Development Strategy
Framework of the Republic of Uzbekistan by 2035
International nongovernmental nonprofit organization BUYUK KELAJAK (hereinafter referred to as INNGO) was registered by the Ministry of Justice of the Republic of Uzbekistan on April 14, 2018. The Expert Council which unites more than 240 fellow countrymen who are experts with experience working abroad in more than 30 countries is the main analytical body of the INNGO. The organizations aim to assist in the implementation of reforms in the economic and social fields and to provide expert support in improving the efficiency of transformations conducted as well as in the accelerated development of the state and society.

The information contained herein is of a general nature and was prepared without regard to the specific circumstances of any person or organization. Although we always strive to provide prompt and accurate information, we cannot guarantee that this information will be accurate at the time of its receipt or will remain accurate in the future. Any actions on the basis of this information may be taken only after consultation with experts and a thorough analysis of a specific situation.

The information provided in the document is based on publicly available data and data provided to the project's working group by BUYUK KELAJAK. It reflects the views and conditions prevailing at the time of the study, which may change over time. When preparing the project, the working group assumed—without further independent evaluation—the completeness, accuracy, and reliability of the information that formed the basis of the document, including information from open sources and provided by third parties. The project's working group shall not be liable for any errors and/or inaccuracies in the document caused by the incompleteness, unreliability, inaccuracy of the data received from third parties as well as from open sources.

Assumptions about the future development of a particular trend or situation expressed by the project's working group in the document are prepared for illustrative purposes—the figures are a quantitative reflection of the scenarios, options, and strategic initiatives described in the Concept of the Development Strategy of the Republic of Uzbekistan until 2035 and depend on political and managerial decisions made or not made in the implementation of the strategy's initiatives.

The project's working group carried out analysis in good faith, but it gives no guarantees, expressed or implied, as to the accuracy, completeness, or correctness of the assumptions, calculations, or results. The project's working group shall not be liable for any actions, decisions, or judgments based on the information provided in the document. All parties are advised to conduct their own analysis and due diligence before making any decision or undertaking any obligation based on the information contained in this document.

During the period from the development of the Strategy Framework from June to December 2018 to the public hearings from January to August 2019, a number of factors were updated. In particular, macroeconomic indicators (exchange rate, inflation rate, etc.) and the policy in the field of statistics (resolution “On additional measures to ensure openness and transparency of public administration, as well as improving the statistical potential of the country”) were updated, certain reforms were carried out (a concept of the reform of the tax system was prepared), new legal acts have been adopted (for example, the law “On the privatization of land plots of non-agricultural purpose”, resolutions of the Cabinet of Ministers of the Republic of Uzbekistan dated March 15, 2019 No. 140, order of the Cabinet of Ministers dated May 6, 2019 No. 03 / 1-1622 to the Ministry of Agriculture of the Republic of Uzbekistan, order of the Presidential Administration dated May 1, 2019 to the Ministry of Agriculture of the Republic of Uzbekistan No. 06 / 1-1536), strategic documents were adopted (for example, the Concept for the development of the tourism sector in the Republic of Uzbekistan for the period until 2025), priority areas were chosen for the development and diversification of the chemical industry until 2030, etc. Despite the above updates, the Strategy Concept remains relevant, especially in terms of the selected strategic priorities and the development vector as a whole.

Note: 1 - "Third parties" mean any physical persons or legal entities
## Contents

### Strategy concept

- Evaluation of the current development level of the Republic of Uzbekistan
- Development scenario for the Republic of Uzbekistan
- Global trends affecting the development of the Republic of Uzbekistan
- Factors that influence the development of the Republic of Uzbekistan
- Concept of the Development Strategy of the Republic of Uzbekistan by 2035
- Establishment of the Reform Management Center of the Republic of Uzbekistan
- Macroeconomy and financial support of the development of the Republic of Uzbekistan
  - Macroeconomic parameters
  - Tax system
  - Investment
  - State budget
  - Capital amnesty
  - Privatization and the Unified National Fund
- Trade development
- Urbanization
- Target development indicators of the Republic of Uzbekistan in 2035
- Key milestones of the Strategy: "Strategic ladder"
- Necessary steps for implementing the Strategy in 2019–2020
- National security
- National idea
Contents

Development Strategy by focus area  70

1. Development of public governance  71
   1.1 Executive authority .................................................. 72
   1.2 Legislative authority .................................................. 84
   1.3 Judicial authority .................................................... 96

2. Economic development  101
   2.1 Agriculture ............................................................ 105
   2.2 Industry ................................................................. 121
      2.2.1 Textile industry .................................................. 122
      2.2.2 Fuel and energy industry ...................................... 129
      2.2.3 Mining and metallurgical industry ......................... 154
      2.2.4 Automotive industry ........................................... 173
      2.2.5 Chemical industry ............................................... 179
      2.2.6 Transport .......................................................... 186
   2.3 Construction industry, utility and communications infrastructure 205
   2.4 Tourism .................................................................. 225
   2.5 Small business and private entrepreneurship ................. 232
   2.6 Financial system .................................................... 254
      2.6.1 Banking system and compliance ............................ 255
      2.6.2 Insurance and pension system ............................... 280
      2.6.3 Capital markets .................................................. 291

3. Social development  299
   3.1 Health care ............................................................. 300
   3.2 Social policy .......................................................... 327
   3.3 Human capital ........................................................ 342
   3.4 Culture .................................................................... 354
   3.5 Environment .......................................................... 322

4. Development of technology and innovations  391
   4.1 Science, technology, and innovations .......................... 392

Appendix to the Breakdown  418
   Tax system .................................................................... 419
Strategy framework

Development Strategy Framework of the Republic of Uzbekistan to 2035
Assessment of the current level of development of the Republic of Uzbekistan

### Economic structure, 2017

<table>
<thead>
<tr>
<th>Nominal GDP, USD billion</th>
<th>GDP based on purchasing power parity ¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>190</td>
<td>207</td>
</tr>
<tr>
<td>66.9</td>
<td>67.1</td>
</tr>
<tr>
<td>2015</td>
<td>2016</td>
</tr>
<tr>
<td>222</td>
<td></td>
</tr>
</tbody>
</table>

#### Employment by sector

<table>
<thead>
<tr>
<th>Sector</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Services</td>
<td>49.8%</td>
</tr>
<tr>
<td>Agriculture</td>
<td>27.2%</td>
</tr>
<tr>
<td>Industry</td>
<td>23.1%</td>
</tr>
</tbody>
</table>

### Economic indicators², 2017

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP per capita</td>
<td>1,485 USD per year</td>
</tr>
<tr>
<td>Inflation</td>
<td>14%</td>
</tr>
<tr>
<td>FDI</td>
<td>2.3 USD billion</td>
</tr>
<tr>
<td>Tax revenue</td>
<td>5.4 USD billion</td>
</tr>
<tr>
<td>Exports</td>
<td>13.9 USD billion</td>
</tr>
<tr>
<td>Imports</td>
<td>14.3 USD billion</td>
</tr>
</tbody>
</table>

### Social indicators³, 2017

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population size</td>
<td>32.7 million</td>
</tr>
<tr>
<td>Average life expectancy</td>
<td>73.7 years</td>
</tr>
<tr>
<td>Population growth rate</td>
<td>1.7%</td>
</tr>
<tr>
<td>Registered unemployed</td>
<td>8.9%  of able-bodied population</td>
</tr>
<tr>
<td>Under 25 years old</td>
<td>46%</td>
</tr>
</tbody>
</table>

### International ratings, 2017

<table>
<thead>
<tr>
<th>Index</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017 World Press Freedom Index</td>
<td>157th</td>
</tr>
<tr>
<td>Reporters Without Borders 2017</td>
<td>165th</td>
</tr>
<tr>
<td>2017 UN Telecommunication Infrastructure Index (TII)</td>
<td>74th</td>
</tr>
<tr>
<td>Human Development Index</td>
<td>114th</td>
</tr>
<tr>
<td>E-Government Development Index, 2018</td>
<td>105th</td>
</tr>
<tr>
<td>E-Government Development Index, 2018</td>
<td>81st</td>
</tr>
</tbody>
</table>

**Note:** 1 - GDP based on purchasing power parity is the calculation of GDP by purchasing power parity, taking into account the purchasing power of the national currency. Sources: 2 - World Bank, 3 - State Statistics Committee.
Assessment of the current level of development of the Republic of Uzbekistan

Current indicators of the Republic of Uzbekistan compared to other countries, 2017

Economic development

<table>
<thead>
<tr>
<th>Nominal GDP, USD billion</th>
<th>Uzbekistan</th>
<th>Singapore</th>
<th>South Korea</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>48.7</td>
<td>297</td>
<td>1,530</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>GDP per capita, USD per capita</th>
<th>Uzbekistan</th>
<th>Singapore</th>
<th>South Korea</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1,485</td>
<td>57,719</td>
<td>29,891</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Doing Business Index, global ranking</th>
<th>Uzbekistan</th>
<th>Singapore</th>
<th>South Korea</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>74</td>
<td>2</td>
<td>24</td>
</tr>
</tbody>
</table>

Economic output

<table>
<thead>
<tr>
<th>Output of the agribusiness sector, USD per employed person</th>
<th>Uzbekistan</th>
<th>Singapore</th>
<th>South Korea</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2,247</td>
<td>22,512</td>
<td>22,875</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Industrial output, USD per employed person</th>
<th>Uzbekistan</th>
<th>Singapore</th>
<th>Malaysia</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4,672</td>
<td>111,471</td>
<td>17,145</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Service sector output, USD per employed person</th>
<th>Uzbekistan</th>
<th>Singapore</th>
<th>South Korea</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3,452</td>
<td>85,301</td>
<td>42,851</td>
</tr>
</tbody>
</table>

Quality of life

<table>
<thead>
<tr>
<th>Registered unemployment, % of labor force</th>
<th>Uzbekistan</th>
<th>Singapore</th>
<th>South Korea</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>8.9</td>
<td>1.8</td>
<td>3.7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Share of the population below the poverty line (USD 1.95 per day), %</th>
<th>Uzbekistan</th>
<th>Malaysia</th>
<th>South Korea</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>10</td>
<td>0.2</td>
<td>0.3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Position in UN rating Human Development Index, position</th>
<th>Uzbekistan</th>
<th>Singapore</th>
<th>South Korea</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>105</td>
<td>9</td>
<td>22</td>
</tr>
</tbody>
</table>
Development scenarios for the Republic of Uzbekistan

Preconditions for the development scenarios of the Republic of Uzbekistan

Favorable foreign market conditions, no crises

**Evolutionary scenario**
- Favorable foreign market conditions with the unsuccessful implementation of reforms
  - The favorable external market determines insignificant development of the Republic of Uzbekistan, compared to current rates
  - The attraction of investments (USD 515-623 billion) is contingent on the development of the economy in favorable market conditions
  - Inflation: gradual consistent decrease from 19.2% in 2018 to 10% in 2025 and a subsequent gradual decrease to 4.5% in 2033 (decrease in the rate according to IMF forecast for 2018-19)
  - Dollar exchange rate: stable at the level of 2018: UZS 8,065 per USD (average exchange rate, no acute fluctuations due to the state of foreign markets)
  - Population growth rate: 1.55% a year (average between the current (2012-2017) and the growth rate of the dynamic scenario)
  - Nominal GDP is calculated based on the consensus forecast of the Ministry of the Economy of the Republic of Uzbekistan, Euromonitor, IMF, the historical growth rates of the countries of the early-demographic dividend category according to the data of the World Bank, including India, Mexico, Argentina, Turkey, etc.

**Dynamic scenario**
- Implementation of reforms with favorable foreign market conditions and considerable amount of investments
  - The favorable foreign market condition and the successful implementation of reforms is critical when determining the possible attainment of the goal of becoming one of the top 50 countries in nominal GDP terms
  - The considerable amount of investments raised: USD 993-1,213 billion
  - Inflation: the implementation of reforms, including the establishment of an independent and efficient Central Bank, makes it possible to successfully target inflation as low as 5% in 2026 and 4.5% from 2031.
  - Dollar exchange rate: stable at the level of 2018: UZS 8,065 per USD (average exchange rate, the stability is supported by balanced capital outflows and inflows)
  - Population growth rate: 1.4% a year (decrease in the population growth rate compared to the current growth due to higher living standards, the growth rate is based on the Euromonitor forecast)
  - Nominal GDP is calculated based on the goal to enter the top 50 countries (on the basis of Euromonitor and EIU forecasts)

Pessimistic scenario
- Unfavorable foreign market conditions and external crises, but successful implementation of reforms
  - Negative foreign market conditions and no reforms, or the unsuccessful implementation of reforms determines the slowdown in the Republic of Uzbekistan development rates compared to the current rate, it proves hard to attract investments (USD 222-272 billion)
  - Once every six years crisis phenomena adversely affect the GDP growth rate (minus 5.4% in the crisis year, comparable to the fall in global GDP in the last crisis year 2015. The most conservative figure is adopted - six years represent the average period of time between global crises 1982-2015)
  - The return to pre-crisis rates takes two years due to inefficient state governance
  - Inflation: gradual consistent decrease from 19.2% in 2018 to 10% in 2025 and subsequent gradual decrease to 4.5% in 2033 (decrease rate according to the IMF forecast for 2018-19)
  - Dollar exchange rate: stable at the level of 2018: UZS 8,065 per USD (average exchange rate, the stability is supported by the lack of capital outflows and inflows)
  - Population growth rate: 1.7% a year (the current growth rate of 2012-2017 is maintained, there is no slowdown in the growth rate comparable to developing countries with low living standards)
  - Nominal GDP is calculated based on the evolutionary scenario taking crises into account

Progressive scenario
- Implementation of reforms against the backdrop of unfavorable foreign market conditions and external crises
  - Successful implementation of the reforms makes it possible to achieve accelerated economic development rates, compared to the current rate and leads to the attraction of investments (USD 600-733 billion)
  - Every six year crisis phenomena adversely affect the GDP growth rate (minus 5.4% in the crisis year, comparable to the fall in global GDP in the last crisis year 2015. The most conservative figure is adopted. Six years represent the average period of time between global crises 1982-2015)
  - The return to pre-crisis rates takes one year due to efficient state governance
  - Inflation: the implementation of reforms, including the establishment of an independent and efficient Central Bank, makes it possible to successfully target inflation as low as 5% in 2026 and 4.5% from 2031.
  - Dollar exchange rate: stable at the level of 2018: UZS 8,065 per USD (average exchange rate, stability is supported by modern measures regulating capital outflows and inflows)
  - Population growth rate: 1.55% a year (average between the current growth rate (2012-2017) and the growth rate of the dynamic scenario)
  - Nominal GDP is calculated based on the dynamic scenario taking crises into account

Unfavorable foreign market conditions, crises

Source: Analysis of the Project Team
Development scenarios for the Republic of Uzbekistan

Nominal GDP of the Republic of Uzbekistan

Favorable foreign market conditions, no crises

Evolutionary scenario

GDP nominal growth rate, %

GDP nominal growth rate, %

Dynamic scenario

GDP nominal growth rate, %

GDP nominal growth rate, %

Pessimistic scenario

GDP nominal growth rate, %

GDP nominal growth rate, %

Progressive scenario

GDP nominal growth rate, %

GDP nominal growth rate, %

Source: Analysis of the Project Team
### Development scenarios for the Republic of Uzbekistan

**Evolutionary scenario**
- **Nominal GDP, USD billion**
- **Actual GDP in prices of 2017, USD billion**

**Dynamic scenario**
- **Nominal GDP, USD billion**
- **Actual GDP in prices of 2017, USD billion**

### Pessimistic scenario
- **Nominal GDP, USD billion**
- **Actual GDP in prices of 2017, USD billion**

### Progressive scenario
- **Nominal GDP, USD billion**
- **Actual GDP in prices of 2017, USD billion**

### Comparison of the nominal and actual GDP of the Republic of Uzbekistan

#### Favorable foreign market conditions, no crises

<table>
<thead>
<tr>
<th>Year</th>
<th>Nominal GDP, USD billion</th>
<th>Actual GDP in prices of 2017, USD billion</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>48.7</td>
<td>41.8</td>
</tr>
<tr>
<td>2020</td>
<td>55.4</td>
<td>46.4</td>
</tr>
<tr>
<td>2025</td>
<td>62.8</td>
<td>45.4</td>
</tr>
<tr>
<td>2030</td>
<td>69.6</td>
<td>42.1</td>
</tr>
<tr>
<td>2035</td>
<td>76.3</td>
<td>45.3</td>
</tr>
</tbody>
</table>

#### Unfavorable foreign market conditions, crises

<table>
<thead>
<tr>
<th>Year</th>
<th>Nominal GDP, USD billion</th>
<th>Actual GDP in prices of 2017, USD billion</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>48.7</td>
<td>41.9</td>
</tr>
<tr>
<td>2020</td>
<td>55.5</td>
<td>47.2</td>
</tr>
<tr>
<td>2025</td>
<td>62.8</td>
<td>45.4</td>
</tr>
<tr>
<td>2030</td>
<td>69.6</td>
<td>43.6</td>
</tr>
<tr>
<td>2035</td>
<td>76.3</td>
<td>42.1</td>
</tr>
</tbody>
</table>

**Source:** Analysis of the Project Team
### Evolutionary scenario

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2017</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal GDP, USD billion</td>
<td>48.7</td>
<td>165.3</td>
</tr>
<tr>
<td>Actual GDP, USD billion</td>
<td>48.7</td>
<td>49.1</td>
</tr>
<tr>
<td>Cumulative investments, USD billion</td>
<td>-</td>
<td>515-623</td>
</tr>
<tr>
<td>Population, million</td>
<td>33.3</td>
<td>43.2</td>
</tr>
<tr>
<td>GDP per capita, USD '000</td>
<td>1.5</td>
<td>3.8</td>
</tr>
<tr>
<td>Ranking in the world in terms of nominal GDP</td>
<td>85</td>
<td>67</td>
</tr>
<tr>
<td>GDP based on PPP, USD billion</td>
<td>222</td>
<td>528</td>
</tr>
<tr>
<td>GDP based on PPP per capita, USD '000</td>
<td>6.8</td>
<td>12.2</td>
</tr>
</tbody>
</table>

### Dynamic scenario

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2017</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal GDP, USD billion</td>
<td>48.7</td>
<td>478.5</td>
</tr>
<tr>
<td>Actual GDP, USD billion</td>
<td>48.7</td>
<td>200.3</td>
</tr>
<tr>
<td>Cumulative investments, USD billion</td>
<td>-</td>
<td>993-1,213</td>
</tr>
<tr>
<td>Population, million</td>
<td>33.3</td>
<td>42.1</td>
</tr>
<tr>
<td>GDP per capita, USD '000</td>
<td>1.5</td>
<td>11.4</td>
</tr>
<tr>
<td>Ranking in the world in terms of nominal GDP</td>
<td>85</td>
<td>50</td>
</tr>
<tr>
<td>GDP based on PPP, USD billion</td>
<td>222</td>
<td>701</td>
</tr>
<tr>
<td>GDP based on PPP per capita, USD '000</td>
<td>6.8</td>
<td>16.7</td>
</tr>
</tbody>
</table>

### Pessimistic scenario

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2017</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal GDP, USD billion</td>
<td>48.7</td>
<td>83.4</td>
</tr>
<tr>
<td>Actual GDP, USD billion</td>
<td>48.7</td>
<td>24.8</td>
</tr>
<tr>
<td>Cumulative investments, USD billion</td>
<td>-</td>
<td>222-272</td>
</tr>
<tr>
<td>Population, million</td>
<td>33.3</td>
<td>44.4</td>
</tr>
<tr>
<td>GDP per capita, USD thousand</td>
<td>1.5</td>
<td>1.9</td>
</tr>
<tr>
<td>Ranking in the world in terms of nominal GDP</td>
<td>85</td>
<td>78</td>
</tr>
<tr>
<td>GDP based on PPP, USD billion</td>
<td>222</td>
<td>303</td>
</tr>
<tr>
<td>GDP based on PPP per capita, USD '000</td>
<td>6.8</td>
<td>6.84</td>
</tr>
</tbody>
</table>

### Progressive scenario

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2017</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal GDP, USD billion</td>
<td>48.7</td>
<td>200.5</td>
</tr>
<tr>
<td>Actual GDP, USD billion</td>
<td>48.7</td>
<td>83.9</td>
</tr>
<tr>
<td>Cumulative investments, USD billion</td>
<td>-</td>
<td>601-735</td>
</tr>
<tr>
<td>Population, million</td>
<td>33.3</td>
<td>43.2</td>
</tr>
<tr>
<td>GDP per capita, USD '000</td>
<td>1.5</td>
<td>4.6</td>
</tr>
<tr>
<td>Ranking in the world in terms of nominal GDP</td>
<td>85</td>
<td>66</td>
</tr>
<tr>
<td>GDP based on PPP, USD billion</td>
<td>222</td>
<td>346</td>
</tr>
<tr>
<td>GDP based on PPP per capita, USD '000</td>
<td>6.8</td>
<td>8.01</td>
</tr>
</tbody>
</table>

Source: Analysis of the Project Team
The dynamic development scenario has been selected for the Republic of Uzbekistan as the target scenario in the Strategy.

- Development of agriculture and industry and infrastructure improvements are the basis for growth.
- Development will be based on growth in human capital.
- Private funds are the main source of investments.
- Total investments will reach USD 993-1,213 billion.

### GDP trend

<table>
<thead>
<tr>
<th>Year</th>
<th>Nominal GDP</th>
<th>Real GDP, in 2017 prices</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>48.7</td>
<td></td>
</tr>
<tr>
<td>2025</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2030</td>
<td>200.3</td>
<td></td>
</tr>
<tr>
<td>2035</td>
<td>478.5</td>
<td></td>
</tr>
</tbody>
</table>

### CAGR

- +13.5%
- +8.2%

### Main characteristics

- Development of agriculture and industry and infrastructure improvements are the basis for growth.
- Development will be based on growth in human capital.
- Private funds are the main source of investments.
- Total investments will reach USD 993-1,213 billion.

### Global ranking

<table>
<thead>
<tr>
<th>Year</th>
<th>Position</th>
<th>Country</th>
<th>Nominal GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>84</td>
<td>Slovenia</td>
<td>48.9</td>
</tr>
<tr>
<td>2017</td>
<td>85</td>
<td>Uzbekistan</td>
<td>48.7</td>
</tr>
<tr>
<td>2017</td>
<td>86</td>
<td>Lithuania</td>
<td>47.3</td>
</tr>
<tr>
<td>2035</td>
<td>49</td>
<td>Denmark</td>
<td>525.8</td>
</tr>
<tr>
<td>2035</td>
<td>50</td>
<td>Uzbekistan</td>
<td>478.5</td>
</tr>
<tr>
<td>2035</td>
<td>51</td>
<td>New Zealand</td>
<td>477.9</td>
</tr>
</tbody>
</table>

Sources: 1 - International Monetary Fund (IMF)
The strategic goal of the Republic of Uzbekistan in 2035 is to become one of the Top 50 global economies.

**Examples of indicators**

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Indicators</th>
<th>Indicators</th>
<th>Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Global Indicators of Regulatory Governance&lt;br&gt;• Democracy Index&lt;br&gt;• Doing Business&lt;br&gt;• E-government Index&lt;br&gt;• Corruption Perceptions Index&lt;br&gt;• Worldwide Press Freedom Index</td>
<td>• GDP per capita&lt;br&gt;• AIC output&lt;br&gt;• Electricity generation&lt;br&gt;• Volume of exported textile products&lt;br&gt;• Automobile production volume</td>
<td>• Registered unemployment&lt;br&gt;• Health care expenses&lt;br&gt;• Child mortality&lt;br&gt;• Gini index&lt;br&gt;• Cultural Influence Ranking</td>
<td>• R&amp;D expenditures&lt;br&gt;• Number of patents&lt;br&gt;• Global Innovation Index&lt;br&gt;• Number of scientists (researchers)&lt;br&gt;• Research citation rate&lt;br&gt;• Number of publications</td>
</tr>
</tbody>
</table>

- GDP is the common goal
- The goal complies with SMART principles

**S**: Certain  
**M**: Measurable  
**A**: Achievable  
**R**: Relevant  
**T**: Limited in time

Sources: 1 - International Monetary Fund (IMF)
### Development scenarios for the Republic of Uzbekistan

The development indicators of the Republic of Uzbekistan in the dynamic and pessimistic scenarios

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Actual, 2017</th>
<th>Dynamic scenario, 2035</th>
<th>Pessimistic scenario, 2035</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Stable macroeconomic development</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GDP (nominal), USD billion</td>
<td>48.7</td>
<td>479</td>
<td>83</td>
</tr>
<tr>
<td>GDP (based on PPP), USD billion</td>
<td>222</td>
<td>701</td>
<td>303</td>
</tr>
<tr>
<td>GDP per capita, USD ‘000</td>
<td>1,486</td>
<td>11,362</td>
<td>1,879</td>
</tr>
<tr>
<td>Budget revenues, USD billion</td>
<td>8</td>
<td>147</td>
<td>26</td>
</tr>
<tr>
<td>Contribution of AIC to gross added value (GAV), USD billion</td>
<td>8</td>
<td>36</td>
<td>14</td>
</tr>
<tr>
<td>Contribution of industry to GAV, USD billion</td>
<td>15</td>
<td>148</td>
<td>25</td>
</tr>
<tr>
<td>Contribution of service sector to GAV, USD billion</td>
<td>20</td>
<td>242</td>
<td>35</td>
</tr>
<tr>
<td>Share of AIC in GAV, %</td>
<td>19</td>
<td>8</td>
<td>19</td>
</tr>
<tr>
<td>Share of industry in GAV, %</td>
<td>33</td>
<td>35</td>
<td>33</td>
</tr>
<tr>
<td>Share of service sector in GAV, %</td>
<td>47</td>
<td>57</td>
<td>47</td>
</tr>
<tr>
<td>Agribusiness output, USD per employed person</td>
<td>2,247</td>
<td>15,585</td>
<td>3,049</td>
</tr>
<tr>
<td>Industrial output, USD per employed person</td>
<td>4,672</td>
<td>27,046</td>
<td>6,421</td>
</tr>
<tr>
<td>Service sector output, USD per employed person</td>
<td>3,452</td>
<td>21,968</td>
<td>4,604</td>
</tr>
<tr>
<td>Unemployment rate, % of able-bodied population</td>
<td>8.9</td>
<td>6.2</td>
<td>7.0</td>
</tr>
<tr>
<td>Employment rate in AIC, % of employed persons</td>
<td>27.2</td>
<td>12.2</td>
<td>29</td>
</tr>
<tr>
<td>Employment rate in industry, % of employed persons</td>
<td>23.1</td>
<td>29.1</td>
<td>23.9</td>
</tr>
<tr>
<td>Employment rate in the service sector, % of employed persons</td>
<td>49.8</td>
<td>58.7</td>
<td>47.1</td>
</tr>
<tr>
<td>Population size, million</td>
<td>33</td>
<td>42.1</td>
<td>44</td>
</tr>
<tr>
<td>State debt share in GDP, %</td>
<td>16.0</td>
<td>38.7</td>
<td>23.9</td>
</tr>
<tr>
<td>Inflation, %</td>
<td>14.4</td>
<td>4.5</td>
<td>4.5</td>
</tr>
<tr>
<td>Share of SMEs, per 1,000 people</td>
<td>7.1</td>
<td>25</td>
<td>7.9</td>
</tr>
<tr>
<td>Value added per 1 SME, USD USD/SME</td>
<td>113</td>
<td>273</td>
<td>127</td>
</tr>
<tr>
<td>Total investments, USD billion</td>
<td>12</td>
<td>129</td>
<td>23</td>
</tr>
<tr>
<td>Exports of goods and services, USD billion</td>
<td>13.9</td>
<td>136.5</td>
<td>23.8</td>
</tr>
<tr>
<td>Imports of goods and services, USD billion</td>
<td>14.4</td>
<td>116.7</td>
<td>20.3</td>
</tr>
</tbody>
</table>
The development indicators of the Republic of Uzbekistan in the dynamic and pessimistic scenarios

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Actual, 2017</th>
<th>Dynamic scenario, 2035</th>
<th>Pessimistic scenario, 2035</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Corruption Perceptions Index, global ranking</strong></td>
<td>157</td>
<td>46</td>
<td>81</td>
</tr>
<tr>
<td><strong>World Press Freedom Index, global ranking</strong></td>
<td>165</td>
<td>43</td>
<td>102</td>
</tr>
<tr>
<td><strong>Doing Business Index, global ranking</strong></td>
<td>74</td>
<td>&lt; 20</td>
<td>&lt; 50</td>
</tr>
</tbody>
</table>

**Living standards**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Actual, 2017</th>
<th>Dynamic scenario, 2035</th>
<th>Pessimistic scenario, 2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Share of the population below the poverty line (USD 1.95 Per day), %</td>
<td>10</td>
<td>0.5</td>
<td>10</td>
</tr>
<tr>
<td>Gini index, %</td>
<td>35.3</td>
<td>31.6</td>
<td>35.3</td>
</tr>
<tr>
<td>Infant mortality rate, per 1,000 newborns</td>
<td>31.3</td>
<td>6</td>
<td>31.3</td>
</tr>
<tr>
<td>Number of children involved in forced labor, million people</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Population growth rate, average annual %</td>
<td>1.6</td>
<td>1.4</td>
<td>1.7</td>
</tr>
<tr>
<td>Life expectancy, years</td>
<td>73.7</td>
<td>81</td>
<td>73.7</td>
</tr>
<tr>
<td>International migrant flow, % of total population</td>
<td>3.9</td>
<td>1.6</td>
<td>3.9</td>
</tr>
<tr>
<td>Health care expenses, % of GNI</td>
<td>5.8</td>
<td>10</td>
<td>5.8</td>
</tr>
<tr>
<td>Education expenses, % of GDP</td>
<td>6.4</td>
<td>7.5</td>
<td>6.4</td>
</tr>
<tr>
<td>Share of children who went to preschool, per 100 people</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Share of children who went to secondary school, per 100 people</td>
<td>95</td>
<td>100</td>
<td>95</td>
</tr>
<tr>
<td>Share of students who went to colleges and universities, per 100 people</td>
<td>9</td>
<td>80</td>
<td>21</td>
</tr>
<tr>
<td>Line in UN rating Human Development index, line</td>
<td>105</td>
<td>Top 50</td>
<td>Top 100</td>
</tr>
<tr>
<td>Population with access to drinking water, urban/rural, %</td>
<td>98/81</td>
<td>100/100</td>
<td>98/81</td>
</tr>
</tbody>
</table>

**Infrastructure and resource efficiency**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Actual, 2017</th>
<th>Dynamic scenario, 2035</th>
<th>Pessimistic scenario, 2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water resources yield capacity, GDP/m3 of pure water</td>
<td>0.95</td>
<td>35.0</td>
<td>0.91</td>
</tr>
<tr>
<td>Annual water intake for agricultural needs, % of total amount</td>
<td>90</td>
<td>70</td>
<td>90</td>
</tr>
<tr>
<td>Mobile subscribers, subscribers per 100 people</td>
<td>73</td>
<td>120</td>
<td>105</td>
</tr>
<tr>
<td>Progress Index of the UN Sustainable Development Goals, score (of 100)</td>
<td>71.2</td>
<td>80.2</td>
<td>71.2</td>
</tr>
<tr>
<td>R&amp;D expenses, % of GDP</td>
<td>0.2</td>
<td>2</td>
<td>0.6</td>
</tr>
</tbody>
</table>
Global trends affecting the development of the Republic of Uzbekistan

Megatrends

- Demography
- Personal development
- Technological potential
- Economic interrelations
- Public debt
- Change in economic centers
- Climate change
- Scarcity of resources
- Urbanization

Source: Analysis of the working group
Human capital

Demography

Will the state be able to provide a decent pension to pensioners?

Increased life expectancy and declining birth rates are increasing the share of elderly people globally, which reduces the capacity of social security systems, including pensions and health care.

In 2011–2035, pension support around the world will grow by:

- 1.3% GDP in developed countries
- 2.2% GDP in emerging markets

Personal development

How does the state improve the provision of services? How can I affect this process?

Achievements in education, health care and technology, helped raise a new generation that has higher demands on transparency and wants to take part in the decision-making process. These changes will continue, and there will be more middle-class people than poor people by 2035.

Technological potential

What will my children do in 2035?

Information and communications technology (ICT) has transformed society over the past 30 years. A new wave of technological achievements today creates new opportunities and tests the state’s ability to leverage technological advantages and provide reasonable oversight of the development of technology.

More pensioners

If the current rate of population growth is maintained, the population of Uzbekistan will rise to 42.1 million by 2035, while the number of working people per pensioner will decline. Whereas in 2017 there were 6 working people per 1 pensioner, by 2035 this ratio will drop to 1:4. The pension of the Republic of Uzbekistan is USD 743 per pensioner. (in South Korea: USD 80,000 per pensioner).

Middle-class reserve

The middle class is not the dominant class in Uzbekistan; it accounts for about 28-30% of the population in Uzbekistan. However, the largest population group (45–48%) consists of a middle-class reserve – citizens who will become the major class in the country in the event of further growth in prosperity and economic growth. One of the main problems in the development of the middle-class reserve is the absence of social ladders.

Innovations and ICT

In Uzbekistan, the ecosystem facilitating the development of innovation and ICT is practically nonexistent. In particular, technology parks, business incubators, crowdfunding platforms, and other necessary elements of innovative infrastructure are at the initial stage of development. ICT use is also in the development stage: Uzbekistan is ranked 95th in the world in the ICT Development Index.

Notes: 1 – Men aged up to 60 and women aged up to 55; 2 – Men aged 15-59 years and women aged 15-54 years

Sources: World Bank, Center for Economic Research, International Telecommunication Union, Population Pyramid, analysis of the working group
Global economy

Economic interrelations

How will the state facilitate the development of international relations?

An interconnected global economy will demonstrate further growth in international commerce and investments, but requires the development of international cooperation for progress and mutually advantageous economic benefits.

Public debt

How does the state balance the decline in foreign debt and stimulation of economic growth?

Government debt is expected to become a significant constraint for governments. The ability of governments to control foreign debt and at the same time find new ways to provide public services will determine the success of the response by the governments of these countries to the main social, economic and environmental problems.

Change in economic centers

How is the state adjusting to the new economic order?

The level of prosperity in emerging markets is growing, which has a significant influence on the global economy. Thanks to changes in the balance of economic growth areas, national governments must pay more attention to supporting the transparency of their activities and increasing inclusiveness.

Growth in international trade

How will the state facilitate the development of international relations?

In 2017 Uzbekistan has commercial relations with over 160 countries. The trade balance is positive: USD 880 million. The country’s foreign trade turnover in 2017 grew by 11% to USD 26.9 billion. Exports from Uzbekistan amount to USD 13.9 billion and have been stable since 2010. Methodical work is being conducted to prepare for the country’s accession to the WTO, and a respective road map has been adopted.

Foreign debt

Uzbekistan’s foreign debt at the end of 2017 was about USD 16.9 billion. The Republic of Uzbekistan is ranked 99th globally in terms of gross foreign debt. The national debt to GDP ratio is low, 16%. It might increase, which would reduce the cost of borrowing through the attraction of international loans.

Public governance efficacy

Certain factors in the Republic of Uzbekistan adversely affect the efficacy of the system of executive authority, which include a high level of corruption, the absence of any integrated system to monitor achievement of goals, the low effectiveness of parliamentary control, excessive control over the mass media, and the absence of a developed system for training senior executives, which reduces the results of government projects and leads to inefficient use of funds.

Sources: State Statistics Committee of the Republic of Uzbekistan, Central Bank of the Republic of Uzbekistan, CIA, World Poverty Clock, data from open sources, analysis of the working group.
Environment

Climate change
How will the government guarantee the protection of personal and business assets from the consequences of climate change?

Greenhouse gas emissions, which increase the average annual temperature, in addition to desertification and other climate changes, impose additional costs on the state.

By 2035 global government expenditure on fighting the consequences of climate change may reach 1% of global GDP each year.

In most countries, attainment of the right combination of the climate change adaptation policy and mitigation of its consequences by 2035 will be a difficult challenge.

Scarcity of resources
How do we provide children with enough food, drinking water and energy?

Population growth, economic growth, and climate change will increase the burden on the main natural resources, including water, food, crop lands and energy. Sustainable management of resources will be central to new government programs.

Urbanization
How should we design infrastructure to make it modern, efficient, and eco-friendly?

Approximately two-thirds of the global population will live in cities by 2035. Urbanization creates significant opportunities for socioeconomic development and more stable life, but it also increases the burden on infrastructure and resources, especially on water and energy resources.

Rising air temperature
The air temperature in Uzbekistan is increasing at twice the global rate and equals 0.29 degrees per decade since the 1950s. The frequency of extreme weather phenomena is highest in the area of Karakalpakstan. The climatic conditions in the region were aggravated by the Aral disaster: in the Aral Sea region, the number of days with a temperature above 40 degrees has doubled (vs. 1.5 times on average around the country).

Access to water
Over 30% of households do not have quality drinking water, and over 1,000 settlements have no drinking water at all. The water quality is low, and water is contaminated with microbes and chemicals due to poor wastewater treatment and the water purification infrastructure. Contamination increases in high temperatures and leads to an increased number of gastrointestinal illnesses during the summer.

Share of urban population
In recent years the share of the urban population in the total population has decreased slightly (2011: 51.2%; 2017: 50.6%). This is because the natural growth of the rural population exceeds growth of the urban population, while there has been no artificial conversion of rural settlements into urban settlements.

Sources: The Center of the Hydrometeorological Service under the Cabinet of Ministers of the Republic of Uzbekistan, UN, State Statistics Committee of the Republic of Uzbekistan, analysis of the working group.

21
Factors that influence the development of the Republic of Uzbekistan

Public governance
- Violation of the principle of the separation of powers
- Inefficient public expenditure
- Lack of anti-corruption measures at all levels of government and public life
- Lack of modern and high-quality decisions by the legislature
- Unsatisfactory level of human rights, including freedom of speech, fair trial

Economy
- Obsolete and complicated access to infrastructure
- Lack of investments
- High share of the informal economy
- High level of state participation in the economy Competencies are at variance with the strategic goals of economic development

Society
- Significant labor migration
- Unequal access to health care
- Undeveloped social infrastructure
- High level of poverty and unemployment
- Water shortages

Innovations
- Limited financing of R&D
- Emigration of highly educated specialists
- Problems with the protection of intellectual property
- Limited access to higher education
- Poor development of high-tech and science-based production

Sources: Analysis of the working group
Factors that influence the development of the Republic of Uzbekistan

### Political challenges

01. Violation of the principle of the separation of powers
   - The Republic of Uzbekistan is ranked 158th out of 165 countries in the Democracy Index 2017

02. Inefficient public expenditure
   - There are no modern project management systems

03. Lack of anti-corruption measures at all levels of government and public life
   - The Republic of Uzbekistan is ranked 157th out of 180 countries in the Corruption Perceptions Index 2017.

04. Lack of modern and high-quality decisions by the legislature
   - Lack of specifics, ambiguous interpretations

05. Unsatisfactory level of human rights, including freedom of speech, fair trial
   - The Republic of Uzbekistan is ranked 165th out of 180 countries in the World Press Freedom Index 2018.

### Economic challenges

01. Obsolete and complicated access to infrastructure
   - Over 35% of water lines and water supply networks need urgent repairs, the Internet speed is 1 Mbps compared to the average global speed of 9 Mbps, the electricity loss rate during transmission is 15%

02. Lack of investments
   - In 2017, the gross fixed capital formation equaled USD 12 billion, which accounted for 25% of GDP, while in other countries, such as Turkey and South Korea, the amount of investments equals or exceeds 30% of GDP
   - According to the estimates of experts and representatives of the public authorities, the share of the informal economy in certain sectors may reach up to 50% of the total

03. High share of the informal economy
   - The share of state ownership exceeds 50% in the following sectors: banking, mining, energy industry, food industry, cotton industry

04. High level of state participation in the economy
   - The lack of able-bodied population with skills in engineering, economics, and business: 36%
   - Low labor efficiency

05. Competencies are at variance with the strategic goals of economic development

Sources: 1) https://www.cable.co.uk/broadband/speed/worldwide-speed-league/, analysis of the working group
Factors that influence the development of the Republic of Uzbekistan

### Social challenges

01. **Significant labor migration**
   - A significant portion (almost 1/3) of the able-bodied population of the country works abroad (85% of them in the Russian Federation)

02. **Unequal access to health care**
   - The health care financing system mostly relies on private payments. Personal expenditures in the healthcare system account for up to 45%

03. **Undeveloped social infrastructure**
   - Uzbekistan is an outsider in the rating of capital investments in health care, and ICT is not in the mainstream

04. **High level of poverty and unemployment**
   - About 10% of the population of Uzbekistan live in conditions of extreme poverty (less than USD 1.95/day), and the estimated level of unregistered unemployment is 35%

05. **Water shortage**
   - Over 10% of the rural population does not have access to drinking water

### Technological challenges

01. **Lack of highly educated specialists**
   - In the employed population of Uzbekistan, researchers account for 0.21% compared to the median of 0.65% in leading countries

02. **Limited financing of R&D**
   - R&D financing in Uzbekistan amounted to USD 133 million in 2015 (in Sweden: USD 16.2 billion, in the USA: USD 599 billion)

03. **Problems with the protection of intellectual property**
   - Unfair competition occurs often in the area of intellectual property, including duplication of the products of international companies

04. **Limited access early years education and higher education**
   - The level of access to higher education in Uzbekistan is low: 9.2% of the population (in Japan: 63%)

05. **Poor development of high-tech and science-based production**
   - In 2016 innovative enterprises accounted for 0.85% of the total number of companies (in EU: about 49%)

Sources: Analysis of the working group
Development Strategy Framework of the Republic of Uzbekistan by 2035

Development Strategy of the Republic of Uzbekistan until 2035

Sources: Analysis of the working group
Note: SME - small and medium enterprises

Development of public governance
- Executive authority: strict compliance with laws and results-oriented
- Independent legislature and judiciary

Economic development
- High-tech and the export-oriented agribusiness sector
- Industry: sustainable transition to industry 4.0
- Unlimited tourism
- Modern infrastructure
- SME support and development
- Free financial market

Social development
- Public-private health care
- Targeted social policy
- Human capital as the main growth factor
- Culture: emergence of new generation
- Environment: change of paradigms and transformation of views

Development of innovations and technology
- Science, technology, and innovations: on the path towards innovative development

Macroeconomics and financial support
- Fiscal policy for business growth
- Balanced monetary policy
- Floating rate of the currency policy
- Unique opportunities for investments
- Phased privatization

Key milestones of the Strategy

Preliminary stage (2019–2020) and three 5-year milestones (2020–2025 – 2030–2035)
Development Strategy Framework of the Republic of Uzbekistan to 2035

Development of public governance

- **The executive**: Implementation of top-down initiatives, strict compliance with laws and results-oriented, transparency and control, creation of the Reform Management Center of the Republic of Uzbekistan (under the President’s Administration)
- **The legislature**: Independence of the branches of powers, optimization of the legislative framework
- **The judiciary**: Observance of human rights and consolidation of the rule of law

Economic development

- **Agriculture**: Hi-tech agriculture through the development of medium-sized economic entities and agricultural clusters, taking into account the impact of climate change
- **Industry**:
  - **Textile industry**: Specialization in branded products using available raw materials
  - **Energy industry**: Increase in the share of renewable energy sources (RES) and establishment of a water power consortium
  - **Fuel industry and the mining and metals industry**: Engagement of international players
  - **Automotive industry**: Attraction of a large number of international automotive concerns and export-oriented production using new technology
  - **Transport**: Appearance of private players, privatization of non-core assets, and reduction in the cost of logistics
  - **Chemical industry**: Production and export of hi-tech polymer, cosmetic, and medicinal products
- **Infrastructure**: Renovation and construction through public private partnership (PPP)
- **Tourism**: Implementation of the potential for tourism, facilitation of the visa scheme, and creation of infrastructure through PPP
- **SME and private entrepreneurship**: Mixed financial and non-financial support to reduce the informal economy, increase the number of enterprises and ensure their growth
- **Financial system**:
  - **Banking system**: Gradual liberalization of the banking sector along with the creation of development institutes at the intermediate stage
  - **Pension system**: Transition to a three-level pension system similar to Australia and the USA
  - **Insurance system**: Development of compulsory forms of insurance to increase the overall prosperity of citizens and reduce the state’s influence

Sources: Analysis of the working group
Development Strategy Framework of the Republic of Uzbekistan to 2035

Social development

- **Health care**: Mixed public-private model: availability of compulsory health insurance, development of private service providers, focus of the state on the needy
- **Social policy**: High targeted coverage through non-financial measures and development of corporate social responsibility (CSR)
- **Human capital**: Maintenance of affordable public education along with the development of private providers, export of highly-skilled workforce
- **Culture**: Establishment of a new cultural generation and formation of the country's national brand by developing the highest demand for intellectual services, art, and creative work
- **Environment**: Elimination of accumulated damage and transition to careful use of natural resources by introducing restrictive government measures and raising the environmental awareness of the public

Development of innovations and technology

- **Science, technology, and innovations**: Creation and development of an innovation center in the sectors driving Uzbekistan's economic growth by involving international companies and experts

Macroeconomics and financial support

- **Fiscal policy**: Decrease in the share of indirect taxes and transition to long-term tax administration
- **Monetary policy**: Gradual decline in the key rate from 16 to 9% and increase in debt from 16 to 38.7%
- **Currency policy**: Floating exchange rate
- **Investment**:
  - **Total amount**: USD 993-1,213 billion for 17 years
  - **Main sources**: Direct investments, including PPP, public investments, and investments from corporate securities
  - **Main expenses**: Agriculture and industry, infrastructure, education, the health care, and social sector
- **Privatization**: Phased complete privatization and creation of a state operator (single state foundation) with transition to a financial holding
- **Budget policy**: Limitation on growth rates in budget expenditure to 13.5%; implementation of tax reforms; budget surplus since 2024.

Sources: Analysis of the working group
Initiatives implemented through key management solutions will help the country achieve its goal of becoming one of the Top 50 global economies.

### Action strategy for 2017–2021

<table>
<thead>
<tr>
<th><strong>Economic development</strong></th>
<th><strong>By 2025</strong></th>
<th><strong>By 2030</strong></th>
<th><strong>By 2035</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Provide long-term rights to land and real estate and guarantee the inviolability of all property rights, including rights to real estate</td>
<td>✓</td>
<td>• Land privatization</td>
<td>• Digitize the economy</td>
</tr>
<tr>
<td>• &quot;Made in Uzbekistan&quot; brand in agriculture and textiles</td>
<td>✓</td>
<td>• Increase labor output (agriculture)</td>
<td>• Agriculture automation</td>
</tr>
<tr>
<td>• Modernize infrastructure support of entrepreneurship ✓</td>
<td>• Increase the depth of processing (agriculture, MMI¹, FEC²)</td>
<td>• Sustainable production helps mitigate the adverse environmental impact</td>
<td></td>
</tr>
<tr>
<td>• Localize production</td>
<td>✓</td>
<td>• Develop insurance</td>
<td>• Renewable energy sources</td>
</tr>
<tr>
<td>• Import growth</td>
<td>✓</td>
<td>• Energy efficiency</td>
<td>• Initial public offering of key mining and metals companies</td>
</tr>
<tr>
<td>• Minimize transaction costs ✓</td>
<td>• Export-oriented clusters</td>
<td>• Localize production</td>
<td>• Land privatization</td>
</tr>
<tr>
<td>• Renewable energy sources</td>
<td>✓</td>
<td>• Water and energy balance</td>
<td>• Increase labor output (agriculture)</td>
</tr>
<tr>
<td>• Initial public offering of key mining and metals companies ✓</td>
<td>• Electric vehicles and gasoline</td>
<td>• Increase the depth of processing (agriculture, MMI¹, FEC²)</td>
<td>• Import growth</td>
</tr>
</tbody>
</table>

### Development of innovations and technology

<table>
<thead>
<tr>
<th><strong>By 2025</strong></th>
<th><strong>By 2030</strong></th>
<th><strong>By 2035</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Basic science ✓</td>
<td>• Create an innovative ecosystem</td>
<td>• Infrastructure facilitating the expanded use of technology (technology transfer centers)</td>
</tr>
<tr>
<td>• Protect intellectual property ✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Engage international companies to create R&amp;D centers and design engineering bureaus ✓</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Social development

<table>
<thead>
<tr>
<th><strong>By 2025</strong></th>
<th><strong>By 2030</strong></th>
<th><strong>By 2035</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Compulsory medical insurance ✓</td>
<td>• Implement pension reform</td>
<td>• Raise environmental awareness</td>
</tr>
<tr>
<td>• Develop private education ✓</td>
<td>• Targeted social support</td>
<td></td>
</tr>
<tr>
<td>• &quot;Water&quot; national project ✓</td>
<td>• Urbanization of the population</td>
<td></td>
</tr>
<tr>
<td>• Implement measures to prevent the consequences of climate change ✓</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Development of public governance

<table>
<thead>
<tr>
<th><strong>By 2025</strong></th>
<th><strong>By 2030</strong></th>
<th><strong>By 2035</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Reform Management Center</td>
<td>• Meritocracy</td>
<td>• E-government</td>
</tr>
<tr>
<td>• Development institutes</td>
<td>• Adopt a culture of zero tolerance to corruption</td>
<td>• Pluralism of opinions</td>
</tr>
<tr>
<td>• National Privatization Fund</td>
<td>• &quot;Smart regulation&quot;</td>
<td>• Enhanced role of democratic institutions</td>
</tr>
<tr>
<td>• Further democratic reforms</td>
<td>• Freedom of speech and independent media</td>
<td></td>
</tr>
</tbody>
</table>

### Financing

<table>
<thead>
<tr>
<th><strong>By 2025</strong></th>
<th><strong>By 2030</strong></th>
<th><strong>By 2035</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Privatization ✓</td>
<td>• Public-private partnership</td>
<td>• Private investments</td>
</tr>
<tr>
<td>• Capital amnesty</td>
<td>• Private investments</td>
<td></td>
</tr>
<tr>
<td>• Implement tax reforms ✓</td>
<td>• Develop capital markets</td>
<td></td>
</tr>
</tbody>
</table>

---

Note: 1 – Mining and metals industry; 2 – Fuel and energy complex

Source: International benchmarking, analysis of the working group
Creation of the Reform Management Center of the Republic of Uzbekistan (in the structure of President's Administration)

Structure of the Reform Management Center of the Republic of Uzbekistan

President of the Republic of Uzbekistan

Reform Management Center of the Republic of Uzbekistan
(to be established under the Administration of the President)

Director

State and Law
Economy
Social Sphere
Technology and Innovations

Does not require additional costs on its establishment: the Project Office is organized under the Administration of the President, and current competencies are sufficient to launch it

KPI setting system

Dashboard of the President of the Republic of Uzbekistan
Control of 10 KPIs

Prime Minister
Responsible for 10 KPIs

Ministers and managers of state-owned companies
Cascaded KPIs
(5–7 KPIs per 1 manager)

Regional authorities
Cascaded KPIs
(all the KPIs of the Government broken down by region)

10 KPIs of the Government
1. GDP
2. GDP per capita
3. Inflation
4. Total investments
5. Unemployment
6. Share of the disadvantaged
7. Doing Business Index
8. Corruption Perceptions Index
9. Health care expenses
10. Education expenses

The total base of KPIs will exceed 1,000 KPIs: cascaded KPIs from 10 KPIs of the President of the Republic of Uzbekistan
### Macroeconomic parameters

#### Fiscal policy

<table>
<thead>
<tr>
<th>Year</th>
<th>Total tax burden, % of income</th>
<th>2017</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>38%</td>
<td>29%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year</th>
<th>Public expenses, % of GDP</th>
<th>2017</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>16.1%</td>
<td></td>
<td>17.8%</td>
</tr>
</tbody>
</table>

- Uzbekistan must reduce the tax burden on businesses to stimulate private sector growth.
- At the same time, public transfers must be increased to improve societal living standards.

