third of consolidated public spending in 2018. SOEs are also a source of significant fiscal risk and contingent liabilities—government debt guarantees to SOEs amounted to about a third of the total public and publicly guaranteed debt stock, and the stock of public-private partnerships (PPPs) is quickly growing in size as the government pushes ahead with an ambitious PPP pipeline (Table 1.1).⁵ About 90 percent of SOEs are monopolies or oligopolies in their respective industries, and are supported by substantial quasi-fiscal spending, such as the use of regulated prices (for example, in utilities), concessional land allocations, tax and customs preferences, and access to concessional finance.⁶ Removing barriers to private sector entry to industries dominated by SOEs, accelerating

⁵ Uzbekistan: Public Expenditure Review, World Bank (2019); Uzbekistan Country Economic Memorandum, World Bank (2021), chapter 7 on SOEs.

⁶ Uzbekistan Systematic Country Diagnostic, World Bank (2022).

the government's existing privatization program, and quickly eliminating special privileges given to SOEs should be an important part of the government's next medium-term fiscal strategy.

Analyzing and disclosing contingent risks, including from SOEs, is particularly important, given the range of risks public finances are exposed to. Some of these specific fiscal risks can impact revenue and spending, while others can directly impact the government's balance sheet. Explicit risks—those where the government has made a firm commitment—relate to government guarantees on borrowing of SOEs, bank deposits, and a minimum return guarantee on savings placed in the Cumulative Pension Fund. Public finances are also exposed to implicit risks, which can cause the government to step in even though it has no explicit obligation to do so. In Uzbekistan, the largest of these relate to non-guaranteed liabilities of banks and explicit guarantees to SOEs. Table 1.1 summarizes the main fiscal risks, which combined create a fiscal exposure on contingent liabilities that grew from about 47 percent of GDP in 2017 to 60 percent of GDP in 2020. Additional exposures also arise from contingent events, such as natural disaster risks.

L					
	2017	2018	2019	2020	2021
Contingent liabilities	47.5	47.6	46.1	59.9	59.2
Explicit guarantees on debt of public corporations	3.5	5.3	8.3	10.1	9.6
Guaranteed bank deposits (net of DIF assets)	3.2	2.8	3.5	4.0	4.2
Public-private partnerships				3.9	4.1
Non-deposit bank liabilities	28.6	27.7	24.7	32.1	29.7
Of which: non-deposit liabilities of state-owned banks	26.6	26.1	22.7	29.8	27.3
Unguaranteed non-equity liabilities of non-financial PC	12.2	11.8	9.6	9.8	11.6
Contingent events					
Natural disasters (average annual loss)	0.5	0.5	0.5	0.5	0.5
Long-term risks					
Pension costs (expected increase, 2015–50)	8	8	8	8	8
Health care costs (expected increase, 2015–50)	3	3	3	3	3

Table 1.1. Uzbekistan: Selected Specific Fiscal Risks, Gross Exposure, Percent of GDP

Source: IMF methodology (*Republic of Uzbekistan: Fiscal Transparency Evaluation*, May 2019, p.51); data from the MoF of Uzbekistan, DIF, and World Bank staff calculations.

Notes: e - estimate for 2021; exposure to public-private partnerships were not assessed in 2017–19 due to lack of data. DIF = Deposit Insurance Fund.

Priority 2: Improving the impact of capital spending through better public investment management

Weaknesses in the public investment framework are limiting value for money from high investment spending. As the health, education, and water chapters of this PER show, weaknesses in public investment management constrain sector performance. Although Uzbekistan's overall capital

spending lags that of its peers, public investment spending increased significantly since the start of the reforms.⁷ Total spending on economic activities more than doubled between 2017 and 2021, a significant portion of which has been financed through external debt. What is less clear is whether the economy and public sector have been able to efficiently absorb and execute these new investments. For example, Uzbekistan's incremental capital output ratio, a metric that assesses the marginal impact of increased investment in generating additional economic growth in the economy, more than doubled from an average of about 3.3 between 2004 and 2016 to about 7 between 2017 and 2019, with a higher value suggesting lower value-added growth returns per unit of capital investment. This is reinforced by the relatively small growth and private investment response during this time, and by the slow pace of reforms to address weaknesses in the public investment framework.

Reducing fragmentation, improving coordination, and strengthening the discipline of public investment spending decisions should be a high priority. Public investment spending decisions are highly fragmented in Uzbekistan—for example, net disbursements of the Uzbekistan Fund for Reconstruction and Development (UFRD) (which are decided on outside the budget investment process) accounted for about a third of total spending on economic activities between 2017 and 2020.⁸ Investment decisions are fragmented by revenue source, with no standard and systematic framework for public investment that provides common guidance for project screening and selection. Limited regulations and guidance for economic appraisals also allow for most projects to be selected based on non-economic judgments. These decisions and responsibilities for public investments are largely delinked from the regular budget process, which oversees current expenditures, and recurrent asset maintenance and replacement costs are not required when costing investment projects.

Improving the public procurement system could also strengthen the quality and impact of public investments. Open, competitive, and transparent procurement markets are needed to improve the efficiency of government spending. A new public procurement law was approved in 2021 to modernize public procurement and increase transparency. The new law will be accompanied by a new online platform for all public procurement that is being developed to strengthen monitoring and transparency. This will increase transparency of contracting companies and reduce opportunities for corruption. The effectiveness of the new law and platform could be further enhanced through improvements in business register data on beneficial ownership of companies.

Priority 3: Ensuring fiscal sustainability through more disciplined deficit and debt management

The planned adoption of new fiscal rules could strengthen fiscal credibility, but should be flexible to accommodate the significant uncertainties surrounding Uzbekistan's transformation. In 2022, the government adopted new measures that established limits on total public and publicly guaranteed debt at 60 percent of GDP (The law "On State Debt" approved by the Senate on August 4, 2022) and plans to limit the overall consolidated fiscal deficit. A limit on guarantees and externally financed lending to SOEs is also expected to be adopted. These measures to be enshrined in public finance and debt law are built on regulatory measures enacted since 2017 setting parliamentary limits on new public debt and consolidating off-budget revenue and spending. The rules are expected to support the government's fiscal consolidation

⁷ Public Investment Management Assessment, IMF (forthcoming).

⁸ Uzbekistan: Public Expenditure Review, World Bank (2019).

efforts in the medium term, rebuild buffers, and maintain fiscal discipline through the transition. However, as international evidence shows, it will be critical for Uzbekistan to have sufficient flexibility to manage exceptional and unavoidable events that are beyond the government's control. Having this flexibility is even more important in Uzbekistan, where the transition from state to market is still in an early stage. Well-designed escape clauses, such as through clearly established and pre-determined triggers that are subject to parliamentary oversight and reporting, could enhance the credibility of the rules being considered.

Uzbekistan's fiscal buffers could be strengthened through more careful public borrowing and guarantee decisions and better management of how borrowed resources are spent. Although Uzbekistan's public debt has increased sharply since 2017, debt levels remain sustainable and at a moderate level relative to peers. Limits on new debt accumulation are also helping to moderate the pace of debt growth. Uzbekistan's access to external financing remains a valuable tool and buffer to manage its ambitious transition. To limit risks to its strong external position, the government should continue to carefully manage public and external borrowing through effective prioritization and through improvements in how public investments are managed. The growth of guarantees, now close to a third of the debt stock, also requires more consideration and greater caution about how future government debt guarantees are granted—especially to SOEs. Structural reforms to strengthen financial inclusion and deepen domestic capital markets will also be critical in mitigating external risks and to reducing external borrowing.

More debt transparency, publication of debt statistics, and public debt management will be important to manage debt risks. Reliable and regular information is now available on the stock, currency composition, origin, and use of public debt. However, debt data remain fragmented, with three different agencies producing different reports about public and private debt without any consolidation. Almost no information is available about aggregate SOE debt, limiting the quality of public debt transparency and of fiscal risk management, and the debt management strategy and annual borrowing plan (Table 1.2). Addressing these issues should be a near-term priority.

Debt Dimension	Assessment			
1. Data accessibility	Debt data published on official websites.			
2. Instrument coverage	Full coverage			
3. Sectoral coverage	Partial coverage: coverage includes central government debt. Local			
	government debt is not expected. Non-guaranteed SOE debt is not reported.			
4. Information on recent	Partial information: the monthly newsletter on the MoF website provides			
contracted loans	some information on recent loans signed.			
5. Periodicity	Quarterly			
6. Time range	Three months			
7. Debt management	No DMS published.			
strategy				
8. Annual borrowing plan	No ABP published.			
9. Other debt statistics/	Insufficient reporting. Reporting is expected on guaranteed debt. NSDP			
contingent liabilities	data reports on the stock of guaranteed debt, but no beneficiary details.			
Source: Debt Transparency: Debt Reporting Heat Man. World Bank (January 27, 2022)				

Table 1.2.	Uzbekistan:	Debt Rei	porting F	leat Man.	October 2021
1 abic 1.2.	Chockistan.	Debt Re	por ung r	reat map,	

Source: Debt Transparency: Debt Reporting Heat Map, World Bank (January 27, 2022). *Note:* ABP = Annual borrowing plan; DMS = debt management strategy; MoF = Ministry of Finance; SOE = stateowned enterprise; NSDP = National Summary Data Page.

Priority 4: Creating room for more economic growth by reducing inefficient spending

The cost of Uzbekistan's public sector operations constrains the emergence of a dynamic private sector. Uzbekistan's consolidated government spending, including on-budget, off-budget, and quasi-fiscal spending, is nearly 41 percent of GDP—higher than in most of its relevant regional, income, and aspirational peers.⁹ This high level of spending reflects the legacy of Uzbekistan's stateled economic model. The phasing out of this model in favor of greater private sector economic leadership is an opportunity to reshape public spending and reduce the level of total government spending. But as lessons from other post-Soviet transitions demonstrate, this process needs to be done fairly and transparently, with a focus on value for money, and by maintaining strong administrative capacity.

Less policy-based lending and the removal of unproductive subsidies and tax preferences could provide substantial additional sector financing and support a more competitive economy. The large share of policy-based lending and the quasi-fiscal losses of SOEs reflect the government's continued support to capital-intensive industry that generates little employment and foreign direct investment. Tax revenues have grown as a share of GDP from 15.2 percent of GDP in 2017 to 18.7 percent in 2020. They are projected to grow further to 19 percent of GDP in 2022. At the same time, Uzbekistan's estimated overall tax and customs expenditures (the revenues forgone due to tax and customs exemptions or privileges) amounted to 16 percent of GDP in 2018—more than half of onbudget revenues.¹⁰ Although tax and customs expenditures are being gradually reduced, there is room to accelerate this process. Revenues from these foregone opportunities are much more than what is needed to address financing gaps identified in this PER. Collecting these revenues could also help support future tax rate reductions to help support greater private sector activity and investment.

3. Summary of sector-level findings

Health

Uzbekistan achieved significant improvements in health outcomes over the past two decades, but now faces rising unmet needs. Life expectancy at birth increased from 67.2 years in 2000 to 71.6 years in 2018. Infant mortality declined from 51.8 deaths per 1,000 live births in 2000 to 16.5 deaths in 2019. The current ratios per 1,000 population of hospital beds, doctors, and nurses in Uzbekistan are comparable to the Organisation for Economic Co-operation and Development (OECD) average levels. Public expenditures also have become better at addressing inequities between provinces and in terms of patient satisfaction with the primary health care system. However, unmet needs are still high, particularly among poorer communities (Figure 1.4). Malnutrition is still prevalent (10.8 percent in 2017), and mortality from cardiovascular diseases, cancer, diabetes, or chronic respiratory disease between ages 30 and 70 was 25.3 percent in 2019, almost twice the average for OECD countries and above the rates for both lower-middle-income and upper-middle-income countries.

⁹ Uzbekistan: Public Expenditure Review, World Bank (2019), pp.15–16.

¹⁰ Uzbekistan: Public Expenditure Review, World Bank (2019).

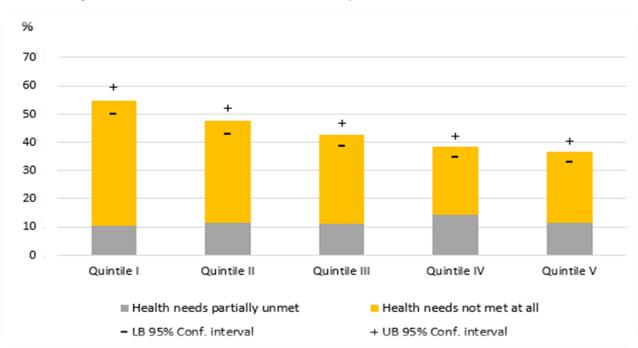


Figure 1.4. Unmet Need for Healthcare, by Socioeconomic Quintile, 2018

Uzbekistan's private spending on health expenditure is high and dominated by unanticipated out-of-pocket expenses. Uzbekistan's total (public and private) health expenditure has remained stable at around 5 percent of GDP over the past two decades. It is higher than average in the lower-middle-income countries, on par with Europe and Central Asia (ECA) countries (excluding high-income countries) and slightly below the average for upper-middle-income countries. Public health expenditure, however, was 2 percent of GDP in 2018, that is, on par with the lower-middle-income countries, lower than in ECA (excluding high-income countries), and lower than in the upper-middle-income countries. With limited insurance markets, nearly all private health spending is out-of-pocket, including formal and informal payments to service providers. In 2018, domestic general government health expenditure accounted for 7.9 percent of general government expenditure, below the ECA average (excluding high-income countries) of 9.5 percent.

The main challenges for Uzbekistan's health sector are to increase public spending on health, improve financial protections for private health spending, improve the quality of services, and increase sector efficiency. The most important issues affecting the sector include (1) the low level and efficiency of public health spending; (2) a very high share of government spending on wages despite remuneration per employee being low; (3) the absence of adequate hospital financing mechanisms that encourage efficiency and outcome orientation; (4) a large (over 60 percent of total) share of out-of-pocket expenditures by

Source: World Bank staff calculations using data from the MoF of Uzbekistan and from the "Listening to the Citizens of Uzbekistan" survey (2018, 2020), World Bank., <u>https://www.worldbank.org/en/country/uzbekistan/brief/l2cu</u>. *Note:* The denominator includes only the population that reported needing healthcare in the past 30 days. The numerator includes population that reported their healthcare needs were wholly or partly unmet, among those included in the denominator. Conf. = confidence; LB = lower bound; UB = upper bound.

households to private sector providers, pharmacies, and formal and informal payments to public medical care providers; (5) a heavily fragmented hospital network that negatively impacts the quality of care; (6) the lack of access to health services among lower-income populations; and (7) the lack of coverage of medicines.

Proportion of households whose budget share for	Threshold share of total consumption		Threshold share of non-food consumption	
health exceeds the given threshold	25%	40%	25%	40%
Lowest quintile	4.4	1.2	13.6	8.2
2	8.7	2.5	20.7	12.4
3	13.8	4.6	25.5	17.8
4	16.9	6.7	26.4	18.3
Highest quintile	16.6	7.1	23.2	15.5
Total	12.1	4.4	21.9	14.4

Table 1.3. Incidence and Intensity of Catastrophic Health Payments

Source: World Bank staff's elaboration using the "Listening to the Citizens of Uzbekistan" survey (2018, 2020), World Bank, <u>https://www.worldbank.org/en/country/uzbekistan/brief/l2cu</u>, and the ADePT software package World Bank. Wagstaff, A., M. Bilger, Z. Sajaia, and M. Lokshin, 2011. *Health Equity and Financial Protection: Streamlined Analysis with ADePT Software*. Washington, DC: World Bank (2011).

Table 1.4. Health: Key Policy Recommendations

Short term

- Finalize the new health strategy currently under development that sets out a clear and costed pathway for reforming Uzbekistan's health sector.
- Increase public health budget in line with measures envisaged under the new strategy to reduce out-of-pocket expenditures on essential health services.
- Set up a strategic purchasing agency that integrates the payment and health planning functions.

Longer term

- Establish a nationwide e-health/clinical information system.
- Develop a masterplan for health infrastructure with required infrastructure, human resources, equipment, and care pathways.
- Improve strategic purchasing by defining and costing a basic benefit package, strengthening reporting systems for input-based financing, defining contracting modalities, and establishing quality standards and monitoring mechanisms.
- Consolidate hospitals at the province level.

Education

Public spending on education has increased in recent years due to an ambitious preschool education drive. A large expansion of the preschool education system helps explain most of the recent spending increases, which helped support a jump in the preschool enrollment rate from 37.7 percent to 52.3 in just one year, between 2018 and 2019. Per capita spending in education is now higher at the preschool level than at the generalized or specialized secondary level. More spending on generalized secondary education (GSE) has also contributed to this increase, albeit less than the case of preschool spending, through expansions in infrastructure, teacher hiring, and learning and teaching materials. GSE accounts for the largest share of public education spending among subsectors in Uzbekistan. In 2019, from the total public expenditures in education (an amount equivalent to US\$2.7 billion), the Uzbekistan government spent the highest share on GSE (around 65 percent of the total budget), followed by preschool education (21 percent), higher education (10 percent), and secondary specialized education (4 percent).

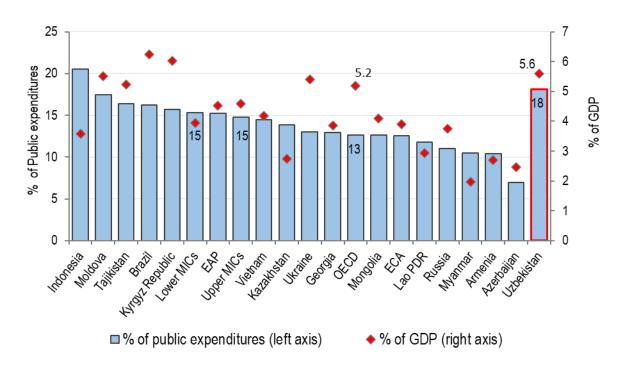


Figure 1.5. Public Education Spending as Shares of Total Public Spending and GDP

Sources: OECD, 2017, <u>https://stats.oecd.org/BrandedView.aspx?oecd_bv_id=edu-data-en&doi=c4e1b551-en#;</u> Singapore Department of Statistics,

https://www.tablebuilder.singstat.gov.sg/publicfacing/createDataTable.action?refId=15204; World Development Indicators, DataBank, World Bank, accessed in October 2020.

Note: Uzbekistan data for 2019 are from the MoF and State Statistics Committee of Uzbekistan. EAP = East Asia and Pacific; Lower MICs = lower--middle-income countries; OECD = Organisation for Economic Co-operation and Development; Upper MICs = upper-middle-income countries.

But the quality of education needs more improvement—by the age of 18, an Uzbekistani student has fulfilled only 62 percent of his or her potential. Students in Uzbekistan are expected to complete 12 years of schooling by age 18, but only complete the equivalent of 9.1 years of schooling—a clear sign of the need for better education quality. By comparison, Russia scores 10.9 and the OECD 10.8. A nationally representative assessment of 4th grade students using a combination of the Trends in International Mathematics and Science Study (TIMSS) for math and science, and the Progress in International Reading and Literacy Study (PIRLS) for reading, shows that the average achievement score was 52 percent. Reading comprehension was 50 percent; math, 52 percent; and science, 59 percent. There is, however, significant variation within the student cohort—roughly equivalent to more than four years of schooling. Such a large gap between poor and good performers shows that learning equity should be the overarching objective of education policy, and by implication, of education spending.

But there are large regional variations and an overemphasis on wages over recurrent spending. At the provincial level, there are significant differences in per student expenditures, which may reflect regional cost differences that need to be analyzed in more detail. For example, Tashkent City has per student expenditures of UZS 2.15 million in GSE, but Navoi has UZS 3.7 million, which is 73 percent higher. Differences in per student expenditures do not follow a predictive pattern, and seem to be uncorrelated to regional GDP or to the incidence of poverty, suggesting a need to analyze equity in per student expenditures in more detail. Recurrent spending is almost entirely dominated by wages, which have increased significantly in recent years and are expected to continue rising as part of efforts to attract higher quality talent into the sector. Uzbekistan's non-wage recurrent spending is the lowest in comparison to regional and income peers.

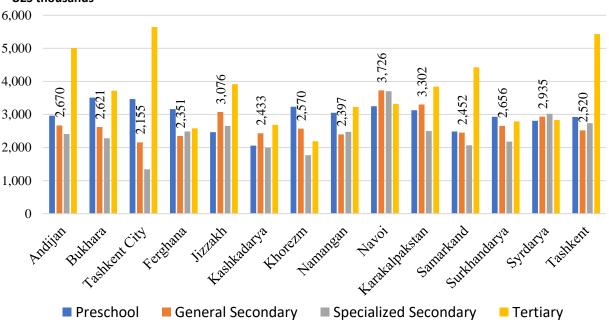


Figure 1.6. Per Student Expenditures by Level of Education, by Region, 2019 (UZS thousands) UZS thousands

Source: World Bank staff estimates using data from the MoF of Uzbekistan.

Improvements in educational quality and inclusion are the key challenges for Uzbekistan's education sector, both of which will require improvements in data. Uzbekistan's main challenge is to translate its relatively generous education budget and its above-average levels of access into higher quality outcomes for all students in the country. Improvements in system performance should focus on learning equity, educational quality, and system accountability. Achieving these improvements requires a more rigorous approach to measuring and reporting on student learning outcomes. The absence of this information has been one of the most binding constraints to education reforms. A greater emphasis on inclusion is also needed, with only 38 percent of disabled students studying in general education schools (while the rest are in specialized schools or are home-schooled). The number of out-of-school children (OOSC) is underestimated, and there is limited analysis of the reasons children are out of school.

Table 1.5. Education: Key Policy Recommendations

Short term

- Implement measures envisaged under the 2021–23 Education Sector Plan, with an emphasis on learning quality, equity, and system accountability.
- Roll out nationwide systematic assessments currently under testing.
- Implement a COVID-19 learning loss recovery strategy.

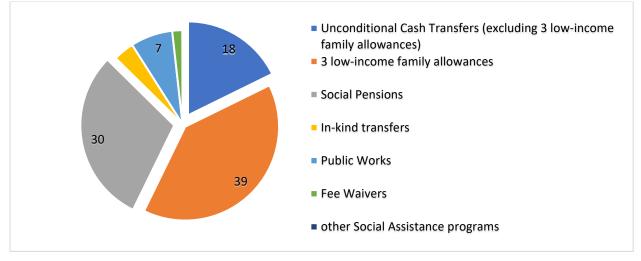
Longer term

- Enhance teacher qualifications and reform existing teacher policies to attract, retain, and develop the best teachers at all levels of education.
- Design and implement interventions to improve the alignment of education with the needs of the emerging economy, including the increasing need of higher-level skills and a focus on curriculum, teachers, and assessments update and enhancement.
- Implement education institutional transformation strategies to allow for greater operational autonomy, results-based accountability, more targeted financing, and stronger governance.

Social Protection

Uzbekistan has a comprehensive social protection program—but its effectiveness is constrained by inadequate budgets, poor data, fragmentation, and legacy challenges. Social protection (SP) programs are comprehensive in Uzbekistan and include social assistance, contributory based social insurance, labor market programs, and social care services. However, the budgetary provisions for many of these programs are inadequate and driven not by needs but instead by a top-down incremental budget not linked to needs, historical trends, and archaic regional quotas. For example, spending on social assistance has been below 1 percent of GDP in recent years, well below international standards. This is because budgetary allocations for social assistance are not driven by needs assessments but instead by regional budget quotas. On average, lower-middle-income countries spend 1.6 percent of GDP on similar programs, and countries in ECA (excluding high-income countries) spent 2.1 percent of GDP (pre-COVID-19). Starting from 2020, a new Single Registry system has helped increase the identification of vulnerable people in need of low-income support. In 2020, and due to the pandemic, social protection program spending increased by 0.5 percent of GDP in 2020—approximately half of the total safety nets budget in

2019. But a substantial part of this expansion occurred outside the Single Registry system, contributing further to the fragmentation of programs. The absence of good data complicates monitoring and analysis and does not allow for systematic and evidence-based policy and budget setting. There is no government agency that is currently aggregating actual expenditures incurred by different social protection programs, and official data for social protection spending are not centrally published. This is partly because several government agencies implement SP programs, and there is no central body to coordinate their efforts. It is also due to the lack of adopted national definition of social protection. Thus, the universe of the programs for which the administrative data or statistical information should be analyzed or collected is not defined.





Source: World Bank staff calculations using administrative data from the MoF of Uzbekistan.

Active labor market policies are relatively new and account for an insignificant share of total spending. In Uzbekistan, spending on public works program is about 7 percent of the social safety net budget—above the regional ECA average share. Although public works programs provide critical basic income protection, they provide temporary employment rather than permanent job creation, unlike active labor market policies (ALMPs). Uzbekistan's spending on ALMPs was negligible prior to 2018 but as has been increasing since then. It remains significantly below other comparator countries at about 0.085 percent of GDP. For example, in Turkey, the spending on ALMPs was about 0.22 percent of GDP and in Kazakhstan, 0.04 percent of GDP.

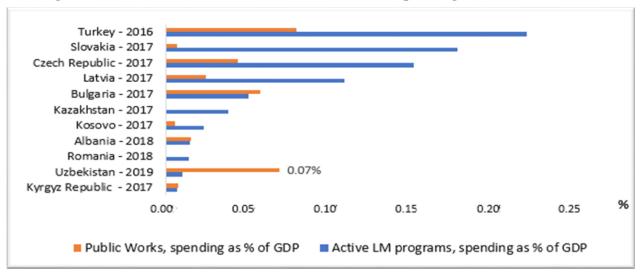


Figure 1.8. Public Works and Active Labor Market Spending in ECA Countries

Sources: World Bank staff calculations using data from the MELR of Uzbekistan for Uzbekistan data, and the World Bank SPEED database for comparator countries Kosovo and Turkey. *Note:* ALMP - Active labor market programs; LM – labor market.

A growing demographic burden requires early actions in order to reform and strengthen the pension system. The ratio of contributing workers to old-age pensioners is likely to decline from the current 2:1 to 1:1 by 2030. In addition to this demographic shift, Uzbekistan's mandatory social insurance and contributory pension systems were affected by the substantial tax reforms of 2019, which sharply reduced personal and corporate social taxes that funded both schemes. Pension expenditures as a share of GDP decreased from 5.9 percent in 2015 to 4.8 percent of GDP in 2018–19, indicating a lag in pensions indexation relative to the growth of incomes of the working population. In addition, large levels of informality and a lack of clear rules and formulas for linking pensions to macroeconomic conditions (such as inflation) could lead to a widening of the relative income gap between pensioners and those who are employed. Key policy reforms that could address these challenges include measures to improve the state basic pension—which provides a basic level of income to the widest possible range of elderly people and people with disabilities—and proposals to increase the retirement age (Uzbekistan remains the only former Soviet Republic where the retirement age is 55 years for women and 60 years for men).

Table 1.6. Social Protection: Key Policy Recommendations

Short term

- Increase funding for ALMPs to enable job access for the most vulnerable, and increase social assistance funding to cover all those in need based on a well-targeted needs-based approach.
- Clarify institutional roles and assign a formal monitoring and evaluation mandate to an appropriate government agency.
- Revisit and revise pension indexation rules.

Longer term

- Establish a dedicated agency or ministry responsible for overseeing all SP programs and ensure that their implementation is aligned with the national social protection strategy.
- Collect statistical information on social protection by different functions to enable evidencebased adjustments to social protection policies.
- Increase the retirement age, adopt a more flexible approach to pension rights accounting, and reform the solidarity system of pension financing.

Note: ALMP = active labor market policy; SP = social protection.

Irrigation Water Management

Uzbekistan's irrigation and drainage infrastructure needs urgent renewal and replacement. Nearly all agriculture in Uzbekistan depends on irrigation, and 90 percent of the country's water usage is for agricultural irrigation. According to official data, 75 percent of Uzbekistan's existing irrigation and drainage area requires reconstruction. Seventy percent of drainage pumps require capital repairs, 66 percent of all main canal infrastructure require anti-filtration covers, and 30 percent of irrigated lands require additional drainage. Addressing these infrastructure deficits will require US\$400 million per year over the next 10 years in order to maintain water infrastructure at the current service level—twice that will be needed to modernize the system. By comparison, total capital expenditures on irrigation and drainage were just US\$200 million in 2020.

But financing for these urgent infrastructure needs is crowded out by high electricity costs from aging water pumping stations. Irrigated agriculture in Uzbekistan is highly dependent on electric pumping. Pumping stations, most of which were built over 30 years ago, account for most of the agriculture sector's electricity consumption and around 16 percent of the country's *entire* electricity use. The dominance of electricity expenditures crowds out O&M spending and capital investments in irrigation and drainage. Nearly half of the entire irrigation budget, and about 70 percent of the O&M budget, is spent on electricity charges. This comes with high opportunity costs: much-needed spending on asset renewals and on land improvements is crowded out by the large electricity costs involved in pumping.

Weaknesses in public investment management contributed to the dominance of pumping and the pace of sector improvements. Investment decisions in the sector are distorted by a weak investment management framework and subsidies for electricity pumping and for access to water. Over time, limited requirements for public investment projects to fully cost the ongoing O&M costs such as electricity and repairs, and low electricity tariffs below costrecovery levels, contributed to the widespread deployment of pumps over gravity-based irrigation systems—which have higher upfront costs than electric pumps due to the need for land remediation. The economic efficiency of O&M expenditures is lower in the regions dominated by pump irrigation, and average returns on O&M expenditures in provinces with predominantly gravity irrigation schemes is five times higher than those with predominantly electrical pumping irrigation. Average O&M expenditure per 1,000 m3 of irrigation water with gravity schemes is 6.2 times lower than that of electrical pumping (lift) irrigation. Despite these stark differences, uptake of gravity irrigation programs is constrained by budget subsidies for electricity costs of irrigation pumping, which amounted to 0.6 percent of GDP in 2019, or 1.8 percent of total budget expenditures. Uzbekistan's electricity subsidies to large farmers that grow cotton and wheat stimulates more electricity consumption that distort farmer incentives and slow down modernization investments and long-term agricultural productivity.

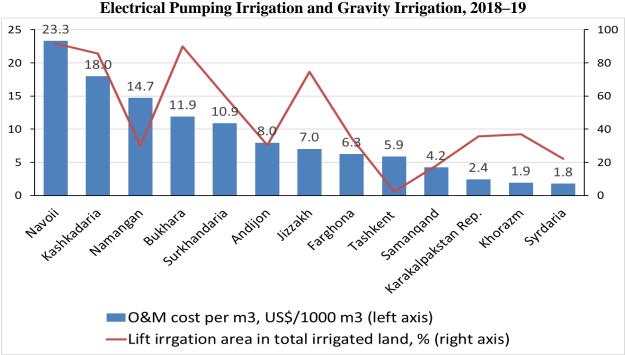


Figure 1.9. O&M Costs across Regions of Uzbekistan Electrical Pumping Irrigation and Gravity Irrigation, 2018–19

Source: World Bank staff calculations using data from Uzbekistan authorities. *Note:* O&M = operations and maintenance.

Quasi-fiscal deficits from low collection rates and below-cost pricing of water usage and irrigation services further compound the financial challenges in the sector. In 2019, water fees were US\$30/ha, against estimated cost-recovery levels of US\$80/ha. In addition, less than 40 percent of individual farmers paid their assessed rates to Water Consumers Associations (WCAs) in 2019, and overall collections were less than 30 percent of the planned value. Increasing collection rates and tariffs would help increase non-electricity O&M resources. While most farms can afford WCA fees, low collection rates may be the result of low transparency, limited accountability to farmers, non-participatory governance of WCAs, and low profitability of state-regulated prices on cotton production for farmers. In all WCAs studied, irrigation fees below cost-recovery levels are lowest for the crops that use the most irrigation water—cotton and wheat, the main state-mandated crops.

Table 1.7. Irrigation Water Management: Key Policy Recommendations

Short term

- Increase non-electricity O&M budgets for repairs and maintenance, and capital budget to accelerate repair and modernization program.
- Accelerate implementation of projects to reduce electricity consumption by pumps.
- Continue rolling out programs to incentivize farmer uptake of drip irrigation.

Longer term

- Move to full cost-recovery tariffs and higher collection rates.
- Ensure that all irrigation investments include O&M budget estimates for the lifetime of the project in order to ensure that appropriate technical decisions (for example, whether to use pump or gravity-based lifting technologies) can be made.
- Explore use of mini-hydro eelectric stations on canals as an alternative energy source in rural areas, including for pumps, where gravity irrigation is not technically or economically feasible.

Note: O&M = operations and maintenance.

Chapter 2. Health

Summary

In the past 20 years, Uzbekistan has achieved significant improvements in key health outcomes; however, it still faces relatively high burdens from non-communicable diseases and nutrition deficiencies. Uzbekistan's health expenditure (both public and private) remained stable at around 5.2–5.6 percent of GDP in 2000–19—higher than the average for lower-middle-income countries, on par with Europe and Central Asia (ECA) countries (excluding high-income countries), and slightly below the average for the upper-middle-income countries. However, public health expenditure was just 2.3 percent of GDP in 2019, outperforming lower-middle-income countries, but lower than in ECA (excluding high-income countries) and upper-middle-income countries.

The main challenges for Uzbekistan's health sector are to improve the financial protection of the population, efficiency of service delivery, and quality of services. Uzbekistan has made little progress toward modernizing its health financing system: there is no relevant and efficient financial protection scheme in health, primary care and hospital services are paid using line-item budgets, and 58 percent of total health spending is out-of-pocket by households. Public spending on health is skewed toward wages and leaves insufficient space for investment, goods, and services. However, with human resource numbers comparable to the OECD average levels and low levels of public spending, spending per staff member is low. On the positive side, public expenditures also have become better at addressing inequities between provinces. The hospital network is fragmented, which negatively impacts the quality of care. The public basic benefits package does not include highly cost-effective outpatient medications for most people and does not favor the poor. The lowest socioeconomic quintiles of the population are disproportionately affected by lack of access to health services and lack of public coverage of medicines and services.

Policy options include modernizing financing systems for primary care and hospitals, updating the service delivery model and infrastructure, and strengthening the regulatory environment and management. Achieving improved levels of service and lower levels of out-of-pocket payments will not be possible without increasing public spending in health.

Context and Recent Developments

Health outcomes

Uzbekistan has achieved significant improvements in key health outcomes. Life expectancy at birth increased from 67.2 years in 2000 to 71.7 years in 2019. The 2019 number compares favorably with the lower-middle-income average (69.1 years). Still, it is below the average for members of the Organisation for Economic Co-operation and Development (OECD) and upper-middle-income countries (80.2 and 75.9 years, respectively, 2019) (Figure 2.1). Infant mortality declined from 50.8 deaths per 1,000 live births in 2000 to 12.5 deaths in 2019 (Figure 2.2). On

both indicators, Uzbekistan outperforms lower-middle-income countries but still significantly lags upper-middle-income countries.¹¹

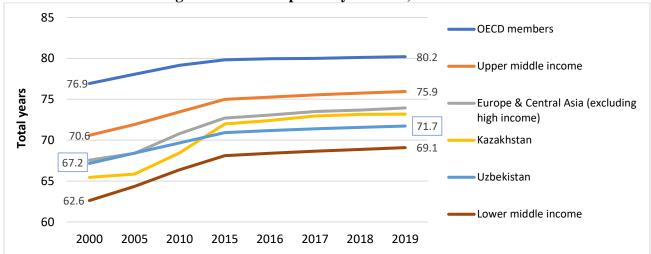


Figure 2.1. Life Expectancy at Birth, 2000–19

Source: World Bank staff's elaboration using World Development Indicators, DataBank, World Bank, 2022, accessed March 25, 2022.

Note: OECD = Organisation for Economic Co-operation and Development.

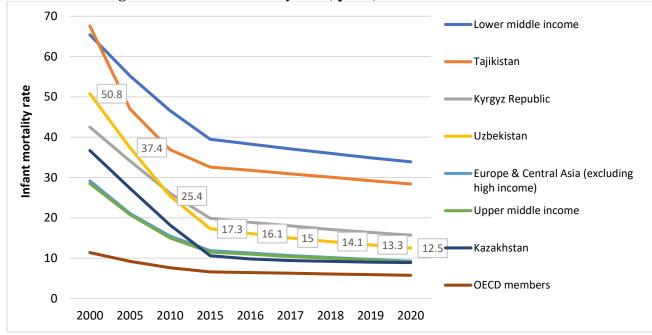


Figure 2.2. Infant Mortality Rate, per 1,000 live births 2000-20

Source: World Bank staff elaboration using World Development Indicators, DataBank, World Bank, 2022, accessed March 25, 2022.

Note: ECA = Europe and Central Asia; OECD = Organisation for Economic Co-operation and Development.

¹¹ World Development Indicators, DataBank, World Bank, 2022,

http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators, accessed March 25, 2022.

Uzbekistan faces relatively high burdens of disease from non-communicable diseases (NCDs) and nutrition deficiencies. Vaccination against the most common disorders among children is almost universal,¹² but malnutrition is still prevalent (10.8 percent in 2017). (Figure 2.3, Panel A). The World Health Organization (WHO) estimates that NCDs account for 84 percent of all deaths, while cardiovascular diseases, a subset of NCDs, account for 58 percent¹³. Mortality from cardiovascular diseases (CVDs), cancer, diabetes, or chronic respiratory disease (CRD) between ages 30 and 70 was 26.8 percent in 2019, more than twice the average for OECD countries and above the rates for both upper-middle-income and lower-middle-income countries (Figure 2.3, Panel B). Gender differences in such mortality are large: for men, it was 29.8 percent, while for women, it was 21.2 percent.

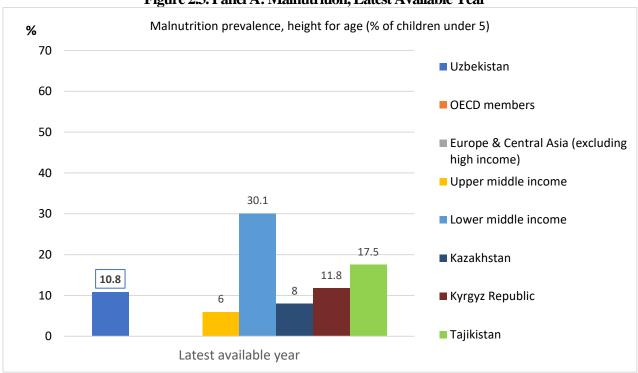
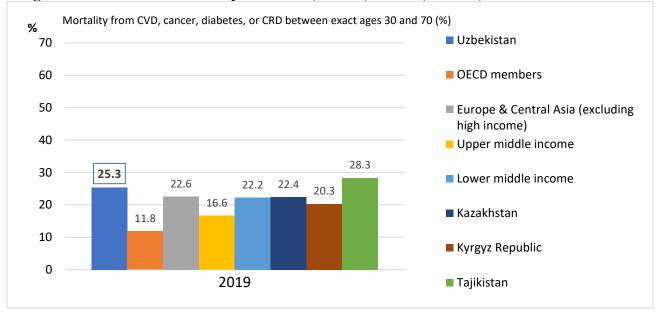


Figure 2.3. Panel A: Malnutrition, Latest Available Year

Source: World Bank elaboration using World Development Indicators, DataBank, World Bank, 2022, accessed March 25, 2022. *Note*: Latest available year for malnutrition is 2019 for the lower- and upper-middle-income country groups; 2017 for Uzbekistan, Tajikistan, and the Kyrgyz Republic; and 2015 for Kazakhstan. No data are available for OECD. members and ECA (excluding high income). ECA = Europe and Central Asia; OECD = Organisation for Economic Co-operation and Development.

¹² The estimated coverage of BCG, HepB3, DPT3, Pol3, and measles were all above 96 percent in 2019 (World Development Indicators, DataBank, World Bank, 2022, accessed March 25, 2022).

¹³ World Health Organization, "Noncommunicable Dieases (NCD) Country Profiles, 2018." <u>https://www.who.int/nmh/countries/2018/uzb_en.pdf?ua=1</u>, accessed Dec. 30, 2020.





Source: World Bank staff elaboration using World Development Indicators, DataBank, World Bank, 2022, accessed March 25, 2022.

Note: CRD = chronic responsion of the cardiovascular disease; OECD = Organisation for Economic Cooperation and Development.

Public and private spending on health

Uzbekistan's current health expenditure as a percentage of GDP is slightly below the average for upper-middle-income countries and on par with countries in ECA, excluding high-income countries (Figure 2.4). Uzbekistan's current health expenditure remained stable from 5.2 to 5.6 percent of GDP between 2000 and 2019. At the same time, this number is far below health spending levels in OECD countries.

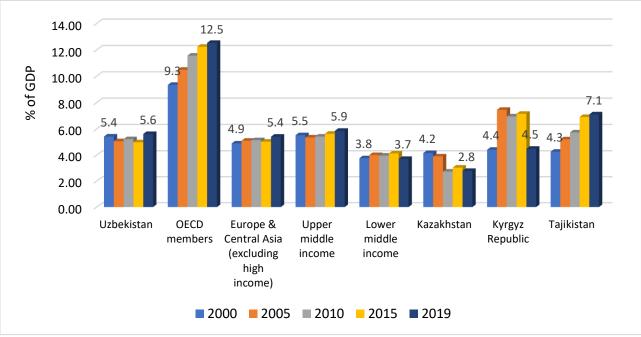


Figure 2.4. Current Health Expenditure, Percent of GDP, Selected Years, 2001–19

Source: World Bank staff elaboration using World Development Indicators, DataBank, World Bank, 2022, accessed March 25, 2022.

Note: OECD = Organisation for Economic Co-operation and Development.

In 2019, domestic general government health expenditure in Uzbekistan was equivalent to just 2.3 percent of GDP, below the average for upper-middle-income countries (3.3 percent) and ECA, excluding high-income countries (3.4 percent)¹⁴ (Figure 2.5). General government spending on health as a percentage of GDP increased between 2000 and 2015 but subsequently returned to a lower level. Overall, between 2000 and 2018, there was no increase in government health spending as a share of GDP compared with 2000, in contrast to the marked increase that can be observed in upper-middle-income countries. These diverging trends have resulted in a widening gap between Uzbekistan and its aspirational group. At the same time, Uzbekistan outperforms lower-middle-income countries as well as some of its Central Asian neighbors.

¹⁴ World Bank World Development Indicators, DataBank, 2022, accessed March 25, 2022.

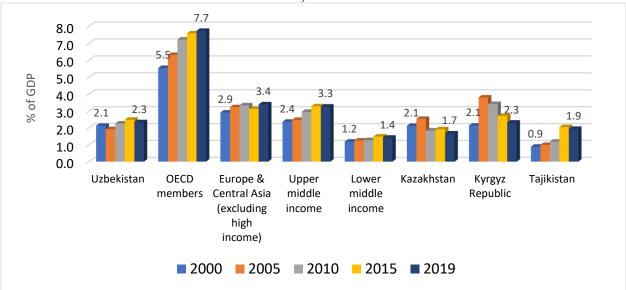


Figure 2.5. Domestic General Government Health Expenditure, Percent of GDP, Selected Years, 2000–19

Source: World Bank staff elaboration using World Development Indicators, DataBank, World Bank, 2022, accessed March 25, 2022.

Note: OECD = Organisation for Economic Co-operation and Development.

In 2019, domestic general government health expenditure accounted for 8.3 percent of general government expenditure, below the average for ECA, excluding high-income countries (10.1 percent) (Figure 2.6). Based on Ministry of Finance (MoF) data, the estimated share of health in the public budget was about 7.8 percent in 2015 and 8.1 percent in 2019. However, these numbers do not include health spending by ministries other than the Ministry of Health (MoH) and may not include all government spending considered in the World Bank 2022 World Development Indicators.

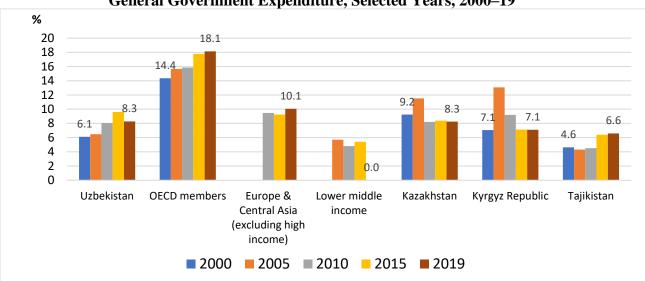


Figure 2.6. Domestic General Government Health Expenditure, Share of General Government Expenditure, Selected Years, 2000–19

Source: World Bank staff elaboration using World Development Indicators, DataBank,, World Bank 2022, accessed March 25, 2022.

Note: OECD = Organisation for Economic Co-operation and Development.