#### Monetary policy

**Refinancing rate, 2018**

<table>
<thead>
<tr>
<th>Year</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>9</td>
</tr>
<tr>
<td>2017</td>
<td>14</td>
</tr>
<tr>
<td>2018</td>
<td>16</td>
</tr>
</tbody>
</table>

- Uzbekistan must gradually reduce its refinancing rate as a high rate significantly restricts business development and household consumption. A gradual decline in the refinancing rate from 16% to 9% (2016 level): economic growth and decreased volatility of the national currency exchange rate.
- A decrease in the cost of borrowing may become possible by attracting international loans. The debt burden must increase from 16.0% to 38.7%. With the growth of nominal GDP, the opportunities for Uzbekistan to increase its state debt will grow as well.

**GDP, USD billion**

<table>
<thead>
<tr>
<th>Year</th>
<th>GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>48.7</td>
</tr>
<tr>
<td>2035</td>
<td>478.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year</th>
<th>Public debt to GDP, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>16.0</td>
</tr>
<tr>
<td>2035</td>
<td>38.7</td>
</tr>
</tbody>
</table>

**Currency policy**

**Free flow of capital**

- **A**: Free inflow of capital as a result of regulation promoting the relative attractiveness of investments in the absence of exchange rate controls.
- **B**: Control of the exchange rate and monetary policy of the country, but capital outflows if the terms of monetary policy diverge from a level of relative competitiveness.
- **C**: Control of the exchange rate and capital flows, but the country's monetary policy cannot be influenced.
- Uzbekistan must retain a floating exchange rate as this facilitates foreign capital inflows and at the same time enables the country to continue implementing an independent monetary policy.

Sources: World Bank data, Ministry of the Economy of the Republic of Uzbekistan, Oxelheim, analysis of the working group.
Target inflation levels based on targeting policy

Target inflation levels in Uzbekistan per calendar year, %

- **2018–2025**: linear decline from 14.3% to 5%
- **2026–2030**: targeting at the level of 5%
- **2031–2035**: targeting at the level of 4.5%

• Target inflation will equal 4.5% by 2035. This indicator was calculated based on international benchmarks, including Singapore and Brazil.

• Over the longer term, target inflation may be 2%–3%, which is the optimal level if the economy is stable.

• The period required to attain the target inflation rate in the Republic of Uzbekistan will equal about seven years after the start of the targeting policy. A similar period of decline in inflation was observed in the Czech Republic and in Brazil.

• The proposed scenario for the attainment of target inflation is more conservative compared to Mexico where target inflation was attained within three years.

• The interest rate of the Central Bank of Uzbekistan on short-term loans remains the main inflation targeting tool. The increase in this rate would reduce lending to the real sector of the economy. As a result, the population and business reduce their expenses, and demand for goods and services declines, which contributes to the slowdown of price growth.

• The maintenance of a high interest rate could have an adverse impact on the national economy. Based on the example of Brazil, inflation targeting based on high key rate instruments caused a decline in economic growth and the deterioration of a number of macroeconomic indicators, including national debt.

• Additional inflation targeting tools facilitating a reduction in lending to the real sector may include an increase in required reserves and the withdrawal of funds from the financial market through the sale of government securities.

• Successful targeting is contingent on consideration of several external factors that affect inflation:
  - Rising prices of key imports.
  - Rising prices of agricultural goods caused by a bad harvest.
  - State regulation of prices for certain goods.
  - Increase in government expenditures.
  - Existence of monopolies in some industries.

Sources: EIU, data of central banks, analysis of the working group.
International examples of inflation targeting

**Czech Republic**
- Target inflation: 3%
- Decline in inflation by 3%
- Time required to attain target inflation: Seven years

**Mexico**
- Target inflation: 3%
- Decline in inflation by 10%
- Time required to attain target inflation: Four years

**Brazil**
- Target inflation: 4.5%
- Decline in inflation by 3.5%
- Time required to attain target inflation: Six years

Sources: EIU, data of central banks, analysis of the working group
Key challenges

- High tax burden
- Frequent changes in tax rates
- The complexity and instability of tax legislation (The Tax Code is not a directly applicable law.)
- Significant difference in the level of the tax burden between the simplified tax system and the standard tax system
- Wide use of "tax schemes" to evade taxation
- Widespread practice of supporting business entities with tax and customs benefits
- Lack of tax framework recognized at the international level
- Imperfection of tax control and administration

Key findings

- Indirect taxes account for 54% of the budget. Their share of tax revenue increases, while the share of direct taxes decreases. (VAT accounts for more than one-third of budget revenues.)
- The main taxpayer is industry that provides 65.7% of tax payments among large entities. In industry, more than 52% of taxes are provided by the food and fuel industries.
- Frequent changes in tax rates adversely affect the investment climate.
- The Tax Code is not a directly applicable law, which leads to a significant number of bylaws. Tax rates are established annually by decisions of the President of the Republic of Uzbekistan.
- The Republic of Uzbekistan has a high tax burden that hinders the development of the economy, in particular, the marginal rate on investments is 49% (23% in Georgia).
- The high tax rate on the payroll fund leads to the concealment of the real number of employees and the payroll fund by taxpayers (about 50% of the nominal salary level).
- The practice of supporting business entities with tax and customs benefits, including individual ones has a detrimental impact on competition due to the absence of an effective system for the monitoring and control of the efficacy of such benefits (the total amount of targeted fiscal benefits in 2017 exceeds UZS 48 trillion).
- Significant difference in the tax burden level between the business entities that pay taxes under the simplified and standard tax systems
- The widespread use of "tax schemes" for tax evasion expressed primarily in the artificial splitting of a business into small companies that can apply a more favorable simplified tax system (confirmed by the ratio of the number of entities applying the "simplified tax system" to the number of entities applying the standard regime, 1 to 10)
- Significant share of the informal economy and also developed corrupt practices
- Uzbekistan ranks 64th among 190 countries in the Tax System Efficiency section of the Doing Business rating.
- Imperfect mechanisms for the exchange of information between government bodies and organizations, forms and methods of electronic tax administration and tax control
On 29 June 2018 the President of the Republic of Uzbekistan through Decree No. UP-5468 approved the Tax Policy Reform Framework of the Republic of Uzbekistan. According to the Presidential Decree, effective 1 January 2019:

- Decrease in the tax burden on the payroll fund through improved taxation of the payers of standard and simplified taxes with the optimization of turnover (revenue) taxes and improved criteria to start application of the simplified tax system
- Implementation of measures to mitigate the adverse impact of improvements to tax policy for taxpayers in the simplified tax system
- Improvement of the procedure for the calculation and payment of value added tax and excise tax

**According to the Presidential Decree, the key areas of improvements to tax policy include:**

- Decrease in the tax burden on the economy;
- Elimination of imbalances in the tax burden between business entities that pay taxes under the simplified and standard tax systems;
- Optimization of the number of taxes through unification and consolidation
- Guaranteed macroeconomic stability
- Simplification of tax laws, elimination of discrepancies and inconsistencies
- Guarantee of the stability of tax legislation and the direct application of the Tax Code
- Retention of a favorable regime for foreign investors
- Improvement in tax control forms and mechanisms

- The framework does not affirm the principles of long-term tax administration. (Further amendments to tax rates are possible.)
- There are no specific timeframes and volumes on the decrease of tax and customs benefits.
- Indirect taxes predominate in the structure of budget tax revenues.
- There is no source to finance extra-budgetary funds after the cancelation of payments.

### Comparison of the current tax rates and proposed tax rates and other mandatory payments

<table>
<thead>
<tr>
<th>Tax/mandatory payment</th>
<th>Current rates</th>
<th>Proposed rates</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income tax</td>
<td>14%</td>
<td>12%</td>
<td>-2%</td>
</tr>
<tr>
<td>Tax on income in the form of dividends and interest</td>
<td>10%</td>
<td>5%</td>
<td>-5%</td>
</tr>
<tr>
<td>Unified tax payment</td>
<td>5%</td>
<td>4%</td>
<td>-1%</td>
</tr>
<tr>
<td>Mandatory contributions to state special-purpose funds</td>
<td>3.2%</td>
<td>0%</td>
<td>-3.2%</td>
</tr>
<tr>
<td>VAT</td>
<td>20%</td>
<td>20%</td>
<td>0%</td>
</tr>
<tr>
<td>Property tax</td>
<td>5%</td>
<td>2%</td>
<td>-3%</td>
</tr>
<tr>
<td>Personal income tax</td>
<td>7.5%–22.5%</td>
<td>12%</td>
<td></td>
</tr>
<tr>
<td>Unified social tax</td>
<td>25%/15%</td>
<td>12%</td>
<td>-3%</td>
</tr>
<tr>
<td>Insurance contributions of citizens</td>
<td>8%</td>
<td>0%</td>
<td>-8%</td>
</tr>
</tbody>
</table>

Sources: Data from open sources, analysis of the working group.
Impact in the Tax Reform Framework on the budget

Implementation of the Tax Reform Framework will increase budget revenues by UZS 26.3 trillion in 2019. However, this will require an increase in expenses by UZS 46.3 trillion in the same period.

State budget revenues of the Republic of Uzbekistan, excluding targeted funds, UZS trillion

<table>
<thead>
<tr>
<th>2019 budget revenues with preservation of the budget structure</th>
<th>Increase in the number of VAT payers</th>
<th>Cancelation of tax and customs benefits</th>
<th>Some individuals “come out in the open” – start declaring revenues - due to the introduction of a single income tax rate</th>
<th>Reform of the simplified tax system (some taxpayers choose the standard tax system)</th>
<th>Decrease in the property tax rate</th>
<th>2019 budget revenues, taking into account the Tax Reform Framework</th>
</tr>
</thead>
<tbody>
<tr>
<td>68.1</td>
<td>16.2</td>
<td>12.2</td>
<td>0.1</td>
<td>0.9</td>
<td>1.4</td>
<td>94.4</td>
</tr>
</tbody>
</table>

State budget revenues of the Republic of Uzbekistan, excluding targeted funds, UZS trillion

<table>
<thead>
<tr>
<th>2019 budget expenses with the preservation of the budget structure</th>
<th>Cancelation of mandatory contributions to state special-purpose funds collected on the turnover of legal entities</th>
<th>Decrease in the unified social tax rate</th>
<th>Cancelation of the insurance fees of citizens to the extra-budgetary pension fund withheld from personal income</th>
<th>2019 budget expenses, taking into account the Tax Reform Framework</th>
</tr>
</thead>
<tbody>
<tr>
<td>68.7</td>
<td>36.2</td>
<td>5.7</td>
<td>4.5</td>
<td>115.0</td>
</tr>
</tbody>
</table>

Sources: Data from open sources, analysis of the working group.
### Tax system

#### Strategic options

1. **Anglo-Saxon option**
   - **Characteristics:** Prevalence of direct taxes
   - **Examples of countries:** USA, UK
   - **Pros:** Relative stability and predictability
   - **Cons:** Tax burden imposed on citizens

2. **Mixed option**
   - **Characteristics:**
     - Combines the features of various models
     - Diversification of the revenue structure of the state budget
     - Independence of the budget revenues from specific taxes or group of taxes and, as a result, flexible tax and budget policy
   - **Examples of countries:** South Korea, Japan
   - **Pros:** Possible frequent amendments to the regulatory framework, Potentially high expenditures on tax administration
   - **Cons:**
     - The mixed model is optimal for economies where budget revenues are highly dependent on the situation in foreign markets.
     - The mixed model makes it possible to rapidly adapt to changes in external factors by manipulating interest rates, expanding the taxpayer base, granting/canceling benefits, etc.

3. **Continental option**
   - **Characteristics:**
     - Priority of indirect taxes
     - High contributions to social insurance
   - **Examples of countries:** Germany, The Netherlands
   - **Pros:** Relative stability and predictability, High level of social protection of the population
   - **Cons:** High tax burden

4. **Latin American option**
   - **Characteristics:**
     - Typical of inflation-based economies
     - High share of indirect taxes
   - **Examples of countries:** Chile, Peru
   - **Pros:** Protection from inflation phenomena
   - **Cons:** Due to the specifics of indirect tax collection, tax administration savings
Tax system

Target vision of the tax system in 2035

**Goal:**
Creation of a modern soft tax system stimulating growth in investments and the budget revenues of the Republic of Uzbekistan

**Objectives:**
- Further optimization of the tax burden by reducing the share of indirect taxes to 35%
- Compliance with a tax regime that ensures growth in tax revenues to the budget and facilitates competition in capital markets to attract foreign investments
- Transition to the principles of long-term tax administration
- Develop a special mechanism for investors with the freezing of tax rates
- Develop an effective mechanism for granting benefits to taxpayers engaged in priority sectors of Uzbekistan's economy
- Further optimization and simplification of the tax legislation to ensure its stability and predictability for taxpayers

**Areas of tax system reform:**
- **General** tax system structure: Transition to long-term tax administration; improvement of tax principles and the legal regulation of the tax system
- Tax structure: Decrease in the share of indirect taxes; increase in the share of personal income tax over the long term
- System of taxes and fees: identification of conceptual problems broken down by individual taxes, implementation of global best practices and trends in taxation (BEPS, automatic tax information exchange, MLI, CbCr, CFC, TP, etc.)*
- Tax and customs benefits: cancelation of targeted benefits; introduction of industry benefits to stimulate certain industries
- Special mechanisms for investors: development of special mechanisms (similar to SIC)** with the freezing of tax rates for investors to attract long-term investments
- Tax control and administration: improvement of tax control procedures and settlement of tax disputes through the introduction of ICT and automation tools an also the advanced training of the employees of the tax authorities
- System of legal liability: improvement in the system of legal liability for violations of tax legislation

**Figures**

<table>
<thead>
<tr>
<th></th>
<th>2017/2018</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doing Business rating</td>
<td>74th</td>
<td>Top 20</td>
</tr>
<tr>
<td>Taxation rating (Doing Business, DB)</td>
<td>64th</td>
<td>Top 20</td>
</tr>
<tr>
<td>Index of procedures after filing reports and paying taxes (0 - the lowest, 100 - the highest)</td>
<td>48.17 points</td>
<td>&gt; 80 points</td>
</tr>
<tr>
<td>Share of indirect taxes in tax revenues of the budget</td>
<td>54%</td>
<td>&lt;35%</td>
</tr>
</tbody>
</table>

**Tax structure,** % of tax revenues of the budget

<table>
<thead>
<tr>
<th></th>
<th>2018</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corporate income tax</td>
<td>13%</td>
<td>19%</td>
</tr>
<tr>
<td>Indirect taxes, including VAT</td>
<td>54%</td>
<td>35%</td>
</tr>
<tr>
<td>Personal income tax</td>
<td>8%</td>
<td>27%</td>
</tr>
<tr>
<td>Other</td>
<td>25%</td>
<td>18%</td>
</tr>
</tbody>
</table>

**Changes in the tax structure:**
- The target rate is calculated based on the benchmark of Japan and South Korea
- Increased personal income tax is associated with a 1.4-fold increase in the number of employed people by 2035, the legalization of incomes, and the increased level of wages. (Increasing personal income tax is standard practice in developed countries.)

---

Note: *BEPS - Base erosion and profit shifting (transfer of revenues and profits to jurisdictions with low taxes); MLI - multilateral convention to implement tax treaty-related measures to prevent BEPS; CbCr - country-by-country reports on BEPS; CFC - controlled foreign corporation; TP - transfer pricing; **SIC - special investment contract.
Sources: Data from open sources, analysis of the working group.
## Investment: Main areas

<table>
<thead>
<tr>
<th>Sources of expenditure</th>
<th>2019 – 2035 (USD billion)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The executive</td>
<td>0.5 – 0.6</td>
</tr>
<tr>
<td>The legislature</td>
<td>0.4 – 0.5</td>
</tr>
<tr>
<td>The judiciary</td>
<td>-</td>
</tr>
<tr>
<td>Agriculture</td>
<td>67.9 – 83.0</td>
</tr>
<tr>
<td>Textile industry</td>
<td>21.0 – 25.6</td>
</tr>
<tr>
<td>Fuel and energy complex</td>
<td>70.2 – 85.8</td>
</tr>
<tr>
<td>Metals and mining industry</td>
<td>43.2 – 52.8</td>
</tr>
<tr>
<td>Automotive industry</td>
<td>41.6 – 50.9</td>
</tr>
<tr>
<td>Chemical industry</td>
<td>40.6 – 49.6</td>
</tr>
<tr>
<td>Transport</td>
<td>28.7 – 35.0</td>
</tr>
<tr>
<td>Construction industry and infrastructure</td>
<td>129.9 – 158.7</td>
</tr>
<tr>
<td>Tourism</td>
<td>39.6 – 48.4</td>
</tr>
<tr>
<td>Small business and private entrepreneurs</td>
<td>30.0 – 36.8</td>
</tr>
<tr>
<td>Banks and compliance</td>
<td>17.4 – 21.2</td>
</tr>
<tr>
<td>Insurance system</td>
<td>4.8 – 5.8</td>
</tr>
<tr>
<td>Pension system</td>
<td>0.6 – 0.8</td>
</tr>
<tr>
<td>Capital markets</td>
<td>10.8 – 13.1</td>
</tr>
<tr>
<td>Health care</td>
<td>132.2 – 161.5</td>
</tr>
<tr>
<td>Social policy</td>
<td>44.7 – 54.6</td>
</tr>
<tr>
<td>Human capital</td>
<td>145.6 – 178.0</td>
</tr>
<tr>
<td>Culture</td>
<td>10.3 – 12.6</td>
</tr>
<tr>
<td>Environment</td>
<td>5.9 – 7.2</td>
</tr>
<tr>
<td>Science, technology, and innovations</td>
<td>50.9 – 62.2</td>
</tr>
</tbody>
</table>

Total expenditure: (USD billion)  
940 – 1,149

Sources: World Bank data, open data of the UN, the Central Bank of Uzbekistan, analysis of the working group
Investments: main sources

<table>
<thead>
<tr>
<th>Sources of financing</th>
<th>USD billion</th>
<th>Dynamic scenario</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2019</td>
<td>2019–2035</td>
</tr>
<tr>
<td>Private investments, including public-private partnership (direct foreign, corporate and private investments, investments of public-private partnerships)</td>
<td>4.0</td>
<td>263–322</td>
</tr>
<tr>
<td>Public reserves</td>
<td>4.8</td>
<td>166–202</td>
</tr>
<tr>
<td>Capital markets (investments in corporate securities)</td>
<td>0.082</td>
<td>192–234</td>
</tr>
<tr>
<td>Other corporate funds (investments of insurance funds and deposits of legal entities)</td>
<td>1.1</td>
<td>112–137</td>
</tr>
<tr>
<td>Other funds of individuals (deposits of individuals and international money transfers)</td>
<td>1.7</td>
<td>113–138</td>
</tr>
<tr>
<td>Public debt (borrowings on foreign markets)</td>
<td>0.9</td>
<td>122–149</td>
</tr>
<tr>
<td>Privatization proceeds (proceeds from the sale of state property)</td>
<td>5.4</td>
<td>25–31</td>
</tr>
<tr>
<td>Funds under the programs of international organizations (transfers and grants under the programs of international organizations)</td>
<td>0.004</td>
<td>0.05–0.06</td>
</tr>
</tbody>
</table>

Average GDP growth rate: 13.5%

Total investments received: 993–1,213

Investment appeal over the period

- At the early stages, in 2020–2025 considerable investment inflows will be observed both under PPP programs and due to the arrival of international companies on the market. High economic growth facilitates public borrowing at a relatively low cost.
- In 2026–2030 the state will play a less significant role. Local banks and capital markets will increase their influence gradually by supporting economic growth together with corporate investors.
- In 2031–2035 thanks to the active development of market mechanisms and the establishment of the financial system, the role of project financing and indirect investment in the corporate sector through the capital market will grow.

Sources: World Bank data, open data of the UN, the Central Bank of Uzbekistan, analysis of the working group.
Forecast state budget surplus/deficit, based on the retention of the budget structure* and with due regard for the tax reform framework, USD billion

- A budget deficit is anticipated until 2024
- Implementation of tax reforms leads to a significant increase in budget expenditures in 2019
- To attain a budget surplus within six years, starting from 2025, it will be necessary to limit the growth rate of budget expenditure to 13.5% annually.
- The tax reform framework stipulates a significant increase in the burden on the state budget, in particular, due to the cancelation of mandatory contributions to state special-purpose funds, which are charged on the turnover (revenue) of legal entities; cancelation of the insurance fees of citizens to the extra-budgetary pension fund; decrease in the unified social tax rate for business entities from 25% (15%) to 12%, which will require the allocation of UZS 46.3 trillion (USD 6 billion) from the budget to cover the expenses previously covered from extra-budgetary funds.
- The main increase in budget revenues is attributable to the expansion of the range of VAT payers (UZS +16.2 trillion in 2019, or USD 2.1 billion) and cancelation of targeted fiscal benefits. (On cancelation of 25% of benefits, the cumulative increase in budget revenues will equal UZS +12.2 trillion or USD +1.6 billion.)
Capital amnesty

Current situation

Key challenges

- High share of the informal economy: up to 50% of GDP
- Low inflows of foreign investments: USD 2.3 billion (for 2017)
- Surplus imports over exports: net exports USD -1.7 billion (for 2017)
- Low lending from the banking sector: only 12.1% of fixed capital investments are financed by commercial banks (for 2017)

Size of informal economy as % of GDP and world ranking (of 159 countries in the list)

The IMF calculates the size of the informal economy and publishes annual trends. As a specialized unit of the UN, the IMF is an authoritative source in the evaluation and forecasting of macroeconomic statistics.

Key findings

- The informal economy accounts for high share of GDP in the Republic of Uzbekistan – in other words, business activity that takes place outside the legal framework and is not subject to taxes and duties. According to the Ministry of the Economy, the informal economy could account for up to 50% of current GDP. Uzbekistan is ranked 152nd globally by this indicator (IMF rating).
- Such a high proportion of the informal economy is a serious obstacle to the development of the financial system and the economy as a whole, because it does not contribute to the volume of bank assets and tax base.
- The high share of the informal economy is due to a number of factors, including:
  - Low level of trust in the state authorities and the financial system
  - High level of corruption
  - High level of legal nihilism
  - Lack of privacy in the banking system and the tax authorities
  - High taxes and mandatory payments

Share of funds in accounts and deposits and cash as % of the money supply at the start of 2018

- In the Republic of Uzbekistan, there is a high share of cash in the structure of the money supply and a low share of noncash funds.
- The high proportion of cash impedes the implementation of measures against corruption, informal economy, and tax evasion.
- The ratio of non-cash money to cash (0.55) is very low compared to Russia (2.45), which is one of the most important indicators of the high share of the informal economy according to the IMF methodology.

Sources: International Monetary Fund
## Capital amnesty

### Strategic options

#### 1. Confidential capital amnesty

Capital legalization through the payment of tax in the amount of 2.5% of assets value or through the acquisition of state securities in the amount of 12% of the value. The state guarantees full confidentiality and cessation of prosecution by the tax authorities.

- **Strong results of the amnesty program**
- **Legalization of the proceeds of crime is possible**
- **High level of public criticism, including demonstrations**

#### 2. Amnesty of funds and property with the mandatory declaration of their sources

Legalization of capital, affecting both cash assets, real estate and other assets. The return of funds to the national banking system is not taxed (provided that the funds are maintained in accounts for five years), real estate is taxed at a one-time fee of 10% of the value. Civil servants are exempt from prosecution. The source of funds must be disclosed.

- **Significant results of the capital amnesty program in the country**
- **Low effectiveness of the capital repatriation program**

#### 3. Capital amnesty with the mandatory declaration of sources of income not applicable to officials

Funds can be deposited in the banking system with payment of 1% to the state budget. Mandatory declaration of sources of funds. The amnesty does not apply to people who earned income from the proceeds of crime and officials of the country.

- **Legalization of capital from the proceeds of crime is not allowed**
- **Low effectiveness of the amnesty program (the collected funds are 100 times less than the anticipated amount)**

### Low effectiveness of the program due the mandatory declaration of sources of income and its inapplicability to officials

---

**Sources:** Analysis of the working group
Target vision of capital amnesty in the Republic of Uzbekistan

The basis of successful capital amnesty is anonymity and decriminalization, as well as an early warning of increased liability for tax evasion

Resolution

- A law on tax amnesty is signed and capital repatriation is carried out from March to December 2019
- Public speech by the President of Uzbekistan announcing the beginning of the capital amnesty

Stages and methods of legalization

The return of capital under the amnesty program is possible through:

- Placement of funds in the resident banks of Uzbekistan, provided that funds are kept on the accounts for at least five years, with the right to receive interest on the balance in any available currency
- Purchase of the securities of Uzbek issuers (in particular, eurobonds) or securities of the central government, provided that they are held for at least three years
- Purchase of assets within the framework of the state privatization program
- Or instead of the aforementioned measures, payment of compensation in the amount of 5% of the value of the amnestied property/asset

The following must be guaranteed:

- Exemption from the filing of a declaration, payment of tax debt, and verification of the funds obtained before legalization
- Liquidation of tax debt records, fines, and penalties for assets submitted for legalization
- Complete confidentiality of all asset transfers to the tax authorities and other government bodies and other persons

All current and former citizens of the Republic of Uzbekistan, including the self-employed, entrepreneurs and officials, may participate in the capital legalization program

Pursuant to the recommendations of FATF, the capital amnesty program will not apply to illegally obtained funds or funds channeled to the financing of terrorism

Work must begin on the signing if an agreement on the exchange of tax information and cooperation in the field of combating tax fraud with friendly jurisdictions (Luxembourg, Switzerland, and others)

Target result

- Raising additional funds to the banking system and capital markets of Uzbekistan in the amount of USD 15–25 billion
- Reduced share of the informal economy and reduced corruption

Note: 1 – The policy of a culture of intolerance to corruption, illegal enrichment, and tax evasion, which bans the offender from holding socially important positions in the Republic of Uzbekistan and includes partially confiscation of property in an amount corresponding to the scale of the crime
Description of the situation and problems

- High proportion of income concealed from taxation
- Significant amount of expatriate capital
- Need for additional financing of the state budget
- High level of corruption in administrative bodies

Resolution

The Italian Senate approved Law No. 186 dated 15 December 2014, stipulating the voluntary disclosure of information, the possibility of legalizing assets located abroad, and a significant decrease in fines.

Stages and methods of legalization

The 2014 program (Law No. 186 dated 2014) was designed specifically to facilitate capital repatriation, and combat offshore tax evasion and the illegal receipt of funds. This program lasted for one year and can be considered the most progressive and comprehensive.

Assets disclosed under this law were taxed at the full rate with significant exceptions regarding monetary penalties for undeclared taxes and immunity from prosecution for tax crimes. However, participating taxpayers were required to provide their name and bank information and disclose intermediaries to allow the authorities to verify the origin of the assets.

In 2015 Italy also signed an agreement with Switzerland, a privileged location for tax evaders from Italy, which stipulates measures for the exchange of tax information and cooperation in combating tax fraud. In 2018 the system of the automatic exchange of tax information between the two countries was introduced. Under this agreement, Italy removed Switzerland from its blacklist of countries, with respect to which companies had to provide additional evidence on their transactions with companies.

Target result

- As of the end of 2014 the proceeds from repatriated assets and declared taxes under the program reached EUR 4 billion
- In total, over EUR 70 billion were collected under the capital legalization programs

Capital amnesty

Stages and methods of legalization

The amnesty came into force on 1 September 2014, and ceased on 31 December 2015, but the deadline was extended to 31 December 2016. All basic material assets – money, securities, shares in companies, real estate – were legalized

At the first stage of legalization, the owner of informal funds had to transfer them to a special savings accounts in second-tier banks or in Kazpost and then choose a scenario for a further amnesty

The main scenario assumes that the legalized funds will be held in accounts in banks or Kazpost for five years

If the owner does not want to hold the funds in accounts for five years, any securities placed on the Kazakhstan Stock Exchange may be purchased

According to the third scenario, the funds may be legalized through the purchase of assets in the second stage of state privatization

An accelerated version of legalization is possible: capital amnesty through payment to the state of 10% of the value of legalized property

Civil servants are also exempt from disciplinary liability for violations of the rules for declaration of property and income

Target result

- The total amount of legalized property reached USD 20 billion, including 7.8 billion in cash
- Significant results were achieved in the legalization of property in the country, but not in the expatriation of property moved from abroad

Note: 1 - Oralmen are expat Kazakhs returning from abroad
On 24 December 2014 the President of Georgia signed a Law on the amnesty and legalization of undeclared tax liabilities and property. The amnesty implied the termination of proceedings initiated in all investigative bodies of cases related to violations of tax legislation for persons who voluntarily participated in this program. The cancelation of criminal records in connection with tax crimes pursuant to the procedure established by law was also announced.

A participant in the amnesty program had the right until the end of the year:

- to submit a declaration to the tax authorities reflecting their property status and to pay a fine in the amount of 1% of the market value of the concealed property
- to transfer funds in the national currency or foreign currency to fixed-term or savings deposits in commercial resident banks in Georgia by depositing cash or transferring funds from abroad

The amnesty did not apply to:

a) Individuals who obtained income (property) from the proceeds of crime, such as drug and arms trafficking, terrorism, human trafficking, and other transnational crimes
b) Officials

Target result

- Instead of the anticipated USD 4 million, the national budget receives from businessmen who evaded taxes only USD 35,000
- The amnesty did not fail because the relevant law was defective, but instead owing to the distrust of businessmen in the government
Privatization and the Unified National Fund

### Government property

- **Privatization and the Unified National Fund**

### Liquid assets

- Highly liquid assets, such as: shares and interest in companies, especially in fuel and energy, the extraction and processing of resources

### Illiquid assets

- Low-liquid or illiquid assets such as obsolete buildings, dysfunctional property complexes

### Strategic assets

- Assets in sectors critical to the development strategy of the Republic of Uzbekistan: industry, fuel and energy, infrastructure

### Non-strategic assets

- Assets outside the scope of the development strategy

### Key objective: growth and development of Uzbekistan’s economy; decrease in the government’s share

### Proposed steps:

- Attraction of active investors to co-investment
- Privatization in three stages (25% + 25% + 50% – 1)
- Control of persons allowed to participate in privatization

### Criteria of a strategic investor

- International company
- Significant experience in this industry
- Presence of relevant assets in the strategic portfolio (horizontal or vertical integration)
- Developed CSR
- Compliance with sustainable development principles
- Access to funding sources and expert reviews
- "History of Success"

### Key objective: cash inflows to the budget of the Republic of Uzbekistan; decrease in the costs of the state budget

### Proposed steps:

- Attraction of strategic/portfolio investors
- Phased privatization
- No strict control of persons allowed to participate in privatization

### Share of the state in key sectors of the economy

- **2018**: 70–80%
- **2035**: 10–15%
Privatization and the Unified National Fund

Privatization stages

"Wholesale privatization"
- Wholesale privatization will **not stipulate the maximum cost** of assets sold.
- Will enable the transfer of property to potentially undesirable investors.
- Will lead to shock phenomena in key economic areas.

Retention of state property
- Will hinder access to additional sources of investment at the beginning of the development.
- Hinders private international investments.
- Requires additional financing for ineffective entities.

Phased completed privatization
- Sends a signal to investors about economic “denationalization”.
- Makes it possible to obtain a "fair" value for a shareholding in the asset being sold.
- Makes it possible to dispose of inefficient assets without shock phenomena.

"25% + 1" → "50%–1" → "Golden share"

The investor enters the capital of the asset and facilitates its enhanced performance. The investor has no power of veto.

The investor will increase the ownership share and will facilitate the increase in market potential and value. The state reserves the right to make a final decision.

The investor will buy back the property from the state. The state reserves the "golden share", that is, the power of veto and dividends, but disengages itself from operational control.

Implementation of phased privatization requires the establishment of the Unified National State Asset and Privatization Management Fund, which will also attract individual and corporate investors to the country and coordinate work with industry consultants.

Structure and functions of the Unified National State Asset and Privatization Management Fund

Unified National fund

- **Attraction of investors**
  - Participation in the authorized capital of companies
  - Placement of free funds for the implementation of investment projects
  - Cooperation with foreign associations of engineers
  - Formation of consortia

- **Management of privatization**
  - Effective management
  - Efficient use of funds
  - Growth in the value of assets under control
  - Maximization of budget proceeds from privatization

- **Engagement of expert review**
Key strategic initiatives

- Privatize state property
- Amnesty of capital
- Establish special administrative areas (CAP) providing a simplified procedure for the registration of legal entities
- Repeal the ban on the opening of branches of foreign commercial banks in the Republic of Uzbekistan
- Improve the practice of conformity between the fiscal and budgetary and monetary and credit policies
- Improve the compliance of the treasury with the State Budget through management of the liquidity of the Uniform Treasury Account of the State Budget
- Improve the legal regulation of relations in public borrowings and management of the state debt and state financial assets
- Reform the tax system
- Develop PPP

Sources: Analysis of the working group
Stimulation of internal and external trade

Incentives for stimulating internal and external trade

Internal
- Develop an institutional environment
- Stimulate investment flows
- Support the business activity of the population

External
- Create favorable conditions for exports
- Support national exporters
- Establish foreign trade development institutes

Stimulate development of the exports

Financial support
1. Insurance
2. Financing
3. Warranties
4. Settlement/currency

Non-financial support
1. Information and educational block
2. Search for partners
3. Research
4. Support of exports (customs, IS, logistics, adaptation)

Unified Export Support Center

OR

Import-Export Bank
Export Loan Insurance Agency
Fund for the Support of Exports of Small Businesses and Private Enterprises
Uzimpexaloka
National Export Promotion Agency

Sources: Analysis of the project team
### Support instruments broken down by export cycle stages and blocks of non-financial support measures

<table>
<thead>
<tr>
<th>Blocks of support measures</th>
<th>Stage 1</th>
<th>Stage 2</th>
<th>Stage 3</th>
<th>Stage 4</th>
<th>Stage 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Notification of export advantages, dynamics of readiness to export</td>
<td>Export planning, search for markets and partners, strategy development</td>
<td>Conclusion of contracts, product adaptation, manufacture</td>
<td>Certification, licensing, delivery of goods</td>
<td>Final procedures and accounting</td>
<td></td>
</tr>
</tbody>
</table>

#### Educational products
- Search for potential partners
- Representation of the interests of the exporter in government bodies
- Ensuring participation in foreign exhibitions, business missions, product promotion

#### Consulting
- Industry analysis
- Country analysis
- Analysis of global trade
- Patent research
- Protection of intellectual property
- Logistics support
- Tender participation support
- Certification and adaptation
- Customs administration
- Representation of the interests of the exporter government bodies
- Consulting on certification and adaptation
- Assistance with document management

#### Support instruments broken down by export cycle stages and blocks of financial support measures

### Financial support tools

#### Insurance
- Insurance of the supplier loan
- Insurance of a loan to export-oriented production
- Insurance of Uzbek investments abroad
- Insurance of a loan to a buyer
- Insurance of a confirmed letter of credit (SR)
- Insurance of export factoring
- Insurance of a loan to replenish the working capital of an exporter
- Insurance of guarantees
- Insurance of security deposits
- Insurance of a confirmed letter of credit (Multiple)
- Insurance of the risk that leasing assets are not returned
- Insurance of the risk that goods are not returned
- Insurance of a guarantor (counter guarantee)
- Insurance of an untied loan to a foreign buyer

#### Financing
- Financing of expenses under an export contract
- Financing of current expenses under export supplies
- Financing of the commercial loan of an exporter
- Financing of commercial turnover with foreign buyers
- Direct loan to a foreign buyer
- Financing through a confirmed letter of credit
- Loan to the bank of a foreign buyer
- Financing of the commercial loan of an exporter
- Financing of factoring
- Investments in the debt instruments of exporters
- Investment loans for local development

#### Warranties
- Tender guarantee
- Advance repayment guarantee
- Guarantee of due performance under an export contract
- Payment guarantee
- Other guarantees
- Guarantees for the issuance of debt instruments

#### Settlement/currency
- Currency risk hedging

Source: Analysis of the project team
Urbanization

Share of the urban population in Uzbekistan, %

According to UN estimates, 68% of the world population will live in cities by 2050, while the urban population in Asia and Africa may increase by 90%. Urbanization is also expected to affect the population of Uzbekistan and have a positive impact on the national economy.

Uzbekistan has prerequisites for increasing the level of urbanization

Share of the urban population, %

- As of 2017, Uzbekistan meets three main prerequisites contributing to increased urbanization:
  - Low level of urbanization – the share of the urban population is 51%
  - Low GDP level per capita – the indicator equals USD 6,865 in terms of purchasing power parity
  - Low level of economic industrialization: agriculture accounts for over 19.2% of the economy

- The following are the main barriers to urbanization in Uzbekistan:
  - Restrictive administrative measures, e.g., registration system creating barriers to internal migration
  - Lack of career opportunities in the cities
  - Low level of industrialization in the cities

Urbanization may become one of the economic growth drivers

Real added value per employed person, USD, in 2010 prices

- Urbanization contributes to a change in the GDP structure towards an increase in the share of industries with higher labor output, which also stimulates economic growth. Based on the example of China and India, urbanization growth by 1% corresponded to growth of GDP per capita by 10% and 13% respectively.

- Despite a high level of state subsidies, agriculture in Uzbekistan remains a less productive industry. In particular, in 2017 the added value per person employed in agriculture equaled USD 1,800 less than in service industries.

Notes: 1 - Proceeding from the share of agriculture in total gross added value
Sources: World Bank, UN, analysis of the working group
Target development indicators of the Republic of Uzbekistan in 2035

Stable macroeconomy

- **GDP (nominal), USD billion**
  - 48.7 (CAGR = 13.5%)
  - 479

- **GDP per capita, USD per capita**
  - 1,485 (CAGR = 12.7%)
  - 11,362

- **Budget revenues, USD billion**
  - 8 (CAGR = 18.7%)
  - 147

- **Contribution of agricultural industry to GAV¹**, USD billion
  - 8.3 (CAGR = 8.4%)
  - 35.7

- **Contribution of industry to GAV**, USD billion
  - 14.2 (CAGR = 13.9%)
  - 148

- **Contribution of service sector to GAV**, USD billion
  - 20.7
  - 242.3

- **Share of AIC in GAV, %**
  - 19.2 (CAGR = -4.5%)
  - 8.4

- **Share of industry in GAV, %**
  - 32.9 (CAGR = 0.3%)
  - 34.7

- **Share of service sector in GAV, %**
  - 47.9
  - 56.9

- **Output of the agribusiness sector, USD per employed person**
  - 2,247
  - 15,585

- **Industrial output, USD per employed person**
  - 4,672
  - 27,046

- **Service sector output, USD per employed person**
  - 3,452
  - 21,968

- **Employment rate in the service sector, % of employed persons**
  - 49.8
  - 58.7

- **Employment rate in AIC, % of employed persons**
  - 17.2
  - 12.2

- **Employment rate in industry, % of employed persons**
  - 23.1
  - 29.1

Sources: World Bank, State Statistics Committee of the Republic of Uzbekistan, data from open sources, analysis of the working group

Note: 1 = GAV (gross value added) means the difference between the value of goods and services produced (output) and the value of goods and services fully consumed in the production process
Target development indicators of the Republic of Uzbekistan in 2035

Stable macroeconomy

Population size, million
32.79 → 42.1
CAGR = 1.4%

Unemployment rate, % of able-bodied population
8.9 → 6.2
CAGR = -2%

State debt share in GDP, %
16 → 38.7
CAGR = 5.0%

Inflation, %
14.4 → 4.5
CAGR = -6%

Share of SMEs, per 1,000 people
7.1 → 25
CAGR = 7.2%

Value added per 1 SME, USD ‘000/SME
113 → 273
CAGR = 5.0%

Annual amount of investmenta, USD billion
12 → 129
CAGR = 14%

Export of goods and services, USD billion
13.9 → 136.5
CAGR = 13.5%

Import of goods and services, USD billion
14.4 → 116.7
CAGR = 12.3%

Corruption Perceptions Index, global ranking
157 → 46
CAGR = N/A

World Press Freedom Index, global ranking
165 → 43
CAGR = N/A

Doing Business Index, global ranking
74 < 20
CAGR = N/A

Sources: World Bank, State Statistics Committee of the Republic of Uzbekistan, data from open sources, analysis of the working group
Note: 1 = Here, investments are understood as gross fixed capital formation per year
Target development indicators of the Republic of Uzbekistan in 2035

Living standards

1. Share of the population below the poverty line (USD 1.95 per day), %
   - CAGR = -100%
   - 10
   - 0.5

2. Gini index¹, %
   - CAGR = -0.6%
   - 35.3
   - 31.6

3. Infant mortality rate, per 1,000 newborns
   - CAGR = -8.8%
   - 31.3
   - 6

4. Number of children involved in forced labor, million people.
   - CAGR = -100%
   - 2
   - 0

5. Population growth rate, average annual %
   - CAGR = -0.7%
   - 1.6
   - 1.4

6. Urban population, % of total population
   - CAGR = 2.3%
   - 50.5
   - 75.6

7. Urban population growth rate, % of total population
   - CAGR = 3.7%
   - 1.4
   - 2.3

8. Life expectancy, years
   - CAGR = 0.8%
   - 70
   - 81

9. International migrant flow, % of total population
   - CAGR = -4.8%
   - 3.9
   - 1.6

10. Healthcare expenses, % of GNI
    - CAGR = 3.1
    - 5.8
    - 10

11. Physician density, doctors per 1,000 people
    - CAGR = 0.6
    - 2.5
    - 2.8

12. Education expenses, % of GDP
    - CAGR = 0.9
    - 6.4
    - 7.5

Sources: World Bank, State Statistics Committee of the Republic of Uzbekistan, data from open sources, analysis of the working group
Note 1: Shows the degree of inequality of different income distribution options
Target development indicators of the Republic of Uzbekistan in 2035

Living standards

- Share of children who went to preschool, per 100 people: 100/100 (CAGR = 0%)
- Share of children who went to secondary school, per 100 people: 95/100 (CAGR = 0.3%)
- Share of students who went to colleges and universities, per 100 people: 9/80 (CAGR = 12.9%)

- Position in UN rating Human Development Index, position: TOP 50

- Population with access to drinking water, urban/rural, %: 98/81 100/100 (CAGR = 1.2%)

Infrastructure and resource efficiency

- Water resources yield capacity, GDP/m3 of pure water: 0.95 35.0 (CAGR = 26.2%)
- Annual water intake for agricultural needs, % of total amount: 90 70 (CAGR = -1.4%)
- Subscribers connected to mobile communications, subscribers per 100 people: 73 120 (CAGR = 2.8%)

- Progress Index of the UN Sustainable Development Goals, score (of 100): 71.2 80.2 (CAGR = N/A)
- Communications subscribers who use mobile Internet, subscribers per 100 people: 42.8 85 (CAGR = 3.9%)
- R&D expenses, % of GDP: 0.2 2 (CAGR = 18.1%)

Sources: World Bank, State Statistics Committee of the Republic of Uzbekistan, data from open sources, analysis of the working group
Key milestones of the Strategy: “Strategic ladder”

**Step 1:** Foundation
- Institutions: Construction of systemic and institutional foundation
- 2019

**Step 2:** Innovations
- Active investments in strategic development goals
- 2025
- Attract investments to boost economic development

**Step 3:** Integration
- Transition to mature market economy
- 2035

- Become one of the Top 50 leading economies of the world
- Build technological economy with high-labor productivity
- Realization of economic and technological potential

Action strategy for 2017–2021
Required steps in 2019–2020

institutions

• Creation of the Reform Management Center of the Republic of Uzbekistan (in the structure of President’s Administration)
• Establishment of Development Institutions:
  — Unified SME support institution
  — Development bank
  — Management company Invest in Uzbekistan
• Establishment of a single national privatization fund

Finance

• Privatization
• Capital amnesty
• Implementation of tax reforms

Society

• Introduction of compulsory medical insurance
• Implementation of pension reforms
• Reform of public education and development of private education
• "Water" national project
• Continuation of political and legal reforms
Expenses on supporting Uzbekistan's military-industrial complex are high compared to other countries

### Share of military expenditure in the country's GDP, 2017

<table>
<thead>
<tr>
<th>Country</th>
<th>Military Expenditure as % of GDP</th>
<th>Military Expenditure in USD Billion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uzbekistan</td>
<td>4.0%</td>
<td>1.4</td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td>10.1%</td>
<td>69</td>
</tr>
<tr>
<td>Russia</td>
<td>4.3%</td>
<td>66</td>
</tr>
<tr>
<td>Russia (billion)</td>
<td>3.1%</td>
<td>610</td>
</tr>
<tr>
<td>India</td>
<td>2.5%</td>
<td>64</td>
</tr>
<tr>
<td>France</td>
<td>2.2%</td>
<td>58</td>
</tr>
<tr>
<td>Turkey</td>
<td>2.1%</td>
<td>18</td>
</tr>
<tr>
<td>Australia</td>
<td>2.0%</td>
<td>28</td>
</tr>
<tr>
<td>China</td>
<td>1.9%</td>
<td>228</td>
</tr>
<tr>
<td>UK</td>
<td>1.8%</td>
<td>47</td>
</tr>
<tr>
<td>Italy</td>
<td>1.5%</td>
<td>29</td>
</tr>
<tr>
<td>Japan</td>
<td>0.9%</td>
<td>45</td>
</tr>
</tbody>
</table>

Comments:

The high level of military expenditure in Uzbekistan will make it possible to attain the following goals:

- Increase the combat readiness and fighting capability of troops
- Provide troops with state-of-the-art weapons and military equipment
- Modernize existing weapons
- Promote military and military-technical cooperation with countries of the region and the world as a whole
- Develop the infrastructure of military camps, systems for technical and logistical support of troops
- Cover the costs of social security for military personnel, their families, and veterans of the armed forces

Sources: Statista, IMF, data from open sources, analysis of the working group

Note: 1 – According to the estimates of the Deputy Head of the Main Department of the State Budget Ismonzhon Mamazhonov
The main principles of Uzbekistan’s national security, which are set out in the Defense Doctrine, are the maintenance of defense sufficiency and preservation of neutrality, but a number of key documents need to be finalized.

### Main national security documents

1. **National security concept**
   - Status: A version from 1997 is currently being used; a new concept is being developed

2. **Defense doctrine**
   - Status: Approved by Law No. ZRU-458 of the Republic of Uzbekistan dated 9 January 2018

3. **Economic security doctrine**
   - Status: No information available

4. **Food security doctrine**
   - Status: No information available

5. **Cyber security doctrine**
   - Status: No information available

### Key principles of the defense policy of Uzbekistan

- Military force is not used against other countries, except in instances of the suppression and deflection of military aggression
- Indivisibility of security; prohibition on strengthening the country’s security at the expense of the security of other countries
- Non-intervention in the internal affairs of other countries; peaceful settlement of possible disputes
- Non-participation in military-political blocs; reserving the right to withdraw from any interstate organization in the event of its transformation into a military-political bloc
- Defense sufficiency
- Adequacy of military capabilities to the nature of modern military conflicts
- Renunciation of the production, acquisition, storage, proliferation, and the deployment of nuclear weapons and other weapons of mass destruction
- Commitment to the principles of the Nuclear-Weapon-Free Zone Treaty in Central Asia
- Prevention of the deployment of foreign military bases and facilities in Uzbekistan
- Non-participation of the armed forces in peacekeeping operations and military conflicts abroad
- Reliance on spiritual and moral values and the cultural and civilizational identity of the people

Implementation of the main principles of Uzbekistan’s national security will make it possible to promptly identify and respond to threats. Depending on the drivers, different combinations of threats are possible: from guerrilla warfare to cultural confrontation, from terrorism to economic war.

Examples of cyber crimes

At present, cyber crimes pose a new threat to Uzbekistan. The following can be cited as examples of such crimes:

- In 2014, the system of the US retail store chain Home Depot was hacked, and data from 50 million credit cards were disclosed.
- In 2015, unauthorized access to the system of the US Internal Revenue Service led to the theft of over 700,000 social security numbers and other confidential information.
- In mid-2017 the WannaCry virus affected more than 500,000 computers and the computer system of the UK’s National Health Service.

Sources: Speeches of the President of the Republic of Uzbekistan Shavkat Mirziyoyev, analysis of the working group.
A wide range of potential threats affect various components of national security

Example of potential threats to national security

Remote military operations, including through drones

Armed conflicts for resources
- Civil war
- Guerrilla warfare
- Invasion by the armed forces of a foreign country
- Terrorism directed at the population and key infrastructure
- Growth in organized crime and drug trafficking
- Environmental and natural disasters

Cyberattacks on the national financial system

Rise in unemployment and decrease in the incomes of the population
- Depreciation of the national currency
- Economic instability of key industries
- Economic sanctions, including through embargoes imposed on national products

Cyberattacks aimed at sabotaging the political system
- Political pressure from another country
- Radical political groups
- Religious conflicts
- Information wars
- Espionage

More pressing threats against Uzbekistan

Sources: Analysis of the working group
A stable economy provides the necessary support for key components of national security. Technology and independence play a crucial role.

National security

Physical security

Economic security

National values

"Hard" power

- Armed forces
- Internal security

Economic forces

- Economic opportunities
- Jobs
- Maintenance of the welfare of the people

"Soft" power

- Diplomacy
- Culture
- Mass media

National economy

Military industrial complex

Key industries

- Fiscal policy
- Monetary policy
- Sectoral policy

- Human capital
- Education
- Immigration

- Innovations
- Science
- Technologies

- World economy
- Sales
- Movement of capital

Strong influence

Moderate influence

Weak influence

Sources: Analysis of the working group
Focus on the economic security doctrine of developed and developing countries

Developed countries in their economic doctrines pay more attention to the fight against external threats, while developing countries focus on the fight against internal threats.

### Components of the economic security doctrine

According to international practice, economic security doctrines include the following main components:

#### Achieve internal economic stability and strengthen positions at an international level

- **Domestic economic stability** is an important part of economic security that contributes to **stable growth** and makes it possible to **avoid crisis phenomena**
- Strengthening of positions in international markets indicates the **increased competitiveness** of the country’s economy

#### Possibility of state control over the movement and use of national resources

- **Efficient use of resources** serves as the basis for the effective functioning of the economy; significant violations of the use of resources lead to a crisis
- **Control over the sale of resources abroad** is necessary to **reduce dependence** on fluctuations on international markets and the loss of strategic resources

#### Meet the economic needs of the population

- **Human capital** is the basis of the economy, and the development of this resource can significantly **increase the country’s potential**
- Creation of a **sustainable social environment** is one of the prerequisites for a country’s economic prosperity

---


---

**Internal threats**
- Instability of economic growth
- Poverty of the population
- High inflation
- High unemployment
- Low education
- Administrative and fiscal barriers to business development
- Low investment activity

**External threats**
- Foreign competition for sales markets
- High dependence on foreign trade conditions
- Lagging behind in the development and implementation of advanced technologies
- Restrictive economic measures of foreign countries

Examples of countries:
- Russian Federation
- Kazakhstan
- USA
- Japan
- France
## National security

### Economic security
United States (as part of the National Security Strategy of the United States of America, 18 December 2017)

<table>
<thead>
<tr>
<th>Objectives</th>
<th>Guidelines for action</th>
</tr>
</thead>
</table>
| Stимulate the national economy | • Reduce the regulatory burden  
• Promote tax reform  
• Upgrade and modernize the infrastructure of the U.S.  
• Reduce debt through changes in fiscal policy  
• Maintain educational scholarship programs |
| Promote free, fair, and mutually beneficial economic relations | • Sign new trade and investment agreements and renew current agreements  
• Counteract unfair trade practices  
• Counteract foreign corruption  
• Work with partner countries  
• Promote new market opportunities |
| Leadership in research, technology, invention, and innovation | • Develop an understanding and forecast global trends in science and technology  
• Attract and retain inventors and innovators  
• Use private capital and experience to create and implement innovations  
• Rapidly implement inventions and innovations |
| Develop and protect the U.S. innovation base | • Identify and monitor threats to the innovation base  
• Protect intellectual property  
• Tighten visa procedures for foreigners to preserve intellectual property  
• Protect data and related infrastructure |
| Stимulate the national economy | • Reduce regulatory barriers  
• Promote exports  
• Ensure energy security  
• Ensure that people and businesses have access to energy  
• Increase the U.S. technological advantage in energy |

### Economic security of Japan as part of the current National Security Strategy, December 2013

<table>
<thead>
<tr>
<th>Objectives</th>
<th>Guidelines for action</th>
</tr>
</thead>
</table>
| Prosperity of Japan and its citizens through economic development | • Strengthen the free trade scheme for economic development through free trade and competition  
• Maintain an environment that provides stability, transparency and predictability |
| Strengthen and expand Japan’s role and capabilities in the world | • Strengthen cyber security  
• International cooperation in the field of defensive weapons and technologies  
• Ensure the sustainable use of outer space and support its use for security purposes  
• Enhance technological capabilities |
| Strengthen national security and promote domestic and global peace | • Maintain and strengthen the defense production and technological bases  
• Develop an intellectual base (in particular, via the interaction of the state, higher educational institutions, and research centers) |

Economic security constitutes an integral part of national security. Implementation of the goals of economic security will make it possible to achieve sustainable economic development, independent of internal and external threats.

**Objectives**

- Achieve internal economic stability and strengthen positions at an international level
- Possibility of state control over the movement and use of national resources
- Meet the economic needs of the population

**Guidelines for action**

- Continuous economic growth and optimal economic structure
- Effective monetary and fiscal policy
- Sociopolitical stability and economic sovereignty
- No restrictions on international trade
- High scientific and technical potential
- Support for export and exporters
- Effective public governance system
- Rational allocation of resources
- Food security
- Sufficient level of the resource base and diversification of sources
- Stable employment
- Access to social security
- High level of human capital development
The national idea should unite Uzbeks and ensure a common goal

- It is a national challenge to resolve the task of becoming one of the Top 50 countries
- It requires motivation and a unifying idea for the whole country
- The national idea is a common goal that is clear and valuable for each Uzbek citizen
- The task of Strategy 2035 is to ensure the happiness of each Uzbek citizen

Shavkat Mirziyoyev
President of the Republic of Uzbekistan:

**Rich people – rich country:** "Based on the principle 'If the people are rich, the state will be rich and powerful', and to ensure the sustainable development of the country, new opportunities and incentives are being created for the development of entrepreneurship and radical improvement of the business environment."

**Government for the citizens:** "We make every decision concerning the life of the country on the basis of direct dialog with the people, taking into account the views of society. The cornerstone of our work is the following principle: 'It is not the people who serve the state bodies, but the state bodies who serve the people'."

**Macroeconomic stability and entrepreneurship:** "The most important priority is to further strengthen macroeconomic stability and maintain high rates of economic growth, including the balance of the state budget at all levels, the stability of the national currency, and the level of prices in the domestic market... It is necessary for the entire macroeconomics to ensure that constant field visits become normal, to study the possibilities of each family to engage in business activities, to resolve the problems of expanding financing, and to provide practical assistance to entrepreneurs."

**Safety for everyone:** "Based on the concept 'Safe city – safe country,' we are carrying out large-scale work aimed at ensuring public order in the country. That is why a new structure was created – the National Guard."

**Raising a harmonious generation:** "It is vital that we raise a healthy and harmoniously developed generation, purposeful and energetic youth, able to take responsibility for the fate and future of the motherland and to direct all their knowledge and potential to this effect."

**Confidence in medicine and health:** "When it comes to health care, we must remember one truth: health workers are the guardians of our health. The people must trust them, and they must win the trust of the people. Ensuring the observance of constitutional norms in the protection of the health of citizens who are our greatest wealth must become the priority of state policy."

**Cooperation and integration:** "I consider it necessary to affirm once again Uzbekistan's readiness to expand and deepen open, mutually beneficial and close cooperation with the countries of our region. This is the main priority of our foreign policy."

Sources: Speeches of the President of the Republic of Uzbekistan Shavkat Mirziyoyev, analysis of the working group
Uzbekistan 2035 is aimed at implementing the underlying principles of public governance established by the President.

Sources: Speeches of the President of the Republic of Uzbekistan Shavkat Mirziyoyev, analysis of the working group.
Detailed Information by Area

Development Strategy Framework of the Republic of Uzbekistan until 2035
1. Development of public governance

Framework of the Development Strategy of the Republic of Uzbekistan until 2035
The executive

Development of public governance
### Key challenges

- Staff shortages, inadequate staff training, and lack of incentives
- Internal control of the executive is underdeveloped
- External control of the executive by the legislature and society is underdeveloped
- Poor availability of electronic public services for the population
- Ineffective implementation of government programs and projects
- No anti-corruption measures

### Government Effectiveness Index

**Government effectiveness index, 2016**

- World Bank
- 150th out of 214 countries

- This index captures perceptions of the quality of government services, the quality of the civil service, the quality of the formulation and implementation of government policies, and the commitment of the government to these policies
- The concept of administrative reform approved by Decree No. UP-5185 of the President of the Republic of Uzbekistan dated 8 September 2017 meets the above challenges and includes the components required to optimize the public administration system. However, implementation of the concept is slow. A mechanism must be created and launched to expedite implementation of the concept of administrative reform

### Corruption Perceptions Index

**Corruption Perceptions Index, 2017**

- Transparency International
- 157th out of 180 countries

- This index ranks countries by “perceived levels of public sector” corruption
- The existing anti-corruption program for 2017–2018 represents a start to combat corruption. However, extensive measures are required to implement a long-term policy in this area

### Key findings

- There is no comprehensive **strategic planning system**. Long-term and medium-term goals are not set for government bodies in the Republic of Uzbekistan
- A number of factors have an adverse impact on the **efficacy of the executive**, including the following:
  - The absence of a comprehensive monitoring system required to assess the attainment of goals by government bodies and their leadership
  - Inadequate parliamentary control, including the failure of the legislature to adopt decisions promptly and the poor quality of adopted decisions
  - Public control of the executive is hindered by the lack of independent mass media
  - No developed administrative staff training system
  - Owing to shortcomings in the project management system, the quality of government projects is undermined, resulting in the inefficient use of funds
- In general, the investment climate is unfavorable due to the lack of anti-corruption measures, impeding economic growth

Sources: World Bank, Transparency International, data from open sources, analysis of the working group
Press Freedom Index

- This index ranks countries by the degree of media freedom, the quality of the legislative framework in respect of mass media, and the level of pressure on journalists.
- The media represent an important institute of public control over the activities of the executive. The absence of a free and independent media in the Republic of Uzbekistan impedes the functioning of a mechanism aimed at improving the performance of the executive through due public control.

Telecommunications Infrastructure Index

- This index is a part of the E-Government Development Index and shows the level of development of telecommunications infrastructure in a country.
- The low level of development of telecommunications infrastructure in the Republic of Uzbekistan (Internet speed in the country is 10 times slower than the average speed in the CIS) hinders widespread use of electronic public services.

Doing Business Index

- Each country is assigned a corresponding ranking in the ease of doing business rating. The higher the ranking of a country in this rating, the more favorable the business environment for the opening and running of an enterprise. The ranking of each country is determined through cumulative scoring in ten areas.
- Uzbekistan has the lowest rating in "Obtaining construction permits" and "International trade".

Sources: UN, World Bank, data from open sources, analysis of the working group
The executive

Current level of development

One key issue is the lack of highly-skilled staff in the executive

Over the past two years the Republic of Uzbekistan has created at republican level:
- three ministries
- four state committees
- three agencies

A pool of highly-skilled staff must be prepared for new government bodies

During an interview, respondents representing 80% of ministries and departments cited staffing among the most pressing issues

15% of departments¹ have vacancies for deputy director

Owing to the lack of highly-skilled staff, officials are transferred between departments too quickly²

Note: ¹ Estimate according to data from the websites of government bodies; ² http://uzxalqharakati.com/ru/archives/22914
The executive

Current level of development

The low level of financial compensation for civil servants is hindering the attraction of highly-skilled staff

Monthly salary of top managers\(^1\)

‘000 nominal dollars based on PPP

<table>
<thead>
<tr>
<th>Country</th>
<th>Salary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uzbekistan</td>
<td>8.8</td>
</tr>
<tr>
<td>Estonia</td>
<td>12.5</td>
</tr>
<tr>
<td>Finland</td>
<td>16.5</td>
</tr>
<tr>
<td>USA</td>
<td>21.0</td>
</tr>
<tr>
<td>France</td>
<td>23.0</td>
</tr>
<tr>
<td>Canada</td>
<td>30.0</td>
</tr>
</tbody>
</table>

Average value in OECD countries: 20

Notes: 1 - Based on the data “Government at a Glance (2017 edition). The data on Uzbekistan are based on interviews with respondents from government bodies (USD 2,000 adjusted based on PPP)

Source: OECD, based on estimates of the representatives of the government bodies of the Republic of Uzbekistan

- The issue of the low remuneration of government employees was mentioned in Decree No. UP-5185 of the President of the Republic of Uzbekistan dated 8 September 2017.
- The level of remuneration of civil servants in Uzbekistan is less than half the average remuneration in developed countries in terms of purchasing power parity. This has the following consequences:
  - There is a mismatch between the social position of civil servants and the level of responsibility that they assume
  - The “prestige” of public service is adversely affected and attempts to attract highly-skilled personnel are undermined
  - Staff retention is low
  - Low pay increases the risk of corruption
- Different salaries can be observed in different departments for identical grades
The existing educational system for civil servants is selective and does not make it possible to achieve a prompt "qualitative" breakthrough, and increase the skill levels of the government apparatus (1/2)

Educational institutes for civil servants

**The Civil Service College (CSC) in Singapore offers 468 training programs to over 43,000 students**

**The Australia and New Zealand School of Government (ANZSOG)**

In the 2017 academic year the training at ANZSOG was completed by 7,300 people

**The Academy of Public Administration under the President of the Republic of Uzbekistan** operates in Uzbekistan

- The Academy offers only three training programs
- The training is completed by 180 people a year, representing less than 0.1% of the total number of civil servants
- Foreign cooperation is poorly developed
- The provision of consultancy services for government bodies is poorly developed

Positive factors

Negative factors

The existing educational system for civil servants is a points-based system that does not make it possible to achieve a prompt "qualitative" breakthrough and increase the skill levels of the government apparatus (2/2)

Educational institutes for civil servants

The Public Service Commission in Singapore develops and supports talent in the field of public service.
- The commission issues 16 types of scholarships for education in Singapore and abroad, which cover the cost of education, accommodation and transportation
- There are accelerated career development programs in government bodies after graduation

USA
- Mayor’s Graduate Scholarship Program (New York City)
- Federal Employee Education and Assistance Fund Scholarship Program
  The programs cover the expenses of civil servants related to part-time and full-time studies

UAE
Study Leave Program for Abu Dhabi Government Employees
- The program covers the expenses of civil servants related to full-time studies in foreign countries

Uzbekistan
- Uzbekistan has selective programs that support the education of civil servants.
  Example: JDS Program. It provides civil servants with an opportunity to earn a master’s degree or doctorate at Japanese universities. In 2018, Japan allocated USD 2.4 million to finance this program. During the 18 years of its existence, 311 civil servants have graduated from this program
- Some ministries and departments independently implement staff training programs - short-term advanced training courses
- There is no comprehensive educational support system for civil servants based on national and/or foreign higher educational institutions
- There are no accelerated career development programs after graduation

Positive factors
Negative factors

The executive

Current level of development

The authorities in Uzbekistan have drafted a staff development system. However, the system has not been launched, as adoption of the necessary laws has been delayed.

Creation of the National Personnel Reserve

The National Personnel Reserve is an institute that will be set up to provide centralized staff selection, training, retraining, and advanced training for public service and also to monitor and facilitate the career development of civil servants.

The training base of the national personnel reserve will be built through a government order on educational services to higher educational institutions.

Organization of regular advanced training programs for civil servants financed with government funds

Attendance of the personnel reserve training programs will enable the trainee to obtain a master’s degree. On completion of the program, civil servants will be required to work for a certain period of time in government bodies or will have to reimburse the cost of the program to the government pro rata to the obligations that they did not discharge.

Creation of the National Agency for Public Service Affairs

The National Agency will coordinate and provide methodological guidance on the activities of advanced training organizations and will approve training programs.

Assignment of qualifications only on the completion of relevant training programs

Career advancement will be directly contingent on the educational qualifications and expertise of civil servants.

The law is intended to resolve key staffing issues. However, yet it has remained a draft law for about a year!

Source: Draft law "On Public Service"
The government of the Republic of Uzbekistan is aware of the importance of the issue of corruption and is taking steps to elaborate a comprehensive approach to combat corruption.

**Law "On Countering Corruption"**

Law No. 419 of the Republic of Uzbekistan "On Countering Corruption" was adopted on 3 January 2017. Corruption will be tackled primarily by:
- Forming a culture of zero tolerance to corruption in society
- Implementing measures to prevent corruption
- Ensuring the principle of unavoidable liability for corruption

**Government Anticorruption Program for 2017–2018**

The Government Anticorruption Program for 2017–2018 was adopted on 2 February 2017

- The Program includes a road map consisting of 51 steps

The status of program implementation will be determined after the receipt of data from the government bodies.

**Interdepartmental Commissions**

To implement the Government Anticorruption Program, the following interdepartmental commissions were set up:
- Republican Interdepartmental Commission
- Interdepartmental Commission in the Republic of Karakalpakstan
- Interdepartmental Commission in Tashkent

Source: 1 = Decree No. PP-2752 of the President of the Republic of Uzbekistan dated 2 February 2017; 2 = Law No. 419 of the Republic of Uzbekistan dated 3 January 2017
The executive

Strategic options to improve the performance of the executive authorities

1. Model based on top-down approach to the implementation of initiatives

The model stipulates identification of the key areas at the highest level of administration of the executive authorities, the elaboration of goals for each department, the development of detailed KPIs, stringent monitoring of the attainment of KPIs on a weekly basis, establishment of an individual executive body to monitor the results of the reforms, independent audit, and public control.

Examples of countries:
The Government Transformation Program (GTP) is the program implemented in Malaysia in 2010.

- Ability to deliver results
- High speed of implementation
- Clear development priorities
- Openness and transparency for society

- Concentration of a wide scope of powers in the control body
- Resolution of a limited range of problems that had been prioritized

Results are achieved quickly through a body responsible for implementation and oversight of reforms

2. Model based on bottom-up approach to the implementation of initiatives

The model stipulates the elaboration of long-term goals drafted by departments (five years), annual targets, and the presentation of annual reports. The departments independently set the goals and targets, and determine the ways to attain them. The system is controlled by the legislature and executive. The model involves elements of nongovernmental control.

Examples of countries:
Government Performance and Results Act (GPRA) is the system implemented in the USA in 1997.

- Results-oriented
- Comprehensive approach
- Nongovernmental control
- Does not require significant input
- Limited powers of the control body

- Slow implementation
- Control is not enforced and as a result is ineffectual
- Risk that priorities are blurred during goal setting
- Possible lack of coordination of the goals and activities of various departments
- Potential inconsistency

In a developed economy ministries and departments independently achieve results

3. Mixed model

The system consists of a framework of agreements between the control body of the executive, the financial regulatory body of the executive, and line ministries, and sets medium-term goals (three years) and targets, allocates the necessary resources, and provides a ballpark "value-for-money" estimate. Control is exercised on a semiannual basis. The system involves an independent audit.

Examples of countries:
Public Service Agreements served as the basis of the system implemented in the UK in 1998–2010.

- Results-oriented independent audit
- Comprehensive approach
- Does not require significant input
- Assessment of cost effectiveness

- Slow implementation
- Control is not enforced and as a result is ineffectual
- Poor coordination of activities between different departments

Work is performed jointly at the highest level of the executive and line ministries to set goals and elaborating ways to achieve them

Sources: Data from open sources, analysis of the working group.
The executive

Implement a comprehensive system for setting the objectives and goals for the executive, improve the resulting quality of government projects and programs, develop a system of internal and external controls of the executive, develop a comprehensive staffing system, combat corruption, improve the availability of public services, and comply with the principles of the alternation of power and retention of the constitutional framework

- Create a mechanism to ensure continuous control of the attainment of performance targets by government bodies
- Increase the independence of the media and develop nongovernmental controls
- Create a personnel pool, deliver high-quality training and re-training of government staff
- Improve the professionalism of government officials and civil servants by establishing the appropriate social status and adequate remuneration
- Develop the telecommunications infrastructure and digitization of the executive
- Reduce corruption through anticorruption programs and optimization of processes
- Implement a set of measures aimed at enhancing the prestige and social attractiveness of state service

Source: Data from open sources, analysis of the working group.

<table>
<thead>
<tr>
<th>Figures</th>
<th>2016/17/18</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>World Bank Governance indicators (ranking)</td>
<td>150th</td>
<td>Top 50</td>
</tr>
<tr>
<td>Corruption Perceptions Index (ranking)</td>
<td>157th</td>
<td>Top 50</td>
</tr>
<tr>
<td>World Press Freedom Index (ranking)</td>
<td>165th</td>
<td>Top 50</td>
</tr>
<tr>
<td>Telecommunication Infrastructure Index (ranking)</td>
<td>114th</td>
<td>Top 50</td>
</tr>
<tr>
<td>Doing Business Index (ranking)</td>
<td>74th</td>
<td>Top 20</td>
</tr>
<tr>
<td>E-Government Development Index (ranking)</td>
<td>81st</td>
<td>Top 30</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Investments</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>by 2025</td>
<td>146 - 178</td>
</tr>
<tr>
<td>by 2030</td>
<td>232 - 284</td>
</tr>
<tr>
<td>by 2035</td>
<td>527 – 644</td>
</tr>
</tbody>
</table>

Sources: Data from open sources, analysis of the working group.
Create a government body responsible for the elaboration and implementation of goal-setting programs and monitoring of the attainment of goals (Reform Management Center)

Improve the professional development system for civil servants (increasing the number of graduates from 180 people to 8,000 people per year, update educational programs, expand the number of educational programs from three to 400)

Implement a comprehensive staffing system (identify hiring needs, attract specialists with international experience)

Develop a culture of meritocracy in government bodies (transparent stages of the selection of criteria determining compliance with positions and implementation of the criteria)

Implement the Government Anticorruption Program approved by Decree No. PP-2752 of the President of the Republic of Uzbekistan dated 2 February 2017, and compel the state and major private organizations and entities to implement the anticorruption program

Improve the legislative framework, eliminate duplicate legal acts

Increase freedom of speech and nongovernmental control through the media (make the Top 120 of the World Press Freedom Index)

Introduce a National Identification Number to simplify the tracking of tax payments, use of public services, etc.

Reform the state statistics service

Hold a census of the population of the Republic of Uzbekistan

Increase the level of education for civil servants (implement international practical training courses, bring educational programs into line with international practice)

Implement an up-or-out system for civil servants, increasing competition for vacancies at government bodies

Create an environment where corruption makes no economic sense for business

Attract to and develop new staff in the public service system, form a culture of zero tolerance to corruption, change the "image" of government bodies through educational programs, the delivery of internal training courses and toughening of legislation, and cooperation with the media (make the Top 80 of the Corruption Perceptions Index)

Form independent institutions of nongovernmental control (grants for nongovernmental organizations, independent media, etc.) (make the Top 80 of the World Press Freedom Index)

Comprehensive digitization of public services, including through artificial intelligence and blockchain technology, make information and communications technology a core component of the work of ministries and departments, and facilitate decision-making based on big data analysis (make the Top 50 countries of the E-Government Development Index and the Top 70 countries of the Telecommunication Infrastructure Index)

International accreditation of educational institutions training future civil servants

Elaborate a culture of zero tolerance to corruption in society, change society's mindset (cooperate with the media and educational institutions) (make the Top 50 of the Corruption Perceptions Index)

Migrate to the electronic delivery of public services, including comprehensive use of artificial intelligence and blockchain technology in project management and in the delivery of public services (make the Top 30 of the E-Government Development Index and Top 50 of the Telecommunication Infrastructure Index)

Improve the performance of the executive (make the Top 50 of the Government Effectiveness Index)

Create a favorable environment for doing business (make the Top 20 of the Doing Business Index)

Support independent media, freedom of speech, create a developed system of nongovernmental control of the activities of the executive (involve organizations in discussions on the current work of ministries and departments, taking into account their opinions when adopting laws) (make the Top 50 of the World Press Freedom Index)

Sources: Analysis of the working group
1.2

The legislature

Development of public governance
The legislature

Current level of development

Key challenges

- The legislature in the Republic of Uzbekistan is not fully independent
- The level of political culture in the Republic of Uzbekistan lags behind democratically developed countries
- The quality of the legislative framework varies and needs to be improved
- The scant application of evidence-based policy instruments and "smart regulation" principles in the drafting of legislation reduces their quality
- The lack of coordination between government bodies during law-making and the low level of scientific support for government bodies adversely affect the quality of regulatory legal acts
- Poor development of parliamentary controls
- Poor accessibility to public platforms for the discussion of laws

Key findings

- There are a number of restrictions on the free formation of the representative authorities and their powers in the Republic of Uzbekistan. These restrictions reduce the independence of the legislature
- The quality of the legislative framework is poor due to the lack of laws that are "directly applicable". Owing to the inattentive drafting of legal rules in primary legislation, detailed drafting is required in the acts of the executive authorities. However, they are always able to draft them in sufficient detail owing to their heavy workload
- Legislation is inconsistent and contradictory due to the lack of coordination between government bodies during legislative activity
- Owing to the inefficiency and resulting poor quality of legislation, the public faces an excessive administrative load. This is due to failure to apply evidence-based policy instruments, such as Regulatory Impact Analysis (RIA) and "smart regulation" principles
- The quality of drafted regulations is poor owing to the lack of scientific support, inadequate professional skills, and the poor provision of resources to parliamentarians
- As there is no digital database of international treaties, the provisions of treaties are not always taken into account during the drafting of legislation
- The low level of development of telecommunications infrastructure and shortcomings in the digitization of the legislative framework complicate public access to legislation and hinder public debate of legislative initiatives

Democracy Index

The Economist

Democracy Index, 2017

158th out of 167 countries

This index shows the level of democracy in a country and covers such areas as elections, political pluralism, civil liberties, the functioning of the government, participation in political processes, and the development of a political culture in the country.

Political culture in the Republic of Uzbekistan needs further development. There are restrictions on the free registration of political parties and limitations on the independence of representative government in the country; the heads of the executive and legislature practice concurrent service at regional level, thereby impeding the independence of the legislature

Global indicators of the quality of public regulation

World Bank

Global Indicators of Regulatory Governance, 2016

74th-80th out of 186 countries

This indicator reflects the quality of the legislative process, the quality and accessibility of the legislative framework for the population.

It is necessary to increase society’s participation in the legislative process, improve the quality of the drafting of legislation, and optimize the legislative framework.

On 8 August 2018 the Framework for Improving Legislative Activity in the Republic of Uzbekistan was approved. Consistent with global best global practice, the framework will, if implemented, lay the foundations for improving legislative activity and the legislative framework in the country.
The legislative authorities in the Republic of Uzbekistan are not fully independent, which compromises the quality of the legislature and corresponding controls

- The Legislative Chamber consists of 150 deputies
- Owing to the electoral system in place, 15 deputies are appointed to the Legislative Chamber by a party without a legitimate mandate, in conflict with the practice of countries with developed democracies
- Owing to a ban on the nomination of independent candidates, the Legislative Chamber consists solely of the candidates of registered parties
- The registration of parties is opaque and hinders the registration of new political parties
- The President has the right to dismiss the Legislative Chamber

The existing mechanism impedes the independence of the Legislative Chamber and complicates the exercise of legislative functions and implementation of controls

The Senate consists of 100 senators:
- Deputies of regional representative authorities elect 84 senators through voting
- Each region elects six senators
- The President of Uzbekistan appoints 16 senators
- Representative government authorities in the regions, districts, and cities (Kengashes [Councils] of People's Deputies) are headed by hokims, in conflict with the principle of the separation of powers, resulting in the inefficient operation of the representative authorities
- The Hokims of the regions are also senators, which greatly reduces the effectiveness of the senate in implementing controls and in adopting decisions regarding the activities of the local executive authorities
- The appointment of 16 senators reduces the independence of the Senate from the executive authorities

Existing mechanisms hinder the independence of the representatives of the Republic of Uzbekistan (Oliy Majlis) and the representatives of local authorities, and the exercise of legislative functions and implementation of controls
The legislature

Current level of development

Hierarchy of the regulatory acts of the Republic of Uzbekistan

Resolutions of the Government of the Republic of Uzbekistan, the acts of republican ministries and departments

Decrees of the President of the Republic of Uzbekistan

The Constitution of the Republic of Uzbekistan

Decisions of the local authorities

International agreements and treaties

Laws of the Republic of Uzbekistan

Laws and Orders of the Republic of Karakalpakstan

Codes of the Republic of Uzbekistan

There are a number of problem areas regarding observance of the hierarchy:

- The regulatory acts published by the executive authorities often replace laws
- The law enforcement authorities are primarily guided by the Decrees of the President of the Republic of Uzbekistan and the Resolutions of the Government of the Republic of Uzbekistan
- International agreements and treaties are not prioritized

The legislature

Current level of development

The existing system does not ensure fully-fledged application of international treaties, which hinders the international integration of the Republic of Uzbekistan

The Ministry of Foreign Affairs is the main governmental body that accumulates international treaties

Uzbekistan participates in over 4,000 international treaties

The Ministry of Foreign Affairs does not maintain a public electronic database of international treaties open to other government bodies and the general public

The absence of a fully-fledged electronic database of international treaties greatly complicates their application by the government bodies, parliamentarians, and the courts

The provisions of international treaties are not fully reflected in the legislative base of Uzbekistan, which hinders implementation

Sources: UNDP Project “Support to the Enhancement of Law-making, Rule-making and Regulatory Impact Assessment /Phase-2”
To resolve all these issues, on 8 August 2018 the President of the Republic of Uzbekistan approved the Framework for Improving Legislative Activity that complies in general with global best practice.

### Improvements in legislation

<table>
<thead>
<tr>
<th>Legislative framework</th>
<th>Implementation deadline</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Reduce the number of regulatory acts, review inactive acts, eliminate unreasonable limitations and unnecessary administrative procedures</td>
<td>Details not provided</td>
</tr>
<tr>
<td>• Implement effective mechanisms for the adoption of &quot;directly applicable&quot; laws</td>
<td>1 December 2018</td>
</tr>
<tr>
<td>• Implement phased migration to the application of a &quot;smart regulation&quot; model, and the formation of a Regulatory Sandbox legal regime</td>
<td>by 1 January 2019</td>
</tr>
<tr>
<td>• Implement a system for the compulsory assessment of the regulatory impact of draft regulatory acts, including a cost-benefit analysis</td>
<td>1 December 2019</td>
</tr>
<tr>
<td>• Improve further and detail procedures for the adoption and consideration of civil initiatives regarding the establishment of, revisions to or revocation of legal rules by government bodies</td>
<td>1 October 2018</td>
</tr>
<tr>
<td>• Appoint a single organization to coordinate the implementation and use of evidence-based policy instruments and &quot;smart regulation&quot; instruments</td>
<td>1 August 2019</td>
</tr>
</tbody>
</table>

### Legislative activity

<table>
<thead>
<tr>
<th>Implementation deadline</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 December 2018</td>
</tr>
<tr>
<td>by 1 January 2019</td>
</tr>
<tr>
<td>1 October 2018</td>
</tr>
<tr>
<td>1 August 2019</td>
</tr>
</tbody>
</table>

### Comments

- The framework contains the main elements for improving the legislative framework and legislative process, in line with the practice of developed countries. It is anticipated that implementation of this framework will have a positive impact on legislative activity and the legislative framework.
- Some elements of the framework are set out in a declarative manner, and detailed description of particular steps, timeframes and the parties responsible is required.

Source: UNDP Project
Owing to the poor drafting of rules in legislation, detail is provided in by-laws, which reduces the quality of the legislation and leads to discrepancies and corruption.

### Primary legislation
- Laws and Codes of the Republic of Uzbekistan: 5%
- Decrees of the President of the Republic of Uzbekistan
- Resolutions of the Government of the Republic of Uzbekistan, acts of republican ministries and departments
- Decisions of the local authorities: 95%

### Secondary (delegated) legislation
- The legislative framework is of moderate quality (ambiguous, open to interpretation, excessive regulation, complicated application, etc.)
- There is the issue of discrepancies between different legislation
- By-laws often replace laws
- Poor detail also facilitates corruption

Restrictions on free speech and independent media in Uzbekistan impede public control of the activity of legislature and the enforcement of laws

- No database of legislation in English
- No legal support
- The electronic database does not contain all the existing legislation
- Poorly developed IT infrastructure hinders public access to electronic databases of legislation

- The absence of legislation in English makes it difficult to attract foreign investors
- The database lex.uz does not provide a full, interactive list of related documents, by-laws or court decisions that would enable users to independently understand issues of interest to them
- Incomplete digitization of legislation complicates public access. For example, a number of international treaties are not included in the electronic database of legislation
- Slow Internet speed and poor coverage hinder attempts to improve public understanding of legislation and reduce the efficacy of laws. In 2018 Uzbekistan ranked 114th out of 193 countries according to the UN ICT Infrastructure Development Index

Pressure points in the legislative process of the Republic of Uzbekistan

Legislative process in the Oliy Majlis

- The structure of the Supreme Assembly does not include a special division to implement studies and advise parliamentarians
- Insufficient application of evidence-based policy instruments, including Regulatory Impact Analysis (RIA)
- Insufficient use of "smart regulation," for example, such principles as:
  - "One in one out"
  - "Regulatory guillotine"
  - "Sunset clause"
- Problems with the interaction of chambers in the Supreme Assembly

Areas of interaction

- No body coordinates the law-making process and application of evidence-based policy instruments
- No ICT platform for interdepartmental interaction
- No involvement of the academic community
- No discussion platforms
- No attention is paid to comments from the general public (53% of comments on regulations.gov.uz are disregarded)²
- Poor development of IT infrastructure complicates public access to the discussion of draft laws on online platforms
- As there is no complete digital database of international treaties, they are not taken into account in draft laws

Note: 1 - Based on the results of interviews: on average draft laws are considered by the Senate for four months, while the Legislative Chamber usually takes a month to consider a draft law; 2 - UN Project "Support to the Enhancement of Law-making, Rule-making and Regulatory Impact Assessment / Phase-2"
Parliamentary control in Uzbekistan is characterized by poor focus on the filing of enquiries and its advisory nature

### Elements of the parliamentary control system (international experience)

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Examples</th>
<th>Status in Uzbekistan¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two chambers of parliament, deputies (senators), parties, factions</td>
<td></td>
<td>In line with international practice</td>
</tr>
<tr>
<td>The structure and powers of the committees responsible for parliamentary control are established by sector</td>
<td></td>
<td>Only the Budget and Economic Reforms Committee is stipulated in legislation. No controls have been stipulated</td>
</tr>
<tr>
<td>Hearing of mandatory government reports</td>
<td></td>
<td>The duty of government representatives to deliver regular reports is prescribed</td>
</tr>
<tr>
<td>Filing of parliamentary enquiries, parliamentary audits, studies, etc.</td>
<td></td>
<td>The parliament is not focused on filing parliamentary enquiries², and there is no information on the number of enquiries</td>
</tr>
<tr>
<td>Vote of no confidence</td>
<td></td>
<td>Deputies of the lower chamber can express a vote of no confidence in the Prime Minister</td>
</tr>
<tr>
<td>Ability to initiate legal proceedings, administrative and criminal liability for the refusal to provide information</td>
<td></td>
<td>The law stipulates that control directives are advisory; the executive authorities ignore the requests of deputies and fractions</td>
</tr>
</tbody>
</table>

### Comment

- Over the past two years the Supreme Chamber has submitted only six parliamentary requests, which reflects the low level of parliamentary control. By comparison, in more developed countries like France and the UK this indicator in 2015 equaled about 25,000 and 30,000, respectively
- In addition, there are no established control procedures. The focus is on “hearings” instead of audits and enquiries, and directives are advisory
- Additional issues in the area of parliamentary control:
  - Lack of the administrative resources required for parliamentary control (deputies do not have their own staff to assist them with the drafting of enquiries, etc.)
  - No coordination between parliamentary control at republican and regional levels

---

¹ Law of the Republic of Uzbekistan “On Parliamentary Control,” 2 - based on estimates of UN representatives
The legislature

Strategic options for balancing the executive and legislature

1

Separation of powers with concentration of authority with the legislature

Most power is held by parliament. Parliament forms the government and controls its work. The head of state is often elected by parliament. Developed political culture; observance of human rights and freedoms; open elections; the government is represented by legitimate representatives elected by the people; high level of government transparency; media freedom.

Examples of countries:
- Germany
- Italy

- Low risk of long-term concentration of authority with one government
- Protection of human rights and freedoms
- Strong control of the activities of the executive

- Possible political instability
- Possible frequent changes of government
- Complicated coordination, especially during crises

Model for a high degree of development of political culture in the country

2

Balanced system with an independent parliament

The head of state is elected by the people. The head of state forms and controls the activities of the government. Parliament exercises parliamentary control of the executive, including budget control, and has the power of veto and impeachment of the head of state. Observance of rights and freedoms of citizens; open elections; the government is represented by legitimate representatives elected by the people; high level of government transparency; media freedom.

Examples of countries:
- USA
- South Korea

- High speed of decision-making and stability
- Control over the activities of the executive
- Separation of powers
- Protection of human rights and freedoms

- Risk of long-term concentration of power in one government
- Possible opposition of the executive and legislature
- Significant dependence on the head of state

High level of external control of the executive’s activities by the legislature

3

Highly centralized system

Absence of political pluralism; poor development of democratic culture; media restrictions; limitation on the freedom of elections; failure to comply with the principle of separation of powers; the government is not controlled by and is not accountable to the people.

Examples of countries:
- China
- North Korea

- Strong government capable of the rapid adoption and implementation of decisions
- Stability, order, and security

- Failure to observe rights and freedoms of citizens
- Lack of control over government activity
- High risk of authoritarianism
- High risk of corruption

No system of checks and balances, no external control over the executive’s activities

Sources: Data from open sources, analysis of the working group.
The legislature

Target vision 2035

Increase the independence of the legislative branch of government, develop political culture in the Republic of Uzbekistan, optimize the legislative framework, increase the quality of the law-making process, continue digitization of the legislative framework, and facilitate public access to legislation.

- Develop the parliamentary control function through the development of the practice of parliamentary enquiries and the issue of publications by the parliament following monitoring and analysis.
- Introduce the mandatory assessment of the regulatory impact of adopted legislation.
- Reduce discrepancies between legislation.
- Digitize the law-making process.
- Increase the involvement of civil society in the law-making process (hold public hearings).

<table>
<thead>
<tr>
<th>Figures</th>
<th>2016/17/18</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Democracy Index (ranking)</td>
<td>158th</td>
<td>Top 50</td>
</tr>
<tr>
<td>Global Indicators of Regulatory Governance (score)</td>
<td>3.0</td>
<td>5.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Investments</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>84 – 102</td>
<td>193 – 235</td>
<td>421 – 515</td>
<td></td>
</tr>
</tbody>
</table>

*billion dollars cumulative*

Sources: Analysis of the working group
The legislature

Key strategic initiatives

2025

- Increase the independence of the representative authorities (inter alia, abolish the practice of concurrent service in the executive and legislative authorities at the level of hokimiyats [local authorities])
- Improve political culture, including liberalization of the rules on registration of new parties, and increase transparency (make the Top 100 of the Democracy Index)
- Introduce the practice of the election of independent candidates
- Increase nongovernmental control and the involvement of society in the law-making process
- Improve the legislative framework, apply the principle of regulatory guillotine (elimination of laws not used directly)
- Extend cooperation with international organizations to analyze the legislative framework, improve the expert review of parliamentarians and their research and resource support
- Increase the availability of laws through the development of electronic legislative databases and telecommunications infrastructure
- Implement elements of an evidence-based policy and “smart regulation,” improve the score of the Republic of Uzbekistan in Global Indicators of Regulatory Governance to 3.8
- Create an electronic system of interaction between the government bodies in the legislative process
- Strengthen parliamentary control (initiation of parliamentary audits, creation of parliamentary reports), create an effective mechanism for the reporting of the executive authorities to parliament
- Create an effective mechanism for the application of international treaties by government bodies

2030

- Ensure nongovernmental control over the activities of the legislature and compliance with laws (grants for nongovernment organizations)
- Ensure comprehensive use of an evidence-based policy, including “Regulatory Impact Analysis”, and extend its application to all regulatory acts
- Ensure comprehensive use of “smart regulation,” including “One in, one out” and “Sunset clause” principles, improve the score of the Republic of Uzbekistan in Global Indicators of Regulatory Governance to 4.4
- Ensure the continuous involvement of society and the academic community in the law-making process (hold public hearings and meetings, and submit documents for discussion)
- Continue improving political culture and the independence of the legislature (make the Top 70 of Democracy Index)
- Ensure comprehensive independent parliamentary control

2035

- Ensure the pluralism of opinions and opposition in parliament
- Establish a balance of powers between the legislature and the executive (make the Top 50 of the Democracy Index)
- Ensure full public control of the activity of the legislature
- Introduce fully transparent elections, including through blockchain technology
- Ensure the stability of legislation and the professional drafting of adopted laws, improve the score of the Republic of Uzbekistan in Global Indicators of Regulatory Governance to 5.0

Sources: Analysis of the working group
The judiciary

Development of democratic institutions
The judiciary

Current level of development

Key challenges

- No understanding of the fundamental importance of an independent judiciary
- Lack of public trust and investor confidence in the ability to guarantee due process
- No understanding of the inevitability of punishment; corruption
- No traditions and knowledge of how to ensure a fair trial and also the openness and transparency of court decisions
- Opacity of court rulings. Issue of openness and transparency of access to court rulings
- Engrained (Soviet) tradition of the involvement of the law enforcement authorities in the exercise of court functions
- No appropriate material and technical base and no education system for professional personnel and judicial personnel
- Formal approach and ineffectiveness of some institutions of the judiciary: People’s assessors, Constitutional Court, etc.
- Weak legal ethics, which must be enshrined in respective rules of law.

Key findings

- Courts are not independent of the law enforcement authorities. It is often the case that judges are subject to the pressure and influence of internal resources, instead of public resources, through justices of the court or higher-instance judicial authorities
- Guarantee the independence of the Supreme Judicial Council, the system used to select and appoint judges, and develop a system for the training and advanced training of the professional judiciary and review of national justice.
- Judges may be disciplined for decisions that undermine the possibility of an independent decision
- Courts rarely acquit people, while statistics disclose instances where acquittals were subsequently reversed.
- Judges have excessive workloads and as a result are unable to consider cases professionally in the allotted time. Due to the excessive workload, judges issue decisions that contain glaring errors and involve gross violations of human rights.
- In Uzbekistan, legal science is not developing at the adequate level, the training of specialists is based on the old education system, and the issue of the gap between theory and practice has not been resolved.
- Corruption and pressure exerted on judges is widespread.
- In practice, the judicial process is insufficiently accessible to the public, except for the individuals participating in a case, and there is no open database of court decisions on reviewed cases.
- The judicial system of Uzbekistan makes inadequate use of information technology developments, while would make it possible to significantly decrease paperwork, save time and other resources
- The principle of legal certainty is not sufficiently applied in judicial practice, and different contradictory decisions can be adopted in similar cases.
- The institution of people’s assessors is in dire need of reform, while the work of the Presidium and Plenum of the Supreme Court of the Republic of Uzbekistan, the Supreme Judicial Council, the Qualification Board of Judges and other structures needs to be systematized and eliminate the duplication of their functions.
- An increase in the influence and status of the Bar would ensure the competitiveness of trials, the fair handling of cases, and the equality of the parties in a case.
- The Constitutional Court needs reform that would transform it into an efficient and reputable institution that protects the constitutional rights and freedoms of citizens and operates primarily to make people respect and safeguard the Constitution. Individuals, whose rights have been violated, should be able to appeal to the court for the restitution of their rights.
The current level of development of the judiciary

- The Supreme Judicial Council was established to prevent illegal interference in the selection and appointment of judges and create a transparent and competitive system. The council exercises substantive public control over the selection and appointment of candidates for judges.
- Guided by the extensive experience of developed countries, the country has introduced the practice of appointing judges for the first time in Uzbekistan’s history. As a result, guarantees of the independence of judges when protecting the rights of citizens have been strengthened.
- To improve the responsibility of tribunals before the public of the Republic of Uzbekistan, relevant public and local activists consult recently appointed judges. Candidates for judges are only appointed subject to the positive opinion of citizens.
- To ensure independent compliance with the principle of independence of the judiciary, and provide financial and logistical support for judges, a court support department was established at the Supreme Court of the Republic of Uzbekistan. The department provides financial and logistical support to judges and the employees of judicial bodies, financial and technical assistance to the courts, establishes the necessary conditions for the courts, and improves working conditions.
- Based on best practice in developed countries, subsequent improvements to the institution of Habeas Corpus strengthened oversight over investigations and preliminary investigations. Powers to authorize wiretapping were transferred from the prosecutor’s office to courts in order to enhance the protection of the constitutional rights of citizens.
- A suit filed in the courts in economic, administrative, civil, and criminal cases is subject to regional and centralized online monitoring, is include in centralized online reporting on applications (motions) and court cases; an online electronic database was launched to monitor all procedures and due dates.
- From the receipt of a document in the court through the uniform electronic database until its archiving, monitoring is performed without any intervention in a case. The parties in a case are notified of adopted rulings, and a system has been introduced to ensure timely enforcement of rulings by bailiffs. The ability to receive a daily online report has been established.
- An internal procedure of the Supreme Court ensuring the transparency of court activity has been developed to increase public trust. Under this arrangement, the Supreme Court can monitor online sessions. Twelve courts in Surxondaryo, Xorazm and Namangan Regions, the most remote areas at present, have been connected to the system.
- In addition, court rulings are announced on the website of the Supreme Court of the Republic of Uzbekistan.
- After the announcement of a court ruling that has entered into force, it is included in judicial practice for interpretation by participants in the judicial process.
- The chairs of regional courts arrange quarterly meetings in all the regions of Uzbekistan to provide information to the public and mass media about the activity of the courts.

Source: Data of the Supreme Court of the Republic of Uzbekistan
The judiciary

Current level of development

Chart/Diagram 1

<table>
<thead>
<tr>
<th>Rank</th>
<th>Country</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>86</td>
<td>Tanzania</td>
<td>0.47</td>
</tr>
<tr>
<td>87</td>
<td>Lebanon</td>
<td>0.47</td>
</tr>
<tr>
<td>88</td>
<td>Philippines</td>
<td>0.47</td>
</tr>
<tr>
<td>89</td>
<td>Russia</td>
<td>0.47</td>
</tr>
<tr>
<td>90</td>
<td>Dominican Republic</td>
<td>0.47</td>
</tr>
<tr>
<td>91</td>
<td>Uzbekistan</td>
<td>0.46</td>
</tr>
<tr>
<td>92</td>
<td>Mexico</td>
<td>0.45</td>
</tr>
<tr>
<td>93</td>
<td>Sierra Leone</td>
<td>0.45</td>
</tr>
</tbody>
</table>

- The number of judges per capita in Uzbekistan is 1 per 23,810 people (2018), compared to per 11,000 in France, 1 per 9,000 in the USA, and 1 per 4,000 in Germany.
- The number of acquittals increased from seven for the period of 2012–2016 (the probability of acquittal was slightly above 0%) to 590 for the first nine months of 2018.
- There is no access in Uzbekistan to court rulings that are being issued or to the procedural schedule for cases. Kazakhstan has published all types of court decisions online since 2009. This practice was established a long time ago in neighboring Russia and Kyrgyzstan.
- There are no legal ethics in Uzbekistan. Legal ethics must be enshrined in respective rules of law.

Strategic options

1

Ensure the independence of the judiciary

The independence of the judiciary from any extra-procedural influence, both inside and outside, must be ensured. Judges must be free and independent in decision-making and must only be governed by the law. The courts must be the only body that determines guilt. A separate law must be adopted on the status of judges with unified rules, which is not part of the law on the court system. A separate law must govern the selection of candidates for judge and the requirements imposed on such candidates, and issues of the liability of judges; it must define disciplinary offenses, penalties, and other issues to avoid the use of different interpretations as an instrument wielded to pressurize judges.

The judiciary must be based on the principle of accessibility for petitions filed by the public. The Constitutional Court needs to be reformed and transformed into an institution that protects constitutional human and civil rights and freedoms and that is accessible to anybody who feels that their rights have been violated.

Examples of countries:
- UK
- Germany

- Judicial bodies as reputable and efficient institutions of society
- Public trust and social stability
- Investment appeal
- Higher rankings in various international ratings
- The Constitution acts as the guarantor of human rights and freedoms

- A significant review of the role of the court is required
- Long-term reforms are required
- Investors will not see the impact of the changes immediately

Such measures would enable the judiciary to be transformed into a truly independent institution, which could serve as an example of successful judicial reform.
The judiciary

Strategic options

An improvement in the quality of the system of education, selection, guaranteed tenure and judicial immunity ensures the authority and independence of judges

Reforms of the training system of legal personnel in the country, the development of legal science, and close cooperation and partnership of educational institutions with industry, will help to provide the judicial system with qualified and highly motivated legal personnel.

The implementation of a system of training and selecting judges through a transparent fair process will lead to the appointment of judges who are competent lawyers with high morals and are able to independently adopt decisions based on facts and the law.

It is necessary to review the procedure for the guaranteed tenure of judges: appointment as a judge must have only an initial probationary period.

Guaranteed tenure is also an important criterion that ensures the independence of judges.

- The judicial system will receive highly professional personnel with high moral standards and legal ethics
- The judicial system and judges enjoy high standing and trust in society
- The independence of the court is ensured; the legislature is protected by the court

- Review of the training system is required
- The criteria and, in general, the system for the selection of candidates for judges must be revised
- Additional resources are required, including temporary resources

Guaranteed tenure of judges would make it possible to form a judiciary capable of ensuring the rule of law, protecting human rights, and instilling in the public and investors with a high level of trust and confidence in the judicial system of Uzbekistan

Chart/Diagram 2

Number of individuals in reserve to be appointed for the first time to the position of judges: 756 people as at November 2018

According to official data for 2017, the Supreme Judicial Council has assessed the performance of 667 judges – it found that 500 "conformed with the position of judge", with 390 appointed to the position.
The judiciary

Strategic options

Reduce the workload of judges, increase court costs proportionally, and successfully use alternative means of dispute settlement and arbitration

To further improve the work of the courts, clearly there has to be an increase in the number of judges. Today, the population of Uzbekistan is approaching 33 million people, and the current number of judges is insufficient for the consideration of an increasing number of cases. Consequently, an increase in the number of judges will decrease the burden on the courts, which will become the bedrock for the adoption of considered and fair judgments. Limits must be established on the workload of judges.

In Uzbekistan court costs are often intended to offset court expenses on the consideration of a case, and not the expenses of a party in whose favor the decision was issued. Court courts are high in such developed countries as Japan, the UK, and the USA (depending on the US state), which compels the parties to reconcile or settle disputes in an alternative way. In Uzbekistan, when measuring court costs, it is also necessary to take into the account actual expenses and the complexity of a case, establish the minimum cost of a lawsuit, etc.

In 2007, a Law on Arbitration Courts was adopted in Uzbekistan, and in 2018, the Law on Mediation. An increase in the number of economic and civil cases considered by arbitration courts would also alleviate the workload of state courts. For a number of reasons, arbitration courts cannot resolve all cases in practice; therefore, the adoption of the Law on Arbitration based on the UNCITRAL Model Law must be adopted, combining aspects of arbitration proceedings and international arbitration.

It is necessary to increase the categories of cases where legislation would stipulate compliance with the mandatory pretrial procedure and the successful use of alternative forms of dispute settlement and arbitration and also the development of a local school for professional mediators. In connection with this fact, the ratification of the Singapore Convention by Uzbekistan is one option that is worth considering.

Reforms to and improvements in the activity of the institution of people’s assessors would facilitate the formation of effective collegial consideration of cases and improve the reputation of the judiciary and public trust in the judicial system.

- An increase in the number of judges and development of alternative dispute resolution methods would contribute to improvements in the quality of issued judgments
- There would be an increase in the number of pretrial settlements of disputes between parties
- Human rights in Uzbekistan are protected by the courts
- Additional resources are required, including temporary resources
- The public has to bear the burden of increased court costs
- Acute shortage of highly-skilled specialists

The uniform distribution of the workload of judges would ensure administration of justice, a comprehensive review of cases, and fair decisions based on the letter of the law and the duty and honor of a judge
The judiciary

Strategic options

Due process and fair judgments are standard practice in Uzbekistan; the widespread implementation of IT solutions in the judicial system make it possible to increase transparency and decrease corruption risks and the cost of resources, increasing the trust and confidence of investors and citizens.

Uzbekistan has a unique historical opportunity to ensure the creation of a judicial process that meets all international standards, both in terms of organization, progress and results. Assigning the right to issue an order for a search and wiretaps of the phone conversations of suspects to judges humanizes criminal justice.

The provision of public access to adopted judicial decisions and implementation of a public electronic service: the submission of electronic documents to courts, tracing of the status of pending cases, etc., would significantly decrease paperwork, ensure accessibility and transparency, and serve as a way to prevent corruption risks.

The development and implementation of advanced IT solutions in the judicial system (including the development of artificial intelligence for the translation of the legislative base, issued judgments, etc., from the Uzbek language to other languages) would promote understanding of legislation by potential investors and the appeal of the country as a reliable and open partner.

Examples of countries: Both countries that use the Anglo-Saxon legal system and countries that use the continental legal system, such as France, Germany, or Spain, regularly bring court decisions to the public’s attention.

Uzbekistan is becoming a country that has successfully conducted efficient judicial reforms, based on a fair judicial process and an accessible and clear judicial system with a low level of corruption risks.