Private health expenditures account for over half of current health expenditure in Uzbekistan. Although the share of private health expenditures decreased from 60.9 percent in 2000 to 48.8 percent in 2015, by 2019 it had rebounded to 58.4 percent. Domestic private sources include spending by households, corporations, and nonprofit organizations. Unlike upper-middle-income countries, Uzbekistan does not evidence a decrease in the share of private health expenditures. Uzbekistan does exhibit a slightly lower percentage of private health spending than lower-middle-income countries as a group (Figure 2.7).

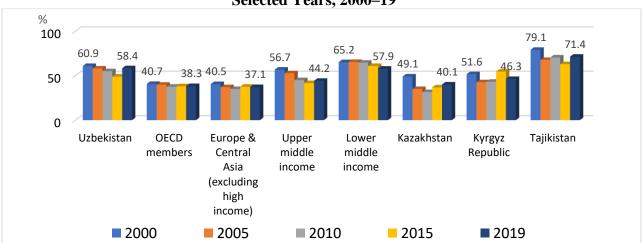
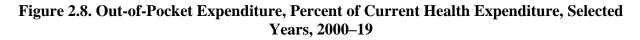


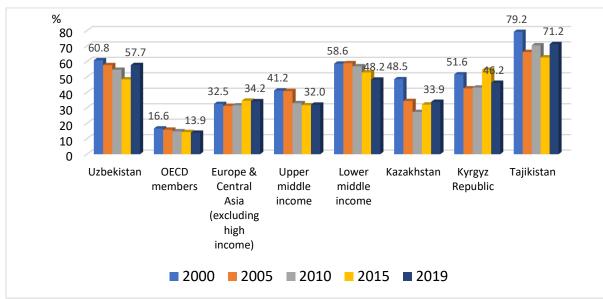
Figure 2.7. Domestic Private Health Expenditure, Percent of Current Health Expenditure, Selected Years, 2000–19

Source: World Bank staff'elaboration using World Development Indicators, DataBank, World Bank, 2022, accessed March 25, 2022.

Note: OECD = Organisation for Economic Co-operation and Development.

Almost all private spending on health in Uzbekistan is out-of-pocket at the point of service. Conceptually, private spending can either be *prepaid* to mandatory or voluntary health insurance schemes or paid at the point of service directly to healthcare providers, known as out-of-pocket (OOP) expenditures. In the case of Uzbekistan, there is no mandatory contributory health insurance schemes, while voluntary private insurance schemes exist but do not account for a significant share of spending. Therefore, almost all private spending is OOP. Such expenditures on health are inefficient because they leave individuals unable to smooth the financial risk of ill health. They also put the population at risk of catastrophic health expenditures and impoverishment due to medical expenses. OOP expenditures accounted for 57.7 percent of total health expenditures in 2019, and there is no evidence of a clear downward movement in those expenditures since 2000 (Figure 2.8). In contrast, upper-middle-income countries channel a significant and increasing share of private spending through prepayment and insurance mechanisms. Uzbekistan also has a higher percentage of OOP spending compared with other lower-middle-income countries; in addition, this gap has widened, as the share of OOP is gradually decreasing among this group. Among the Central Asian countries, Uzbekistan has a lower OOP private spending share than Tajikistan (72.2 percent), but a higher percentage than Kazakhstan (33.9 percent) and the Kyrgyz Republic (46.2 percent).





Source: World Bank staff elaboration using World Development Indicators, DataBank, World Bank, 2020, accessed March 25, 2022.

Note: OECD = Organisation for Economic Co-operation and Development.

Health system organization: Financing and service delivery structure

Uzbekistan's public health system is strongly hierarchical; the principal source of revenue for public spending on health is general government taxation revenue, including national, regional, and local taxes. On both the service delivery side and the financing side, its functions are organized along with the state's administrative levels: the national or republican level, the regional (*vilayot*)

or *oblast*) level, and the level that includes districts (*tuman* or *rayon*) and cities. On the financing side, each of the three levels has responsibilities for revenue collection through taxation, consolidation of budgets, management of funds, and financing of health services. At the national level, the MoF allocates the budget for health services and investment in health infrastructure. At the regional and district levels, the respective financial departments (treasury offices) manage their share of government revenues and provide funds for their health departments to provide services. Funds are managed through the Treasury system, which is integrated with the financial departments and not with the health departments.¹⁵ The responsibility for spending state funding within the approved protocols lies with the treasury offices and not with the health departments. Beyond the funds raised locally, the central government also provides direct financing toward the regional, district, and city health departments.¹⁶ National budget allocations to regions and to districts include funding for the construction or renovation of hospitals, procurement of equipment, and others. Finally, a number of areas, including tuberculosis, HIV/AIDS, cancer, and diabetes, are funded through vertical programs.

On the service delivery side, each hierarchical health department is responsible for defined services in its geographic area. Health departments in districts and cities are responsible for organizing the delivery of primary care, which includes ambulatory care through rural physician centers, multidisciplinary polyclinics, and urban polyclinics, as well as inpatient care in rayon hospitals and city hospitals. While primary care provision was previously fragmented, in 2017 under the primary health care (PHC) reforms, the different PHC providers were consolidated into rayon medical unions (RMUs) and city medical unions (CMUs)¹⁷ under one legal entity.¹⁸ The regions are responsible for managing regional-level hospitals and providers. The MoH is responsible for managing national-level hospitals, specialized medical centers, and research institutes. The Republican Scientific Center of Emergency Medical Services (EMS) manages emergency health services, including prehospital and in-hospital services, although the center coordinates EMS activities with the regional and rayon departments.

Volume-wise, the district/city level is by far the most prominent one. On the spending side, district and city budgets accounted for 57 percent of public health expenditures in 2019, while regional budgets accounted for 32 percent and the national budget accounted for 11 percent.¹⁹ On the financing side, it is not clear what percentage of revenue for health is collected at each level and how much are the intergovernmental transfers between the district/city, regional, and national levels.

To date, there is no purchaser-provider split in the public health sector. Although at the regional and district/city levels, the health authorities are responsible for the delivery of health services and the financing departments are responsible for managing the funds, the relationship

¹⁵ The government rolled out the treasury system in 2007. The financial departments are deconcentrated MoF offices. Prior to 2007, state funds were transferred directly to health facility accounts, and the responsibility for spending the funds

lay with health facilities. (Almedov, M., R. Azimov, Z. Mutalova, S. Huseynov, E. Tsoyi, and B. Rechel. 2014.

[&]quot;Uzbekistan Health System Review," European Observatory on Health Systems and Policies, Vol. 16, No. 5).

¹⁶ Cabinet of Ministers Decree #532 "On the improvement of financing mechanisms of health care delivery institutions," 1997; Presidential Decree #up-594 of February 28, 2007, "On measures to develop a treasury framework."

¹⁷ Presidential Resolution #pp-2857 of March 29, 2017, "On measures to improve the organization of activities of primary health care institutions of the Republic of Uzbekistan."

¹⁸ Implementation Completion and Results Report for the Republic of Uzbekistan Health Systems Improvement Project. August 2020. World Bank, Washington, DC, ICR00004995.

¹⁹ World Bank staff calculations based on data from the MoF of Uzbekistan.

between these government entities is not one of "purchasing." Instead, the treasury units are simply financial administrators for the health departments and handle the payroll, which accounts for the largest share of health expenditures at their level (see below). Health care workers in the public sector are public employees who are paid according to state guidelines and not dependent on the services they provide.

The health system's two main sources of financing for health—the state budget and OOP payments—are used in different combinations depending on the level and type of care. In 1996, the government defined a basic benefits package²⁰ that includes free-of-charge primary and emergency care for the entire population. The package also includes care for "socially significant and hazardous" conditions²¹ and specialized (including hospital) care for 13 population categories defined as vulnerable.²² Pharmaceuticals are only covered when related to inpatient care that forms part of the basic benefits package, or to outpatient care for the defined conditions and vulnerable population categories. It is worth noting that the primary care definition of the benefits package includes inpatient care in district/city-level hospitals.

OOP payments include both payment to private sector providers and pharmacies, as well as formal and informal payments to public medical care providers. Formal payments to state providers were introduced to expand the available financing for health beyond exclusive state funding that was typical for Soviet-era health systems. At first, they concerned non-medical services such as meals, but then gradually expanded to include diagnostic and medical services. Formal payments in public health facilities are regulated by the MoH²³ in accordance with framework executive orders.²⁴ The MoH and regional health departments also review and approve fee calculations proposed by the health institutions under their purview.

At the primary level, state financing of outpatient medicines is severely limited, which leads to high OOP expenses for households. Most patients typically pay OOP for outpatient medicines, unless those medicines are for prioritized conditions, or the patient belongs to a targeted group. Even then, state spending on medicines is very limited (see below) and therefore, medicines included in the benefits package may not be available at the public facility and may need to be purchased by patients in private pharmacies. Inpatient services at the district/city level are theoretically free, but patients are typically required to pay for co-pays for food, communal expenses, missing pharmaceuticals, and specific services, such as some diagnostic services.

²⁰ Law on Health Protection, 1996.

²¹ Six disease groups are included: cancer, endocrinological (including diabetes) and mental conditions, tuberculosis, leprosy, HIV/AIDS, and post-operative states related to cardiac interventions and organ transplantations.

²² Vulnerable groups include single pensioners registered at the social services, veterans from and persons disabled during the WWII, persons disabled as a consequence of the Chernobyl nuclear accident, international war veterans (for example, the Soviet-era war in Afghanistan), and retired military personnel who worked on nuclear technology. (Ahmedov, M., R. Azimov, Z. Mutalova, S. Huseynov, E. Tsoyi, and B. Rechel. 2014. "Uzbekistan Health System Review," *European Observatory on Health Systems and Policies*, Vol. 16, No. 5).

²³ See Cabinet of Ministers Resolution #54 of February 5, 1999, "Regulations on the structure of costs and the formation of financial indicators in the production and sale of goods and services"; Ministry of Health Regulation #880 of January 25, 2000; Ministry of Health Order #526 of November 26, 2007; Ministry of Health Order #161 of May 31, 2010.

²⁴ See Decree of the President of the Republic of Uzbekistan #PF-2107 of November 10, 1998, "On the state program of health care reform"; Resolution of the Cabinet of Ministers of the Republic of Uzbekistan #414 of September 3, 1999, "On improving financing of budget organizations."

At the regional/secondary hospital level, service delivery is highly fragmented into specialized, vertical hospitals. These include tuberculosis hospitals, dermatological and venereal disease hospitals, neurological and psychiatric hospitals, cardiology hospitals, and emergency hospitals. Copays were introduced at this level to increase the financing base. Although state funding is still the dominant source of funding, patients have increasingly been charged for services. No precise information is available regarding the percentage of hospital spending that is financed with patient co-pays.

At the national level, large hospitals, research institutes, and centers provide tertiary inpatient care and specialized outpatient care. An increasing number of these hospitals and facilities are making a transition to "self-financing." In theory, tertiary-level institutions must be fully self-financed except for a maximum of 20 percent of their costs, which the state pays in exchange for providing services to patients who are included in a designated list of patients. Decisions on inclusion of patients in the designated list are made by both the MoH and the local health departments. Outside of the main public service delivery structure, several other public entities, including the Ministry of the Interior and Ministry of Defense, fund and operate parallel health service networks for their employees and their families.²⁵

The private sector accounts for a small but growing segment of health service delivery. Private health insurance exists but accounts only for a minimal share of health spending. Several large private sector companies do finance and organize health care provision for their employees. Pharmacies and the pharmaceutical supply chain have been mostly privatized. Public hospitals still account for almost three-quarters of hospital beds, but the private sector has been growing rapidly. In 2018, the health sector included 1,165 hospitals with 153,600 beds, of which 566 hospitals and 117,366 beds were public, while the rest were private.²⁶ Private hospitals are typically very small, with an average number of beds of 28.²⁷

The current hospital bed ratio represents an almost three-fold reduction since 1990, when there were over 120 beds per 10,000 population. In absolute numbers, the number of hospital beds decreased from 183,000 in 1994 to 153,600 in 2018. This results in a hospital bed ratio of 47 beds per 1,000 population, which is comparable to the OECD average of 47 in 2016 (World Development Indicators, DataBank, World Bank, 2020). In the public sector, there is an average of 36 beds per 10,000 population.

Disparities between regions in access to hospital beds are moderate: all regions have between 30 and 42 public hospital beds per 10,000 population, except Tashkent City, which has a higher number (70) due to the location of tertiary level hospitals (Figure 2.9). The Surkhandarya region reports the lowest bed density compared to the population—30 beds per 10,000 population, while the Syrdarya region reports the highest density—42 beds per 10,000 population. The private sector exhibits larger regional variations in the availability of hospital beds than the public sector: the availability of private hospital beds per 10,000 population ranges from one in the Autonomous Republic of Karakalpakstan to 23 in the Ferghana region.

²⁵ Their spending is not included in the analysis presented in this document, as no data were available at the time of preparation of this report.

²⁶ State Statistics Committee of Uzbekistan (<u>www.stat.uz</u>), accessed September 10, 2020.

²⁷ Hellowell, Mark. 2022. "The Private Health Sector in Uzbekistan," PowerPoint presentation, World Bank (May 2022).

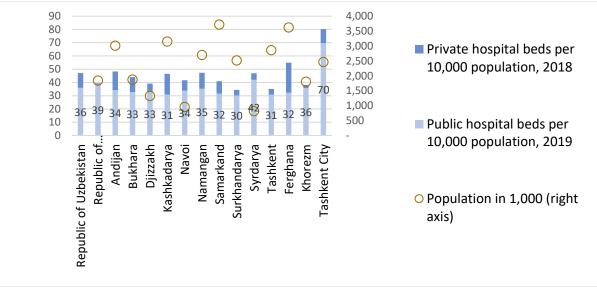


Figure 2.9. Hospital Beds, per 10,000 Population, Public and Private Sectors

Source: World Bank staff elaboration based on data from State Statistics Committee of Uzbekistan (<u>www.stat.uz</u>), accessed September 10, 2020, and the MoH of Uzbekistan.

In 2018, the health sector included 5,631 outpatient clinics, of which 2,374 were public (MoH system) and 3,257 were private (Figure 2.10). Private outpatient clinics are concentrated in Tashkent City. No further statistical information was available about the type or size of facilities in the private sector.

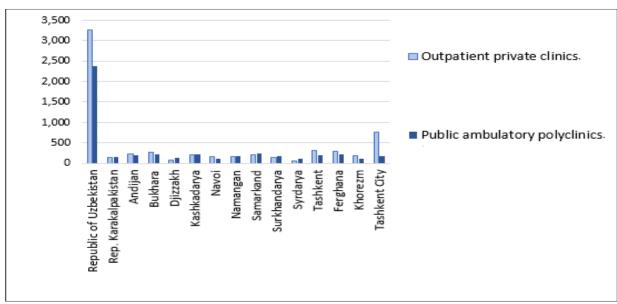


Figure 2.10. Outpatient Private Clinics and Public Ambulatory Polyclinics, 2018

Source: World Bank staff elaboration using data from the MoH of Uzbekistan.

In terms of human resources, Uzbekistan has a relatively high ratio of nurses to doctors. The latest available statistics, for 2014, show a density of 24 medical doctors per 10,000 population, on par with Poland (24) and only slightly behind the UK (28), the US (26), and Brazil (22), but lower than Russia (37). The number of nurses was 113 per 10,000, which is double the rate of Poland (69) and Russia (85), and on par with France (115) and Sweden (118).²⁸

Health policy and reforms

Since the mid-1990s, Uzbekistan has undergone significant reforms, including in the health sector, which saw a restructuring of the PHC system and the development of an emergency medical care network. The past 20 years have seen a gradual but thorough remodeling of primary care delivery. In rural areas, the previously multi-tier system of health facilities was replaced with a two-tier system: rural physician points provide the first point of access, while family polyclinics associated with district hospitals provide more complex ambulatory care. In urban areas, the previously fragmented system of separate polyclinics for men, women, and children was reorganized into urban family polyclinics staffed with general practitioners (GPs). The past 10 years have seen efforts to upgrade the infrastructure and renew the equipment in RMUs and CMUs, thereby strengthening their capacity to deliver services. The country implemented a standardized approach to the training of GPs and upgraded the rural PHC infrastructure and equipment and the scope of PHC health services. The MoH developed over 20 clinical protocols for the attention of diseases that account for a large share of the burden of disease. Overall, the reforms and investments have resulted in increased satisfaction of the population with the improvement of primary health services²⁹ and increased motivation of service providers, due to improved working conditions, retraining, and availability of bonus incentives.³⁰

The emergency care system was also reorganized. The system includes the Republican Center, 12 regional branches, and 176 sub-branches and is free-of-charge. Reforms included improving the triage and dispatch functions and strengthening the service delivery infrastructure and equipment.³¹ Despite the progress in access and quality of emergency services, the vertical and separate system of emergency medical care perpetuates a tradition of medical specialty silo hospitals or departments that is neither efficient nor clinically optimal. On the flip side, the population perceives emergency departments to have superior equipment and staffing while also being free, which leads to an overuse of emergency services.³² To some extent, the superior equipment, facilities, and capacities of the emergency services hospitals, combined with the superior financial coverage of the services, have converted them into a preferred network of general hospitals where both emergency and non-emergency services are being provided.

²⁸ Global Health Observatory (GHO) data repository, World Health Organization, 2020. https://apps.who.int/gho/data/node.home.

²⁹ A patient satisfaction survey showed that patient satisfaction at the primary level rose from 82.7 percent in 2011 to 90.7 percent in 2019, while satisfaction at the secondary level rose from 69.5 percent in 2011 to 86.8 percent in 2019.

³⁰ World Bank. 2020. "Implementation Completion and Results Report for the Republic of Uzbekistan Health Systems Improvement Project." World Bank, Washington, DC. August. ICR00004995.

³¹ Ibid.

³² Ahmedov, M., R. Azimov, Z. Mutalova, S. Huseynov, E. Tsoyi, and B. Rechel. 2014. "Uzbekistan Health System Review." *European Observatory on Health Systems and Policies* 16 (5).

On the financing side, reforms have been much more challenging to implement. The transition to self-financing among tertiary-level public facilities has been much slower than anticipated. A long-planned pilot of volume-and-cost contracts in the Ferghana region has not been rolled out to date.

Reform plans

The government of Uzbekistan's overall framework for health reform is outlined in the "Concept of Development of the Health Care System of the Republic of Uzbekistan for 2019–2025" and the "Program of Measures for the Implementation of the Concept of Development of the Health Care System of the Republic of Uzbekistan in 2019–2021." The concept focuses on the following three main goals:

- 1. To increase life expectancy by improving the effectiveness of prevention and treatment of diseases and conditions that cause the majority of cases of premature death and disability.
- 2. To reform the system of financing and organizing health care to ensure equal access to medical care, financial protection of the population, and equitable distribution of resources.
- 3. To strengthen the capacity of health management authorities, increasing the role and responsibility of their leaders to implement the objectives of the concept, and improving the quality of medical care.

The government of Uzbekistan has declared its intention to introduce sweeping changes in health financing. The health financing reforms are outlined in the Presidential Decree #5590 of December 7, 2018, "On complex measures for the fundamental improvement of the healthcare system of the Republic of Uzbekistan," dated December 7, 2018 (Box 2.1). Currently, the development of the policies, tools, and mechanisms that will be needed to achieve the government's vision is ongoing.

Box 2.1. Planned Reform in Health

According to Presidential Decree #5590, "On complex measures for the fundamental improvement of the healthcare system of the Republic of Uzbekistan," dated December 7, 2018, the government's planned reforms in health include:

- 1. Staged implementation of the payment system for "per treated case" per disease-related groups and new mechanisms of per capita financing, which provides for:
 - Implementation of measures to equalize the regional budget provision of primary healthcare through the implementation of a single per capita funding standard with differentiated adjustment coefficients accounting for regional characteristics, type of institutions, population density, and other factors;
 - Transition to modern methods of payment for services of specialized medical care for the "treated case" per disease-related groups in national, regional, and district/city medical and preventive treatment facilities; and
 - Transition to the system of contracts for the provision of medical services under the stateguaranteed free medical care programs with public and private healthcare providers.
- 2. Creating the national system of health accounts to account for health expenditures and to provide an evidence base, enabling justified strategic decision-making and support to the implementation of compulsory medical insurance programs.

- 3. Establishing the Mandatory Health Insurance Fund, accumulating and distributing financial resources under the programs of mandatory health insurance.
- 4. Introducing special programs of mandatory health insurance for target groups of patients and target types of medical care in all regions of the republic, based on a calculation of guaranteed volumes of medical services and the formation of diagnosis-related groups.
- 5. Introducing citizens' motivation programs to ensure the rational use of medical resources and interest in maintaining and strengthening their health.
- 6. Step-by-step provision of universal coverage of citizens of the republic with mandatory health insurance.

Source: Excerpts from Presidential Decree #5590 of December 7, 2018, "On complex measures for the fundamental improvement of the healthcare system," Annex 1. "Health System Development Concept of the Republic of Uzbekistan for 2019-2025."

In July 2021, the government began piloting a new model of health service delivery and financing in the Syrdarya region. The newly established State Medical Insurance Fund (SMIF) has been given the responsibility of strategic purchasing of medical care in the region. The pilot aims to introduce a system of per capita financing at the primary care level, as well as a system of payment "per treated case" for hospital (inpatient) care. The pilot also aims to strengthen service delivery in primary care and includes a strong push to digitize health information, partly to make the new financing mechanisms possible. The government plans to roll out the pilot to six regions in 2023. So far, the per-treated-case payment system for hospitals has been started but is still in the incipient stage. On the other hand, capitation-based payments for primary care have not yet been introduced, due to a shortfall in budget. Consolidation of the budget at the oblast level, including funding for human resources and redirecting this budget through the SMIF, is a prerequisite for the SMIF to function as a real strategic purchaser—this consolidation has not yet been achieved.

Key Challenges

Uzbekistan's critical challenges in terms of public spending on health are the low level of public spending, the inefficiency of spending, and the lack of financial protection for the **population.** This section provides evidence on the latter two challenges and identifies their underlying structural causes. The concept of efficiency used in this report is based on the management of resources dedicated to the production of health services. There are two key processes to consider: (1) the optimization in the allocation of financial resources; and (2) the procurement and combination of physical resources. A health system achieves allocative efficiency if it prioritizes its resources in a way that maximizes the well-being of the population, including coverage of services and financial protection against catastrophic health expenditures. This includes a review of spending by type of provider, production factors, and payment and contracting mechanisms. On the other hand, it achieves technical efficiency if it procures and combines its factors in such a way that it could not increase the provision of its services¹⁹ without raising its cost. This report examines the structure of the hospital network and the incentives faced by health facilities to efficiently transform their resources into services. Together, these two sets of efficiency processes determine the equity of coverage, the quality of health services to the population, and financial protection. In the absence of information on quality of care, the PER reviews the equity of spending and service access from a geographic and socioeconomic group perspective and financial protection.

Allocative efficiency: Public health spending by type of provider

The model that a country uses to deliver care has a profound impact on its population's health as well as on the financial sustainability of the health system. Ideally, health services should be managed and delivered in an integrated way so that people receive a continuum of health promotion, disease prevention, diagnosis, treatment, rehabilitation, and palliative care services that respond to their needs throughout life. Rather than being centered solely on a disease, care needs to be person-centered, that is, it needs to consider a person's many health needs and the social determinants of those needs. The location of services (both in terms of geography and in terms of type of facility) should balance accessibility and cost: in general, care should be delivered at the primary care level or on an outpatient basis whenever possible, and hospitals should be focused on acute complex care. Finally, integrated care requires high levels of coordination: between providers at different levels of care, between providers of individual patients, and between health, social, and elderly care services (Figure 2.11).

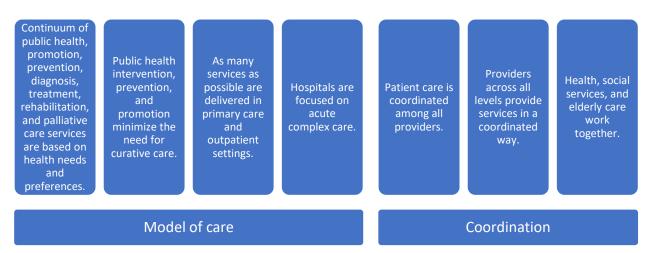


Figure 2.11. Building Blocks of Integrated, Patient-Centered Care

In the early 2000s, Uzbekistan saw a marked shift in government spending toward ambulatory care provision: the share of spending on hospital care decreased markedly until 2012 and stabilized thereafter. Between 1998 and 2010, the share of total government expenditure devoted to hospitals (including emergency care) decreased steadily from 72 percent to 58 percent. The share of spending on hospitals and emergency care has been stable

at around 60 percent of the budget (Figure 2.12).^{33,34} Overall, the share of spending on hospitals appears somewhat high, though not extremely so. Two financing reviews commissioned by the MoH argue that the shift toward ambulatory care has stalled in the past decade, due to several factors: First, the reduction in the number of hospitals and hospital beds was not accompanied by an equivalent reduction in health personnel, which accounts for most of the spending. Second, savings from reductions in the number of hospitals and hospital beds tended to be redirected toward the expansion of the emergency care network and not toward the ambulatory primary care providers. However, we do not have sufficient data to corroborate these hypotheses in this PER.

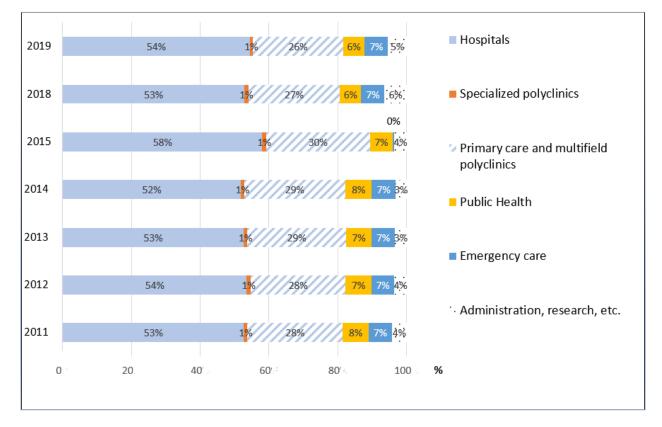


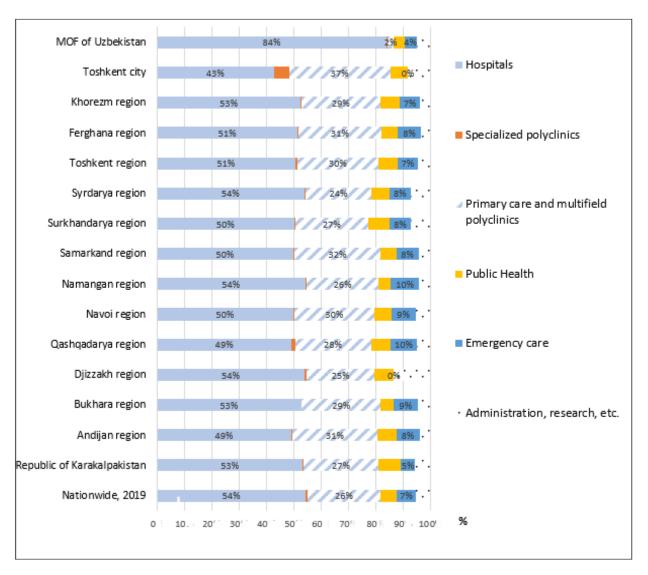
Figure 2.12. Public Expenditure on Health, by Type of Provider, Selected Years, 2011–19

Source: World Bank staff elaboration based on data from the MoF of Uzbekistan.

The inter-regional variation in spending on hospitals is limited. Except for Tashkent City, all regions devote between 49 and 54 percent of the public health budget on hospitals (Figure 2.13).

³³ In the 2015 data, it appears emergency services were probably included in hospital spending; however, with the data available to the World Bank, it is not possible to disentangle emergency services spending from other hospital spending.

³⁴ Uzbekistan: *Public Expenditure Review*, World Bank (2005) estimated that two-thirds of expenditures were dedicated to hospitals. Although no further details are available, the estimate probably included emergency services, about 7 percent of spending.





Source: World Bank elaboration based on data from the MoF of Uzbekistan.

Note: MoF spending is central government health budget. Regional spending includes spending in each region's cities and districts.

Even in the district and city budgets, which are the main budget holders for primary care, hospitals spend an equal share of the budget as primary outpatient facilities and multifield polyclinics. District and city budgets also make substantial allocations toward emergency care, but virtually none toward public health functions, which are financed vertically (Table 2.1). On the institutional side, the consolidation of budgets for primary care and central district hospitals under the RMU or CMU is unlikely to have improved, based on the tendency to prioritize spending on hospitals. RMUs are typically headed by the chief doctor of the central district hospital, who has an incentive and the pressure to prioritize the hospital at the detriment of primary care. Increasing spending on outpatient care would require clear rules on allocating funds within a broader overhaul of primary care financing.

Expense type	Total (%)	National budget (%)	Regional budgets (%)	District and city budgets (%)
Hospitals	54	84	61	45
Specialized polyclinics	1	1	2	1
Primary care and multifield polyclinics	26	2	1	45
Public health	6	4	18	0
Emergency care	7	4	3	9
Administration, research, etc.	5	5	14	0

Table 2.1. Public Expenditure on Health, by Type of Provider and Budget Level,Percent of Total, 2019

Source: World Bank staff elaboration based on data from the MoF of Uzbekistan.

To understand the allocation of spending between hospital and primary care, it is necessary to look not only at government spending but also at overall health spending including OOP payments. The 2018 National Health Accounts calculated that in 2014, approximately 40 percent of overall health spending went toward inpatient care, while 31 percent went to medical products (mostly pharmaceuticals).³⁵ Therefore, the percentage of total health expenditures dedicated to hospitals is significantly lower than the percentage of government health expenditures on hospitals. As a point of comparison, the share of current healthcare expenditure for hospitals in the European Union member states was 36.3 percent on average, with variations from 46.2 percent in Croatia to 28.3 percent in Germany.³⁶

Patients continue to favor hospitals and ambulances for care, and the use of PHC and outpatient clinics is suboptimal. Among the population that received care in the past 30 days, only in 42.57 percent of cases were PHC and outpatient polyclinics the latest location of care (Figure 2.14). Ambulance care accounts for over 4 percent of the latest consultations.

³⁵ Aripova, G., and N. Aigo. 2018, "Uzbekistan Health-3 Health Improvement Project: Develop and Implement the National Health Accounts Systems (NHA) based on SHA 2011. Second report." Tashkent, Uzbekistan. https://www.minzdrav.uz/projects/detail.php?ID=56482.

³⁶ EUROSTAT. 2020. Health expenditure statistics. https://ec.europa.eu/eurostat/statistics-

explained/index.php?title=Healthcare_expenditure_statistics#Healthcare_expenditure_by_function.

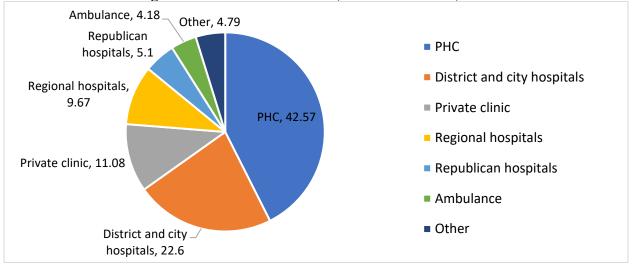


Figure 2.14. Location of Care, Percent of Total, 2018

Source: World Bank staff calculations using data from the "Listening to the Citizens of Uzbekistan" survey (2018, 2020), World Bank, https://www.worldbank.org/en/country/uzbekistan/brief/l2cu.

Note: PHC includes both rural physician points and polyclinics. PHC = public health care.

Allocative efficiency: The economic structure of government expenditure on health (production factors)

There are seven main factors in the production of health services: (1) human resources (clinical and non-clinical); (2) medical goods (including pharmaceuticals, medical supplies, medical equipment); (3) medical services (such as outsourced laboratory services); (4) non-medical goods (such as furniture, computers); (5) non-medical services (such as outsourced training, laundry, security, or logistics services); (6) utilities and communications; and (7) infrastructure (including capital investment and repairs, maintenance and repairs). Many countries struggle with disproportionate spending on health wage bills that displace spending on other critical factors. In such circumstances, health workers cannot provide high-quality services, due to outdated infrastructure, equipment, and training, and lack of supplies and medicines. Meanwhile, the burden of providing the necessary inputs and pharmaceutical products falls on patients and results in high OOP payments.

In Uzbekistan, the share of government spending on human resources is very high, although there is evidence of increased spending on other categories. Health wage spending decreased from 84 percent to 77 percent of public expenditures on health between 2011 and 2019 (Figure 2.15). As wage spending decreased, government spending on medical goods and services increased from 3 percent in 2015 to 12 percent in 2019, a positive progression. Expenditures on capital investments, maintenance, and repairs have been under 6 percent of public spending in most years since 2011, and virtually non-existent between 2012 and 2014.

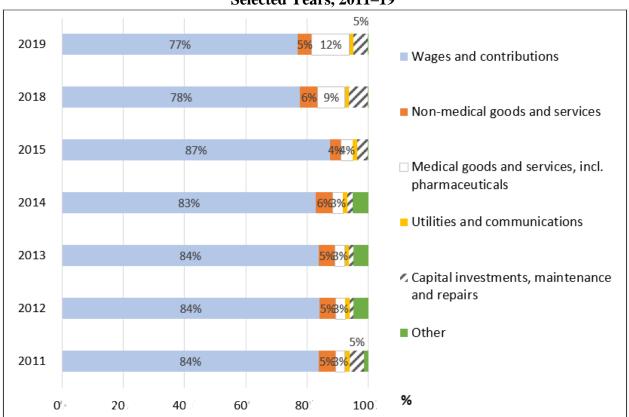


Figure 2.15. Economic Allocation of Public Health Spending, Selected Years, 2011–19

Source: World Bank staff elaboration based on data from the MoF of Uzbekistan.

Most local entities devote more than 80 percent of their health budget to personnel payments, with some regions, including Fergana, Kashqadaria, Khorazm, and Tashkent, spending over 85 percent (Figure 2.16). The displacement of non-personnel expenses is sharp in the district/city budgets, where 86 percent of spending is personnel expenses (Table 2.2). Given that this level, in particular, is responsible for primary care, it is clear that primary care provided by the state severely lacks budgetary space for medical and non-medical goods, medicines, and equipment.

The high share of spending on personnel contrasts with the general perception that health worker remuneration in Uzbekistan is low—too low to motivate health workers to provide high-quality services. There is no contradiction, however: Uzbekistan's staffing levels are relatively high, and in some cases even comparable to high-income countries, while government spending on health is much lower as a share of GDP. This can only be accomplished with a low level of wages.

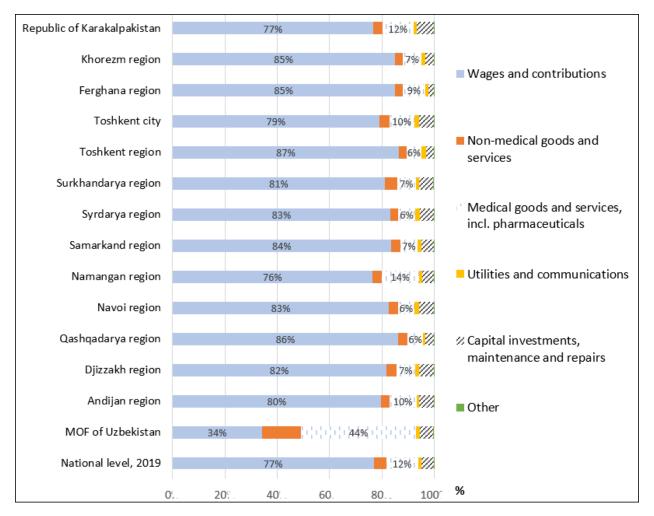


Figure 2.16. Economic Allocation of Public Health Spending, by Region, 2019

Source: World Bank staff elaboration based on data from the MoF of Uzbekistan.

	Total (%)	National budget (%)	Regional budgets (%)	District and city budgets (%)
Wages and contributions	77	34	75	86
Non-medical goods and services	5	15	6	2
Medical goods and services, including. pharmaceuticals	12	44	11	7
Utilities and communications	1	1	2	1
Capital investments, maintenance, and repairs	5	5	6	4
Other	0	0	0	0

Table 2.2. Economic Allocation of Public Health Spending, by Budget Levels, Percent, 2019

Source: World Bank staff elaboration based on data from the MoF of Uzbekistan.

The low observed spending on pharmaceuticals in the regional, district, and city budgets has structural and conjunctural explanations. On the structural side, most outpatient medicines are excluded from the benefits package for most patients—therefore, there is no mandate for local budgets to dedicate funds. On the conjunctural side, spending on medicines is more discretionary than expenditures for human resources. When faced with an increase in the cost of human resources (for example, due to a centrally mandated increase in wage scales), districts and cities can more easily cut spending on medicines and supplies than expenditures on human resources, which would require letting go of staff.

The coverage of inpatient medications and the simultaneous exclusion of outpatient medications negatively affect the efficiency and quality of health services. Pharmaceuticals are only covered when related to inpatient care that is included in the basic benefits package, or to outpatient care for the defined conditions and vulnerable population categories. This generates two types of inefficiency. First, patients and staff have a perverse incentive to substitute outpatient care with inpatient care to access covered medicines. Second, requiring patients to pay OOP for essential, highly cost-effective medications leads to their suboptimal use. In other countries, this has been shown to lead to a preventable worsening of chronic conditions, complications of acute conditions, and avoidable hospitalizations.³⁷ On balance, the inclusion of essential outpatient medications would prevent disability and loss of productivity and save the state budget from unnecessary hospitalizations.

Technical efficiency: Payment and contracting mechanisms

Health workers, who represent the largest share of spending at all levels, are salaried. Their remuneration must follow strict state guidelines that depend on the type of position and qualifications. While a 2005 presidential degree introduced the possibility of incentives for health workers, in practice, there is no evidence that this mechanism has been used to reward the

³⁷ Prabhakaran, D., et al., "Cardiovasular, Respiratory, and Related Disorders: Key Messages and Essential Interventions to Address Their Burden in Low- and Middle-income Countries. 2017." In *Cardiovascular, Respiratory, and Related Disorders*, Disease Control Priorities 3rd Edition, Vol. 5. Seattle, WA: University of Washington.

performance of health workers. No information is currently available on the productivity of staff across the public system.

In theory, primary care is financed on a capitation basis; however, the implementation of the capitation system has practically collapsed. The capitation system does not function in a way that fosters managerial autonomy and responsibility for managing the care of a catchment population, which are traditionally seen as the main strengths of this mode of financing for primary care. When the capitation payment system was originally introduced starting in the early 2000s, separate legal entities were created for each rural physician point, with autonomy over budget execution. However, human resource compensation, including increases in the wage levels, continued to be set at the central level. With salary expenditures representing around 90 percent of primary care level budgets, the room for adjustment of expenditures at the local level to respond to the needs of the population was practically nil. Starting in 2007, financial planning and control of health budgets were transferred back to financial authorities, away from health institutions, and incorporated into the treasury system. The separation between financial management of health budgets and health activities continues to this date.³⁸ In 2016, the functioning (and legal entities) of primary health posts were consolidated under the legal entities of the RMU and CMU. These consolidated entities are under the leadership of the head doctor of the rayon central hospital or city hospital. In addition, there are no mechanisms or incentives to ensure enough financing for outpatient facilities, protecting them against the "draw" on resources that is typical in a mixed hospital-PHC entity. The results of this setup for primary care financing efficiency are clear from Figure 2.14: in RMUs and CMUs, hospitals spend an equal share of the budget as primary outpatient facilities and multifield polyclinics.

The current hospital financing mechanisms do not foster improvements in the efficiency of hospitals. Inpatient care at the oblast and national levels is paid using budgets that are based on the required number of beds.³⁹ Established staffing norms determine the required number and type of staff for the required number of beds, which in turn largely determines the hospital budget, because the cost of staffing is the largest share of the hospital budget. The required number of beds is based on historical numbers as well as bed occupancy rates. Hospitals that have an inefficiently high number of beds have no incentive to reduce this number, as reducing beds would reduce the budget of the hospital. In addition, there is a disincentive for hospitals to discharge patients on time or reduce unnecessary hospitalization—doing so reduces the bed occupancy rates and undermines the hospital's justification for maintaining its beds. The available statistics show that the average length of stay in acute care hospitals in Uzbekistan is in line with the EU average, while the bed occupancy rate is much higher (Figure 2.17 and Figure 2.18). While high bed occupancy rate could be a result of high demand for services and lack of available beds, this is unlikely given that the number of beds per population is only 20 percent below the EU and Uzbekistan has a younger population than the EU average. Instead, this is likely to point to unnecessary hospitalizations for conditions that should be managed on an outpatient basis (for example, surgeries amenable to daytime-only hospitalization) or at the primary care level.

³⁸ Ministry of Health of Uzbekistan, 2019. "Analysis of Government Expenditures on Health Care of the Republic of Uzbekistan: Creating a Financial Mechanism for Effective Realization of Healthcare Development Concept 2.0." Tashkent, Uzbekistan; Ministry of Health of Uzbekistan, 2015. "Analytical Review: Assessment of Territorial Fairness of Allocation of Government Budget Funds for Public Health in Uzbekistan." Tashkent, Uzbekistan.
³⁹ Specialized outpatient care is paid based on the number of visits (for specialized outpatient care), staff (for

Hospitals continue to have "therapeutic departments" that do not treat acute conditions but host patients with chronic conditions for an extended period. Under a hospital optimization plan, these beds should be reassigned into different types of facilities or services, such as long-term care and palliative care. Overall, the lack of validated and internationally comparable statistics on bed occupancy rate since 2009 also points to a lack of capacity to monitor hospital activity levels.

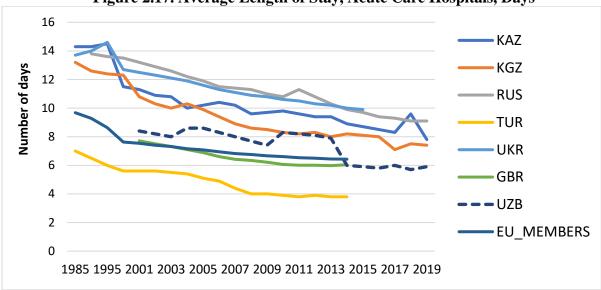


Figure 2.17. Average Length of Stay, Acute Care Hospitals, Days

Source: World Bank staff elaboration based on data from the WHO European Health for All database (HFA-DB), 2018. https://gateway.euro.who.int/en/datasets/european-health-for-all-database/, accessed September 26, 2018.

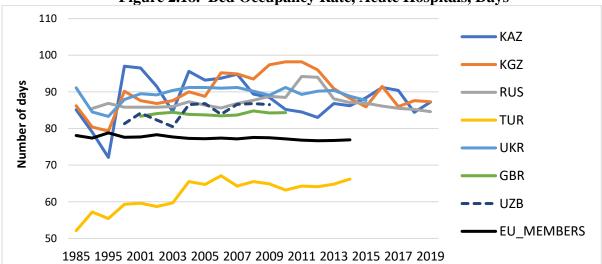


Figure 2.18. Bed Occupancy Rate, Acute Hospitals, Days

Source: World Bank staff elaboration based on data from the WHO European Health for All database (HFA-DB), 2018. https://gateway.euro.who.int/en/datasets/european-health-for-all-database/, accessed September 26, 2018. A number of specialized and tertiary care institutions were transferred to a "self-financing system," whereby the institutions are expected to raise their own operating costs through patient payments. However, the state allocates a budget for the attention of prioritized populations and conditions that are part of the benefits package. This budget is given in advance each year, and institutions must justify these funds by providing free-of-charge services to eligible individuals. In theory, these institutions may use self-financing revenue to incentivize staff. However, the management leeway to introduce such changes is limited, as staff salaries are still bound to follow the salary scales determined by the MoF. In addition, in the absence of a robust regulatory environment that articulates these specialized facilities within the health system, this self-financing setup will not reduce OOP expenditures, healthcare costs, or inappropriate care. In fact, a dual system of state financing and patient co-payments that does not ensure access for those patients who cannot afford the co-payments, will result in regressive subsidies for specialized care for the better-off segments of the population.

The different services are also financed with varying levels of patients OOP payments, both formal and informal. No information is currently available on informal payments. The 2018 survey "Listening to the Citizens of Uzbekistan" reports on total OOP payments, without differentiating between official and unofficial payments. OOP payments vary substantially between levels of care. At the PHC level, one-third of patients paid out of pocket, and those who paid disbursed UZS 100,000 (about US\$12.4) on average. At the regional and republican hospitals, approximately 70 percent of patients reported paying, and the average payment was around UZS 180,000. Ambulances were an outlier, in that only 18 percent of users reported paying for services (Figure 2.19). In theory, public ambulance services are free-of-charge for the entire population. The survey does not distinguish between public and private ambulance services.

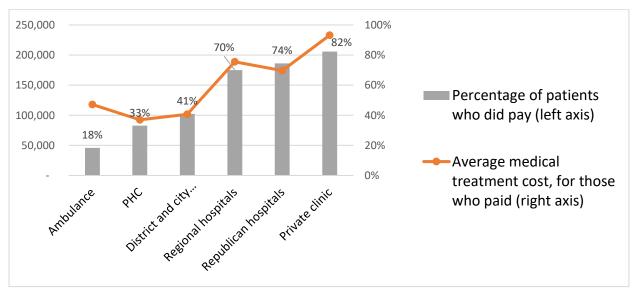


Figure 2.19. OOP Payment for Care in the Past 30 Days, by Location of the Last Visit, 2018

Source: World Bank staff calculation using the "Listening to the Citizens of Uzbekistan" survey, 2018, World Bank. *Note:* The location of care is the location of the latest visit in the past 30 days. PHC includes both rural physician points and polyclinics. The "other" location category is excluded. The medical treatment cost includes payments for laboratory tests and all consultations in the past 30 days. OOP = out-of-pocket; PHC = public health care.

Technical efficiency: The hospital network

Like many post-transition economies, Uzbekistan has an inefficient network of institutions to deliver secondary and tertiary level health care services, including inpatient services. Inpatient services are provided in an inefficient, poorly equipped, and fragmented network of hospitals and specialized clinics. The roles and linkages between the hospitals and specialized care facilities are unclear and lead to duplication and lack of economies of scale. At the regional/secondary hospital level, although there are general multi-specialty hospitals, a large share of service delivery is still atomized in single-specialty hospitals linked to vertical programs. These include tuberculosis hospitals, dermatological and venereal disease hospitals, neurological and psychiatric hospitals, cardiology hospitals, the organization of the infrastructure hospital is inefficient. Hospital sites typically include multiple, not-interconnected buildings, and the layout of the buildings themselves is not functional. Both management and technical oversight follow disconnected vertical chains of command and control. (See Box 2.2 for further illustrations.)

Box 2.2. Technical Efficiency Challenges

Technical efficiency is difficult to measure and impossible to benchmark in the absence of reliable data on the patients and conditions treated in the health system. However, it is easy to identify clearly inefficient processes. A few examples are:

- The yearly review of the disability status of disabled persons includes hospitalization (average seven days).
- Selection, procurement, and supply of medicines (supply chain management) neither exploit economies of scale nor ensure the quality of medicines. Of the total public sector procurement of medicines in 2021, about 20 percent took place at the central level and 80 percent was undertaken directly by health facilities. Direct procurement by health facilities is replete with issues, including frequent bidding for small quantities and a disorganized market with 698 licensed distributors, many of whom do not have acceptable distribution and storage practices.
- Existing regulations limit reinforce the traditional roles of physicians, nurses, and other healthcare workers, which no longer correspond to the needs of a modern health system. The large cadre of mid-level health care workers (such as nurses) is underdeveloped and underused. More efficient staffing strategies (including task shifting) cannot be implemented, due to legal norms. Meanwhile, the skills mix among nurses is heavily skewed toward general nurses, as opposed to baccalaureate nurses with better training.
- There is no national registry of healthcare workers or any requirement for license renewal. This limits the options for optimizing the allocation of health care workers to improve the delivery of services.
- All complaints in the sector are handled at the central level, resulting in an overload in processing those complaints and offering little opportunity to resolve problems at the local level. The MoH recorded almost 79,000 complaints in 2021.
- Patient medical records are in paper format and scattered around healthcare facilities. As a result, neither the patient nor the clinicians can obtain an accurate picture of the patient's medical history, resulting in narrow one-episode-focused treatment, duplication of efforts, and wasted time.

• On the administrative side, healthcare managers do not have access to accurate data on the inventory and services of healthcare facilities, their staffing, patients, and resources (beds, intensive care units, diagnostic equipment, and so on). Core administrative processes such as patient referrals, appointment booking, patient admittance to the hospital, surgery department planning, patient discharge, medication stock management, billing, and cost reimbursement are done on an ad-hoc basis and often paper-based.

Source: MoF of Uzbekistan, with World Bank, USAID, KfW, and UNFPA. 2022. *Diagnostics for the Development of a Health Strategy*.

The fragmented nature of the hospital network negatively impacts the quality of care. Patients with NCDs as well as older patients typically present multisystem diseases that cannot be addressed in a comprehensive, interlinked manner in single-specialty hospitals. Patient-centered case management, based on quality improvement techniques, evidence-based medicine, and up-to-date clinical practice protocols and standards, requires integration of different levels of care as well as cross-specialty coordination, and is almost impossible in the current setup.

Within the proposed health reform, the hospital network's reorganization will be a critical factor in improving access to high-quality care and public spending effectiveness. While various donors are developing master plans for specific regions within the context of particular investments, the government requires a more strategic vision and plan for its investment in hospitals, that takes into account future health needs and covers the entire country.

The equity of public health spending

Healthcare financing levels among regions and districts/cities depend on the local budget, which in turn depends on the local tax base and the efficiency of tax collection. Locally, the health budget also depends on the negotiations and interactions between healthcare and finance (treasury) departments. On the other hand, the local budgets for health may be equalized through intergovernmental transfers from the national budget. We find substantial variations in the amount of spending per capita across regions. In 2019, nominal spending (not including centralized spending) varied from UZS 284,000 in the Samarkand region to UZS 474,000 in the Syrdarya region (Figure 2.20).

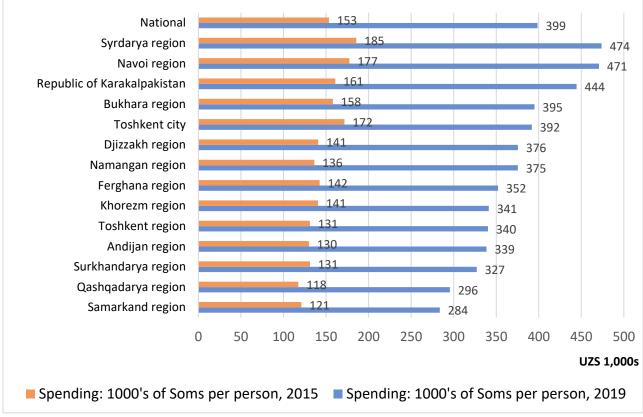


Figure 2.20. Uzbekistan Public Health Expenditure per Capita, by Region, 2015 and 2019, UZS thousands

Source: World Bank staff elaboration based on data from the MoF of Uzbekistan. *Note:* The national average includes central-level spending, while the regional averages do not include it.

Public expenditures have become better at redressing inequities between regions. When contrasting spending on health with the incidence of poverty at the regional level, there is a neutral relationship for 2015, and a neutral to moderately progressive relationship for 2019 (Figure 2.21). This finding contrasts with the 2005 Uzbekistan: Public Expenditure Review, which found that regions with a higher incidence of poverty spent less per capita on healthcare than richer regions.⁴⁰

⁴⁰ Uzbekistan: Public Expenditure Review, World Bank, 31014-UZ, 2005.

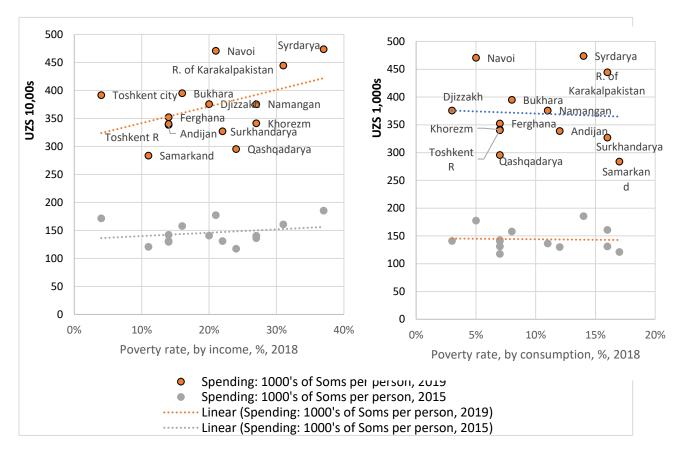


Figure 2.21. Poverty vs. Nominal Public Spending on Health, by Region, 2015 and 2019

Source: World Bank staff elaboration based on data from the MoF of Uzbekistan.

There is significant regional variation in the proportion of population that had their health needs met; however, this variation cannot be explained by differences in per capita spending between the regions. Among persons with a need for care, the proportion who reported that their health needs were only partially met or not met at all varies from 15 percent in Khorazm to 67 percent in the Qashqadarya region (Figure 2.22). However, there is no evidence that unmet need is associated with lower per capita spending (Figure 2.23).

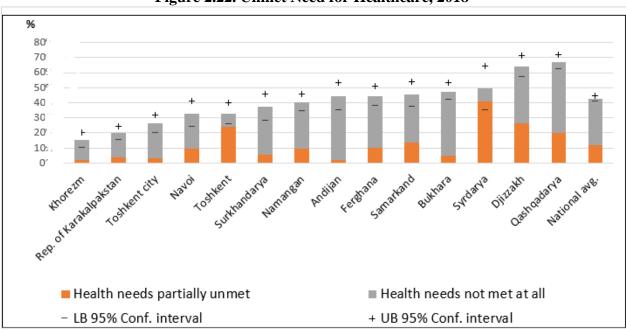
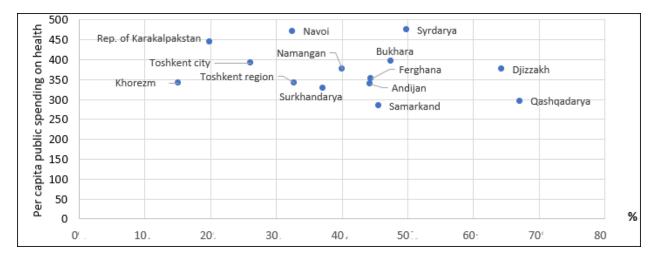


Figure 2.22. Unmet Need for Healthcare, 2018

Source: World Bank staff calculations using the "Listening to the Citizens of Uzbekistan" survey, 2018[13], <u>https://www.worldbank.org/en/country/uzbekistan/brief/12cu.</u>

Note: The denominator includes only the population that reported needing healthcare in the past 30 days. The numerator includes population that reported that their healthcare needs were wholly or partly unmet, among those included in the denominator. Conf. – confidence interval.

Figure 2.23. Unmet Need for Healthcare (2018) vs. Per Capita Spending (2019), by Region



Source: World Bank staff calculations using data from the MoF of Uzbekistan and the "Listening to the Citizens of Uzbekistan" survey (2018, 2020), World Bank, <u>https://www.worldbank.org/en/country/uzbekistan/brief/l2cu</u>. *Note:* The denominator includes only the population that reported needing health care in the past 30 days. The numerator includes population that reported their health care needs were wholly or partly unmet, among those included in the denominator.

Although evidence is limited, there are indications that the lack of access to health services is sharper in the lowest socioeconomic quintiles. In the lowest socioeconomic quintile, 55 percent of the population had unmet health needs, significantly higher than in the fourth and fifth quintiles (38 and 37 percent, respectively) (Figure 2.24).

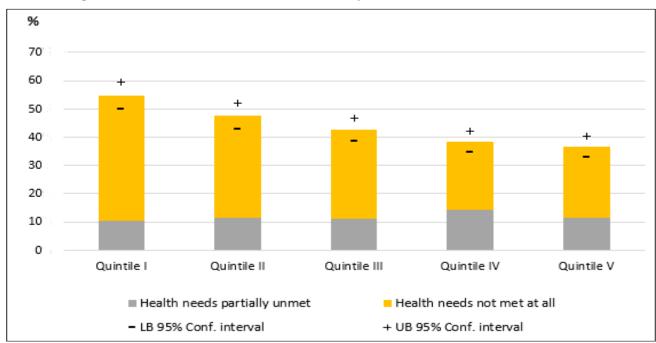
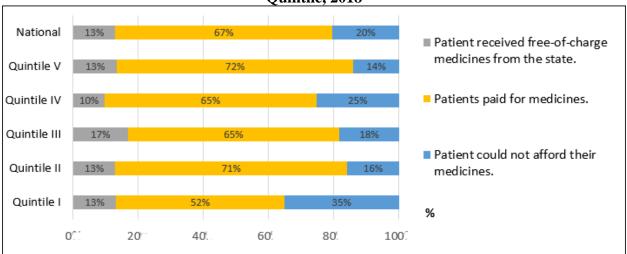
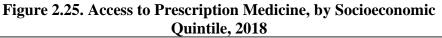


Figure 2.24. Unmet Need for Healthcare, by Socioeconomic Quintile, 2018

Source: World Bank staff calculations using data from the MoF of Uzbekistan and from the "Listening to the Citizens of Uzbekistan" survey (2018, 2020), World Bank., <u>https://www.worldbank.org/en/country/uzbekistan/brief/l2cu</u>. *Note:* The denominator includes only the population that reported needing healthcare in the past 30 days. The numerator includes population that reported their healthcare needs were wholly or partly unmet, among those included in the denominator. Conf. = confidence; LB = lower bound; UB = upper bound.

The lack of coverage of medicines and services disproportionately affects access to care for the poorest segment of the population, in part because the prioritization of population groups for free secondary and tertiary care and outpatient medications is not driven by or integrated with a socioeconomic approach. Individuals may form part of the prioritized categories irrespective of whether they are low-income, middle class or middle-income, or high-income. For example, a high-income diabetic patient may receive covered care, while a poor hypertensive patient will have to pay OOP for essential medications. In 2018, 35 percent of patients from the lowest quintile who received a prescription for medication reported not receiving their medicines, because they were unaffordable (Figure 2.25). As is evident in the same figure, the state provision of prescription medication is orthogonal to the patients' socioeconomic status. In both the first (poorest) and the fifth (richest) quintiles, 13 percent of individuals with prescriptions reported that they received free-of-charge medicines from the state.





Source: World Bank staff calculations using data from the "Listening to the Citizens of Uzbekistan" survey (2018, 2020), World Bank, <u>https://www.worldbank.org/en/country/uzbekistan/brief/l2cu</u>.

Note: The denominator includes only the population that reported receiving a prescription for medication following a medical consultation.

Financial protection against impoverishing and catastrophic health expenditures

In this section, data from the "Listening to the Citizens of Uzbekistan" survey are used to estimate the extent to which out-of-pocket payments result in impoverishment, as well as the incidence of catastrophic health expenditures. OOP expenditures are involuntary and displace expenditures on other goods and services that would increase wellbeing. Such spending is considered impoverishing if its extent pushes a household below the poverty line; it is deemed to be catastrophic if it exceeds an agreed fraction (usually 25 or 40 percent) of a household's income or consumption.⁴¹

This PER estimates that in 2018, 2.5 percent of the population was impoverished due to OOP expenditures. This percentage is calculated by comparing the percent of population that falls under the poverty line gross and net of OOP health payments. Gross of OOP payments, only 9.5 percent of the population was estimated to live below the poverty line of US\$3.20 per day; however, net of OOP payments, 12.1 percent of the population falls below the poverty line (Table 2.3). Gross of OOP payments, the mean positive poverty gap is 19.8 percent of the poverty line, versus 18.8 percent net of OOP payments. Health expenditure-related impoverishment is most common in the first and second quartiles of the consumption distribution, as can be expected (Figure 2.26).

⁴¹ Wagstaff, A., M. Bilger, Z. Sajaia, and M. Lokshin. 2011 *Health Equity and Financial Protection: Streamlined Analysis with ADePT Software*. Washington, DC: World Bank.

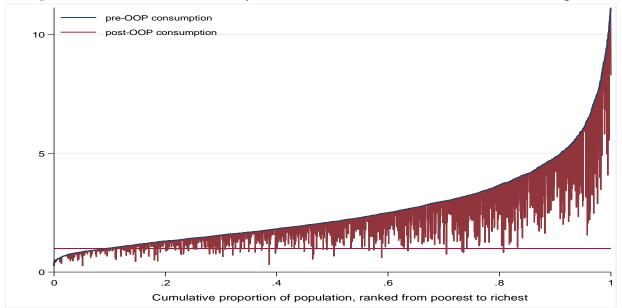
Table 2.3. Impoverishment Due to OOP Health Expenditures: Measures of Poverty Based
on Consumption Gross and Net of Spending on Healthcare, 2018

	Gross of OOP health payments	Net of OOP health payments
Poverty headcount (% of population)	9.5	12.1
Poverty gap (current 2018 soms)	28,518	38,160
Normalized poverty gap (% of poverty line)	1.8	2.4
Normalized mean positive poverty gap (% of poverty line)	18.8	19.8

Sources: World Bank staff calculations using the "Listening to the Citizens of Uzbekistan" survey (2018, 2020), https://www.worldbank.org/en/country/uzbekistan/brief/l2cu), and ADePT software, World Bank;

https://www.worldbank.org/en/country/uzbekistan/brief/l2cu; Wagstaff, A., M. Bilger, Z. Sajaia, and M. Lokshin. 2011 Health Equity and Financial Protection: Streamlined Analysis with ADePT Software. Washington, DC: World Bank. 2011 Note: Calculations use a poverty line of US\$3.20 per day.

Figure 2.26. Effects of Health Payments on Pen's Parade of Household Consumption



Source: World Bank staff elaboration using the "Listening to the Citizens of Uzbekistan" survey (2018, 2020), World Bank, <u>https://www.worldbank.org/en/country/uzbekistan/brief/l2cu</u>, and ADePT software, World Bank; Wagstaff, A., M. Bilger, Z. Sajaia, and M. Lokshin, 2011. *Health Equity and Financial Protection: Streamlined Analysis with ADePT Software*. Washington, DC: World Bank.2011.

Note: The horizontal line represents the \$3.20 poverty line, measured in 2011 purchasing power parity (PPP) US\$. Households are ranked from poorest to richest on the horizontal axis. The red vertical drops represent the drop in household per capita consumption when accounting for OOP health expenditures.

The incidence of catastrophic health payments is high in Uzbekistan. In the poorest quintile, 8.2 percent of households spent more than 40 percent of their disposable share of non-food consumption on health (Table 2.4). Catastrophic health expenditures that exceed 40 percent of non-food consumption affect more than 15 percent of households in each of the three highest socioeconomic quintiles.

Proportion of households whose budget share for	Threshold sl consum		Threshold share of non-food consumption	
health exceeds the given threshold	25%	40%	25%	40%
Lowest quintile	4.4	1.2	13.6	8.2
2	8.7	2.5	20.7	12.4
3	13.8	4.6	25.5	17.8
4	16.9	6.7	26.4	18.3
Highest quintile	16.6	7.1	23.2	15.5
Total	12.1	4.4	21.9	14.4

Table 2.4. Incidence and Intensity of Catastrophic Health Payments

Source: World Bank staff's elaboration using the "Listening to the Citizens of Uzbekistan" survey (2018, 2020), World Bank, <u>https://www.worldbank.org/en/country/uzbekistan/brief/l2cu</u>, and the ADePT software package World Bank. Wagstaff, A., M. Bilger, Z. Sajaia, and M. Lokshin, 2011. *Health Equity and Financial Protection: Streamlined Analysis with ADePT Software*. Washington, DC: World Bank (2011).

While results and satisfaction with the primary health care system have improved, Uzbekistan's health sector faces considerable challenges to improve the efficiency of service delivery, financial protection of the population, and the quality of services. Table 2.6 summarizes the main strengths and weaknesses in each area.

Area	Strengths	Weaknesses
Health results	• Almost universal coverage of vaccination and preventive measures against the most childhood common disorders.	 Substantial prevalence of malnutrition (10.8 percent). Growing burden of non-communicable diseases. High mortality rates from cardiovascular diseases (CVD), cancer, diabetes, or chronic respiratory disease (CRD).
Health spending	• Uzbekistan outperforms lower- middle-income countries in terms of current health expenditure and domestic general government health expenditure as a share of GDP.	 Domestic general government health expenditure in Uzbekistan was equivalent to just 2.0 percent of GDP in 2018. Uzbekistan does not evidence a decrease in the share of private health expenditures, which accounted for 61 percent of total spending in 2017.
Financial protection		 The overwhelming majority of private health expenditures are OOP. In the absence of a comprehensive public or even private health protection scheme, most of the population has no options for smoothing their risk of health expenditures.

Table 2.2. Strengths and Weaknesses of the Uzbekistan Expenditure Framework for Health

Area	Strengths	Weaknesses
		 High incidence of catastrophic health spending among households in all socioeconomic quintiles. Every year, 2.5 percent of households (or 800,000 persons) are impoverished due to OOP health expenditures.
Model of care	 Reforms have moved the system toward better integration and coordination of primary care. Investments in the quality of primary care through equipment, training, and reorganization of RMUs and CMUs. Investments in emergency services (including emergency hospitals) have resulted in a capable set of well-equipped hospitals. 	 Outpatient care has low resolutive capacity. Lack of continuity or coordination of care between primary, secondary, and tertiary care. Inpatient services are provided in an inefficient, poorly equipped, and fragmented network of hospitals and specialized clinics. Atomized hospital structure does not foster a patient-centered approach to care. No separation between acute care and long- term care.
Effective spending	 Marked shift of government spending toward ambulatory care provision in the early 2000s. Spending on non-wage items increased between 2011 and 2019. 	 Shift of spending toward ambulatory care has stalled. Insufficient fiscal space for non-wage expenditures, especially at the district and city level. Spending on pharmaceuticals is crowded out. Decentralized, frequent procurement of small quantities of medicines by individual health organizations from a chaotic market of low-capacity suppliers. Lack of coverage for high-ROI essential medicines and services and outpatient medicines. Meanwhile, free-of-charge ambulance and emergency services encourages their use instead of primary care. Even in the district and city budgets, which are the main budget holders for primary care, hospitals still spend an equal share of the budget as primary outpatient facilities and multifield polyclinics.
Equity and access	• The regional distribution of spending is relatively well balanced.	 The prioritization of population groups for free secondary and tertiary care and outpatient medications is not driven or integrated with a socioeconomic approach. State financing of medicines is orthogonal to socioeconomic status. Over 40 percent unmet need for care in 8 of the 14 regions. The lack of access to health services is sharper in the lowest socioeconomic quintiles: 55 percent in the lowest quintile vs. 36 percent in the highest quintile.

Area	Strengths	Weaknesses
Human resources	• Staffing of medical doctors is adequate.	 High/possibly excessive levels of paramedical and lower-level nursing staff. Low levels of compensation. Rigid compensation structure and staffing levels. No metrics for staff or institutional effectiveness or performance.
Payment systems for primary care	• Consolidation of primary care in the districts.	 Capitation payment system is not operational. Setup of RMUs and CMUs still favors hospital spending and does not protect spending in outpatient care.
Payment systems for hospital care		 Global budget payment system does not incentivize efficiency of spending. Inpatient care at the oblast and national levels is paid using historical global budgets that are based on the required number of beds, which disincentivizes the efficient organization of care.
Benefits package	• The government's guaranteed (and theoretically free) package of services includes both primary care and emergency care.	• The service benefits package is permeable: On the one hand, secondary level hospitals continue to be mostly funded by the state, although they are not included in the benefits package for most people. On the other hand, the benefits package theoretically includes primary care, but in reality, a large share of the population still pays for primary care.
Management and monitoring	• Treasury system allows for on- time, complete information on state spending to the level of type of expense and legal entity.	 Lack of linkages to systems for managing patient-level information. No information standards or infrastructure to manage electronic clinical information, including electronic health records. Insufficient information to assess hospital service delivery levels or performance. Insufficient information on key health sector resources (including staffing, equipment, infrastructure) to efficiently organize services. No strategic planning or analysis of distributional impact of spending.

Policy Options

Uzbekistan's first challenge is to increase public spending in health and reduce its reliance on outof-pocket expenditures to finance essential health services to the population. In addition, the country faces many challenges related to the structure of its health system. Issues of improving the efficiency of service delivery, the financial protection of the population, and the quality of services can often be traced back to the structure of the system as well as the management and financing systems that are used to operate the systems. This section proposes sequential action lines in three different but interconnected action lines.

Action line 1: Modernize the service delivery model and hospital infrastructure.

The first line of action is to continue to modernize the service delivery model, moving further toward patient-centered care anchored in PHC. PHC needs higher resolutive capacity so that its role can evolve toward the resolution of health problems rather than mainly referring patients to higher levels of care.

Meanwhile, the hospital system also needs to evolve. Hospitals at the oblast level need to be consolidated to move away from vertical single-specialty hospitals and toward general, multi-specialty hospitals with better capacity to care for the whole patient. Consolidation of hospitals could be done around the existing emergency hospitals, which could be converted to general hospitals. Most tertiary-level hospitals should be converted or integrated into general reference hospitals for patients with complicated cases and multiple morbidities. To achieve this transformation, the MoH will need to develop a masterplan for health infrastructure that outlines a consolidated service delivery structure with required infrastructure, human resources, equipment, and care pathways. The master plan should include a consolidation of infrastructure, equipment, staffing, and administration, and the implementation of the new e-health system. Based on the master plan, the MoH will also need to agree on an implementation plan that includes the timeline and the modality of investment (public investment or public-private partnerships should only be initiated once there is clarity that a project is a strategic fit within the master plan, rather than the other way around. Such a large investment plan could be managed through a Health Infrastructure Investment Fund with a 10-year (or longer) investment plan.

Action line 2: Modernize payment systems for primary care and hospitals.

Uzbekistan's public health system would benefit from a gradual transition toward institutional mechanisms that foster the efficient use of resources. In tandem with the modernized service delivery model, there is a need for structural and financial frameworks that nudge providers to provide high-quality, cost-effective care. Moving the financial framework toward strategic purchasing of health services will require redefining the basic benefit package and beneficiary population and costing the package. The basic benefits package should include cost-effective essential outpatient medications that can prevent disability and loss of productivity and save the state budget from unnecessary hospitalizations. Moving payment systems away from a historical budget and toward output-based financing will require new contracting modalities for primary and hospital levels, such as capitation-with-performance for primary care and case-based financing for hospitals. This will need to be accompanied by clear quality standards and clinical guidelines and strengthened reporting systems, as well as quality monitoring mechanisms. The

implementation of new contracting mechanisms is complicated, and different countries have chosen different paths; in some countries, purchasing agencies are fully independent from the MoH, while in others, there is a more integrated setup or an arm's-length relationship between the MoH and the purchasing agency. In the short run, substantial savings could be made from centralizing procurement of medicines and inputs using modern purchasing arrangements such as framework agreements and a centralized catalog.

Action line 3: Strengthen the regulatory environment and health system management.

The transition to modern service delivery and financing models should be supported by strengthened regulation and health system management capacity. Fundamental regulatory and supervision functions include licensing of health personnel, licensing and supervision of pharmaceutical suppliers, and supervision of quality of care. The private sector is expanding at a fast pace, but currently operates mostly in a vacuum of oversight. Creating a conducive environment for inclusive, high-quality services will require market level regulations, including stringent and transparent licensing and registration.

Another fundamental investment is the e-health/clinical information system, starting with truncal modules (patient registry, health facility registry) and the key modules for outpatient care, inpatient care, and referrals. Health facility equipment and connections will need to be upgraded, and health personnel and administrative staff will need to be trained on computer skills. Critically, information systems should not automate the existing, inefficient, statistics-oriented processes, but rather should support the transition toward high-quality, efficient, and patient-centered care. Strengthened management information systems and analytical capacity could then be built on the new information systems, helping the transition to strategic management of the health system.

Reforming the health service delivery model and moving toward modern payment systems for health services are significant reforms that will require broad national consensus as well as a solid strategy. A national strategy for the health sector that includes health financing, service delivery, and e-health could frame and guide all reform initiatives. The strategy should be based on a shared vision built with multiple stakeholders, including all relevant government ministries, private sector leaders, and civil society groups, and clearly outline the strategic reforms needed to achieve this vision, as well as the respective roles and responsibilities of each stakeholder group. The strategy needs to identify the desired structure of the health system and specify the reforms that will line up to the desired change. The strategy will include (1) general financing strategies (fiscal allocation and mobilization strategies including decisions on the use of contributory insurance, general taxation, and OOP expenditures); (2) the general principles of the new service delivery model; and (3) the role of the private sector in service delivery and financing.

Bold reforms and increases in the financial protection of the population will not be possible without an expansion of the fiscal space for health. The current levels of government spending on health do not allow enough fiscal space to provide essential health services, including essential medications. In addition to general taxation, the government may want to consider introducing or increasing excise taxes on tobacco, alcohol, and sugarsweetened beverages, which could both reduce the consumption of items that are harmful to the population's health and raise additional revenue.

Chapter 3. Education

Summary

Uzbekistan is one of the early adopters of the World Bank's Human Capital Project, which includes the Human Capital Index (HCI) that quantifies the contribution of education and health to the productivity of the next generation of workers. The HCI for Uzbekistan shows a score of 0.62, which means that by age 18, a student has fulfilled only 62 percent of potential. Students in Uzbekistan are expected to complete 12 years of schooling by age 18, but instead only complete the equivalent of 9.1 years of schooling. This leaves a learning gap of 2.9 years of schooling, which clearly indicates the need for better education quality. There is also a large gap between poor and good performers that shows that learning equity should be the overarching objective of education policy and of education spending. The estimated learning losses due to COVID-19 for Uzbekistan will reduce expected earnings by an estimated 3.5 percent, which amounts to purchasing power parity of US\$465 million per year. Fortunately, the government of Uzbekistan protected education spending, especially teacher salaries, which allowed for distance education to mitigate the negative effects of the pandemic. Determining the true learning losses and recovering those losses should be a priority for education policy over the next two years. At the provincial level, there are significant differences in per student expenditures that may reflect regional cost differences that need to be analyzed in more detail. From 2018 to 2019, public spending in education increased as a share of total budget spending and of GDP, mostly due to the expansion of the preschool education system and the recent reform to expand general secondary education (GSE). Investing in infrastructure increased significantly in the pre-pandemic years in 2017-19, but it was cut during the pandemic. The recent focus of education policy on preschool enrollment has captured a significant share of public expenditures, to the point where the expenditures per capita in preschool are higher than per capita expenditures in general or specialized secondary education. Spending on GSE is likely to continue increasing due to the reform that included two additional years of schooling and the increase in salary of teachers.

Uzbekistan's education system should deepen reforms to ensure education quality and learning equity, and the Education Sector Plan (ESP) 2021-2023 objectives need some important revisions. A key shortcoming of the education system is the lack of information on learning outcomes. On the access side, the government plans to increase the number of preschools and to engage private providers to expand coverage and to save on capital expenditures. Elevating the quality and prestige of preschool teachers is also an important objective, making sure there are career paths that involve training and better salaries. The plan also calls for curricular innovations and assessments, and strengthening school quality and relevance. Parent engagement is another priority, but the mechanisms for it are still in development. Inclusion needs to be in the educational agenda: GSE policies still follow a traditional and antiquated approach for addressing vulnerable children, as it ignores the different types of vulnerability outside of physical disability. Although there exists statistical information about children with disabilities, there is no information on the size and characteristics of vulnerable groups, nor specific plans for addressing inequality. Broadening the perspective of vulnerability among children is an important issue that can have important budgetary and programmatic implications in the near future. Estimations of out-of-school children (OOSC) is underestimated, and without an analytical context explaining why children are out of school (for example, early marriage, poverty, discrimination, transportation), there are no indicators that can be monitored or targets for their reduction. The government should be able to review the results of its policies on a continuous basis to refine the work plan and become more cost-effective. There are important policies left out that would

require better planning and analytical capacity now absent in the three ministries; a key item in the policy portfolio includes strengthening the managerial and analytical capacity, capacity for planning, financial management, and assessment and monitoring capacity of the MoPE and MPSE. The educational expenditures need to resolve the issues affecting learning equity by directing efforts and funding toward the problems outlined above, since how expenditures are used in education is as important as how much is spent. Education expenditures need to be targeted on those policies that will improve system performance. Learning equity and education quality should be the overarching objectives for education spending in preschool, and equity considerations should drive preschool policies. Therefore, funding should be set aside for identifying and serving underserved populations, such as children in isolated areas, children in extreme poverty, and children whose language is different than that of the classroom. Here the issue does not call for additional funding, but for its redistribution, to improve educational equity in preschool. Learning equity and system accountability should guide the choice of policies in GSE. Counting and monitoring the actions taken to serve OOSC and the poor should be part of the MoPE's operation budget. Regular measuring and reporting of quality of student learning is essential: the analysis of the TIMSS/PIRLS assessment brought to light very practical lessons that need to be in the budget. First and foremost, funding for the design and implementation of standardized testing, and funding for the post-test analysis using socioeconomic data of the children participating in the assessment are fundamental. Testing can be expensive, and efforts can be made to obtain external financing for these purposes. What these plans are lacking is the capacity for self-evaluation and for internalizing the need to collect quality data that can be returned to the school level to help school principals make better decisions. For that, the issue is not one of additional funding but of using existing funds to improve system management. Regarding women in higher education, the government should change its approach: instead of investing in gender equality, invest in human capital to increase productivity and economic growth.

Overview

Uzbekistan's education system should deepen reforms to ensure education quality and learning equity. The Education Sector Plan (ESP) of 2013–2017 set the stage for the reforms outlined in the ESP 2021-2023; additional reforms aim at expanding access to preschool education, restructuring the offerings for secondary and specialized education, and expanding access to higher education. This is a work in progress, as the education sector remains highly regulated but committed to continuous improvement through the design and implementation of appropriate reforms. The ESP 2019-2023 considers the development strategy as well as various presidential decrees and government resolutions aimed at improving education sector, addressing developmental priorities formulated in line with international education commitments.⁴² The current ESP focuses on two important objectives: (1) the introduction of competency-based curriculum; and (2) the implementation of learning assessments, which would set the stage for improving system accountability and student performance. In pursuing these objectives, the ESP 2021-2023 also aligns the national development policy with the Sustainable Development Goals (SDGs), including SDG 4, on inclusive and equitable quality education and promotion of lifelong learning opportunities for all.⁴³ It also integrates SDG

 ⁴² Government of Uzbekistan. 2018. Education Sector Plan of Uzbekistan 2019-2023. Tashkent.
 <u>https://www.globalpartnership.org/sites/default/files/2019-04-gpe-esp-uzbekistan.pdf.</u>
 ⁴³ https://sdgs.un.org/goals/goal4.

targets and indicators into central, sectoral, and regional strategies, as well as into annual legal, budgetary, and reporting processes.

Uzbekistan's young and growing population can be a great asset for the country, provided that children and youth have access to quality education. The country's population has doubled since 1980 and is approaching 32 million (31.96 million in 2018). This brings the potential to reap a period of high and prolonged growth, boosting prosperity and reducing poverty and inequality. However, as the working age population ages out, the workforce is predicted to start dwindling by 2048 (Figure 3.1) with the inevitable change in its age dependency ratio, where the percent of old people will increase and the percent of young dependents will decrease (Figure 3.2).⁴⁴ Such a change places a heavier burden on the economically active population, implying that if Uzbekistan invests in education to improve productivity, it will be able to continue growing its economy and improving its quality of life, as investing in its human capital is the basis for a more productive, innovative, inclusive and stable society.⁴⁵

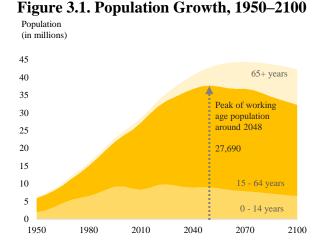
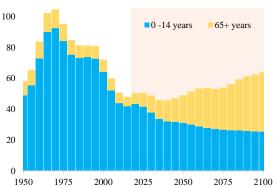


Figure 3.2. Total Dependency ratio, 1950–2100





Source: United Nations, Department of Economic and Social Affairs, Population Division, World Population Prospects (UN WPP). 2017. https://www.unicef.org/uzbekistan/media/686/file/Generation%202030%20Uzbekistan.pdf.

Human capital development

Uzbekistan has a fast-growing school-age population that varies across regions. Between 2016 and 2019, the population grew from 31.6 million to 33.3 million, almost a 6 percent increase in three years. Moreover, around 37 percent (12 million people) of the population is under age 19. More remarkably, the population has almost doubled since 1980, when it stood at 15.9 million. Even though this growth rate recently slowed, the average annual growth between 2016 and 2019 remains at 1.8 percent.

https://data.worldbank.org/indicator/SP.POP.DPND?locations=UZ&view=chart.

⁴⁴ The total dependency ratio is defined as the sum of ages 0-14 population and the elderly population (ages 65+) divided by the population of working age. A high ratio indicates that the working-age population and the overall economy face a greater burden to support the young and old dependents.

⁴⁵ Dankov, Artem. 2020. The Paradoxes of Social and Economic Development in Central Asia. *Modern Diplomacy*, February 2, 2020. <u>https://moderndiplomacy.eu/2020/02/02/the-paradoxes-of-social-and-economic-development-in-central-asia/</u>.

These demographic features pose additional challenges to the education system. The largest populated regions currently face fewer access and enrollment challenges for their school-age population, but the population is predicted to grow significantly in coming years. However, less populated regions, including Khorazm and Karakalpakstan, are already experiencing significant pressure on access to education and enroll high shares of their population in pre-university education institutions.

Population fluctuations indicate a change in budget needs. Growth in the 0–2 and 3–7 age groups is 2 percent and 1.6 percent, respectively, with large variations being observed across the 14 regions, and around 3 to 4 percentage point differences between the highest and lowest rates (Figure 3.3). Because of their relatively high growth rates in these two age groups, regions like Jizzakh and Surkhandarya are subject to higher budget pressure and bigger challenges in preschool and primary education during the next decade.

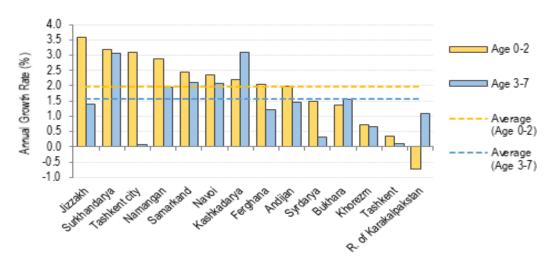


Figure 3.3. Annual Population Growth Rate, by Region, 2015–19

In short, Uzbekistan is facing significant demographic pressure, particularly for the age group 0–7, and its extent varies across regions. The effects of a growing population are already visible in Namangan, where the population ages 0–3 grew on average by 4.5 percent between 2013 and 2016. This exerts further pressure on the education system, in a region where, on average, about 1,000 students enroll in each GSE school located in urban areas, and where 64 percent of GSE schools operate in double shifts (that is, morning and afternoon shifts at the same school). In Kashkadarya and Djizzak regions, where the population ages 0–3 grew second and third highest from 2013 to 2016, respectively, 65 percent and 82 percent of GSE schools operate in two or more shifts.

Uzbekistan is one of the early adopters of the World Bank's Human Capital Project and includes the Human Capital Index (HCI), which quantifies the contribution of education and

Source: State Statistics Committee of Uzbekistan, 2019. <u>https://stat.uz/en/181-ofytsyalnaia-statystyka-en/6383-demography.</u>

health to the productivity of the next generation of workers. The HCI for Uzbekistan shows a score of 0.62, which means that by age 18, a student has fulfilled only 62 percent of potential (Table 3.1). In comparison, high-performing countries have a full 100 percent score, and other countries in Europe and Central Asia also score better than Uzbekistan.

	Uzbekistan	Top Systems	ECA Region
Probability of survival to age 5	0.98	1.0	0.99
Expected years of school	12.0	14.0	13.1
Harmonized test scores	474	625.0	479
Learning-adjusted years of school ⁴⁶	9.1	14.0	10.36
Fraction of children under 5 not stunted	0.89	1.0	0.9
Adult survival rate	0.87	1.0	0.9
Human Capital Index	0.62	1.00	0.69

Table 3.1. HCI 2020 Components for Uzbekistan and ECA Region

Source: World Bank.(2020).

The HCI shows that Uzbekistan needs to invest in its human capital now. According to the HCI 2020, students in Uzbekistan are expected to complete 12 years of schooling by age 18, but under learning-adjusted years of schooling (LAYS) this number drops to 9.1 years of schooling. This means that Uzbekistan has a learning gap of 2.9 years of schooling. Such a gap clearly indicates that education quality needs to be improved. For comparison, Russia scores 10.9 and the Organisation for Economic Co-operation and Development (OECD) norm is 10.8 (Figure 3.4). To compare internationally, Uzbekistan has a relatively narrower gap between expected and learning-adjusted years of schooling than that of the Council of International Schools (CIS) average and the upper- and lower-income country averages, but is further behind the OECD average and Russia's indicators.

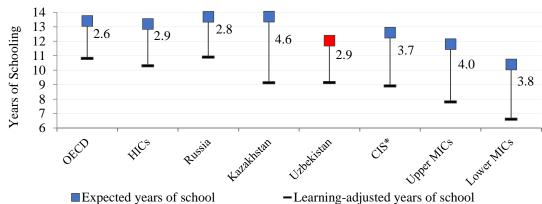


Figure 3.4. Difference between Expected and Learning-Adjusted Years of Schooling

Source: Human Capital Index (HCI) database, World Bank, accessed in October 2020. *Note:* *Turkmenistan is not included in CIS average, as no data are available. CIS = Commonwealth of Independent States; HICs = high-income countries; Lower MICs = lower-middle-income countries; OECD - Organisation for Economic Co-operation and Development; Upper MICs = upper middle-income countries.

⁴⁶ LAYS are calculated by multiplying the expected years of schooling by the ratio of the most recent harmonized test scores to 625, where 625 corresponds to advanced attainment on the TIMSS (Trends in International Mathematics and Science Study) test. <u>https://ourworldindata.org/grapher/learning-adjusted-years-of-school-lays</u>.

Student assessment and associated factors

A recent student assessment shows significant learning gaps. In 2018, UNICEF conducted a nationally representative assessment of grade 4 students using a combination of Trends in International Mathematics and Science Study (TIMSS) for math and science, and Progress in International Reading Literacy Study (PIRLS) for reading.⁴⁷ The study was conducted in close collaboration with the State Inspectorate for the Supervision of Education Quality. TIMSS/PIRLS results from 2018 were calibrated using item response theory (IRT) methods, where test items have different weights based on their discriminating power and level of difficulty. The IRT scale has a range of 0 to 1,000, with a mean of 500 and a standard deviation of 100. The results show that after standardizing the test scores, the average achievement score was 52 percent. Reading comprehension was 50 percent; math, 52 percent; and science, 59 percent.⁴⁸

Inequalities in learning outcomes are significant. The Standard Age Score (SAS) for the 10th percentile was 363, significantly lower than the 623 points scored by students in the 90th percentile (Table 3.2). However, a better estimator of inequality is the interquartile range, which shows the difference in the number of points scored between each quartile: 137 points. This range shows that in terms of learning outcomes for grade 4, learning equity is very low. For example, the math score for the 75th quartile is 573 and the score for the 25th quartile is 435. The difference between these two quartiles is 138 points, or 1.4 Standard deviation (SD). It is estimated that one SD is equivalent to about four years of schooling.⁴⁹ On average, the PIRLS scores for Uzbekistan are similar to the PIRLS 2016 scores for Bulgaria and Kazakhstan, and higher than Georgia and Azerbaijan.

Percentile Scores Summarized Achievement Score (SAS) Reading Math Scien						
Tercentile Scores	Summarized Achievement Score (SAS)	Keaung	Iviatii	Science		
Lowest	154	209	135	162		
10th	363	358	365	369		
25th	435	433	435	433		
50th	507	508	504	503		
75th	572	572	573	571		
90th	623	625	625	625		
Highest	767	764	782	737		
Overall range	613	555	647	575		
Inter-quartile range	137	139	138	138		

Table 3.2. TIMSS/PIRLS Test Scores and Their Distribution by Percentiles

Source: UNICEF 2019.

Note: PIRLS = Progress in International Reading and Literacy Study; TIMSS = Trends in International Mathematics and Science Study.

The analysis of the assessment data led to important insights about education policy and, by implication, about the targeting of educational expenditures. Using multivariate

⁴⁷ UNICEF. 2019. "Student Learning at Primary Grades in Uzbekistan: Outcomes, Challenges, and Opportunities: A Summary of Uzbekistan National Learning Achievement Study, Grade IV." July 2019, Tashkent: UNICEF. https://www.unicef.org/uzbekistan/en/reports/student-learning-primary-grades-uzbekistan-outcomes-challenges-andopportunities.