- The status and credibility of the court would improve significantly
- The rights of citizens are fully protected
- The investment climate improves significantly
- Public supervision over the courts is ensured
- Judges strive to be highly qualified
- The saving of resources, including temporary resources

- Additional resources are required
- Critical analysis of various issues in the process is required
- Highly-skilled personnel are required
Uzbekistan has an independent judiciary that ensures the rule of law, protects human rights, and enjoys an impeccable reputation of citizens and investors

- Be ranked in the top 10 countries in various international ratings on the rule of law (Rule of Law Index, etc.)
- The inclusion of Uzbekistan and Tashkent International Arbitration Center (TIAC) in the list of arbitration centers and jurisdictions that practice arbitration successfully
- Be ranked in the top 10 countries in anticorruption ratings, including in the justice system
- Receive positive feedback from various independent experts, including UN bodies
- Lawsuits are conducted in Uzbekistan’s courts between large corporations, thereby confirming the credibility of Uzbekistan’s judicial system as a fair arbitrator
- Use of the norms of international law, both public and private, by the courts of Uzbekistan
- Judges and other lawyers in Uzbekistan play a proactive role in international courts, tribunals, and UN bodies along with lawyers from other countries
- 1 judge per 5,000 people

**Road map**

**Formation of courts**
- Adopt and implement a road map for the reform of the judiciary as an institution ensuring institutional independence
- Final acquittals reach the level of 20%–30%
- Access all procedures that make it possible to submit individual communications within the UN
- Reform legal education to provide Uzbekistan with highly qualified, world-class lawyers dedicated to their profession

**Rule of law**
- Eradicate completely the gap between law and practice
- Adopt a mechanism that would allow direct application and interpretation of the rules of international treaties by Uzbekistan’s judges
- Ensure the fully-fledged functioning of the Constitutional Court in Uzbekistan, which participates proactively in the formation of Uzbekistan’s legal landscape

**International level**
- Uzbekistan’s judicial system represents best practice in Eurasia and is on a par with Western countries, including the United Kingdom, Switzerland, and the Netherlands
- Uzbekistan’s judges and other lawyers participate in various international tribunals, courts, and arbitration courts based on competence, high ethical standards, and reputation
- International law is an integral part of Uzbekistan’s legal system and is directly applicable to judges resolving all types of cases
- Uzbekistan is in international ratings of supremacy of law top-10’s
2. Economic development

Development Strategy Framework of the Republic of Uzbekistan until 2035
2.1

Agriculture

Economic development
Key challenges

- Climate change
- Problem of food security (1.9 million undernourished people in 2016)
- Lack of water resources against the backdrop of a growing population and wasteful use of water
- Lack of cultivated lands, pastures, fodder due to high salinity and soil erosion
- Low agricultural productivity (USD 2,247 per agricultural worker)
- Losses during the storage and transportation of vegetables and fruit
- High regulatory barriers for the development of entrepreneurship in agriculture
- Lack of credit
- Poor development of staff training centers

Key findings

- Uzbekistan ranks 78th in the Food Security Index 2017. The index calculates the accessibility and quality of food resources in terms of the affordability and availability of healthy food in 113 countries
- Uzbekistan holds leading positions in the production of a number of crops: cotton, apricots, cherries, sultana grapes (vine)
- At present, cultivated lands are being freed up from use for cotton in favor of fruit and vegetables
- The yield of croplands used to grow various fruits and vegetables lags behind the indicators of developed countries
- At present, all lands are 100% owned by the state, and farmers lease them
- Infrastructure problems also exist – exhaustion of the working capacity of the irrigation system
- The drying of the Aral Sea and rise in the level of subsoil waters, increasing the salinity of river water, and irrational use of water contribute to subsequent salinization of soil and harvest failure due to salt storms
- Presence of a large amount of eroded soil due to the use of toxic defoliants in the past

Food security

<table>
<thead>
<tr>
<th>Malnutrition</th>
<th>% of population, 2016²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uzbekistan</td>
<td>6.3%</td>
</tr>
<tr>
<td>European countries</td>
<td>1.8%</td>
</tr>
<tr>
<td>Turkey</td>
<td>2.3%</td>
</tr>
<tr>
<td>Russia</td>
<td>2.5%</td>
</tr>
</tbody>
</table>

Comments

- The prevalence of malnutrition in Uzbekistan is 2–3 times higher than in Western countries, Turkey, and Russia, and includes 1.9 million people
- The deficiency of certain micronutrients is also greater than in other countries
- The anemia rate among women reaches 100% in Karakalpakstan

<table>
<thead>
<tr>
<th>Deficiency in individual micronutrients</th>
<th>% of population, 2016²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uzbekistan</td>
<td>53.1%</td>
</tr>
<tr>
<td>European countries</td>
<td>38.4%</td>
</tr>
<tr>
<td>Turkey*</td>
<td>26.8%</td>
</tr>
<tr>
<td>Russia*</td>
<td>28.1%</td>
</tr>
</tbody>
</table>

Vitamin A deficiency, % of children
Vitamin A deficiency, % of adults

* There are no data on vitamin A deficiency among children in Turkey and adults in Russia

Agriculture

Current level of agricultural development

Export of agricultural and food products
2017, USD billion

<table>
<thead>
<tr>
<th>Country</th>
<th>Value (USD billion)</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>149.1</td>
</tr>
<tr>
<td>The Netherlands</td>
<td>92.8</td>
</tr>
<tr>
<td>Germany</td>
<td>86.8</td>
</tr>
<tr>
<td>Brazil</td>
<td>78.8</td>
</tr>
<tr>
<td>France</td>
<td>74.2</td>
</tr>
<tr>
<td>Malaysia</td>
<td>26.0</td>
</tr>
<tr>
<td>Turkey</td>
<td>17.7</td>
</tr>
<tr>
<td>Uzbekistan</td>
<td>2.2</td>
</tr>
</tbody>
</table>

To conduct a comparative analysis of employment indicators, contribution to the economy and agricultural productivity, leading manufacturing countries of agricultural products, export-oriented and possessing high-tech agriculture were selected.

Uzbekistan exports fruit and vegetables, eggs, and lamb and goat meat. There is vast potential for agricultural crops, legumes, and seed crops (flax, sunflower, cotton), in particular, the export of finished goods.

Contribution of the agriculture sector to the economy
2017, USD billion (share of GDP, %)

<table>
<thead>
<tr>
<th>Country</th>
<th>Contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turkey</td>
<td>51.7 (6.1%)</td>
</tr>
<tr>
<td>Malaysia</td>
<td>27.6 (8.8%)</td>
</tr>
<tr>
<td>Brazil</td>
<td>93.8 (4.5%)</td>
</tr>
<tr>
<td>Israel</td>
<td>3.8 (1.3%)</td>
</tr>
<tr>
<td>France</td>
<td>38.9 (1.5%)</td>
</tr>
<tr>
<td>Uzbekistan</td>
<td>17.8 (34%)</td>
</tr>
</tbody>
</table>

The share of agriculture in the Republic of Uzbekistan is currently higher than in other countries, which characterizes Uzbekistan's economy as an emerging economy (1.3–1.5%).

Employment in agriculture
2017, million people (share of employed people, %)

<table>
<thead>
<tr>
<th>Country</th>
<th>Employment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turkey</td>
<td>5.40 (19.3%)</td>
</tr>
<tr>
<td>Malaysia</td>
<td>1.60 (11%)</td>
</tr>
<tr>
<td>Brazil</td>
<td>9.30 (10.3%)</td>
</tr>
<tr>
<td>Israel</td>
<td>0.04 (1.1%)</td>
</tr>
<tr>
<td>France</td>
<td>0.78 (2.8%)</td>
</tr>
<tr>
<td>Uzbekistan</td>
<td>3.70 (27.2%)</td>
</tr>
</tbody>
</table>

The high level of employment in agriculture indicates a low level of integration of technological solutions in the agricultural sector.

Agricultural productivity
2017, USD/employee

<table>
<thead>
<tr>
<th>Country</th>
<th>Productivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turkey</td>
<td>9,608</td>
</tr>
<tr>
<td>Malaysia</td>
<td>16,818</td>
</tr>
<tr>
<td>Brazil</td>
<td>10,007</td>
</tr>
<tr>
<td>Israel</td>
<td>95,243</td>
</tr>
<tr>
<td>France</td>
<td>49,475</td>
</tr>
<tr>
<td>Uzbekistan</td>
<td>2,247</td>
</tr>
</tbody>
</table>

Uzbekistan lags behind developed countries several-fold in terms of the productivity of its agricultural industry.

Sources: 1 - Information provided by BYUY KELAJAK, World Atlas, Export.gov, World Bank, State Statistics Committee of the Republic of Uzbekistan, analysis of the working group
If the current model of land and water resource management is maintained, food shortages will increase, land quality will deteriorate, and water reserves will decrease.

Uzbekistan borders strategically attractive markets for trade in agricultural products.

Export volume of raw agricultural products, billion dollars

- 2015: 1.586
- 2016: 1.422
- 2017: 1.481

Export volume of finished products from the food industry, billion dollars

- 2015: 46.0
- 2016: 58.0
- 2017: 72.4

Source: Trade Map, 2017, analysis of the working group.
Agriculture

Current level of Uzbekistan's export potential

### Agricultural crop growing volumes

#### 2017, thousand t/year

<table>
<thead>
<tr>
<th>Country</th>
<th>Apricots (2nd in the world)</th>
<th>Cherry (4th in the world)</th>
<th>Watermelons (4th in the world)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turkey</td>
<td>730</td>
<td>599</td>
<td>79,244</td>
</tr>
<tr>
<td>Uzbekistan</td>
<td>662</td>
<td>220</td>
<td>3,929</td>
</tr>
<tr>
<td>Iran</td>
<td>306</td>
<td>123</td>
<td>3,814</td>
</tr>
<tr>
<td>Algeria</td>
<td>257</td>
<td>95</td>
<td>1,976</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Country</th>
<th>Tomatoes (12th in the world)</th>
<th>Cucumbers (6th in the world)</th>
<th>Grapes (13th in the world)</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>56,423</td>
<td>61,949</td>
<td>79,244</td>
</tr>
<tr>
<td>India</td>
<td>18,399</td>
<td>1,993</td>
<td>3,929</td>
</tr>
<tr>
<td>USA</td>
<td>13,038</td>
<td>1,811</td>
<td>788</td>
</tr>
<tr>
<td>Uzbekistan</td>
<td>2,648</td>
<td>933</td>
<td>1,976</td>
</tr>
</tbody>
</table>

### Crop yield (examples of agricultural crops)

#### 2017, hundred kilograms per hectare

<table>
<thead>
<tr>
<th>Crop</th>
<th>Country</th>
<th>Uzbekistan</th>
<th>Israel</th>
<th>France</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tomatoes</td>
<td>Uzbekistan</td>
<td>433</td>
<td>724</td>
<td>1,861</td>
</tr>
<tr>
<td></td>
<td>Israel</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>France</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cucumbers</td>
<td>Uzbekistan</td>
<td>474</td>
<td>655</td>
<td>788</td>
</tr>
<tr>
<td></td>
<td>Israel</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>France</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cherry</td>
<td>Uzbekistan</td>
<td>88</td>
<td>85</td>
<td>42</td>
</tr>
<tr>
<td></td>
<td>Israel</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Turkey</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sources: 1 - UN Food and Agriculture Organization (FAO); 2 - State Committee of the Republic of Uzbekistan for Land Resources, Geodesy, Cartography, and State Cadastre
Agriculture

Structural changes in the use of cultivated land

Structure of cultivated land use, 2018

Target structure of cultivated land use, 2035

Comments

• Elimination of cotton crops (60,000 ha) and grain crops (42,000 ha) on low-yield lands allows the average crop yield to increase considerably

• An increase in the production of white meat will increase the profitability of the sector (production of 1 kg of white meat requires 5 times less feed)

  • 15 thousand ha of production areas will be allocated in the Republic of Karakalpakstan (Uzbekistan) for the growing of chili peppers. This order was given by President of Uzbekistan Shavkat Mirziyoyev during a trip to the Republic of Karakalpakstan

  • Chili peppers will be grown from varieties of Indonesian hot peppers, which were recently studied by an Uzbek delegation during a trip to Indonesia.

  • 68.3 million tons of chili peppers are produced worldwide today. The ripening period of chili peppers is 60–80 days, and the yield of industrial cultivation is 40 t/ha

  • Growing crops like pistachios on piedmont drylands is 50 times more profitable than wheat production on these lands; grazing during the period delivers only 4.5% of the benefits received from growing pistachios for the entire period

• Pistachios and chili peppers are not the only crops suitable for growing in Uzbekistan, and are simply provided here as examples. Research will make it possible to determine the optimal approach to the crops that are most efficient based on the conditions in the country

• It would also be possible to extend production of traditional crops (local brands of pomegranates, figs, apples, peaches, melons, pears, radishes, and others) and new crops, such as olives (olive plantations in Southern Europe are dying from a fungal infection that appeared due to climate changes)

Area of irrigated lands exposed to salinization and erosion, km²

<table>
<thead>
<tr>
<th>Area of saline soils²</th>
<th>19309 (44,8%)</th>
<th>23791 (55,2%)</th>
<th>43,100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area of soil exposed to erosion¹</td>
<td>6,284 (14,6%)</td>
<td>36,816 (85,4%)</td>
<td>43,100</td>
</tr>
</tbody>
</table>

• In Karakalpakstan, the soil salinization ratio is 69%, in Xorazm Region, 100%, in Bukhara Region, 86%

• Desertification and man-made pollution pose a significant risk

Sources: 1 - State Committee of the Republic of Uzbekistan for Land Resources, Geodesy, Cartography, and State Cadastre, State Statistics Committee of the Republic of Uzbekistan, Uzdaily.uz, analysis of the working group
2 - Ministry of Water Resources of the Republic of Uzbekistan
If the current model of land and water resource management is maintained, food shortages will increase, land quality will deteriorate, and water reserves will decrease.

### Food product consumption

<table>
<thead>
<tr>
<th>Product Type</th>
<th>2016 Consumption (kg per capita per year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vegetable oil</td>
<td>280</td>
</tr>
<tr>
<td>Fruit</td>
<td>149</td>
</tr>
<tr>
<td>Sugar</td>
<td>334</td>
</tr>
<tr>
<td>Vegetables</td>
<td>44</td>
</tr>
<tr>
<td>Dairy products</td>
<td>863</td>
</tr>
</tbody>
</table>

### Soil salinization and water shortage

- Lands with medium and heavy salinization
- Lack of water for irrigation

### Comments

- Uzbekistan produces enough **fruit, vegetables and meat** to satisfy current domestic demand for these products.
- However, **there is already a need** to increase imports of dairy products, sugar, and vegetable oil.
- By 2035, shortages of **other types of food** products are likely due to the following factors:
  - **Population growth and change in the age structure** towards an adult population
  - Increased income = increased demand
- The increased food shortage will be associated with:
  - **Scarcity** of land and water resources
  - Predicted climate change, as a result of which irrigation rates will increase by 5–10% by 2030

Expansion of water-conservation irrigation methods and support for maintenance of the irrigation and drainage infrastructure will increase the quality of land and prevent water shortages.

**Increase in the quality of land, %**

- **Lands with high crop yield**
- **Lands in good reclamation condition**
- **Lands with low crop yield**

**Elimination of water shortages, %**

- **Shortage**
- **Water supply level**

Source: State Statistics Committee of the Republic of Uzbekistan, Report under the UN Development Program Uzbekistan 2030, analysis of the working group.
Vision of the development of winemaking and viticulture

- On 28 February 2018, the Decree of the President of the Republic of Uzbekistan Shavkat Mirziyoyev "On Measures to Fundamentally Improve the Wine Industry and the Sale of Alcoholic Beverages" was issued.
- One of the most important clauses concerned the abolition of licensing for winemaking activities: “From 1 January 2019, the licensing of activities for the production of natural grape wines developed from the raw materials of grape plantations, with the classification of such wines in the category of agricultural products, is canceled.”
- Another item of the decree – introducing regulatory barriers to entry into the industry – will also be important to potential investors: “From 1 January 2019, the activities for the production of natural wines, wine materials and brandy spirits, as well as the processing of grapes can be carried out by enterprises with plantations of at least 100 ha for the cultivation of fruit-bearing technical varieties (…)”

<table>
<thead>
<tr>
<th>New and existing vineyards, ha</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>New vineyards</strong></td>
</tr>
<tr>
<td>16,550 (82.8%)</td>
</tr>
</tbody>
</table>

• By 2023 the area allocated to vineyards will increase more than five-fold

<table>
<thead>
<tr>
<th>Use of production capacities of enterprises processing grapes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Idle capacities</strong></td>
</tr>
<tr>
<td>110.4 (55.0%)</td>
</tr>
</tbody>
</table>

200.8
• At present, available production capacities are not fully utilized, and production might potentially more than double

Production volume
- 2015: 228 billion dollars
- 2016: 243 billion dollars
- 2017: 258 billion dollars

Product export
- 2015: 15 billion dollars
- 2016: 20 billion dollars
- 2017: 21 billion dollars

Product of alcohol products by type
- Over half of all alcohol products produced in Uzbekistan are vodka, liqueurs, and spirits.
- Wine production accounts for only 7.4% of total production.

Sources: JSC Uzsharobsanoat, analysis of the working group
False flax (Camelina) is a traditional product of GAV

False flax is a dual-purpose product:
- For the production of aviation biofuel and biodiesel
- For feeding cattle

Lactoferrin is a source of simple income from any dairy production

Lactoferrin is a protein found in blood plasma. Lactoferrin is produced in the mammary glands of humans and other mammals

Main market: China, Japan, South Korea

Technology for membrane storage of products

Implementation of the membrane method for storing fresh plants in a modified gas medium will facilitate the long-term storage of vegetables and fruit.

This technology is used in new types of containers, with a controlled gas medium created inside during sealing.

Export potential:
USD 90 million+ per year

Cultivation costs:
30%+ of cotton

Export potential:
USD 200 million+ per year

Price per kg:
USD 800 to USD 5,000 per kg

Market growth:
39% per year

Shelf life:
- apples: up to 330 days
- cherry: up to 25 days
- plums: up to 50 days

Sources: 1 - National Library of Medicine (USA), analysis of the working group
Accelerated development of horticulture in the Republic of Uzbekistan through a cluster system

- On 29 March 2018, the Decree of the President of the Republic of Uzbekistan Shavkat Mirziyoyev “On Additional Measures for the Accelerated Development of Horticulture in the Republic of Uzbekistan” was issued
- One clause of this decree concerns the creation of horticulture clusters: “To ensure in 2018 the creation in each region of 1–2 horticulture clusters and participation from 2019 as clusters in the organization of the agricultural production of all regions specialized in the cultivation of fruit and vegetables; provide horticulture clusters with the right to independently decide on the placement of crops, determine the volume of cultivation of products, their species, and varieties, apply agrotechnological methods taking into account soil and climatic conditions, focus on demand from domestic and foreign markets, and also conclude contracts with farmers and dehkan farms for the harvesting of their agricultural products”
- According to global best practice, the introduction of horticulture clusters will have a positive impact on the development of agriculture

The context and activity of the Cluster Association of the Midi-Pyrenees Region (France) illustrates the important role played by clusters in stimulating innovations in the agribusiness sector

The agri-food sector is the foundation of the economy in Aquitaine and the Midi-Pyrenees

The cluster employs over 210,000 people

Financial turnover in the cluster exceeds EUR 12 billion

Access to 20 million consumers within a 300 km radius of Toulouse

Project participants in cluster association

- Mobilize regional resources for investment in the cluster: attract financial and institutional support for the regional authority, optimize use of financial instruments, and attract federal funding
- Support innovation clubs by individual areas:
  - Adaptation of crops to climate change
  - Development of agricultural machinery
  - Improvement in health safety and quality improvement
  - Innovative products
  - Improvement in production systems
  - Creation of new market proposals
  - Interaction with the environment
- Form alliances with the cluster associations of other regions

Goals

- Increase the added value of the cluster’s products
- Gain leadership among regions due to competitive AIC
- Increase the region’s appeal
- Create new jobs

554.9 EUR million for implementation of 238 projects
595 engaged enterprises
23 projects within the framework of target programs
Introduction of geographic indicators in Australia and Argentina increased added value and exports of agricultural and food industry products

The "Made in Australia" mark indicates Australia as the exporter of agricultural products

Goal:

To create a positive image of Australia as an agricultural product exporter:

1. All the most important product ingredients were produced in Australia
2. The process of finished product manufacture also took place in Australia

Indicators:

- Over 10,000 products are labeled with the "Made in Australia" logo
- 98% of consumers recognize this logo
- Over 1,800 companies use the logo on their products

The "Brand of the Country" program played an important role in creating Argentina’s positive image as an agricultural product exporter

Implementation mechanisms:

- "Brand of the Country" program
- "Argentina Food Products" trademark
- "Wines of Argentina" brand promotion

Activities:

Creation of Argentina Top Wines, an organization uniting more than ten wineries focused on exporting wine

Current results:

At the present time, the Wines of Argentina brand is represented in 36 countries and more than 70 cities worldwide

Target by 2020:

- USD 2 billion, revenue from the sale of Argentine wines
- 10%, global export of wines

Sources: Official websites of Australian Made and Wines of Argentina, analysis of the working group
Agriculture

International experience

The production volume in India’s agricultural sector increased by teaching farmers the best international practices

BASF training program contributed to the development of agriculture in India

Before 2005, the average yield of soybean fields in India amounted to 0.9 t/ha, which accounted for only 37.5% of average global indicators (the average global indicator was 2.37 t/ha). The causes of low crop yield in India were:

- Wrong choice of fertilizers
- Underuse of plant protection agents
- Overall lack of knowledge in farming

The idea is to unite the efforts of BASF agronomists and farmers to achieve higher returns on business:

- Over 2,000 group lessons and 950 onsite seminars. Each of the 280 engaged agronomists trained 150 to 225 farmers
- Teaching farmers how to farm was expected to increase demand for fertilizers, one of BASF’s key products in 2011². Fertilizers were distributed through the existing system of suppliers that farmers were familiar with

Support and education of farmers enabled BASF to triple sales in India in five years

Indicators after the introduction of the training program:

- Soybean crop yield grew by 31%
- Income grew by 24%
- A call center was set up as demand rocketed
- Sales of the training company tripled

- Intensification in agriculture creates demand for mineral fertilizers
- Development of agriculture with the highest result requires informed decisions based on farming knowledge
- Teaching farmers global best practice in the agricultural industry amid poor agriculture intensity is beneficial both for the farmers and for large companies producing fertilizers or agricultural machinery

Sources: BASF reports, analysis of the working group
Strategic options

1

Government associations

80–100% of land is owned by the state. Land plots are leased on a competitive basis.

State monopoly associations have great influence; there are quotas for growing agricultural crops and for water.

- Solving the problem of food security at government level
- High level of development of staff training centers

- Absence of market conditions reduces competition between farmers
- Enterprises subsidized by the state cannot be competitive in global markets

The state plays a key role in the development of agriculture

Examples of countries:
- Uzbekistan
- Israel
- China

2

Medium-sized farms

In total, 40–60% of land is owned by the state. Land plots are leased on a competitive basis or are granted in ownership to farmers.

Emphasis is placed on the development of medium farms through PPP, and regional agricultural clusters are created.

- Ability to increase output due to scalability
- Full-cycle production inside clusters delivers synergies

- Focus on increasing quantity, and not on improving the quality of products
- Lack of flexibility in the choice of products, focus on marginal products

Large and medium farms operating in the cluster system become the driver of agricultural development

Examples of countries:
- France
- Croatia
- Austria

3

Small households

In total 90–100% of land is privately owned. Farmers are granted ownership of the land plots.

Emphasis is placed on the development of small farms, and agriculture has the following structure: farmers – traders – brokers.

- Competition between small households stimulates development of the sector
- Possibility of reorienting production due to the lack of quotas

- Legal barriers need to be introduced to counter potential changes in the intended use of agricultural croplands by land owners

Small households produce natural agricultural products that will then be sold via a system of traders to the domestic market and for export

Examples of countries:
- Germany
- Ireland
- The Netherlands

Sources: Analysis of the working group
Agriculture

Target vision 2035

High-tech agriculture satisfying the growing demands of the population of Uzbekistan and focused on export products with a high level of processing, fresh fruit and vegetables

- 40–60% of land is owned by the state
- Focus on exporting finished products with high added value
- Emphasize PPP in the development of large-scale forms of farming in production and small-scale forms of farming in growing raw materials
- Create regional agricultural clusters
- Rationally use water resources for agricultural needs
- Develop measures to restore saline soils by cultivating salt-tolerant plants such as glycyrrhiza
- Create 15–20 centers for storing, sorting and processing agricultural products
- Open new training centers in partnership with leading US and European universities
- Automated management of agricultural complexes
- Establish regulatory and institutional mechanisms for the organization of the entire cycle of the production process “seed harvesting-growing agricultural products-processing of raw materials-selling (export)” and their relationship with infrastructure
- Define “family farming” in the legislation of Uzbekistan and create the necessary legal, institutional and economic conditions
- Build two factories for the manufacturing of agricultural machinery
- Adopt international quality standards
- Promote healthy eating by the population by offering a wider choice of fruit and vegetables, and ensuring the availability of various types of food for the population

### Figures

<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th>2035</th>
<th>CAGR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural production, USD billion</td>
<td>8.3</td>
<td>35.7</td>
<td>8.4%</td>
</tr>
<tr>
<td>Employment in agriculture, %</td>
<td>29</td>
<td>12.2</td>
<td></td>
</tr>
<tr>
<td>Agricultural productivity, USD thousand per employee</td>
<td>2.2</td>
<td>15.6</td>
<td>10.6%</td>
</tr>
<tr>
<td>Decline in the share of salinized lands, %</td>
<td>48.6</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Decline in the share of irrigated lands exposed to erosion, %</td>
<td>14.6</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Export of alcohol products, USD billion</td>
<td>21</td>
<td>80</td>
<td>8.2%</td>
</tr>
<tr>
<td>Average crop yield of vineyards, t/ha</td>
<td>4</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Annual water intake for agricultural needs, % of total amount</td>
<td>90</td>
<td>70</td>
<td></td>
</tr>
<tr>
<td>Prevalence of malnutrition, % of total population¹</td>
<td>6.3</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

### Investment

<table>
<thead>
<tr>
<th></th>
<th>by 2025</th>
<th>by 2030</th>
<th>by 2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>USD cumulative</td>
<td>14-18</td>
<td>29-36</td>
<td>68-83</td>
</tr>
</tbody>
</table>

### Agriculture

#### Key strategic initiatives

<table>
<thead>
<tr>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Adopt international quality standards</td>
<td>• Establish laboratories to monitor quality and safety</td>
<td>• Improve the informational support system in the agricultural industrial complex</td>
</tr>
<tr>
<td>• Implement the membrane method of plant product storage</td>
<td>• Build factories to manufacture agricultural machinery</td>
<td>• Establish the necessary conditions for the innovative development of agriculture</td>
</tr>
<tr>
<td>• Upgrade existing and build new irrigation and drainage infrastructure</td>
<td>• Produce protein products made of insects to feed animals, poultry, and fish</td>
<td>• Widespread automation of management of agricultural complexes: implement IIOT technology, use drones</td>
</tr>
<tr>
<td>• Create large agricultural clusters and chains selling natural products</td>
<td>• Create programs to retrain agricultural workers</td>
<td>• Final formation of a clear structure in the agribusiness (small and medium forms of farming for growing raw materials and large-scale forms for product manufacture)</td>
</tr>
<tr>
<td>• Improve the personnel training and retraining system for agricultural sectors</td>
<td>• Develop consumer cooperatives</td>
<td>• Create a unified public register of vineyards and database of lands suitable for growing grapes</td>
</tr>
<tr>
<td>• Use salinized irrigated lands to plant salt-tolerant plants: particularly salt-tolerant plants, such as beets (table beets, stock beets, and sugar beets), and medium-tolerant plants, such as tomatoes, cabbage, turnips, radishes, carrots, potatoes</td>
<td>• Subsidize loans for the development of private household plots and farms</td>
<td>• Increase output of the wine sector</td>
</tr>
<tr>
<td>• Subsidize agricultural manufacturers</td>
<td>• Implement HAT technology for the collection and retention of information in the water economy</td>
<td>• Solve malnutrition and micronutrient deficiencies</td>
</tr>
<tr>
<td>• Conduct a series of studies to identify the best, most effective crops in the country</td>
<td>• Develop biotechnologies, including genetic modification, molecular markers, molecular diagnostics, vaccines, cell cultures, microbiological solutions for the food industry</td>
<td>• Use false flax to restore the soil after cotton</td>
</tr>
<tr>
<td>• Implement successful experience of foreign countries in drip irrigation, including innovative methods and techniques of irrigation</td>
<td>• Solve malnutrition and micronutrient deficiencies</td>
<td>• Regulate agricultural products through futures contracts and negotiated prices</td>
</tr>
<tr>
<td>• Implement HAT technology for the collection and retention of information in the water economy</td>
<td>• Use false flax to restore the soil after cotton</td>
<td>• Use aeroponics and biological processing of agricultural waste as part of agricultural production</td>
</tr>
<tr>
<td>• Lease for technical outfitting: equipment and machinery for the development of livestock breeding and crop growing</td>
<td>• Regulate agricultural products through futures contracts and negotiated prices</td>
<td></td>
</tr>
<tr>
<td>• Create a seed bank from local varieties of domesticated crops</td>
<td>• Use false flax to restore the soil after cotton</td>
<td></td>
</tr>
<tr>
<td>• Lease breeding cattle with high productivity (including cows that produce milk with a higher content of lactoferrin, sheep and goats, horses, camels, ostriches, turkeys)</td>
<td>• Implement aeroponics and biological processing of agricultural waste as part of agricultural production</td>
<td></td>
</tr>
</tbody>
</table>

Sources: Analysis of the working group
2.2.1 Textile industry
### Current level of development

#### Key challenges
- Expand production capacities for the complete and in-depth processing of the entire volume of produced cotton fiber
- Resolve the issue of forced labor used to pick raw cotton
- The textile sector performs a social function, *inter alia*, employing women
- Ensure the output of products that are competitive on foreign markets
- Improve the qualified staff training system for the industry

#### Share of the textile industry in GDP

<table>
<thead>
<tr>
<th>Country</th>
<th>2017, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uzbekistan</td>
<td>4.0</td>
</tr>
<tr>
<td>Turkey</td>
<td>9.8</td>
</tr>
<tr>
<td>China</td>
<td>11.2</td>
</tr>
<tr>
<td>India</td>
<td>8.0</td>
</tr>
<tr>
<td>Pakistan</td>
<td>8.5</td>
</tr>
</tbody>
</table>

#### Cost of labor

<table>
<thead>
<tr>
<th>Country</th>
<th>USD per hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uzbekistan</td>
<td>0.9</td>
</tr>
<tr>
<td>Turkey</td>
<td>5.8</td>
</tr>
<tr>
<td>China</td>
<td>1.7</td>
</tr>
<tr>
<td>India</td>
<td>0.3</td>
</tr>
<tr>
<td>Pakistan</td>
<td>0.7</td>
</tr>
</tbody>
</table>

---

### Key findings
- At present, in Uzbekistan, a system of textile clusters has not been developed to the proper extent. However, a plan to establish new textile and cotton clusters has been approved
- A system of geographic indicators on the manufacturing of textile products comparable to the indicators used by leading textile product manufacturing countries has not been introduced
- There is a dearth of state-of-the-art weaving and dyeing-finishing capacities owing to the low profitability of weaving factories and long-term turnover of funds (more than four months)
- Uzbekistan’s cotton industry faced particular criticism globally after several international organizations released reports on the use of forced labor (including child labor) in Uzbekistan to pick cotton; as a result the rate of development of the textile industry slowed and foreign investors were deterred from investing in the sector
- There is a shortage of qualified management staff, while the qualifications of managers and personnel are insignificant. There are no employment incentives, and the prestige of blue-collar and technical jobs has declined

---

Note. 1 – Based on data provided by JSC Uztekstilprom
Source: Analysis of the working group
Current level of development

Breakdown of the volume of textile products by region

Output of the textile industry
USD billion

- The textile industry grew consistently in 2013–2017
- In 2013–2017 annual growth of the textile industry averaged 24%

Sources: 1 - State Statistics Committee of the Republic of Uzbekistan, analysis of the working group
Textile industry

Current level of development

Cotton production and export trends

Structure of cotton exports

Cotton fiber manufacturers

Sources: 1 - European Commission Report 2017 on Uzbekistan, 2 - analytical portal Statista.com, analysis of the working group
Textile industry

Strategic options

1

Cheap products (current situation)

Raw products and exports are subsidized, preferential short-term loans for working capital are provided, and imports of all auxiliary materials are exempt from customs duties in a bid to attract international investors. The creation of large textile companies operating as part of holdings (clusters) delivering a closed production cycle – from fiber processing to the manufacturing of the finished clothes – makes it possible to maintain prices at a competitive level.

Examples of countries:

- India
- Pakistan
- China

- The textile industry starts developing quickly
- The country receives significant foreign investments
- The finished products will both satisfy domestic demands and be exported in large volumes

- International investors investing in production will focus on the cheap labor force. That is why the living conditions of the people will not improve
- Cheap products are often manufactured using dangerous chemicals in order to reduce costs

High competition with countries manufacturing cheap textile products

2

Branded products

The sector is also developing with the help of clusters. However, the finished product value creation chain also includes expenses on partner programs with international design firms, on expansion of the range of clothes through the creation of exclusive models, and on ensuring the production of leisure clothes made from natural fabrics. The clothes industry also focuses on the tastes and demands of specific segments of the population, the age of consumers, climate conditions, etc.

Examples of countries:

- Turkey
- South Korea
- Indonesia

- To secure long-term foreign investments, it is essential to gain a reputation as a manufacturer and exporter of high-quality textiles
- Upgrade of technological equipment
- Organization of production to facilitate the creation of related components: zippers, buttons, etc., which leads to the creation of new jobs

- In the short term, a state-regulated sector must transition to the free market, invest in R&D, purchase new equipment, and ensure the creation of training centers for the retraining of employees

Target development option

Big investments in production, technology, human capital, and brand image are required

Source: Analysis of the working group
Textile industry

Target vision 2035

**High-tech textile industry with extensive processing of raw material** that satisfies the internal needs of the population based on the natural competitive advantages of the country and that is integrated with the global system of the division of labor.

- Recognition by the global community that the issue of forced labor in cotton picking has been resolved
- Expansion of production capacities for the processing of cotton fiber (over 90 ginning plants)
- Launch of partner programs with TOP 10 international design firms to create branded products, in particular, the conclusion of long-term contracts for the manufacturing of textile products.

### Figures

<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th>2035</th>
<th>CAGR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production of textile industry, USD billion 1</td>
<td>3.56</td>
<td>20.7</td>
<td>10.91%</td>
</tr>
<tr>
<td>Exports of the textile industry, USD billion 1</td>
<td>1.62</td>
<td>8.2</td>
<td>10.03%</td>
</tr>
<tr>
<td>Production of chemical fibers and threads, '000 t</td>
<td>104</td>
<td>664</td>
<td>11.52%</td>
</tr>
</tbody>
</table>

### Investments

<table>
<thead>
<tr>
<th></th>
<th>2017-2025</th>
<th>2025-2030</th>
<th>2030-2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>USD cumulative</td>
<td>3.7-4.5</td>
<td>8.5-10.3</td>
<td>21.0-25.6</td>
</tr>
</tbody>
</table>

Sources: 1 – JSC Ustekstilprom, 2 – JSC Uzpakhtasanoat, analysis of the working group.
## Key strategic initiatives

<table>
<thead>
<tr>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conclude partner agreements with international fashion and design agencies</td>
<td>Use next-generation sewing machines to automate the technological component of the production process</td>
<td>Export high-quality products based on one label &quot;Uztextile&quot;</td>
</tr>
<tr>
<td>Conclude long-term contracts for the manufacturing of textile products with major brand manufacturers</td>
<td>Implement &quot;smart clothes&quot; production technologies that will deliver anytime Internet access, measure parameters of state of health, etc.</td>
<td>Introduce nanotechnology in the textile industry</td>
</tr>
<tr>
<td>Update production technologies in the textile industry</td>
<td>Produce new materials made of untraditional raw materials and secondary resources</td>
<td>Optimize staffing, their professional and expertise-based structure</td>
</tr>
<tr>
<td>Adopt international quality standards, eliminate the problem of forced labor</td>
<td>Increase the performance of filtered non-woven materials to resolve the environmental problems of large industrial enterprises</td>
<td>Resolve the problem of the employment of textile industry workers made redundant during automation and robotization (75% of workers are women)</td>
</tr>
<tr>
<td>Make the transition to a system of environmentally sound production of clothes</td>
<td>Create a modern educational and research textile technopark based on the Tashkent Institute of Textile and Light Industry. Develop pilot projects for the localization of chemical fiber production facilities</td>
<td></td>
</tr>
<tr>
<td>Increase the production of fabrics with special types of finishing – crease-resistant and shrink-resistant – enhancing the stability of shape stability and reducing material consumption</td>
<td>Build a technological chain of synthetic materials (from the production of polyester, viscose and polyamide fibers up to the production of technical textile and other synthetic fabrics). Develop pilot projects for the localization of chemical fiber production facilities</td>
<td></td>
</tr>
<tr>
<td>Create a modern educational and research textile technopark based on the Tashkent Institute of Textile and Light Industry. Develop pilot projects for the localization of chemical fiber production facilities</td>
<td>Maintain and develop existing associated industry segments, including the creation of a technological chain of leather materials production (from raw hides to the finished leather for clothing, footwear, furniture, and automotive industries)</td>
<td></td>
</tr>
<tr>
<td>Train skilled technical staff for the textile industry</td>
<td>The segment offers access to new product markets. Expand and diversify product sales markets (Asian, African, American countries). Develop product marketing and advertising, image advertising, and PR activities</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Analysis of the working group
2.2.2 Fuel and energy industry

Economic development. Industry
Thermal power plants (TPP) operating on natural gas account for the main source of electricity and thermal energy in the Republic of Uzbekistan.

Restoration of the independent position Republic of Uzbekistan in the water-energy balance of Central Asian countries requires an increase in the output of power plants through renovation and the conversion of existing and installation of new units, including renewable energy units (biomass, etc.).

An increase in the level of energy expertise requires the opening of new and expansion of existing training centers, and also the development of employee retraining programs, including an expansion in training programs for experts specializing in renewable energy technologies.

Due to the increased importance of renewable energy sources, the coal industry will contract. Therefore, jobs must be found for people working in the coal industry.

Despite the low electricity price (2.8 cents per kW), the cost of connecting to the power supply system is nine times higher than per capita average income, and actual connection to the system takes 6.5 times as long as in developed countries. The country’s ranking in the Doing Business Rating will improve if the connection cost and time required for connection is reduced.

According to data provided by the Ministry of Economy for 2015, the energy content of the GDP of Uzbekistan has declined since 2000 from 0.98 tons of oil equivalent (t.o.e.) to 0.2 t.o.e. per USD 1,000, compared to the global average of 0.2 t.o.e., and could decline even more.

At present, the model for using available energy resources is cost-intensive. If there is no change, the shortfall in energy resources will increase to 65% by 2035.

Upgrade in the existing obsolete energy industry infrastructure.

The need for major repairs of all main units at a number of existing power plants.

The development of the innovative potential of the Republic of Uzbekistan will help to considerably strengthen the water-energy balance of Central Asian countries.

Energy loss during distribution.

Absence of facilities satisfying typical loads (HHP, PSPP, CHP, CCIGT).

Lack of qualified personnel.

Key challenges
Key findings
- Thermal power plants (TPP) operating on natural gas account for the main source of electricity and thermal energy in the Republic of Uzbekistan.
- Restoration of the independent position Republic of Uzbekistan in the water-energy balance of Central Asian countries requires an increase in the output of power plants through renovation and the conversion of existing and installation of new units, including renewable energy units (biomass, etc.).
- An increase in the level of energy expertise requires the opening of new and expansion of existing training centers, and also the development of employee retraining programs, including an expansion in training programs for experts specializing in renewable energy technologies.
- Due to the increased importance of renewable energy sources, the coal industry will contract. Therefore, jobs must be found for people working in the coal industry.
- Despite the low electricity price (2.8 cents per kW), the cost of connecting to the power supply system is nine times higher than per capita average income, and actual connection to the system takes 6.5 times as long as in developed countries. The country’s ranking in the Doing Business Rating will improve if the connection cost and time required for connection is reduced.
- According to data provided by the Ministry of Economy for 2015, the energy content of the GDP of Uzbekistan has declined since 2000 from 0.98 tons of oil equivalent (t.o.e.) to 0.2 t.o.e. per USD 1,000, compared to the global average of 0.2 t.o.e., and could decline even more.

Shares of electricity sources by type

<table>
<thead>
<tr>
<th>Year</th>
<th>Coal</th>
<th>Fuel Oil</th>
<th>Gas</th>
<th>RES</th>
<th>Hydro</th>
<th>Nuclear Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>5,327</td>
<td>1,639</td>
<td>6,188</td>
<td>34,299</td>
<td>34,358</td>
<td>1,915</td>
</tr>
<tr>
<td>2015</td>
<td>3,263</td>
<td>2,112</td>
<td>5,879</td>
<td>35,298</td>
<td>34,358</td>
<td>4,712</td>
</tr>
<tr>
<td>2010</td>
<td>2,630</td>
<td>2,340</td>
<td>2,009</td>
<td>37,992</td>
<td>37,992</td>
<td>4,712</td>
</tr>
<tr>
<td>2005</td>
<td>2,340</td>
<td>1,475</td>
<td>2,112</td>
<td>42,963</td>
<td>42,963</td>
<td>4,712</td>
</tr>
<tr>
<td>2000</td>
<td>2,340</td>
<td>1,475</td>
<td>2,112</td>
<td>42,963</td>
<td>42,963</td>
<td>4,712</td>
</tr>
<tr>
<td>1995</td>
<td>5,327</td>
<td>1,639</td>
<td>6,188</td>
<td>34,299</td>
<td>34,358</td>
<td>1,915</td>
</tr>
</tbody>
</table>

Volume of power generated by electricity

<table>
<thead>
<tr>
<th>Year</th>
<th>Coal</th>
<th>Fuel Oil</th>
<th>Gas</th>
<th>RES</th>
<th>Hydro</th>
<th>Natural Gas</th>
<th>Nuclear Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>12,113</td>
<td>4,712</td>
<td>5,879</td>
<td>34,358</td>
<td>34,358</td>
<td>5,327</td>
<td>6,188</td>
</tr>
<tr>
<td>2015</td>
<td>2,812</td>
<td>4,712</td>
<td>5,879</td>
<td>34,358</td>
<td>34,358</td>
<td>5,327</td>
<td>6,188</td>
</tr>
<tr>
<td>2010</td>
<td>2,340</td>
<td>1,475</td>
<td>2,112</td>
<td>37,992</td>
<td>37,992</td>
<td>2,630</td>
<td>2,112</td>
</tr>
<tr>
<td>2005</td>
<td>2,340</td>
<td>1,475</td>
<td>2,112</td>
<td>37,992</td>
<td>37,992</td>
<td>2,630</td>
<td>2,112</td>
</tr>
<tr>
<td>1995</td>
<td>1,639</td>
<td>2,112</td>
<td>5,879</td>
<td>35,298</td>
<td>35,298</td>
<td>1,639</td>
<td>2,112</td>
</tr>
</tbody>
</table>

Comments

At present, the Republic of Uzbekistan appears to be abandoning fuel oil due to its poor efficiency in generating electricity.
Fuel and energy industry

Analysis of energy supply and demand

Balance of energy supply and demand, 2017
billion kWh

<table>
<thead>
<tr>
<th></th>
<th>Electricity distribution</th>
<th>Exports</th>
<th>Republican Consumption</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>61.95</td>
<td>1.85</td>
<td>60.10</td>
</tr>
</tbody>
</table>

Key findings

- According to the data of JSC Uzbekenergo, the amount of electricity generated by JSC Uzbekenergo, JSC Uzbekhydroenergo, and the isolated generating plants AMMC and UKGC is sufficient to meet demand in Uzbekistan. However, rotating blackouts occur in winter.
- Since 2002 Uzbekistan has been supplying electricity to Afghanistan under annual direct contracts with due account of demand from Afghanistan. Every year the supply volume has increased. In 2018, a contract on the supply of about 1.85 billion kWh of electricity was signed.
- To cover the demand for electricity in Fergana valley, Uzbekistan imports 1.2 billion kWh from Kyrgyzstan (2017).
- Today, four Central Asian republics—Uzbekistan, Tajikistan, Kazakhstan, and Kyrgyzstan—have resumed operation of the unified energy ring of Central Asia.
- This project will also include the establishment of the legal framework to implement a water and energy balance arrangement in the Central Asian region.

Forecast of electricity production per capita

Key findings

- Today, Uzbekistan generates less than 2,000 kWh per capita, which is the second lowest amount in Central Asia.
- JSC Uzbekenergo plans to increase electricity generation to 3,156 kWh per capita, taking into account the growing population.
- This figure may be achieved through increased production of renewable energy sources in the structure of generating capacities from the current level of 12.7% to 19.7% by 2025, an upgrade of the existing plants, the construction of new CCGT, and subsequent construction of NPP.

Sources: JSC Uzbekenergo, EurAsia Daily, analysis of the working group; 1 – Institute of Forecasting and Macroeconomic Studies under the Cabinet of Ministers of the Republic of Uzbekistan, JSC Uzbekenergo; 2 – Sputnik Uzbekistan, analysis of the working group.
Fuel and energy industry

Current level of energy industry development

Water-energy balance chart of the Central Asian region

Water reserves¹
million t.o.e.

<table>
<thead>
<tr>
<th>Country</th>
<th>Total</th>
<th>Tajikistan</th>
<th>Kyrgyzstan</th>
<th>Kazakhstan</th>
<th>Uzbekistan</th>
<th>Turkmenistan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>772</td>
<td>412 (53%)</td>
<td>266 (34%)</td>
<td>32 (4%)</td>
<td>4 (1%)</td>
<td>11 763 (100%)</td>
</tr>
</tbody>
</table>

Oil reserves²
million t

<table>
<thead>
<tr>
<th>Country</th>
<th>Total</th>
<th>Tajikistan</th>
<th>Kyrgyzstan</th>
<th>Kazakhstan</th>
<th>Uzbekistan</th>
<th>Turkmenistan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>4264</td>
<td>6 (0%)</td>
<td>58 (8%)</td>
<td>4 (1%)</td>
<td>82 (2%)</td>
<td>1841 (16%)</td>
</tr>
</tbody>
</table>

Natural gas reserves²
billion m³

<table>
<thead>
<tr>
<th>Country</th>
<th>Total</th>
<th>Tajikistan</th>
<th>Kyrgyzstan</th>
<th>Kazakhstan</th>
<th>Uzbekistan</th>
<th>Turkmenistan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>4092</td>
<td>2 (0%)</td>
<td>83 (2%)</td>
<td>82 (2%)</td>
<td>7504 (64%)</td>
<td>2407 (20%)</td>
</tr>
</tbody>
</table>

Sources: 1 – World Bank, 2 – CIA World Factbook, International Energy Agency, Report based on the UN Development Program Uzbekistan 2030, analysis of the working group
**Fuel and energy industry**

**Current level of energy industry development**

**Distribution of water resources in the Republic of Uzbekistan**

**Experience of using small hydroelectric power plants (HPP)**

- One of the most effective measures to increase energy efficiency would involve the construction of small diversion power plants at shallow channels (7–8 m deep) similar to the experience of Russia, Ukraine, Kyrgyzstan, and Kazakhstan
- Small HPPs have no adverse environmental impact, unlike large dams and run-of-river HPP
- Shavkat Mirziyoyev, President of Uzbekistan, approved the Hydroelectric Power Development Program for 2017–2021. In particular, the program outlined 42 projects for the construction of new and upgrade of 32 existing hydroelectric power plants in the system of the Ministry of Agriculture and Water Facilities of the Republic of Uzbekistan, Uzbekhydroenergo JSC, at natural water flows and water utilization facilities in the country
- In total, 1,350 small HPP in Sweden generate 10% of the country’s electricity demand. About 83,000 small HPP operate in China.

**Hydroelectric power development for 2020–2030**

<table>
<thead>
<tr>
<th>Year</th>
<th>Construction of HPP (over 30 MW)</th>
<th>Construction of small HPP (less than 30 MW)</th>
<th>Modernization of existing HPP</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>1,854</td>
<td>2,618</td>
<td>1,972</td>
</tr>
<tr>
<td>2025</td>
<td>1,972</td>
<td>2,972</td>
<td>1,012</td>
</tr>
<tr>
<td>2030</td>
<td>3,785</td>
<td>712</td>
<td>712</td>
</tr>
</tbody>
</table>

Sources: 1 – Regnum, 2 – Uzbekhydroenergo JSC, State Statistics Committee of the Republic of Uzbekistan, Report based on the UN Development Program Uzbekistan 2030, analysis of the working group
Trend in the availability of water resources in Central Asia and Europe

Categories of water resource availability:
- > 1,700 m³ = significant
- 1,000–1,700 m³ = insignificant
- < 1,000 m³ = shortage

Comments

• Over the last 40 years, water supply volumes in Central Asia declined from 8,400 m³ to 2,500 m³ per capita annually
• By 2030, in view of current population growth indicators in Central Asia, water supply volumes will reach the critical level of less than 1,700 m³ annually
• However, another 500–700 million m³ of water will be required annually to support the minimum consumption level in Central Asia
Fuel and energy industry

Current level of energy industry development

Qualitative distribution of wind speed (average wind speed) at 80 m above the ground

- Uzbekistan has huge potential for the commercial development of the wind power industry
- The regions with wind potential marked on the wind map in purple, red, and orange (5.50 to > 6.25 m/s) are suitable for the construction of highly efficient wind power plants

Optimum place for the construction of wind power plants

Daily amount of cumulative solar radiation

- The daily amount of cumulative solar radiation makes it possible to determine the level of solar exposure, which is one of the main criteria for the installation of solar batteries and solar collectors
- Uzbekistan has favorable conditions for the development of solar power, since most of the country has the maximum solar exposure rate of 5.5 to 6 kWh/m

- By 2025, the share of solar power in the Republic of Uzbekistan will increase to 2.3%, and the share of wind power to 1.6%¹

Criteria for choosing the location to install industrial solar batteries:
1) Highest concentration of solar radiation (> 6 kWh/m)
2) Settlements are located far from other power plants generating energy, so lack of power is observed

Sources: 1 - Sputnik Uzbekistan, Report based on the UN Development Program Uzbekistan 2030, analysis of the working group
Fuel and energy industry

Strategic options for the level of regulation of the energy industry

1

Focus on traditional energy sources

Electricity will continue to be generated at existing TPP and CHPP. New electricity generation technologies will also be implemented based on mobile gas turbine plants.

- Plants and infrastructure already exist; they only require renovation
- There are huge natural gas reserves that will satisfy domestic demand

- Today, the global trend of abandoning fossil fuel use is becoming more popular
- Decrease in gas export potential

Uzbekistan will continue to use traditional energy sources, and investments will be used to upgrade the infrastructure and equipment

2

Focus on renewable energy sources

Over 30% of all energy of the country is generated with renewable energy sources (RES); large investments are being made in the construction of industrial solar batteries, wind farms, small HPP, and related infrastructure and also in energy storage systems

- Geographic position and weather conditions
- Relatively inexpensive installation of power generation plants
- Reduction in prices for renewable energy equipment
- Concurrent development of industrial areas in the case of large-scale implementation of RES

- Lack of qualified personnel
- At the moment, there are no operational and effective energy storage solutions
- The modern electrical network is not configured to connect with RES
- High cost of transportation of the equipment for RES
- Lack of the institutional environment and efficient mechanisms for the support of RES

Green energy will be the main energy in Uzbekistan’s energy portfolio

3

Focus on the nuclear power industry

Over 30% of all electricity is generated at nuclear power plants, large direct foreign investments are attracted, and foreign specialists are brought in to build and subsequently service them

- Direct investments
- Creation of new jobs for highly qualified specialists
- Potentially uninterrupted supply of electricity over a longer period of time compared to other sources
- Possibility of using energy carriers to receive products with gross added value (GAV)

- Electricity from RES is cheaper
- Man-made risks
- High demand for water
- Very high cost of investment
- Geopolitical risks
- The lack of agreed fee in tariff policy

Major capital investments in the nuclear power industry will have a long payback period, but power supply will be relatively uninterrupted

Sources: analysis of the working group
Fuel and energy industry

Target vision 2035

Establish Uzbekistan’s position in the energy balance of Central Asia, adopt a resource-efficient model for water consumption, and increase the economy’s energy efficiency overall

- Build small diversion HPP and related infrastructure
- Build plants generating thermal or electrical power from renewable energy sources, such as the sun, wind, or biowaste
- Work on creating a water-power consortium in Central Asia (which would meet 100% of domestic demand for electricity)
- Develop projects in the nuclear power industry (together with Russia, France, and China)
- Develop an industrial energy storage system
- Implement a decentralized electricity generation system (Smart Grid)
- Establish an efficient and stable energy system with high added value
- Prepare highly qualified personnel in RES and nuclear power
- Facilitate significant localization of the manufacturing of equipment and technological development of RES
- International companies will operate in Uzbekistan’s energy industry
- Separation of tariffs for day and night

### Figures

<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th>2035</th>
<th>CAGR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electricity generation, billion kWh</td>
<td>60.8</td>
<td>117.1</td>
<td>3.7%</td>
</tr>
<tr>
<td>Electricity exports, billion kWh</td>
<td>7.6</td>
<td>12.1</td>
<td>2.6%</td>
</tr>
<tr>
<td>Electricity losses during transfer and distribution, %</td>
<td>15</td>
<td>6.52%</td>
<td></td>
</tr>
</tbody>
</table>

### Investments (in the fuel and energy complex)

<table>
<thead>
<tr>
<th></th>
<th>by 2025</th>
<th>by 2030</th>
<th>by 2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>USD cumulative</td>
<td>23–28</td>
<td>37–46</td>
<td>70-86</td>
</tr>
</tbody>
</table>

Sources: 1 – JSC Uzbekenergo, 2 – Index Mundi (electricity loss indicator in the EU), analysis of the working group
Fuel and energy industry

Target vision 2035

Increase in the generation of all used sources of energy

- Upgrade and build additional TPP and CCGT facilities with simultaneous gradual reorientation toward investments in "green" energy
- Transition towards the use of more efficient and environmentally friendly sources of energy; increase the share of alternative energy

Increase in energy efficiency, forecast for 2018–2035,

GW

Electricity dynamics broken down by different power source, 2018–2035

Sources: 1 – Uzbekenergo JSC, 2 – Index Mundi (electricity loss indicator in the EU), analysis of the working group
Fuel and energy industry

Target vision 2035

Increase in the share of renewable energy sources in the general structure

- Invest in wind and solar power to create facilities capable of supplementing existing traditional sources
- Reduce the share of use of fossil fuel in favor of renewable sources
- Increase investments in thermal power for further development of existing facilities by 2025
- Build solar, wind, and hydroelectric power plants of 1 GW, 1 GW and 2 GW, respectively
- Increase the share of renewable sources of energy to 30% of the total by 2025

USD 29 billion in investments in the energy industry is required until 2035.