⁴⁸ Ibid, p. 39.

⁴⁹ Evans, David K., and Fei Yuan. 2019. "Equivalent Years of Schooling. A Metric to Communicate Learning Gains in Concrete Terms." Policy Research Working Paper 8752, World Bank, Washington DC. https://documents1.worldbank.org/curated/en/123371550594320297/pdf/WPS8752.pdf.

regression methods, where school, household, and personal characteristics are used as independent variables, the analysis of this assessment indicates that, after controlling for school effects, home factors account for 55 percent of the variation, regional factors account for 15 percent of the variation, and school factors account for 30 percent of the variation. High-performing schools had lower within-school variation in test scores, and by inference, had better learning equity. *Student-teacher ratios did not have any effect on test scores*, but the quality of the infrastructure and the school environment did have an impact on student performance. Students who attended preschool performed better than students who did not. Teachers with at least five years of experience or a master's degree made a larger impact than entry-level teachers or those with only a bachelor's degree. These findings clearly suggest that learning equity and the factors affecting education quality should be at the forefront of targeting educational expenditures.

Estimated learning losses for Uzbekistan have been relatively modest. Using a simulation model, World Bank estimates suggest that COVID-19-related learning losses are close to 0.11 SD (Figure 3.5). Learning loss related to the pandemic may amount to an overall economic loss of up to PPP of US\$425 million every year. The learning loss and the reduced years of schooling for student cohorts affected by the pandemic will reduce their expected earnings by an estimated 3.5 percent, assuming that a year of schooling increases earnings by 8 percent on average. Despite fiscal constraints posed by the pandemic, the Uzbekistan government protected education spending, especially teacher salaries, which allowed for distance education to mitigate the negative effects of the pandemic.

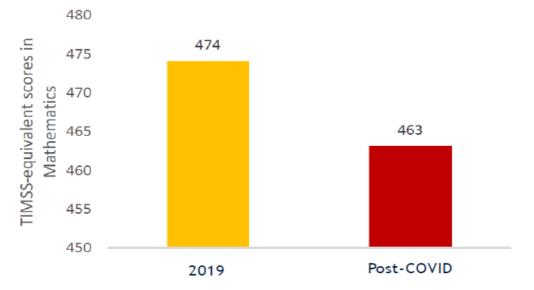


Figure 3.5. Estimated COVID-19 Learning Loss in Uzbekistan

Determining the true learning losses should be a priority and recovering those losses should drive education policy for the next two years. Recovering learning losses implies the identification of the individual learning loss through testing and assessment. It should be followed by the grouping of children with similar levels of achievement, and work with individual children should focus on

Source: World Bank 2020.

mastering the foundational skills using a simplified curriculum. Once student assessments show that children are at the right level, then the normal curriculum should be implemented.⁵⁰

Structure of the education sector

Uzbekistan's education system comprises multiple decision makers. It is currently managed by three ministries: the Ministry of Preschool Education (MPSE), the Ministry of Public Education (MoPE), and the Ministry of Higher and Secondary Specialized Education (MHSSE). Several other governmental agencies play different roles in the management of higher education. The current education system comprises 12 years of mandatory schooling, with 11 years of GSE, preceded by a year of preschool, which became mandatory in March 2020. Figure 3.6 illustrates the structure of the education system.

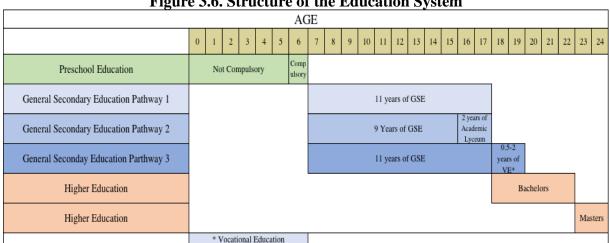


Figure 3.6. Structure of the Education System

Source: Uzbekistan Education Sector Analysis Report.

The total number of students has been steadily increasing over the past few years, especially in preschool education. Uzbekistan's education system comprises 30,181 educational institutions that cater to around 8.1 million pre-university students. There are nearly 700,000 teachers. The dominant language of instruction in schools is Uzbek (82.5 percent of GSE schools).⁵¹ While the total number of learners has increased by 30 percent from 2012 to 2021 (from 6.73 million to 8.76 million), the increase has been remarkable in preschool education, where the number of enrolled children has tripled (from 550,000 to 1.7 million), which reflects the scale of the government's objective to massively expand preschool education (Figure 3.7). Between 2013 and 2018, the number of students had been growing at a modest pace, but there is a marked increase in the student population after 2018, indicating that the current efforts at reaching universal coverage in basic education are succeeding. Table 3.3 shows evidence of this increase in coverage: the number of

⁵⁰ Arcia, Gustavo, Rafael de Hoyos, Harry Patrinos, Alina Sava, Tigran Shmis, and Janssen Teixeira. 2021. "Learning Recovery after COVID-19 in Europe and Central Asia: Policy and Practice." ECA Education. World Bank, Washington DC. https://documents1.worldbank.org/curated/en/836481622436593904/pdf/Learning-Recovery-after-COVID-19-in-Europe-and-Central-Asia-Policy-and-Practice.pdf.

⁵¹ Education in Uzbekistan 2017, State Committee on Statistics. https://www.globalpartnership.org/sites/default/files/2019-04-gpe-esp-uzbekistan.pdf.

Note: GSE = general secondary education.

preschool institutions has grew from 6,381 in 2018 to 19,316 in 2020, and the number of preschool students grew by 88 percent during this period, from 932,000 in 2018 to 1.76 million in 2020. Table 3.3 also shows a slight decline in specialized secondary education.



Figure 3.7. Number of Learners in Different Levels of Education in Uzbekistan, in Thousands

Source: The Government of Uzbekistan (https://www.globalpartnership.org/sites/default/files/2019-04-gpe-esp-uzbekistan.pdf).

Table 3.3. Education System Growth, 2015-20								
	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020	2020/2021		
Number of Institutions								
Preschool	5,126	5,138	5,186	6,381	12,115	19,316		
General secondary	9,720	9,719	9,718	9,774	9,942	10,008		
Specialized secondary	1,567	1,566	1,556	1,537	1,117	725		
Higher education	69	70	72	98	122	132***		
	Number of Students (thousands)							
Preschool	634	691	733	932	1,413	1,760		
General secondary	4,671	4,825	5,271	5,851	6,053	6,236		
Specialized secondary	1,499	1,459	1,163	728	282	177		
Higher education	264	268	298	360	469	590		
	Number of 1	Full-Time Te	achers (thous	sands)				
Preschool	58	60	63	81	95*	117		
General secondary	394	400	420	458	482**	501**		
Specialized secondary	111	110	91	50	21	17		
Higher education	25	24	25	26	27*	30		

Table 3.3. Education System Growth, 2015-20

Source: National Security Council, Ministry of Finance, Ministry of Public Education, Ministry of Higher and Secondary Specialized Education, and Ministry of Preschool Education of Uzbekistan.

Notes: *Public institutions only. **Includes permanent full-time and part-time teachers. *** The number of higher education institutions in Uzbekistan has been increasing after 2020 and reached 198 institutions by end-2022 (Address by the President of Uzbekistan Shavkat Mirziyoyev to the Oliy Majlis and the People of Uzbekistan on December 20, 2022).

Preschool education

The government of Uzbekistan is committed to total enrollment for 6-year-olds in a mandatory last year of preschool education. In 2017, the government embarked on an ambitious plan of universal enrollment for 6-year-old children by 2025. Starting in the 2021–22 school year, preschool enrollment of all 6-year-old children will be compulsory. The implementation of this policy plans for a regionally staggered introduction, with the first cohort having started on October 15, 2020.

General secondary education

In GSE, the reforms focus on improving quality mainly through better teaching conditions and practices. Presidential Decree N° 6108 proposes, inter alia, short- and medium-term goals aimed to increase the status of teachers and to incentivize high performance by teachers and school principals. Salaries of the principals and vice-principals of GSE schools that have a high rate of admission of graduates to universities and professional education institutions will receive a bonus pay in the range of three to 12 times the minimum wage. By 2024, the monthly salary of high-performing teachers will be gradually increased up to 15 times the minimum wage. Incentives for performance will imply that teachers of the winners of international scientific olympiads will be promoted to the highest qualification category. The presidential decree also focuses on professional development for teachers in Syrdarya region in 2020, and aimed to include Bukhara, Fergana, and Samarkand regions and the capital city of Tashkent the following year.

Compulsory and free GSE explain the nearly universal coverage in this level of education. Enrollment in GSE has remained high over time and has slightly increased since the academic year 2015–16. Access to GSE is comparable to that in other countries in Europe and Asia, although the gross enrollment rate (GER) for grades 5–9, which is equivalent to lower secondary education, lags.

Secondary specialized vocational education (SSVE)

Uzbekistan is reforming its SSVE system to conform to the International Standard Classification of Education (ISCED). In accordance with Presidential Decree #5812 "On additional measures to further improve professional education system," starting from the 2020–21 academic year, a network of educational institutions will introduce a new system of primary, secondary, and vocational education in accordance with ISCED. These programs last from six months to two years, depending on the specialization, and target both employed and unemployed learners. These changes are aligned with international best practices in lifelong learning. It is worth mentioning that enrollment within the Uzbekistan SSVE system is high and on par with the rates of European countries such as Austria and Poland.

Higher education

One of the most pressing issues in higher education in Uzbekistan is access, which is currently very low, yet the demand is high. In fact, the gap between demand for and admissions to higher education is increasing over time. Higher-education enrollment in Uzbekistan is significantly low at 15.9 percent⁵². The rate is lower for women compared with men, as explained in Box 3.2. Increasing higher education enrollment is strategic for the country, and the government is committed to raise the enrollment rate to 50 percent by 2030. Uzbekistan's economic expansion has encountered a shortage of higher-education graduates. In the past four years, 53 new higher education institutions (HEIs) have been established, bringing the total number of HEIs to 132 (MHSSE 2020). This includes 28 local and 28 foreign HEI branches, as well as 24 non-governmental HEIs.

Box 3.2. The Gender Issue in the Access to Higher Education in Uzbekistan

Uzbekistan's higher-education enrollment rate is low, and is lower among women compared with men. The gross enrollment rate for women is markedly low at 14 percent (UNESCO UIS 2020). Although this registers a 6-percentage-point improvement over a decade ago, it is insufficient progress in comparison with male peers. In fact, women's higher education GER in 2020 is equivalent to that of men in 2010.

Enrollment in higher education is prominently by men, and only 46 percent of higher-education students are women. In contrast, in the rest of the world, women's enrollment rates have reached parity with or surpassed those of male students. In high-income countries, on average, 54 percent of students in higher education are women. Uzbekistan's rate is below the average of 49 percent of women participating in higher education in lower-middle-income countries today. Women's enrollment in higher education in Uzbekistan is also below that in neighboring countries, including Tajikistan, which made considerable progress in enrolling more women in universities over the past decade; in Uzbekistan, the share of female students remained at around 40 percent over the same period.

By the Resolution of the Cabinet of Ministers #402, of June 23, 2020, targeted benefits are aimed at incentivizing women to enroll in higher education; equity and inclusion are key considerations for increasing enrollment among women who have low incomes, are disabled, or have particularly disadvantaged backgrounds.

Despite forward changes in higher education, it has experienced slower progress compared with other subsectors. A per capita financing mechanism was introduced in 2010, and the formula includes compensatory coefficients, with additional funding for orphaned and disabled students. These coefficients are jointly determined by the MHSSE and Ministry of Finance (MoF) every year. In 2012, quality assessment for the sector was moved away from an input-focused approach to an outputs-oriented one, setting the basis for the creation of a university ranking, first published in August 2018.

⁵² The UNESCO Institute for Statistics (UIS), 2020.

The Uzbekistan government also aims to foster innovation to ultimately promote economic growth; the country wants to become a top 50 in the Global Innovation Index by 2030. In September 2018, the government adopted the Strategy for Innovative Development for 2019–2021, which is designed to improve research excellence; strengthen the links between education, science and industry; and increase public and private investments in innovation, research and development, and modern technologies. Gross expenditures in research and development are expected to quadruple from 0.2 percent to 0.8 percent of GDP from 2018 to 2021.⁵³

Key findings and challenges

The overarching issues in public education in Uzbekistan are education quality and learning equity. Access to preschool education, at the center of the government's education policy, is improving rapidly; access to grades 1–11 in general education is almost universal, and post-secondary education is being revised within the context of private sector development and the dynamics of the labor market. However, access to education among children with disabilities and for vulnerable groups could improve substantially, and the quality of general education can be improved to be on par with OECD levels. Hence, *the focus of the analysis of educational expenditures is how to target them to improve quality and increase learning equity*.

Patterns of spending on education

Overall spending

Uzbekistan has been investing modestly in the education sector compared with OECD countries over time. In 2019, Uzbekistan spent 5.6 percent of its GDP on education; this amount represented 18.1 percent of the total public expenditure. The government's spending on education in 2019 was proportionally higher than the average of OECD countries (5.0 percent of GDP in 2017 and 5.2 percent of GDP in 2019) and higher than several other middle-income countries (Figure 3.8), which suggests that its quality could improve to reach parity with these countries. given that level of financial effort.

⁵³ https://www.worldbank.org/en/news/press-release/2020/10/28/uzbekistan-to-modernize-its-national-innovation-system-with-support-from-the-world-bank.

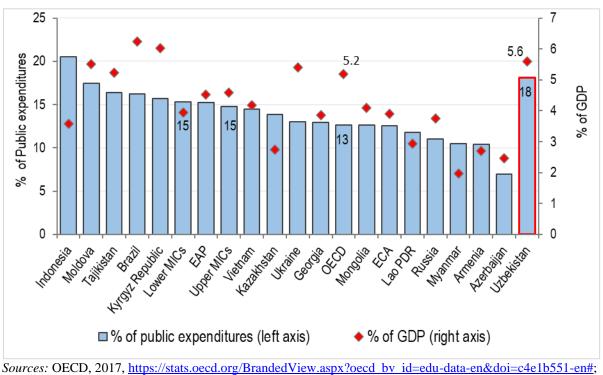


Figure 3.8. Public Education Spending as a Share of Total Spending and GDP

Sources: OECD, 2017, <u>https://stats.oecd.org/BrandedView.aspx?oecd_bv_id=edu-data-en&doi=c4e1b</u> Singapore Department of Statistics,

https://www.tablebuilder.singstat.gov.sg/publicfacing/createDataTable.action?refId=15204; World Development Indicators, DataBank, World Bank, accessed in October 2020.

Note: Uzbekistan data for 2019 are from the MoF and State Statistics Committee of Uzbekistan. EAP = East Asia and Pacific; Lower MICs = lower--middle-income countries; OECD = Organisation for Economic Co-operation and Development; Upper MICs = upper-middle-income countries.

Public expenditures on education were not reduced during the COVID-19 pandemic. Public expenditures on education had been growing in 2016, reaching 23.5 percent of total budget expenditures and 5.7 percent of GDP (Figure 3.9). However, before the COVID-19 crisis, education expenditures were reduced in 2017 and 2018 to 16.6 percent of total budget spending and 4.8 percent of GDP, which may be partly explained by the impact of reform of the exchange rate in 2017. Education expenditures increased again in 2019 and were not reduced during the pandemic. Unlike many other countries of the world, the GDP in Uzbekistan grew during the pandemic crisis by 1.9 percent in 2020 and by 7.4 percent in 2021. Such growth helped maintain the overall level of public expenditures on education during the pandemic almost at the average level of pre-pandemic years, in 2015–19.

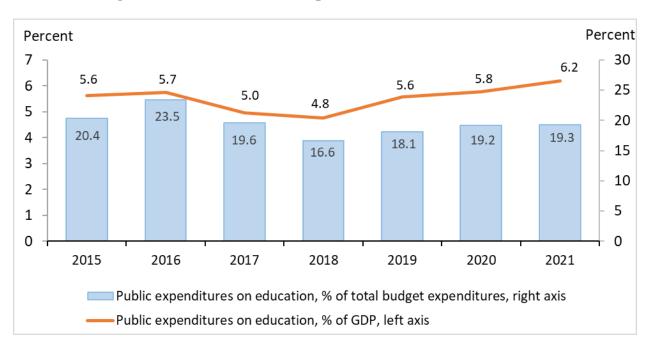


Figure 3.9. Trends in Public Expenditures on Education, 2015–21

Source: World Bank staff estimates using data from the MoF of Uzbekistan.

From 2019 to 2021, public spending in education increased as a share of total budget spending and of GDP. One plausible explanation is the increase in salaries of general secondary and preschool education teachers by an average of 59 percent and 43 percent, respectively.⁵⁴ Another reason relates to the Extra-Budgetary Fund for Development of Material and Technical Basis of Educational and Medical Institutions, which was consolidated in the government's budget plan of 2019.⁵⁵ The fund was created in 2017 to finance capital expenses in all levels of education, receiving central government allocations as a separate line item labeled "education and health" sector. Starting in 2019, investment and other expenses previously incurred through the fund haven been financed directly from the central budget.

The expansion of the preschool education system helps explain the increase in spending from 2018 to 2019. The enrollment rate increased almost 15 percentage points, from 37.7 percent to 52.3 percent from 2018 to 2019.⁵⁶ This and the recent reform to expand GSE demand an increase in budget to accommodate the needs of additional inputs, including infrastructure, teachers, and learning and teaching materials.

How does Uzbekistan compare with other countries in education expenditures? As a share of GDP, Uzbekistan spends as much in higher education as CIS countries but less than OECD countries. In 2019, spending on higher education in Uzbekistan increased

⁵⁴ Ministry of Finance (2019). *Budget for Citizens*.

⁵⁵ Ibid.

⁵⁶Data from Ministry of Preschool Education and *Uzbekistan National Voluntary Review 2020 on the Implementation of Agenda 2030* (in Russian), 2020.

from 0.5 percent of GDP in 2015 to 0.6 percent of GDP in 2019, which is less than the OECD average (0.9 percent) but slightly more or on par with the CIS average (0.5), except for the Russian Federation (0.7 percent). However, Uzbekistan's s relatively low enrollment rate (12.6 percent in 2019) in contrast with the OECD average (44 percent in 2018) signals potential spending efficiency issues in Uzbekistan (Figure 3.10).

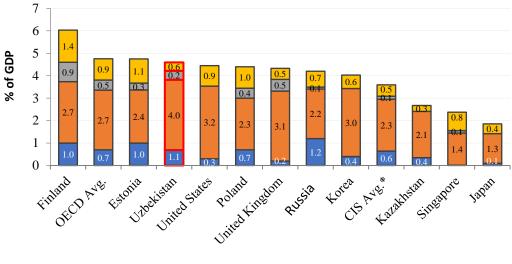


Figure 3.10. Education Spending as a Share of GDP, by Education Level

■ Preschool ■ Primary + General Secondary ■ TVET ■ Higher Education

Sources: World Bank EdStats; OECD (latest available data 2017-2019), <u>https://stats.oecd.org/index.aspx?r=868273#</u>, accessed in April 2022.

Note: *Tajikistan and Turkmenistan are not included, as their latest available data are before 2016. In Uzbekistan, General Secondary Education includes both primary and general secondary education. Specialized Secondary Education is the same as TVET. For OECD member countries, the government education spending includes only government direct expenditures; hence, the sum of percentage of all levels of education may be lower than the percentage shown in Figure 3.5. For comparator countries that don't have data on TVET, the category is either not applicable in the country or included in other categories. Preschool presented in this graph includes both early childhood educational development (ages 0–2), if applicable, and pre-primary education (ages 3–6). CIS = Commonwealth of Independent States; OECD = Organisation for Economic Co-operation and Development; TVET = Technical and vocational education and training.

Expenditure on preschool education as a share of GDP in Uzbekistan is higher than the average of OECD levels. Uzbekistan spent 0.7 percent of the GDP on preschool education in 2015 and 1.1 percent of GDP in 2019, which was more than what most developed countries spent on this education level, such as the US (0.3 percent), South Korea (0.4 percent), and Japan (0.1 percent). The Russian Federation spent 1.2 percent of its GDP in 2019. However, Uzbekistan's relatively low enrollment rate (52.3 percent in 2019) in contrast with the OECD average (87 percent in 2017) signals potential spending efficiency issues in Uzbekistan, which could be analyzed if data on quality were available.

Recent pay increases for teaching and non-teaching staff in the education sector will continue to expand the Uzbekistan government's sizable wage bill. In 2019, the government spent UZS

19.1 trillion (the equivalent of US\$2.2 billion) on staff compensation, which accounts for 81 percent of the total education expenditure. This percentage is the highest among all comparator countries, including OECD countries and CIS peers⁵⁷ (Figure 3.11). Payment for staff in general and specialized secondary education is driving this high percentage. Current expenditures other than staff compensation (for example, maintenance and repairs) is extremely low.

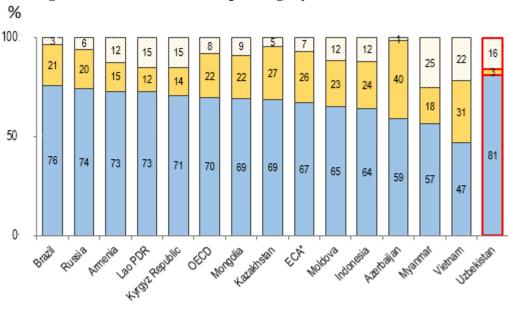


Figure 3.11. Breakdown of Spending, by Economic Classification

Capital expenditures Current expenditures other than compensation All-staff compesation

Source: Uzbekistan authorities and World Bank staff estimates using executed budget from the Mof of Uzbekistan; World Bank EdStats; OECD Education at a Glance database. *Note:* *Countries like Georgia, Tajikistan, Turkmenistan, and Ukraine are not included, due to lack of data. ECA = Europe and Central Asia; OECD = Organisation for Economic Co-operation and Development.

Expenditures by subsector

General secondary education accounts for the largest share of public education spending among subsectors in Uzbekistan. In 2019, from the total public expenditures in education (an amount equivalent to USS\$2.7 billion), the government of Uzbekistan spent the highest share on GSE (around 65 percent of the total budget), followed by preschool education (21 percent), higher education (10 percent), and secondary specialized education (4 percent). Spending on secondary specialized education absorbed a corresponding increase in spending over the same period, as shown in Figure 3.12. It is important to note the lack of disaggregated

⁵⁷ Capital expenditures for Uzbekistan are average for 2010–14.

data on spending on preschool education prior to 2017.⁵⁸ The spending on GSE is likely to continue increasing due to the reform that included two additional years of schooling and the increase in salary of teachers.

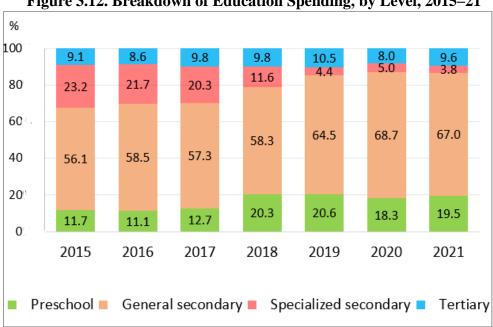


Figure 3.12. Breakdown of Education Spending, by Level, 2015–21

Source: Uzbekistan authorities and World Bank staff estimates using executed budget data from the MoF of Uzbekistan.

The recent focus of education policy on preschool enrollment has captured a significant share of public expenditures, to the point where the expenditures per capita in preschool are higher than per capita expenditures in general or specialized secondary education (Table 3.4). Since parents have to pay preschool fees, this level of expenditures may reflect the higher infrastructure requirements that ensure a higher quality of preschool education, as well as the investment needed to care for children ages 0–5. Per student expenditures in preschool education are about US\$1,300 in PPP terms.

⁵⁸ Until 2017, the MoPE was responsible for the provision of both preschool and general secondary education services. The MPSE was established in late 2017.

			Per student	Per
	Total expenditures	Number of	(UZS	student
	(UZS millions)	students	millions)	(PPP US\$)
Preschool	3,522,496	1,185,775	2.97	1,304
General secondary	16,020,299	6,053,153	2.64	1,162
Secondary specialized	2,043,558	797,700	2.56	1,125
Tertiary	1,925,394	452,462	4.25	1,869

Table 3.4. Public Expenditures in Education, by Level, 2019

Source: MoF of Uzbekistan.

Note: Exchange rate: 1 USD = 9,491 UZS. PPP = purchasing power parity.

Even though the spending on preschool education has historically been low compared with GSE, data show that this pattern is changing. Expenditures on preschool education have increased from 11.7 percent of the total government education spending in 2015 to 20.6 percent in 2019. This has been done mainly to enable the implementation of the ambitious 2017 government program that aims to achieve 100 percent enrollment for children ages 6–7 by 2025.⁵⁹ Within this context, 20,000 new preschools were created in 2019 alone, through the construction of 12 new public preschools, repurposing of 53 empty buildings, and renovation of hundreds of existing preschools. This massive expansion continued in 2020 with the construction of 18 new preschools, the commissioning of 129 empty, and the reconstruction of 260 public preschools.⁶⁰

The government of Uzbekistan has further committed to investing in its preschool teaching workforce by increasing teacher salaries. Continuing its efforts to invest in preschools, the Uzbekistan government introduced a series of changes to the salaries of preschool staff by increasing the base pay by 30 percent in early 2018.⁶¹ Teachers who taught children ages 5–7 saw their salaries matching those of their peers who taught in primary schools.⁶² An additional pay increase for employees in the preschool education system was created in 2020 to accommodate the mandates of a one-year compulsory preparation for children starting primary school from the 2019–20 academic year.

In addition to increasing preschool teachers' salaries, Uzbekistan has also introduced various policies that regulate salary increases for GSE teaching and non-teaching staff. In the 2019 budget, salaries for secondary school teachers in GSE were increased by an average of 59 percent, followed by an increase in salary of 43 percent for primary school teachers. The monthly salary of high-performing teachers is to be gradually increased up to 15 times the minimum payout for labor.⁶³ In addition, incentive funds for public educators will be established.⁶⁴ Finally, the salary of methodologists will be leveled to the base rate amount of a teacher in the highest category.

⁶² World Bank. 2018. "Uzbekistan Education Sector Analysis."

⁵⁹ The target year was originally 2021, but Presidential Resolution #132 "On measures to further develop the system of compulsory one-year preparation of children for primary education," which was adopted on March 9, 2020, revised it to the academic year 2024-25.

⁶⁰ Based on information of the MPSE of Uzbekistan.

⁶¹ Based on Presidential Decree of February 28, 2018, "On measures to improve the terms of payment for certain categories of employees of state preschool educational institutions," beginning on March 1, 2018.

⁶³ Minimum wage base from June 1, 2022, was UZS 920,000 (about \$84) per month.

⁶⁴ https://kun.uz/en/news/2020/10/24/salary-of-school-teachers-to-be-increased-up-to-15-times-the-mpl-by-2024.

To achieve 100 percent enrollment for children ages 6-7 by 2025, considering the high demographic pressure mentioned earlier, spending on preschool education might have to increase up to 105 percent in real terms. A 2025 sensitivity analysis (Figure 3.13)—that assumes that the expenditure per preschool education child holds stable at the current level (around UZS 3.0 million, equivalent to US\$1,420.6 in current USD using PPP) and that the current GER (52.3 percent) holds stable for children ages 3–5—shows the estimates on preschool education spending using different gross enrollment rates for children ages 6–7. The lower bound estimate is that the expenditure on preschool education in 2023 will increase 47 percent from that in 2019 in nominal terms if 50 percent of children ages 6–7 are enrolled in preschool in 2024. A higher bound estimate will be a 105 percent increase if the goal is achieved.

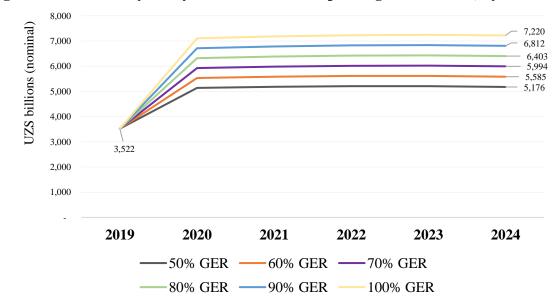


Figure 3.13. Sensitivity Analysis of Government Spending on Preschool, by 2025

Sources: World Bank staff estimates using data from World Bank Population Estimates and Projections; National Security Council and the MoF of Uzbekistan.

At the regional level, there are significant differences in per student expenditures, which may reflect regional cost differences that need to be analyzed in more detail. Figure 3.14 shows significant differences among the provinces, which may be explained by differences in teacher salaries, student-teacher ratios, heating and utilities costs, or differences in operational efficiency. Using general secondary education as a guide, because it accounts for the largest component of the education budget, there are notable differences in per student expenditures. For example, Tashkent City has per student expenditures of UZS 2.15 million, but Navoi has UZS 3.7 million, which is 73 percent higher.

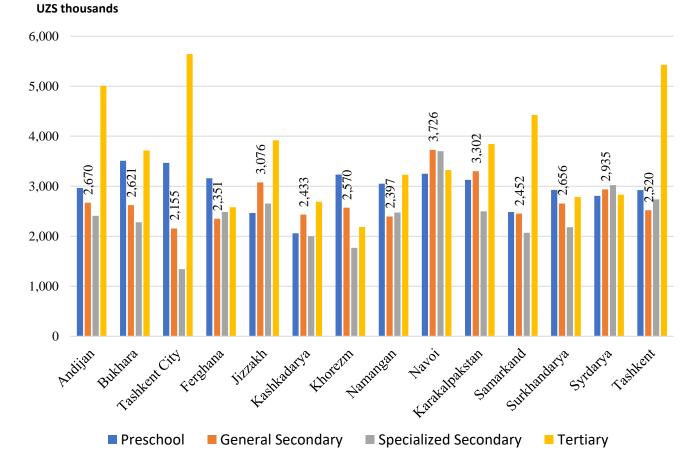


Figure 3.14. Per Student Expenditures, by Level of Education by Region, 2019 (UZS thousands)

Source: World Bank staff estimates using data from the MoF of Uzbekistan.

Differences in per student expenditures do not follow a predictive pattern, as could be suggested by the regional GDP, because per student expenditures as a share of regional GDP per capita, or in relation to poverty, also show large unsystematic variations (Table 3.5). This suggests a *need to analyze equity in per student expenditures in more detail.*⁶⁵

⁶⁵ A review of the age distribution of teachers by provincial (regional) poverty did not show a systematic bias, where the more experienced, more expensive teachers could be in the richer provinces (regions). Hence, a more detailed analysis of teacher costs would be recommended.

Table 5.5 Expenditures as a referent of Regional ODF per Capita								
Region	Preschool	General	Specialized	Tertiary	Regional GDP	Poverty rate		
	(%)	secondary	secondary	(%)	per capita	(US\$3.20/day)		
		(%)	(%)			(%)		
Andijan	28	25	23	47	10,622	12		
Bukhara	25	19	16	27	13,980	8		
Tashkent City	12	7	5	19	29,331	0		
Ferghana	36	27	28	29	8,861	7		
Jizzakh	22	28	24	3%	11,126	3		
Kashkadarya	18	22	18	24	11,233	7		
Khorezm	31	25	17	21	10,337	7		
Namangan	37	29	30	39	8,354	11		
Navoi	9	10	10	9	37,120	5		
Karakalpakstan	31	33	25	39	9,944	16		
Samarkand	25	25	21	45	9,794	17		
Surkhandarya	34	31	25	32	8,597	16		
Syrdarya	22	23	2%	23	12,500	14		
Tashkent	17	15	16	32	17,164	7		
Average	19	17	17	28	14,212			

Table 3.5 Expenditures as a Percent of Regional GDP per Capita

Source: World Bank staff estimates using data from the MoF of Uzbekistan.

Explaining the differences in per student expenditures could be a key factor in targeting future expenditures to achieve learning equity. In order to address learning equity, it is important to analyze expenditures: funding for better teachers, funding for learning assessments, and changes in managerial autonomy at the school level could have a significant impact on the ways expenditures are allocated, even if funding is not increased further.

Investing in infrastructure increased significantly in the pre-pandemic period of 2017-19, but it was reduced during the COVID-19 crisis. The share of capital expenditures in total expenditures on education increased from 9.3 percent in 2017 to 15.9 percent in 2019, and then decreased to 12.2 percent in 2020 and to 9 percent by 2021. The same pattern of capital spending can be seen in the preschool and general secondary education sectors over the same period: it increased in 2018–19 and then decreased to the 2017 level or lower in 2020–21 (Figure 3.15). In tertiary education, the share of capital spending has been decreasing steadily, from 25.4 percent in 2017 to 15.9 percent in 2021. In specialized secondary education, the share of capital spending increased significantly from 1.9 percent in 2017 to 5.3 percent in 2020–21 even during the pandemic.

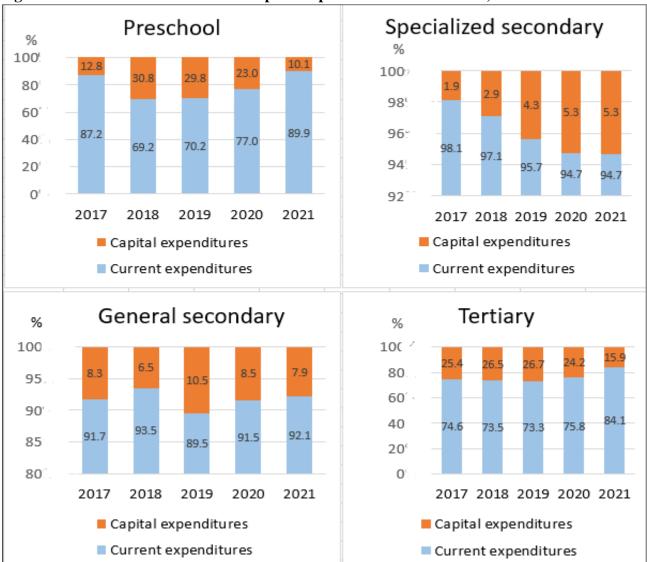


Figure 3.15. Trends in Current and Capital Expenditures on Education, 2017-2021

Source: World Bank staff estimates using data from the MoF of Uzbekistan.

The overall trend of reducing public capital spending during the pandemic years in 2020-21 may be reversed. The reductions in capital expenditures during the pandemic resulted from adjustments in budget expenditures to redirect funds to health and social protection, and to maintain current spending on education, such as teacher wages, school meals, textbooks and teaching materials, and the maintenance of facilities. As a result of COVID-19 lockdowns in Uzbekistan and in trading partner countries, several construction projects were put on hold in 2020–21. However, once the pandemic is over, the share of capital expenditure is likely to be restored to the pre-COVID-19 levels. One of the lessons from COVID-19 is that poverty has increased during the crisis, and therefore, the provision of school meals and instructional materials to the most vulnerable groups will need to continue until their situation improves. Thus, the targeted and well-managed provision of meals and textbooks should continue in order to ensure the returns on access and quality of education, particularly for the poor.

The Education Sector Plan and the future of education spending

Reforms to education need to focus on quality and equity. The reforms aim to expand access to preschool and higher education while also improving the quality of general secondary and specialized secondary education. The Development Strategy 2022–2026 prioritizes seven policy areas, including human capital development. The ESP 2019–2023 addresses developmental priorities formulated in alignment with international education commitments, and integrates the SDG targets and indicators: the plan includes SDG baselines and target values that reflect national aspirations to 2030 while gradually integrating the SDG targets and indicators into central, sectoral, and regional strategies, as well as into annual legal, budgetary, and reporting processes in both the executive and legislative branches.⁶⁶

The ESP 2019-2023 is a good start, but it needs some important revisions.⁶⁷ First, the plan needs to articulate the links between levels of education, which are now in three separate ministries. For example, general secondary education is tuition-free, with parents covering the costs of books, transportation, and uniforms. However, most parents of preschool children pay preschool fees, which can reduce enrollment in rural areas. A key shortcoming of the Uzbekistan educational system is the lack of information on learning outcomes. National assessments with non-standardized tests are administered by classroom teachers; the school assesses students' ability to meet the minimum standards in key foundational skills. The results are used internally and are not made public. As a result, system accountability is low to non-existent, as it depends on the ability of school principals to use the results constructively. The ESP 2019–2023 includes the creation of a National Learning Assessment System (NAS), which will complement classroom student assessments based on competencies, and results from the Programme for International Student Assessment (PISA) and TIMSS, of which Uzbekistan will be a participant country.⁶⁸

The ESP has many policy objectives, but only a few directly address learning equity and education quality. Most policy objectives outlined in the ESP address operational issues or refine the main tenets of the key policy objectives. The ESP has a workplan where the tasks and subtasks implementing policy objectives are listed in great detail. The purpose of Table 3.6 is to show those policy objectives already in the ESP 2021–2023 that need to be high priority in order to ensure leaning equity and better student learning. This list is by no means exhaustive but is comprehensive enough to orient policies that have budgetary implications.

⁶⁶ The UN-World Bank Joint MAPS Mission draft report (2018), "Mainstreaming, Accelerating and Policy Support for achieving Sustainable Development Goals in Uzbekistan." October.

⁶⁷ Begue-Aguado, Alberto. 2018. "External Evaluation Report of the Second Education Sector Plan 2019-2023 in Uzbekistan." Tashkent: UNICEF. <u>https://www.globalpartnership.org/sites/default/files/2019-04-gpe-uzbekistan-esp-appraisal-report.pdf</u>

⁶⁸ Government of Uzbekistan. 2018. Op. cit., p. 104.

	Table 5.6 Selected Policy Objectives in the ESP 2021-2025
Preschool	Access
	• Expand preschool provision and improve physical condition of preschool educational
	institutions.
	• Increase availability of space by constructing additional preschools and expanding the
	capacity of existing ones.
	• Establish/strengthen and implement strategies to engage the private sector in preschool
	expansion/construction/maintenance.
	• Strengthen the regulatory framework to support inclusive education in preschools.
	Service Quality and Relevance
	• Implement an enhanced curriculum based on ELDS.
	Promote innovative learning methodologies and materials.
	• Expand ICT in preschools.
	• Raise teacher qualifications and skills, and improve teaching service conditions.
	• Build managerial capacity building and collaboration with complementary services (health,
	nutrition).
	• Engage parents.
	• Strengthen EMIS.
	Strengthen links with private sector providers.
General	• Improve school facilities for safe and enabling environment.
Secondary	• Identify and serve OOSC.
	• Improve service to disabled children and children with special needs.
	 Improve teachers' service conditions and raise their qualifications and skills.
General	Create a curriculum based on competencies.
Quality of	• Review and revise methods of learning assessment in the classroom.
Education	• Conduct regular sample-based National Assessment Surveys to assess the learning
	outcomes at the system level.
	 Improve the supply of school equipment and pedagogical materials.
	• Expand ICT.
	 Improve teachers' service conditions and raise their qualifications and skills.
Courses Education	Sector Plan 2021_2023

Table 3.6 Selected Policy Objectives in the ESP 2021-2023

Source: Education Sector Plan 2021–2023.

Note: ELDS = Early Learning Development Stands; EMIS = Education Management Information System; ICT = information and communication technology; OOSC = out-of-school children.

Based on the number of specific actions, preschool education does have a prominent place in the government's list of policy priorities, addressing access and service quality head on. On the access side, the Uzbekistan government plans to increase the number of preschools and to engage private providers in order to expand coverage and also to save in capital expenditures. Elevating the quality and prestige of preschool teachers is also an important objective, making sure there are career paths that involve training and better salaries. The plan also calls for curricular innovations and assessments, and for strengthening school quality and relevance. Parent engagement is also a priority, but the mechanisms for it are still in development.

General secondary education shows a very short list of priorities, two of which address learning equity directly: identifying and attracting out-of-school children and improving service for disabled children. However, GSE policies still follow a traditional and antiquated approach to addressing vulnerable children, as it ignores the different types of vulnerability outside of physical disability. Broadening the perspective of vulnerability among children is an important issue that can have important budgetary and programmatic implications in the near future.

General quality of education is a significant priority now. The government has an ambitious plan to elevate the standard of living of Uzbekistan to the top 50 in the world. The fact that it is using the HCI as a benchmark for improving education illustrates Uzbekistan's perspective on education quality. General policy objectives for addressing quality include: the implementation of competency-based curricula, the revision of the current system of classroom-level assessments, the regular use of national standardized tests to assess student learning, and the improvement of teacher quality. All of these policy priorities have budgetary implications.

ESP policies now drive the education budget. This is good news, as the ESP approaches expenditures from a task-oriented perspective, which eliminates the inertial approach that existed in previous decades. What remains to be seen is whether the government can review the results of the policies on a continuous basis in order to refine the work plan and become more cost-effective. This is a big qualifier for two reasons: (1) the ESP was prepared by a large group of advisors who include personnel from other institutions, which means that it will take a while for the three education ministries to internalize the ESP policies that apply to them; and (2) there are important policies left out that would require better planning and analytical capacity now absent in the three ministries; a key item in the policy portfolio includes strengthening the managerial and analytical capacity of the MoPE and MPSE. The ESP-driven budget for 2022 and 2023 is summarized in Table 3.7.

	2022	2023
Preschool		
Total expenditures	6,517	6,707
Capital	1,771	1,825
Recurrent	4,747	4,882
% of total education expenditures	18%	17%
General secondary education		
Total expenditures	21,971	23,070
Capital	4,406	3,957
Recurrent	17,565	19,113
% of total education expenditures	59%	59%
Higher education		
Total expenditures	2,775	3,154
Capital	438.5	472.9
Recurrent	2,336	2,681
% of total education expenditures	7.5%	8.1%

Table 3.7 Projected Expenditures for 2022 and 2023 (UZS Billions)

Source: Education Sector Plan of Uzbekistan for 2021-2023.

Inclusion needs to be in the educational agenda. About 100,000 children younger than 16 in Uzbekistan suffer a disability—this is about 13.3 percent of the 780,000 people with disabilities in the country. Although the government is committed to their integration into society, education for disabled children is segregated. Of the total number of children with disabilities, only 38 percent are enrolled in general education schools, while the remaining 62 percent study in

specialized schools, are home-schooled, or attend specialized preschool educational institutions.⁶⁹ There are special boarding schools and four specialized vocational schools for people with disabilities in the country, with about 17,000 children with disabilities. However, efforts at mainstreaming disabled students could be increased.

A fundamental issue for education advancement is learning equity. The MoPE does not have an analysis of vulnerabilities in general secondary education. Although there exists statistical information about children with disabilities, there is no information on the size and characteristics of vulnerable groups, nor specific plans for addressing inequality. As a result, equity is not addressed in detail, with the exception of small schools in poor isolated regions. Estimations of OOSC is underestimated, and without an analytical context explaining why children are out of school (for example, early marriage, poverty, discrimination, transportation), there are no indicators that can be monitored, or targets for their reduction.⁷⁰ Finally, at the institutional level, there is a need to reinforce the capacity for planning, financial management, and assessment and monitoring capacity of the MoPE and MPSE. The net conclusion from this situation is that *educational expenditures need to resolve the issues affecting learning equity by directing efforts and funding toward the problems outlined above, because how expenditures are used in education is as important as how much is spent in the sector*.

Setting the stage for learning equity

The following are several items that need to be reinforced in the ESP in order to improve learning equity and education quality.

Regional education indicators. The TIMSS/PIRLS tests revealed large variations across regions and within the regions in terms of student performance. Six regions (Bukhara, Fargana, Karakalpakstan, Khorazm, Surkhadarya, and Sirdarya) have a high concentration of low performers compared with regions such as Jizzak, Navoi, and Tashkent, highlighting the need to look at region-specific challenges in learning.⁷¹

Enrollment of OOSC, vulnerable children, and women in higher education. Although the ESP calls for the identification of OOSC, the MoPE has limited capacity to go outside its walls to find those children, requiring a close coordination with other institutions in the social sector, such as health and social protection. This close coordination requires managerial abilities that need to be developed in the areas where OOSC are likely to be located. As for increasing and retaining vulnerable children, the MoPE needs to make efforts to identify and analyze vulnerable groups, and design and implement programs addressing the different types of vulnerability, including learning disabilities (not visible to the naked eye), poverty, child labor, early marriage, and other factors that make a child prone to do poorly in school or to drop out. And to increase the proportion of women in higher education, the government needs to address the issue in terms of human capital investment, and not as a gender issue.

⁶⁹ UNICEF. 2019. "Situation Analysis of Children and Adults with Disabilities in Uzbekistan" (brief report). Tashkent: UNICEF.

⁷⁰ Begue-Aguado. 2018. Ibid.

⁷¹ UNICEF 2018. "Study on the Profiles of Children with Low Learning Levels in Uzbekistan. Inception Report. Tashkent: UNICEF.

Policy Options

Education expenditures need to be targeted on those policies that will improve system performance.

The ESP 2021–2023 already has a long list of policies with their respective costing, with the intent of advancing system performance. This section reinforces some of the policy choices made in the ESP while calling attention to other issues that also deserve priority to reach the same goal.

Learning equity and education quality should be the overarching objectives for education spending in preschool.

The ESP calls for many actions oriented at improving education access, especially in preschool and in early childhood development. However, equity considerations should drive preschool policies. Therefore, funding should be set aside for identifying and serving underserved populations, such as children in isolated areas, children in extreme poverty, and children whose language is different than the language of the classroom. Here the issue does not call for additional funding, but for its redistribution, to improve educational equity in preschool.

Learning equity and system accountability should guide the choice of policies in general secondary education.

Uzbekistan has already identified OOSC as a critical issue, with plans to identify and serve them better. Add to that the issue of children in poverty, who are not necessarily out of school, but who, because of low family income, are bound to perform poorly due to hunger, inadequate clothing, pressures to enter the labor market too early, and other similar issues that bring stress to poor children. In terms of system accountability, counting and monitoring the actions taken to serve OOSC and the poor, should be part of the operational budget of the MoPE.

Regularly measure and report student learning. The analysis of the TIMSS/PIRLS assessment revealed practical lessons that need to be in the budget.

First and foremost, funding for the design and implementation of standardized testing, and funding for the post-test analysis using socioeconomic data of the children participating in the assessment, is fundamental. Testing can be expensive, and efforts can be made to obtain external financing for these purposes. This is an issue that has already been considered in the ESP, as the government's planned budget for 2022–23 identifies funding gaps that need to be financed with donor grants and with external funds.

Complementary policies are already in the pipeline.

The ESP lists many policies oriented at improving education quality, including improving the requirements for new teachers, improving the training of existing teachers, expanding the use of ICT and EMIS in school and system management, and strengthening the managerial and planning

capacity at the MoPE. What these plans are lacking is the capacity for self-evaluation and for internalizing the need to collect quality data that can be returned to the school level to help school principals make better decisions. For that, the issue is not one of additional funding, but of using existing funds to improve system management. To be more effective, the education system in Uzbekistan can make some low-cost but very effective changes, including:

- Give more managerial autonomy to school principals to use funding at the local level for school repairs, the purchase of locally available inputs, and for the hiring and firing of staff.
- Make the analysis of school-level data available to schools, so they can see where they need to improve, or feel better because they are better than similar schools in the region. This approach uses the principles of market competition to motivate teachers to do better.
- Conduct and implement an analysis of data quality, to make sure that the data reflect school conditions.
- Engage parents, so they can reinforce what the school does during the school day.

Chapter 4. Social Protection

Summary

Uzbekistan has a comprehensive set of social protection programs; however, a major drawback of the system design is the lack of proper data consolidation for comprehensive monitoring and evaluation of the efficiency of the programs. Developing a strong monitoring and evaluation function and statistical capacity for social protection (SP) programs is crucial to allow for coherent analysis of the programs and the overall social protection system for informed policy and budget allocation decisions. Following the countercyclical pandemic-driven expansion of financing and coverage of social assistance programs, the numbers are expected to return to pre-COVID-19 levels. This is also the result of the budgeting for social assistance, which is not being determined by needs but instead is being defined through historical trends and regional quotas. The concern is that social assistance might remain underfunded and as a result, the coverage would be low. Active labor market policies are relatively new, and while the spending has been increasing, it is still below comparators. In terms of public social insurance (contributory pensions), the combination of the growing demographic burden and deficit of the Pension Fund, the lack of clear rules and weak indexation formula, as well as large informal employment, may lead to further decline in the level of income of pensioners in comparison with the income of the employed population. Establishing a dedicated agency/entity with a strong monitoring and evaluation center-responsible for overseeing all SP programs and ensuring that their implementation is aligned with the national social protection strategy, as well as reforming the pay-as-you-go pension system—would help to address the existing challenges.

Context and Recent Developments

Uzbekistan has a comprehensive set of social protection (SP) programs, which includes social assistance, contributory social insurance, labor market programs, and social care services.⁷² However, SP system functions are fragmented across various institutions, with none of them responsible for the coordination or integration of interventions, monitoring, evaluation and data analysis, or centralized SP policy overall. The Ministry of Finance (MoF) and the Pension Fund are responsible for some of the social assistance programs and the contributory pensions. The Ministry of Employment and Labor Relations (MELR) implements active and passive labor market programs, and public works program. The Ministry of Health (MoH) manages health-related programs and services for the elderly and persons with disabilities, and the Ministry of Public Education (MoPE) oversees small, in-kind schemes for schoolchildren, childcare institutions, and boarding schools for children with special learning needs. The Ministry of Makhalla and Family Support oversees the services for the survivors of domestic violence, including managing the newly established rehabilitation centers⁷³ that began to open gradually in 2018–19 in each region and district. There is no formal definition of

⁷² Detailed description of the scope of the social protection system and programs in Uzbekistan can be found in "An Assessment of the Social Protection System in Uzbekistan, Based on the Core Diagnostic Instrument (CODI). A Joint Report by ILO, UNICEF, and The World Bank (2020)."

⁷³ There are currently 184 actually working centers of rehabilitation and adaptation nationwide; however, of these, few work as shelters that meet all required standards and conditions.

social protection or a national social protection strategy, and, therefore, the understanding of the scope of the programs that the social protection system entails differs from agency to agency.

There are several social protection initiatives in Uzbekistan that, among other things, will support the integration of the SP sector as a whole, including defining a clearer scope of social protection financing. The first one is the piloting (October 2019) and the rollout (implemented from August to December 2020) of the Single Registry (SR), managed by the MoF, and the development of the Labor Market Information System (LMIS), managed by the MELR. The SR should not only become the tool of the effective management of social assistance programs and beyond, but should also simplify and speed up accumulation of administrative data for the programs. For example, currently (in 2021), the data on the number of beneficiaries and spending on the three low-income family allowances (for families with children aged less than 2 y.o., for families with children aged 2 to 14 y.o, and for the lowincome families) are manually collected at the local level, then aggregated by the MELR, and then provided to the MoF. Due to the complexity of the process, the data lag is about two months. Notably, in the Syrdaria region, where the Single Registry has been piloted since October 2019, the detailed data were available at the beginning of the following month. The development of the LMIS is going to support the MELR in more effective management of the active labor market programs, as well as collecting more detailed data and complex statistics to allow trend analysis and monitoring. For example, now the databases of the active labor market policies (ALMPs) beneficiaries are often stored on local computers, disconnected from the online employer database, and some employment support centers do not store beneficiary data electronically at all. This impedes proper monitoring and evaluation of the programs as well as data linkages with, for example, the SR.

Other important initiatives include the ongoing development of the National Social Protection Strategy and the institutional reform of the SP system. The MoF is leading the development of the strategy with close collaboration with the MELR; Ministry of Economic Development and Poverty Reduction; Pension Fund under the MoF; MoH; MoPE; Ministry of Higher and Secondary Specialized Education; Ministry of Internal Affairs; Ministry of Makhalla and Family Support; General Prosecutor's Office; and other agencies. A consultative working group comprising these ministries as well as the UN agencies and the World Bank has been created in order to ensure the comprehensiveness of the ongoing work on the SP strategy and to align this work with some other ongoing national initiatives, such as the development of the Poverty Reduction Strategy (led by the Ministry of Economy and Poverty Reduction), Employment Strategy (led by the MELR), or the Vision 2030 for Uzbekistan. Finally, the government has created a separate cross-ministerial working group with multilateral and bilateral donor organizations on the institutional reform of social protection system. The working group is deliberating the creation of an SP entity providing leadership in ensuring cohesiveness of SP programs, accountability, and responsibility for the SP system nationally as well as ensuring the alignment of the policies with the priorities of the developed SP strategy. It is envisioned that the entity will be inclusive of all spheres of SP, such as social assistance, social insurance, labor market policies, and social care services, while also focusing on SP data availability, quality, and transparency.

The Uzbekistan authorities realize that the pension system, as part of the broader social protection system, requires parametric reforms, greater transparency, and a transition from legacy processes to the system that is an automated and based on clear criteria. Specialists on the Off-Budget Pension Fund have been working on drafting the Concept of Pension Reform,

which is one of the programs of the general Protection Strategy for the period up to 2030. The scope of that work includes parametric adjustments (formula, retirement age, minimum eligibility criteria) as well as digital transformation.

At present, the budgeting for social assistance programs in Uzbekistan is not driven by needs, but relies on historical expenditure trends. Budget for SA programs is historically defined through regional quotas, which are based on previous expenditure patterns instead of on the needs of each community. Social registry could be leveraged to assess these needs and make more efficient budget allocation decisions. It is possible to analyze administrative data on the number of applications and eligible households for low-income allowances across the regions using the SR. Such data could be leveraged to (1) access real-time demand and eligibility for low-income allowances, which can differ from region to region; and (2) rank households to prioritize those in most need of support and therefore use the resources more efficiently by targeting such households first, in case of financial constraints of the program.

Prior to Single Registry rollout, re-enrollment procedures for the three low-income allowances created benefits gaps for vulnerable families.⁷⁴ Before the establishment of the Single Registry, the reapplication process for the three low-income allowances varied significantly across regions. Recipients had to wait until the current enrollment ended, and there were at least one-month interruptions in the receipt of benefits. In practice, families had to wait three to six months before they could reapply, because usually the *mahallas* (residential neighborhood communities) were managing "capped resources," so they rotated the beneficiaries to give everyone a chance to receive support.⁷⁵ Currently, the duration of low-income allowances is 12 months, after which beneficiaries need to reapply to be reassessed. The process of reapplication is managed through the registry and the interruption of benefits is around one month. It is important to ensure that going forward, the eligibility verification process happens prior to benefit discontinuation (either by letting them reapply a month before, or by automatizing the eligibility verification mechanisms) to ensure uninterrupted support to families for which the situation hasn't improved.

The working-age population has increased by some 50 percent since 2000, magnifying the slow job creation challenges. Uzbekistan's development trajectory over the past 25 years increasingly created structural challenges in the country's economy, including inadequate employment creation (relatively high unemployment, especially among youth, and inactivity, insufficient job creation in relation to demand, and mismatch between labor demand and supply in terms of skills and qualifications); entrepreneurial deficit (economic output dominated by state-owned enterprises (SOEs) and microenterprises within the small private sector; a poor business environment; and a lack of incentives for private firms, undermining productivity.⁷⁶ Unemployment and inactivity rates are higher especially for youth, women, and people in the poorest two quintiles.⁷⁷ These facts underscore the importance of the development of the ALMPs to decrease skill mismatch and improve employability.

 ⁷⁴ World Bank. 2019. Targeting Assessment, Social Protection and Jobs Global Practice, World Bank, Washington, DC.
 ⁷⁵ Ibid.

⁷⁶ World Bank. 2018. "Creating Markets in Uzbekistan: From Stabilization to Competitiveness. A Country Private Sector Diagnostic." World Bank, Washington, DC.

⁷⁷ World Bank. 2019. "Uzbekistan Risk and Vulnerability Assessment." World Bank, Washington, DC; World Bank. 2014. "The Skills Road: Skills for Employability in Uzbekistan." World Bank, Washington, DC; World Bank. 2021. "Youth Unemployment in Uzbekistan." World Bank, Washington, DC.

The pension system of Uzbekistan is based on the principles of mandatory contributory social insurance. The pay-as-you-go (PAYG) system is the main element, while the mandatory funded component is negligible. The PAYG system retains some key parameters from Soviet times: a defined benefit scheme (DB); the retirement age set at 55 for women and 60 for men; and the required service for full pension set at 20 years for women and 25 years for men (Box 4.1). Adherence to the DB scheme has its advantages: since the conditions are clear and familiar to the population, there are no structural gaps between the pensions of new and old participants. Considering the regional specifics of employment, the assessment of pension rights through years of service seems objective and suitable. Flexibility of the DB scheme is achieved by adjusting the rules for accounting of service duration and valorization of earnings. In the past seven years, modifications of the PAYG system were gradual and frequently concerned only specific categories of pensioners; therefore, they did not impact significantly the current dynamics of the number of pension level (Annex A4.1–A4.2).

Box 4.1. Current Parameters of the PAYG Pension System in Uzbekistan			
Parameters	Description		
Type of program	Defined benefit (DB) compulsory social insurance scheme		
Types of pensions	Old-age, invalidity (for disability groups 1 and 2, not for group 3), and survivors		
Coverage	Employees in paid employment (except military) and self-employed		
Contribution rate (social tax, single rate)	Employer: 25% for budget sector and 12% for other; self-employed: small fixed amount Until 2019, employer: 15% for small and microenterprises and 25% for other;		
	employee: 8%; additional contributions of companies linked to total sales: 3.2%; self-employed: small fixed amount		
Qualifying period	At least 7 years for both men and women (5 years, prior to July 2016)		
Service for drawing full pension	At least 25 years for men and 20 years for women		
Statutory retirement age	60 years for men and 55 years for women (54 years for women with at least 20 years of service)		
Pension formula	55% * basic amount for pension calculation * individual earnings rate + 1% for each year over full service. Basic amount for pension calculation is internal parameter for valorization of individual earnings, definition of scopes for minimum and maximum earnings for calculation of pensions, and special increments for pensioners. Individual earnings rate determined by the insured's average monthly earnings in any consecutive five years in the past 10 years.		
Minimum pension	Fixed value, set by presidential decrees (from July 2021, UZS 565,000 for full pensions and UZS 400,000 for pensions with insufficient service).		
Indexation	No clear legal rules; usually twice a year. Date and increase coefficient set by presidential decrees.		
Limitations for working retirees	No limits (until 2019, paid only half of the pension)		

Source: The Law of the Republic of Uzbekistan "On state pension provisions" of September 3, 1993, 938-XII, with amendments and additions, https://lex.uz/acts/112312.

The main shock for the pension system was the tax reform that was introduced in 2019: reduction in the funding sources manifested itself in decreased revenues of the Pension Fund as a share of GDP. The Pension Fund completely lost revenue items such as insurance contributions of employees (the rate was at 8 percent of the wage) and contributions of companies relative to total sales (the rate of contributions in public trust funds amounted to 3.2 percent of sales, of which 1.5 percent was transferred to the Pension Fund).⁷⁸ During 2015–18, these items comprised 30–33 percent of all the revenues of the Pension Fund (Annex A4.3). Besides, starting from January 1, 2019, the rate of social tax for non-budget enterprises has been reduced from 25 or 15 percent to 12 percent. The state budget slated a 4.7 trillion sum to be transferred to the fund if the latter could not meet current obligations. By the end of 2019, the revenues from the social tax exceeded the expectations by 18 percent.⁷⁹ Combined with considerable funds saved from 2018, it became possible to avoid an apparent deficit and request of funds from the state budget. Reduction in the funding sources manifested itself in a decrease of revenues of the Pension Fund as a share of GDP: during 2015–18 tax revenues of the fund accounted for about 6 percent of GDP, while in 2019 this figure declined to 4.7 percent of GDP. Impacted by the COVID-19 pandemic, the social tax revenues decreased to 3.4 percent of GDP in 2020 and 3.2 percent of GDP in 2021. The transfer from the state budget to cover the deficit of the Pension Fund amounted to 1.5 percent and 2 percent of GDP, respectively (Annex A4.3).

Pension expenditures as a share of GDP have decreased, which indicates a lag of pension indexation relative to the growth of incomes of the working population. While pension expenditures in nominal terms doubled over the past seven years and exceeded UZS 36.5 trillion in 2021, the level of pension expenditures as a share of GDP has decreased from 6.1 percent in 2015 to about 5 percent of GDP in 2018–21. As the number of pensioners grew rapidly over this period, the reduction of pension expenditure in percentage of GDP indicates a lag of pension indexation relative to the growth of current earnings. Tax reform largely affected fiscal sustainability of the system, whereby the drastic reduction in the social contribution failed to produce an anticipated expansion of the tax base that would compensate for that cut. Addressing that issue through corresponding reduction in the benefit adequacy, to cut pension expenditure, will lead to an undesirable outcome that would not be socially or politically sustainable.

The mandatory funded component of the pension system has limited impact. In addition to the main PAYG system, there is a separate mandatory funded scheme financed by contributions of employees.⁸⁰ The rate of contribution was initially quite small, only 1 percent of wage, and after the tax reform in 2019, it became a rather symbolic 0.1 percent. The system operates in the form of saving deposits, and the contributions are placed in participants' individual savings accounts in Xalq Bank (Joint-Stock Commercial Xalq Bank of Uzbekistan, a state-owned bank). By the end of 2021, the individual savings accounts balance was UZS 5,071 billion (about 0.7 percent of GDP).⁸¹ The main areas of investment for these funds were interbank deposits (58 percent) and various investment projects (41 percent).

⁷⁸ The Tax Code of the Republic of Uzbekistan of December 30, 2019, with amendments and additions, https://lex.uz/ru/docs/4674893.

⁷⁹ Report of the Extra-Budgetary Pension Fund (2019), MoF of Uzbekistan, https://www.mf.uz/media/file/funds/pensiya/brandbook/2019.pdf.

⁸⁰ The Law of the Republic of Uzbekistan #702-II of December 2, 2004, "On the funded pension provisions," with amendments and additions, https://lex.uz/acts/391377.

⁸¹ Statistical bulletin of the Central Bank of the Republic of Uzbekistan for 2021. Tashkent, 2022.

https://cbu.uz/upload/medialibrary/930/Statisticheskiy-byulleten-TSentralnogo-banka-_-2021-god.pdf.

Key Challenges

Summary of challenges

- 1. No centralized data collection and evaluation of social protection programs.
 - No centralized administrative data collection for the social protection program expenditures.
 - Weak monitoring of social protection programs for informed decision making regarding the SP program budget allocation; no systematic performance analysis of the programs for informed budget allocation decisions.
- 2. Low expenditures on social assistance and active labor market programs pre-COVID-19 crisis and likely to fall back.
 - Spending on social assistance remained low by international standards pre-crisis; postcrisis, there is a need to integrate all SA spending, due to the introduction of several oneoff cash transfers in the past few years.
 - Spending on active labor market programs remains low, and on public works, spending is high compared with other countries.
- 3. Budget allocations for low-income family allowances are not needs-based but instead defined by historical trends and quotas, which limits program effectiveness.
- 4. Demographic changes and aging population put pressure on the pension system.
- 5. Large segments of informal employment do not benefit from the social insurance.
- 6. Challenges of financing of the social insurance post-tax reform.

No centralized data collection and evaluation of social protection programs

Robust monitoring and evaluation frameworks play a central role in any national social protection strategy, but the lack of quality data collection and monitoring can easily undermine policy objectives. It is crucial to track performance indicators and analyze the impact of SP programs in order to make sound and effective policy decisions, including regarding budget allocations. The lack of quality data collection and monitoring can easily undermine the policy objectives. This challenge can be further disaggregated into these two aspects: (1) no centralized administrative data collection for SP program expenditures; and (2) weak monitoring of SP programs for informed decisions about program budget allocation, and no systematic performance analysis of SP programs for informed budget allocation decisions.

Currently, no agency in Uzbekistan is aggregating the actual expenditures incurred by different social protection programs. The official data for SP spending is not being centrally published. This is partly because several ministries are implementing SP programs, and there is no central body to accumulate SP spending data, though the Information Analytical Department within the Cabinet of Ministers is expected to gather all information and provide oversight of SP policies.⁸² This is due in part to the lack of an adopted national definition of

⁸² "An Assessment of the Social Protection System in Uzbekistan" (2020), a joint report by ILO, UNICEF, and the World Bank, based on the Core Diagnostic Instrument (CODI).

social protection (SP strategy is now under development). Thus, the universe of the programs for which the administrative data or statistical information should be analyzed or collected is not defined. This creates the system in which the impact of the combined SP programs is hard to evaluate, and it also results in lower cost-effectiveness of social protection, as fragmentation prevents optimal administration.

The lack of aggregated statistics on social protection and on expenditures for various social protection programs complicate monitoring and analysis. Compilation of SP statistics, particularly the expenditures on different SP programs, is flawed. SP programs are administered by several government agencies (MoF, PF, MELR, MoH, MoPE, MoMFS), and the annual summary statistics are compiled by the MoF in the beginning of each year. Often this annual summary statistics collection is delayed into the second quarter. Moreover, sometimes it is outright erroneous, because the MoF may omit non-budgetary funds that agencies use to finance SP programs. Sometimes the figures on expenditures and beneficiaries can be underestimated if agencies use non-budgetary funds on top of the funds allocated from the state budget. The MoF usually sees the funds it disbursed from the state budget, and unless the ministry requests the statistics from the agencies administering the programs, there can be missing amounts in the aggregate statistics.

One of the SP areas where the lack of aggregated information is especially visible is social care services for which not only state but also extra budgetary funds are allocated. There is little understanding of the scope of coverage of beneficiaries and actual expenditures on social care services. Available services target specific segments of the population, like vulnerable and abandoned children, the elderly living alone, and the survivors of domestic violence. Spending information is collected on the expenditures on residential institutions for children without parents and those with disabilities, as well as for the elderly living alone or having disabilities; however, further disaggregation is not available, which would allow assessing the quality of services and its coverage and the links between services and benefits. The information on the expenditures and services of the shelters and rehabilitation centers for domestic violence survivors is not being centrally collected so far.

All programs that are administered by the Ministry of Employment and Labor Relations require further monitoring and performance analysis strengthening. All SP programs that are administered by the MELR are financed by three funds under the ministry: the Employment Support Fund, Public Works (PW) Fund, and External Migrants Support Fund. The main funds are the first two, in terms of expenditures and the number of beneficiaries they support. The Employment Fund and PW Fund receive transfers from the state budget each year. The Employment Support Fund received UZS 150 billion (US\$14.5 million) from the state budget in 2021, but most of its revenues are generated by the fraction of social tax (0.4 percentage points out of 12 percent), which is about UZS 260 billion (US\$25 million). The PW Fund received UZS 250 billion (US\$24 million) from the state budget, an additional UZS 200 billion (US\$19.2 million) from the Anti-Crisis Fund, and UZS 100 billion (US\$9.6 million) from the Union of Youth.

The centralized data collection would allow conducting systematic analyses of performance indicators together with household survey indicators and impact evaluations. Such analyses allow answering such questions as, for example, what share of specific population groups are covered by specific program, or on the contrary, who is being left out of the system, which is something administrative data on programs are not showing. Household survey indicators also enable evaluation if the design of the program allows successfully reaching the target population throughout the country. Incidence indicators highlight the distribution of beneficiaries and benefits across welfare distribution. And the impacts on poverty and inequality show the effectiveness of different programs, but most importantly, the combinations of programs overall. It is also important to complement the analysis of household survey indicators with impact evaluations, though not being conducted very frequently; they can shed light on the specific outcomes that SP program performance—including coverage, beneficiary incidence, benefits level, and the impact of programs on poverty and inequality—derived from household surveys, are not being monitored systematically as specific programs, but also for the wholesomeness of the SP system. For instance, the public works program is a large safety nets tool in Uzbekistan, and its coverage and impact should be monitored alongside the social assistance cash transfer programs.

Low expenditures on social assistance and active labor market programs pre-pandemic

Social protection programs are the direct and most efficient tool in poverty reduction and addressing vulnerability, and they could be disaggregated into contributory pensions, social safety nets, social care services, and labor market programs. As the population of Uzbekistan is rather young (71 percent is younger than 40), unemployment is a key concern. Active labor market programs are a common mechanism of reducing informality of the labor market, raising productivity, integrating people in the changing labor market, and creating new jobs. At the same time, keeping social assistance out of the reach of some groups weakens the effectiveness of the SP policy. Pre-pandemic levels of spending on social assistance, as well as on active labor market programs, were low by international standards, and on public works were high compared with comparator countries. Following the significant expansion of SP financing during the pandemic, the challenge now would be to further expand ALMPs and ensure ongoing sufficient financing of social assistance, making sure that the financing is efficient. This means that the expenditures are well-targeted and the performance of SP programs is efficient. Consolidated spending on SP in Uzbekistan in 2021 is estimated at 5 percent of GDP, with contributory pensions comprising around 75 percent of total SP expenditures (Figure 4.1).

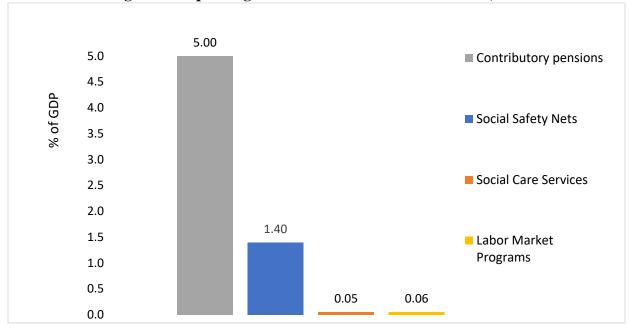


Figure 4.1. Spending on Social Protection in Uzbekistan, 2021

Source: World Bank staff calculations based on the MoF, MELR, and Extra-Budgetary Pension Fund administrative data on SP program expenditures using ASPIRE WB methodology.

Although spending on social assistance was rather stable during 2016-19, spending on the contributory pensions declined. The amount of spending on contributory pensions—both as the share of GDP and as ratio in total SP spending—has decreased in the past few years. Spending on social safety nets (or social assistance) is estimated at 0.97 percent of GDP, social care services at 0.04 percent of GDP, and labor market programs at 0.013 percent of GDP in 2019. Following a sharp decline (from 1.9 percent of GDP in 2012),⁸³ spending on social assistance has been rather stable since 2016, fluctuating around 0.95 percent of GDP except for year 2017, when it fell to 0.86 percent of GDP (Table 4.1).⁸⁴ Spending on social care services has also been increased, from 0.02 percent of GDP in 2016 and then becoming stable at 0.04 percent of GDP in 2017–19.⁸⁵ Spending on labor market programs includes active (0.01 percent of GDP in 2019) and passive (unemployment benefits at 0.003 percent of GDP in 2019) labor market programs. Active ALMPs are new in Uzbekistan, and overall spending on ALMPs was almost negligible prior to 2018.

⁸³ "An Assessment of the Social Protection System in Uzbekistan" (2020), a joint report by ILO, UNICEF, and the World Bank, based on the Core Diagnostic Instrument (CODI).

⁸⁴ World Bank staff estimates using administrative data from the MoF of Uzbekistan.

⁸⁵ Spending on social care services includes support of elderly citizens living alone and disabled people in boarding homes "Sakhovat" and boarding homes for disabled people "Muruvvat," orphanages and boarding schools for disabled children and children with special needs, home care services and medical, and social and professional rehabilitation of disabled people. The amount excludes expenditures on rehabilitation centers and shelters for the survivors of gender-based and domestic violence, due to data constraints.

Spending	2016	2017	2018	2019	2020	2021
Contributory pensions	5.90	5.40	5.00	5.10	5.30	5.00
Social safety nets	0.87	0.83	0.92	0.96	1.30	1.40
Social care services	0.02	0.03	0.03	0.04	0.04	0.05
Labor market programs	0.00	0.00	0.01	0.01	0.05	0.06
Social protection, total	6.79	6.26	5.97	6.11	6.70	6.50

Table 4.1. Uzbekistan: Trends in Spending on Social Protection, Percent of GDP, 2016–21

Source: World Bank staff calculations using MoF, MELR, and Extra-Budgetary Pension Fund administrative data on SP program expenditures using ASPIRE WB methodology.

Prior to the pandemic, Uzbekistan was spending significantly below comparators on social assistance as a share of GDP. Funding for most social assistance, social care services, and labor market programs in Uzbekistan comes directly from the state budget; some labor market programs are financed by the Employment Support Fund, where the revenues include workers' contributions. The chapter follows an internationally accepted framework of social assistance, and the analysis includes the following types of social assistance programs existing in Uzbekistan: unconditional cash transfers, food and in-kind benefits, social pensions, and public works.⁸⁶ Using a standardized (World Bank ASPIRE database) approach to estimating spending on social assistance to enable cross-country comparisons, the estimate includes public works⁸⁷ and excludes health fee waivers. In nominal terms, budget allocation to social assistance programs has been consistently expanding in Uzbekistan in recent years. However, social assistance spending as a share of GDP has been declining since the beginning of the analysis period of 2012 up until 2018, when it started increasing as a result of the expansion of the low-income family allowances programs and with the expansion of the public works program. Despite the upward trend in the amount of the nominal social assistance spending, Uzbekistan is currently spending significantly below comparators (Figure 2). On average, developing countries spend 1.5 percent of GDP on SA programs, while the median spending around the world stands at 1.1 percent of GDP if health fee waivers are excluded.⁸⁸ Uzbekistan spends on social assistance programs less than half of the amount countries in the Europe and Central Asia region (ECA) spend on average on such programs (2.1 percent of GDP pre-COVID-19 crisis). Lower-middle-income countries also spend on average more than Uzbekistan, around 1.58 percent of GDP. Such countries as Armenia, Brazil, India, and Turkey spend around 1.5 percent of GDP on their social assistance programs, Kazakhstan spent

⁸⁶ A detailed description of Uzbekistan's SP programs can be found in ""An Assessment of the Social Protection System in Uzbekistan" (2020), a joint report by ILO, UNICEF, and the World Bank, based on the Core Diagnostic Instrument (CODI).

⁸⁷ Following the methodology of the World Bank "State of Safety Nets" report and ASPIRE classification of SP programs, public works is included in the definition of social assistance programs and not labor market programs, to ensure international comparability of spending on social assistance.

⁸⁸ World Bank. 2018. "State of Safety Nets." World Bank, Washington, DC.

1.7 percent of GDP on social assistance in 2017, and globally, there are significant variations in terms of spending on social assistance.⁸⁹

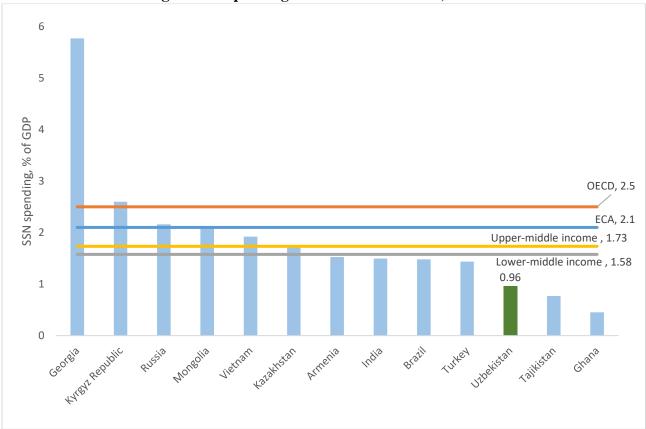


Figure 4.2. Spending on SSN in Uzbekistan, 2019

Source: World Bank staff calculations.

Note: Country-level data are from SPEED (Social Protection Expenditure and Evaluation Database) and ASPIRE (Atlas of Social Protection Indicators of Resilience and Equity database). Data for OECD countries refer to 2015 and are based on the Social Expenditure Database. Social safety net spending for OECD countries shown here is approximated by the sum of the "family" and "other social policy" social protection functions, as defined in the Social Expenditure Database. Averages for income groups are from the "State of Safety Nets," 2018, World Bank. OECD = Organisation for Economic Co-operation and Development; SSN = social safety net.

⁸⁹ Significant variations between countries on social assistance spending could be explained by either inclusion of some type of a universal program (for example, universal old-age social pensions, or child benefits) or fragility, conflict, and violence. Most of spending on SSN comes not from government budgets but instead fully or partially donor-funded sources. For example, the highest spending country in ECA is Georgia (5.8 percent of GDP), where SSN spending is driven by the universal old-age social pension scheme, and the targeted social assistance program. Mongolia was spending 2.1 percent of GDP in 2018 on SSN due to the Child Money program. In Kyrgyz Republic, where SA spending was as high as 2.6 percent of GDP in 2018, the SA system also relies on the main targeted social assistance program for families with children. In Russia, the SP system is very fragmented and complex, combining more than 700 federal and regional SA programs; the spending on social assistance reached 2.2 percent of GDP in 2017.

In 2020-21, like most countries globally, Uzbekistan significantly increased spending on social assistance and active labor market programs in response to the COVID-19 pandemic (Box 4.1). From 0.96 percent of GDP in 2019, social assistance spending jumped to 1.3 percent of GDP in 2020, further increasing to 1.4 percent of GDP in 2021. A similar budget is planned for 2022. Social assistance expenditures are known to be countercyclical,⁹⁰ increasing in the face of crisis or disasters, and are likely to fall following the crisis. Therefore, the question will be: to which level will it return in the case of Uzbekistan? It is important to ensure (1) the financing remains sufficient yet sustainable going forward; (2) the expenditures on social assistance reach intended beneficiaries—for this the analysis of the largest safety nets programs' performance is crucial; and (3) any additional SP measures that were created as a response to the pandemic, such as, for example, one-off payments using Uzbekistan's Iron Notebook and Women's Notebook lists of beneficiaries' needs, to be streamlined and integrated into the centralized SP systems, to ensure transparency and efficiency of spending.

Uzbekistan spends more than 85 percent of total social safety nets spending on cash transfers to the population. Countries in ECA traditionally spend on average more than 75 percent of the SSN budget on different types of cash transfers (such as unconditional and conditional cash transfers and social pensions), while public works and in-kind programs (such as school feeding programs, in-kind food and good distribution, and different types of fee waivers) constitute the remaining 25 percent.⁹¹ Uzbekistan demonstrates similar patterns in terms of the preferred SSN instruments (Figure 4.3); more than 85 percent of total SSN spending constitutes different types of cash transfers to the population. Around 40 percent of total SSN spending is channeled to the three low-income family allowances—poverty-targeted SA programs. The share of SSN spending that is going to different types of social pensions, which has categorical targeting (including noncontributory old age, disability, and survivor social allowances), is 30 percent of total SSN budget. The other 18 percent of SSN spending goes into other types of unconditional transfers, such as bread price increase compensation cash transfers, lump sum birth grants, and different allowances, including those for orphans or children with disabilities or HIV, which are also all categorical. The share of SSN budget that is going to poverty-targeted programs vis-à-vis categorical benefits, such as bread price compensation or social allowances, is an important consideration for the efficiency of spending. For example, in Armenia, more than half of SSN spending is allocated to povertytargeted programs, including the flagship cash transfers program as well as health, education, and energy benefits for poorer households. Importantly, the recent program-based budgeting reform aims to align national development strategic planning with budget planning.

Budget allocations for low-income family allowances is not needs-based, but instead defined by historical trends and quotas

The main safety net program in Uzbekistan is the benefits for low-income family's schemes, which are now accounted in the Single Registry system. The program prior to September 2021 consisted of three types of benefits: the child allowance for families with young children (under age 2); the child allowance for families with children ages 2–14; and the low-income family

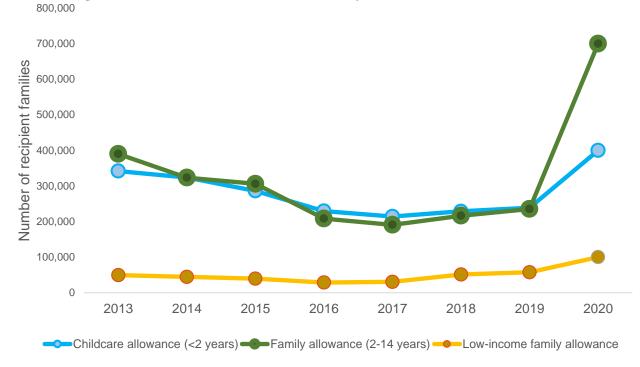
⁹⁰ World Bank. "State of Safety Nets." 2018. World Bank, Washington, DC.

⁹¹Ibid.

allowance. In September 2021, the three benefits were optimized into two programs: the allowance for families with children under 18, and the low-income allowance for families without children. Until October 2019, these programs were administered through local mahallas, but with the piloting of the SR (Syrdaria region, October 2019) and the current expansion to the rest of the country (gradually expanding the administration starting from September–December 2020 for the whole country), the programs are now administered by the Pension Fund under the MoF. Before the SR rollout, the MoF limited the monthly expenditures of social allowances for low-income families. If mahallas received more eligible applicants and the funds allocated for the current month could not support all applicants, then the applicants would be put on the waiting list. As of 2020, the SR compiles the payroll lists and submits them to the MoF, then the MoF approves the funds, and finally the SR disburses the funds according to payrolls. There is a built-in module in the SR that automatically generates a waiting list if the funds allowed by the MoF do not meet the demand. So far, the SR has not generated such a waiting list, but obviously, it is not certain that these waiting lists will not arise in the future.

In the past, the amount of financing allocated to the low-income family allowances has limited the possible number of beneficiaries for each of the benefits. Total coverage of beneficiaries decreased from 2013 to 2016, slightly increased until 2019 (Figure 4.3), and then doubled in 2020 in response to the COVID-19 crisis (Box 4.2). The combined coverage of the three low-income family allowances was around 9 percent of population, based on administrative data in 2019, increasing to around 1.2 million households, or almost 20 percent of the population, in 2021.⁹² The observed expansion of nominal spending was primarily driven by the increase in the benefit amounts (Figure 4.4). The spending allocation increase until 2020 did not transfer into the growing share of program spending as a share of GDP; however, with the significant expansion of the program financing during the crisis, the spending on the low-income allowances reached 0.75 percent of GDP in 2021 (Figure 4.5). The performance indicators assessment of efficiency of these programs haven't been performed yet, but they should be, since the Household Budget Survey data have become available for the government and have given substantial coverage of these programs.

⁹² Assuming the average household size of 5.5 for low-income families and considering the population is 33 million people.





Source: World Bank staff calculations using administrative data from the MoF of Uzbekistan.

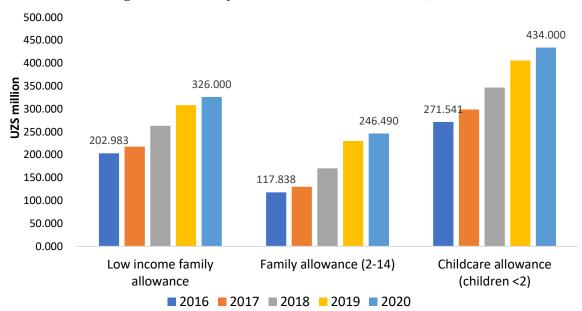


Figure 4.4. Family Allowance Benefit Amounts, 2016–20

Source: World Bank staff calculations using administrative data from the MoF of Uzbekistan.

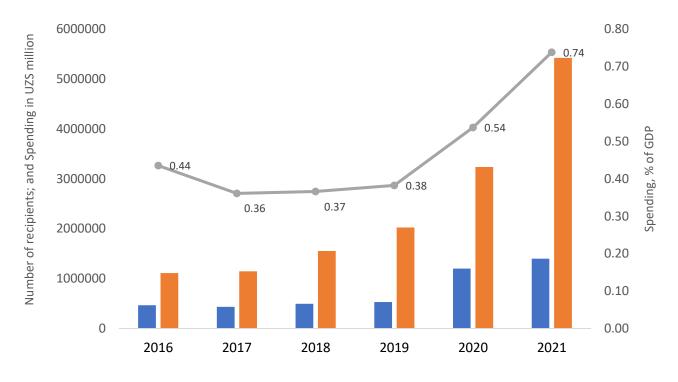


Figure 4.5. Low-Income Family Allowances

Total number of the 3 benefits recipients Ending, mln UZS -----Spending on 3 benefits, % of GDP

Source: World Bank staff calculations using data from the MoF of Uzbekistan.

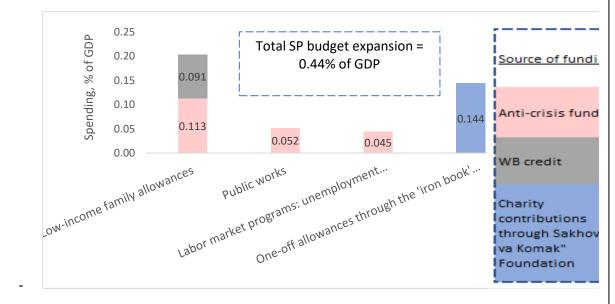
BOX 4.2. Expansion of Safety Nets during the COVID-19 Pandemic

- The pandemic-driven expansion of Social Protection amounted to 0.44 percent of GDP in 2020, which is approximately half of the total safety net budget in 2019. The government expenditures on SP programs grew by UZS 2.57 trillion in response to the pandemic outbreak that year. The additional funds were received from extra-budgetary sources, with the bulk coming from the Anti-crisis Fund. Expansion of the programs that were adapted to scale up the social protection response included the following:
- Expansion of the three low-income family allowances: the increase in expenditures included UZS 1.18 trillion allocated to low-income family allowances, which covered 10 percent of additional beneficiaries and an extra three months of allowances for outstanding beneficiaries, as well as the expansion of the programs' coverage.
- Expansion of the public works program: the Anti-crisis Fund transferred UZS 300 billion to the Public Works Fund within the Ministry of Employment and Labor Relations.
- Expansion of unemployment benefits and self-employment support subsidies: UZS 260 billion transferred to the Employment Support Fund, a financial institution within the MELR.

Ad-hoc social protection measures have also been established:

• UZB 834.6 billion was spent on several one-off allowances, most of them through Uzbekistan's Iron Notebook, containing lists, compiled by mahallas, of families that lost breadwinners and jobs, usually families with many dependents. Mahallas distributed assistance packages of cash or food to the affected families.

Figure B4.1. COVID-19 Expansion of SP Measures to Support the Population, 2020



Source: World Bank staff calculations using data from the MoF of Uzbekistan; "Assessing Uzbekistan's Transition," World Bank Country Economic Memorandum, June 2021

Spending on Uzbekistan's public works program is high, as it is an important adaptive instrument of the social assistance system. Notably, about 7 percent of the SSN budget in Uzbekistan goes to PW (Figure 4.6)—higher than the share spent by the average ECA country. By this indicator, Uzbekistan's public works expenditure is closer to that of Latin American, East Asian, and Sub-Saharan African countries, which spend a comparable share of their SSN budgets on public works.⁹³ However, in Uzbekistan, spending on PW is volatile; it reached around 0.07 percent of GDP in 2019 (but was twice that amount in 2018—0.14 percent of GDP) and was further increased in 2020 as one of the COVID-19 response measures.⁹⁴ Among the comparator countries in ECA, only Turkey's spending on PW has remained relatively unchanged. While public works programs are a critical tool for supporting the population in Uzbekistan, they are aimed at providing temporary employment rather than creating permanent jobs through active labor market policies; therefore, it is essential to increase spending on these policies. It is also important to link the design, implementation, and budgeting of the public works program not only with the national Employment Strategy (currently under preparation), but also with the national Social Protection Strategy, also under development.

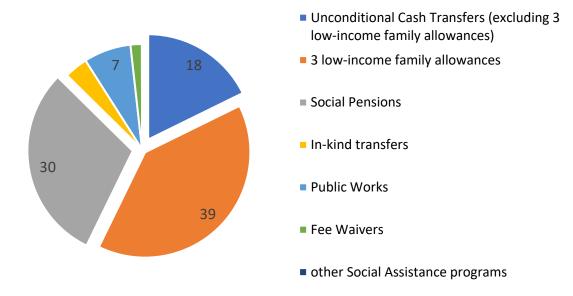


Figure 4.6. SSN Spending, by Instrument, Percent, 2019

Source: World Bank staff calculations using administrative data from the MoF of Uzbekistan.

⁹³ For example, in 2017, India was spending around 17 percent of the total SSN budget, or a bit below a quarter of a percent of GDP, on its flagship public works program Mahatma Gandhi National Rural Employment Guarantee (MGNREG), which provides wage employment to an average of 70 million households a year (see World Bank. "Pathways to Reducing Poverty and Sharing Prosperity in India." 2019. World Bank, Washington, DC).

⁹⁴ See the government resolution on the expansion of public works.

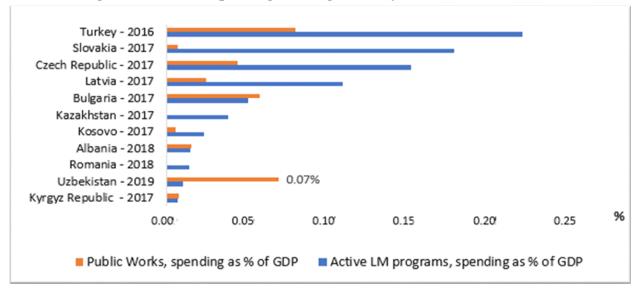
MELR is implementing a wide range of labor market (LM) programs and services through the employment support centers and training centers across the country. The MELR is implementing three types of LM support through employment support centers (ESCs): public employment services (job counseling and intermediation services), active labor market programs (professional training in the classroom and on the job, apprenticeships, the quota-based employment plan, and wage subsidies for employers hiring above the quota, subsidies to cover business startup costs, and greenhouse setup subsidies), and passive labor market measures (unemployment benefits), as well as public works programs. While Uzbekistan's spending on labor market policies has been increasing, as of 2019, it was still significantly below comparators, such as the countries in ECA (Figure 4.7). The LM programs represent a small share of the social protection system budget and are funded through general budget resources, although the Unemployment Fund gets a small contribution (0.1 percent) from the employer social insurance contribution.