USD 6 billion

USD 18 billion

USD 5 billion

Thermal power
Nuclear power
Hydraulic power
Wind power
Solar power

Electricity generation,

billion kWh

Sources: Analysis of the working group
### Fuel and energy industry

#### Main strategic initiatives in the energy industry

<table>
<thead>
<tr>
<th>Year</th>
<th>Initiative</th>
</tr>
</thead>
<tbody>
<tr>
<td>2025</td>
<td>Operate and upgrade combined-cycle power units during the implementation of economic measures, including the introduction of a fee for excess emissions of carbon dioxide and direct ban on obsolete technologies that do not meet modern technological and environmental standards.</td>
</tr>
<tr>
<td></td>
<td>Finalize the upgrade of existing power plants, primarily where coal is the specified fuel. Upgrade and commission gas turbine and upgraded combined-cycle CHPP of various capacity, including modular stations operating mostly on gas and partially on coal (where coal is the specified fuel).</td>
</tr>
<tr>
<td></td>
<td>Develop nuclear and renewable energy (in particular, solar and wind energy) aimed at diversifying the national fuel and energy balance.</td>
</tr>
<tr>
<td></td>
<td>Water-energy consortium as part of the restoration of the unified energy system of Central Asia. Supply of electricity to neighbors at a competitive price and receipt water resources in exchange.</td>
</tr>
<tr>
<td>2030</td>
<td>Implement a distributed electricity generation system.</td>
</tr>
<tr>
<td></td>
<td>Develop an industrial energy storage system.</td>
</tr>
<tr>
<td></td>
<td>Ensure balanced development of networks depending on the specific terms and conditions for the utilization of transformers and lines based on elaboration and implementation of the Network Development Plan.</td>
</tr>
<tr>
<td></td>
<td>Develop the energy industry based on renewable energy sources, including in the form of small diversion HPP, solar power plants, geothermal power plants and heat supply units, bioenergy and wind plants, waste incineration and waste processing energy facilities in large cities. The share of RES in the energy balance will reach 25%–30%.</td>
</tr>
<tr>
<td></td>
<td>Start retraining coal industry workers.</td>
</tr>
<tr>
<td></td>
<td>Develop production of equipment for power generation from RES and develop regional hubs for the industrial storage of electricity.</td>
</tr>
<tr>
<td></td>
<td>Introduce a system of compulsory quotas for the employment of local personnel for foreign contractors.</td>
</tr>
<tr>
<td></td>
<td>Introduce a compulsory procedure for the establishment of a liquidation fund for coal mining enterprises.</td>
</tr>
<tr>
<td>2035</td>
<td>Integrate industrial use of digital technologies and the internet.</td>
</tr>
<tr>
<td></td>
<td>Continue work on strengthening interstate power transmission lines for a material increase in the share of Uzbekistan’s electricity in the energy balance of neighboring countries in Central Asia.</td>
</tr>
<tr>
<td></td>
<td>Participate in the construction of infrastructure under the CASA-1000 program and thereby increase the export potential of the Republic of Uzbekistan toward Afghanistan and Pakistan, taking into account the shortfalls in the energy system in these countries.</td>
</tr>
<tr>
<td></td>
<td>Reduce the share of gas consumption in electricity generation due to support of the gas processing industry, receiving a product with a higher added value.</td>
</tr>
<tr>
<td></td>
<td>Ensure significant localization of the cycle of RES equipment and technology production.</td>
</tr>
<tr>
<td></td>
<td>Reduce the role of coal in the energy generation structure and finish work on closing lossmaking and unpromising coal enterprises.</td>
</tr>
<tr>
<td></td>
<td>Develop projects in the nuclear power industry and include NPP facilities in the total electricity balance of the country.</td>
</tr>
</tbody>
</table>

**Sources:** Analysis of the working group
Fuel and energy industry

Main strategic initiatives in the energy industry

- Upgrade 62 main substations of 220–500 kV, replacing the main power equipment with energy-efficient equipment with increased power (power and metering transformer units)
- Develop financial mechanisms and other initiatives to stimulate demand for green electric power—assistance in the development of industry, large infrastructure projects, and exports of electricity
- Implement measures of state support for the installation of solar panels on the roofs of houses in the private sector, for the construction of windmills for SMEs and farms
- Upgrade distribution networks and power lines
- Focus on the energy efficiency of buildings and urban infrastructure
- Open new and expand existing training centers and develop programs for personnel retraining, including extension of training programs for the preparation of specialists in renewable energy technologies
- Implement an automatic control and information collection system (based on the example of SCADA)
- Study the experience of post-Soviet countries, such as Georgia, where it proved possible to partially resolve issues related to the lack of electricity, in particular, by attracting foreign investments in the construction of HPP and modernization of existing HPs in the country. Study the experience of implementing programs against the backdrop of transparent and clear rules for investors to enter the energy sector and state-guaranteed energy purchase prices.

Sources: Analysis of the working group
The lack of qualified staff, low level of qualifications of managers and personnel, absence of employee motivation, decline in the prestige of blue-collar and technical jobs, use of old working methods

Uzbekistan’s oil and gas industry is a regulated market, and the transition to a developed oil and gas market will require structural adjustments to the value creation chain, as well as amendments to legislation and an increase in the number of international players

There is a tendency to reduce formation pressure on oil and gas fields due to generation intensity, requiring additional investments not only in development but also in maintenance of the industry

Uzbekistan does not fully avail itself of available and relatively inexpensive associated gas utilization technologies (it ranks 31st in terms of the quantity of flare gas) and exhaust heat utilization technology (ORC technology)

Feasibility studies of projects are based on obsolete methodology

### Key challenges

- Implement systematic measures to train qualified staff in the industry and integrate the educational process with practice, science and production
- Increase the raw material processing depth to obtain goods with a higher added value based on comprehensive assessment of economic efficiency.
- Optimize the efficiency of drilling process management
- Organize local centers for the repair and maintenance of high-tech equipment
- Renovate obsolete gas transportation equipment and upgrade existing refineries

### Ratio of exports and domestic consumption of gas

<table>
<thead>
<tr>
<th>Year</th>
<th>Exports (billion m³)</th>
<th>Domestic consumption (billion m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>3 (11.7%)</td>
<td>51 (94.4%)</td>
</tr>
<tr>
<td>2017</td>
<td>6 (10.2%)</td>
<td>50 (89.3%)</td>
</tr>
</tbody>
</table>

At present, the share of natural gas exports increased (twofold, compared to 2016)

### Oil consumption

<table>
<thead>
<tr>
<th>Year</th>
<th>Domestic production (million t)</th>
<th>Import (million t)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>2.65 (81.0%)</td>
<td>0.3 (19.0%)</td>
</tr>
<tr>
<td>2017</td>
<td>2.52 (75.8%)</td>
<td>0.2 (24.3%)</td>
</tr>
</tbody>
</table>

Since 2016, oil consumption has grown by 60,000 t, while domestic consumption has declined by 130,000 t; oil imports have increased by 17,100 t

### Average retail prices for oil products

<table>
<thead>
<tr>
<th>Country</th>
<th>Petrol 91</th>
<th>Diesel fuel (sulfur 0.1%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kazakhstan</td>
<td>0.48</td>
<td>0.52</td>
</tr>
<tr>
<td>Uzbekistan</td>
<td>0.85</td>
<td>0.57</td>
</tr>
<tr>
<td>Kirgyzstan</td>
<td>0.63</td>
<td>0.64</td>
</tr>
<tr>
<td>Tajikistan</td>
<td>0.75</td>
<td>0.65</td>
</tr>
<tr>
<td>Afghanistan</td>
<td>0.77</td>
<td>0.68</td>
</tr>
</tbody>
</table>

The average retail price for petrol 91 in the Republic of Uzbekistan is higher than in other Central Asian countries due to a shortage of motor fuel

The price for diesel fuel (sulfur 0.1%) is at the level of other countries in the region. However, consumer access is limited.
Fuel and energy industry

Proven oil and gas reserves in Uzbekistan

Proven gas reserves in Uzbekistan (trillion m³)

Proven oil reserves in Uzbekistan (million t)

Oil production (past and future)

Oil production is decreasing

1996 – 2017

Annual production volume (million t)

2018 – 2027

Sources: Fitch Solutions Uzbekistan Oil & Gas Report 2019
Fuel and energy industry

Forecast gas production forecast through 2027 looks stable

Gas production

Gas production in Uzbekistan increased significantly in 2018 after the launch of new production facilities. It is anticipated that gas production in the country will continue growing through 2027, but at more modest rates.

• The increase is attributable to a range of investment projects that are being implemented by domestic and international oil and gas companies, such as LUKOIL.
• Production was boosted by the launch of new capacities at the Kandymskoye and Gissarskoye fields and Ustyurt.
The refining industry in Uzbekistan is small. The total capacity load ratio is less than 30%.
At present, a refinery is under construction in Jizzakh Region that is expected to increase the existing refining facilities of the country by almost 48% and to more than double the production of petroleum products in Uzbekistan by 2021.

It is anticipated that the capacity load ratio in the oil refining sector will continue to decrease slowly, as the margins from oil refining are insignificant.
At the same time, however, it is anticipated that production volumes will increase after the launch of the new refinery in Jizzakh Region by USD 2.2 billion in 2021 and potential new GTL refineries.

Sources: Fitch Solutions Uzbekistan Oil & Gas Report 2019
Domestic consumption of petroleum products

Over the next few years oil consumption is expected to grow against the background of a fall in domestic production of fuels due to low utilization indicators at obsolete Uzbek refineries. Domestic demand for oil ranged from 6 million to 7 million per annum in 1996–2007, but decreased in subsequent years and reached only 3 million per annum in 2018. Growth of petroleum product consumption by 0.5% per annum is expected by 2027.

Domestic consumption of gas

It is anticipated that domestic consumption of gas in Uzbekistan, which dominates the energy sector, will increase gradually during the forecast period through 2027. Consumption growth will exceed increases in production, which will affect export capabilities. However, the prioritization of gas exports over domestic needs may result in a decrease in consumption forecasts.
In Uzbekistan, 86% of extracted gas is consumed for domestic consumption; Uzbekistan is a country with a high consumption level per capita.¹

<table>
<thead>
<tr>
<th>Place</th>
<th>Country</th>
<th>Per capita m³</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Uzbekistan</td>
<td>1730.5</td>
</tr>
<tr>
<td>2</td>
<td>Germany</td>
<td>977.9</td>
</tr>
<tr>
<td>3</td>
<td>South Korea</td>
<td>966.6</td>
</tr>
<tr>
<td>4</td>
<td>Kazakhstan</td>
<td>889.8</td>
</tr>
<tr>
<td>5</td>
<td>Turkey</td>
<td>596.9</td>
</tr>
<tr>
<td>6</td>
<td>France</td>
<td>573.2</td>
</tr>
<tr>
<td>7</td>
<td>Denmark</td>
<td>571.4</td>
</tr>
<tr>
<td>8</td>
<td>Sweden</td>
<td>96.0</td>
</tr>
</tbody>
</table>

Source 1 – http://world.bymap.org/NaturalGasConsumption.html
Fuel and energy industry

Current level of fuel industry development

Oil and gas production and processing by region

Comments

- Proven reserves of fuel and energy resources in Uzbekistan: oil, about 82 million t, natural gas, 1.85 trillion m³, coal, 1.9 billion t, including: lignite, 1.853 billion t; black coal, 47 million t
- Uzbekistan is ranked:
  - 44th in the world in terms of oil reserves
  - 21st in the world in terms of natural gas reserves
- 125,000 people are employed in the oil and gas production sector
- 210 fields with free gas deposits
- 125 oil fields
- The gas industry is concentrated around Gazli and Qarshi. The main natural gas reserves are found at the Shurtan, Zevardy, Kokdumalak, Alan, and Adamtash fields
- Oil is mostly produced in Fergana valley and Bukhara Region
- Oil fields have been discovered in Karakalpakstan and in six regions: Qashqadaryo, Bukhara, Surxondaryo, Namangan, Andijan, and Fergana. About 75% of oil reserves are concentrated in Qashqadaryo Region, including 70% at the Kokdumalak field
- At present, coal is mined at three fields: Angren lignite field, Shargun and Baisun black coal fields

Sources: Uzbekneftegaz, World Bank, analysis of the working group
### Fuel and energy industry

#### Current level of fuel industry development

<table>
<thead>
<tr>
<th>Natural gas</th>
<th>Oil</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Geological exploration</strong></td>
<td><strong>Production and/or processing</strong></td>
</tr>
</tbody>
</table>

#### Local and foreign companies

- **Uzbekneftegaz**
- **LUKOIL**
- **Gazprom**
- **CNPC**
- **KNOC**
- **Natural Gas-Stream**
- **PETROMARUZ**
- **Uz-Kor Gas Chemical**

#### Comments - natural gas

- The state company JSC Uzbekneftegaz is responsible for all extraction and distribution processes through its subsidiaries, while JSC Uztransgaz is responsible for gas transportation.
- Large foreign companies from Russia, South Korea, and China are involved in natural gas extraction, and LUKOIL is the main foreign company investing in the country. There are no Western companies on the market.

#### Comments - oil

- The state company JSC Uzbekneftegaz is responsible for the upstream sector and for marketing and sales via its subsidiaries. JSC Uznefteprodukt is also involved in marketing and sales.
- Russian, Chinese, and Korean companies also operate in the production and processing sectors.

---

Sources: Neftegaz.ru analytical agency, analysis of the working group
Flaring volume – TOP 60 countries rating, 2013–2017
The countries are graded by the aggregate volume of flared gas in 2017
Cubic meters of natural gas flared by production of 1 oil barrel

- In 2017, Uzbekistan ranked 31st worldwide by the volume of associated flared gas and 3rd by the quantity of associated flared gas per barrel of oil produced and in 2013–2016 was the worst worldwide in this indicator.
- In April 2015 Uzbekistan undertook to terminate associated gas flaring by 2030 within the framework of the Global Gas Flaring Reduction Partnership (initiated by the UN and the World Bank)
- At present, there is still no clear state program/plan or regulatory policy for the reduction of flare gas emissions.

Use of ORS technology at the Khodzhiabad booster compressor

- According to the data of Uzbekneftegaz, about one billion cubic meters of gas are flared annually (according to other data, up to 1.8 billion cubic meters), while total gas production equals about 53 billion cubic meters.
- Even though the gas flaring volume contracted recently by 3.5 billion cubic meters due to the construction of booster compressors and associated oil gas collection systems, the potential of these projects remains significantly underutilized.
- Associated gas utilization projects have a high added value, but depend on the energy transmission infrastructure.
- The potential of ORS technology use has not been realized, subject to appropriate financing.
1. Regulated market

There is a need to improve the efficiency and return on state assets and import the technologies of foreign companies. IPOs of state assets and accession to the WTO and regional integration (similar to EU). Price deregulation due to unstable development of the industry.

- The price of electricity supply is regulated by the state and, therefore, remains low
- The state provides jobs to workers by subsidizing the industry
- There is no competitive environment
- There are regulatory barriers to entering the market

Examples of countries:
- China
- Uzbekistan

The state will continue to play a major role in the development of the oil and gas sectors

2. Developed market with state control

The privatization of state assets has started to increase the interest of foreign investors (political reasons). Price deregulation in some areas of the sector. Gradual introduction of an antitrust law and law on countering unlawful price fixing.

- Improved business climate due to reduced state participation
- Possibility of initial attraction of private investment
- Establishment of free access to the electricity market for renewable energy sources
- This type of market is a transition between regulated and emerging markets, which is why it is still exposed to uncertainty

Examples of countries:
- Norway

The state continues to control the market, but private players start to appear

3. Developed market with private monopolies

The privatization of public assets is completed, large international players are involved in the upstream sector, and in the processing and transportation sectors. Disaggregation of assets in the oil and gas industry and the energy industry.

- Full deregulation, except for natural monopolies, which leads to the formation of a competitive environment
- Reduced barriers for entering the energy sector due to a focus on increased market efficiency
- It is likely that transitioning to a market system will reduce the number of jobs in order to increase operational efficiency

Examples of countries:
- USA

Fully market-based sector, private players are the driving force of industry development

Sources: Analysis of the working group
**Fuel and energy industry**

**Target vision 2035**

**High efficiency** of management of all types of energy carriers, including in terms of cost reductions and improvements in labor efficiency, increase in the processing depth, improvement in the general energy efficiency of the economy of the Republic of Uzbekistan, proactive implementation of new technologies from design to the utilization of associated gas at existing entities

- Reorganize the existing business units of Uzbekneftegaz, including through the engagement of foreign managers
- Improve fundamentally business processes in the industry (feasibility study calculation methodology, procurements, etc.)
- Privatize lossmaking and inefficient state organizations in the industry
- Diversify the geography of the international partners of the state in the oil and gas industry
- Improve the methodology of theoretical and practical training of personnel and create incentives to popularize the engineering profession
- Upgrade infrastructure and increase raw material processing depth at refineries
- Increase the number of fueling stations and related infrastructure
- Decrease significantly the volume of associated gas flaring through the implementation of utilization technologies and the introduction of respective legislative restrictions to promote the process
- Develop a decentralized sustainable energy supply system for remote and inaccessible regions
- Certify residential and office buildings in cities in terms of their energy efficiency and transition to a new system of tariffs for energy consumption, depending on the passport of the building ("green" house)
- Upgrade the power transportation infrastructure to allow entities to generate electricity not only for their own needs
- Maintain the industry development sequence and abandon economically unfeasible projects

---

**Figures**

<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>World position with regard to the volume of flared gas</td>
<td>31</td>
<td>60</td>
</tr>
<tr>
<td>Natural gas production, billion m³/year</td>
<td>57</td>
<td>80</td>
</tr>
<tr>
<td>Gas condensate production, million t/year</td>
<td>1.95</td>
<td>3.5</td>
</tr>
</tbody>
</table>

**Investments (in the fuel and energy complex)**

<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>by 2025</td>
<td>23–28</td>
<td></td>
</tr>
<tr>
<td>by 2030</td>
<td>37–46</td>
<td></td>
</tr>
<tr>
<td>by 2035</td>
<td>70–86</td>
<td></td>
</tr>
</tbody>
</table>

**USD cumulative**

Sources: 1 – State Committee of the Republic of Uzbekistan for Geology and Mineral Resources, analysis of the working group
### Main strategic initiatives of fuel industry

#### 2025
- Increase the number and quality of staff training centers for oil and gas and geological sectors and staff training in foreign countries, train top and middle management of companies
- Develop and approve a territorial plan for the construction and placement of filling stations
- Reorganize the operations of JSC Uzbekneftegaz through the engagement of external managers, including the provision of consultations to administrative staff
- Process associated gas
- Retrofit and upgrade refineries to develop technological facilities for deeper oil refining, decrease specific oil consumption per unit of target products, and implement state-of-the-art technologies
- Retrofit gas transport facilities, provide systematic organization of the operation process modes of the main gas pipelines, and reduce gas losses
- Bring the system of technical and environmental standards for petrochemical products into line with the standardization systems of the European Union
- Arrange for the structural division and market liberalization of the production and retail sale of gas, fuel and lubricants, and electricity
- Increase the overall energy efficiency of the economy, including through the involvement of external consultants to analyze priority areas for optimization and improvement in the oil and gas industry
- Use power plants operating on low-boiling heat carriers (LBHC) using the Organic Rankine Cycle (ORC modules)

#### 2030
- Increase the crude oil refining depth at refineries and improve the Nelson complexity index
- Use new technologies to analyze the state of equipment and launch predictive repairs of equipment and monitor the condition of employees, and use digital twins (virtual modeling of assets)
- Implement automated control systems and telemechanics
- Implement technologies to enhance the efficiency of hydrocarbon production at existing fields
- Introduce a system of compulsory quotas for the employment of local personnel for foreign contractors

#### 2035
- Continue development of the gas processing and gas chemical industry for efficient use of valuable fractions of crude hydrocarbons and associated petroleum gas
- Automate processes in the oil and gas industry, implement robotization
- Create favorable conditions for the development of a supplier ecosystem based on SMEs to provide engineering services and other service functions to enterprises in the industry

*Sources: Analysis of the working group*
2.2.3 Metals and mining industry
The mining industry is one of the main sources of revenue for the budget of the Republic of Uzbekistan.

Uzbekistan is one of the world’s top 10 countries in gold reserves and the production of gold and uranium.

In total, 2,028 fields are listed in the state balance of mineral resources of the Republic of Uzbekistan (2018): precious metals (97) (gold, silver); nonferrous and rare metals (12); radioactive metals (38); ferrous metals (5); construction materials (867); ground water (649); hydrocarbons (244) (oil, gas, condensate); mining materials (37); mining and chemical materials (32); ornamental stone materials (30); coal and slate coal (7); others (1).

At the current rate of production, proven gold reserves will last for more than 50 years; uranium, for more than 20 years; copper, for more than 100 years.

The prospecting, evaluation and exploration of gold accounts for about 45% of total state funding for geological exploration work; uranium (17%); other metallic minerals (10%), ground water (4%), nonmetallic minerals (3%), regional surveys (7%); R&D (5%), etc.

On 23 July 2018 the President of Uzbekistan Shavkat Mirziyoyev signed a Decree to increase the tax on subsoil use, imposed on the extraction of nonferrous and precious metals (fivefold on average). The respective amendments were introduced to Annex No. 14 of Presidential Decree No. PP–3454 dated 29 December 2017.

Sources: 1 – State Committee of the Republic of Uzbekistan for Geology and Mineral Resources, analysis of the working group.
Metals and mining industry

Current level of development

Metallogenic zoning map of Uzbekistan

Gold: 1 – Muruntau and Myutenbay, 2 – Charmitan, 3 – Chadak, 4 – Kyzylalmasay, 5 – Kochbulak, 6 – Kauldy, 7 – Mardzhanbulak, 8 – Sarmich, 9 – Adzhubugut, 10 – Kokpatas, 11 – Daugyz, 12 – Amantaytau, 13 – Balpantau

Silver: 14 – Lashkerek, 15 – Vysokovoltnoye, 16 – Kosmanachi, 17 – Okzhetpes, 18 – Adkepe


Nonferrous metals (copper, lead, zinc): 19 = Kalmakyr + Eshlik-I, 20 = Sarycheku, 21 = Eshlik-II, 32 = Kurgashinkan, 33 = Uch-Kulak, 34 = Khandiza

Radioactive metals (uranium): 26 = Uchquduqtau, 27 = Dzhantuar, 28 = Alatanga

Ferrous metals (iron): 29 = Tebinbulak, 30 = Temirkan, 31 = Syurenata

Ratio of the value of proven and probable reserves

USD billion

- According to the estimates of the State Committee of the Republic of Uzbekistan for Geology and Mineral Resources, potential crude reserves could be worth USD 5.7 trillion

Sources: 1 – State Committee of the Republic of Uzbekistan for Geology and Mineral Resources, analysis of the working group
Largest metals enterprises

Current legislation governing the metals and mining industry¹

- The activities of mining and metals companies in the Republic of Kazakhstan are governed by the following legislative acts:
- In recent years, a number of regulatory acts have been adopted in Uzbekistan to expand investment cooperation in the mining and geological sector¹:
  - Resolution No. 328 of the Government of the Republic of Uzbekistan which approved the lists of prospective areas of strategically important solid minerals
  - Decree No. PP-3479 of the President of the Republic of Uzbekistan “On Measures for the Stable Supply of In-Demand Types of Products and Raw Materials to Sectors of the National Economy”
  - Decree No. PP-3578 of the President of the Republic of Uzbekistan “On Measures to Improve the Activities of the State Committee of the Republic of Uzbekistan for Geology and Mineral Resources”

Sources: ¹ State Committee of the Republic of Uzbekistan for Geology and Mineral Resources, analysis of the working group
The production of all metals is currently concentrated in four major state entities

### Nonferrous metallurgy

#### Navoiy MMC SC
- Navoiy MMC (NMMC) is one of the largest **gold producers** in Central Asia
- The combine is **fully owned** by the state
- The main gold mining base of the enterprise is the **Muruntau field** (Central Kyzylkum), which has been mined since 1967
- Gold production at NMMC has equaled approximately **80,000 t** in recent years out of total production of **100,000 t** in Uzbekistan
- The NMMC production complex currently unites four metals plants in: **Navoi -1 (MMC-1)**, **Zarafshan -4 (MMC-2 and others)**, **Uchquduq -1 (MMC-3)**, **Zarmitan -1 (MMC-4)** and **Marzhanbulake -1**

#### Almalyk MMC JSC
- Almalyk MMC (AMMC) is the **only copper producer** in Uzbekistan
- The state holds a **97.53%** interest in the combine, which is controlled by SFI Management Group
- The enterprise produces **refined copper**, **zinc**, **lead** and **molybdenum concentrates**, and other products
- AMMC accounts for about **90% of silver production and 20% of gold production** in the country
- Since 2015, the assets of Uzbek Combine of High-Melting and Heat-Resistant Metals JSC (UzCHHM, Chirchiq, Tashkent Region) have been fully transferred to AMMC. As a result, the combine is also the monopoly producer of **tungsten**

#### Uzvtortsvetmet JSC
- Uzvtortsvetmet JSC is the sole entity in the Republic of Uzbekistan managing **ferrous metals scrap and waste**
- The state holds a **50.5%** interest in the company, which is controlled by SFI Management Group
- The entity produces secondary aluminum, copper-based nonferrous alloys, lead alloys, nonferrous metals scrap and waste, and other products

### Ferrous metallurgy

#### Uzmetcombine JSC
- Uzmetcombine is **the leading ferrous metallurgical enterprise** in Uzbekistan
- The state holds a **74.1%** interest in the combine, which is controlled by SFI Management Group
- According to expert estimates, only 36.1% of Uzbekistan's current total demand for rolled ferrous metals is satisfied by the processing of ferrous metals scrap and waste at Uzmetcombine JSC in Bekabad. The remainder (63.9%) is imported from CIS countries, primarily Russia, Kazakhstan and Ukraine

---

The plan for the upgrade and technical renovation of the processing equipment fleet includes a decrease in the amount of obsolete equipment (from 49% to 13%) and increase in the overall amount of equipment in use.
Metals and mining industry

Further development of metals and mining enterprises

Listing of metals and mining enterprises through IPOs

• To enable the metals and mining industry to facilitate continued active growth of Uzbekistan’s economy, the largest metals and mining enterprises initially require financial restructuring. After the transfer of the companies to private management, they can be prepared for IPOs.

• This method has been used in several countries:
  - For example, Saudi Arabia transferred its main mining company Maaden to private management and in the process increased its value and the volume of transfers to the budget of Saudi Arabia several-fold
  - Botswana and Chile implemented similar strategies with their main mining companies

The engagement of international experts enabled Maaden to increase the value of the company and revenues to the budget of Saudi Arabia several-fold

✓ Implementation of up-to-date corporate governance methods
✓ Engagement of international experts
✓ Implementation of operating measures to improve production
✓ Attraction of international debt finance
✓ Listings on international stock exchanges

Financial indicators (Maaden)

<table>
<thead>
<tr>
<th>Year</th>
<th>EBITDA, USD billion</th>
<th>Revenue, USD billion</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>0.1</td>
<td>0.0</td>
</tr>
<tr>
<td>2009</td>
<td>0.2</td>
<td>0.0</td>
</tr>
<tr>
<td>2010</td>
<td>0.2</td>
<td>0.0</td>
</tr>
<tr>
<td>2011</td>
<td>0.4</td>
<td>0.0</td>
</tr>
<tr>
<td>2012</td>
<td>1.5</td>
<td>0.2</td>
</tr>
<tr>
<td>2013</td>
<td>1.6</td>
<td>0.8</td>
</tr>
<tr>
<td>2014</td>
<td>2.9</td>
<td>1.0</td>
</tr>
<tr>
<td>2015</td>
<td>3.0</td>
<td>1.0</td>
</tr>
<tr>
<td>2016</td>
<td>2.6</td>
<td>1.0</td>
</tr>
<tr>
<td>2017</td>
<td>3.3</td>
<td>1.6</td>
</tr>
</tbody>
</table>

Sources: BUYUK KELAJAK expert data, analysis of the working group
Metals and mining industry

Further development of metals and mining enterprises

IPOs of metals and mining enterprises

- Increase production
- Implement an investment program aimed at increasing the return on investments and capitalization
- Increase the profitability of the enterprises in line with international benchmarks

2021

- Develop and implement measures to improve production of mineral resources
- Introduce financial and operational audits
- Implement IFRS system in the audit
- Attract international debt financing
- Initiate industry transformation program
- Place shares in trust
- Conduct financial and technical due diligence of the enterprise
- Engage management with international experience
- Change the corporate governance system
- Sell mineral resources at market prices

State metals and mining enterprises
Metals and mining industry

Further development of metals and mining enterprises

The listing of state entities is the best strategy to develop the industry and improve the state’s image

IPOs offer the fairest assessment of the market value of assets. Listed companies have to comply with high standards of disclosure of financial and business information and create investment appeal for potential investors. According to Megginson (2000), in countries where privatization involved the transfer of assets to private investors, the process was often opaque and included insider transactions and corruption. Despite benefits for investors, as a rule the state and taxpayers missed out, as the assets were undervalued during the privatization.

Shareholders can benefit from the higher liquidity of company shares and an increase in their value. Over time, business owners can sell a proportion of their portfolio of shares on the open market or use them as collateral for loans.

Granting rights to company shares may facilitate the recruitment of key employees and keep them incentivized over the long term.

By listing shares on a properly selected stock exchange, a company can become better known in the market, enjoy brand awareness and receive recognition at an international level. In general the confidence of stakeholders in the company is enhanced.
Prior to an IPO, a company must comply with a number of information disclosure requirements and implement international standards.

**GRI – information disclosure requirements**

- GRI (Global Reporting Initiative) determines the structure of information to be disclosed within the framework of the sustainable development concept and preparations for an IPO.

- This assessment expands the horizons of financial reporting and provides a broader view of long-term projects. Reporting enables the users of the information to understand the social and ecological contribution of an entity, the value of its products and services from a sustainable development perspective.

**International Financial Reporting Standards**

- IFRS (International Financial Reporting Standards) is a set of documents (standards and interpretations) regulating the rules for preparation of financial reporting required by external users to adopt economic decisions with respect to an entity.

**Joint Ore Reserves Committee Code (JORC)**

- JORC is a key standard that is used worldwide and regulates the preparation of reports on the results of prospecting surveys, mineral resources, and ore reserves.
Under the current tax system for metals and mining enterprises, the effective tax rate ranges from 113% to 416%.

At present, metals and mining companies are subject to following taxes and charges:

- State target fund 3.5%
- Extraction tax 4.0%–10.4% (royalty, for metals)
- Profit tax 14%
- Excess profit tax 50%
- Payments to UFRD (if copper price is > USD 5,600/t)
- Other taxes and charges

Tax liabilities of a large mining and metallurgical enterprise in 2017 by metals

<table>
<thead>
<tr>
<th>Metals</th>
<th>Gold STF</th>
<th>Gold ST</th>
<th>Gold Other</th>
<th>Gold Excess profit</th>
<th>Gold UFRD</th>
<th>Total STF</th>
<th>Total ST</th>
<th>Total Other</th>
<th>Total Excess profit</th>
<th>Total UFRD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cathode copper</td>
<td>34%</td>
<td>56%</td>
<td>3.4%</td>
<td>34%</td>
<td>34%</td>
<td>61%</td>
<td>26%</td>
<td>13%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gold</td>
<td>100%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td></td>
<td>0%</td>
</tr>
<tr>
<td>Silver</td>
<td>3.4%</td>
<td>64%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td></td>
<td>0%</td>
</tr>
</tbody>
</table>

Tax system applied to the metals and mining industry in Uzbekistan

- State companies significantly understate their profits in their reporting to reduce payments to the UFRD and excess profit tax.
- In global practice, the state owner withdraws funds through dividends, which is not reflected in P&L, and thereby enables the company to show profits and raise external debt financing.

Sources: BUYUK KELAJAK expert data, analysis of the working group
Metals and mining industry

Tax system applied to the metals and mining industry in Uzbekistan

EBITDA margin for key metals and current extraction tax rates

%  
Gold  3.4%  
Silver  3.4%  
Copper  3.4%  
Lead  34%  
Zinc  3.4%  
Molybdenum  3.4%  
Tungsten  34%  
Uranium  3.4%  
Tungsten  10.4%  
Uranium  10.0%

Sources: BUYUK KELAJAK expert data, analysis of the working group
Note: 1. Average margin in 2017 according to Glencore, Vedanta Resources, Teck Resources, KazMinerals

Production of all metals is currently concentrated in state enterprises
### Practice of diversifying royalty rates in the metals sector

#### Royalty rate on metals

<table>
<thead>
<tr>
<th>Metals</th>
<th>Australia</th>
<th>Brazil</th>
<th>Botswana</th>
<th>Chile</th>
<th>South Africa</th>
<th>Sweden</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper</td>
<td>3.5%</td>
<td>2.0%</td>
<td>3.0%</td>
<td>7.0%</td>
<td>3.3%</td>
<td>0.2%</td>
</tr>
<tr>
<td>Gold</td>
<td>1.3%</td>
<td>1.0%</td>
<td>5.0%</td>
<td>7.0%</td>
<td>2.3%</td>
<td>0.2%</td>
</tr>
<tr>
<td>Rare metals</td>
<td>2.7%</td>
<td>3.0%</td>
<td>3.0%</td>
<td>7.0%</td>
<td>5.0%</td>
<td>0.2%</td>
</tr>
<tr>
<td>Iron</td>
<td>7.0%</td>
<td>2.0%</td>
<td>3.0%</td>
<td>7.0%</td>
<td>3.3%</td>
<td>0.2%</td>
</tr>
</tbody>
</table>

#### Comments

- In countries with a developed metals and mining industry, the government sets different royalty rates for metal production.
- Royalty rates usually depend on the margin of metals and on the desire of the country to stimulate investments in a certain industry.
- The tax arrangement in different countries also differs in terms of additional benefits.
- The main difference concerns the different set of benefits and mechanisms for stimulating investments:
  - Accelerated depreciation
  - Write-off of capital expenditures in OPEX
  - No limitations on the carry-forward of losses, etc.

**Note:** 1. The average rate is specified, the range is established by law; 2.7%–3.5% 2. The average rate is specified, the range is established by law; 0.0%–2.5% 3. The average rate is specified, the range is established by law; 6.5%–7.5% 4. The average rate is specified, the range is established by law; 0.0%–14.0% 5. The average rate is specified, the range is established by law; 0.5%–7.0% 6. The average rate is specified, the range is established by law; 0.5%–5.0%

**Sources:** BUYUK KELAJAK expert data, analysis of the working group
### Metals and mining industry

#### Examples of the most successful tax arrangements by metal

<table>
<thead>
<tr>
<th></th>
<th>Copper</th>
<th>Gold</th>
<th>Rare metals</th>
<th>Iron</th>
</tr>
</thead>
<tbody>
<tr>
<td>Country</td>
<td>Chile</td>
<td>Australia</td>
<td>Australia</td>
<td>Brazil</td>
</tr>
<tr>
<td>Royalty rate</td>
<td>0–14%</td>
<td>0–2.5%</td>
<td>2.7%</td>
<td>2.0%</td>
</tr>
</tbody>
</table>
| Specific terms for CODELCO | • 10% royalty on export revenue from the sale of copper  
  • Designated use of the royalty | • Accelerated depreciation  
  • No restrictions on carrying forward losses | • Accelerated depreciation  
  • No restrictions on carrying forward losses | • License fee  
  • No tax on dividends |

#### Description

<table>
<thead>
<tr>
<th>Country</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chile</td>
<td>Copper is the key source of remittances for Chile's budget. Chile is also home to CODELCO, the world's largest producer of copper.</td>
</tr>
<tr>
<td>Australia</td>
<td>Australia ranks second in the world in terms of gold production. Australia's gold mining industry is the key industry in the country due to its direct impact on the economy (exports: USD 15–20 billion per annum). Gold is produced at 75 open and underground mines. There are also about 20 mining enterprises where gold is recovered as a byproduct.</td>
</tr>
<tr>
<td>Australia</td>
<td>Rare metals hold a special niche in the economy of any country. Unlike gold or other metals, junior miners deal with the development of rare metals. One of the key examples in the area of taxation is Australia, where one-third of worldwide production of rare metals is concentrated. As a rule, junior miners deal with the production/development of rare metals.</td>
</tr>
<tr>
<td>Brazil</td>
<td>Brazil ranks third in the world for iron ore production. About 90% of commercial iron ore in Brazil is produced by Vale, the largest mining company. The company ranks first in the world in terms of the volume of iron ore reserves and second in production volumes.</td>
</tr>
</tbody>
</table>

Sources: BUYUK KELAJAK expert data, analysis of the working group
At present, other than isolated companies in the waste processing sector, no private mining companies operate in the Republic of Uzbekistan. As a result, the state loses significant potential tax revenues from private individuals. This also hampers opportunities to create new jobs in the private sector.

1. **Amendments to the current tax and royalty system:**
   - Receive money through dividends for state-owned companies
   - Abolish the PSA (Production Share Agreement) system for mining companies
   - Reform the tax system (in particular, subsoil tax) in line with global best practice

2. **Creation of a system of benefits for new enterprises/projects in the industry:**
   - Accelerated depreciation. For example, investments in infrastructure, transportation, and the construction of facilities and equipment for mining activities (including gas pipelines, power lines, roads) are subject to accelerated depreciation, 33% annually
   - Carry-forward of tax losses. Taxpayers of mining operations have the right to carry forward their tax losses with no time restrictions
   - Write-off of capital expenditures. Mining companies are entitled to deduct up to 100% of their capital expenditures associated with project exploration and development, including expenses on the receipt a field exploration and development license, etc., from their taxable income.
   - 30 years of tax stability
   - Exemption from import duties on capital investments
   - Early VAT refund

Sources: BUYUK KELAJAK expert data, analysis of the working group
Metals and mining industry

Strategic options

1

State assets

There is a need to improve the efficiency and return on state assets and import the technologies of foreign companies. IPOs of state assets and accession to the WTO and regional integration (similar to the EU). Deregulation of prices due to the unstable development of the industry.

- The state provides jobs to workers by subsidizing the industry
- There is no competitive environment
- There are regulatory barriers to entering the market
- Unsustainable infrastructure assets require private capital investments

The state will continue to play a major role in the development of the metals and mining industry

2

Asset privatization

State assets have been privatized, large international players participate in the production, processing, and enrichment of crude minerals

- Full deregulation leading to the formation of a competitive environment
- Reduced barriers for entering the mining sector due to a focus on increased market efficiency
- Unstable effective demand of associated sectors of the national economy

Privatization has been completed, and private players are the driving force of industry development

3

IPO

Creation of global players on the basis of existing mining companies, with subsequent IPOs

- Liquidity enhancement
- Incentives for key specialists
- Improvement of the company’s image
- Transparency of the information about the operations of companies often results in a situation when executives focus on accomplishing short-term targets instead of the attainment of objectives that promote long-term growth

The first initial public offering by a metal and mining enterprise has been conducted

Sources: Analysis of the working group
Metals and mining industry

Target vision 2035

High efficiency of MMC management, including in terms of cost reduction and improvements in labor efficiency, and increase in the refining depth of crude materials

- Create global leaders on the basis of existing mining companies
- Listings of entities through IPOs
- Reform the tax system (in particular, subsoil use tax) in line with global best practice
- Increase the number of staff training centers for the geological sector and train personnel in foreign countries
- Increase rock recoverability
- Reorganize the operation of existing metals and mining enterprises by engaging managers under contracts
- Reduce the occupational injury and mortality rate
- Create a tungsten industry cluster in the Republic of Uzbekistan
- Use design and information support technology for mining operations (mathematical simulation of the subsoil, calculations of the optimal forms of open pits, and the development schedule of mining operations, ore separation)
- Stop the state subsidy program for state enterprises

---

<table>
<thead>
<tr>
<th>Figures</th>
<th>2017</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of open fields</td>
<td>1931</td>
<td>2124</td>
</tr>
<tr>
<td>Gold production, t/year</td>
<td>100</td>
<td>150</td>
</tr>
</tbody>
</table>

---

<table>
<thead>
<tr>
<th>Investments</th>
<th>9-11</th>
<th>22-27</th>
<th>43-53</th>
</tr>
</thead>
<tbody>
<tr>
<td>by 2025</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>by 2030</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>by 2035</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

USD billion, cumulative

Sources: 1 – State Committee of the Republic of Uzbekistan for Geology and Mineral Resources, analysis of the working group
Key strategic initiatives

2025

• Increase the number of staff training centers for the geological sector and train personnel in foreign countries
• Build the infrastructure for the transportation of raw materials
• Ensure the investment appeal of projects on manufacturing highly processed metallurgical products, special steels, and alloys by eliminating regulatory and infrastructure restrictions
• Create industrial clusters uniting manufacturers of primary metals and products from subsequent processing stages
• Implement the "use it or lose it" principle in subsoil use that would make it possible to revoke licenses where no production has followed
• Implement procedures to facilitate the awarding of geological exploration contracts
• Upgrade the ore reserve evaluation and reporting system to deliver a more accurate estimate of recoverability
• Create the regulatory framework for selling emission quotas under the Kyoto Protocol in case of the increased environmental friendliness of the production process
• Implement professional operating standards aimed at reducing the accident rate, increasing safety, and improving working conditions at the enterprises of the industry
• Develop a leasing system for production equipment, including mining and smelting equipment

2030

• Use design and information support technology for mining operations (mathematical simulation of the subsoil, calculations of the optimal forms of open pits, and the development schedule of mining operations, ore separation)
• Use IIOT (Industrial Internet of Things) technology for analysis of the state of equipment and predictive repairs
• Develop and implement measures aimed at increasing the supply of scrap to enterprises, including by intensifying imports
• Implement technology aimed at processing solid man-made waste of the industry, including aimed at the repeat recovery of ore material
• Reduce the occupational injury and mortality rate
• Organize compulsory long-term production practice for students of higher and vocational educational institutions based on the examples of France and Germany
• Subsidize advanced training programs for staff, with a focus on safety aspects
• Implement activities to motivate SMEs within the framework of the development of a supplier ecosystem
• Implement an ore mining reserve evaluation and reporting system in line with the international standards JORC, with Uzbekistan joining the Combined Reserves International Reporting Standards Committee

2035

• Control machines remotely
• Total robotization of technological equipment in the production, processing, and enrichment sectors
• Promote the development of new materials to mitigate the risks of falling sales as a result of the replacement of metal products with substitute goods in the long term
• Increase the production of ferrous metal products by expanding domestic demand from the construction industry triggered by the following factors: replacement of obsolete housing stock; increase in the residential area indicator per capita; replacement of housing and utilities infrastructure; promotion of the use of metal in construction
• Ensure government support of projects aimed at eliminating surplus facilities, involving the shutdown of ineffective production facilities, or a change in their profile in monotowns
• Increase the output of existing mining and metals enterprises, involving cut-off grade ores and mineralized bulk in processing

Sources: Analysis of the working group
Key strategic initiatives

- Create a tungsten industry cluster in the Republic of Uzbekistan
- Reform the Tax Code for mining companies in line with international standards
- Allow the deductibility of capital expenditures related to exploration and processing in full in the company’s financial statements in the year in which such expenses were incurred
- Allow accelerated depreciation (up to 33% annually) for investments in infrastructure, transport, and equipment for mineral production

Sources: Analysis of the working group
2.2.4

Automotive industry

Economic development. Industry
Automotive industry

Current level of development

Key challenges

- High customs duties (about 30%)* and excise taxes on imported vehicles
- Low availability of cars: 76 cars per 1,000 people¹
- High product cost and low labor efficiency
- Low level of localization and dependence on imports
- Late upgrades and obsolete product range
- Lack of domestic engineering base and low scientific and technological potential
- Insufficient effectiveness of HR policy

Key findings

- Significant share of the automotive industry in GDP: about 8%
- Forecast increase in the number of jobs in the industry from 27,000 in 2018 to 50,000 in 2035² due to localization of the production of international companies
- Uzbekistan’s automotive market in 2018 shows positive trends: market capacity was 203,000 cars in 2018 and grew by 72% compared to the previous year
- Existing production facilities of the automotive industry are potentially enough to manufacture 400,000 cars annually, but they are utilized at half their full capacity²
- A closed market and lack of competition lead to the overvaluation of vehicles in the domestic market compared to the export market for the purposes of currency earnings
- High import duties and the poor solvency of the population limit market development

Share of the automotive industry in GDP, 2018²

<table>
<thead>
<tr>
<th>Country</th>
<th>Share of GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan</td>
<td>3.4%</td>
</tr>
<tr>
<td>Uzbekistan</td>
<td>0.9%</td>
</tr>
<tr>
<td>Russia</td>
<td>3.4%</td>
</tr>
</tbody>
</table>

Share of the automotive industry in the total volume of industry, 2018²

<table>
<thead>
<tr>
<th>Country</th>
<th>Share of Industry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan</td>
<td>3.4%</td>
</tr>
<tr>
<td>Russia</td>
<td>0.9%</td>
</tr>
<tr>
<td>Uzbekistan</td>
<td>3.4%</td>
</tr>
</tbody>
</table>

Output of main products²

<table>
<thead>
<tr>
<th>Year</th>
<th>Light vehicles</th>
<th>Buses and trucks</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>251</td>
<td>246</td>
</tr>
<tr>
<td>2015</td>
<td>220</td>
<td>185</td>
</tr>
<tr>
<td>2016</td>
<td>190</td>
<td>93</td>
</tr>
<tr>
<td>2017</td>
<td>141</td>
<td>136</td>
</tr>
<tr>
<td>2018</td>
<td>225</td>
<td>220</td>
</tr>
</tbody>
</table>

Sources: 1 – United Nations Economic Commission for Europe, 2 – JSC Uzavtosanoat, AUTOSTAT analytical agency, BMI, 3 – ITC Trade Map, analysis of the working group
Notes: * Customs duty + USD 1.8–3/cc (depending on engine capacity); excise duty: USD 2.4–3.1/cc (depending on engine capacity)
Russia is Uzbekistan’s main commercial partner and the main importer of cars manufactured in Uzbekistan.

Vehicles sold on the domestic market are more expensive than export analogs.

In 2018, the export price policy of JSC GM Uzbekistan was revised, and the present export prices are based on new selling prices. JSC GM Uzbekistan is continuing to work on decreasing the cost and forming competitive export prices.

In 2018 Uzbekistan’s automotive market also shows positive trends.

The market capacity equaled 203,000 cars in 2018 and grew by 72% against the previous year.

Considering existing production capacities, Uzbekistan has the potential to manufacture and sell up to 400,000 vehicles annually by 2026–2027.