Active labor market policies (ALMPs) in Uzbekistan are rather new and thus are financially limited and lack an integrated policy approach or definition.⁹⁵ ALMPs are aimed at human capital increases to support activation and in actual or potential earnings, and they contribute to graduating people from social assistance programs, usually targeting vulnerable or hard-to-employ groups. Passive labor market programs in Uzbekistan include unemployment benefits, spending on which was 0.003 percent of GDP in 2019. The unemployment benefits program targets people who have lost their job and need urgent financial support, but it doesn't promote human capital development. The basis of the MELR's program targets and budget allocations for ESCs is not entirely clear and appears somewhat arbitrary, and for many programs, the budget is known only one year in advance. This may set perverse incentives (target chasing or budget chasing) and undermine ESCs' service delivery.⁹⁶ Overall spending on ALMPs was almost negligible prior to 2018.⁹⁷ With the introduction of four new employment subsidies in 2019, spending on LM programs increased from basically nothing in 2015⁹⁸ to 0.013 percent of GDP in 2019 if public works are excluded, and increased further to 0.049 percent of GDP in 2021 as a COVID-19 crisis response measure. The lack of evidence on the effectiveness of ALMPs is a key bottleneck to policy making for activation measures for vulnerable groups.

⁹⁵ World Bank. 2020. "Active Labor Market Policies in Uzbekistan." Policy Note. World Bank, Washington, DC.
⁹⁶ Ibid.

⁹⁷ World Bank staff estimates using administrative data from the MELR of Uzbekistan.

⁹⁸ "An Assessment of the Social Protection System in Uzbekistan" (2020), a joint report by ILO, UNICEF, and the World Bank, based on the Core Diagnostic Instrument (CODI).





Sources: World Bank staff calculations using data from the MELR of Uzbekistan for Uzbekistan data, and the World Bank SPEED database for comparator countries Kosovo and Turkey. *Note:* ALMP - Active labor market programs; LM – labor market.

Demographic changes and the aging population put pressure on the pension system

The population of Uzbekistan is growing and aging rapidly, and changes in the age structure will result in the decrease of the potential support ratio of elderly people (Figure 4.8 and Table 4.2). In the past five years alone, the number of people of retirement age (55+ for women and 60+ for men) has increased by 32 percent. By 2050, this number will increase 2.6 times, and the share of people of retirement age in the total population will grow from the current 10 percent (in 2021) to 22 percent. At the same time, the number of working-age people (15– 54/59) will grow at a much slower rate, and starting from mid-2040s, it will begin to fall. Changes in the age structure will result in the decrease of the potential support ratio of elderly people: there were six working-age people for every one person of retirement age as of 2020; by 2050, there will be only three. Over the past five years (2018-2021), total number of pensioners increased by 612,741 persons, or 23 percent, and approached 3.3 million (Annex A4.1). The number of elderly pensioners grew the fastest (additional 567,804 people, or by 26 percent). Elderly pensioners account for 84 percent of the total number of pensioners and 77 percent of the population of retirement-age people.

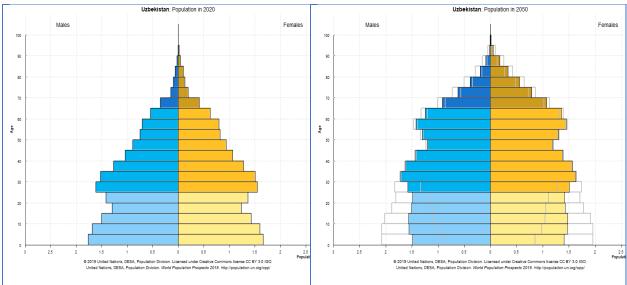


Figure 4.8. Uzbekistan Population (2020 Estimates): Three Scenario Forecasts for 2050, Millions



Because the number of pensioners and the number of insured workers will increase at different speeds, the ratio of the number of contributing workers to the old-age pensioners may decline. Assuming the pension coverage of retirement-age people and the contribution coverage of the working-age population stay at the levels in 2021 (77 percent and 26 percent, respectively), the number of old-age pensioners will increase from the 2.7 million in 2021 to 3.9 million by 2030 and 7.1 million by 2050. While the low vesting requirements could produce such a high old-age coverage (as those indicators are generally inversely related), the majority of those who qualify for a pension may end up with a very small benefit, requiring an additional redistributive element to prevent old-age poverty. The number of insured workers making contributions will increase from the 5.3 million in 2021 to 6.2 million in 2030 and 6.8 million by the end of 2050. Thus, the ratio of the number of contributing workers to the elderly pensioners may decline from the 2:1 in 2021 to 1:1 in 2050. The increased burden on the pension system due to demographic changes is the main long-term challenge for the country's public finances.

Population categories	2020	2025	2030	2035	2040	2045	2050
Retirement-age population, million persons	3.6	4.4	5.1	5.9	6.9	8.1	9.3
Including old-age pensioners	2.7	3.4	3.9	4.6	5.3	6.2	7.1
Working-age population, million persons	21.1	22.2	23.7	25.1	26.0	26.3	26.1
Including contributors	5.4	5.8	6.2	6.5	6.8	6.8	6.8
Population contingent ratios							
Working-age persons per 1 elderly							
person	5.9	5.1	4.6	4.2	3.8	3.3	2.8
Contributors per 1 pensioner	2.0	1.7	1.6	1.4	1.3	1.1	1.0

Source: Estimates of medium-term scenario from *World Population Prospects 2019*, United Nations, Department of Economic Affairs and the Population Dynamics.

(https://population.un.org/wpp/Download/Files/1_Indicators%20(Standard)/EXCEL_FILES/1_Population/ WPP2019_POP_F07_2_POPULATION_BY_AGE_MALE.xlsx https://population.un.org/wpp/Download/Files/1_Indicators%20(Standard)/EXCEL_FILES/1_Population/WPP2019

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Large informal employment limits the social impact of the public pension program and undermines the financial sustainability of the pension system

The negative impact of the COVID-19 pandemic on the labor market and employment in 2020 has largely offset the stimulating effect of the tax reform in 2019 aimed at the increasing formal sector employment. Although real GDP growth slowed down in 2020 and a rapid recovery of high growth is projected to start from 2021,⁹⁹ the negative impact of the pandemic on the labor market and employment may be felt much longer. Despite the reduction in funding sources, the tax revenues of the Pension Fund in 2019 were even slightly above the 2018 level, partly due to the accelerated growth of wages and the overflow of employment between sectors. The tax reform measures resulted in the legalization of more than 500,000 jobs and the creation of about 100,000 new businesses in 2019.¹⁰⁰ The results of the Labor Force Survey of 2019 confirmed the increase in economic activity of the population, accompanied by a reduction in employment in the informal sector (about 115,000 persons) and an increase in employment in the formal sector by 300,000 jobs. However, the lockdowns in March-September 2020 dramatically changed the situation in the labor market. The unemployment rate rose to 13.2 percent in the second quarter of 2020 (from 9.0 to 9.4 percent between the second guarter of 2018 and the first guarter of 2020). The number of employed persons decreased by 702,000 in the same period, including 572,000 in the private sector. The largest decline in employment was in the commercial services, trade, and transport sectors, where the presence of small businesses is significant. The number of persons officially engaged in individual entrepreneurship has almost halved over the same time span, while the number of employed in *dehgan* and personal land plots has grown. In fact, the total number of employed reverted to the pre-reform level of 2018. In 2021, the situation in the labor market improved, and the scale of employment and unemployment has almost returned to pre-COVID-19 levels. But employment is growing in both the formal and informal sectors, due to the influx of working-age people of younger cohorts and the decrease of the unemployment level rather that the reduction of the informal sector and labor migration. Informal employment still absorbs half of all employed people.¹⁰¹ Rooted segmentation of employment is a barrier to participation in pension insurance and undermines the financial viability of the Pension Fund.

The Pension Fund deficit became one of the signs of the new COVID-19 reality. In 2020, tax revenues of the Pension Fund were UZS 20.4 trillion (UZS 3.6 trillion less than in 2019), and total expenses were UZS 31.8 trillion (UZS 5.6 trillion sum more than in 2019). Shortage of funds was compensated by transfers from the state budget (UZS 9.1 trillion) and the remaining balance from the previous year.¹⁰² Part of the reduction in tax revenue was due to the provided incentives and deferrals for small businesses during lockdowns. However, the quarantine was dragging on, and in such uncertainty, it was impossible to project when and to what extent the most affected sectors will be able to revive their activities. By 2021, tax revenues of the Pension Fund were estimated at UZS

¹⁰⁰ "Tax Reform: How Effective Is It?" March 11, 2020. Press release, State Tax Committee, Uzbekistan, <u>https://soliq.uz/press-services/news/show/nalogovaya-reforma-naskolko-ona-rezultativna.</u>

¹⁰¹ Calculated according to the website of the State Statistics Committee, Uzbekistan, section "Labor market," <u>http://new.stat.uz/ru/ofitsialnaya-statistika/labor-market</u>, and the press releases of the MELR, Uzbekistan, https://mehnat.uz/uz/news/uzbekistonda-ishsizlik-darazhasi-94-foizni-tashkil-etdi.

¹⁰² Open data portal, Uzbekistan, https://data.gov.uz/ru/datasets/12262.

⁹⁹ Ministry of Economic Development and Poverty Reduction of Uzbekistan. Analytical information on the results of the economic state of Uzbekistan for nine months, Q4 of this year, and expectations for 2021 and factors affecting the economy. Tashkent, 2020, <u>https://mineconomy.uz/ru/news/view/3317.</u>

23.5 trillion—still less than in 2019 and 2018. At the same time, Pension Fund expenditures amounted to UZS 36.5 trillion, and transfers from the state budget to the fund reached UZS 14.7 trillion. The gap between the tax revenues and expenditures was 35 percent. But an even bigger challenge was the decrease of the tax revenues of the Pension Fund as a share of GDP to 3.2 percent (from 6 percent of GDP in 2015–18 and 4.7 percent of GDP in 2019). Without structural reforms in the economy and employment, as well as pension reform measures, this trend may persist over the long term.

Gaps in the legislation cause the vulnerability of pensioners

With the introduction of comprehensive market reforms, inflation and wage growth accelerated, but uncertain indexation rules caused pensions to lag behind. The Law "On State Pension Provisions" defines indexation of pensions as changes in the basic amount of pension,¹⁰³ which is a common parameter of the pension formula for all pensioners. Specific terms and guidelines for determining the indexation coefficients are not provided in the law. According to the established long-term practice, indexation is authorized by a presidential decree and performed once or twice a year.¹⁰⁴ As a rule, indexation is conducted simultaneously with an increase of the minimum old-age pension and other social benefits and guarantees. The basic amount of pension calculation (the minimum wage until September 2019) and the minimum old-age pension are increased by the same indexation coefficient. During 2015–21, the average nominal size of old-age pensions increased by 2.3 times and reached UZS 925,000 (Annex A4.2). However, most of the increase was absorbed by inflation, with the real growth for the same period at about 12 percent. In 2015–17, the rate of increase in pensions roughly corresponded to the growth of wages, so the pension-to-wage ratio was kept at the same level (Table 4.3). With the introduction of comprehensive market reforms, inflation and wage growth accelerated, and pensions began to lag behind. In 2019, increases in pensions did not even compensate for inflation. In 2020, the dynamics of prices and wages slowed under the influence of anti-pandemic measures, while pensions were indexed twice, thus the ratio of pension-to-wage remained at the level of 2019 (31 percent). In 2021, the indexation policy focused on raising the minimum social guarantees to bring the incomes of vulnerable groups in line with the new social standard-the minimum consumer spending (similar to the poverty line or subsistence level). In particular, an additional fixed guarantee is set as the minimum pension for pensioners with incomplete service (UZS 440,000 per month, equal to the amount of the old-age social allowance; previously, the benefit for this category was guaranteed at not less than 50 percent of the minimum old-age pension). However, due to the high inflation and wage growth, the indexation of pensions turned out to be insufficient, and the pension-to-wage ratio fell to 29 percent.

¹⁰³ The Law of the Republic of Uzbekistan #938-XII of September 3,1993, "On state pension provisions," with amendments and additions, (<u>https://lex.uz/acts/112312</u>). ¹⁰⁴ Information and legal portal NORMA,

https://www.norma.uz/poleznaya_informaciya/dinamika_izmeneniya_minimalnogo_razmera_zarabotnoy_platy#.

Indicators	2015	2016	2017	2018	2019	2020	2021 est.
Coefficient of indexation, for the whole							
year	1.1	1.15	1.15	1.177	1.1	1.177	1.1
Growth rate of average old-age pension	1.078	1.122	1.122	1.149	1.146	1.158	1.110
Consumer price index	1.056	1.057	1.144	1.143	1.152	1.111	1.110
Growth rate of nominal wages	1.162	1.104	1.123	1.250	1.275	1.150	1.200
Pension-to-wage ratio, %	37	38	38	34	31	31	29

Table 4.3. Pension Indexation and Wage Dynamics

Source: World Bank staff calculations using data from the Uzbekistan open data portal, <u>https://data.gov.uz/ru/datasets/6249?dp-1-page=1</u>, and State Committee of Statistics website, Official Statistics section, <u>http://web.stat.uz</u>.

Given the growing demographic burden and deficit of the Pension Fund, the lack of clear rules and formula for linking the indexation coefficient to macroeconomic dynamics may lead to further deterioration of the income of pensioners relative to the incomes of the employed population. During 2018–21, pension expenditures accounted for about 5 percent of GDP. To maintain the pension-to-wage ratio at 30 percent at the least while the contributors-topensioners continuously declines, pension expenditures should be increased to 6.5 percent of GDP by 2030. Since the level of tax revenues in the Pension Fund is estimated at only 3.2 percent of GDP, an equal amount will have to be financed by the state budget. If the target is to reach the replacement rate of 40 percent, pension expenditures will have to be increased to 8.7 percent of GDP, and the share of the state budget transfers in the Pension Fund revenues will exceed 60 percent. If, however, the pension expenditures were kept at 5 percent of GDP, the replacement ratio would drop to 23 percent. Unclear indexation rules lead to ad-hoc solutions and vulnerability of pensioners' incomes. A recent study of the impact of inflation on living standards confirms that pensioners are among the categories most affected by crises because their income is fixed and depends on the adequacy of indexation.¹⁰⁵ Indexation rules should be flexible enough to fit within the available budget, but more importantly, the rules need to provide for clear periodicity in benefit adjustments and the minimum indexing threshold.

Another problem of pension legislation concerns certain limitations that are design to reduce the burden of pension expenditure but that adversely affect benefit adequacy and undermine social sustainability. These limitations, most of them introduced in 2011, include the following:

• Periods of stay on childcare leave are counted toward pensionable service with a limit of three years, combined throughout the life of a woman. The Labor Code provides for three years of childcare leave with the payment of benefits in the first two years.¹⁰⁶ The total fertility rate in Uzbekistan was 2.5 children in 2021, and in the 1980s and 1990s it was four to five children per woman.¹⁰⁷ Generations of women who are now reaching retirement age have given birth

 ¹⁰⁵ "On living standards and inflation," information and analytical material. 2020. Central Bank of Uzbekistan, Tashkent, https://cbu.uz/upload/iblock/4a8/Uroven_zhizni_i_inflyatsiya.pdf.
 ¹⁰⁶ Labor Code of Uzbekistan, https://lex.uz/docs/145261#146843.

¹⁰⁷ United Nations. 2019. *World Population Prospects 2019* (online edition). Department of Economic and Social Affairs, Population Division, United Nations.

usually to three to five children, but these women will have counted the care for only one child. This parameter was sharply cut without notice, and contributes to important gender inequality in benefit calculation. Women with multiple child births significantly contributed to sustaining and improving the demographics of the country, and consequently the fiscal situation of the pension system.

- People with a Group 3 disability are not entitled to a disability pension or disability social allowance for persons without pensionable service. They can only count on assistance under general social programs for the poor, where access is also limited, as discussed separately.
- Service during periods without contributions (childcare leave, compulsory military service, studies at university, and so on) is countable in the total length of service only if there are at least seven years of actual employment and/or payment of contributions. In effect, this means that non-contributory periods are not counted as qualifying years of service that entitle a person to a pension.
- Earnings for pension calculation are considered only from the last 10 years of employment. This limits the possibility of optimizing the wage coefficients in benefit formula. The age profile of wages in the post-Soviet countries has a clear pattern: the highest earnings are observed at the age of about 35 years, and after 40 years, the age-earnings curve decreases sharply long before retirement.¹⁰⁸

When these restrictions were introduced in 2011, the number of disability pensioners was reduced by one-third (from a maximum of 600,000 at the beginning of 2010 to 406,000 at the end of 2012),¹⁰⁹ the number of recipients of social allowance for people without pensionable service increased 1.5-fold (from 240,000 at the beginning of 2010 to 400,570 at the beginning of 2021); the share of pensioners with incomplete service increased from 5 to 6 percent in 2009–10 to about 55 percent in 2015–21.¹¹⁰ These restrictions reduced the inflow of new retirees, but they increased the risk of poverty for households that include people with disabilities and elderly people.

In February 2022, one of the largest issues was addressed. The limit on the duration of childcare leave in pensionable service was increased from three to six years, as the World Bank had recommended. This rule applies not only to new pensioners, but also to those who retired earlier.¹¹¹ As a result, the number of women pensioners with incomplete service should be significantly reduced, thereby increasing the average size of women's pensions and making the gender gap in pensions more equitable. An effective publicity campaign should accompany this policy change.

¹⁰⁹ Data from the Interstate Statistical Committee website, CIS,

http://www.cisstat.com/rus/macro/pens_obespechenie.htm.

https://population.un.org/wpp/Download/Files/1_Indicators%20(Standard)/EXCEL_FILES/2_Fertility/WPP2019_F ERT_F04_TOTAL_FERTILITY.xlsx.

¹⁰⁸ Gimpelson, Vladimir Efimovich, and Daria Igorevna Zinchenko. 2019. "The Price of Age: Wages of Workers in Older Ages." WP3, Labor Market Problems Series, University Higher School of Economics. Moscow.: Ed. House of the Higher School of Economics, <u>https://wp.hse.ru/data/2019/07/12/1479459990/WP3_2019_05.pdf.</u>

¹¹⁰ Open data portal of Uzbekistan, <u>https://data.gov.uz/ru/datasets/6407.</u>

¹¹¹ PF: some women can apply to the Pension Fund for pension recalculation. KUN.UZ, 28.04.2022. https://kun.uz/ru/news/2022/04/28/pf-nekotoryye-jyenshchiny-mogut-obratitsya-v-pensionnyy-fond-dlya-pererascheta-pensii.

Policy Options

Short term (within one year)

Clarify the monitoring and evaluation responsibility of the different social protection programs.

A specific department within the Ministry of Finance or separate SP agency should be tasked to accumulate and analyze administrative program level data to track not only the budget allocated to different SP programs, but also the actual expenditures on the overall universe of SP programs (social assistance and labor market programs). These include one-off support distributed through the Iron Notebook, Women's Notebook, and Youth Notebook; the number of such beneficiaries; and benefit amounts, as well as detailed and structured administrative data for social care services.

Evaluate and improve the targeting of low-income family allowances and other social assistance benefits.

In order to spend efficiently on SP, it is crucial that performance analysis, including targeting efficiency of social assistance benefits, be regularly evaluated using national household budget surveys to ensure resources are efficiently allocated to the neediest (households at the bottom of the national welfare distribution) and leakages minimized. The large inclusion and exclusion errors can significantly undermine the effectiveness of SP programs in poverty reduction. It is essential to evaluate and then improve targeting drawing on existing analytical work and policy notes, for example, by easing certain mandatory requirements and filters in the low-income family allowances, improving the quality of the imputation of agricultural income, and adopting a "hybrid" method combining the meant testing with a control instrument to verify meant test eligibility and correct inclusion errors. In the short term, it is already possible to assess the performance of low-income family allowances using household budget surveys 2021 data.

Ensure adequate financing of the social assistance and labor market programs to all those in need.

A large increase in financing allocated to both social assistance programs and active labor market programs occurred starting 2020 and continues now. However, it is crucial to continue expanding ALMPs beyond the crisis response in order to answer evolving needs of the labor market and ensure people find jobs in the transformed economy. It is also crucial to ensure that once/if the levels of SA spending fall following the COVID-19 crisis, the expenditures level will be still sufficient to cover all those in need, which can be analyzed using administrative and survey data. The poverty reduction programs in Uzbekistan have a higher potential to have impact. All households that are de jure eligible for the program based on the outlined selection criteria should have de facto access to the benefits. This essentially means that the funding for the low-income family allowance program will vary depending on the particular year's needs. Now that the poverty line has been introduced, it should also be leveraged as a tool to make informed decisions on the financing allocations.

Continue expanding the financing of the ALMPs to facilitate access to existing jobs among the most vulnerable but produce evidence of their effectiveness.

The ALMPs can help reduce vulnerabilities people face in the labor market caused by the rapid transformation of the labor market and job losses due to the pandemic. Active labor programs have been small scale in Uzbekistan, although ALMPs are known to be cost-effective tools of reducing

unemployment, especially at times of economic downturn and other crises such as the current pandemic. It is important to continue increasing expenditures on ALMPs but also monitor their effectiveness to ensure the investment goes to the programs that have the highest impact on employment outcomes. The lack of evidence on the effectiveness of ALMPs is a key bottleneck to policy making in the area of activation measures for vulnerable categories.

Clarify pension indexation rules.

The indexation rules should be flexible enough to consider the current capacity of public finances, but also specific enough to guarantee support for pensioners' incomes. To maintain the level of income of pensioners relative to the income of the employed population, pensions should be adequately indexed, with some incorporation of the wage growth. Indeed, many countries legally set the indexation coefficient above inflation. For example, the Swiss indexation formula is the proportional combination of two components, namely price and wage growth rates. Together they compensate 100 percent of inflation and a percentage of real wage index. For example, the Czech Republic, Ukraine, and Kyrgyzstan take 100 percent of consumer price increase and 50 percent of real wage growth. Slovenia takes 100 percent of consumer price growth and 60 percent of real wage growth for indexation, while Poland takes 100 percent of consumer price growth and at least 20 percent of real wage growth. Estonia uses a link to insurance contributions instead of wages: 100 percent increase in consumer prices + 80 percent increase in social tax revenue. Some countries take a differentiated approach to indexing. For example, Austria, Italy, and Portugal apply a regressive scale of indexation coefficients: the higher the total pension, the lower the increase. Latvia applies a combined scale of indexation coefficients for the length of service and amount of pension: the longer the length of service, the higher the coefficient; the part of pensions that exceed 50 percent of average wage from which social security contributions were paid the previous year are not indexed. Clarifying the rules for indexing pensions will help improve the budgeting process, including assessing the required transfer from the state budget to the Pension Fund.

Medium term (one to three years)

Establish a dedicated agency responsible for overseeing all SP programs and ensure that their implementation is aligned with the national social protection strategy.

The government has been contemplating this reform and discussing this initiative in interagency working groups, but so far, they have continued to postpone initiation of this process. Single Registry has the potential to become an effective platform for such an agency. One of the responsibilities of the dedicated agency should be to create monitoring and evaluation units in charge of the whole SP system monitoring. Monitoring and evaluation are the integral component of any effective social protection system, which requires systematic data collection for its operation. The SR is expected to expand to deliver all social assistance in the future, which will address the issue of timely and reliable statistical reports.

Collect statistical information on social protection by different functions in order to avoid information flaws and allow the evidence-based decision making.

The State Statistics Committee of Uzbekistan could collect SP data, as an integral part of social sector reform, to strengthen national statistic capacity in the sphere of social protection. SP policy

design should be informed by such statistical instruments as, for example, regular labor force surveys to better understand the effect of different labor market programs on employment outcomes. household budget surveys can support informed decision making on the effectiveness of social benefits vis-à-vis poverty reduction, among other areas.

Evaluate the performance of ALMPs and public works program using different means.

Employing various means is crucial in order to be able to make informed budget allocation decisions to the programs that maximize labor market/employment outcomes: There is a need to build a strong tracing system to monitor the LM outcomes of graduates of vast training programs functioning in the country. A detailed analysis of the design and effectiveness/performance of the public works program is necessary, given the amount of financing that goes into this social protection instrument and how adaptive it is. In addition, review the good and bad practice of similar interventions worldwide in order to maximize the impact of this instrument.

Evaluate systematically the performance of social assistance programs and the SP system overall. In order to understand whether SP programs are reaching target populations and who is being left out of the system, as well as impacts on poverty and other program outcomes, it is necessary to establish a comprehensive household survey analysis system. It is also important to complement the analysis of household survey indicators with impact evaluations; though not conducted frequently, they can shed light on the specific outcomes that SP programs achieve, as, for example, labor supply or levels of consumption. The indicators of SP program performance such as coverage, beneficiary incidence, benefits level, and the impact of programs on poverty and inequality—derived from household surveys, are not being monitored systematically as specific programs, but also for the wholesome SP system.

Ensure a more flexible approach to pension rights accounting.

Documenting the length of pensionable service is a convenient and conventional way to record pension rights. Tax reform, employment policy, and other changes initiated in the country are aimed at developing entrepreneurship and expanding economic freedom. It is very important that efforts to expand formal employment are not blocked by severe restrictions on pension rights. Therefore, it may be inappropriate and impractical to set requirements for the minimum years of documented service too high for the current generation of new pensioners. Prohibitive requirements for the qualifying period of service discourage many people of working age from participating in pension insurance, and increase the risk of poverty for older people and people with disabilities, who will be excluded from the pension system in much larger numbers. The compulsory insurance pension system is designed to produce maximum coverage of contributions and pensions; otherwise, it loses relevance. For example, one can consider the system in Kyrgyz Republic, where the entitlement to pension is granted as soon as a worker has one month of service or has once paid a contribution.¹¹²

The following are recommendations for improving the social protection of elderly people and people with a disability:

• Refrain from further increasing qualifying service for elderly pension eligibility.

¹¹² Law of the Kyrgyz Republic of July 21, 1997, #57 "On state pension and social insurance," http://cbd.minjust.gov.kg/act/view/ru-ru/557/410?cl=ru-ru.

- Reduce the criteria of qualifying service for the disability pension.
- Include people with a Group 3 disability in the pension system.
- Provide eligibility for social allowance for the disabled in Group 3, who do not have qualifying service for the disability pension.
- Provide eligibility for the disability social allowance for working people with a disability, regardless of their disability category.
- Facilitate access to social benefits for elderly people who do not have qualifying service for the old-age retirement pension, regardless of their status of dependence on relatives.

A more flexible approach to accounting for service will improve pension coverage for elderly people and people with a disability, promoting participation in the formal system.

Consider introducing a universal pension component funded by transfers from the state budget to the Pension Fund.

The tax reform has significantly cut the sources of financing for the Pension Fund. The introduction of the universal/basic state pension component can ensure that the state guarantees the minimum benefit and limits the fund's growing deficit. The universal pension component can fulfill much broader functions in the context of poverty alleviation policies. The draft National Strategy for Social Protection of the Population for 2021–2030, submitted for public consultations, outlines the task to revise and improve the procedure and system for providing social assistance to elderly people who live alone, pensioners, and people with a disability.¹¹³ The universal component is a convenient and reliable tool for solving this problem. Since it is funded from the state budget, it cannot only replace some part of the structure of insurance pensions; it also covers the broadest possible range of elderly people and people with a disability, guaranteeing them a minimum level of personal income. The allocation and payment of social allowances for people without the qualifying period of service is still carried out through the Pension Fund. The universal state pension component will allow these people to be included in the expanded framework of the general pension system, which will help not only to overcome poverty, but also to reduce social inequality and tensions in the society. The state budget will receive a universal instrument with clear and transparent rules, which will allow consolidating various types of social allowances and minimum guarantees.

The practice of the countries of the region shows that the conditions for the provision of a universal/basic pension can be written in a way that does not undermine incentives for employment and participation in pension insurance. Kazakhstan provides the state universal pension to people who reached retirement age but do not have the qualifying service, but the length of service affects the amount of the benefit. If the service is 10 years or less, the benefit is equal to 54 percent of the established value of the subsistence minimum. If the service exceeds 10 years, the benefit is increased by 2 percent for each full year of service over 10 years but not more than 100 percent of the established subsistence minimum. Upon reaching retirement age, a person receives two benefits from the PAYG system—the universal (basic) pension and the earnings-related defined benefit pension—the amounts of which depend on the length of service.¹¹⁴

¹¹³ Draft Presidential Resolution of Uzbekistan "2021–2030 йилларда Ўзбекистон Республикасида аҳолининг ижтимоий ҳимоя қилинишининг миллий стратегия концепциясини тасдиқлаш тўғрисида PFL-499/20-2," Government's Portal for Discussion of Legislation drafts, <u>https://regulation.gov.uz/ru/document/22546</u>.

Kyrgyzstan grants the right to an elderly pension to those who have at least one month of service or paid at least one contribution. This right applies not only to the basic part, but also to the insurance notional defined contributions part of the pension, which together are summed up in one payment. With incomplete service (less than 25 years for men, 20 years for women), the basic part decreases in proportion to the actual service. Because of this discounting, the basic part of pension does not guarantee a minimum payout in the event of incomplete service.¹¹⁵ The basic pension, following the example of Kazakhstan, does a better job of guaranteeing a minimum benefit and can be adopted in Uzbekistan. Specific parameters and amounts should be established by detailed calculations in order to avoid a sharp increase in pension expenditure. At the beginning, one can also foresee the dependence of the size of the basic pension on the availability of other sources of income and/or the property status of the household.

As an alternative solution or temporary/transitionary measure until a universal basic pension is introduced, those who lack service for a regular or sufficient pension benefit should be provided with greater access to social assistance. This measure would guarantee a minimal personal income for all people with a disability (including Group 3) and the elderly, regardless of the composition and sources of income of their household.

Longer term (over three years)

Increase the retirement age.

Uzbekistan remains the only former Soviet republic where the retirement age is 55 years for women and 60 years for men. Many countries raised the retirement age by two to three years during the transitional reforms of the 1990s. The second wave of increases began in the 2010s, when countries initiated the long-postponed pension age reforms (Belarus, Russian Federation, Ukraine). Countries that had previously raised the age of retirement, at this stage emphasized gradual equalization of the retirement age of women and men (Armenia, Azerbaijan, Kazakhstan, Lithuania, Moldova). Azerbaijan, Estonia, Latvia, and Lithuania are raising the retirement age to 65 for both women and men (Box 4.3).

In times of a pandemic and high unemployment, it is unreasonable to start raising the retirement age. But experience shows that between deciding and starting its implementation, it is preferable to allow time for adaptation so the pre-retirement age workers could adjust their life plans. It would be ideal to take a decision within the framework of the National Strategy of Social Protection for 2021-2030, providing for a slow (three to four months per year) increase in the retirement age to 65 years, starting from 2025. This will make it possible to gradually move the line between the working age and the retirement age, curbing the pressure of demographic changes. It is very important for the country to act before the exhaustion of the demographic growth potential of the labor force (mid-2040s), as this is a matter of national competitiveness. Neighboring countries have significantly higher birth rates and retirement ages, which give them some advantages. Raising the retirement age will support the financial sustainability of the pension system and public finances over the long term.

¹¹⁵ Law of the Kyrgyz Republic of July 21, 1997, #57 "On state pension and social insurance," http://cbd.minjust.gov.kg/act/view/ru-ru/557/410?cl=ru-ru.

Bo	x 4.3. The Retirement Age in the Former So	wiet Republics as of July 1, 2021
Countries	Men	Women
Baltic and East	tern Europe	
Estonia	64 years; increase by 3 months per year until 65 in 2026	64 years; increase by 3 months per year until 65 in 2026
Latvia	64 years; increase by 3 months per year until 65 years in 2025	64 years; increase by 3 months per year until 65 years in 2025
Lithuania	64 years and 2 months; increase of 2 months per year until 65 years in 2026	63 years and 4 months; increase of 4 months per year until 65 years in 2026
Belarus	62 years and 6 months; increase of 6 months per year until 63 years in 2022	57 years and 6 months; increase of 6 months per year until 58 years in 2022
Moldova	63 years	59 years and 6 months; increase of 6 months per year until 63 years in 2028
Russia	61 years and 6 months; increase to 65 years in 2028	56 years and 6 months; increase to 60 years in 2028
Ukraine	60 years	60 years
Central Asia a	nd South Caucasus	
Armenia	63 years	63 years
Azerbaijan	65 years	62 years and 6 months; increase of 6 months per year until 65 years in 2026
Georgia	65 years	60 years
Kazakhstan	63 years	60 years; increase of 6 months per year until 63 years in 2027
Kyrgyzstan	63 years	58 years
Tajikistan	63 years	58 years
Turkmenistan	62 years	57 years
Uzbekistan	60 years	55 years

Sources: Mutual Information System on Social Protection (MISSOC) comparative tables, <u>https://www.missoc.org/missoc-database/comparative-tables/</u>; Uzbekistan national legislation.

Annex A.4

Annex A4.1. Number of Pensioners in Uzbekistan, on January 1, 2015–21

Type of pensions	2015	2016	2017	2018	2019	2020	2021
Total	2,713,929	2,781,618	2,882,087	3,007,621	3,162,139	3,312,723	3,424,629
Old-age	2,181,771	2,262,990	2,369,317	2,481,488	2,618,427	2,749,575	2,849,004
Disability	371,374	358,572	351,546	359,291	370,363	382,563	386,559
Survivors (number of families)	160,784	160,056	161,224	166,842	172,933	180,585	189,066

Source: Extra-Budgetary Pension Fund, of Uzbekistan.

Type of pensions	2015	2016	2017	2018	2019	2020	2021
Total	389,965	421,629	474,460	532,912	612,379	702,389	817,457
Old-age	403,100	434,500	487,400	546,800	628,200	719,911	833,303
Disability	401,700	437,300	496,400	559,400	638,300	689,375	802,117
Survivors	262,500	282,600	316,800	355,100	404,200	463,175	538,699
Minimum old-							
age pension	231,575	254,730	292,940	336,880	396,500	436,150	513,350

Annex A4.2. Average Monthly Pensions in Uzbekistan, on January 1, 2015–21, UZS

Source: Extra-budgetary Pension fund, MoF of Uzbekistan; NORMA, legal information portal (minimum old-age pension).

https://www.norma.uz/poleznaya informaciya/dinamika izmeneniya minimalnogo razmera zarabotnoy platy#

Revenue/expenditure	2015	2016	2017	2018	2019	2020	2021 est.
item							
Balance at the							
beginning of year	2,564.4	2,118.7	2,310.7	3,384.8	6,973.6	5,069.8	2,400.0
Revenues, total	12,534.3	14,672.0	17,707.5	24,075.7	24,339.0	29,709.3	38,170.0
Tax revenues	12,512.4	14,638.1	17,644.5	23,948.8	24,029.0	20,416.1	23,470.0
Employer							
contributions	7,611.3	8,774.7	10,280.5	13,896.9	20,722.1	19,841.4	22,880.0
Employee					n.a.	n.a.	n.a.
contributions	2,595.6	3,121.5	3,940.6	5,198.2			
Contributions					n.a.	n.a.	n.a.
based on sales	1,197.4	1,354.7	1,804.9	2,769.5			
Other revenues	1,108.1	1,387.1	1,618.4	2,084.2	3,307.0	574.7	590.0
Non-tax receipts	21.9	33.9	63.0	127.0	309.9	176.2	0.0
Transfer from the	n.a.	n.a.	n.a.	n.a.	n.a.		
state budget						9,117.0	14,700.0
Expenditures, total	12,984.0	14,479.8	16,633.3	20,483.0	26,242.8	31,807.8	36,487.0
Pensions	12,858.0	14,325.0	16,457.5	20,235.7	26,202.8	31,758.6	36,477.0
Social allowances	120.4	152.6	174.6	243.4	n.a.	n.a.	n.a.
Other expenses	5.6	2.2	1.2	1.6	39.9	49.2	10.0
Balance at the end of							
year	2,113.1	2,310.8	3,384.8	6,977.5	5,070.0	2,971.4	4,083.0
As % of GDP:							
Tax revenues	6.0	6.0	5.8	5.9	4.7	3.4	3.2
Transfer from the	n.a.	n.a.	n.a.	n.a.	n.a.		
state budget						1.5	2.0
Expenditures on							
pensions	6.1	5.9	5.4	5.0	5.1	5.3	5.0

Annex A4.3. Budget of the Pension Fund, 2015–21, UZS Billions

Source: Extra-Budgetary Pension Fund, MoF of Uzbekistan.

Chapter 5. Irrigation Water Management

Summary

Due to the arid climate, agricultural production in Uzbekistan is almost entirely dependent on irrigation. Present-day agriculture remains one of the most important economic sectors in Uzbekistan, which accounts for 27 percent of both GDP and employment. Because of the social value of irrigation and improved integrated water resources management policies, including the establishment of the Ministry of Water Resources (MoW), Uzbekistan has managed to maintain its irrigation potential.

Uzbekistan is facing increasing challenges to satisfy future demand for irrigation water. Climate change is expected to amplify seasonal and annual variation in precipitation and temperature regimes, and forecasts suggest that most of the country will experience water shortages in the future. The current conditions of irrigated lands and irrigation and drainage (I&D) systems restrain further growth of crop productivity and incomes of rural commodity producers. Lack of an integrated and systematic approach to developing land reclamation projects and reliable sources of their financing, as well as insufficient activity of water management organizations and water consumer associations (WCAs), have led to reducing the scope of reclamation works and to the rise of groundwater table and salinity on the irrigated fields. The aging of large-scale irrigation infrastructure amplifies existing weaknesses, leading to low efficiency and performance of irrigation services by public irrigation basin authorities and community-based water consumers associations. The irrigation water allocation and service delivery were geared until recently toward meeting state quotas of cotton and wheat production.

While the operations and maintenance (O&M) expenditures of Basin Administrations of Irrigation Systems (BAISs) in Uzbekistan (per cubic meter and per hectare) are lower than the average in other countries, and its structure is dominated by electricity costs that reflect high dependency on lift (electrically pumped) irrigation due to its topography and hydrogeological conditions. Provinces with predominantly lift irrigation have higher O&M expenditures and lower economic efficiency of O&M expenditures compared with provinces with predominantly gravity irrigation. A chronic underfinancing of the repair and maintenance cost has led to an excessive wear-and-tear on the infrastructure, resulting in its shortened actual lifetime and excessive demand for capital investment. While most farmers in Uzbekistan can afford fees of WCAs, the low fee collection could be explained by low transparency, accountability, and non-participatory governance of WCAs. However, many lowprofitability farmers cannot cover the irrigation service fee of WCAs, as prices on material and technical resources and services are growing faster than the increase in state-established purchase prices on cotton and wheat. the weak incentive framework for farmers, district BAISs, and WCAs to conserve water must be addressed.

It is recommended to preserve the current budget level for O&M of the BAISs as a share of GDP, prioritize allocation of repair and maintenance expenditure by norms in a preventive repair and maintenance plan, and improve collection rates of irrigation service fees within the WCAs. Decrease electricity use by installing modern energy-efficient pumps, replacing lift irrigation with gravity irrigation schemes where it is economically feasible. Improve state support to large farms that implement water-saving and energy-saving irrigation technologies. Pilot installation of volumetric metering to prepare for volumetric payments between WCAs and farmers. Introduce direct water payments (a fee) for large farmers based on O&M cost of district level BAISs; transfer district level BAISs to self-financing based on those fees; and move gradually to full cost recovery (including depreciation of capital) to make

systems financially sustainable. Expand training for farmers and BAISs, including on adaptability to climate change; raise average wage of BAISs up to the average level in the country; and link wages to the performance indicators for BAISs and employees. Introduce service-oriented management and performance-based contracts for O&M of pumping stations through public-private partnership (PPP), and improve the overall public investment, including ex-post evaluation of irrigation projects, and increase budget financing of capital investment.

Context and Recent Developments

Water management in Uzbekistan, as in many other countries, faces increased inter-sectorial competition, and water and food security issues. Uzbekistan is one of the most water-dependent countries in the world with the role of irrigated agriculture in the economy. More than 80 percent of the country's renewable water resources originate in neighboring countries. Annual water usage is nearly 1,590 m³ per person and approaches stress level. About 97 percent of crop production is on irrigated land. According to international estimates, ¹¹⁶ Uzbekistan will become one of the 33 countries with the largest water scarcity by 2040. Moreover, it is reported that renewable water availability per capita declined by 25 percent between 2002 and 2014 across countries of Central Asia (United Nations 2018).¹¹⁷ The Central Asia region might witness a decline up to 6 percent of its regional GDP growth by 2050 under a business-as-usual scenario related to inefficient water management.¹¹⁸ Reduced crop yields will result in serious negative consequences for food security, which emphasizes the need for a national transition to sustainable and integrated water resources management practices.

Climate change looms large and will very likely generate additional risks to irrigation infrastructure and related service functionalities. With progressing global warming, especially related to temporal and spatial changes in precipitation patterns and intensities, and air temperature, glaciers, and ice caps—the main water sources of the major rivers of the region—are projected to shrink. It is estimated that by 2050, water resources in the Syrdarya and Amudarya river basins are expected to substantially decrease. According to national assessments,¹¹⁹ the total water deficit in Uzbekistan was around 3 billion m³ per year in 2015, and by 2030, it could reach 7 billion m³, and by 2050, 15 billion m³. In addition, degradation of water quality translates directly into risks, impacting human health, limiting food production, reducing ecosystem functionality, and hindering economic growth.¹²⁰

About 90 percent of Uzbekistan's water is used by irrigated agriculture, which is an important source of value-added and job creation. According to the river basin plans of the Amudarya and Syrdarya basins, the average annual water withdrawal limit¹²¹ for Uzbekistan is estimated as 64 billion m³. For the past decade, average water withdrawal is reported as 51–52 billion m³. On average for the period of 2008–18, the irrigation used 89.6 percent; industry, 3.7 percent (including 0.8 percent for energy generation); communal utilities, 4.4 percent; fisheries, 1.8 percent; and 0.7 percent on other

¹¹⁹ Ministry of Water Resources of the Republic of Uzbekistan. 2020. Presidential Decree UP-6024 of July 10, 2020, "On the approval of the Concept of Development of the Water Management Sector of the Republic of Uzbekistan for 2020-2030. http://www.water.gov.uz/en/posts/1545735855/396, accessed on May 6 2020.

¹¹⁶ WRI. 2020. Aqueduct Toolkit. World Resources Institute. https://www.wri.org/aqueduct/, accessed on April 27, 2020.

¹¹⁷ United Nations. 2018. Sustainable Development Goal 6 Synthesis Report 2018 on Water and Sanitation. New York: United Nations.

¹¹⁸ World Bank. 2016. *High and Dry: Climate Change, Water, and the Economy*. Washington, DC: World Bank.

¹²⁰ World Bank. 2019. *Quality Unknown: The Invisible Water Crisis*. Washington, DC: World Bank.

¹²¹ An annual water allocation in cubic meters is agreed with other Central Asian countries.

(that is, services) subsectors.¹²² The hydraulic infrastructure is complex and composed of 182,000 km of irrigation canals, 160,000 units of various hydrotechnical structures, and 55 reservoirs with a total volume of 20 billion m³ (MoW 2020).

About 50 percent of irrigated land is salinized in Uzbekistan, which impacts crop yields. Irrigation in Uzbekistan requires drainage to control waterlogging and salinization. Uzbekistan has approximately 1.3 million ha (30 percent out of total irrigated) of artificially drained land with the total length of 143,000 km drains, of which 106,200 km are "open horizontal," 36,700 km are "closed horizontal," as well as 172 reclamation pumping stations and 3,897 wells of vertical drainage. About 24 percent of irrigated land is affected by shallow groundwater (as two meters from the surface). Because of salinization, approximately 300,000 ha of irrigated land has been abandoned. Soil salinization now affects more than 50 percent of the irrigated lands and is a major threat leading to declining crop production and a deteriorating ecosystem. The government created a special fund for melioration, with more than US\$110 million annually spent on drainage infrastructure improvement. As a result, the main and inter-farm drainage collectors are in satisfactory condition and irrigated lands with drainage increased from 65 percent in 1994 to 69 percent in 2018.