Sources: 1 – JSC Uzavtosanoat, AUTOSTAT analytical agency, BMI, analysis of the working group
**Automotive industry**

**Strategic options**

### 1

**Leadership in costs**

Follow the current development model of the automotive industry of Uzbekistan: manufacture budget cars with increased quality and reliability. In future, exports will focus on growing consumption markets

- **Pros:**
  - There are ready production capacities designed to double the current manufacturing level
  - Today, there is demand for cheap cars in countries with growing populations
- **Cons:**
  - Need to upgrade existing capacities due to high level of obsolescence
  - Lack of qualified personnel
  - The demand for low-end vehicles will decrease due to the growth of personal income and refocus on a higher class of vehicle

**Focus on the manufacture of budget vehicles with improvement in their quality**

### 2

**Production innovations**

Opening of new innovative vehicle production facilities using high-tech materials. It is necessary to improve the investment climate, create special economic areas, and open staff training centers. In future, exports will be focused on developed markets

- **Pros:**
  - Impetus for development of the automotive industry, including localization of the manufacture of parts and components
  - Increase in jobs
  - Potential to take a share of the high-tech vehicle market
  - Growing demand for electric vehicles
- **Cons:**
  - Lack of qualified personnel
  - It is necessary to significantly upgrade production capacities and infrastructure
  - The investment climate must be improved
  - Lack of modern tool manufacturers
  - It is necessary to develop technologies for the production of materials for the automotive industry in order to further modernize and reduce the cost of production

**Focus on innovations**

Sources: Analysis of the working group
Automotive industry

Target vision 2035

An automotive industry focused on export using new technology and attracting international auto groups with the subsequent localization of production

- Localize the production of international companies
- Improve the customs and tariff regulation system and optimize customs payments in foreign trade activity as a step towards WTO accession
- Expand the export geography of automobile products
- Implement the full-cycle manufacture of electric vehicles
- Develop the industry for the production of modern and cheap materials for automobiles
- Reduce import duties to reduce monopolization

<table>
<thead>
<tr>
<th>Figures</th>
<th>2016/17/18</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creation of jobs, ‘000 employees</td>
<td>27</td>
<td>50</td>
</tr>
<tr>
<td>Share of electric vehicles, %</td>
<td>0</td>
<td>30</td>
</tr>
<tr>
<td>Car manufacturing volume, ‘000 units</td>
<td>225</td>
<td>400</td>
</tr>
</tbody>
</table>

Investment

- USD cumulative

- by 2025: 1.8–2.2
- by 2030: 14.6–17.8
- by 2035: 41.6–50.9

Sources: Analysis of the working group
Automotive industry

Key strategic initiatives

2025

- Localize the production of international companies
- Introduce mobile technology solution in luxury-class vehicles
- Upgrade the model line, facilitate the launch of innovative product manufacturers in the market by creating favorable conditions for manufacturers
- Provide priority access to government support programs depending on current technological operations (e.g., supporting gas-powered car manufacturing)
- Integrate the Uzbek component sector into the supply chains of global automotive manufacturers and component suppliers
- Implement component export development programs in countries with rapidly growing economies
- Reduce the net cost by increasing efficiency, optimizing procurement activity, developing suppliers, etc.; implement comprehensive net cost reduction programs (including design-to-cost and lean production)
- Prepare the legislative framework for the manufacture and implementation of electric vehicles and for the construction of the necessary infrastructure
- Form a compulsory technical regulation that would set out specifications and standards for cyber security to be observed in software and hardware used in intelligent transport systems and vehicles
- Manufacture cars using future technology: air-free tires, polymeric carbon fiber and resin, etc.
- Export cars to promising markets: India, China, Pakistan
- Manufacture electric vehicles
- Develop engineering staff and competencies on the basis of 1–2 modern local platforms (models)
- Support and specialize "niche" R&D
- Form an Uzbek base of automotive components, which is required for the further development of local manufacture of motors, gearboxes, axles, and chassis
- Prepare the legislative framework for the manufacture and implementation of electric vehicles and for the construction of the necessary infrastructure
- Manufacture electric vehicles
- Develop engineering staff and competencies on the basis of 1–2 modern local platforms (models)
- Support and specialize "niche" R&D
- Form an Uzbek base of automotive components, which is required for the further development of local manufacture of motors, gearboxes, axles, and chassis
- Prepare the legislative framework for the manufacture and implementation of electric vehicles and for the construction of the necessary infrastructure
- Continue development of vehicle manufacturing technologies, including the launch of self-driving vehicle manufacturing
- Expand the export geography: Uzbekistan is one of the main car exporters to Central Asia
- Gradually curtail production of old local models and replace them with deeply localized global platforms

Sources: Analysis of the working group
2.2.5

Chemical industry

Development of AIC, industry, fuel and energy and infrastructure
Chemical industry

Share of chemical industry in GDP, 2017

- **Germany**: 5.8%
- **Uzbekistan**: 0.6%
- **Kazakhstan**: 0.2%

Chemical industry share in the total industry volume, 2017

- **Germany**: 18.8%
- **Uzbekistan**: 8.4%
- **Kazakhstan**: 2.0%

Forecast production dynamics of chemical fertilizers ('000 t)

<table>
<thead>
<tr>
<th>Year</th>
<th>Production</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>1.200</td>
</tr>
<tr>
<td>2025</td>
<td>1.798</td>
</tr>
<tr>
<td>2030</td>
<td>2.400</td>
</tr>
<tr>
<td>2035*</td>
<td>3.203</td>
</tr>
</tbody>
</table>

- **According to forecasts contained in the Chemical Industry Development Program for 2018–2030 elaborated by JSC UzKimyosanoat, by 2030, production of mineral fertilizers will double due to the expansion of domestic demand, increased productivity of the agricultural sector and exports**
- **This growth will be possible thanks to the creation of new production facilities and upgrading of facilities**

Notes: * Calculation by the working group

Key findings

- **JSC UzKimyosanoat** is the Uzbek holding company of the chemical enterprises of the Republic of Uzbekistan
- **The chemical industry accounts for an insignificant share of GDP (0.6%), with focus on the production of nitrogen, phosphate and potash fertilizers**
- **In addition to chemical fertilizers, Uzbekistan’s chemical industry is represented by segments of chemical products for the metals and mining industry, the oil and gas industry, inorganic, organic and household chemical products**
- **Chemical industry enterprises can be found in almost every region of the country: Navoiy, Tashkent, Samarkand, Qashqadaryo, Fergana, Jizzakh Regions and the Republic of Karakalpakstan**
- **To overcome the main barriers to the development of industry, domestic demand must be developed, primarily from the agribusiness sector**

Sources: World Bank, JSC UzKimyosanoat, analysis of the working group

Key challenges

- Limited financial resources
- No fundamental research base and state-of-the-art design engineering developments in the chemical industry
- Lack of qualified personnel
- Focus on the manufacturing of low-margin products
- Limited use of chemical products in industrial sectors

Comments

- **The chemical industry accounts for 0.6% of GDP in the Republic of Uzbekistan**
- **Germany’s example shows the existing potential for increasing the role of the chemical industry, together with increased industry growth in general**
Chemical industry

Current level of development

Comparison of domestic demand and supply of mineral fertilizers, 2017, ‘000 t

- Production of mineral fertilizers exceeds significantly domestic demand by 40%–50% on average
- At present, supply exceeds domestic demand for mineral fertilizers due to exports
- The Chemical Industry Development Program for 2018–2030 prepared by JSC Uzkimyosanoat forecasts an increase in exports from USD 185.4 million in 2018 to USD 769.0 million in 2030
- The main importers of Uzbekistan’s chemical products are China, Russia, Kazakhstan and Turkey

Chemical industry production by product type, USD million

- Based on UN Development Program data, high-tech polymer products (polyethylene, polypropylene, polystyrene, etc.), cosmetics, and medicines are expected to account for 70% of chemical production by 2030

Sources: 1 – Trade Map, UN Development Program, JSC Uzkimyosanoat, Ministry of Agriculture, analysis of the working group
### Chemical industry

#### Current level of development

The chemical industry is represented by mineral and household chemical segments

Simplified chemical industry production value chain against the backdrop of fully integrated enterprises in consumer sectors

<table>
<thead>
<tr>
<th>Hydrocarbon fields</th>
<th>Phosphate rock deposits</th>
<th>Potash salt deposits</th>
<th>Table salt deposits</th>
<th>Natural gas and oil fields</th>
<th>Household chemicals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural gas</td>
<td>Phosphate rock</td>
<td>Sylvinite, carnallite</td>
<td>Halite, rock salt,</td>
<td>Oil, oil gas, natural gas</td>
<td>Halite, rock salt,</td>
</tr>
<tr>
<td>Oil</td>
<td></td>
<td></td>
<td>salt lakes, sea</td>
<td></td>
<td>salt lakes</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>salt</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mineral chemicals</th>
<th>Production of primary products</th>
<th>Production of secondary products</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pure hydrogen</td>
<td>Nitrogen-phosphorus fertilizers (N-P)</td>
</tr>
<tr>
<td></td>
<td>Pure nitrogen</td>
<td>Nitrogen-phosphorus-potash fertilizers (N-P-K)</td>
</tr>
<tr>
<td></td>
<td>Sulfur, sulfur oxide</td>
<td>Monoammonium phosphate (MAP)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Diammonium phosphate (DAP)</td>
</tr>
</tbody>
</table>

#### Sources

JSC Uzkimyosanoat, analysis of the working group

- Agribusiness sector
- Medicine
- Metallurgy
- Agribusiness sector
- Retail trade
- Food industry
- Light industry
- Metals and mining industry
Chemical industry

Strategic options

1. Cost leadership

Continue the current development model of the chemical industry of Uzbekistan: produce mineral fertilizers with a focus on meeting domestic demand and exports of fertilizers to growing consumption markets

Examples of countries:
- China
- India
- Belarus

- There are ready production capacities designed to double the current level of production
- Today, there is demand for mineral fertilizers in countries with growing populations

- Dearth of qualified personnel
- Lack of incentives for the development of the chemical industry
- Demand will shift from low-technology chemicals (fertilizers) to high-technology products (polymer products, cosmetics, and medicines) by 2035

Focus on the regular production of mineral fertilizers

2. Production innovations

The opening of new innovative production facilities of polymer products, cosmetics and medicines. It is necessary to improve the investment climate, create special economic areas, and open staff training centers. In the future, exports will focus on developed markets (the countries of the Arabian Peninsula, Turkey)

Examples of countries:
- Germany
- Japan
- South Korea

- Impetus for the development of the chemical industry as an export-oriented sector
  - Increase in jobs
  - Potential to take its market share in the global market of high-tech products

- Lack of qualified personnel
- Production capacities and infrastructure needs to be upgraded
- The investment climate needs to be improved for the localization of the production facilities of international companies

Focus on innovations

Source: Analysis of the working group
Chemical industry

Target vision 2035

Chemical industry focused on the production and export of high-tech polymer products using new technologies and attracting international companies

- Localize the production of international companies
- To proactively stimulate industrial cooperation, a focus on high-technology “forward-looking” chemical production facilities is required: polymer, synthetic rubbers and medicines
- Separate production of chemical products: create separate companies for the production of mineral fertilizers and high-tech chemical products
- Establish effective industrial cooperation between the chemical industry and other industry sectors
- Proactively develop science and industry-specific research
- Integrate cutting-edge R&D in the production process aimed at deeper processing of hydrocarbons and mineral resources
- Improve the quality of design engineering works and diagnostic studies
- Organize an effective staff training and advanced training system in all areas of chemistry and chemical technology

<table>
<thead>
<tr>
<th>Figures</th>
<th>2017</th>
<th>2035</th>
<th>CAGR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical products export volume, USD million</td>
<td>176.2</td>
<td>1.323</td>
<td>12.2%</td>
</tr>
<tr>
<td>Share of polymer products in the chemical industry, %</td>
<td>16.2%</td>
<td>50%</td>
<td></td>
</tr>
</tbody>
</table>

Investments

- USD cumulative

- by 2025: 8.5-10.4
- by 2030: 25.7-31.4
- by 2035: 40.6-49.7

Sources: 1 = UN Development Program Report “Uzbekistan’s Chemical Industry up to 2030,” analysis of the working group
Key strategic initiatives

2025

- Localize the production of international companies
- Build new chemical industry production facilities
- Upgrade the existing production facilities through technical retrofitting through the procurement of production lines to expand the assortment and range of manufactured products
- Organize the production of complex fertilizers containing nitrogen, phosphorus and potassium (NPP fertilizers)
- Provide priority access to government support programs depending on the current technological operations
- Develop staff potential starting from school
- Conduct market studies to identify and expand the sales market for chemical products
- Activate work on sharing experiences in process management and implementation of modern corporate governance methods, organize the technical and technological retrofitting of enterprises

2030

- Expand the production of industrial rubber goods (conveyor belts, car tires, etc.)
- Increase the production of polymer products, cosmetics and medicines
- Draft a binding technical regulation establishing the specifications and standards for the safe use of chemical products
- Develop staff training centers to supply enterprises of the industry and the central office of JSC UzKimyosanoat with highly qualified specialists
- Establish close cooperation with institutes and scientists, and announce grants to finance innovative ideas and inventions and also projects to create new types of chemical products
- Organize a diagnostic center to examine production equipment
- Create a R&D and design institute together with international partners

2035

- Expand the geography of exports: Uzbekistan is one of the main manufacturers of chemical products in Central Asia

Source: Analysis of the working group
Transport

Development of AIC, industry, fuel and energy and infrastructure
Transport

Current development level of the transport and logistics industry

Key challenges

- Obsolescence of infrastructure
- Lack of available air service for the population
- Inefficient rail transportation
- Lack of public transportation
- Increase in railway electrification
- Growth of competition from alternative routes, enhanced intermodality
- Poor quality of transport and logistics services
- Problems with the customs clearance of cargo

Key findings

- The transport infrastructure covers Uzbekistan’s main regions and cities, and facilities are being expanded and upgraded. The amount of attracted investments in 2017 equaled USD 651 billion
- In 2013–2017, passenger traffic stagnated in all types of transport (railway, air, motor)
- Over the past five years, cargo transport by air and road has increased slightly (+5%)
- Uzbekistan lags behind developed countries in terms of logistics efficiency and ranks 99th in the Logistics Performance Index (LPI)

Functions and role of the transport and logistics system

Transport connection of the country

- Transport accessibility and connections to the key economic centers of the country
- Transport connection of work places and places of residence of the population
- Transport connection of places of goods production and consumption (including B2B “raw materials – goods production”)
- Transportation is possible from any point to any other point

Transportation efficiency

- High speed of transportation
- Predictable and compliant with transportation deadlines
- Possibility of just-in-time delivery

Integration in the global community

- Transport accessibility of the global markets for national manufacturers (sale of products)
- Transport accessibility of global sourcing for national companies (purchase of resources)
- Accessibility of the country’s transport and logistics system for foreign users (transit)

Coverage and service quality

- Transportation of any type of cargo and any category of passengers
- Offer of a whole range of transport and logistic services in a user-friendly format
- Guaranteed transportation safety

Sources: JSC Uzbekiston Temir Yullari, JSC Uzbekiston Havo Yullari, analysis of the working group
Contribution of an efficient transport and logistics system to the country’s development

Stimulation of economic growth

• Development of the basic economic sectors and growth in international trade due to more efficient transport links and cheaper transportation
• Attraction of new companies to the country (transport quality is the third most important factor for companies when selecting a site for localization)
• Creation of new jobs through improved mobility of the population

Increase in labor productivity and competitiveness

• Reduction in production costs (a more efficient transport system reduces transport costs)
• Enhanced performance efficiency (just-in-time delivery and offering of comprehensive logistic services enables consignors to cut their production costs and free up resources by eliminating maintenance of their own transport divisions, etc.)

Support for structural changes in the economy

• The ability of the population to change their place of work in case of changes in the economic structure (a developed transport system facilitates the movement of the workforce)

Improvement in quality of life

• Reduced travel time expands the amount of leisure time of the population
• A developed transport system expands the list of available goods and services
• Develops domestic tourism and strengthens ties between regions

Contribution of the transport and logistics system to the economy of Uzbekistan

Transport service as a share of GDP

<table>
<thead>
<tr>
<th>2017, USD billion</th>
</tr>
</thead>
<tbody>
<tr>
<td>14%</td>
</tr>
<tr>
<td>86%</td>
</tr>
<tr>
<td>48,717</td>
</tr>
</tbody>
</table>

Transport services

Transport service as a share of total services

<table>
<thead>
<tr>
<th>2017, USD billion</th>
</tr>
</thead>
<tbody>
<tr>
<td>30%</td>
</tr>
<tr>
<td>70%</td>
</tr>
<tr>
<td>14.974</td>
</tr>
</tbody>
</table>

Transport services

Share of people employed in the transport industry in the total number of employed people

<table>
<thead>
<tr>
<th>2017, thousand people</th>
</tr>
</thead>
<tbody>
<tr>
<td>5%</td>
</tr>
<tr>
<td>95%</td>
</tr>
<tr>
<td>13,520</td>
</tr>
</tbody>
</table>

Transport services

Sources: JSC Uzbekiston Temir Yullari, JSC Uzbekiston Havo Yullari, analysis of the working group
Uzbekistan is ranked 99th in the international Logistics Performance Index (LPI)\(^1\)

<table>
<thead>
<tr>
<th>Country</th>
<th>No. in the rating</th>
<th>LPI score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany</td>
<td>1</td>
<td>4.20</td>
</tr>
<tr>
<td>The Netherlands</td>
<td>2</td>
<td>4.07</td>
</tr>
<tr>
<td>Sweden</td>
<td>3</td>
<td>4.07</td>
</tr>
<tr>
<td>Singapore</td>
<td>4</td>
<td>4.05</td>
</tr>
<tr>
<td>Uzbekistan</td>
<td>99</td>
<td>2.58</td>
</tr>
</tbody>
</table>

- The indicator demonstrates the relative efficiency of logistics among countries and regions
- In 2018, Germany came first in the LPI rating
- Uzbekistan is ranked 99\(^{th}\) out of 160 countries
- Uzbekistan has rather low figures for all six criteria, which is indicative of the poor development of the transport and logistics complex that requires comprehensive improvements

Sources: https://lpi.worldbank.org/, analysis of the working group
Over the past five years, passenger traffic has stagnated in some types of transport.

### Passengers carried by rail

<table>
<thead>
<tr>
<th>Year</th>
<th>Thousand Passengers</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>18,383</td>
</tr>
<tr>
<td>2014</td>
<td>19,847</td>
</tr>
<tr>
<td>2015</td>
<td>20,633</td>
</tr>
<tr>
<td>2016</td>
<td>20,962</td>
</tr>
<tr>
<td>2017</td>
<td>21,591</td>
</tr>
</tbody>
</table>

*Source: JSC Uzbekiston Temir Yullari, JSC Uzbekiston Havo Yullari, Uzbek Agency of Automobile Transport, analysis of the working group*

### Passengers carried by air

<table>
<thead>
<tr>
<th>Year</th>
<th>Domestic Flights</th>
<th>Flights to CIS</th>
<th>International Flights</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>22%</td>
<td>48%</td>
<td>31%</td>
</tr>
<tr>
<td>2014</td>
<td>22%</td>
<td>48%</td>
<td>31%</td>
</tr>
<tr>
<td>2015</td>
<td>23%</td>
<td>46%</td>
<td>31%</td>
</tr>
<tr>
<td>2016</td>
<td>21%</td>
<td>46%</td>
<td>33%</td>
</tr>
<tr>
<td>2017</td>
<td>18%</td>
<td>47%</td>
<td>34%</td>
</tr>
</tbody>
</table>

### Passengers carried by car

<table>
<thead>
<tr>
<th>Year</th>
<th>Thousand Passengers</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>6,895,102</td>
</tr>
<tr>
<td>2014</td>
<td>7,244,372</td>
</tr>
<tr>
<td>2015</td>
<td>7,511,383</td>
</tr>
<tr>
<td>2016</td>
<td>5,480,800</td>
</tr>
<tr>
<td>2017</td>
<td>5,591,271</td>
</tr>
</tbody>
</table>

*In 2016–2017, a new passenger traffic calculation methodology was used*
Over the past five years, cargo carriage by air and motor transport increased slightly.

### Cargo carried by rail

<table>
<thead>
<tr>
<th>Year</th>
<th>Cargo Carried (thousand t)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>82,889</td>
</tr>
<tr>
<td>2014</td>
<td>82,291</td>
</tr>
<tr>
<td>2015</td>
<td>81,844</td>
</tr>
<tr>
<td>2016</td>
<td>86,369</td>
</tr>
<tr>
<td>2017</td>
<td>86,406</td>
</tr>
</tbody>
</table>

### Cargo carried by air

<table>
<thead>
<tr>
<th>Year</th>
<th>Cargo Carried (tons)</th>
<th>Domestic flights</th>
<th>Flights to CIS</th>
<th>International flights</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>40,930 (4%)</td>
<td>26%</td>
<td>19%</td>
<td>70%</td>
</tr>
<tr>
<td>2014</td>
<td>42,812 (5%)</td>
<td>19%</td>
<td>11%</td>
<td>70%</td>
</tr>
<tr>
<td>2015</td>
<td>41,839 (4%)</td>
<td>11%</td>
<td>4%</td>
<td>85%</td>
</tr>
<tr>
<td>2016</td>
<td>43,848 (4%)</td>
<td>15%</td>
<td>4%</td>
<td>81%</td>
</tr>
<tr>
<td>2017</td>
<td>48,905 (3%)</td>
<td>18%</td>
<td>4%</td>
<td>80%</td>
</tr>
</tbody>
</table>

### Cargo carried by road

<table>
<thead>
<tr>
<th>Year</th>
<th>Cargo Carried (million t)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>1,258</td>
</tr>
<tr>
<td>2014</td>
<td>1,327</td>
</tr>
<tr>
<td>2015</td>
<td>1,400</td>
</tr>
<tr>
<td>2016</td>
<td>1,003</td>
</tr>
<tr>
<td>2017</td>
<td>1,013</td>
</tr>
</tbody>
</table>

Sources: JSC Uzbekiston Temir Yullari, JSC Uzbekiston Havo Yullari, Uzbek Agency of Automobile Transport, analysis of the working group.
Current development level of transport corridors and airports

Main transport corridors and airports in the Republic of Uzbekistan

**International road and rail transport corridors**
- CAREC Corridor 2a
- CAREC Corridor 3a

**Cities**
- Population > 2 million people
- Population > 500 thousand people
- Population < 500 thousand people

**Airports**
- Islam Karimov Tashkent International Airport
- Samarkand International Airport
- Bukhara International Airport
- Urgench International Airport
- Navoiy International Airport
- Namangan International Airport
- Andijan International Airport
- Termez International Airport
- Fergana International Airport
- Qarshi International Airport
- Nukus International Airport

Sources: JSC Uzbekiston Havo Yullari, analysis of the working group
Today, the number of logistics centers in the country is increasing. However, the transport industry should accept the challenges of a growing economy and continue to expand its storage and logistics capacities. 

<table>
<thead>
<tr>
<th>Logistics center name</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sergeli-AgroFresh</td>
<td>Tashkent</td>
</tr>
<tr>
<td>Modus Best LLC</td>
<td>Kungrad (Republic of Karakalpakstan)</td>
</tr>
<tr>
<td>United Cargo Center</td>
<td>Tashkent</td>
</tr>
<tr>
<td>JIZZAXULGURJISAVDO LLC</td>
<td>Jizzakh</td>
</tr>
<tr>
<td>Forward Trans Terminals LLC</td>
<td>Tashkent</td>
</tr>
<tr>
<td>TUCella</td>
<td>Tashkent</td>
</tr>
<tr>
<td>UNIVERSAL LOGISTICS SERVICES LLC JV</td>
<td>Tashkent</td>
</tr>
<tr>
<td>Bayer Group LLC</td>
<td>Tashkent</td>
</tr>
<tr>
<td>REELLOG TASHKENT LLC</td>
<td>Tashkent</td>
</tr>
<tr>
<td>Transatlantic</td>
<td>Tashkent</td>
</tr>
<tr>
<td>NOVASPIN LTD</td>
<td>Tashkent</td>
</tr>
<tr>
<td>Fargonalgurzhisavdo LLC</td>
<td>Fergana</td>
</tr>
<tr>
<td>Agricultural Logistics Enterprise LLC</td>
<td>Fergana</td>
</tr>
<tr>
<td>Pakhtakor-tola bazasi, Subsidiary Enterprise</td>
<td>Jizzakh</td>
</tr>
<tr>
<td>Wholesale regional depot &quot;Surxondaryo ozik-ovkat mollari&quot;</td>
<td>Termez</td>
</tr>
<tr>
<td>Andijon moilash materiallari LLC</td>
<td>Andijan</td>
</tr>
<tr>
<td>ZVSB LLC</td>
<td>Samarkand</td>
</tr>
<tr>
<td>BEK Broker LLC</td>
<td>Kungrad (Republic of Karakalpakstan)</td>
</tr>
<tr>
<td>Xo’jalik va qurilish mollari</td>
<td>Tashkent</td>
</tr>
<tr>
<td>TSB, Subsidiary Company</td>
<td>Keles (Tashkent region)</td>
</tr>
<tr>
<td>TLC Andijan</td>
<td>Andijan</td>
</tr>
</tbody>
</table>

Today, Sergeli-Agrofresh is the largest logistics center in the country.

- The refrigeration and warehousing logistic complex Sergeli-Agrofresh, just like most logistics centers in the country, is located in Tashkent.
- The area of the center’s production premises is 14,000 m² and can hold from 10,000 to 16,000 tons of cargo.
- The complex is furnished with modern, high-quality, imported refrigeration equipment. Maintenance of the temperature and humidity inside the premises is fully automated.
- This center provides all cargo handling services, from unloading to sorting, marking, and labeling.

Sources: Logistika.uz, analysis of the working group
Main transit corridors

- **Trans-Afghan international transport corridor.** Termez (Uzbekistan) – Mazari-i-Sharif – Herat (Afghanistan) – Bandar Abbas (port) and Chabahar (port) (Iran)
- **International transport corridor Uzbekistan – Turkmenistan – Iran – Oman.**
- **Existing transport corridors (motor transportation) to sea ports**
  1.1. Tashkent – Kizil-Orda – Aralsk – Aktyubinsk – Baltic ports (actively used by companies from Kazakhstan for entering European markets)
  1.2. Tashkent – Shymkent – Balkhash – Astana – Petukhovo – Chelyabinsk – Moscow
  1.3. Tashkent – Chardzhou – Nukus – Guryev – Astrakhan – Black Sea ports
  1.4. Tashkent – Shymkent – Almaty – Semipalatinsk – Far Eastern ports
- **Developing transport corridors (motor transportation)**
  2.1. Tashkent – Almaty – Druzhba – Urumqi – Lyaongan port (China) – Busan port (South Korea)
  2.2. Tashkent – Bukhara – Chardzhou – Bandar Abbas (Iran)
  2.3. Tashkent – Port of Turkmenbashi – Baku – Port of Poti (Georgia)
  2.4. Tashkent – Chardzhou – Tehran – Port of Mersin (Turkey)
  2.5. Tashkent – Kungrad – Beyneu- Astrakhan – Russia (Ukraine) – Europe
- **Future transport corridors (motor transportation)**
  3.1. Tashkent – Port of Aktau – Baku – Port of Poti (Georgia)
  3.2. Tashkent – Port of Aktau – Volga – Volga-Don Channel – Black Sea
  3.3. Tashkent – Port of Turkmenbashi – Astrakhan – Russia – Europe
  3.4. Tashkent – Kungrad – Astrakhan – Port of Novorossiysk
  3.5. Tashkent – Andijan – Osh – Sary-Tash – Irkeshtam – Kashgar (China)
- **CAREC corridors (Central Asian Regional Economic Cooperation) going across Uzbekistan:**
  5. CAREC corridor – 6a. Direction: Astrakhan (Russia) – Beyneu (Uzbekistan) – Bukhara – Guzar – Hairatan customs border post (Termez, Uzbekistan) – Mazari-i-Sharif (Afghanistan)
  6. CAREC corridor – 6b. Direction: Orenburg (Russia) – Kyrgyzdor – Shymkent (Kazakhstan) – Tashkent – Samarkand – Termez (Uzbekistan)

- **The transport corridor Europe – Caucasus – Asia (TRASECA) consists of a network of land and sea routes from Europe across the Black Sea, Caucasus and Caspian Sea to the Central Asian republics**

- One possible area of transit development is the China – EU corridor, with an estimated trade volume of about USD 800 billion by 2020
- Active work is underway to extend transport connections with Iran, Afghanistan, Turkey, and other countries
- India is building a port and logistics center jointly with Iran in Chakhbakh Port in Iran to simplify access to Central Asian markets and Russia

Sources: CEED Bulgaria, analysis of the working group
Transport

Investment projects in the transport and logistics infrastructure

Investments attracted in 2017
651 billion dollars

- 13 investment projects for the development and electrification of railroads are being implemented in Uzbekistan.
  - New electrified double-track section "Jizzakh-Yangiyer," restoration of railways, renovation of passenger and freight cars, renovation and upgrading of trains
  - Modernization of Chukursay station that will be transformed into a powerful logistics station

- In 2016 the national airline Uzbekistan Airways began implementing the investment project "Construction of a new international passenger terminal in Tashkent Airport (Tashkent-4)"
  - Tashkent-4 will cover about 87,000 m² in area, and have a throughput capacity of 1,500 passengers per hour, or 5.7 million passengers annually

- In 2017 11 investment projects were scheduled for implementation
  - The World Bank is supporting a project for the development of local roads in Uzbekistan
  - The total cost of phase 1 of the project equals USD 200 million, and is being implemented by the World Bank in collaboration with the Republican Road Fund

Sources: Uzbekiston Temir Yullari JSC, Uzbekiston Havo Yullari JSC, analysis of the working group
Transport

Current development level of railway transportation

Railroad coverage in the Republic of Uzbekistan

- Termez Regional Railway Junction (RRJ)
- Tashkent RRJ
- Aral RRJ
- Bukhara RRJ
- Fergana RRJ
- Railroads of other countries
- Qarshi RRJ
- The Bukhara – Miskin and Urgench – Khina, and the Uichi – Uchkurgan railway line is under construction

Share of electrified tracks

<table>
<thead>
<tr>
<th>Region</th>
<th>% of the network</th>
</tr>
</thead>
<tbody>
<tr>
<td>Europe</td>
<td>49%</td>
</tr>
<tr>
<td>Uzbekistan</td>
<td>36%</td>
</tr>
<tr>
<td>Southeast Asia</td>
<td>29%</td>
</tr>
</tbody>
</table>

Comments

- Compared to diesel traction, the cost of freight carriage by electrified tracks is 25–30% lower
- Rail transportation using electrical haulage is one of the most efficient and environmentally sound forms of transportation

Share of repaired motor roads for the year

<table>
<thead>
<tr>
<th>Region</th>
<th>Share</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Russia</td>
<td>89.3%</td>
<td>1,396,000</td>
</tr>
<tr>
<td>Uzbekistan</td>
<td>97.1%</td>
<td>189,400</td>
</tr>
</tbody>
</table>

Share of repaired roads

Sources: 1 - World Bank, Regnum Information Agency, analysis of the working group

• In 2017, 3% of motor roads were repaired in the Republic of Uzbekistan
• To improve the quality of roads, it is necessary to attract investments in R&D and use the existing developments of developed countries (Plastic Road Concept in the Netherlands)
Current development level of air transportation

Number of destinations by region

- Domestic flights
- CIS
- Europe and America
- Near East and Middle East
- Asia

<table>
<thead>
<tr>
<th>Airline</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air Astana</td>
<td>Kazakhstan</td>
</tr>
<tr>
<td>Air Kyrgyzstan</td>
<td>Kyrgyzstan</td>
</tr>
<tr>
<td>Asiana Airlines</td>
<td>South Korea</td>
</tr>
<tr>
<td>Korean Air</td>
<td>South Korea</td>
</tr>
<tr>
<td>China Southern Airlines</td>
<td>China</td>
</tr>
<tr>
<td>S7 Airlines</td>
<td>Russia</td>
</tr>
<tr>
<td>Aeroflot</td>
<td>Russia</td>
</tr>
<tr>
<td>Utair</td>
<td>Russia</td>
</tr>
<tr>
<td>Ural Airlines</td>
<td>Russia</td>
</tr>
<tr>
<td>Yakutia Airlines</td>
<td>Russia</td>
</tr>
<tr>
<td>Turkish Airlines</td>
<td>Turkey</td>
</tr>
<tr>
<td>Azerbaijan Airlines</td>
<td>Azerbaijan</td>
</tr>
</tbody>
</table>

- Uzbekistan Airways has poor geographic coverage of flights: the company offers flights to only seven cities in European and American countries
- The population is forced to build their own travel itineraries with transfers
- The air carrier market is also rather small: 12 carriers from seven countries
- There are plans to open two new destinations and increase the frequency of some existing airlines

Low-cost airline market capacity in Asia

- The share of low-cost airlines in Uzbekistan is 0.1%
- During 2008–2018, Asia managed to outpace Europe in terms of the penetration of low-cost airlines – the average growth rate equaled 19% in Asia vs. 9.4% in Europe
- During this period, the share of low-cost airlines in the market grew from 10 to 28%
- If this growth pace is maintained, low-cost airlines are predicted to occupy 50% of the entire Asian air market by 2030

Sources: JSC Uzbekiston Havo Yollari, analysis of the working group
Current development level of transport by road

### Density of road networks

<table>
<thead>
<tr>
<th>Country</th>
<th>Density (km per 100 km²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uzbekistan</td>
<td>41</td>
</tr>
<tr>
<td>Tajikistan</td>
<td>19</td>
</tr>
<tr>
<td>Kyrgyzstan</td>
<td>17</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>5</td>
</tr>
<tr>
<td>Turkmenistan</td>
<td>3</td>
</tr>
</tbody>
</table>

**Comments**

- The Republic of Uzbekistan has the highest density of road networks in the Central Asian region.

### Number of permits issued for the carriage of oversized and heavy freight along roads

- Over five years the number of permits issued to carry oversized freight nearly doubled.

### Number of permits issued for the carriage of oversized and heavy freight along roads

- Over 5 years, the volume of freight carried by national carriers across the Republic of Uzbekistan grew, and the share of foreign carriers declined, though it still comprises a major part of the market.

Sources: Uzbek Agency of Automobile Transport, State Committee of the Republic of Uzbekistan for Roads, analysis of the working group
Transport

Current development level of transport by road

Accessibility of passenger cars/buses
units per 10’000 people

- Cars: 12
- Buses: 2
- Small buses: 1

Comments
- About 2% of settlements in Uzbekistan have no regular road transport connection (227 out of 12,366)
- At present, some routes have been closed due to the lack of buses
- There are only 15 means of public transport per 10,000 people of the population

Settlements without regular transport connections by road

- Jizzakh Region: 97
- Surxondaryo Region: 37
- Bukhara Region: 34
- Sirdaryo Region: 22
- Fergana Region: 15
- Republic of Karakalpakstan: 13
- Navoiy Region: 9

Regions in Uzbekistan where all settlements have regular transport connections by road

Sources: Uzbek Agency of Automobile Transport, State Statistics Committee, analysis of the working group
Transport

Strategic options

1

Investment mechanisms at government level

- At government level, investment mechanisms determine the general policy for different government institutions seeking funding
  - The government receives recommendations from the consultative body on prioritizing projects
  - The government adopts general decisions, for example, determining the scope of funding for the entire transport industry

Examples of countries:
- Australia
- Japan

The model outlines the common policy for all state administrative authorities

2

Investment mechanisms at ministerial level

- The projects to be funded are determined at ministerial level, proceeding from overall government investment priorities
  - Focus on various criteria, such as government policy, performance indicators, and the needs of different groups of people
  - It is difficult to make a quantitative assessment of the advantages and benefits attained

Examples of countries:
- USA
- UK

The model establishes the priority of financing projects according to a number of criteria

3

Investment mechanisms at project level

- Individual projects compete for funding for transport development based on specific needs, such as the need to solve the problem of road transport network capacity
  - Reduction in road occupancy
  - Increase in traffic safety
  - Reduction in carbon dioxide emissions
  - Increase in mobility
  - Lost time during maintenance
  - Capital investments
  - Load on other services

Examples of countries:
- Canada
- Sweden

The model analyzes individual demands through an assessment

Sources: World Economic Forum, Global Competitiveness Report, analysis of the working group
Transport industry focused on the emergence of private players, privatization of non-core assets, and reduction in the cost of logistics

- Create two dry ports, develop a multimodal carriage segment, reduce customs regulations
- Build and electrify new motor and rail roads and upgrade stations and airports
- Increase the number of low-cost airlines, introduce open skies scheme
- Implement mobile technology solution in urban transportation
- Use passenger unmanned drones
- Transfer ticket sales functions to IT companies through implementation of IIIC, IIOT, and IIOM
- Provide an opportunity to test new types of transport in Uzbekistan (for example: Shinkansen, Hyperloop)

### Figures

<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Logistics Performance Index (ranking)</td>
<td>99</td>
<td>Top 30</td>
</tr>
<tr>
<td>Electrification of railroads, %</td>
<td>36.3</td>
<td>&gt; 90</td>
</tr>
<tr>
<td>Supply of public transport (bus per 10,000 people)</td>
<td>2.3</td>
<td>12</td>
</tr>
</tbody>
</table>

### Investments

<table>
<thead>
<tr>
<th></th>
<th>USD cumulative</th>
</tr>
</thead>
<tbody>
<tr>
<td>by 2025</td>
<td>15-18</td>
</tr>
<tr>
<td>by 2030</td>
<td>19-23</td>
</tr>
<tr>
<td>by 2035</td>
<td>29-35</td>
</tr>
</tbody>
</table>

### Strategic development goals of the transport and logistics system

- **Realize transit potential**
- **Increase the mobility of the population**
- **Realize export potential**
- **Realize the tourism potential of the country**
- **Satisfy domestic demands of the national economy**

Sources: Analysis of the working group
<table>
<thead>
<tr>
<th>Year</th>
<th>Key Strategic Initiatives</th>
</tr>
</thead>
<tbody>
<tr>
<td>2025</td>
<td>Implement measures to develop fair competition in the freight carriage market (motor, rail, air transport) and related services. Privatize the road and railroad construction industry. Establish international bus connections with the Russia, Kyrgyzstan, Kazakhstan, and Tajikistan. Build, reconstruct, and repair stopping points on public passenger routes (using PPP mechanisms). Create and implement automated systems and software in the road transport management system. Open new passenger bus routes, mostly in rural areas. Develop the interdepartmental development strategy of the transport and logistics system until 2035, including the forecast cargo and passenger carriage model. Revise price regulation in the transport sector, with the subsequent gradual decrease in the share of state regulation. Implement mobile solution technology in urban transportation. Repair existing airports, railway stations, bus stations, and small bus stations and build new ones. Improve their logistics with due account of passenger convenience.</td>
</tr>
<tr>
<td>2030</td>
<td>Build new automobile roads and railways (electrification) and upgrade existing ones, in particular, in the regions. Reduce the adverse impact of the motor transportation sector on the environment and improve the environment. Implement a project to create dry ports and develop a multimodal carriage segment, create an integrated transport system. Integrate into the world transport environment by realizing the transit potential of the republic, creating conditions for the competitiveness of domestic carriers on the international motor transportation market. State support for the creation of smart transport systems to improve the quality of motor transportation using advanced information and telecommunication technologies. Upgrade and replenish the fleet of passenger and cargo vehicles.</td>
</tr>
<tr>
<td>2035</td>
<td>Create a backbone network of public roads that would connect all administrative centers with a network of paved roads. Make the phased transition to electric buses and electric vehicles in the passenger transport system and complete withdrawal of motor vehicles operating on gasoline and diesel, and also to light-fast trains as in Malaysia and Singapore. Resolve the problem of traffic jams and environmental degradation in large cities by setting a fee for entering the downtown area in personal vehicles, developing bicycle and motor transport, and prohibiting the access of trucks to downtown areas. Implement a mobile solution technology in urban transportation. Repair existing airports, railway stations, bus stations, and small bus stations and build new ones. Improve their logistics with due account of passenger convenience.</td>
</tr>
</tbody>
</table>

Sources: Analysis of the working group.
### Key strategic initiatives for motor and railway transport

<table>
<thead>
<tr>
<th>Year</th>
<th>Initiative</th>
</tr>
</thead>
<tbody>
<tr>
<td>2025</td>
<td>Form and improve the regulatory framework and harmonize it in line with the requirements of international laws and standards.</td>
</tr>
<tr>
<td>2030</td>
<td>Update the methodology for the insurance of passengers and cargo during transportation and increase the liability of carriers.</td>
</tr>
</tbody>
</table>

Sources: Analysis of the working group
Key strategic initiatives for air transport

### 2025
- Prepare intergovernmental agreements on air traffic, restrictions on the number of carriers, established routes, frequency, and fares
- Implement a program to increase the number of low-cost airlines and introduce the open skies program
- Amend legislation to facilitate the attraction of foreign citizens as aviation staff
- Divide the country into key aviation regions: Western, with the main airport in Urgench; Eastern, in Namangan/Fergana; Southern, in Termez; Navoiy will continue its further development as a cargo port in the country
- The following transformations in the aviation industry:
  - Transform the State Aviation Supervisory Agency into the aviation administration body of the country (state independent agency) responsible for implementing aviation policy and state supervision
  - Separate Uzairnavigation from NAC and make it a state enterprise with private shareholding, which would provide services to all air space users at uniform tariffs
  - Privatize NAC airports
  - Establish the Uzbek Aviation Academy
  - Create fuel farms for the stable delivery of aviation fuel to air enterprises (local and foreign) at market prices and based on PPP

### 2030
- Develop a mechanism to predict demand for air transport along routes that are subject to state support measures, including analysis of price characteristics, the elasticity of demand, and other market parameters
- Develop the main airports of aviation regions (Urgench, Namangan/Fergana and Termez) as hub airports
- Construction of a hub airport connecting Europe and Asia (like those in Seoul or Singapore)

### 2035
- Strengthen the role of IT companies in the sale of air tickets (Google, Amazon) by implementing IIIC, IIOT, and IIOM
- Tashkent Airport as the main hub airport for Uzbekistan Havo Yollari (Uzbekistan Airways)

Sources: Analysis of the working group
2.3

Construction industry, utilities and communications infrastructure

Development of AIC, industry, fuel and energy and infrastructure
Key challenges

- Lack of construction projects involving foreign capital
- Growing population
- Growing business demands, which must be satisfied with industrial and civil buildings
- Poor technological and innovation potential
- Lack of qualified personnel
- High level of regulatory barriers
- Implementation of state-of-the-art international construction standards

Key findings

- The stock of raw materials in the Republic of Uzbekistan is sufficient for the production of construction materials to satisfy domestic demand
- Despite significant growth in the prices of natural gas and electricity in 2018 for manufacturers in individual sectors, output of construction materials (cement) is growing
- A significant proportion of the workforce are employed in the construction industry (1.2 million people). However, there is a shortage of qualified staff in the industry (only 10 higher educational institutions provide courses on the construction industry)
- Regulatory barriers hamper development of the construction industry: it is hard to gain access to cartographic and geodetic materials

Construction as a share of GDP, 2017, USD billion

<table>
<thead>
<tr>
<th>Country</th>
<th>Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turkey</td>
<td>9.7%</td>
</tr>
<tr>
<td>Uzbekistan</td>
<td>6.1%</td>
</tr>
<tr>
<td>South Korea</td>
<td>5.1%</td>
</tr>
</tbody>
</table>

Comments

- Construction industry accounts for 6.1% of GDP in the Republic of Uzbekistan
- Based on this indicator, Uzbekistan holds an intermediate position between Turkey and South Korea

Construction industry as a share of industry as a whole, 2017

<table>
<thead>
<tr>
<th>Country</th>
<th>Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turkey</td>
<td>17.7%</td>
</tr>
<tr>
<td>Uzbekistan</td>
<td>20.3%</td>
</tr>
<tr>
<td>South Korea</td>
<td>14.7%</td>
</tr>
</tbody>
</table>

Comments

- The construction sector accounts for a significant share of industry – 20.3% in Uzbekistan vs. 17.7% in Turkey and 14.7% in South Korea

Sources: 1 - Ministry of Construction of the Republic of Uzbekistan, analysis of the working group
Construction industry

Current level of development of the resource base

Location of cement plants

Existing plants:
1. JSC Kyzylkumcement
2. JSC Akhangarancement
3. JSC Kuvasaicement
4. JSC Bekabadcement
5. Jizzakh Cement Plant
6. LLC Fergana Cement JV
7. LLC Turon Eco Cement Group
8. LLC Fargona Yasin Kurilish Mollari
9. LLC Kurilish Ashyo Sifat
10. LLC Perpetual Motion
11. LLC Pop Cement JV
12. LLC Kurilish Ashyo Sifat
13. IP Surkhoncementinvest
14. LLC Samarkand Afrosiyob Cement
15. LLC Marakand Cable Invest
16. LLC Zhomboi Yashil Chiroklari
17. LLC Bukhoro Euro Cement
18. Establishment of the new cement plant of JSC Akhangarancement
19. Upgrade and retrofitting of second clinker burning line of JSC Kyzylkumcement

Cement output of enterprises, ‘000 t

<table>
<thead>
<tr>
<th>Enterprise*</th>
<th>Output (‘000 t)</th>
<th>Entity</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>JSC Kyzylkumcement</td>
<td>3,571</td>
<td>LLC Namangan Cement 1st phase</td>
<td>250</td>
</tr>
<tr>
<td>JSC Akhangarancement</td>
<td>1,624</td>
<td>LLC Zhakhon Service</td>
<td>200</td>
</tr>
<tr>
<td>JSC Kuvasaicement</td>
<td>946</td>
<td>LLC Pop Cement JV</td>
<td>500</td>
</tr>
<tr>
<td>JSC Bekabadcement</td>
<td>1,116</td>
<td>LLC Perpetual Motion</td>
<td>100</td>
</tr>
<tr>
<td>Jizzakh Cement Plant</td>
<td>946</td>
<td>LLC Yaipan Invest Union</td>
<td>120</td>
</tr>
<tr>
<td>Other entities (small entities)</td>
<td>1,001</td>
<td>LLC Great Silk Road Servis</td>
<td>200</td>
</tr>
<tr>
<td>Total:</td>
<td>9,204</td>
<td>LLC Turon Eco Cement</td>
<td>600</td>
</tr>
<tr>
<td></td>
<td></td>
<td>LLC Fargona Yasin Kurilish Mollari</td>
<td>800</td>
</tr>
<tr>
<td></td>
<td></td>
<td>LLC Kurilish Ashyo Sifat</td>
<td>160</td>
</tr>
<tr>
<td></td>
<td></td>
<td>IP Surkhoncementinvest</td>
<td>360</td>
</tr>
<tr>
<td></td>
<td></td>
<td>LLC Samarkand Afrosiyob Cement</td>
<td>560</td>
</tr>
<tr>
<td></td>
<td></td>
<td>LLC Marakand Cable Invest</td>
<td>300</td>
</tr>
<tr>
<td></td>
<td></td>
<td>LLC Zhomboi Yashil Chiroklari</td>
<td>150</td>
</tr>
<tr>
<td></td>
<td></td>
<td>LLC Bukhoro Euro Cement</td>
<td>750</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Establishment of the new cement plant of JSC Akhangarancement</td>
<td>2,400</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Upgrade and retrofitting of second clinker burning line of JSC Kyzylkumcement</td>
<td>400</td>
</tr>
<tr>
<td>Total:</td>
<td></td>
<td></td>
<td>7,450</td>
</tr>
</tbody>
</table>

Total: 16,654

Sources: JSC Uzstroymaterialy, Ministry of Construction of the Republic of Uzbekistan, analysis of the working group
Construction industry

Current level of development of the resource base

Cement production, '000/year

<table>
<thead>
<tr>
<th>Year</th>
<th>Production</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>8,462</td>
</tr>
<tr>
<td>2017</td>
<td>8,490</td>
</tr>
<tr>
<td>2018</td>
<td>7,990</td>
</tr>
</tbody>
</table>

-2.8% decrease

Comments

- The decline in cement production in 2018 was attributable primarily to a significant increase in the price of natural gas and electricity for manufacturers in certain industries.
- Gas and electricity tariffs for construction enterprises, including cement producers, rose by 60% in 2018.
- Domestic consumption of cement equals 8.79 million tons per year and will continue to grow, as annual consumption per capita is almost half the average level globally.
- As a result, cement imports to Uzbekistan increased.
- According to the State Statistics Committee of the Republic of Uzbekistan, cement imports equaled USD 79.8 million in the first half of 2018, up six-fold compared to the same period in 2017.

* Note: Predicted cement output in 2018

Cement consumption per capita, kg per year

- Western Europe: 395 kg per capita
- Russia: 462 kg per capita
- Turkey: 931 kg per capita (433 kg per capita = average global indicator)
- Uzbekistan 2016: 268 kg per capita
- Uzbekistan 2020: 328 kg per capita

Sources: 1. State Statistics Committee of the Republic of Uzbekistan, JSC Uzstroymaterialy, analysis of the working group
Construction industry

Current level of development of the staff training system for the construction industry

Creation of a new government department

- In May 2017 the President of Uzbekistan Shavkat Mirziyoyev issued a Decree “On Measures for a Radical Improvement in the Activity of the State Committee for Architecture and Construction of the Republic of Uzbekistan”
- The reformed State Committee for Architecture and Construction will combine the committee for architecture and construction and the inspectorate for quality supervision in design engineering and urban development, and also include some industry-related educational institutions
- In addition, the State Committee for Architecture and Construction will be responsible for monitoring compliance with technical standards in design engineering and for the implementation of innovative project solutions, technology and building materials.

Staffing

10 core higher educational institutions*

> 1.2 million people employed in the industry

> 24,000 enterprises

* The following higher educational institutions provide courses on construction and architecture: Islam Karimov Tashkent State Technical University; Tashkent Institute for Design Engineering, Construction and Operation of Motor Roads; Tashkent Institute of Architecture and Construction; Tashkent Institute of Railway Transport Engineers; Turin Polytechnic University; Jizzakh Polytechnic University; Karshi Engineering and Economic Institute; Namangan Engineering and Construction Institute; Samarkand State Institute of Architecture and Construction; Fergana Polytechnic Institute

Regulatory barriers

Creation of a new government department

The following regulatory barriers exist:

- The complexity and cost of access to the materials of the republican cartographic and geodetic fund and data from hydrometeorological observations required for engineering surveys
- In May 2018 a maximum cement price was established by a Presidential Decree for a number of contracting organizations. Cement enterprises were allowed to sell 2 million tons of cement to contracting organizations building affordable housing for people in need of improved housing conditions, social facilities, transport infrastructure, and water facilities through centralized sources at a price of 367,000 sum per ton (including VAT), subject to a 100% down payment

Sources: 1 - State Statistics Committee of the Republic of Uzbekistan, Ministry of Construction of the Republic of Uzbekistan, analysis of the working group
## Condition of apartment buildings by region

<table>
<thead>
<tr>
<th>Region</th>
<th>Slum housing</th>
<th>Dilapidated housing</th>
<th>Repaired housing</th>
<th>Number of Buildings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Republic of Karakalpakstan</td>
<td>2.3%</td>
<td>5.7%</td>
<td>92.0%</td>
<td>1,369</td>
</tr>
<tr>
<td>Andijan Region</td>
<td>0.1%</td>
<td>2.7%</td>
<td>97.2%</td>
<td>1,568</td>
</tr>
<tr>
<td>Bukhara Region</td>
<td>0.3%</td>
<td>16.1%</td>
<td>83.6%</td>
<td>1,897</td>
</tr>
<tr>
<td>Jizzakh Region</td>
<td>0.1%</td>
<td>0.3%</td>
<td>99.7%</td>
<td>1,838</td>
</tr>
<tr>
<td>Namangan Region</td>
<td>0.3%</td>
<td>2.0%</td>
<td>97.8%</td>
<td>1,156</td>
</tr>
<tr>
<td>Qashqadaryo Region</td>
<td></td>
<td></td>
<td></td>
<td>1,662</td>
</tr>
<tr>
<td>Navoiy Region</td>
<td></td>
<td></td>
<td></td>
<td>1,503</td>
</tr>
<tr>
<td>Samarkand Region</td>
<td></td>
<td></td>
<td></td>
<td>1,665</td>
</tr>
<tr>
<td>Surxondaryo Region</td>
<td>0.5%</td>
<td>0.8%</td>
<td>98.7%</td>
<td>1,143</td>
</tr>
<tr>
<td>Sirdaryo Region</td>
<td>0.9%</td>
<td>10.0%</td>
<td>89.0%</td>
<td>1,972</td>
</tr>
<tr>
<td>Tashkent Region</td>
<td>0.3%</td>
<td>0.9%</td>
<td>98.7%</td>
<td>4,759</td>
</tr>
<tr>
<td>Fergana Region</td>
<td>0.2%</td>
<td>4.1%</td>
<td>95.7%</td>
<td>3,179</td>
</tr>
<tr>
<td>Xorazm Region</td>
<td>0.3%</td>
<td>1.1%</td>
<td>98.6%</td>
<td>1,204</td>
</tr>
<tr>
<td>Tashkent</td>
<td>5.0%</td>
<td>0.2%</td>
<td>94.7%</td>
<td>10,952</td>
</tr>
</tbody>
</table>

### Comments
- The breakdown and decay rate (expired service life) varies from 0.4% of the total number of apartment buildings in Jizzakh Region to 16.4% in Bukhara Region.
- No data are available on the condition of apartment buildings in Qashqadaryo, Navoiy and Samarkand Regions.

**Sources:** Ministry of Housing and Utilities Services, analysis of the working group
Utilities and communications infrastructure

**Current level of development**

### Key challenges
- A low proportion of the population are connected to the main water supply line
- Complicated procedure for connection to the power supply system and supply of electricity to the population
- Low level of telephone network capacity
- Low level of railroad and highway electrification
- Slow and unreliable Internet

### Key findings
- The share of expenditure on supporting information and communications technology in the Republic of Uzbekistan is small
- Only 64% of the population of Uzbekistan have access to the central water supply
- In addition, 35% of the population of Uzbekistan with access to the central water supply have not connected their homes to the water supply system and instead use outdoor standpipes to collect water
- The price of electricity in Uzbekistan is low (USD 0.068 for 1 kW). However, the process of connecting to the power supply system is very expensive and takes a long time
- Railroads in the Republic of Uzbekistan provide a link to countries in the east and west and organize the train traffic of six regional railway junctions (RRJ)
- The railway network density in the Republic of Uzbekistan is 14.5 km per 1,000 km² of land

### Current level of development of the telecommunications network

**Telephone network capacity of Uzbekistan¹**

<table>
<thead>
<tr>
<th></th>
<th>Installed</th>
<th>In use</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATS</td>
<td>58%</td>
<td>42%</td>
</tr>
<tr>
<td>RTS</td>
<td>64%</td>
<td>36%</td>
</tr>
</tbody>
</table>

- In **developed countries**, telephone network capacity decreases every year due to migration to virtual automatic telephone stations (ATS)
- **Standard ATS** already fail to satisfy business demands: they offer limited functionality and throughout capacity, while maintenance of the ATS is expensive

**Number of mobile subscribers¹**

<table>
<thead>
<tr>
<th></th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>20.66</td>
<td>21.26</td>
<td>22.50</td>
</tr>
</tbody>
</table>

- Since 2015, the number of mobile subscribers has increased by almost **2 million people**

Sources: 1 - Ministry for Development of ICT and Communications of the Republic of Uzbekistan, analysis of the working group

---

¹ Figures at the end of 2017
Utilities and communications infrastructure

Current level of development of the telecommunications network

Share of ICT expenses in the structure of public expenditure

<table>
<thead>
<tr>
<th>Year</th>
<th>Total state expenditure</th>
<th>ICT</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>98.5%</td>
<td>1.5%</td>
</tr>
<tr>
<td></td>
<td>7,800</td>
<td></td>
</tr>
</tbody>
</table>

Comments
- The Republic of Uzbekistan is characterized by the extremely low share of expenditure on supporting information and communications technology. The same indicator in India accounts for more than 19% of public expenditure.

Exports and imports of ICT services

<table>
<thead>
<tr>
<th>Year</th>
<th>Exports</th>
<th>Imports</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>99.8%</td>
<td>0.2%</td>
</tr>
<tr>
<td></td>
<td>26,803</td>
<td>26,803</td>
</tr>
</tbody>
</table>

Comments
- As information and telecommunications technology is not that developed in the Republic of Uzbekistan, virtually the entire market of ICT services is imported. By way of comparison, imports of ICT services market to the USA account for about 40% of the total.

Maximum data transfer rate of the Internet

<table>
<thead>
<tr>
<th>Country</th>
<th>Mbps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Singapore</td>
<td>136</td>
</tr>
<tr>
<td>South Korea</td>
<td>95</td>
</tr>
<tr>
<td>Japan</td>
<td>83</td>
</tr>
<tr>
<td>USA</td>
<td>57</td>
</tr>
<tr>
<td>Uzbekistan</td>
<td>19</td>
</tr>
</tbody>
</table>

Average globally: speed 32.5 Mbps

Comments
- The maximum data transfer rate of the Internet in the Republic of Uzbekistan is 1.7 times slower than the average worldwide, which is indicative of the inadequate development of information and communications technology in the country.

Sources: World Bank, Ministry for Development of ICT and Communications, analysis of the working group.
## Utilities and communications infrastructure

### Current level of development of the water supply

#### Water supply

**Water supply to the population of Uzbekistan**

<table>
<thead>
<tr>
<th>Year</th>
<th>Access to Main Supply Line</th>
<th>Using Alternative Sources</th>
<th>Dependent on Imported Water</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>66.8%</td>
<td>24.2%</td>
<td>11%</td>
<td>32.8</td>
</tr>
</tbody>
</table>

- Population with access to the main water supply line
- Population using alternative water sources
- Population dependent on imported water

**Population with access to the main water supply line**

<table>
<thead>
<tr>
<th>Year</th>
<th>Access to Main Supply Line</th>
<th>Using Outdoor Standpipes</th>
<th>Without Access to Main Supply Line</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>42.8%</td>
<td>22%</td>
<td>36.52%</td>
<td>32.8</td>
</tr>
</tbody>
</table>

- With home connections to the network
- Using outdoor standpipes
- Without access to the main water supply line

**Population using alternative water sources**

<table>
<thead>
<tr>
<th>Year</th>
<th>Access to Main Supply Line</th>
<th>Using Outdoor Standpipes</th>
<th>Without Access to Main Supply Line</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>71%</td>
<td>20%</td>
<td>9%</td>
<td>7.2</td>
</tr>
</tbody>
</table>

**Share of obsolete water supply networks**

<table>
<thead>
<tr>
<th>Year</th>
<th>Obsolete</th>
<th>In Perfect Condition</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>38.5%</td>
<td>61.5%</td>
<td>53.73</td>
</tr>
</tbody>
</table>

### Coverage of settlements in Uzbekistan with centralized sewerage systems

<table>
<thead>
<tr>
<th>Settlement Type</th>
<th>Access to Sewerage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cities</td>
<td>66% 119</td>
</tr>
<tr>
<td>Urban-type towns</td>
<td>95% 5% 1.085</td>
</tr>
<tr>
<td>Villages</td>
<td>99.5% 0.5% 11.012</td>
</tr>
</tbody>
</table>

- People with no access to the sewerage network
- People with access to the sewerage network

### Comments

- **Overall coverage of centralized sewerage systems** in Uzbekistan is only **14.2%**, which is extremely low compared to developed countries.

### Sources

- Ministry of Housing and Utilities Services, analysis of the working group.
Utilities and communications infrastructure

Current level of development of the power supply

Ranking in the "Getting Electricity" rating

<table>
<thead>
<tr>
<th></th>
<th>UAE</th>
<th>South Korea</th>
<th>Taiwan</th>
<th>Malaysia</th>
<th>Uzbekistan</th>
<th>Turkey</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost</td>
<td>25.2</td>
<td>37.0</td>
<td>38.9</td>
<td>28.0</td>
<td>883.1</td>
<td>457.7</td>
</tr>
</tbody>
</table>

Doing Business 2017 "Getting Electricity" indicator

out of 190 countries

Comments

- In one year Uzbekistan rose from 112th to 27th in the ranking on the "Getting Electricity" indicator, ahead of such countries as Turkey, Kazakhstan and Georgia

Cost of connection to the power supply system, % of income per capita

Time required for connection to the power supply system, days

<table>
<thead>
<tr>
<th></th>
<th>UAE</th>
<th>South Korea</th>
<th>Taiwan</th>
<th>Malaysia</th>
<th>Uzbekistan</th>
<th>Turkey</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost</td>
<td>10</td>
<td>13</td>
<td>22</td>
<td>31</td>
<td>88</td>
<td>55</td>
</tr>
</tbody>
</table>

Comments

- The cost of connection to the power supply system decreased from 1,393.1% (1) of per capita income to 883.1% (37% decrease), thereby facilitating connection to the power supply system

Electricity price, US cents per kW

<table>
<thead>
<tr>
<th></th>
<th>UAE</th>
<th>South Korea</th>
<th>Taiwan</th>
<th>Malaysia</th>
<th>Uzbekistan</th>
<th>Turkey</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost</td>
<td>12.3</td>
<td>8.7</td>
<td>10.9</td>
<td>12.9</td>
<td>6.8</td>
<td>12.1</td>
</tr>
</tbody>
</table>

Comments

- The electricity price rose by 0.8 US cents during the year, but still remains low compared to other countries

Place in the Doing Business 2017 rating for "Getting Electricity"

Sources: World Bank, analysis of the working group
Note: (1) Data for 2016
Level of development of the administrative centers of Uzbekistan

Comments

• According to official statistics, there were 119 cities in the Republic of Uzbekistan in 2013.
• Uzbekistan stands out in terms of the population density of the capital compared to other cities.

Source: Analysis of the working group
Urbanization

Rating of Uzbekistan’s regions

Development level of Uzbekistan’s regions

- The ratings of the regions were calculated based on four categories: tourism, development potential, quality of life (by personal income) and industry.
- According to these ratings, the leading regions are Tashkent, Navoiy, Andijan and Samarkand, which may be deemed the central regions of Uzbekistan (2035).

Sources: Center for Economic Research, analysis of the working group
The current population of Uzbekistan (32.7 million, 2018) exceeds previous demographic forecasts, which is indicative of high population growth and requires the rapid resolution of challenges related to the urbanization of the population.

The population of Tashkent will grow at evolutionary rates, increasing by 14% by 2035.

The populations of Samarkand, Navoiy, and Andijan will grow dynamically due to migratory inflows from neighboring regions.

Sources: Center for Economic Research, analysis of the working group
Urbanization

Current level of development of Uzbekistan’s cities

Construction in Uzbekistan’s cities by 2035, %

- Tashkent: 14%
- Namangan: 12%
- Fergana: 10%
- Jizzakh: 10%
- Samarkand: 10%
- Guliston: 6%
- Qarshi: 6%
- Navoiy: 6%
- Bukhara: 6%
- Urgench: 6%
- Andijan: 6%
- Nukus: 6%
- Termez: 6%

Residential housing: 35%
Administrative and office buildings: 18%
Educational institutions: 14%
Medical institutions: 11%
Shopping and recreation centers (malls) + hotels: 9%
Sport and fitness complexes: 7%
Cultural centers: 6%
Recreation parks: 6%

Comments
- Due to the urbanization of the population, it would be advisable to assign a larger share of construction for apartment buildings. At present, the rural population accounts 61% of the total population.
- There are insufficient shopping and recreation complexes in Uzbekistan’s cities.

Sources: Center for Economic Research, analysis of the working group
When forming the territory of a city, it is advisable to take account of natural and strategic factors, such as urban agglomerations, landscape areas, existing airports and railway stations.
Efficient use of land plots due to increased construction density on reconstructed territories and a decreased share of low-density low-rise housing in the total area of new construction.
Urbanization

Anticipated consequences of the development of cities and eco-solutions

Sanitation
- Assignment of an appropriate area outside city limits for garbage and the construction of garbage recycling plants

Cycling infrastructure
- Promotion of cycling decreases air pollution in a city

Eco conservation
- Minimal intervention in the natural environment during the construction of cities

Civil services
- Allotment of an appropriate area outside developing cities for cemeteries

Comments
- Household waste is forecast to grow by 30% in developing cities
- At present Uzbekistan’s cities do not have any cycling infrastructure
- According to report, more than 20,000 trees were felled in the Republic of Uzbekistan over the past two years
- The replenishment of cemeteries by 25% is forecast by 2035

Source: Analysis of the working group
Construction industry, utilities and communications infrastructure

Strategic options

1  Chinese model

Sources of financing

- More effective management of project development thanks to management staff with sufficient competence in financial and technical issues
- Fundraising through the issuance of infrastructure bonds

The state funds almost 100% of infrastructure projects

2  Australian model

Sources of financing

- May be in the form of debt or shared participation, which attracts investors
- High level of transparency and simplicity of nongovernmental control
- Cheap borrowing for the state

Private investments account for about half the portfolio

3  British model

Sources of financing

- The state is able to implement important projects despite fiscal restrictions
- High level of transparency and simplicity of nongovernmental control

Private investors account for over 75% of funding, while the state plays a major role from the perspective of planning and regulation

Sources: Reserve Bank of Australia, analysis of the working group

Notes:

- PPP
- International financial institutions

- Government - commercial enterprises
- Budget appropriations
- 100% private finance
High-tech construction industry with advanced high-quality infrastructure that meets the requirements of business and the population

- Private investors account for over 75% of funding, while the state plays a major role from the perspective of planning and regulation
- High level of transparency and simplicity of nongovernmental control over infrastructure financing
- Use of global best practice for the construction of highways
- Construction of new infrastructure and upgrade of obsolete infrastructure: increase in the share of people with access to the main sewerage networks (14.2%) and water supply networks (64.8%) to 90–100%, and also water, electricity, and gas supply
- Expansion of the broadband Internet access and telecommunications network by increasing the number of mobile communications base stations from 20,000 to 40,000
- Implementation of 5G data transfer technology
- Implementation of public-private partnerships in infrastructure construction
- Use of big data to analyze traffic and road conditions

### Figures

<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ranking in the Doing Business 2017 rating for &quot;Getting Electricity&quot;</td>
<td>27th</td>
<td>Top 10</td>
</tr>
<tr>
<td>Population with access to the main water supply line, %</td>
<td>64.8</td>
<td>100</td>
</tr>
<tr>
<td>Covered by centralized sewerage networks, %</td>
<td>14.2</td>
<td>42.5</td>
</tr>
<tr>
<td>Average maximum data transfer rate of the Internet, Mbps</td>
<td>19</td>
<td>2048</td>
</tr>
<tr>
<td>Share of mobile subscribers in the total population, %</td>
<td>68%</td>
<td>&gt; 90 %</td>
</tr>
<tr>
<td>Supply of housing, sq. m per 1 person (UN recommendations)</td>
<td>-</td>
<td>18</td>
</tr>
</tbody>
</table>

### Investment

- **by 2025**: 11-13 USD cumulative
- **by 2030**: 42-51 USD cumulative
- **by 2035**: 130-159 USD cumulative

Sources: UN recommendations, analysis of the working group
## Construction industry, utilities and communications infrastructure

### Key strategic initiatives

<table>
<thead>
<tr>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expand the Internet and telephony coverage area, introduce 5G mobile communications technologies</td>
<td>Improve public-private partnership in the construction of housing and utilities, create telecommunications networks</td>
<td>Deliver an integrated solution to the issue of dilapidated and slum housing</td>
</tr>
<tr>
<td>Increase the average Internet speed</td>
<td>Rehabilitate and improve the energy efficiency of buildings (heat insulation of facades, attics, etc.)</td>
<td>Implement vertical and horizontal technical quality control schemes at all stages of the production cycle of engineering and technical works to ensure the high quality of construction</td>
</tr>
<tr>
<td>Create an apartment building management system that would encourage development of a market for the operation and maintenance of apartment building stock</td>
<td>Improve and update the legal framework for urban construction and urban</td>
<td>Uninterrupted supply and complete coverage of the population of the Republic of Uzbekistan with energy and gas</td>
</tr>
<tr>
<td>Establish the legislative and regulatory framework for energy conservation, developing standards regulating heat consumption by residential buildings and promoting the adoption of energy conservation measures and improvements to the energy efficiency of buildings based on Germany’s experience</td>
<td>Develop and implement state standards for engineering and technical work in line with advanced international standards, urban planning standards and rules, and climatic conditions</td>
<td>Rebuild and upgrade the heat supply system to achieve reductions in excessive loss by migrating to a closed heat supply system, automated control of the heat supply system, fully-fledged accounting and monitoring of the customer database with respective control and accounting of debts</td>
</tr>
<tr>
<td>Improve the educational process in industry-related educational institutions in order to improve the training of qualified staff in architecture, design and construction and supply personnel for the construction industry</td>
<td>Implement effective infrastructure project financing mechanisms for PPP and private investors</td>
<td>Full coverage of the population with high-quality drinking water</td>
</tr>
<tr>
<td>Expand access to the supply of gas and electricity</td>
<td>Implement energy-efficient technology in the street lighting system and energy-efficient lightbulbs in residential and public buildings</td>
<td>Expand access to the centralized sewerage network for the country’s urban population</td>
</tr>
<tr>
<td>Create a think tank for infrastructure investments, with the potential to perform econometric and qualitative assessments of the impact of infrastructure projects using state funds</td>
<td>Overhaul central boiler units and build local boiler units to supply heat to apartment buildings, social infrastructure facilities, and business entities, and transfer heat supply to a local system</td>
<td></td>
</tr>
<tr>
<td>Implement the practice and system of cooperation between think tanks and production entities, drawing on international experience</td>
<td>Implement a transparent tender system for the architectural and business design of state construction facilities</td>
<td></td>
</tr>
<tr>
<td>Involve business in the preparation of statutory documentation in the construction industry and create the requisite conditions for the work of private R&amp;D and design institutes and entities</td>
<td>Implement smart thermostat systems</td>
<td></td>
</tr>
<tr>
<td>Elaborate a development strategy and master plan for all Uzbekistan’s cities by 2035, based on advanced technologies and development trends</td>
<td>Establish the architectural and city planning association of Uzbekistan (Union of Architects) and develop the website of the Union of Architects. Organize exhibitions, master classes, forums, competitions, etc.</td>
<td></td>
</tr>
<tr>
<td>Implement an automated billing system for payment and accounting of housing and utilities services</td>
<td>Upgrade and retrofit equipment used for the growing and primary processing of cotton</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Analysis of the working group
Tourism

Current level of development

Key challenges

- Complicated visa policy and registration system
- Poor development of tourism infrastructure in popular cultural centers, and the lack of any such infrastructure outside the main tourist places
- High cost of air fares, poor coverage of the potential markets by Uzbek and international airlines
- Older tourists (55+ years old) and virtual absence of young visitors
- Shortage of qualified staff in the tourism industry
- Poor development of the leisure, entertainment and service industries
- Lack of an aggressive PR strategy for Uzbekistan in the international market
- Insufficient number of foreign (international) tourist organizations
- Lack of a national tourism brand and tourism product
- The tourism industry is not attractive to foreign investors due to the high entry barriers to the Uzbek market
- Statistics on tourism are out of date and incomplete

Key findings

- Over 50% of all hotels in the country are concentrated in three main cultural centers: Tashkent, Bukhara and Samarkand
- Most foreign visitors (52.1%) are aged 31–55. The next major category (28.5%) are foreign citizens under 30 years - that is, young people. Tourists over 55 years account for 19.3% of the total number of visitors. In total, 70% of tourists prefer museums, excursions accompanied by a guide, and shopping as entertainment
- The complicated process of obtaining a visa was one of the main factors why tourists decide not to travel to Uzbekistan. However, now Uzbekistan has drastically simplified the visa regime. Starting from 2019, a visa-free regime was established for another 45 countries (increasing the total number of such countries to 64). The list of countries whose citizens can receive an electronic entrance visa was expanded. Registration procedures for foreign citizens have been simplified
- Limited choice of air flight routes and high cost of air fares increase significantly the cost of visiting Uzbekistan and, therefore, reduce the country’s competitiveness on the international travel market

Contribution of tourism to the economy

USD billion

<table>
<thead>
<tr>
<th>Country</th>
<th>Direct</th>
<th>Indirect</th>
<th>Stimulating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uzbekistan</td>
<td>139</td>
<td>53%</td>
<td>18%</td>
</tr>
<tr>
<td>Austria</td>
<td>24.3</td>
<td>43%</td>
<td>19%</td>
</tr>
<tr>
<td>Turkey</td>
<td>659</td>
<td>32%</td>
<td>50%</td>
</tr>
</tbody>
</table>

- The contribution of tourism to the economy of the Republic of Uzbekistan is extremely low and is under 3%

Capital investments per tourist

USD billion

<table>
<thead>
<tr>
<th>Country</th>
<th>Capital investments per tourist</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uzbekistan</td>
<td>4.7 times lower than the same indicator in Turkey</td>
</tr>
<tr>
<td>Malaysia</td>
<td>154</td>
</tr>
<tr>
<td>Turkey</td>
<td>659</td>
</tr>
</tbody>
</table>

- The amount of capital investments spent on one foreign tourist in 2017 was almost 5 times lower than the same indicator in Turkey
- The country has a rich cultural heritage. However, Uzbekistan’s potential can only be unlocked after significant investments in the tourism industry

Source: World Travel and Tourism Council
Tourism

Target level of development

Potential tourist flow from cities with direct flights to Tashkent

Annual tourist flow, ‘000 people

<table>
<thead>
<tr>
<th>Country</th>
<th>Flow (mln)</th>
<th>Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Europe</td>
<td>1.18</td>
<td>1.4 times</td>
</tr>
<tr>
<td>India</td>
<td>17</td>
<td>1.8 times</td>
</tr>
<tr>
<td>Turkey</td>
<td>18</td>
<td>2.6 times</td>
</tr>
<tr>
<td>South Korea</td>
<td>12</td>
<td>2.6 times</td>
</tr>
<tr>
<td>China</td>
<td>4</td>
<td>2.6 times</td>
</tr>
<tr>
<td>Malaysia</td>
<td>3</td>
<td>2.6 times</td>
</tr>
</tbody>
</table>

Selected countries with the potential for an annual increase in the tourist flow

1. Cultural and educational, exotic, events-based, gastronomic, agricultural, recreational, environmental and sports tourism
2. Religious, events-based, recreational, gastronomic and agricultural tourism
3. Cultural and educational, religious, recreational and events-based tourism
4. Cultural and educational, exotic, events-based, gastronomic, agricultural, recreational, sports, industrial and ethnic tourism
5. Cultural and educational, exotic, events-based, gastronomic, agricultural, recreational, ecological, sports, industrial and ethnic tourism
6. Cultural and educational, exotic, events-based, gastronomic, agricultural and ethnic tourism

Tourism development potential in Uzbekistan

**Cultural and educational tourism**
Travel to Uzbekistan’s most ancient cities, such as Samarkand, Tashkent, Bukhara, Khiva, Fergana, with their medieval architecture, historical, architectural, and archaeological monuments will create unforgettable experiences.

**Exotic tourism**
Travel to places away from civilization using non-traditional transportation (camels, etc.).

**Religious tourism**
Visits to Uzbekistan’s holy places, such as the original Koran of the Caliph Osman from the 7th century, the mosque and tomb in holy Bukhara, and a necropolis in Samarkand where the brother of the Prophet Muhammad was buried.

**Events-based tourism**
Trip with visits to Uzbekistan’s main events, such as the World Nomad Games, Silk and Spices International Festival, Sharq Taronalari International Music Festival, etc.

**Gastronomic tourism**
Excellent opportunity to enjoy the delicacies of Uzbek cuisine and, most importantly, to try real Uzbek pilaf, which is included on UNESCO’s List of Intangible Cultural Heritage.

**Agricultural tourism**
Unique trip enabling guests to the country to visit families and live in the homes of various peoples of Uzbekistan, in towns and villages, and even in the yurts of nomads in the desert.

**Recreational tourism**
Ability to spend a vacation away from noisy cities: take a trip to the mountains and stay in health spas, visit salt therapy rooms, including special procedures.

**Ecological tourism**
Travel to an area where the sun shines almost the whole year round, to the kingdom of dry hot summers, warm winters, soft honey falls, and bright blooming springs will impress any traveler.

**Sports tourism**
Alpine skiing, water sports, horseback riding, or walking – all these activities help people stay fit and admire Uzbekistan’s picturesque environment.

**Industrial tourism**
The opportunity to learn about the manufacturing processes of household appliances (“SamRosKholod”) and foods and visit a real factory would be interesting not only to students, but also to the employees of any industry.

**Ethnic tourism**
Guests to Uzbekistan will meet an ancient, eastern ethnic group whose indigenous culture and national heritage go back centuries.

**Trip with visits to Uzbekistan’s main events, such as the World Nomad Games, Silk and Spices International Festival, Sharq Taronalari International Music Festival, etc.**

**Events-based tourism**
Trip with visits to Uzbekistan’s main events, such as the World Nomad Games, Silk and Spices International Festival, Sharq Taronalari International Music Festival, etc.

**Religious tourism**
Visits to Uzbekistan’s holy places, such as the original Koran of the Caliph Osman from the 7th century, the mosque and tomb in holy Bukhara, and a necropolis in Samarkand where the brother of the Prophet Muhammad was buried.

**Gastronomic tourism**
Excellent opportunity to enjoy the delicacies of Uzbek cuisine and, most importantly, to try real Uzbek pilaf, which is included on UNESCO’s List of Intangible Cultural Heritage.

**Agricultural tourism**
Unique trip enabling guests to the country to visit families and live in the homes of various peoples of Uzbekistan, in towns and villages, and even in the yurts of nomads in the desert.

**Recreational tourism**
Ability to spend a vacation away from noisy cities: take a trip to the mountains and stay in health spas, visit salt therapy rooms, including special procedures.

**Ecological tourism**
Travel to an area where the sun shines almost the whole year round, to the kingdom of dry hot summers, warm winters, soft honey falls, and bright blooming springs will impress any traveler.

**Sports tourism**
Alpine skiing, water sports, horseback riding, or walking – all these activities help people stay fit and admire Uzbekistan’s picturesque environment.

**Industrial tourism**
The opportunity to learn about the manufacturing processes of household appliances (“SamRosKholod”) and foods and visit a real factory would be interesting not only to students, but also to the employees of any industry.

**Ethnic tourism**
Guests to Uzbekistan will meet an ancient, eastern ethnic group whose indigenous culture and national heritage go back centuries.

Source: The State Statistics Committee of the Republic of Uzbekistan
Tourism

Strategic options

1

Tourism as a public policy

This is predicated on the presence of a strong ministry with significant control over the tourism industry.

Government activity is aimed at:

• Stimulating the development of tourism
• Ensuring the necessary level of safety for tourists
• Simplifying border and customs formalities
• Creating a national network for economic and social studies in the field of tourism
• Creating conditions for the development of the tourism industry

Examples of countries:
- Malaysia
- Israel
- Brazil
- India
- Mexico

- Existence of a branch structure (departments and divisions)
- The state as the main regulatory body
- Slow application of the latest technology
- Lack of qualified personnel

Development of a strong Ministry of Tourism

2

Tourism and related industries

Involve the establishment of a joint ministry that would handle as well as tourism other related areas (and would coordinate the actions of other government bodies on tourism-related issues).

Combination of tourism and other industries:

• Material area (industry, energy, engineering, trade, transport, communications)
• Non-production area (culture, sports, information, environmental protection, natural resources, and other)

Examples of countries:
- South Korea
- Japan
- Turkey
- Argentina
- Spain

- Tourism is a priority area of economic and cultural development
- Clear distribution of powers between the central and regional tourist administrations
- Poor development of the material and technical base in tourism
- The quality of service requires improvements

The Ministry of Tourism together with:

• Production sector (joint ministries of tourism and areas of the material sector)
• Non-production sector (joint ministries of tourism and areas of culture, environment, and other sectors)

Source: Analysis of the working group
Tourism

Target vision 2035

The tourism potential of the Republic of Uzbekistan as a key tourist destination in Central Asia is realized

- Form target tourism segments
- Create tourist products
- Guarantee the safety of tourists
- Launch a marketing campaign
- Simplify the visa policy for target groups of countries
- Develop a modern hospitality infrastructure involving international networks
- Build new hotel chains (in particular, near the transport infrastructure facilities connecting cities) and improve tourist infrastructure
- Create a competitive tourist product for target segments, including young people
- Develop mass tourism, leveraging the tourism potential of the Republic of Uzbekistan:
  - Cultural and educational tourism
  - Exotic tourism
  - Religious tourism
  - Events-based tourism
  - Gastronomic tourism
  - Agricultural tourism
  - Recreational tourism (in particular, medical and healthcare tourism)
  - Environmental tourism
  - Sports tourism (in particular, mountain skiing)
  - Industrial tourism
  - Ethnic tourism
  - Homestay
- Establish and implement national and individual international quality standards in the service sector, and consistently harmonize and bring these standards into line with international levels
- Establish an information base to create the digital infrastructure of the transportation network
- Create national platforms for the digitization of the tourism industry
- Develop private business in the transport and tourism industries
- Attract foreign travel operators with experience of international tourism
- Develop home-based tourist accommodation in the residential sector, including through preferential tax concessions
- Develop domestic tourism, determining its target parameters
- Improve the methodology of tourism statistics

Sources: World Travel and Tourism Council, State Statistics Committee of the Republic of Uzbekistan, Travel & Tourism Competitiveness Report 2017, analysis of the working group

Figures

<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rank in the rating of countries by competitiveness of the tourism industry (out of 136 countries in 2017)</td>
<td>27th</td>
<td>Top 50</td>
</tr>
<tr>
<td>Ranking in the population hospitality rating (out of 153 countries)</td>
<td>96th</td>
<td>Top 30</td>
</tr>
<tr>
<td>Ranking in the tourism export rating of countries (out of 185 countries)</td>
<td>149th</td>
<td>Top 80</td>
</tr>
<tr>
<td>Ranking in the country rating based on the contribution of tourism to GDP (out of 185 countries)</td>
<td>117th</td>
<td>Top 50</td>
</tr>
<tr>
<td>Ranking in the country rating by level of investments in the tourism industry (out of 185 countries)</td>
<td>180th</td>
<td>Top 50</td>
</tr>
</tbody>
</table>

Investments in the tourism industry (forecast)

<table>
<thead>
<tr>
<th></th>
<th>by 2025</th>
<th>by 2030</th>
<th>by 2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>USD cumulative</td>
<td>3.6-4.4</td>
<td>16.1-19.7</td>
<td>39.6-48.4</td>
</tr>
</tbody>
</table>
### Key Strategic Initiatives

<table>
<thead>
<tr>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Simplify the visa scheme for target groups of countries</td>
<td>Harmonize and bring national quality standards in services in line with the requirements of international standards</td>
<td>Integrate international networks in the global tourism system</td>
</tr>
<tr>
<td>Improve the regulatory framework for tourism aimed at forming favorable conditions for the activities of business entities in tourism</td>
<td>Implement unified digital infrastructure of the national transport network</td>
<td>Implement an electronic system of urban and intercity transport service</td>
</tr>
<tr>
<td>Attract international networks to upgrade the hospitality infrastructure, create new hotel chains</td>
<td>Conduct a promotional tourist campaign</td>
<td>Form and promote a positive image of the country globally and create the &quot;Uzbekistan&quot; brand</td>
</tr>
<tr>
<td>Improve the training system of highly qualified specialists for the tourism industry, the retraining and advanced training of employees of tourism entities with particular focus on the learning of foreign languages (in particular, English)</td>
<td>Create the necessary infrastructure for the disabled</td>
<td></td>
</tr>
<tr>
<td>Launch programs to attract and support private business in the transport and tourism sectors, which would stipulate, among other things, preferential tax concessions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Host international cultural and sports competitions, festivals, and contests (e.g., motor rally)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increase the number of direct air flights to international destinations, launch low-cost airlines, build railroads</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Analysis of the working group
Small businesses and private entrepreneurship

Economic development
Small businesses and private entrepreneurship

Current level of development

Key challenges

• Statistical accounting of small business and private entrepreneurship
• Low level of SB&PE penetration
• Stagnation of SB&PE development
• Low level of conversion from private entrepreneurs into small and medium-sized companies
• High share of the informal economy
• High cost of borrowing
• High debt burden and complex tax system
• Underdeveloped simplified tax system
• Opaque and bureaucratic tender procedures
• Complicated access to land plots and real estate
• Hard to obtain construction and town-planning permits
• Tax regulation issues
• Problems of banking sector regulation
• Lack of attention from local authorities to entrepreneurs’ problems
• Lack of collateral value of clients – small and medium enterprises
• Export barriers
• Lack of a network of support infrastructure for small businesses and entrepreneurs, including regional network
• No single institute to support small business and entrepreneurs
• Lack of well-built internal processes (including in relation to reporting)
• High inflation

Key findings

• Criteria for the classification of enterprises as SMEs in Uzbekistan are at variance with international practices, there is no medium-sized business segment
• Problems arise with the statistical accounting of SB&PE. There are no accurate data on the number of private enterprises
• Uzbekistan lags behind developing countries in terms of the number of SME and behind developed countries by the level of added value per SME
• A new online registration system has simplified and reduced time and labor costs on the registration of enterprises
• There are no tax incentives for SB&PE, other than the ability to apply a simplified tax system, which needs improvements
• A low level of conversion from private entrepreneurs into small and medium companies can be observed in Uzbekistan
• The share of the informal economy is significant: While the share of the informal economy is estimated at 50%, GDP losses equal up to USD 16–17 billion
• In the business environment, the key problems are the high cost of borrowing, high taxes, opaque and bureaucratic tender procedures
• The main infrastructure problems include access to land and real estate, and the receipt of construction and town-planning permits
• From a regulatory perspective, entrepreneurs negatively comment on the problems of tax regulation and regulation of the banking sector, and also on the lack of attention paid by the local authorities to existing problems
• The key barriers to attracting foreign investments include staffing, the lack of information for investors, and lack of interest from the local authorities
• Lending to SB&PE grew by 23%. However, the lack of collateral value of SMEs is a problem
• Uzbekistan is characterized by a high level of self-employment (27%), which is typical for an undeveloped SME sector
• SB&PE financing with 18% share of SME in the credit portfolio is insufficient
• State regulation of export procedures and customs barriers complicate the development of exports by SB&PE
• There is no unified consolidating body responsible for the development of an SB&PE support strategy and subsequent monitoring of its implementation

Sources: State Statistics Committee of the Republic of Uzbekistan, World Bank, data from statistical agencies of the corresponding countries, OECD, World Bank, open sources, analysis of the project team
Small businesses and private entrepreneurship in the Republic of Uzbekistan

The SME sector in the Republic of Uzbekistan is defined as "Small businesses and private entrepreneurship" (SB&PE)

- Small businesses are represented by individual entrepreneurs, micro-enterprises, and small enterprises
- This classification is regulated by Resolution No. 275 of the Government of the Republic of Uzbekistan dated 24 August 2016 and includes only the criterion "Staff size"
- The number of employees varies depending on the industry
- There is no "medium-sized business" segment

The criteria for defining small business and private entrepreneurship are at variance with international practice:

<table>
<thead>
<tr>
<th>Comparison with international practice</th>
<th>Int'l</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. &quot;Number of employees&quot; criterion</td>
<td>✔</td>
</tr>
<tr>
<td>2. &quot;Revenue&quot; or &quot;Assets&quot; criterion</td>
<td>✗</td>
</tr>
<tr>
<td>3. Industry differences</td>
<td>✔</td>
</tr>
</tbody>
</table>

- Preservation of industry-specific differences is necessary subject to certain tax objectives (e.g., stimulation of individual industries) or statistical objectives (e.g., comparison of labor productivity) set by the state

Uzbekistan lags behind developing countries in terms of the number of SMEs and behind developed countries by the level of added value per SME

- With 7.1 SMEs per 1,000 people, Uzbekistan lags behind developing countries with a median of 44 SMEs (difference of 37 SMEs per 1,000 people at the average delta of 17 SMEs in developing countries)
- At the same time, the added value of SMEs in Uzbekistan is comparable to similar countries: USD 113 (median value of USD billion)
- The added value of SMEs in Uzbekistan is less than half the level in emerging countries (USD 113,000 vs. USD billion)

Sources: Data from statistical agencies of the respective countries, OECD, World Bank, open sources, analysis of the project team
Small businesses and private entrepreneurship problems depending on the life cycle stage

**SME life cycle**

<table>
<thead>
<tr>
<th>Concept</th>
<th>Registration/opening</th>
<th>Growth/development/export</th>
<th>Exit from business/closure</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Level of entrepreneurial activity of the population</td>
<td>• Ease of registering a business</td>
<td>• Ability to manufacture goods with high added value</td>
<td>• Access to customers</td>
</tr>
<tr>
<td>• Inclination of the population to establish businesses (fear of failure, lack of motivation, opportunities, and skills)</td>
<td>• Development level of informal economy</td>
<td>• Business management issues</td>
<td>• Business management issues</td>
</tr>
<tr>
<td>• Conditions for doing business</td>
<td>• Tax incentives for self-employment</td>
<td>• Maturity of the financial system and access to capital (ease of obtaining a loan)</td>
<td>• Government regulation</td>
</tr>
<tr>
<td></td>
<td>• Availability of capital and knowledge required to start a business</td>
<td>• Access and simplicity of organizing export supplies</td>
<td>• Access to resources (financing and infrastructure)</td>
</tr>
<tr>
<td></td>
<td>• Protection of entrepreneur’s rights</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Maturity of the financial system and access to capital (ease of obtaining a loan)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Influencing factors (international experience)**

- Affects the number of SMEs
- Affects the size of SMEs
- Affects the number of SMEs

**Dynamics of the number of SB&PE (calculation based on statistics), 2013–2017**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>214</td>
<td>26</td>
<td>19</td>
<td>221</td>
<td>27</td>
<td>23</td>
<td>225</td>
<td>31</td>
<td>231</td>
<td>38</td>
<td>224</td>
</tr>
<tr>
<td>2014</td>
<td>221</td>
<td>27</td>
<td>23</td>
<td>226</td>
<td>31</td>
<td>25</td>
<td>231</td>
<td>38</td>
<td>224</td>
<td>22</td>
<td>221</td>
</tr>
<tr>
<td>2015</td>
<td>226</td>
<td>31</td>
<td>25</td>
<td>226</td>
<td>25</td>
<td>22</td>
<td>231</td>
<td>38</td>
<td>224</td>
<td>22</td>
<td>221</td>
</tr>
<tr>
<td>2016</td>
<td>226</td>
<td>25</td>
<td>22</td>
<td>242</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Statistical data differ from the data calculated on the basis of the same statistical data. This underscores issues with accounting and statistics
- Insignificant growth of registered SMEs can be observed, in particular, owing to the growth of registration outstripping the number of SMEs being closed

Sources: State Statistics Committee of the Republic of Uzbekistan, analysis of the working group
Changes in the SME registration system

- Growth in the number of registrations is observed. This is due in part to simplification of the registration process, which now takes 30 minutes online.
- The new registration system is line with the latest international practices, which enabled Uzbekistan to rise to 11th in the “Registration of enterprises” section of the Doing Business rating.

**Previous registration system**

<table>
<thead>
<tr>
<th>Founder</th>
<th>State authorities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preparing and filing documents</td>
<td>Registration authority: verification, assignment of statistical codes, certification of the seal</td>
</tr>
<tr>
<td></td>
<td>State tax service: assignment of TIN</td>
</tr>
<tr>
<td></td>
<td>Registration authority: entering information in the Unified State Register, issuance of a certificate</td>
</tr>
<tr>
<td>Receiving original registration certificate</td>
<td>Other bodies (tax authority, State Statistics Committee, People’s Bank): registration</td>
</tr>
</tbody>
</table>

**Current registration system (since 2017)**

<table>
<thead>
<tr>
<th>Founder</th>
<th>State authorities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filing documents online</td>
<td>State registration system: verification, registration, entry in the registers, including identifiers (TIN and others), sending of electronic registration certificate</td>
</tr>
<tr>
<td>Receiving registration certificate online</td>
<td></td>
</tr>
</tbody>
</table>

**Duration of registration process**

- 2–7 days for legal entities
- 2 days for individual entrepreneurs
- 30 minutes for legal entities and individual entrepreneurs

**Required number of documents**

- 5–6 for legal entities and individual entrepreneurs
- 2 for legal entities
- 1 for individual entrepreneurs

**“Registration of enterprises” in the Doing Business 2018 rating**

1. New Zealand
2. Canada
3. Hong Kong
10. Kosovo
12. Estonia
190. Venezuela
11th Uzbekistan


Share of operating SB&PE in the total number of registered SB&PE

- Growth in the number and share of current SMEs in the total number of registered enterprises can be observed
- The share of operating SB&PE equaled 95% in 2017, the number of operating SB&PE grew by 21% to 230,000 enterprises (higher growth than the number of registered enterprises, which increased by 16% over the same period)
- The growth in operating companies is due to the closure of dormant companies and the decision of businesses “to go legal” (companies are starting to register some of their activities)
- However, there are no tax incentives for SMEs, other than the ability to apply the simplified tax system
- The general tax system is complicated, which leads to the high administration cost of tax accounting
- The simplified tax system needs improvements, since entrepreneurs are only able to pay tax on revenue
- Possible improvement: introduction of income tax payment, which is relevant for newly opened enterprises with a low profit level

Share of micro-enterprises in the SME structure, 2017

<table>
<thead>
<tr>
<th>Country</th>
<th>Micro</th>
</tr>
</thead>
<tbody>
<tr>
<td>Russia</td>
<td>93.5%</td>
</tr>
<tr>
<td>European Union²</td>
<td>93.2%</td>
</tr>
<tr>
<td>Uzbekistan</td>
<td>91.8%</td>
</tr>
<tr>
<td>billion</td>
<td>89.5%</td>
</tr>
</tbody>
</table>

- The share of micro-enterprises in the SME structure of Uzbekistan corresponds to international practice
- Every country has its own principles for dividing companies into micro, small, and medium enterprises
- For the purposes of this analysis, we used national criteria to group companies

Note: 1 = EU data for 2016
Source: State Statistics Committee of the Republic of Uzbekistan, analysis of the working group
The development of SMEs is stagnating both in terms of quantity and size

Number of SME per 1’000 people

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of SMEs</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>6.3</td>
</tr>
<tr>
<td>2013</td>
<td>7.3</td>
</tr>
<tr>
<td>2014</td>
<td>6.4</td>
</tr>
<tr>
<td>2015</td>
<td>6.6</td>
</tr>
<tr>
<td>2016</td>
<td>6.6</td>
</tr>
<tr>
<td>2017</td>
<td>7.1</td>
</tr>
</tbody>
</table>

- The number of SB&PE per 1,000 people varied within 6.3–7.3 enterprises; since 2013, the number of enterprises grew slightly, but the current number of SB&PE has not recovered compared to 2012
- Taking into account the informal economy, the number of SMEs may be higher
- The number of SMEs grew throughout 2012–2016, but fell by 38% in 2017, partially due to the weakening of the national currency

Value added per 1 SB&PE, thousand billion

<table>
<thead>
<tr>
<th>Year</th>
<th>Value added</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>129.9</td>
</tr>
<tr>
<td>2013</td>
<td>169.5</td>
</tr>
<tr>
<td>2014</td>
<td>180.5</td>
</tr>
<tr>
<td>2015</td>
<td>182.5</td>
</tr>
<tr>
<td>2016</td>
<td>181.2</td>
</tr>
<tr>
<td>2017</td>
<td>113.0</td>
</tr>
</tbody>
</table>

- Uzbekistan is characterized by a high level of self-employment (27%), which is typical for emerging countries
- When the SME level is developed, the rate of self-employment decreases by 15% on average
- After further development of SMEs in Uzbekistan, the self-employment rate may drop to approximately 20%

Share of self-employed, 2017

- Developed countries
- Developing countries
- Size = able-bodied population
- In general, a high level of self-employment is typical for developing countries
- Over the past five years, the self-employment level in Uzbekistan decreased by 1% annually on average
- The current level of self-employment is 27%

Source: State Statistics Committee of the Republic of Uzbekistan, World Bank, analysis of the project team; World Bank, analysis of the project team
Small businesses and private entrepreneurship

Estimated number of private entrepreneurs (million people)

There is a shortage of accurate data on the number of private entrepreneurs in the Republic of Uzbekistan

<table>
<thead>
<tr>
<th>Source</th>
<th>Number of Private Entrepreneurs</th>
</tr>
</thead>
<tbody>
<tr>
<td>ILO</td>
<td>3.5</td>
</tr>
<tr>
<td>Open sources</td>
<td>2.8</td>
</tr>
<tr>
<td>Official statistical data</td>
<td>Analysis of open sources did not reveal any data on the number of private entrepreneurs</td>
</tr>
</tbody>
</table>

Number of private entrepreneurs per SME

A low level of conversion from private entrepreneurs into small and medium companies is observed in Uzbekistan

<table>
<thead>
<tr>
<th>Country</th>
<th>Number of Entrepreneurs</th>
</tr>
</thead>
<tbody>
<tr>
<td>billion</td>
<td>4.3</td>
</tr>
<tr>
<td>Russia</td>
<td>1.4</td>
</tr>
<tr>
<td>Uzbekistan</td>
<td>11.6</td>
</tr>
</tbody>
</table>

- In most countries, the number of private entrepreneurs exceeds the number of SMEs
- There are about 11.6 private entrepreneurs per registered company in Uzbekistan (with an estimated number of 2.8 million private entrepreneurs)
- In the US, there are 4.3 entrepreneurs per company, and in Russia, 1.4 entrepreneurs

Assessment of the share of the informal economy

- The informal economy accounts for a significant share of the economy
- While the share of the informal economy is estimated to be 50%, GDP losses equal up to USD 16–17 billion

Source: State Statistics Committee of the Republic of Uzbekistan, analysis of the project team; Data of relevant ratings, analysis of the project team; International Labor Organization, data from open sources, Uzbekistan 2035 Forum
The interviewed entrepreneurs identified a number of factors that adversely affect the development of entrepreneurship:

- In the business environment, the key problems are the high cost of borrowing, high taxes, opaque and bureaucratic tender procedures.
- The key infrastructure problems include access to land and real estate, and the receipt of construction and town planning permits.

### Key problems of the business environment

<table>
<thead>
<tr>
<th>Problem</th>
<th>Percentage of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>High borrowing rate</td>
<td>80%</td>
</tr>
<tr>
<td>High taxes</td>
<td>72%</td>
</tr>
<tr>
<td>Opaque and bureaucratic tender procedures</td>
<td>46%</td>
</tr>
<tr>
<td>Access to tender information</td>
<td>42%</td>
</tr>
<tr>
<td>Issuance of permits</td>
<td>39%</td>
</tr>
<tr>
<td>Access to information on technologies and equipment</td>
<td>36%</td>
</tr>
<tr>
<td>Problems with the regulatory authorities</td>
<td>36%</td>
</tr>
<tr>
<td>Problems with product certification</td>
<td>31%</td>
</tr>
<tr>
<td>Licensing problems</td>
<td>30%</td>
</tr>
<tr>
<td>Resistance to fair competition of informal businesses</td>
<td>26%</td>
</tr>
</tbody>
</table>

### Key infrastructure problems

<table>
<thead>
<tr>
<th>Problem</th>
<th>Percentage of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access to land plots</td>
<td>51%</td>
</tr>
<tr>
<td>Access to vacant buildings and structures</td>
<td>45%</td>
</tr>
<tr>
<td>Receipt of APA</td>
<td>40%</td>
</tr>
<tr>
<td>Gas supply</td>
<td>33%</td>
</tr>
<tr>
<td>Energy supply</td>
<td>32%</td>
</tr>
<tr>
<td>Sewerage</td>
<td>27%</td>
</tr>
<tr>
<td>Heating</td>
<td>27%</td>
</tr>
<tr>
<td>Water supply</td>
<td>22%</td>
</tr>
<tr>
<td>Telephone communications</td>
<td>11%</td>
</tr>
</tbody>
</table>

Source: CCI, UN DP, Oliy Majlis (interview of over 600 entrepreneurs, 2018), analysis of the project team

Notes: 1 = architectural planning assignment
## Small businesses and private entrepreneurship

### Factors that adversely affect the development of entrepreneurship

The interviewed entrepreneurs identified the following factors that adversely affect the development of entrepreneurship:

- From a regulatory perspective, entrepreneurs negatively comment on the problems of tax regulation and banking sector regulation, and also the lack of attention paid by the local authorities to existing problems.
- The key barriers to attracting foreign investments are staffing, the lack of information for investors, and lack of interest from the local authorities.

### Regulatory factors that have the most negative impact on business development

<table>
<thead>
<tr>
<th>Factor</th>
<th>% of the total number of interviewed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tax regulation</td>
<td>66%</td>
</tr>
<tr>
<td>Banking sector regulation</td>
<td>62%</td>
</tr>
<tr>
<td>Lack of attention from the local authorities</td>
<td>30%</td>
</tr>
<tr>
<td>Antitrust regulation</td>
<td>23%</td>
</tr>
<tr>
<td>Construction legislation</td>
<td>21%</td>
</tr>
<tr>
<td>Customs regulation</td>
<td>15%</td>
</tr>
<tr>
<td>Technical regulation</td>
<td>12%</td>
</tr>
</tbody>
</table>

### Key barriers to growth in foreign investments

<table>
<thead>
<tr>
<th>Factor</th>
<th>% of the total number of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of qualified personnel</td>
<td>66%</td>
</tr>
<tr>
<td>Lack of information for investors</td>
<td>54%</td>
</tr>
<tr>
<td>Lack of interest of the local authorities in attracting investments</td>
<td>48%</td>
</tr>
<tr>
<td>High cost and complexity of transactions</td>
<td>46%</td>
</tr>
<tr>
<td>Limited access to raw materials</td>
<td>45%</td>
</tr>
<tr>
<td>Excessive hierarchy</td>
<td>38%</td>
</tr>
<tr>
<td>Poor development of existing economic zones</td>
<td>37%</td>
</tr>
<tr>
<td>Lack of international commercial arbitration in Uzbekistan</td>
<td>33%</td>
</tr>
<tr>
<td>Poor development of automotive infrastructure</td>
<td>32%</td>
</tr>
</tbody>
</table>

Source: CCI, UN DP, Oliy Majlis (interview of over 600 entrepreneurs, 2018), analysis of the project team
Small businesses and private entrepreneurship

Division of existing SB&PE by type of activity
%

Analysis of the past five years shows that from an industry perspective SMEs are stagnating, with insignificant growth in trade and industry.

<table>
<thead>
<tr>
<th>Year</th>
<th>Accommodation and food services</th>
<th>Agriculture, forestry, and fishing industry</th>
<th>Construction</th>
<th>Industry</th>
<th>Other types</th>
<th>Sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>27.3%</td>
<td>19.9%</td>
<td>19.8%</td>
<td>20.3%</td>
<td>15.5%</td>
<td>30.2%</td>
</tr>
<tr>
<td>2014</td>
<td>28.4%</td>
<td>20.1%</td>
<td>20.1%</td>
<td>21.2%</td>
<td>15.0%</td>
<td>29.4%</td>
</tr>
<tr>
<td>2015</td>
<td>28.4%</td>
<td>19.8%</td>
<td>19.8%</td>
<td>20.3%</td>
<td>15.0%</td>
<td>29.4%</td>
</tr>
<tr>
<td>2016</td>
<td>28.4%</td>
<td>19.8%</td>
<td>19.8%</td>
<td>20.3%</td>
<td>15.0%</td>
<td>29.4%</td>
</tr>
<tr>
<td>2017</td>
<td>28.4%</td>
<td>19.8%</td>
<td>19.8%</td>
<td>20.3%</td>
<td>15.0%</td>
<td>29.4%</td>
</tr>
</tbody>
</table>

Average

<table>
<thead>
<tr>
<th></th>
<th>15.3%</th>
<th>15.0%</th>
<th>15.1%</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>190</td>
<td>196</td>
<td>207</td>
</tr>
<tr>
<td>2014</td>
<td>196</td>
<td>207</td>
<td>211</td>
</tr>
<tr>
<td>2015</td>
<td>207</td>
<td>211</td>
<td>230</td>
</tr>
<tr>
<td>2016</td>
<td>211</td>
<td>230</td>
<td>100%</td>
</tr>
</tbody>
</table>

- Trading enterprises account for the largest proportion of SMEs, although their share declined slightly from 30.2 to 27.3%.
- The share of SMEs involved in industry grew by 2.2%.
- Growth in SMEs is also observed in construction, agriculture, forestry, and the fishing industry, and also in hospitality services, transportation, and storage.

Source: State Statistics Committee of the Republic of Uzbekistan, analysis of the working group
Small businesses and private entrepreneurship

Loans granted to small businesses
UZS billion

- While lending to small businesses and private entrepreneurs increased by 23%, microloans account for the largest share.
- The problem is the lack of collateral value of SMEs, which makes it impossible to issue traditional loans and also results in the significant volume of microlending.

### 2016

<table>
<thead>
<tr>
<th>Category</th>
<th>Amount (UZS billion)</th>
<th>Share (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other</td>
<td>8,073</td>
<td>50.9%</td>
</tr>
<tr>
<td>Microloans</td>
<td>3,326</td>
<td>21.0%</td>
</tr>
<tr>
<td>Loans for service sector development</td>
<td>2,457</td>
<td>15.5%</td>
</tr>
<tr>
<td>Loans for the support of female entrepreneurs</td>
<td>1,647</td>
<td>10.4%</td>
</tr>
<tr>
<td>Loans for the development of family businesses and crafts</td>
<td>367</td>
<td>2.3%</td>
</tr>
<tr>
<td>Total</td>
<td>15,870</td>
<td>100%</td>
</tr>
</tbody>
</table>

### 2017

<table>
<thead>
<tr>
<th>Category</th>
<th>Amount (UZS billion)</th>
<th>Share (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other</td>
<td>8,695</td>
<td>44.4%</td>
</tr>
<tr>
<td>Microloans</td>
<td>4,015</td>
<td>20.5%</td>
</tr>
<tr>
<td>Loans for service sector development</td>
<td>3,582</td>
<td>18.3%</td>
</tr>
<tr>
<td>Loans for the support of female entrepreneurs</td>
<td>2,782</td>
<td>14.2%</td>
</tr>
<tr>
<td>Loans for the development of family businesses and crafts</td>
<td>490</td>
<td>2.5%</td>
</tr>
<tr>
<td>Total</td>
<td>19,565</td>
<td>100%</td>
</tr>
</tbody>
</table>

### Loan portfolio structure, 2013–2017

<table>
<thead>
<tr>
<th>Year</th>
<th>Individuals</th>
<th>Small entities</th>
<th>Corporate segment</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>78%</td>
<td>11%</td>
<td>11%</td>
</tr>
<tr>
<td>2014</td>
<td>75%</td>
<td>14%</td>
<td>11%</td>
</tr>
<tr>
<td>2015</td>
<td>73%</td>
<td>12%</td>
<td>16%</td>
</tr>
<tr>
<td>2016</td>
<td>71%</td>
<td>12%</td>
<td>17%</td>
</tr>
<tr>
<td>2017</td>
<td>70%</td>
<td>12%</td>
<td>18%</td>
</tr>
</tbody>
</table>

- In absolute terms, lending to SB&PE grew by +23% in 2017 compared to 2016.
- Microloans constitute a significant portion of loans (about 20%), which indicates that it is impossible to obtain traditional bank loans.
- The share of small businesses in the loan portfolio is growing due to a decline in the corporate segment and currently accounts for 18%.
- The real share of small businesses in the loan portfolio may be higher due to the portion of loans to individuals used for the needs of small businesses.