With economic development and population growth, other sectors will increase their water usage share in 2030. The government of Uzbekistan plans to reclaim about 0.3 million ha for the period of 2019–30 (Figure A5.1 in Annex 5.1). The two sectors (water supply and sanitation (WSS), and industry) will increase their shares, while agriculture will reduce its share but still dominate, with more than 85 percent. By 2030, the government will increase groundwater use instead of surface water resources.

Aging hydraulic infrastructure with its associated engineering structures are subject to numerous biophysical, technical, and management issues that require more efficient safety monitoring programs. Sustainable dam operation needs improved institutional, technical, and regulatory capacities at the national level. Safe dam operations will also have a positive effect on transboundary cooperation. Dam operators need early warning systems, and effective risk management strategies, and modern monitoring instruments for sustainable operation, and will need to prepare themselves for emergency situations. Poor human capacities and insufficient financing increase the risk of industrial accidents at hydraulic facilities and correspondingly risks to life, human health, property/assets, and the environment.

In Uzbekistan after independence, the government undertook important policy initiatives in agriculture and irrigation in an attempt to modernize the existing system. Such initiatives included: (1) redistributing the most land in use from collective farms to individual farms; (2) increasing wheat production and later horticulture for food security concerns; (3) implementing a mandatory state-order system on cotton and wheat on state-controlled prices, later substituting the state by textile companies in relation to cotton farms and creating "cotton-textile clusters"; (4) reducing agricultural subsidies and increasing state-order prices on cotton and wheat; (5) introducing a land tax (in 1995) for fiscal purposes to increase revenue of state budget; (6) establishing WCAs as non-government, nonprofit organizations to manage an irrigation and drainage (I&D) system between the district and on-farm level; and (7) promoting water saving technologies.

¹²² Data of the State Statistics Committee of Uzbekistan, <u>https://stat.uz/en/181-ofytsyalnaia-statystyka-en/6391-environment</u>.

In 2019, the government adopted the Strategy for Agricultural Development for 2020-2030. This strategy set out an ambitious and transformative agenda to end state-led agricultural production, improve land tenure and security, increase transparency of land distribution, and redirect state agricultural financing to private sector enabling investments. Its vision is to develop a competitive. market-based, diversified, and export-oriented agri-food sector that will increase farm incomes, create new jobs, enhance food security, and ensure sustainable use of natural resources, including water for irrigation, through nine priorities: (1) enhancing food security of the population; (2) creating favorable environment for agribusiness and value chains; (3) decreasing state involvement in sector management and enhance investment attractiveness; (4) encouraging rational use of natural resources and environmental protection; (5) developing modern public institutions; (6) diversifying state expenditures; (7) developing research, education, and advisory services; (8) developing rural areas; and (9) developing transparent statistics and information systems.

In 2020, Uzbekistan adopted its first ever Concept of Development of the Water Management Sector for 2020-2030,"¹²³ with sectoral goals and priorities, compatible with international good practices. The following strategic areas are part of the concept: (1) rational use of water resources; (2) scaled-up watersaving technologies; (3) safe and efficient management of water infrastructure; (4) improved condition of irrigated land; (5) adoption of market principles in the water sector (including PPPs); (6) improved governance in water resource management and service delivery; (7) improved transboundary water management; (8) ICT (Information Communication Technologies) adoption in water management, control, and accounting; and (9) capacity building and research for improved sector performance. It has been decided that the phased implementation of the concept will be carried out based on Water Sector Development Strategies to be approved for every three years following the high priority areas, as well as target parameters and indicators for the relevant period (see Table A5.1 in Annex 5.1).

Key Challenges

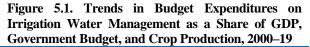
The level of budget expenditures on irrigation water management in Uzbekistan, at 1.1 percent of GDP and 4 percent of total budget expenditures on average in 2016–19, is low and insufficient for adequate services. Over the past 20 years, the budget expenditures on irrigation water management as a share of GDP, as a share of total budget expenditures, and as a share in total crop production had an overall declining trend (Figure 5.1). In terms of total irrigation water spending per hectare of irrigated land, it has an overall upward trend in the past 20 years: from 49 US\$/ha in 2000 and increased up to 156 US\$/ha in 2019 (Figure 5.2). This reflects the increased per hectare expenditures on O&M, capital expenditures in fixed assets, and drainage over this period of time.¹²⁴ However, capital expenditures on I&D have been inadequate: the actual capital investment in the I&D subsector was UZS 1.238 billion, or US\$36/ha, in 2018 and US\$56/ha in 2019, assuming the irrigated area of 4.3 million¹²⁵ ha. The requirement is to spend on fixed capital in I&D at least US\$250/ha per year (that is, 4.5 times

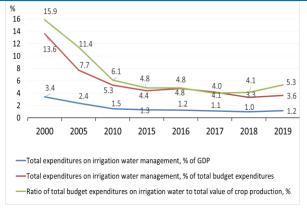
¹²³ Presidential Decree #UP-6024, of July 10, 2020, "On Water Sector Development Concept of Uzbekistan for 2020-2030."

¹²⁴ While irrigation and drainage expenditure as a share of GDP was falling from 3.4 percent in 2000 to 1.1 percent in 2017 in terms of per ha, the expenditures were increasing. This is because the absolute GDP of Uzbekistan increased from US\$13.5 billion in 2000 to US\$62.1 billion in 2017, that is, 4.6-fold, while spending as a share of GDP declined 3-fold. Thus, the spending per ha increased about 2-fold (as irrigated land was broadly unchanged in this period).

¹²⁵ The 4.3 million ha includes secondary crops, while the arable land in recent years might be smaller.

more) without irrigation modernization.¹²⁶ To secure reliable, adequate, and flexible irrigation water supply, the capital investments in the long-term future would need to increase to US\$1,400/ha, and the modernization of the entire irrigation and drainage infrastructure over 2015–30 would cost between US\$5.5 billion and US\$16 billion.





Source: World Bank staff calculations using data from Uzbekistan authorities.

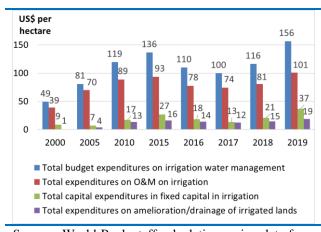


Figure 5.2. Trends in Budget Expenditures on Irrigation Water Management, US\$ per Hectare, 2000–19

The structure of budget expenditure on irrigation water management is dominated by O&M

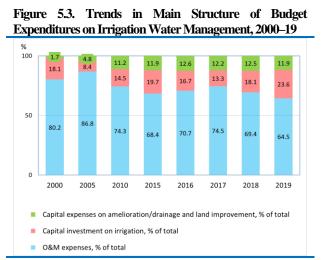
spending (around two-thirds in recent years), followed by the capital investment in fixed assets in irrigation, as well as expenditures on drainage (Figure 5.3). The lesson from around the world is that the I&D budget needs to be well-balanced across subcategories (wages, repairs and maintenance, other non-wage recurrent expenditures, and capital expenditures) to make it sustainable and effective.¹²⁷ The positive trend is that capital expenditures increased in 2000–15, declined in 2016–17, and increased again in 2018–19. O&M expenditures, which are about 65 to 70 percent of the total expenditures, are split into expenditures on electricity (about 67 to 70 percent of total O&M), wages (about 20 percent of total O&M), and other expenses, including repairs of canals and equipment, fuels, lubricants and related materials, and security services on water objects (Figure 5.4).

Source: World Bank staff calculations using data from Uzbekistan authorities. *Note:* O&M = operations and maintenance.

¹²⁶ Ibid, p.105. Due to the lack of asset management plans, there are no reliable estimates of the costs of maintaining this infrastructure. Based on international experiences and depending on the type of the system, a typical range of annualized costs for replacing and maintaining of irrigation infrastructure can be estimated as US\$170–US\$220 per ha for gravity schemes and at US\$220-320 per ha for mixed gravity and pumped systems. Based on these assumptions, annual funding requirements for covering only the cost of replacement and maintenance of irrigation infrastructure (in actually irrigated areas) may be estimated as US\$860 thousand–US\$1.2 million per year. Full rehabilitation (that is, to return the system to its original design and as-built status) may cost US\$1,000–US\$2,000 per ha, and modernization (that is, adoption of more modern infrastructure based on best practice) may cost US\$1,000–US\$4,000 depending on the extend (see *Modernizing Central Asia Irrigation*, stocktaking and strategic discussion report, FAO/World Bank, May 2019, pp. 28-29). For such norms of capital spending on I&D to become affordable in Uzbekistan, the current incentives structure for large farmers should be changed, as it results in low productivity of irrigated land under cotton and wheat. Under adequate incentives, productivity can be doubled by farmers in three years, as most farmers know how to increase productivity, but currently they have no interest in doing so.

¹²⁷ Uzbekistan: Public Expenditure Review (2019), chapter 7 on the public expenditures on agriculture.

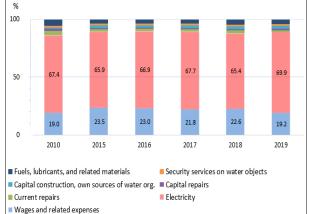
The dominance of electricity expenditures (at 70 percent) in total O&M expenditures crowds out spending on the current and capital repairs that remains at a low level of 2.9 percent of total O&M expenditures. The irrigated agriculture in Uzbekistan is a highly electricity-consuming sector, as 56 percent of total irrigated land is irrigated by lift irrigation with electrical pumps. The MoW has 1,687 pumping stations with more than 5,000 pumps, with annual electricity consumption of 6 billion to 8 billion kilowatt-hours, which consume 16 percent of total electricity consumption in the country. The electricity use for I&D pumps costs close to US\$350 million annually, and account for 60 percent of the annual O&M budget of the MoW. The share of payments for grid electricity in the total O&M budget has increased dramatically from 40 percent in the 1995 to 70 percent in 2019. In addition, more than 10,000 pumping units are operated by WCAs of farmers and part of the growing cost for electricity is paid directly by farmers. Much more spending is required for repairs and maintenance, as actual budget (without electricity cost) was only US\$28/ha in 2018 and US\$30/ha in 2019, while the requirement is US\$80/ha (that is, 2.6 times more).



Source: World Bank staff calculations using data from Uzbekistan authorities.

Note: O&M = operations and maintenance.





Source: World Bank staff calculations using data from Uzbekistan authorities.

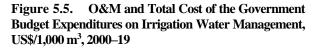
The O&M cost of BAISs in Uzbekistan per cubic meter is lower than the average O&M cost in other countries. This fact may point to both the lack of financing of O&M expenditures in Uzbekistan compared with other countries, and lower wages in Uzbekistan, while electricity tariffs have been on the increasing trend in real terms. While the total budget cost per 1,000 m³ of irrigation water in the country is estimated at US\$14.7/1,000 m³ in 2019, the O&M cost is estimated at US\$9.5/1,000 m³ in 2019 (Figure 5.5). This level of O&M cost can be indicative of the average irrigation water tariff¹²⁸ in Uzbekistan, if water charges will be determined across the district- or province-level BIAS. Over time, the trend for both total and O&M cost in Uzbekistan in US dollars (calculated at market exchange rates) is upward sloping; however, it is still only a third of the average for other countries.¹²⁹ The range in volumetric

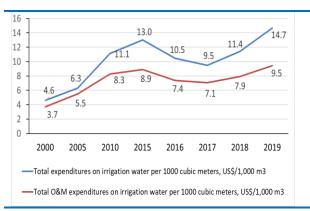
¹²⁸ One option is to set water tariffs per actual m³ consumed; tariffs remain unchanged for five years (only adjusted for annual inflation). Farmers are free to save water on-farm as much as they want (via water-saving technologies). Absence of water tariffs between irrigation bodies and WCAs stimulates inefficiency of water bodies.

¹²⁹ On O&M costs and water tariffs on irrigation, the comparator countries include Australia, China, Greece, India, Israel, Italy, Jordan, Kazakhstan, Mexico, Morocco, Portugal, Romania, Tanzania, Turkey, and the US.

price for irrigation water across many countries that introduced charges for irrigation water is great from below US\$1/1,000 m³ in Canada and Romania, to US\$180-290/1,000 m³ in Israel, US\$420/1,000 m³ in Tanzania, and US\$1,330/1,000 m³ in the Netherlands (when tariff applied for municipal supply is used for irrigation). However, the average price for irrigation water in most countries of about US\$20/1,000 m³ is probably indicative¹³⁰ of the global "average" volumetric price charged for irrigation water, which covers only the O&M cost.¹³¹

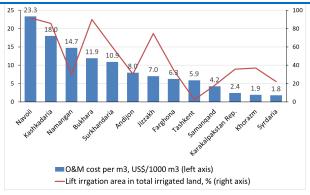
The high variation in the O&M cost per cubic meter of irrigation water by regions of Uzbekistan correlates to the domination either of electrical pumping or gravity irrigation schemes, soil salinity, and cropping patterns. In regions that use predominantly electrical pumping irrigation, the O&M cost is much higher (about US\$11–23 per 1,000 m³) than in regions with predominantly gravity irrigation (about US\$1.8–4.2 per 1,000 m³). Regions that predominantly use the electrical pumping irrigation include Bukhara, Jizzakh, Kashkadarya, Navoi, and Surkhandarya; regions with predominantly gravity irrigation include Andijan, Ferghana, Khorezm, Namangan, Samarkand, Syrdarya and Tashkent and the Republic of Karakalpakstan (Figure 5.6).





Source: World Bank staff calculations using data from Uzbekistan authorities. *Note:* O&M = operations and maintenance.

Figure 5.6. Differences in O&M and Total Costs on Irrigation Water Management across Regions, Electrical Pumping Irrigation vs. Gravity Irrigation, 2018–19.



Source: World Bank staff calculations using data from Uzbekistan authorities. *Note:* O&M = operations and maintenance.

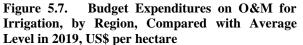
Economic efficiency of O&M expenditures per hectare is lower in provinces with predominantly electrical pumping irrigation. The analysis shows (Figure 5.6 and Figure 5.8)

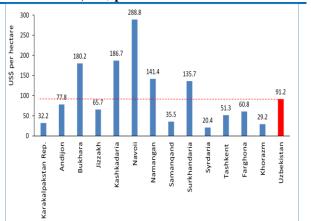
 $^{^{130}}$ This US\$20/1,000 m³ level was in the late 1990s; if the average annual inflation in the US in 2000–19 were taken into account, then this figure comes to about US\$31/1,000 m³ in 2019.

¹³¹ The average tariff on irrigation water in most countries is based on O&M cost (without capital depreciation cost) from a river down to farm border. The average tariff for farmers in comparator countries is about US\$31/1000 m³; in Uzbekistan, water tariffs for farmers do not exist (between main canals and WCAs of farmers). If one were introduced, the actual O&M cost (the basis for a tariff) in Uzbekistan would be about US\$9.5/1000 m³—three times less than the global average. So, Uzbekistan farmers could afford it, if they own cotton and wheat output or prices on these crops are unregulated, and if farmers would allocate their farmland between crops. The average tariff in Uzbekistan can be even lower in the long run, after most pump irrigation is transferred to a gravity irrigation scheme.

that the average return on O&M expenditures in four regions with predominantly gravity irrigation schemes (Karakalpakstan, Khorezm, Samarkand, and Syrdarya) is five times higher than the return on O&M expenditures in four provinces with predominantly electrical pumping irrigation (Bukhara, Kashkadarya, Navoi, and Surkhandarya). The average O&M expenditures per 1,000 m³ of irrigation water with gravity are 6.2 times lower than electrical pumping irrigation. Therefore, increasing water use efficiency in irrigated cropping in Uzbekistan is critical for the entire country, and especially in provinces with predominantly electrical pumping irrigation.

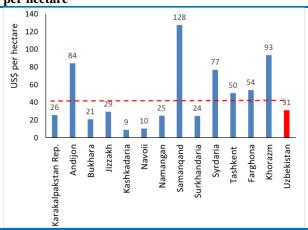
Crop diversification is critical for increasing both efficiency of water use and efficiency of O&M spending on I&D. The ratio of crop output from irrigated land per unit of O&M expenditure by province compared with the Uzbekistan' average level in 2019 is the highest in Andijan, Khorazm, Samarkand, and Syrdarya, while it is the lowest in Bukhara, Kashkadarya, and Navoi. The difference between provinces in the efficiency of crop output per unit of O&M expenditures is also correlated with the use of electrical pumping or gravity irrigation (Figure 8), and cropping patterns with land quality factors. This also shows that there is considerable potential to increase water use efficiency at the farm level.





Source: World Bank staff calculations using data from Uzbekistan authorities.

Figure 5.8. Efficiency of O&M Expenditures, by Region, Compared with Average Level in 2019, US\$ per hectare



Source: World Bank staff calculations using data from Uzbekistan authorities.

Note: The efficiency of O&M expenditures is measured as the ratio of crop output from a hectare of irrigated land to O&M expenditures per hectare.

While most farms can afford WCA fees, low fee collection could be explained by low transparency, accountability to farmers, and non-participatory governance of WCAs. Actual collection rates by WCAs from their members (individual farms) for water services are less than 40 percent on average, in many cases less than 30 percent of the planned value.¹³² This amount may be enough to cover low wages, but hard to avoid further deterioration of I&D infrastructure at the WCA

¹³² To address the lack of WCA financing, from January 1, 2020, at least 1 percent and 2 percent of the total bank loans for wheat and cotton, respectively, are recommended for covering WCAs for water delivery services to farms (Cabinet of Ministers Resolution #982 of December 12, 2019). To date, farmers are not willing to allocate those to WCAs.

level. The low profitability of raw cotton production for farmers points to insufficient incentives to increase cotton yields¹³³ over the long term. In addition, the high price taxation in the cotton sector existed until 2019¹³⁴ and almost fully negated the positive impact of public expenditures on agriculture, including public expenditures on irrigation. However, estimates of the capacity of large farmers to cover O&M costs show¹³⁵ that most farms can afford the WCA fees in both lift and gravity irrigation provinces. The international experience suggests that the lack of transparency of WCA decision making and the lack of farmers' participation in decisions about setting water charges may be part of the reason for low collection rates.

In all of the WCAs for which data were available, irrigation fees below cost-recovery levels are lowest for the crops that use the most irrigation water—cotton and wheat, the main statemandated crops. In most case study sites (World Bank 2016), dehkans and tomorka owners (also referred to as smallholders) depend on water in the WCA-managed canals to irrigate their crops. However, WCA officials claimed that because tomorka owners and most dehkans are not registered as legal entities, they cannot officially join a WCA. Thus, irrigation needs of dehkans and tomorka owners are not always adequately considered by the WCA and public BAISs when water supply schedules are prepared, making them de facto illegitimate users. Yet, water law clearly states that all water consumers (with registration and not) can be members. Farmers in wellfunctioning WCAs already pay higher fees than farmers in poorly functioning ones, and the former are already active in maintaining and repairing the irrigation system. The low incomes of individual (large) farmers from the existing structure of crop production (cotton and wheat) continue to constrain cost recovery for O&M. The inability of farmers to pay for water supply services is due to low land and water productivity per hectare, a result of several factors, including: (1) crop placement system with mandatory production of cotton and wheat at about 65 percent of arable land; (2) relatively low profitability of cotton production, less so wheat, compared with horticulture production; (3) continued taxation of wheat prices and to a lesser extent of cotton prices; and (4) low quality or absence of public programs, such as advisory services and seed improvements, to help reduce cotton and wheat production costs.

¹³³ The incentive to increase cotton productivity is low and broadly unchanged, with the average raw cotton yield in Uzbekistan at 2.6 tons/ha in the past 50 years, while yields of other crops (vegetables, fruits, grain, etc.) have increased significantly even in the past decade.

¹³⁴ Ibid, see Table 7.17. in Uzbekistan PER, 2019, p. 107, for details of market price support (MPS) calculations. The MPS to agriculture is the difference between domestic and international prices on agricultural output. When domestic prices are above international prices, MPS is positive; when below, MPS is negative and farmers face implicit taxation. During 2016–18, the implicit taxation of cotton and wheat subsectors was 1.3 percent of GDP in 2016, 3.6 percent of GDP in 2017, and 1.7 percent of GDP in 2018; in 2017, the implicit taxation of agriculture exceeded the total public expenditures on agriculture, which included public expenditures on irrigation and drainage of 1.1 percent of GDP in 2017. In 2019 and 2020, however, farmgate prices for cotton increased and they were much closer to the world market level. The state procurement farmgate prices of wheat in 2019 reached the market level, but in 2020, they were set at 30 percent below the market prices.

¹³⁵ "Full Cost Recovery on Operation and Maintenance of Irrigation Systems in the Pilot Basins"/Project Report of the European Union Programme on "Sustainable Management of Water Resources in Rural Areas of Uzbekistan," Tashkent 2019, pp. 34–50. For example, in Shakhrykhansay Basin of Ferghana Valley, the O&M costs of WCAs in 2017 of US\$6.6/ha (at the market exchange rate) were only 0.95 percent of the total costs of individual farmers per 1 complex hectare, and only 0.15 percent of the profits of individual farms at the existing crop yields. In Aksu Basin of Kashkadarya region (Kitob, Shakhrisabz, Yakkobod districts), the O&M costs of WCAs in 2017 of US\$10.2/ha (at the market exchange rate) were only about 1.2 percent of the total costs of individual farmers per 1 complex hectare, and only 0.31 percent of the profits of individual farms at the existing crop yields.

There is insufficient application by farmers of water-saving technologies despite government subsidy, tax, and financial incentives. In recent years, the Uzbekistan government has been providing support for introducing of water-saving irrigation technologies: 77,470 ha were equipped with "drip irrigation" technology; 1,123 ha were under "sprinkler irrigation." and 2,000 ha were under "discrete irrigation" in 2019. In 2020, it was reported that about 133,000 ha were equipped with water-saving technologies, of which drip irrigation systems were on 49,500 ha. However, the total share of these modern irrigation technologies in Uzbekistan has been low at below 7 percent of total irrigated land in 2020. The reasons can be attributed to (1) the lack of volumetric metering; (2) no direct charges to and payment by farmers to district-level BAISs for water use; and (3) a large proportion of the benefits are public, while technologies on over 2 million ha by 2030, yet practical uptake is rather limited, despite the existence of national programs with subsidy, tax, and financial incentive. The amount of subsidy depends on types of water-saving technologies and the soil quality of irrigated lands: UZS 8 million/ha for drip system, UZS 4 million/ha for sprinkler system, and UZS 1 million/ha for discrete irrigation.

Water-use tax on water withdrawal from surface and groundwater sources is allocated to local governments, but a part of revenue from this tax is not earmarked for the financing of the irrigation sector. Payers are legal entities, individual entrepreneurs, and *dehqan* farms. Tax rates per m³ of water depend on the type of water source and the kind of economic activity. In 2015 and 2019, new water-tax categories were introduced for enterprises producing non-alcoholic beverages and industrial enterprises and for car-washing stations, respectively (see Table A5.3 in Annex 5.2). Communal utilities can withdraw water to produce drinking water for the population free of charge; they only have to pay for water resources used for their own operational needs. This implies that technical water losses do not enter into their operating costs. Hydropower plants are also tax-exempted for water withdrawals with salt-leaching practices. Revenues from the water-resources tax amounted to UZS 140.4 billion (US\$18 million) in 2018 and UZS 320.8 billion (US\$36.9 million) in 2019 and projected UZS 349.5 billion (US\$34.8 million) in 2020 and UZS 391.4 billion (US\$36.9 million) in 2021; these revenues are allocated to local governments, but they are not earmarked for financing the irrigation sector. For water used for irrigating agricultural land and fish breeding, including farms, a single tax rate of UZS 40 per one cubic meter was established by the 2021 budget law.

In conditions of budget deficit and limited general budget financing and, given priority to wages and electricity payments for pumps, the repair and maintenance expenditure on I&D, is often financed below the required norms. According to the recent European Union report,¹³⁶ the actual amount of O&M received by BAISs from the state budget on I&D systems amounts to only 70 to 75 percent of the required norms of Uzbekistan (excluding the amount spent on electricity).¹³⁷ Without electricity costs, the annual O&M budget of BAISs is small in international comparison: it was only UZS 30/ha in 2019, while the good international practice requirement is UZS 80/ha. A systematic under-financing of the repair and maintenance cost of I&D infrastructure has led to excessive or accelerated wear-and-tear, resulting in the shortened actual lifetime of I&D infrastructure and excessive demand for capital investment. Poor maintenance initiates a vicious

¹³⁶ European Union Project Report. 2019. "Full Cost Recovery on Operation and Maintenance of Irrigation Systems in the Pilot Basins"/the EU Programme on "Sustainable Management of Water Resources in Rural Areas of Uzbekistan," Tashkent 2019.

¹³⁷ European Union Project Report (2019). "Full Cost Recovery on Operation and Maintenance of Irrigation Systems in the Pilot Basins"/the EU Programme on "Sustainable Management of Water Resources in Rural Areas of Uzbekistan," Tashkent 2019, p. 12.

circle of decline: for example, at the WCA level, "poor maintenance => reduced water supply => lost output => farmers' anger, despair, and reduced investment => reduced water fee collections for WCAs => poor maintenance." As a result, the WCAs and BAISs often have been focusing their efforts on de facto emergency repair and maintenance works, that is, when repairs are urgently needed to prevent complete failure of the system. As a result of inadequate O&M expenses, many WCAs and some BAISs perform below capacity. The World Bank has expressed the need to increase maintenance costs after the completion of public investment projects.¹³⁸ The IMF report on Uzbekistan also recently mentioned¹³⁹ that insufficient funding on repair and maintenance in the public investment projects is lagging that of the CIS and most developing countries, and may jeopardize the sustainability of assets.

The district- or province-level BIASs provide water services to individual farms without direct charges to and payments from farms, while WCAs do directly charge farms for services; however, because WCAs set tariffs below actual costs, the WCAs collection rate is low, and they run quasifiscal deficits. The state budget provides I&D services at the district- or province-level BAIS¹⁴⁰ as direct subsidies to farms, but some of these subsidies are compensated by additional tax (both explicit and implicit) on agricultural output in the form of land tax and in the form of controlled prices on cotton and wheat below world market prices. So, the state budget's provision of water subsidies to farmers (in the absence of direct payments from farmers to district- or province-level BIASs for water services) is de facto compensated¹⁴¹ back to the state budget. However, a system of WCA services below the O&M cost pricing, without regard for adequate profitability, results in WCAs' quasi-fiscal deficit. According to World Bank methodology,¹⁴² the quasi-fiscal operations are estimated based on three components: (1) pricing gaps: losses from end-user tariffs set below cost-recovery rates; the cost recovery tariff needs to include full O&M cost and interest on outstanding debt; (2) collection inefficiency: losses from differences between billed and collected revenue; and (3) technical inefficiency: losses above normal technical losses from inefficient operations.¹⁴³ The estimate of quasi-fiscal losses of WCAs should reflect interest payments and capital cost of replacing fully amortized equipment. Electricity used in lift irrigation is also cross subsidized by the natural gas company (Uzbekneftegas), as existing electricity in 80 percent is generated from the natural gas, which is also underpriced in Uzbekistan's domestic market. So, the cost recovery tariff for WCAs in lift irrigation districts would have been higher had electricity prices been set to reflect the cross-subsidy to power generation from cheap natural gas. If the WCAs receive subsidized loans, these subsidies also must be added to their quasi-fiscal deficits.

¹³⁸ For instance, Uzbekistan PER, 2019, pp. 68, 73.

¹³⁹ International Monetary Fund, Public Investment Management Assessment (PIMA) for Uzbekistan: Preliminary Findings, Virtual Roundtable of International Partners, December 2020.

¹⁴⁰ Although the district- and province- (or region-) level BIASs are not formally registered as "state-owned enterprises" (SOEs) de jure, they nevertheless are owned by the state and receive financing from the state budget. Thus, for the purpose of this analysis, the BAISs are viewed as SOEs de facto, and so they can run a quasi-fiscal deficit if the prices on BIASs services will be set below their actual O&M cost, without regard for adequate profitability.

¹⁴¹ According to World Bank calculations of net taxation in 2016–18, the implicit taxation of cotton and wheat subsectors was 1.3 percent of GDP in 2016, 3.6 percent of GDP in 2017, and 1.7 percent of GDP in 2018. In 2017, the implicit taxation of agriculture exceeded the total public expenditures on agriculture, which included public expenditures on irrigation and drainage of 1.1 percent of GDP in 2017. In 2019–20, implicit taxation declined to 0.4 percent of GDP.

¹⁴² Uzbekistan PER, 2019, p. 58.

¹⁴³ The technical inefficiency is coming from underinvestment in maintenance and inadequate metering and results in lost output, that is, lost water above normative technical losses reduces the potential revenue of water management organizations. Note that this definition of QFOs does not capture revenue needs or "deficits" related to expansion of capital (new investment projects beyond maintenance).

Quasi-fiscal deficits of WCAs and reduced budget financing of BAISs make them unable to invest. Because water SOEs are monopolies for their respective agricultural farms and WCAs have prices for their irrigation services below cost-recovery levels, they both do not have adequate revenue, proper incentives, and technical capacity to improve operational efficiency and invest. Investment for BAISs and WCAs is funded from the state budget under the public investment program. This includes investment in rehabilitation of canals, drainage, pumps, electrification of pumps, purchase of equipment, and others. These resources have been insufficient to ensure adequate levels of investment, though. As a result, water losses due to lack of investment for maintenance are significant and above international norms. Lack of adequate information prevented the team from calculating these quasi-fiscal deficits of WCAs.

To achieve 2030 goals, Uzbekistan needs to overcome systematic underinvesting in the capital replacement and modernization of irrigation and draining infrastructure. Capital investments in irrigation and drainage grew in recent years, but they continued to be crowded out by large electricity expenditures. This has led to chronic underinvesting in capital replacement and modernization of I&D infrastructure. Uzbekistan will have to increase its budget spending on I&D, as currently about 66 percent of main canals require anti-filtration cover, 75 percent of the existing drainage area requires reconstruction, 70 percent of drainage pumps require capital repairs, and 30 percent of irrigated lands require additional drainage, according to the Ministry of Water Resources. All of these upgrades need significant investments to build new and rehabilitate existing infrastructure to maintain service quality over time. The World Bank estimated in the first Agriculture Public Expenditure Review (2019) that an annual investment of US\$400 million would be needed over the next 10 years to maintain water infrastructure at the current service level. Furthermore, at least the same annual amount would be required to modernize the system. For comparison, in 2020, total capital expenditures on irrigation and drainage were US\$200 million. Thus, the annual capital spending should be at least doubled to maintain water infrastructure at the current service level, and quadrupled to modernize the system.

While the main sources of investment project financing in I&D will remain the state budget and foreign donors' loans and grants, the PPP contract regulations need to be enhanced. Commercial bank credits for irrigation water management purposes are rarely used by both farmers and BAISs (including WCAs) to financing O&M and capital expenditures because of the absence of profitability for BAISs and the lack of incentive framework for cotton farmers. PPPs offer the main opportunities for scaling up the financing today. However, the regulations of PPP contracts (preparation, selection, implementation) need to be enhanced to avoid failed projects and lack of expected results of PPPs.

Human capacities and knowledge management need to be strengthened for sustainable water management of Uzbekistan. Such challenges include: (1) low proportion of water sector specialists with higher education; (2) inadequate availability of training courses for the secondary specialized and workers' education in the water sector; (3) bringing the average monthly wage of irrigation water workers up to the average monthly wage level in Uzbekistan; (4) adequate funding for research and development expenditures, innovation, and training activities, including on water-saving technologies; and (5) advancing the research in optimizing the energy regime with an irrigation regime of reservoirs and rivers in the Aral Sea Basin.

¹⁴⁴ Uzbekistan PER, 2019, chapter 7, on the public expenditures on agriculture.

Policy Options

Short term (within one year)

Introduce a phased implementation of mechanisms for covering a part of the operational costs of BAISs for the delivery of irrigation water by water consumers.

Establish priorities in allocation of required repair and maintenance expenditure by norms to the most critical assets and prepare their mapping in a "preventive repair and maintenance plan."

Accelerate the pace of implementation of ongoing projects on reducing of electricity consumption at water facilities and the widespread introduction of energy-saving and energy-efficient technologies, as well as the introduction of effective methods for regulating the operation of pumping stations.

Medium term (one to three years)

Provide an adequate budget for financing the implementation of the water sector strategy.

Assess the feasibility of establishing an earmarked fund to finance part of the expenses for implementing the water sector strategy, such as a Water Resources Conservation/Development Fund.

This extra-budgetary fund could be established to calculate the exact budget needs and kept separate from the general budget for two years to help finance the strategy, then integrated back into the general budget.

Introduce service-oriented management and performance-based contracts for O&M of pumping stations through PPPs. Prepare and implement some investment projects or management as PPPs.

While institutional transformation concerned mostly the change in governance and O&M expenditure management, the ownership for water-related infrastructures will remain under state jurisdiction. Evidence demonstrates that PPPs in irrigation are likely to succeed in the policy environment that supports high value and commercial agriculture, free from state intervention, and where farming is highly profitable. Distortions such as input and output subsidies or implicit taxation in agriculture and lack of incentives, usually crowd out private investments. After incentives for greater cost efficiency, productivity, and innovation appear, a list of water facilities to be transferred to PPPs could be prepared, including the agricultural extension services to farmers.

Ensure that O&M costs of I&D are revised and incorporated into the medium-term expenditure plans and into the appraisal documents of new investment projects.

The revised O&M costs should consider that the electrical pumping irrigation scheme in some districts of Uzbekistan will be transferred to the gravity scheme, where economically and technically feasible, to reduce the increasingly expensive payments for grid electricity.

Switch to higher value-added crops under crop diversification to improve water efficiency.

Uzbekistan allocates about 62 percent of its irrigated lands and 46 of water for cultivation of three crops—cotton, wheat, and rice—that provide far less value-added per hectare and per water unit than most fruits, vegetables, and some other crops.

Improve collection rates of the WCAs' irrigation service fees close to 65 percent, on average, of total assessed fees from the current 47 percent on average, based on the improved performance of the WCAs (with updated annual plans for O&M).

Ensuring stronger user *participation, transparency, and accountability* regarding setting water charges by the WCAs can help to improve collection rates. Water users must be *satisfied* with the performance of WCAs. To achieve this, the WCAs should become true cooperatives (co-ops) of the founding farmers and WCA assets should be fully divided among the farmers that they serve so that O&M costs could be compensated by farmers in proportion to water volumes or irrigated land. In case of a large financing gap between current charges and full cost recovery of WCAs, besides charging higher fees, consider providing government subsidized loans¹⁴⁵ to the poor farmers only.

Pilot the installation of volumetric metering between district BAISs and WCAs and between WCAs and farms in order to prepare the irrigation system for volumetric payments.

Water metering and accounting is essential for measuring water supply and losses and determining potential gains from investments in water-saving technology. Currently, water inlets to farms are practically not equipped with water-measuring facilities, and thus, it is not possible to organize the collection of WCA and district BAIS fees based on water volume. As a result, farmers in Uzbekistan are not interested in saving water, as WCAs charge water services on a per hectare basis.

In cases where the gravity irrigation scheme is not technically or economically feasible, introduce the use of small-scale hydropower stations on canals (see Box A5.1 in Annex 5.3) to generate cheaper electricity locally to feed the pumps.¹⁴⁶ Leasing small hydropower stations can help BAISs and farmers pay only a small fee, based on the asset depreciation of such equipment, to increase affordability and to spread stations across Uzbekistan.

This includes evaluating projects against value-for-money criteria both ex ante and ex post; strengthening ex post review and evaluation to improve future projects and address institutional capacity bottlenecks; and developing a more detailed strategy for modernizing I&D to reduce a long-term budget for this purpose. In particular, the pre-selection stage offers an opportunity to apply lessons from the ex-post evaluation of similar completed projects to the initial design of new projects. The provision of technical assistance could be a responsibility of a single specialized unit in the Ministry of Investment and Trade to address capacity bottlenecks. The capital investment for the rehabilitation and modernization of I&D should be reassessed

¹⁴⁵ If subsidies are necessary, some basic principles should be set in place for subsidies that should be: (1) predictable to ensure longer-term planning and budgeting, and to avoid the vicious circle of inadequate maintenance, low service quality, low collection rates, and insufficient revenues for basic maintenance; (2) transparent, and reviewed continuously to ensure sufficient incentives for the organization providing service to improve performance; (3) reduced over time in a phased approach; and (4) charges should take affordability concerns into consideration.

¹⁴⁶ Solar panels to power the pumps may be an option in Uzbekistan in remote areas with a lack of grid electricity, as solar panels are still more expensive compared with grid electricity. Solar pumps for irrigation are widely used by farmers across Africa and Asia.

after many districts with lift irrigation, where feasible, are transferred to gravity irrigation in order to radically reduce expensive payments for grid electricity.

Improve the system of state support for agricultural producers (farmers) that implemented water-saving and energy-saving irrigation technologies.

Public support for investments in land leveling, small hydropower fed pumps, and the purchase of drip or sprinkler systems can be helpful to reduce water and grid electricity use with subsidies or rebates for purchasing water- and energy-efficient devices or installing drip irrigation. The source for financing of such investments on the farm level could be complemented by a special tax on agricultural producers located on the best irrigated lands with the highest natural fertility.

Longer term (over three years)

Introduce direct volumetric (or at least per hectare) irrigation water charges for commercial and large farmers on the basis of the O&M cost of district BAISs; transfer district BAISs to self-financing; and gradually move to full cost recovery (including depreciation of capital) in order to make systems financially sustainable.

The concept of Uzbekistan water development until 2030 envisages the introduction of water charges. Setting irrigation water tariffs at the O&M cost will reduce these expenditures in the state budget on the part of district BAISs. Based on volumetric tariffs, the district BAISs can self-finance O&M costs, while the capital cost financing will remain from the state budget in the longer term.

Ensure that large farms are able to pay directly to district BAISs by removing their state budget financing and providing this same amount of state budget financing to large agricultural farms; remove this direct budget financing (subsidies) of irrigation water three to five years after its introduction, as soon as farmers' profitability is increased.

This will improve transparency of the state budget, as the existing state budget financing of BAISs (which is an indirect subsidy to agriculture) will be replaced by the explicit direct budget subsidy to large agricultural farms, while these farms will start paying directly to district BAISs. The district BAIS services will become commercial services instead of quasi-fiscal subsidies. Thus, until the capital cost is included in the irrigation tariffs of district BAISs, indirect subsidies to agriculture in the form of capital expenditures on I&D will remain in the state budget. State budget subsidies on irrigation water may be continued only for poor farmers located on poor natural fertility lands.

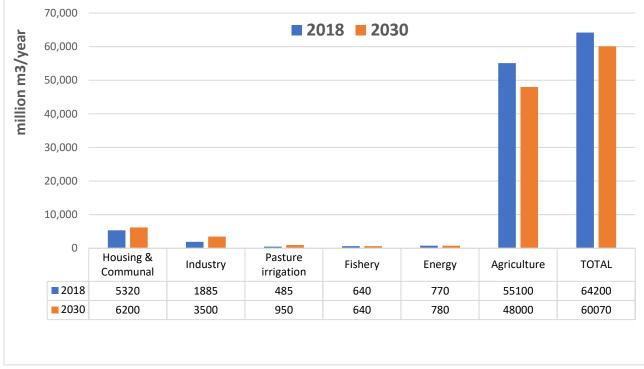
Improve the capacity of WCAs and district BAISs to mitigate climate risks in order to adequately respond to climate change for resilient service delivery.

There are three interlinked processes: (1) conducting vulnerability assessments of a system, (2) designing climate-resilient business planning, and (3) developing and implementing an emergency response plan.

Annex A.5

Annex 5.1. Water Consumption and Key Government Targets by 2030

Figure A5.1. Actual and Potential Water Consumption (Demand), by Economic Sector, million m³/year.



Sources: "Complex Scheme for Water Resources Use in Uzbekistan until 2027." Aide memoire of "Vodprojekt" Design Institute of the Ministry of Water of Uzbekistan, 2017.

Table A5.1. Key Targets an	d Indicators of the	Water Developm	ent Concept in	Uzbekistan for 2020–30

No.	Indicator	Unit rate	2019	2020	2021	2025	2030
I. E	fficient water use	Tate		2020	2021	2025	2030
1	Increased efficiency of irrigation networks	Ratio	0.63	0.64	0.65	0.68	0.73
2	Reduction of irrigated lands with low water	'000 ha	560	526	492	356	190
2	availability	%	13	12	11	8	4
3	Rehabilitation of irrigation system and increasing the	km	9,675	9,960	10,529	11,425	13,175
3	share of canal concrete lining	%	34	35	36	40	46
4	Within the system of the MWR:						
	Replacement of pumping station units with energy-	Unit	732	895	1,058	1, 711	2,482
	saving pumping units	%	13.8	16.9	20	32.3	46.9
	Replacement of old electric motors of pumping	Unit	1,627	1,841	2,060	2,963	3,727
	stations with new ones	%	30.7	34.8	38.9	56	70.5
	Reduction of grid power consumption by pumping	Billion	8.0	7.6	7.3	7.0	6.0
	stations	kWh	0.0	,.0	,	,.0	0.0
II. I	Expansion of areas with water-saving technologies						
5	Expansion of water-saving technologies in irrigation,	'000 ha	175	250	532	1,000	2,000

		TT *4					
No.	Indicator	Unit	2019	2020	2021	2025	2020
	including	rate %	4	5.8			2030
	including:	% '000 ha	4 77.4	5.8 125	12.3 175	23 300	47
ттт	Expansion of areas with drip irrigation technology	000 na	//.4	125	1/5	300	600
	Improvement of land reclamation status	4000 ha	1.049	1.026	1.006	1.952	1 722
6	Reduction of saline land areas on irrigated areas,	'000 ha	1,948	1,926	1,906	1,852	1,722
	including:	%	45.7	45	44.6	43	40
	Reduction of highly and moderately saline irrigated	'000 ha	607	581	559	516	430
7	land areas	%	14	13.5	13	12	10
7	Reduction of land areas with a critical groundwater	'000 ha	1,051.1	988.1	945.2	859.2	773.4
	level (0–2 m)	%	24	23	22	20	18
8	Reclamation of the abandoned irrigated agricultural	'000 ha	48	58.2	41.5	150.8	n.a.
TT 7	land areas						
	Safe and reliable operation of water management	infrastruc	ture			, 	
9	Modernization, restoration, and upgrade of	TT •			~	20	
	instrumentation and warning systems at reservoirs	Unit	n.a.	n.a.	5	20	55
X 7 1	and other large water structures	 					
	Use of modern information and communication tec	nnologies	in the wat	er sector	1	, 	
10	On rivers and mountain streams:						
	Equipping hydro posts with automated equipment	Unit	2	3	4	10	14
	using ITC technologies Restoration of hydro posts and routine water flow						
		Unit	n.a.	n.a.	n.a.	7	18
	control						
11	Implementation of a smart-water system for water	Unit	61	151	3,250	18,576	n.a.
10	monitoring and metering water in real time						
	Automation of processes at water infrastructure facilities	Unit	n.a.	10	20	50	100
-		Unit	66	2 000	4.022	° 500	27.270
13	Installation of automated monitoring system on		66	2,000	4,022	8,500	27,270
1.4	drainage observation wells	%	0.25	7.3	30	50	100
14	Installation of online monitoring system for	Unit	n.a.	100	327	1,821	n.a.
	electricity consumption and water flow control in real time	%	n.a.	4.6	15	100	n.a.
		ahaniana	in the west	on coston		100	
	Improvement of research activities and market me		in the wa	ler sector	1	, 	
	Increase of research and development scope,						
	research and innovation capacity development, extension of research developments and know-how	Unit	15	25	28	32	40
	in the water sector						
16		Drojaat	n 0	5	15	25	50
	Implementation of PPP projects in the water sector Reduction of the share of budget funds allocated to	Project	n.a.	5	15	23	50
1/	the water sector by using market mechanisms in	%	n 0	n 0	2	15	30
		70	n.a.	n.a.	3	15	50
VII	water resources management Provision of the sector with exports with universit	w odnosť	on and a	wetom of 4	hoir ince	ntivog	
	. Provision of the sector with experts with universit						2 000
10	Staffing of the BAIS under the MWR with experts with university education	Pax %	400	500	500	1,600	2,000
10		%	42	45	47	50	65
19	Bringing monthly wages of BAIS under the MWR up to the national average level (relative to monthly	0/	64	75	95	100	100
		%	64	75	85	100	100
	average wages)						

Source: Ministry of Water Resources of Uzbekistan; Concept of Water Development of Uzbekistan for 2020–2030, Presidential Resolution #up-6042 of July 10, 2020.

Annex 5.2. Water Consumer Associations in Uzbekistan and Tax for Water Use

The Water Consumer Associations were created in 2002¹⁴⁷ as nongovernment, nonprofit organizations to manage I&D system between the district and on-farm level, while farmers manage water inside their farms. WCAs are responsible for: (1) ensuring reliable distribution of water among water consumers; (2) determining and collecting irrigation service fees; (3) resolving disputes on water use and management of the irrigation system in an appropriate, transparent, and democratic manner; and (4) maintaining, refurbishing, and improving the I&D system in the WCA operational area. The irrigation service fee (ISF) is charged on a per hectare basis. The ISF rate and payment rate for farmers are low. WCAs are in debt because of low irrigation fees and substantial operational costs. The salient features under WCA management and jurisdiction are as following: about 3.7 million ha of irrigated lands (1.28 million ha (cotton), 1.13 million ha (wheat), and 1.29 million ha (horticulture and vineyards); 142,600 km and 86,800 km of I&D, respectively, 4,836 pumps, and 1,066 vertical irrigation boreholes/wells. The WCA units include some 81,500 different water consumers nationwide. On average, each WCA serves about 2,510 ha of irrigated land. The total number of staff is estimated at 10,442, with seven employees per WCA.

In December 2019,¹⁴⁸ the government of Uzbekistan decided to restructure the number of WCAs (from 1,503 to 158) and establish a WCA per administrative territorial principles instead of hydrographic. Since January 1, 2020, each WCA consists of several territorial "hydro-schemes" without legal entity status (Table A5.2). To ensure the financial sustainability of WCAs, beginning on January 1, 2020, at least 1 percent and 2 percent out of the total bank loans to farmers for allocated for grain crops and cotton cultivation, respectively, are the recommended shares attributable as the WCA ISF.

Table A5.2. Water Consumer Associations in Uzbekistan, 2019							
Administrative territories	Number of WCAs	Number of new WCAs	Number of hydro schemes under WCAs				
Karakalpakstan	127	15	127				
Andijan	99	14	99				
Bukhara	131	11	131				
Djizzak	116	12	116				
Kashkadarya	152	13	152				
Navoi	55	6	55				
Namangan	134	11	134				
Samarkand	41	14	41				
Surkhandarya	151	13	151				
Syrdarya	108	8	108				
Tashkent	148	15	148				
Fargona	128	16	128				
Khorazm	113	10	113				
TOTAL	1,503	158	1,503				

Table A5.2. Water Consumer Associations in Uzbekistan, 2019

Source: Resolution of Cabinet Ministries of Uzbekistan #982 of December 11, 2019, "On measures to improve the activities of Water Consumers Associations."

¹⁴⁷ Resolution of Cabinet Ministries #8 of January 5, 2002.

¹⁴⁸ Resolution of Cabinet Ministries #982 of December 11, 2019.

								U	zbek Sum/m3
		2015		2018		2019		2021	
	Categories	Surface	Groundwater	Surface	Groundwater	Surface	Groundwater	Surface	Groundwater
	Enterprises from all economic sectors								
	and individual enterpreneurs (except								
1	categies of 2-6),	61.9	120	98.2	124.8	78.6	150	182	221
2	Industry	61.9	360	300	360	78.6	430	472	564
3	Power stations	17.9	30	28.4	42.2	26.6	50	70	90
	Communal Utilities	34	60	53.9	69.7	43.9	80		
	Irrigated water for agriculture, fishery								
4	and dekhkan farmers*			98.2	124.8	120	150	40	40
5	Car washing			1000	1250	1200	1500	1990	1990
	Non-alcoholic and alcoholic								
6	beverages excet bear and wine	10000	19040	15870	15870	10000	19040	25185	25185

Table A5.3. Tax for Water Use by Categories of Economic Activity in Uzbekistan,ZS/m³

Source: Presidential decrees (1) pp-2270 of December 4, 2014, "On the forecast of the main macroeconomic indicators and parameters of the state budget of the Republic of Uzbekistan for 2015"; (2) pp-3832 of July 2, 2018, "On measures for increasing effectiveness of water resources use"; and (3) Citizen's Budget 2021 for Uzbekistan: Draft (UNDP and the MoF of Uzbekistan, 2020).

BOX A5.1. Experience of Using Pico- and Micro-Hydro Power Units on Irrigation Canals.

Pico-hydro (under 5 kW), micro-hydro (from 5 kW to 100 kW), and mini-hydro (from 100 kW to 1 MW) could be planned on existing small rivers, streams, creeks, and irrigation canals; they ensure a smooth and stable power supply, and can reduce consumer demand on the national grid network, but can always be fed to the national grid. Such hydropower stations are environmentally friendlier than both large hydro- and fossil fuel-powered plants. They do not require any civil engineering works and can be installed, running, and moved in just a few hours. A pico-hydro can be installed and moved manually, and micro- or mini-hydro modules can be transported by a small cargo transport, and a crane can lift them into the large or small canal. The number of houses connected to each pico-hydro power unit is typically up to 100, and each unit can easily feed several small pumps for irrigation. The pico-hydro units have a lower cost per kW than solar, wind, diesel power generator systems, or electricity grid. The hydro units are small and cheap (from US\$25–50 for 200-300 Watts, up to US\$500–600 per kW, and US\$1,000–3,000 per 5 kW) and are typically installed and used by one or two persons.

The pico- and micro-hydro generators are widely used by farmers and small rural businesses in both hilly and plain areas in Australia, Bangladesh, Canada, China, Colombia, Ecuador, India, Indonesia, Nepal, Peru, Philippines, Tanzania, US, Vietnam, and other countries and in Europe. The principal reasons that the market for pico- and mini-hydro power units remains untapped in many developing countries are that such turbine generator units are not available, or, where equipment is available, few people know how to design and install complete systems. In Vietnam, for example, many households have chosen off-grid solutions to obtain electricity, and due to the presence of cheap pico-hydro turbines from China or that are locally produced, the country has the highest use of pico-hydro in the world. Even some grid-connected consumers choose pico-hydro as a back-up, because the grid is often unreliable. About half of the Vietnam population lives in rural areas where houses are close to a stream or irrigation canals and pico-hydro technology naturally finding its demand on the market, and are affordable to the poor.

Sources: Maher, Phillip, and Nigel Smith. 2001. Pico-Hydro for Village Power: A Practical Manual for Schemes up to 5 kW in Hilly Areas, Edition 2.0. UK Department for International Development. May; Noon, Chris. 2019. Canal Plus: These Tiny Turbines Can Turn Man-Made Waterways into Power Plants//Hydropower. General Electric, Hydropower, September 5, 2019; Andrews, Jessica, and Mike Britton. 2017. Capturing Untapped Potential: Small Hydro in Irrigation Canals/ Hydroreview, October 1; Pico & Micro Hydropower System: Low-Cost Hydropelectric Generator, UNIDO, http://www.unido.or.jp/en/technology_db/1769/; Taylor, Simon D.B., Manuel Fuentes, John Green, and Kavita Rai. Stimulating the Market for Pico-hydro in Ecuador. IT Power, Grove House, Hampshire, UK, (https://assets.publishing.service.gov.uk/media/57a08cfbe5274a27b2001563/R8150-Ecuador.pdf)

Spotlight 1. Drinking Water Supply and Sanitation

Summary

Uzbekistan's water supply and sanitation sector has experienced impactful reforms that need to be capitalized to establish it as a well-performing sector. Over the past five years, significant changes took place that led to merging more than 130 fragmented service providers into 14 regional utilities (suvokovas), which are being centralized under a newly established single joint stock company. Moreover, over the past 10 years, the sector has received the attention of the government and attracted significant finance from international financing institutions, including the World Bank, Asian Development Bank, Asian Infrastructure Investment Bank, European Union, Islamic Development Bank, Swiss Development Agency, and others. Nonetheless, there are still many challenges and urgent needs to continue the reforms, aiming at achieving universal access to safe drinking water and wastewater service through the efficient and well-performing utilities that meet public demand and respond to growing needs at a proportionate fair price.

Context

Access to and quality of water supply and sanitation (WSS) services remains a significant challenge in Uzbekistan. The WSS infrastructure, largely constructed 40–50 years ago, has by and large exhausted its useful life and requires extensive rehabilitation and renewal. Public expenditure, while increasing substantially in recent years, has not kept pace with requirements for asset replacement, maintenance, and system expansion. These infrastructure issues, combined with institutional capacity constraints, have resulted in a stagnation or decline in water and sanitation service quality both in urban and rural areas. On one hand, national statistics still report "high levels of access," mainly in urban areas, reflecting a presence of physical water/sewerage infrastructure that is outdated, outsized, and deteriorated. However, the situation is not promising for rural areas both for sanitation and drinking water. Most importantly, the quality of services masks significant inequities between and within provinces, communities, and even neighborhoods.

National statistical data indicate that access to piped connections is relatively high (87 percent), but the share that receive safely managed water is considerably lower (69 percent). Water quality varies widely within the country: in Tashkent and other large cities, water quality is generally compliant with national standards, yet in rural areas only 30 percent is reported. Outdated and oversized pumps, which lead to high operational costs,¹⁴⁹ and power outages are often cited as the cause of intermittent service. Furthermore, continuity of service is a common and serious issue, with many systems supplying water for less than 12 hours per day.¹⁵⁰ Non-revenue water is as high as 50 percent, yet official statistics report only about 30 percent. The difference can be explained by the fact that water is charged based on consumption norms instead of actual readings from metered networks.

¹⁴⁹ Water supply and wastewater management services in Uzbekistan are energy intensive. In 2017, the water utilities consumed around 640 million kWh of electricity, which represents around 1.2 percent of the country's total electricity consumption. Energy costs for the utilities, at 2017 prices, was around US\$19.5 million, which is 20–50 percent of the utilities' total operating costs. Furthermore, such costs will rise as suppressed energy tariffs rise over the coming years.

¹⁵⁰ About two-thirds of the population in Uzbekistan receives water service for less than six hours/day.

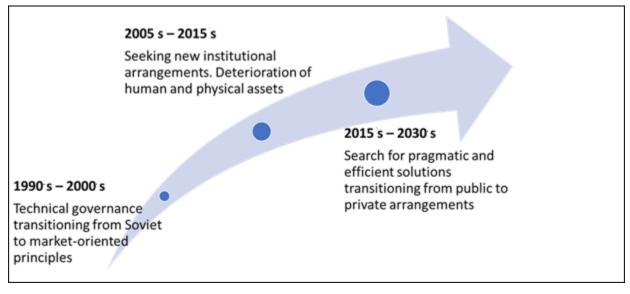
In 2016, about 3.7 million people (12 percent of the total population) were reported to be served by a centralized sewerage system, mostly in large cities.¹⁵¹ Most households in rural areas rely on self-built, on-site sanitation—that is, dry pit latrines or, for households with indoor bathroom facilities, septic tanks with onsite disposal. Wastewater is collected but generally not treated according to international standards, because many wastewater treatments plants are nominally functioning. As a result, most likely, wastewater is discharged without proper treatment into water bodies.

Recent Developments

Since the 1990s, there have been waves of reforms focusing on regulatory, financial, and institutional aspects, yet overall, the governance framework is still in transition. As a result, the OECD (2011) rightfully points out that "continued political interference has prevented water utilities from operating as autonomous institutions on a commercial basis, whether privately or publicly managed."¹⁵² Tariff levels and collection rates have increased, yet in practice, barely recovers operational costs. With increased tariffs, the population has not seen improvements in services and thus, there is opposition to further tariff increases.

The government recently launched a nationwide reorganization of its WSS institutions and initiated financial and cost recovery mechanisms, with the objective of improving sector governance and utility management, efficiency, and financial sustainability while maintaining affordability.

Figure A5.5. Main Phases of Transitions in Water Supply and Sanitation Sector in Uzbekistan



Source: World Bank staff.

¹⁵¹ In 2020, about 17 percent of population in Uzbekistan had access to a centralized sewerage system; it is planned to increase this level up to 35 percent by 2026 and 57 percent by 2030.

¹⁵² OECD. 2011. "Ten Years of Water Sector Reform in Eastern Europe, Caucasus and Central Asia." OECD Studies on Water, OECD (Organization for Economic Cooperation and Development) Publishing, Paris. https://doi.org/10.1787/9789264118430-en.

The first phase of the reforms began in January 2016, when the suvokovas were created through a merger of urban and rural service providers, responsible for both water supply and sewerage services, with assets owned jointly by regional and local governments. The underlying objectives of institutional restructuring were to improve service delivery by consolidating human resources and technical capacity, leveraging economies of scale, and promoting financial sustainability, thus creating companies that generate enough revenues to fund or finance necessary capital investments to improve operational efficiencies and extend services to currently unserved areas.

The second phase was initiated in April 2017 and focuses on the institutional framework for improved sector policy and governance. Specifically, the second phase resulted in the creation of the new Ministry of Housing and Communal Services (MHCS), the State Water Inspectorate (technical compliance mandate), and the Clean Water Drinking Fund, among other elements. The creation of the MHCS, with responsibility for oversight of the sector, presented an opportunity to build capacity and knowledge in and of the sector, to establish modern regulatory procedures, and to build a framework for long-term planning, investments, and sustainable operations and maintenance. Phase 3 of the reform (below), which is due to be launched, aims to support private-sector participation to improve efficiency and leverage private finance for capital investments.

The government's priorities for development of the sector were reinforced through Presidential Resolution pp-4040 of November 30, 2018. Specifically, this decree tasked relevant agencies to develop and implement new tariff procedures to allow sustainable cost recovery in the sector, complemented by a national water metering program. These two areas—tariff reform and metering—were identified as the highest-priority policy-based actions in the government's sector reform roadmap. The above resolution (pp-4040) also calls for resource efficiency; the adoption of innovative technologies; improved sector monitoring and accounting; the introduction of international best practices in utility management, including the use of public-private partnerships (PPPs); and strengthening of human resources in WSS based on international experience.

Thereafter, the government demonstrated its strong commitment to tariff reforms by issuing a new tariff policy on April 13, 2019. This policy and associated procedures aim to transform the planning and tariff setting processes, with the end objective of improving services. Specifically, tariff applications are now aligned with and integrated into the development and costing of medium-term investment and performance plans intended to address identified service improvement needs. Moreover, under the new policy, it is envisioned that, over time, revenues generated by tariffs will move toward full coverage of costs, including both operating expenses and capital investments. In conjunction with the new tariff policy, full customer metering is encouraged by the government, with the intention of rationalizing existing consumption "norms" for non-metered customers as actual household consumption is documented. This should facilitate tariff approvals without the risk of overburdening unmetered households and should incentivize the completion of metering programs by the suvokovas.

The third phase in sector reforms began in 2020. Within the third phase all operational functions, such as billing and collection, were returned to water utilities. Effective January 2020, all water utilities of the country were merged into a single national joint-stock company (JSC). The first deputy minister of the MHCS was assigned the post of chairman of the national water utility company JSC Uzsuvtaminot. The MHSC's control over the sector has been consolidated and strengthened, including direct control of all operators, inspectors, and funds of the sector.

In September 2020, the government initiated the Program for the Comprehensive Development and Modernization of Water Supply and Sewerage Systems, 2021–2025. This five-year State Investment Program was enacted through Presidential Decree up-6074 of September 25, 2020 and defines strategic priorities for investments in the WSS sector: (1) integrated measures to improve access by the general public to clean drinking water; (2) reconstruction and rehabilitation of existing water and wastewater infrastructure; (3) introduction of modern information and communications technology, including automated billing of water consumption; (4) transfer of WSS systems to business entities on PPP terms in 2021–22; and (5) creation of conditions for financial and economic sustainability of water supply organizations and improved pricing for services. It furthermore sets out objectives, including a nationwide increase in access to safe and reliable water supply systems, with targets set in (average for the country) 98.5 percent for urban and 87 percent for rural.

In order to achieve these sector development targets, the program identifies high-priority infrastructure projects to be initiated within the five-year period and implemented by the JSC Uzsuvtaminot. This is a US\$6.8 billion program of which US\$4.1 billion is for the water supply and US\$2.7 billion is for the sewerage system development. The WSS sector investments are viewed as part of the government's support for the development of social services, to improve living conditions, and to boost economic development.

Key Challenges

Despite the government's intensive and ambitious reform agenda, the WSS sector of Uzbekistan can still be characterized as poorly functioning, with the following features:

- 1. Fundamentally flawed institutional arrangements merging regulatory and operating mandates within the same institution, with negligible public accountability.
- 2. Prevalence of outdated designs in networks (no zoning and pressure optimization) and facilities (underuse of gravity flows; excess capacity; inefficient energy use; and lacking metering, automation, telemetry, and controls), necessitating massive investments for an infrastructure overhaul and renewal, as well as modernization in practices and methods.
- 3. Decrepit assets due to prolonged underinvestment and mismanagement, especially in terms of operations and maintenance (O&M), entailing the need for massive capacity building measures in asset management and O&M.
- 4. Lacking efficacy of infrastructure investment projects, due to poor design and construction supervision practices, entailing the need for extensive capacity building within the utilities workforce and engineering firms servicing the sector.
- 5. Primitive (almost nonexistent) asset management systems and practices.
- 6. Obsolete practices in terms of IT, MIS, and other technologies (leakage detection and management, GIS, hydraulic modeling, SCADA, O&M controlling tools, integrated asset management, CRM, grievances redress systems).
- 7. Virtually bankrupt water utilities with substandard financial reporting and management.

- 8. Unsustainable levels of tariffs that don't even cover the operation and maintenance costs.
- 9. Severely lacking practices for affordability analysis and full-cost accounting.
- 10. Weak arrangements for internal and external accountability.
- 11. Unsustainable human resources management practices, with unreasonably low levels of remuneration and onerous working conditions.
- 12. Generational losses in human capital in the sector, with no functional schools of cadre in the country for the WSS sector.
- 13. Excessive wastewater treatment standards, which are not attainable with available capital and technologies, resulting in regulators and water utilities monitoring compliance with wastewater treatment standards with laxity.
- 14. Rudimentary, virtually nonexistent performance management and monitoring systems and practices.
- 15. Lacking grievances redress and public consultations practices.
- 16. Lacking public accountability systems and practices.

Policy Options

The aforementioned issues can be addressed in the short-, medium- and long-term policy reforms summarized below.

Short term (within one year)

Strengthen governance.

Develop a policy and legal framework that allocates clear segregated roles and responsibilities between the three main key governance stakeholders. These include service providers, regulators, and policy makers to ensure sector sustainability, transparency, accountability, and adequate service to the public. Build on the Policy, Institution, and Regulation diagnostic study by the World Bank. The next phase should include development of an action plan to improve the WSS governance structure and performance.

Enhance accountability.

Develop performance contracts that measure and evaluate service providers' performance. This also entails the development and implementation of a customer charter.

Establish a benchmarking system.

Support the establishment of a functioning benchmarking system that covers reporting on the performance and service quality of all service providers. Such transparency can enable the environment for competition by comparison. The country can capitalize on the existing International Benchmarking Network (IBNET) and later upgrade to respond to growing needs of the sector regulation.

Scale up the consumption metering for all customers.

This will improve the level of customer satisfaction through transparency and equity in charge accounting and hence willingness to pay. It also provides accurate information for demand estimation and non-revenue measurement. This will inform the investment plans of the sector.

Medium term (one to three years)

Reform tariff pricing.

Continue to assist with reforming tariff-setting practices and WSS economic regulation, especially. This will require the development of a tariff-setting framework and determination of tariffs for each region that will consider the affordability and incentives for efficient use of water. The tariff setting should be considered as the principal revenue stream to cover the service expenses subject to the sociopolitical constraints that may influence the date of achieving full cost recovery.

Build utility capacity.

Build the capacity of the WSS service providers and offer good incentives to the utility staff to facilitate attracting well-qualified specialists and improve the operational and financial efficiency of the water utilities (suvtaminot/suvokovas.) Eventually, it is advisable to support utilities to become autonomous while being accountable.

Build the capacity of the regulator, policy makers, and JSC Uzsuvtaminot.

In parallel with building the capacity of the utilities, it is crucial to invest in building the capacity of the newly established JSC Uzsuvtaminot as well as the regulatory agencies (economic, quality, and environmental regulators) and the sector policy makers and planners.

Until full cost recovery is attained, increase and optimize public, concessional, and non-concessional financing.

This is required to expand and improve the quality of service and to meet the SDG 6 goals for universal access. The sector investments required to achieve the SDG 6 goals are around US\$10 billion. Hence, a WSS fund is suggested to be established to assist in securing around US\$1 billion per year for the coming 10 years.

Longer term (over three years)

Achieve utility credit worthiness and engage in PPPs.

This will likely require all efforts to enable the environment for PPP engagements and to attract funds from international financing institutions as well as commercial banks.

The latter will be feasible once the utilities build up their operational and financial efficiencies to the extent that they become creditworthy.

Achieve utility autonomy and phase out public subsidy.

Agree with the regional governments in scheduling targets for phasing out public subsidy. This may be achieved at a later date after five years, but upstream plans need to be in place and reflected in the utility performance agreements with the sector regulator.

Annex 1: Fiscal Reforms since the Last Uzbekistan PER (2019)

Fiscal strategy and public financial management reforms have continued to support the government's ambitious reform priorities. Several important fiscal policy changes were announced as part of the government's decision in 2017 to reorient the economy toward a more open and market-oriented model. These included substantial increases in public infrastructure and social assistance spending, a gradual increase in regional fiscal autonomy, a transformation of the tax system, greater collaboration with international development partners and lending institutions, and a large reduction in the size and inefficiency of the public sector balance sheet. Alongside these changes to fiscal strategy, the government also adopted roadmaps aimed at strengthening fiscal transparency and modernizing public financial management systems. Since 2019, and in part based on recommendations identified in the last Uzbekistan Public Expenditure Review (2019), the government has made significant progress toward several of these objectives—particularly in strengthening fiscal transparency, improving the quality and efficiency of social sector spending, and in strengthening the tax system. Progress in reducing budget and quasi-fiscal subsidies, especially to state-owned enterprises (SOEs), has moved less quickly, as have reforms to strengthen public investment management and increase regional fiscal autonomy (Table A1.2).

Table A1.2. Progress on Implementing Recommendations since the Last Uzbekistan PER (2019) Fiscal policy and budget

- Consolidate all off-budget spending into the budget.
- Move all extra-budgetary funds (EBFs) and off-budget accounts on the Treasury Single Account (TSA).
- Strengthen budget preparation process and public sector accountability and accounting.
- Provide regular quarterly and annual reports on the consolidated budget.
- Include estimates of SOEs' quasi-fiscal deficits and report them at least annually.

State-owned enterprises

- Establish a centralized database of all enterprises where state exerts control.
- Restructure SOEs and SOBs, reorganize corporate governance, and introduce performance criteria.
- Implement international accounting and bankruptcy standards for all SOEs.
- Accelerate privatization process.
- Disclose all SOEs' and SOBs' quasi-fiscal activities, recognize all support to SOEs/SOBs, and record it explicitly on budget and on their financial statements.
- Replace quasi-fiscal and off-budget support to SOEs/SOBs with explicit subsidies, raise prices to cost recovery levels, and introduce support to vulnerable people.

Fiscal relations between central and regional governments

- Establish rules-based transfer system to increase predictability of regional budgets.
- Provide greater revenue autonomy for subnational governments.
- Review and clarify the assignments of functions across government levels.

Tax expenditures						
• Reduce and simplify tax and customs expenditures through a cost-benefit analysis of main						
incentives provided.						
• Withdraw tax incentives for new investment, and impose a minimum tax to ensure that firms						
pay at least a certain minimum amount of tax.						
• Prepare public tax expenditure statements as part of the regular budget process.						
Public wages and employment						
• Improve legal framework for civil service management and compensation.						
• Carry out functional reviews to help improve the distribution of government functions and						
rationalize the number of employees.						
• Establish a common framework, grading structure, and compensation framework.						
Consolidate all bonuses and allowances into the base pay.						
• Develop an HR and performance management framework for merit-based recruitment, per-						
formance appraisal, promotion, and professional development. Develop an HRM						
information system.						
Public investment management						
• Move all public investment spending, including PPPs, on budget.						
• Integrate capital investment budgeting into the overall budgeting process, and establish						
unified responsibility for asset creation, management, and maintenance.						
• Strengthen the MoF role in investment project selection process, including veto powers for						
value-for-money, affordability, and fiscal risk reasons.						
• Ensure all future investment projects are based on a uniform cost-benefit analysis approach.						
• Establish integrated PIM control throughout the public investment, including after project						
implementation.						

• Develop a policy on how to handle decentralized and SOE investments.

Note: Red = little or no progress; yellow = initial to moderate progress; green = significant progress.

In just three years, nearly all off-budget spending—which previously amounted to more than half of total public spending—has been integrated into the budgetary process. One of the most critical issues identified in the last PER was the significant amount of off-budget spending, which was estimated at over half of total public spending in 2018. Resources from off-budget sources—such as the Uzbekistan Fund for Reconstruction and Development (UFRD), extra-budgetary funds (EBFs), and off-budget spending accounts of government agencies—were raised and spent separately from the budget process and were not well coordinated with the government's overall fiscal strategy objectives. In addition to weakening the effectiveness of the government budget, this spending also had consequences for other macroeconomic policy objectives, such as inflation management and financial sector stability—especially in the case of UFRD resources that were provided to SOEs at heavily subsidized interest rates well below the monetary policy reference rate. Over the past three budgets, the government has successively moved to integrate all off-budget spending into a newly developed budget preparation and oversight framework governed by parliament. Between 2019 and 2021, the operations of the UFRD and 21 other extra-budgetary funds were included in the consolidated government

budget.¹⁵³ Starting with the 2022 budget, all remaining EBFs, several thousand off-budget accounts of government agencies, and all externally financed expenditures will be included in the consolidated government budget.

Budget oversight and information disclosure have been substantially strengthened since the last Uzbekistan PER. Prior to 2019, the budget was approved each year by a presidential decree, with little public consultation and information disclosure beyond high-level aggregates of revenue and spending that were published after the budget had been approved. Since 2019, a series of successive reforms to the government's budget code law has significantly improved the budget oversight process and the level of budget information disclosure. The most important of these reforms has been to transfer the responsibility of budget approval and oversight to parliament. Parliament's oversight powers cover the entire consolidated government budget, including UFRD operations, extra-budgetary funds, off-budget accounts, and externally financed spending. Budget code amendments also set in place spending variation limits applicable to the entire consolidated government must seek reauthorization from Parliament of a supplementary budget. Budget data disclosure has also improved significantly, and disaggregated information is now reported for each spending agency. Draft budgets must also follow the regular government public consultation process prior to parliamentary submission.¹⁵⁴

Since 2020, all government agencies and EBFs are publishing quarterly financial reports. These reports cover the following themes: distribution of budget funds by subordinate budget organizations; financial statements; implementation of budget-funded projects; and all major public procurements. Such reports must be published within 25 days after the end of the reporting quarter. In addition, the government will use (<u>https://openbudget.uz</u>) to ensure transparency of state budget funds directed to the Investment Program of Uzbekistan, tax and customs benefits provided to taxpayers, measures to control and combat financial violations, and spending of above-forecasted budget incomes.

Despite these reforms, an expansion in the use of extra-budgetary funds continues to create significant fragmentation in public spending. Although EBFs are now reported, authorized, and overseen through a consolidated budget process, the government continues to rely on the use of EBFs to ring-fence public expenditure for the most important government priorities. Since 2019, 16 new EBFs have been established through various legal and regulatory acts. These acts often provide spending and revenue collection authorizations that are different from standard public finance requirements under the budget code and other legislation that governs public sector financial activity.¹⁵⁵ While these EBFs are part of the consolidated budget and the government's Treasury Single Account—and although they are subject to annual audit requirements similar to other public spending—they risk creating distortions and allocative

¹⁵³ UFRD and EBF accounts are presented to parliament as part of an expanded (consolidated) central government budget comprising the republican budget, the budget of the Republic of Karakalpakstan, and the accounts of off-budget sources.

¹⁵⁴ Draft legal and regulatory acts of government are required to be published on the government's online regulatory consultation portal for at least two weeks prior to finalization.

¹⁵⁵ A common provision in most EBFs is authorization to pay wage premiums, beyond those permitted by regulations governing public sector pay, for technical experts.

inefficiencies and undermine efforts to strengthen the quality of budget execution and delivery by spending agencies, and overall public financial controls.

The consolidation of policy lending from the UFRD has strengthened fiscal coordination. As a result of the consolidation, a significant share of gold-mining receipts that would ordinarily accrue as revenues directly to the UFRD are now recorded under the government budget's general revenues. Revenue contributions to the UFRD are now instead a discretionary budget process overseen by parliament. Increased budget disclosure and transparency requirements have also led to improvements in UFRD data disclosure. Quarterly operational and financial positions are now posted regularly to the UFRD website. UFRD activity is also subject to quarterly scrutiny by parliamentary subcommittees. Greater coordination between UFRD and budget spending has helped strengthen macroeconomic management and the implementation of fiscal strategy, especially during the COVID-19 pandemic. Consistent with the government's macroeconomic objectives of reducing policy lending, budget and UFRD equity purchases (for example, banks, SOEs) and net lending (for example, housing, others) have decreased sharply since 2019. Financial support for SOEs and businesses affected by the COVID-19 crisis was provided using a mix of funds from the government's anti-crisis budget (supporting recurrent spending needs) and investment lending from UFRD (supporting continued capital improvements in SOEs).

Good progress is being made toward the government's goal of shifting to a medium-term budget process. For the first time, in 2020, aggregate macroeconomic and fiscal parameters of the consolidated budget were presented to, and approved by, parliament on a medium-term (three-year) basis.¹⁵⁶ Alongside this change, the government adopted its first medium-term fiscal strategy covering 2021–23 and has expanded budget information to include assessments of tax and fiscal policy for the medium term, a review and forward look of macroeconomic conditions covering 2019–23, an update on key improvements to the public financial management system, and a description of major fiscal risks. The budget calendar has also been revised to align the budget preparation process with macroeconomic forecasting and data release calendars. These changes would allow the development of a full medium-term budget in the coming years.

The government is in the process of implementing fiscal rules and debt transparency reforms to strengthen economic management. In 2020, as part of reforms to the budget process, an annual limit on new loans was established, restricting newly signed public external debt and guarantees to not more than US\$5.5 billion. In 2021, this limit was maintained at the same level but also included domestic debt issuances. Measures have been enacted to require all debt-financed public spending to be mandatorily audited by the Chamber of Accounts (the supreme audit institution in Uzbekistan). These measures have been effective at restricting new debt-financed projects and strengthening the evaluation and selection process for newly financed loans. In 2020 and 2021, significant changes were made to debt-financed project pipelines to ensure compliance with the ceiling on new loans. In addition to annual limits on new debt, the government is also in the advanced stages of finalizing a new debt law that establishes an overall public and publicly guaranteed (PPG) debt ceiling of 60 percent of GDP and requires the government to implement containment measures when PPG debt crosses 50 percent of GDP. The new law will also enable

¹⁵⁶ Presidential Resolution #pp-4086 of December 26, 2018, "On the forecast of the main macroeconomic indicators and parameters of the State Budget for 2019 and budget targets for 2020-2021."

the government to adopt a medium-term approach to debt management through the adoption of medium-term debt strategies that are aligned with the new medium-term budget framework. The law also brings public debt management processes and activities under the closer supervision of parliament, which will receive and scrutinize detailed debt information reports on a quarterly basis.

Downstream public financial management is improving gradually through reforms to accounting and audit standards. Uzbekistan still does not produce financial statements that follow internationally recognized standards and practices. Twelve budget accounting standards have been adopted since 2017 in accordance with the International Public Sector Financial Reporting Standards (IFRSOS–IPSAS). A further 25 standards will be adopted between 2021 and 2024. Internal audit standards are also being strengthened, with new internal audit legislation and regulations under development.¹⁵⁷ Recent amendments to the budget code also contain measures to strengthen budget execution assessments and oversight, with the aim of enabling Uzbekistan's budget documents to be assessed through the Public Expenditure and Financial Accountability (PEFA) process and the annual Open Budget Survey.

Many tax expenditures—that benefited a small number of firms at a high cost to the rest of the economy—have been canceled, creating opportunities to reduce the tax burden for all taxpayers. The cost of various tax and customs benefits was estimated in the last PER to be at least 6 percent of GDP, with little evidence to suggest that these benefits were generating equivalent economic or social value. Following a comprehensive stock take by the government of all tax and customs benefits, most of these benefits have been abolished through successive measures enacted between 2019 and 2020, including preferences to the oil and gas, textile, electrical, and livestock sectors.¹⁵⁸ The additional revenues generated by the cancellation of these preferences created fiscal space for the government to lower the value-added tax (VAT) rate from 20 to 15 percent in October 2019.

A new tax code was introduced in January 2020 to modernize and simplify tax policy and processes. The new code also introduces new measures to expand the VAT to include digital services, modernize the transfer pricing, and control foreign company (CFC) regimes. These measures were based on the tax reform in 2018–19 that improved the tax system. The aim of the new code is to reduce and unify the tax burden across all enterprises (irrespective of their size); unify the rates of corporate and personal income taxes and the social tax; rationalize VAT payments; reduce the number of direct tax and mandatory payment categories; and improve the efficiency of tax administration.

¹⁵⁷ Presidential Resolution of August 21, 2017, "On the further improvement of the financing mechanism for educational and medical institutions and the system of state financial control."

¹⁵⁸ Presidential decrees of June 27, 2019, and June 19, 2020.

Annex 2. Recent Developments: The Impact of COVID-19 on Public Finances

Although Uzbekistan's economy did not contract, the COVID-19 pandemic has had a profoundly negative impact on lives and livelihoods. Economy-wide disruptions from domestic lockdowns, international travel and transportation suspensions, and declining demand from trading partners sharply slowed real GDP growth in 2020 to 1.9 percent, compared with 5.7 percent in 2019. Although Uzbekistan was one of the few countries in the region to continue growing during the pandemic, the social impact of the pandemic was acute. The poverty rate (using the poverty line appropriate for lower middle-income countries of US\$3.20 per person per day in PPP terms), which had fallen consistently over the past two decades, increased to 9 percent in 2020, compared with precrisis projections of 7.4 percent, and an estimated 800,000 people fell into poverty. The unemployment rate, which was 9.0 in 2019, increased to 10.5 in 2020. Although economic growth has since recovered strongly, reaching 7.4 percent in 2021, the pandemic has continued to have a lingering impact on the export and economy, especially in service sectors such as tourism, catering, and transportation. As a result, both poverty and unemployment rates remain above pre-crisis levels.

Responsive anti-crisis measures, backed by strong fiscal buffers, have been vital to saving lives and preserving livelihoods. Beginning with a "first response" package of anti-crisis fiscal policy measures that was introduced in the first half of 2020, Uzbekistan's fiscal policy response to the crisis has been substantial. Comprising both spending and revenue measures, the government's anti-crisis measures center on three objectives: (1) to shore up health management systems; (2) to ensure adequate social assistance amid rising poverty, unemployment, and hardship; and (3) to support businesses in the worst-affected sectors. Amounting to nearly 4 percent of GDP in 2020 and 0.5 percent in 2021, the government's anti-crisis policies have played an important role in mitigating the impact of the pandemic on the economy and on people.

The economic impact of COVID-19 and the cost of anti-crisis measures have increased the fiscal deficit. Weaker economic conditions and anti-crisis tax relief measures contributed to a fall in budget revenues to 26.6 percent of GDP in 2020 from 28.1 percent of GDP in 2019. The fall in revenues was less steep than initially projected, due to higher world gold prices and the consolidation of all gold revenues into the republican budget.¹⁵⁹ Overall spending fell in 2020 to 31.1 percent of GDP compared with 32 percent in 2019, with slower policy lending and public investment spending offsetting additional anti-crisis spending on health, social protection, and support to businesses. Higher gold revenues and a faster-than-expected economic recovery helped limit the fiscal deficit to 4.5 percent of GDP against early government projections of 7.3 percent and compared with 3.9 percent in 2019. Preliminary estimates for 2021 show that budget revenues have recovered to 28.3 percent of GDP in 2021, largely due to recovering economic conditions and the expiry of time bound anti-crisis tax relief measures. Overall spending has also recovered to 34.3 percent of GDP in 2021, leading to a deficit of estimated 6.2 percent of GDP in 2021, compared with pre-crisis projections of 2.1 percent of GDP.

¹⁵⁹ Reforms adopted in 2019 consolidated all UFRD revenues and spending into the consolidated government budget. Whereas previously a proportion of windfall gold revenues automatically accumulated to the UFRD, these revenues are now part of the general budget and revenue transfers to the UFRD are discretionary.

Box A2.1. A Summary of Uzbekistan's Anti-Crisis Measures and Their Fiscal Impact

Strong and timely anti-crisis fiscal policies have helped save lives and protect the vulnerable. Uzbekistan spent about 4.5 percent of GDP in 2020–21, comprising a Republican Anti-Crisis Fund of 1.5 percent of GDP to respond to direct pandemic costs, and about 3 percent of GDP in additional measures designed to protect the economy and population.

Fiscal measures

I. Health system response

1. Spending measures. Emergency medical and quarantine expenses, special allowances paid to frontline medical staff. About 30,000 additional medical beds were organized. Vaccine purchases and distribution and related healthcare measures.

2. *Revenue measures*. Temporary removal of import duties on medicines and devises and equipment to combat COVID-19. Tax incentives to domestic firms that produce key medical supplies related to virus containment. Local authorities reduced local taxes by 30 percent and provided a six-month grace period for the payment of property tax.

- II. **Social policy measures.** Workers infected with COVID-19 were provided temporary disabilities allowances of 100 percent of wages. These allowances were also provided in cases where caregivers became ill and forced workers to stay home. Low-income and childcare social assistance benefits for families that were due to lapse in 2020 were automatically extended for all beneficiaries, without the need for new applications. Almost 8 million citizens in 2020 received assistance in the form of social assistance payments or income tax breaks. More than 800,000 low-income families in 2020 received some direct material assistance. The number of beneficiaries was further expanded in 2021.
- III. **Support to economy.** Tax payments for the most affected SMEs and individual entrepreneurs were deferred; a temporary moratorium on tax audits and bankruptcy proceedings; an extension of deadlines for filing tax returns; extension of VAT payment requirements for small businesses; abolition of excise duties and customs duties on imports of 20 types of basic consumer goods; suspension of lease payments for the use of state property by economic entities; higher policy lending to support the economy; building additional infrastructure by using public works; support of small business and individual entrepreneurship development that created jobs. More than 300,000 firms (both small and medium enterprises and state-owned enterprises) received assistance in the form of tax breaks and deferrals.

Other economic policy measures. Deferrals of repayment of loans to banks, injecting liquidity into the banking system, cutting the CBU policy rate from 16 to 14 percent in 2020, temporary state procurement restrictions to favor local firms to partly offset their output and profit losses. Several targeted refinancing operations for commercial banks, banks postponed loan payments for firms in sectors affected by the pandemic, subsidized interest on banking loans from SOBs, government guarantees to enterprises on taking bank loans.

Anti-crisis measures have helped support the economy but have raised the budget deficit and public debt level. Effective anti-crisis measures allowed for a sharp rebound in activity that began in the second half of 2020 and continued through 2021. On the back of a recovering economy, most anti-crisis tax policy measures were allowed to lapse in 2021, allowing for a recovery in tax revenues, especially VAT. Nevertheless, higher spending amid a still-sluggish global recovery from the pandemic outpaced revenue growth, leading to an overall deficit of 6.2 percent of GDP. The 2021 budget deficit was financed almost entirely through external financing from Eurobonds and budget support from development partners, increasing the level of PPG debt to about 39 percent of GDP in 2021. A robust economic recovery, the gradual withdrawal of anti-crisis measures, and tax administration reforms to widen the tax base are

projected to help consolidate public finances, reduce fiscal deficit in 2022, and stabilize PPG debt at about 44 percent of GDP by 2023. The government aims to reduce the overall fiscal deficit from 6 percent of GDP in 2021 to about 3 percent of GDP in 2022–23 (to pre-crisis levels) to put public debt on a downward path to reduce costs and risks and ensure medium-terms sustainability. The 2022–23 budgets include an estimate of privatization proceeds, as the authorities started SOE privatization in 2021.

	2019	2020		2021		2022	2023
	Actual	Sept.	Actual	Budget	Revised	Proj.	Proj.
Consolidated budget revenues	28.1	24.9	26.6	25.5	28.3	26.6	25.3
State budget revenues	21.9	21.6	22.9	21.4	24.0	22.6	21.3
Extra-budgetary funds (net of	4.9	3.8	4.0	3.8	4.0	3.6	3.5
transfers)							
Fund for Reconstruction and	1.9	0.7	0.7	0.8	0.4	0.4	0.3
Development							
Adjustment of revenue	-0.6	-1.2	-1.0	-0.5	-0.1	0.0	0.1
Consolidated budget expenditures	28.3	28.9	29.9	28.5	32.1	28.3	27.3
State budget expenditure (net of	23.0	23.3	23.0	21.8	24.8	20.4	19.8
transfers)							
Extra-budgetary funds	5.3	6.1	6.1	5.9	5.7	6.7	6.3
Fund for Reconstruction and	3.0	2.7	1.4	1.9	0.5	0.1	0.1
Development							
Adjustment of expenditures	-3.0	-3.2	-0.6	-1.1	1.6	1.1	1.1
Consolidated budget balance	-0.2	-4.0	-3.3	-3.0	-3.8	-1.7	-2.1
Recapitalization and net policy	3.7	3.3	1.2	2.4	2.4	0.8	1.0
lending							
Overall budget expenditure	32.0	32.2	31.1	30.9	34.3	29.1	28.3
Overall fiscal balance	-3.9	-7.3	-4.5	-5.4	-6.2	-2.5	-3.0
Memorandum items							
Nominal GDP, UZS trillion	529.4	590.1	602.2	688.9	734.6	838.2	970.8

Table A2.1. Uzbekistan: General Government Operations, Percent of GDP, 2019–23

Source: MoF, IMF, and World Bank staff estimates.

Note: Adjusted fiscal data are budget data adjusted for financing operations of the UFRD, equity injections, and policy lending. Since 2021, UFRD revenue includes dividends and interest and excludes mining revenues that go straight to general budget revenues. The "policy lending" includes external financing lending and UFRD repayments, equity injections, and policy lending. The overall fiscal balance in this table includes these and externally financed expenditures.

The COVID-19 pandemic has triggered the emergence of a structural budget deficit that will take time to consolidate. The sharply negative economic and social effects of COVID-19 in 2020, and the lingering impact of the pandemic that continues to today, have affected fiscal strategy in several ways. First, necessary anti-crisis spending to protect lives and livelihoods has led to the formation of a substantial budget deficit after almost two decades of nearly balanced on-budget spending. In 2020, the wider budget deficit was partially offset by slower off-budget public investment spending and execution—which was slower due to lockdowns and supply chain constraints. Most public investment project constraints have now eased, but continued pressures on the budget from the costs of pandemic management are likely to delay the government's plan of consolidating its overall fiscal position. In addition to temporary fiscal pressures such as vaccination costs and continued support to sectors such as tourism and

transportation, the pandemic has also led to structural spending increases—most notably through large higher health sector wages and permanent expansions in social assistance coverage and amounts. As the chapters of this PER highlight, structural spending increases in social sectors are critical to reversing declining standards of health, education, and social protection services. At the same time, the slow progress of reforms to reduce the state's spending and subsidies on economic production are likely to create a structural budget deficit that will take longer to consolidate.

Uzbekistan has sufficient fiscal buffers to absorb the structural deficit in the medium term—a credible consolidation strategy to restore fiscal balance is important for the next phase of Uzbekistan's market transition. In the most recent joint IMF-World Bank Debt Sustainability Analysis, the paths of external and public debt (in the baseline scenario) are expected to be about 6 to 9 percentage points of GDP higher than under pre-crisis projections. Largely due to anti-crisis measures, total external debt rose more quickly than pre-crisis projections—from 43.9 percent of GDP at end-2019 to 62.3 percent of GDP at end-2021. Total external debt and public and publicly guaranteed debt are expected to peak in 2022 at about 64 and 44 percent of GDP, respectively, and PPG debt is projected to stabilize at about 40 percent of GDP by 2026. Underdeveloped domestic capital markets will lead to most of this debt being externally financed. Although Uzbekistan has ample buffers to absorb these increases, a clear strategy to restore fiscal balance and rebuild buffers will be important as the structural reform agenda advances to tackling more complex issues such as SOE and financial sector reforms, factor market liberalization, and ambitious spending plans to improve human capital and well-being.



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