Source: Central Bank of Uzbekistan, overview of the economy of the Republic of Uzbekistan, commercial representative office of the Russian Federation in the Republic of Uzbekistan, analysis of the project team.
Small businesses and private entrepreneurship

Share of small businesses and private entrepreneurship in the loan portfolio* and share of SMEs in GDP

- Developed countries with a high share of SMEs in GDP are characterized by a low share of SMEs in the loan portfolio.
- Emerging countries are characterized by more intensive financing of SMEs in order to stimulate their growth.
- Compared to developing countries, Uzbekistan lags behind in financing small businesses and private entrepreneurship with a share of SMEs in the loan portfolio of 18%.
- To stimulate growth, the target for Uzbekistan might be 30–40% in the loan portfolio.

Share of SMEs in GDP

Note: * Data for 2014–2017, the latest available information was used.
Source: World Bank, OECD, data from open sources, analysis of the project team

- A moderate share of small businesses and private entrepreneurship in the loan portfolio with a high level of SMEs in GDP is typical of developed countries: Italy, Germany, France, UK, and USA.
- Developing countries are characterized by a higher share of small businesses and private entrepreneurs in the loan portfolio: China, India, South Korea, etc.
- Uzbekistan, with its high share of small businesses and private entrepreneurs in GDP, has a relatively low share of small businesses and private entrepreneurship in the loan portfolio (about 18%), whereas the median is 39.8% in developing countries.
Small businesses and private entrepreneurship

- International ratings on the state of the economy and society attest to weak development of the entrepreneurial climate in Uzbekistan
- Uzbekistan is not represented in a number of important ratings, such as Global Entrepreneurship Monitor

<table>
<thead>
<tr>
<th>Index</th>
<th>Description</th>
<th>Position of the Republic of Uzbekistan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Index of Economic Freedom, 2017</td>
<td>Index of Economic Freedom, in other words, no government intervention or obstruction in the production, distribution, and consumption of goods and services, except for the protection required by citizens and the support of freedom</td>
<td>152nd out of 180</td>
</tr>
<tr>
<td>Doing Business, 2018</td>
<td>Assessment of indicators that help to expand entrepreneurial activity and also the norms that hinder entrepreneurial activity</td>
<td>74th out of 180</td>
</tr>
<tr>
<td>Indigo Index, 2018</td>
<td>Assessment of the ability of an economy to adapt and develop when transitioning from the use of raw materials and natural resources to the use of innovations and technologies</td>
<td>128th out of 180</td>
</tr>
</tbody>
</table>

SB&PE share in GRP (gross regional product) of regions, 2016

- Jizzakh and Samargand Regions are the leaders in SB&PE's share in GRP of the region
- Regional development of SB&PE is largely attributable to historical reasons, including the presence of large businesses, population density, etc.

Source: Data from relevant ratings, analysis of the project team; International Labor Organization, data from open sources, Uzbekistan 2035 Forum
Small businesses and private entrepreneurship

State regulation of export procedures and customs barriers greatly complicate the development of exports by SB&PE: as well as high export costs, the documentation required to export goods can take a long time to complete/process.

Dynamics of the number of closures of small and private enterprises (calculation based on statistics), thousand enterprises, 2014–2017

The number of closures of enterprises remains at the same level. In 2014–2016, there was an increase in closures.

<table>
<thead>
<tr>
<th>Countries</th>
<th>Share of SMEs in exports, %*</th>
<th>Value of exports (USD per 1 TEU)**</th>
<th>Duration of export procedures, days**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan</td>
<td>53%</td>
<td>829</td>
<td>11</td>
</tr>
<tr>
<td>China</td>
<td>42%</td>
<td>823</td>
<td>21</td>
</tr>
<tr>
<td>UK</td>
<td>34%</td>
<td>1,005</td>
<td>8</td>
</tr>
<tr>
<td>USA</td>
<td>33%</td>
<td>1,224</td>
<td>6</td>
</tr>
<tr>
<td>Canada</td>
<td>27%</td>
<td>1,680</td>
<td>8</td>
</tr>
<tr>
<td>Uzbekistan</td>
<td>27%</td>
<td>5,090</td>
<td>54</td>
</tr>
<tr>
<td>Malaysia</td>
<td>19%</td>
<td>525</td>
<td>11</td>
</tr>
<tr>
<td>South Korea</td>
<td>19%</td>
<td>670</td>
<td>8</td>
</tr>
<tr>
<td>Australia</td>
<td>5%</td>
<td>1,200</td>
<td>9</td>
</tr>
</tbody>
</table>

Note: * Data for the last available period (2015-2017) from open sources ** data for the last available period (2014), TEU = “twenty-foot equivalent unit”

Source: World Bank, OECD, data from open sources, analysis of the project team
Small businesses and private entrepreneurship

Lack of SB&PE support infrastructure

<table>
<thead>
<tr>
<th>Development institute</th>
<th>Description</th>
</tr>
</thead>
</table>
| Fund for the Support of Exports of Small and Medium-Sized Businesses and Private Enterprises | • Institute set up to expand the export potential of small and private businesses  
• Provision of the necessary legal, financial, and organizational support to SMEs to increase the manufacture of modern products that would be competitive in foreign markets |
| State Support Fund for the Development of Entrepreneurship under the Cabinet of Ministers | • The main area of activity is to expand entrepreneurial access to financial services (warranty support)  
• Participation in the implementation of special state, industry-specific, and regional programs, projects, and activities |
| Chamber of Commerce and Industry (CCI) | • Non-governmental organization whose purpose is to improve the business climate and create favorable conditions for developing entrepreneurship  
• Provides consultation services  
• Has regional branch offices |

• Despite a number of development institutes, some key elements of SB&PE support are not represented
• In Uzbekistan there is no regional consultancy infrastructure, in particular, ESC (entrepreneur support centers), ExSC (export support centers), regional financial infrastructure (regional guarantee funds), and other types of support infrastructure (technology parks, business incubators)

Creation of unified body of SB&PE support

Until August 2019 there was no unified consolidating body in Uzbekistan responsible for the development of the SB&PE support strategy and the subsequent monitoring of its implementation

<table>
<thead>
<tr>
<th>Country</th>
<th>Development of SME strategy</th>
<th>Introduction of support measures</th>
<th>Monitoring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Singapore</td>
<td>SPRING Singapore</td>
<td></td>
<td>SPRING Singapore, Ministry of Trade and Industry of Singapore</td>
</tr>
<tr>
<td>Malaysia</td>
<td>SME Corporation</td>
<td></td>
<td>SME Corporation</td>
</tr>
<tr>
<td>Japan</td>
<td>SME Agency</td>
<td></td>
<td>SME Agency</td>
</tr>
<tr>
<td>USA</td>
<td>SBA</td>
<td>Several organizations</td>
<td>SBA</td>
</tr>
<tr>
<td>Vietnam</td>
<td>SME Development council</td>
<td></td>
<td>SME Development council</td>
</tr>
<tr>
<td>Thailand</td>
<td>OSMEP</td>
<td></td>
<td>OSMEP</td>
</tr>
<tr>
<td>India</td>
<td>Ministry of SME</td>
<td></td>
<td>Ministry of SME</td>
</tr>
<tr>
<td>South Africa</td>
<td>Small Enterprise Development Agency</td>
<td></td>
<td>Small Enterprise Development Agency</td>
</tr>
<tr>
<td>South Korea</td>
<td>SMB Administration</td>
<td></td>
<td>SMB Administration</td>
</tr>
<tr>
<td>Russia</td>
<td>Ministry of Economic Development of Russia</td>
<td></td>
<td>Ministry of Economic Development of Russia</td>
</tr>
<tr>
<td>Uzbekistan</td>
<td>None</td>
<td></td>
<td>Several organizations</td>
</tr>
</tbody>
</table>

Source: Data of SME support bodies of the represented countries, analysis of the working group
Small businesses and private entrepreneurship

Satisfaction with entrepreneurship support measures

- The following support measures have the lowest satisfaction level: concessionary lending, support during the provision of buildings and premises, and information and consultancy support.
- In general, the percentage of respondents completely satisfied with support measures is low; maximum satisfaction is observed in educational programs, which demonstrates that the support measures need to be restructured and improved.

Source: CCI, UN DP, Olly Majlis (interview with over 600 entrepreneurs, 2018), analysis of the working group
Small businesses and private entrepreneurship

Strategic options

1

Financial support to SMEs

Use of credit support to small and medium-sized enterprises as the main support instrument. Financing is provided from state funds and through the extension of concessionary loans from commercial banks, which receive in turn certain preferences from the state. Skills and competencies are developed through the efforts of the entrepreneurs themselves.

Examples of countries:
- USA
- Canada

- Ability to quickly start a business and get results
- Risk that the SMEs may be lossmaking due to insufficient analysis when the loans were issued
- Short-term impact of support
- Need for large budgetary expenditures

Supply of resources to SMEs in the short term

2

Nonfinancial support to SMEs

Use of mainly non-financial support to SMEs. Main support instruments are consultation, education, assistance with access to foreign markets, and provision of guarantees. SMEs do not have quick access to the financial resources required to establish new companies.

Examples of countries:
- India
- Singapore

- Long-term impact of the support
- SMEs have better business management skills, which has a positive impact on their profitability
- The problem of the lack of financing is increased by low income levels and the lack of investment opportunities for people in Uzbekistan

3

Mixed support of SMEs and regulation

Combination of financial and non-financial support in the event of the removal of regulatory and infrastructure barriers. The state supports the functioning of a stable institutional environment, together with the delivery of targeted financial or non-financial support through the regional infrastructure network, subject to the presence of an SME policy coordinator.

Examples of countries:
- UK
- France

- Ability to launch SMEs quickly, with long-term support
- Need for significant administrative efforts to establish a support system

Combination of the available financial resources and skills of SME representatives subject to a stable institutional environment

Sources: Analysis of data from open sources, analysis of the working group
Small businesses and private entrepreneurship

Target vision 2035

The country uses various financial and non-financial state support measures for the comprehensive development of an entrepreneurial spirit and business, enabling entrepreneurs to open with ease and freely conduct and develop their business. Mixed support model

- Facilitate legalization of unofficial employment through capital amnesty (including tax amnesty)
- Create a single support institution, support infrastructure (business support centers, expert training centers, technology parks, accelerators, etc.) and introduce new support products
- Provision of access to financing through guarantee support
- Greater access of SMEs to state orders (quotas) and export incentives
- Improve the tax system, including the introduction of profit tax in the simplified tax system
- Assign separate status to medium-sized businesses and differentiate state policy with respect to support products depending on the size of the enterprise
- Develop a sound electronic declaration system for all types of business entities
- Implement unified inter-departmental integrated electronic information system for foreign trade operations
- Create unified automated control system for transit goods and vehicles

Guidelines for action

<table>
<thead>
<tr>
<th>Figures</th>
<th>2017</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Share of SMEs, per 1,000 people</td>
<td>7.1</td>
<td>25</td>
</tr>
<tr>
<td>Value added per SME, USD ‘000/SME</td>
<td>113</td>
<td>273</td>
</tr>
<tr>
<td>Doing Business Index (rating position)</td>
<td>74</td>
<td>Top 20</td>
</tr>
<tr>
<td>Index of Economic Freedom (rating position)</td>
<td>152</td>
<td>Top 50</td>
</tr>
<tr>
<td>Share of SMEs in the loan portfolio</td>
<td>18%</td>
<td>40%</td>
</tr>
<tr>
<td>Period for connecting SMEs to the electrical supply network (days)</td>
<td>88</td>
<td>20</td>
</tr>
<tr>
<td>Export clearance period (days)</td>
<td>54</td>
<td>9</td>
</tr>
</tbody>
</table>

Investment

- 8-10 by 2025
- 18-22 by 2030
- 30-37 by 2035

Support

Non-financial

- Proliferation of entrepreneurs

Financial

- Growth in average size of SMEs

Sources: Analysis of data from open sources, analysis of the working group
### Key strategic initiatives (1/2)

<table>
<thead>
<tr>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improve legislation: assign separate status to medium-sized businesses and reform accounting criteria for SMEs in line with international practice</td>
<td>Popularize entrepreneurship at state level for the purpose of stimulating the conversion of private entrepreneurs into small businesses (holding educational and marketing campaigns)</td>
<td>Create unified knowledge base for SMEs on the basis of a single SME support institution</td>
</tr>
<tr>
<td>Development of a single institution for SME support</td>
<td>Develop business education (increasing the number of training areas in higher educational institutions, training courses for young teachers, management courses for experienced entrepreneurs)</td>
<td>Expand the guarantee support program to increase lending to the SME sector</td>
</tr>
<tr>
<td>Transfer all functions related to SME development to a single institution (“single window”) and consolidate this status in legislation</td>
<td>Introduce a simplified procedure for the access of SMEs to infrastructure, including access to the electrical supply network</td>
<td>Stimulate the creation of mutual guarantee funds</td>
</tr>
<tr>
<td>Appoint an executive responsible for SME support at government level</td>
<td>Introduce a simplified procedure for the access of SMEs to infrastructure, including access to the electrical supply network</td>
<td>Simplify state regulation (application of the principle of regulatory guillotine)</td>
</tr>
<tr>
<td>Legalize private enterprises through an amnesty and registration as simple notification</td>
<td>Simplify the SME closure procedure</td>
<td>Support high-tech and innovative enterprises</td>
</tr>
<tr>
<td>Introduce measures to support SME lending, including guarantee support</td>
<td>Improve the business climate: make the TOP 80 of the Corruption Perceptions Index and Index of Economic Freedom</td>
<td>Maximize support coverage (by number of supported SMEs)</td>
</tr>
<tr>
<td>Improve the simplified tax system due to the introduction of income tax</td>
<td>Shift industry focus to trade and tourism</td>
<td>Create a favorable business climate: make the TOP 50 of Corruption Perceptions Index, Index of Economic Freedom, and TOP 20 of Doing Business Index</td>
</tr>
<tr>
<td>Reduce the cost of SME administration by reducing the number of reports</td>
<td>Develop SME exports by providing export loans and insurance</td>
<td></td>
</tr>
<tr>
<td>Introduce inspection holidays: ban inspections of SMEs during the first three years of their activity, including regulation of the supervision system</td>
<td>Expand access to the state order through implementation of a program of firm orders from SMEs</td>
<td></td>
</tr>
<tr>
<td>Digitize interaction between the state and SMEs in order to reduce administrative costs</td>
<td>Elaboration of measures to prevent illegal activities</td>
<td></td>
</tr>
<tr>
<td></td>
<td>System of grants to establish SMEs</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Reform of the SME accounting system based on a SME support institution</td>
<td></td>
</tr>
</tbody>
</table>

Sources: Analysis of data from open sources, analysis of the working group
Develop youth and female entrepreneurship

Create a system of platforms for testing ideas with preferential conditions for SMEs: business incubators, career centers, co-working spaces, technology parks

Prepare SME support strategy, including differentiation of the state policy by support tools depending on the size of the company

Introduce amendments and addenda to the Law of the Republic of Uzbekistan “On Competition”

Develop social entrepreneurship

Create regional support infrastructure (independently or in cooperation with the CCI or on the basis of the State Fund for the Support of Entrepreneurship Development) in two directions: guarantee funds and consulting centers, and also expert training centers, technology parks, accelerators, etc.

Sources: Analysis of data from open sources, analysis of the working group
2.6

Financial system

Economic development
2.6.1 Banking system and compliance

Economic development
The Republic of Uzbekistan lags behind developed countries considerably in terms of the banking system’s size (assets), which needs to be increased significantly to achieve the goals of economic development. The total growth of assets for the year was 98%, but 60% was due to devaluation of the exchange rate and the proportional growth in foreign currency assets.

Banks with state participation occupy a dominant position both in terms of the size of capital and the size of the loan portfolio, but this situation is acceptable for a developing economy, as it makes it possible to direct credit flows to strategically important sectors of the economy.

There is a crisis of confidence in the banking system of Uzbekistan among the population, which slows development and helps maintain the shadow economy. However, the share of banking services is gradually increasing due to the development of infrastructure. At the moment, more than half of the population is still not provided with basic banking products.

In 2017, the total assets of commercial banks increased by UZS 82.6 trillion, or 98.2% in percentage terms (in 2016, 29%), and amounted to UZS 166.6 trillion as of January 1, 2018, while the country’s GDP reached more than UZS 249.13 trillion.

At the same time, 64% (or UZS 52.8 trillion) of the increase in total assets was due to sharp devaluation of the exchange rate of the national currency. Under the influence of this factor, the ratio of bank assets to GDP in 2017 increased to 67% (compared to 42.2% in 2016), which places the Republic of Uzbekistan 81st in the world.

The share of banking services is gradually increasing due to the development of infrastructure, but a significant part of the population is still not provided with basic banking products. The low share of banking services generally hinders the development of the banking sector due to the lack of sources of cheap liabilities—deposits from the population. At the moment, UZS 1 of cash accounts for only UZS 0.55 of deposits of individuals.

---

**Ratio of banking assets in % to GDP and place in the global ranking**

<table>
<thead>
<tr>
<th>Rank</th>
<th>Country</th>
<th>Ratio of assets to GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Luxembourg</td>
<td>1,550%</td>
</tr>
<tr>
<td>3</td>
<td>UK</td>
<td>490%</td>
</tr>
<tr>
<td>6</td>
<td>The Netherlands</td>
<td>385%</td>
</tr>
<tr>
<td>81</td>
<td>Uzbekistan</td>
<td>65%</td>
</tr>
<tr>
<td>117</td>
<td>Kazakhstan</td>
<td>41%</td>
</tr>
<tr>
<td>122</td>
<td>Azerbaijan</td>
<td>36%</td>
</tr>
<tr>
<td>125</td>
<td>Kyrgyzstan</td>
<td>32%</td>
</tr>
<tr>
<td>132</td>
<td>Tajikistan</td>
<td>28%</td>
</tr>
</tbody>
</table>

**Key challenges**

- Inefficient mechanisms for transferring financing to the economy’s strategically important areas
- Range of banking products does not meet the requirements of the economy
- Low volume of the banking sector: 86th place in the world
- High cost of borrowed capital: over 23% per annum
- Low level of public confidence in the financial system: less than 60%
- Low level of market processes, international accounting systems, and compliance practices
- Lack of trust from international investors
- Lack of competition, antitrust regulatory mechanisms in financial services markets, closed market for processing services, and high costs for banks
- Low level of integration with international payment system

**Key findings**

- The share of banking services is gradually increasing due to the development of infrastructure, but a significant part of the population is still not provided with basic banking products.
- The low share of banking services generally hinders the development of the banking sector due to the lack of sources of cheap liabilities—deposits from the population. At the moment, UZS 1 of cash accounts for only UZS 0.55 of deposits of individuals.

**Sources:** International Finance Corporation, World Bank Open Data

1. State statistic committee
Banking system and compliance

Current level of development

Size of the financial services market of the Republic of Uzbekistan ¹

<table>
<thead>
<tr>
<th>Year</th>
<th>Market size (UZS billion)</th>
<th>USD/UZS exchange rate</th>
<th>+81%</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>73,293</td>
<td>2,022</td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td>90,865</td>
<td>2,222</td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td>34,458</td>
<td>2,500</td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td>54,277</td>
<td>2,703</td>
<td></td>
</tr>
<tr>
<td>2017</td>
<td>113,053</td>
<td>5,333</td>
<td></td>
</tr>
</tbody>
</table>

Comments

- The capacity of the domestic financial market is small. The domestic capital market is underdeveloped, and there is no active market for the issue of speculative debt of the private sector in the country.
- Investment in the banking system and the country is very risky due to the high degree of state participation, lack of transparency, and selective law enforcement.
- Low effective demand from the population significantly limits the attraction of liabilities and the development of banking products.
- There is a low level of compliance with international requirements, including as concerns the compliance system, financial reporting, and corporate governance standards.

Financial system risk comparison by category², 2017 Categories 1 to 9 (9 = high risk, 1 = low risk)

- Economic stability
- Economic imbalance
- Credit risk level in the economy
- Institutional structure
- Competitive dynamics
- System financing

- Risk level
  - 5
  - 4
  - 6

Reference group

- Uzbekistan
- Reference group

Reference group

- Kazakhstan
- Russia
- Argentina
- Kenya
- Tunisia
- Georgia

Sources: ¹ = size of the bank loan portfolio, leasing portfolio, and collected insurance portfolio; ² = S&P according to BICRA methodology (dated 25 June 2018); ³ = No. PP-3270 dated 12 September 2017 "On Measures for Further Development and Improvement of the Stability of the Banking System of the Republic"
Banking system and compliance

Current level of development

Number of payment terminals in the Republic of Uzbekistan\(^1\)

<table>
<thead>
<tr>
<th>Year</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of payment terminals</td>
<td>183,060</td>
<td>208,536</td>
<td>235,712</td>
</tr>
</tbody>
</table>

Comments

- The number of payment terminals increased by 29% in 2 years
- However, the entry to the market of payments involves high expenditures on purchasing mandatory devices from a single player and payment of high fees on system maintenance

Number of users of the remote banking service system\(^2\) in Uzbekistan

<table>
<thead>
<tr>
<th>Year</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Legal entities and individual entrepreneurs</td>
<td>81</td>
<td>136</td>
<td>228</td>
</tr>
<tr>
<td>Individuals</td>
<td>980</td>
<td>1,906</td>
<td>4,225</td>
</tr>
</tbody>
</table>

Comments

- In 2018, the number of users of the remote banking service increased greatly: by nearly 200% among legal entities and individual entrepreneurs, and 330% among individuals

Number of ATMs per 100,000 people, 2017

<table>
<thead>
<tr>
<th>Country</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Azerbaijan</td>
<td>33</td>
<td>52</td>
<td>74</td>
</tr>
<tr>
<td>Uzbekistan</td>
<td>74</td>
<td>74</td>
<td>98</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>74</td>
<td>74</td>
<td></td>
</tr>
<tr>
<td>Georgia</td>
<td>33</td>
<td>33</td>
<td>33</td>
</tr>
<tr>
<td>Switzerland</td>
<td>128</td>
<td>128</td>
<td>128</td>
</tr>
<tr>
<td>Japan</td>
<td>128</td>
<td>128</td>
<td>128</td>
</tr>
</tbody>
</table>

Comments

- The share of banking services is gradually increasing due to the development of infrastructure, but a significant part of the population is still not provided with basic banking products

Share of SMEs in production volume in the Republic of Uzbekistan, 2017

<table>
<thead>
<tr>
<th>Sector</th>
<th>Agriculture</th>
<th>Passenger transportation</th>
<th>Retail sales</th>
<th>Construction</th>
<th>Cargo transport</th>
<th>Industry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Share</td>
<td>100%</td>
<td>91%</td>
<td>84%</td>
<td>64.8%</td>
<td>64%</td>
<td>48%</td>
</tr>
</tbody>
</table>

Comments

- The high share of SMEs in the structure of production and job creation requires that the offering of banks products for this segment be expanded
- It is necessary to actively develop the following products:
  - Working with current liquidity and placement
  - Bank certificates, guarantees, and letters of credit
  - Consulting services on the basis of financial institutions

Sources: 1 = Central Bank of the Republic of Uzbekistan as of January 1; 2 = remote service
Banking system and compliance

Current level of development

Currency regulation

↗ Liberalization of the FX policy contributes to the development and activation of international trade
↗ Currency revaluation has led to an increase in bank assets

Monetary policy

↗ A restrained monetary policy will reduce inflation
↗ The expansion of banks’ access to the provision of certain types of financial services and investments will increase the share of banks in the turnover of the domestic financial market and will contribute to the development of competition
↘ Toughening of monetary policy will have a negative impact on business development

International trade and balance of payments

↗ Development of trade will provide the country with equipment
↘ The open market will have a negative impact on local producers in the short term

Confidence in the banking system

↘ The low level of confidence prevents the growth of liabilities
↘ The low level of confidence leads to a shadow economy

Macroeconomic

Employment level

↘ The low employment level reduces effective demand in the country
↗ The low employment level increases the competitiveness of labor

Level of development of small- and medium-sized enterprises

↗ The large number of SMEs contributes to equitable distribution
↗ The large number of SMEs stimulates competition

Development of nonbanking financial institutions

↗ Development of leasing and insurance companies will expand opportunities for companies and citizens by reducing the share of banking services

Development of banking infrastructure

↗ Development of banking infrastructure will increase business activity
↗ Development of banking infrastructure will increase transparency of the system

Increasing independence of the regulator

↗ This will increase the level of confidence in banks
↗ This will improve the stability of the financial system

Source: analysis of the working group
### Banking system and compliance

#### Current level of development

<table>
<thead>
<tr>
<th>Category</th>
<th>Loans granted to small businesses (^1) (UZS billion)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2016</strong></td>
<td>Total: 15,870</td>
</tr>
<tr>
<td>Other</td>
<td>8,073 (50.9%)</td>
</tr>
<tr>
<td>Microloans</td>
<td>3,326 (21%)</td>
</tr>
<tr>
<td>Loans for service sector development</td>
<td>2,457 (15.5%)</td>
</tr>
<tr>
<td>Loans for support of female entrepreneurs</td>
<td>1,647 (10.4%)</td>
</tr>
<tr>
<td>Loans for development of family businesses and crafts</td>
<td>367 (2.3%)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>19,565</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category</th>
<th>Loans granted to small businesses (^1) (UZS billion)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2017</strong></td>
<td>Total: 19,565</td>
</tr>
<tr>
<td>Other</td>
<td>8,695 (44.4%)</td>
</tr>
<tr>
<td>Microloans</td>
<td>4,015 (20.5%)</td>
</tr>
<tr>
<td>Loans for service sector development</td>
<td>3,582 (18.3%)</td>
</tr>
<tr>
<td>Loans for support of female entrepreneurs</td>
<td>2,782 (14.2%)</td>
</tr>
<tr>
<td>Loans for development of family businesses and crafts</td>
<td>490 (2.5%)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>19,565</td>
</tr>
</tbody>
</table>

The great importance of the SME segment for social and economic security necessitates the priority development of banking services in this segment of the economy, in particular:

- **Development of lending**
  Creation of new, more flexible loan instruments

- **Development of transactional products**
  Work with current liquidity and placement

- **Expansion of export-import instruments**
  Bank certificates, guarantees, and letters of credit

- **Provision of consulting services on the basis of financial institutions**
  Consulting of SMEs on legal, financial, and tax issues

- **Improvement in operational efficiency and digital accessibility**
  Improvement in service quality and rate, reduction in decision-making time, remote identification, online and mobile banking

Source: \(^1\) = Central Bank of Uzbekistan
### Current level of development

**Loans issued to small business entities**

<table>
<thead>
<tr>
<th>Year</th>
<th>Assets</th>
<th>Credit investment</th>
<th>Capital</th>
<th>Attracted deposits</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>36,197</td>
<td>30,105</td>
<td>26,334</td>
<td>5,692</td>
</tr>
<tr>
<td></td>
<td>47,878</td>
<td>52,611</td>
<td>36,341</td>
<td>8,981</td>
</tr>
<tr>
<td></td>
<td>84,075</td>
<td></td>
<td>66,698</td>
<td></td>
</tr>
<tr>
<td>2018</td>
<td>59,988</td>
<td>41,686</td>
<td>29,862</td>
<td>14,494</td>
</tr>
<tr>
<td></td>
<td>106,644</td>
<td>68,886</td>
<td>28,806</td>
<td>20,676</td>
</tr>
<tr>
<td></td>
<td>166,632</td>
<td>110,572</td>
<td>58,668</td>
<td></td>
</tr>
</tbody>
</table>

- In UZS
- In foreign currency

**Comments**

- In 2017, the total liabilities of commercial banks increased by UZS 70.9 trillion, or by 90% (30% in 2016), and amounted to UZS 146 trillion as of 1 January 2018. At the same time, 71% of this growth (or UZS 50 trillion) was due to the increase in the value (in UZS) of loans and deposits that were raised in foreign currency as a result of sharp devaluation of the som.

### Source

Source: 1 = Central Bank of Uzbekistan
Banking system and compliance

Current level of development

**Capital adequacy indicators**

<table>
<thead>
<tr>
<th>Year</th>
<th>UZS trillion</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total risk-weighted assets</td>
<td>57.4</td>
<td>106.9</td>
<td></td>
</tr>
<tr>
<td>Regulatory capital</td>
<td>8.5</td>
<td>20.0</td>
<td></td>
</tr>
<tr>
<td>Ratio of risk-weighted regulatory capital to total assets, in %</td>
<td>14.7%</td>
<td>18.8%</td>
<td></td>
</tr>
</tbody>
</table>

**Capital stability indicators**

<table>
<thead>
<tr>
<th>Year</th>
<th>UZS trillion</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total assets</td>
<td>84.1</td>
<td>166.6</td>
<td></td>
</tr>
<tr>
<td>Total capital</td>
<td>9.0</td>
<td>20.7</td>
<td></td>
</tr>
<tr>
<td>Ratio of total capital to total assets, in %</td>
<td>10.7%</td>
<td>12.4%</td>
<td></td>
</tr>
</tbody>
</table>

**Financial performance indicators**

<table>
<thead>
<tr>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross income</td>
<td>5.6</td>
</tr>
<tr>
<td>Interest margin</td>
<td>2.2</td>
</tr>
<tr>
<td>Ratio of interest margin to gross income, in %</td>
<td>39.5%</td>
</tr>
</tbody>
</table>

**Liquidity indicators**

<table>
<thead>
<tr>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total assets</td>
<td>84.1</td>
</tr>
<tr>
<td>Liquid assets</td>
<td>21.3</td>
</tr>
<tr>
<td>Ratio of liquid assets to total assets, in %</td>
<td>25.4%</td>
</tr>
</tbody>
</table>

**Financial performance indicators**

<table>
<thead>
<tr>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest-free income (loss)</td>
<td>-239.9</td>
</tr>
<tr>
<td>Net profit (loss)</td>
<td>1,152.8</td>
</tr>
<tr>
<td>Ratio of net profit before tax to total assets (ROA)</td>
<td>2.00</td>
</tr>
<tr>
<td>Ratio of net profit before tax to total capital (ROE)</td>
<td>17.95</td>
</tr>
</tbody>
</table>

Source: 1 = Central Bank of Uzbekistan
High level of banking sector concentration:

at the beginning of 2017, the 5 largest banks had half of the total banking capital, at the beginning of 2018, this dropped to only 3 banks
The volume of liabilities of the banking sector increased by **94%** for the year mainly due to attracted loans and deposits. The lack of diversification in the sources of fundraising makes the situation of commercial banks critical when large clients leave for other banks.
### Trend of troubled loans

<table>
<thead>
<tr>
<th>Year</th>
<th>Troubled Loans (UZS billion)</th>
<th>Loans with revised terms</th>
<th>Overdue loans</th>
<th>In court proceedings</th>
<th>Troubled loans</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>1,119</td>
<td>70.8%</td>
<td>22.9%</td>
<td>6.3%</td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td>1,211</td>
<td>64.7%</td>
<td>28.3%</td>
<td>6.9%</td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td>1,383</td>
<td>64.9%</td>
<td>29.4%</td>
<td>5.8%</td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td>2,372</td>
<td>73.9%</td>
<td>20.8%</td>
<td>5.3%</td>
<td></td>
</tr>
<tr>
<td>2017</td>
<td>2,216</td>
<td>82.2%</td>
<td>13.8%</td>
<td>4.1%</td>
<td></td>
</tr>
</tbody>
</table>

#### Comments

- In 2017, total liabilities of commercial banks increased by UZS 70.9 trillion, or by 90% (compared to a 30% increase in 2016) and amounted to UZS 146 trillion as of 1 January 2018. At the same time, 71% of this growth (or UZS 50 trillion) was due to the increase in the value (in UZS) of loans and deposits that were raised in foreign currency as a result of sharp devaluation of the som.
### Key problems today

<table>
<thead>
<tr>
<th>Problem</th>
<th>Japanese system</th>
<th>Singaporean system</th>
<th>Russian system</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inability to direct funds to strategically important areas of the economy</td>
<td>❌</td>
<td>❌</td>
<td>✅</td>
</tr>
<tr>
<td>Range of banking products does not meet the requirements of the economy</td>
<td>❌</td>
<td>❌</td>
<td>✅</td>
</tr>
<tr>
<td>Low volume of the banking sector: 81st place in the world</td>
<td>❌</td>
<td>❌</td>
<td>✅</td>
</tr>
<tr>
<td>High cost of borrowed capital: over 23% per annum</td>
<td>❌</td>
<td>❌</td>
<td>✅</td>
</tr>
<tr>
<td>Low level of public confidence in the financial system, less than 60%</td>
<td>❌</td>
<td>❌</td>
<td>✅</td>
</tr>
<tr>
<td>Lack of market processes and international accounting and compliance systems</td>
<td>❌</td>
<td>❌</td>
<td>✅</td>
</tr>
<tr>
<td>Lack of trust from international investors</td>
<td>❌</td>
<td>❌</td>
<td>✅</td>
</tr>
</tbody>
</table>

### The system solves the specified problem

- **Japanese system**: Creation of development institutions for implementation of state programs; withdrawal of state projects beyond the scope of banks.
- **Singaporean system**: Full liberalization of the banking market; absence of state players. The state retains only supervisory and regulatory functions.
- **Russian system**: High share (about 80%) of state participation in the banking sector and the practice of "manual control" of the country's financial flows.

Source: analysis of the working group
Banking system and compliance

Strategic options

1. Gradual

Gradual transition from the current model (high level of state sector involvement) to the distribution of financial flows through development institutions, privatization of the banking sector, and further full liberalization

- Does not require destruction of the traditional structure of the financial sector
- Allows support for priority industries through development institutions

- Inefficient spending of public funds
- High share of the state in the banking sector
- Does not allow all challenges of the banking sector to be met

Slow evolutionary transition of the sector to full liberalization

2. Liberal

At the first stage, there are private and independent banks; state projects are implemented in development institutions. At the second stage, full liberalization of the banking market takes place; absence of state players. The state retains only supervisory and regulatory functions

- Relatively gradual transition bypassing the stage with a high share of state participation
- Allows support for priority industries through development institutions

- Does not allow all the challenges of the banking sector to be met in the short term

Gradual transition of the sector to full liberalization bypassing the stage with a high share of state participation

3. Shock

Sharp transition from the current state to the Singaporean model of the banking sector. Full liberalization of the banking market; absence of state players. The state retains only supervisory and regulatory functions

- Allows all the challenges of the banking sector to be met in the short term

- Requires destruction of the traditional operating model of the financial sector
- Does not allow the state to use the banking sector to support priority programs and projects
- Possible "excesses" at the local level

Shock transition to complete liberalization of the banking sector

Note: * A number of experts specified the Strategic Option No. 3 "Shock" as the target development option; however, the Strategic Option No. 2 "Liberal" is supported as the target option by the majority as being more balanced

Source: analysis of the working group
Private commercial banks and other financial institutions meet the people's needs for financial services, while development institutions and private investors finance state projects.

- Infrastructure upgrades
- Implementation of modern banking practices and standards, including modern IT systems
- Adoption of digital banking and retention of service types implemented earlier
- Identification and use of plastic cards of bank issuers within a single payment system
- Full liberalization of the banking sector
- The state retains only supervisory and regulatory functions

Further development of the banking system is possible thanks to innovations in digital labor, data analysis, and remote services.

**Level I, by 2020**
- Banking applications
- Connection of customers
- Support service
- Card readers and mobile terminals
- Fiscalization of payments, collection and processing of fiscal data

**Level II, by 2025**
- Inventory accounting and portal for retail and service outlets
- Transaction management
- Cryptographic identifiers of mobile banking
- Integration of related services into digital banking platforms
- Open API
- Remote identification, products based on artificial intelligence and machine learning in the banking business
- Provision of financial services via retailers and telecom
- Introduction of several fiscal operators

---

**Figures**

<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th>2035</th>
<th>CAGR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bank assets to GDP, % (place in the rating)</td>
<td>67</td>
<td>Top 50</td>
<td>-</td>
</tr>
<tr>
<td>Share of banking services</td>
<td>60%</td>
<td>90%</td>
<td>2.3%</td>
</tr>
<tr>
<td>Share of cash in the money supply</td>
<td>27%</td>
<td>5%</td>
<td>-8.9%</td>
</tr>
<tr>
<td>Share of the state in capital structure</td>
<td>88%</td>
<td>10%</td>
<td>-11%</td>
</tr>
<tr>
<td>Share of lending to small business and private entrepreneurship</td>
<td>17%</td>
<td>40%</td>
<td>4.9%</td>
</tr>
</tbody>
</table>

Cost-to-income ratio

- 1.0-1.3 by 2025
- 8.9-10.9 by 2030
- 17.4-21.2 by 2035

*Sources: international benchmarking, analysis of the working group*
### Key strategic initiatives (1/2)

<table>
<thead>
<tr>
<th>Year</th>
<th>Initiative</th>
</tr>
</thead>
<tbody>
<tr>
<td>2025</td>
<td>Improved corporate governance standards: standardization of the structure of the board of directors with obligatory participation of independent directors; removability of a chairman; separation of the roles of chairman and chief executive officer</td>
</tr>
<tr>
<td></td>
<td>Development of a product portfolio to better reflect the needs of retail customers, individual entrepreneurs, and medium-sized businesses. Expansion of support for import and export activities</td>
</tr>
<tr>
<td></td>
<td>Convergence with international reporting standards</td>
</tr>
<tr>
<td></td>
<td>Development of digital banking, expansion of banking services in remote regions by improving the provision of services in the field of lean technologies (Lean) and Omni channel banking in the regions</td>
</tr>
<tr>
<td></td>
<td>Adaptation of international regulatory standards and control in the banking sector, including the introduction of the Big Data system to reduce the share of problem loans</td>
</tr>
<tr>
<td></td>
<td>Membership in the leading international banking associations</td>
</tr>
<tr>
<td></td>
<td>Development of correspondent relations with international banks</td>
</tr>
<tr>
<td></td>
<td>Mandatory installation of modern mobile cash registers in all service infrastructure companies</td>
</tr>
<tr>
<td></td>
<td>Implementation of due diligence/KYC practices in the banking system</td>
</tr>
<tr>
<td></td>
<td>Clear separation of supervisory bodies in charge of banking monitoring</td>
</tr>
<tr>
<td></td>
<td>Creation of an AML/CTF regulator under the financial regulator (not under the securities agency)</td>
</tr>
<tr>
<td></td>
<td>Expansion of international payment system coverage</td>
</tr>
<tr>
<td></td>
<td>Middle office and back office are fully automated thanks to modern developments in digital labor</td>
</tr>
<tr>
<td>2030</td>
<td>Optimization of banking processes, reduction of CIR to 40%, including through partial automation of processes</td>
</tr>
<tr>
<td></td>
<td>Creation of investment incubators and accelerators for the development and growth of small- and medium-sized businesses</td>
</tr>
<tr>
<td></td>
<td>Introduction of cryptographic identifier technologies and portable platforms of the mobile bank</td>
</tr>
<tr>
<td></td>
<td>Integration of related services into digital banking platforms</td>
</tr>
<tr>
<td></td>
<td>Creation of banking ecosystems that will help integrate related services; development of commission systems of cooperation</td>
</tr>
<tr>
<td></td>
<td>Development of investment banking</td>
</tr>
<tr>
<td></td>
<td>Gradual termination of the issue of small denomination banknotes</td>
</tr>
<tr>
<td></td>
<td>The implementation of a KYC database</td>
</tr>
<tr>
<td></td>
<td>Development of contactless payment systems using wearable devices</td>
</tr>
<tr>
<td></td>
<td>Adaptation and persistent monitoring of international standards of regulation and control in the banking sector</td>
</tr>
<tr>
<td>2035</td>
<td>Reduction of cash payments; full transition to noncash payments</td>
</tr>
<tr>
<td></td>
<td>Integration of banking applications with a personal digital device</td>
</tr>
<tr>
<td></td>
<td>Development of mutual investment and lending mechanisms</td>
</tr>
<tr>
<td></td>
<td>Creation of liquidity placement systems and integration with banking products</td>
</tr>
<tr>
<td></td>
<td>Integration of banking, insurance, investment, and savings products into a &quot;one-stop solution&quot;</td>
</tr>
<tr>
<td></td>
<td>Transition from a product sales model to a model of support of the customer's life cycle and customer's actual financial needs</td>
</tr>
<tr>
<td></td>
<td>Review of corporate governance standards</td>
</tr>
<tr>
<td></td>
<td>Adaptation and persistent monitoring of international standards of regulation and control in the banking sector</td>
</tr>
</tbody>
</table>

Source: analysis of the working group
Implementation of advanced training programs for bank employees

Creation of the Uniform Client Base of the country

Creation of an effective system of insurance of personal deposits (through the establishment of a federal deposit insurance fund)

Source: analysis of the working group
Banking system and compliance

Target vision of compliance in 2035

- **Financial market**
  - **Fair competition**
  - **Trusted environment**
  - **Financial stability**
  - **Financial availability**

**Counteract the use of insider information:**
implementation of modern standards to combat the use of insider information

**Anti-money laundering and combating the financing of terrorism (AML/CFT):**
application of remote identification; introduction of strict internal rules of zero tolerance of unfair and illegal practices, including AML/CFT of heads and owners of financial institutions and their clients, adoption of a cross-sectoral approach, creation of conditions for zero tolerance to illegal practices, achievement of full compliance with FATF recommendations

**SCA, API (PSD2 as a possible legislative framework) (more in the section “Financial availability”)**

**Counteracting unfair practices; prevention and suppression of misconduct in the financial market:**
expansion of legal and regulatory requirements for implementing an integrated anti-fraud and anti-corruption system in financial institutions, both with respect to their activity and within the framework of operations financed by such institutions

**Toughening of requirements for personal data protection:**
adoption of the General Data Protection Regulation (GDPR), which is a directly applicable law and applies to all companies processing personal data of personal data subjects in the EU, regardless of the company’s location

**Development of control over the practices of corporate governance, transparency, and reporting:**
creation of a regulatory framework to govern the scope of participants in the management bodies of financial organizations based on the “fit and proper” principle, frequency of their rotation, information disclosure on independence and remuneration, as well as principles and frequency of communications with investors

**SCA, API (PSD2 as possible legislative framework):**
- improvement of the remote customer authentication mechanisms, including biometric data – SCA (Strong Customer Authentication)
- development of open software platforms (API – Application Programming Interface) for the development of cross-banking interaction and integration of non-banking providers

**Application of electronic interaction mechanisms in the financial market:**
improvement of the mechanism for piloting innovative financial technologies, products and services; use of blockchain technology, creation of a sandbox for testing financial products and services

**Improvement in financial market regulation; optimization of the regulatory load on financial market participants:**
- further implementation and development of the global financial market regulation rules – Basel 2/3 and Solvency 2,
- implementation of modern standards and requirements for operations involving politically significant and equivalent persons: creation of regulatory requirements for such operations

**SCA, API (PSD2 as possible legislative framework):**
- improvement of the remote customer authentication mechanisms, including biometric data – SCA (Strong Customer Authentication)
- development of open software platforms (API – Application Programming Interface) for the development of cross-banking interaction and integration of non-banking providers

**Application of electronic interaction mechanisms in the financial market:**
improvement of the mechanism for piloting innovative financial technologies, products and services; use of blockchain technology, creation of a sandbox for testing financial products and services

**SCA, API (PSD2 as possible legislative framework):**
- improvement of the remote customer authentication mechanisms, including biometric data – SCA (Strong Customer Authentication)
- development of open software platforms (API – Application Programming Interface) for the development of cross-banking interaction and integration of non-banking providers

**Toughening of requirements for personal data protection:**
adoption of the General Data Protection Regulation (GDPR), which is a directly applicable law and applies to all companies processing personal data of personal data subjects in the EU, regardless of the company’s location

**Development of control over the practices of corporate governance, transparency, and reporting:**
creation of a regulatory framework to govern the scope of participants in the management bodies of financial organizations based on the “fit and proper” principle, frequency of their rotation, information disclosure on independence and remuneration, as well as principles and frequency of communications with investors

**SCA, API (PSD2 as possible legislative framework):**
- improvement of the remote customer authentication mechanisms, including biometric data – SCA (Strong Customer Authentication)
- development of open software platforms (API – Application Programming Interface) for the development of cross-banking interaction and integration of non-banking providers
**Banking system and compliance**

**Target vision of compliance in 2035**

**Antifraud and anticorruption system**

1. **Creation of a compliance system paradigm**
   - Strategic goals and principles
   - Estimated level of acceptable risk of fraud and corruption
   - Instilled culture of the fraud and corruption risk management system

2. **Implementation and control**
   - Implementation plan for strategic initiatives
   - Continuous system audit plan
   - Mobilization plan for effective functioning of the system

3. **Methodology**
   - Implemented Code of Ethics
   - Risk management standards for the entire company structure
   - Set of necessary policies ("Know your customer," "Know your product")

4. **Separation of duties**
   - Separation of duties in the system
   - Establishment of an operational risk management department and compliance department
   - Description of functions of the operational risk management department and compliance department

5. **Process audit**
   - Creation of a fraud and corruption risk identification process
   - Fraud and corruption risk assessment procedures
   - Internal control procedures

6. **Data analysis**
   - Determination of IT requirements for the system
   - Determination of data storage principles
   - Differentiation of database access rights
   - Implementation of spare systems in the event of main system disturbance
   - Implementation of a testing practice for all systems

7. **Reporting and cascading of objectives**
   - System of internal and external reporting on fraud and corruption risks
   - Key risk indicators (KRI) of the fraud and corruption risk management system

8. **Continuous monitoring**
   - Formation and improvement of the fraud and corruption risk monitoring system
   - Collection of data on external and internal fraud and corruption risks
   - Development of measures to improve the risk management system and process
   - IT system monitoring by the regulator
   - Outsourcing monitoring by the regulator
   - Regular monitoring of financial institutions by the regulator
   - Automation of reporting to the regulator

A similar system should be implemented not only in the banking and financial systems but also in every company in the Republic of Uzbekistan, especially in state bodies and companies

Source: analysis of the working group
Implementation of SCA, API (PSD2 as possible legislative framework)

Regarding customer authentication, it is necessary to develop remote methods, since this will accelerate and reduce the cost of banking services:

- SCA (Strong Customer Authentication) is mandatory for EU banks only, but other countries should also implement this standard, since it will facilitate international banking cooperation and will greatly increase the possibility of cooperation with large international banks.
- Implementation of a unified database of citizens and organizations in the Republic of Uzbekistan will reduce the cost of KYC procedures\(^1\) for international banks and will significantly reduce the cutoff threshold for the volume of transactions with which international banks are willing to work.
- Development of remote authentication will also increase the remote service quality and expand the coverage of banking services in Uzbekistan.

In the field of interbank and cross-platform interaction, it is necessary to develop platforms with open source code:

- API interfaces provide banks with the technological ability to link their payments and services for data transfer with third parties, which is the main goal of PSD2.
- This cooperation will allow operators and competitors to use clients' data and innovations to create new income flows and personalized offers of services.
- Development of stable and secure platforms with open source code (API) is the underlying project for implementing initiatives to create financial marketplaces from 2025 to 2030, and for the subsequent integration of banking, insurance, and investment and savings products.

Implementation of current FinCEN rules

According to this rule, financial institutions should establish procedures for:

- Identification of an individual who directly or indirectly owns more than 25% in the customer's/legal entity's capital ("ownership")
- Identification of an individual who is responsible for the control, management, and direction of the customer's activities ("right of control")
- Verification of the identity of the above persons in accordance with procedures performed on the basis of risk assessment, which should include a number of mandatory elements in accordance with the customer identification rule.

The rule contains four main elements of the customer's due diligence process within AML/CFT:

- Identification and verification of a customer
- Verification and identification of a beneficial owner
- Understanding the purpose of the customer relationship to determine the customer’s risk
- Continuous monitoring to identify suspicious transactions; timely updating of information about a customer in its file
- Creation of a database of legal entities with open access to 2–3 basic identifiers (company name, year of founding)
- Creation of a database on the basis of the tax regulator’s unified data.

Source: analysis of the working group
Note: KYC – Know Your Client – the customer’s due diligence procedure for the occurrence of regulatory risk.
1. **Provision of banking services by one bank** (correspondent bank) to another bank (respondent bank)

2. The respondent bank may be provided with a **wide range of services**, including management of financial indicators (including maintaining savings accounts in various currencies), international bank transfers, payments by check, transit payments and transit (payable through) accounts, services for operations with foreign currency.

3. **Correspondent banking** does not offer one-time transactions and SWIFT messaging in terms of non-client interaction but has a **long-term recurring nature**.

4. Major international banks act as correspondent banks for thousands of other banks around the world.

---

**FATF requirements**

1. **Collect sufficient information** about a respondent financial institution to get a full understanding of the respondent’s business/ to evaluate the reputation of the financial institution and practices of mutual annual inspections and supervision, including whether it is subject to AML/CFT regulation.

2. **Assess the respondent’s means of control** with respect to AML/CFT.

3. **To obtain the approval** of the leadership of the FI in the establishment of correspondent relations.

4. **Have fixed areas of responsibility for financial institutions / respondents**.

5. For transactions made through correspondent accounts, make sure that the respondent bank has **taken sufficient measures to identify** and assess/manage the risks from customers who have direct access to the correspondent bank’s accounts.

---

**Implementation stages of FATF recommendations (in respect of all recommendations)**

<table>
<thead>
<tr>
<th>Step No. 1</th>
<th>2019</th>
<th>Step No. 2</th>
<th>2022</th>
<th>Step No. 3</th>
<th>2025</th>
<th>Step No. 4</th>
<th>2030</th>
<th>Step No. 5</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tactical steps</strong></td>
<td></td>
<td><strong>Training</strong></td>
<td></td>
<td><strong>FATF audit</strong></td>
<td></td>
<td><strong>FATF audit</strong></td>
<td></td>
<td><strong>FATF audit</strong></td>
<td></td>
</tr>
<tr>
<td>- Banks</td>
<td></td>
<td>- Business</td>
<td></td>
<td>- Work on technical systems</td>
<td></td>
<td>- Work on technical systems</td>
<td></td>
<td>- Work on technical systems</td>
<td></td>
</tr>
<tr>
<td>- Main government agencies</td>
<td></td>
<td></td>
<td></td>
<td>- Unified database for banks of businesses</td>
<td></td>
<td>- Unified database for banks of businesses</td>
<td></td>
<td>- Unified database for banks of businesses</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Source:** analysis of the working group

**Note:** FATF – Financial Action Task Force
The Financial Action Task Force on Money Laundering (FATF) is an intergovernmental organization founded to establish standards and facilitate effective application of legal, regulatory, and operational measures to combat money laundering, financing of terrorism, and financing of the proliferation of weapons of mass destruction, and other relevant threats to the international financial system’s integrity. The main tool used by FATF in carrying out its mandate is 40 recommendations in the field of AML/CFT, which undergo revision every five years on average.

### List of FATF recommendations*

<table>
<thead>
<tr>
<th>Policy for Countering the Laundering of Proceeds from Crime and the Financing of Terrorism (AML/CFT) and coordination</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Risk assessment and application of a risk-oriented approach</td>
</tr>
<tr>
<td>2) National cooperation and coordination</td>
</tr>
<tr>
<td>Money laundering and confiscation</td>
</tr>
<tr>
<td>3) Crime of money laundering</td>
</tr>
<tr>
<td>4) Confiscation and security measures</td>
</tr>
<tr>
<td>Financing of terrorism and financing of proliferation of weapons of mass destruction (WMD)</td>
</tr>
<tr>
<td>5) Crime of financing of terrorism</td>
</tr>
<tr>
<td>6) Targeted financial sanctions related to terrorism and financing of terrorism</td>
</tr>
<tr>
<td>7) Targeted financial sanctions related to proliferation of WMD</td>
</tr>
<tr>
<td>8) Nonprofit organizations</td>
</tr>
<tr>
<td>Preventive measures</td>
</tr>
<tr>
<td>9) Laws on protection of the secrecy of financial institutions</td>
</tr>
<tr>
<td>10) Due diligence of clients</td>
</tr>
<tr>
<td>11) Data storage</td>
</tr>
<tr>
<td>12) Public officials</td>
</tr>
<tr>
<td>13) Correspondent banks</td>
</tr>
<tr>
<td>14) Services for money transfer or transfer of valuable items</td>
</tr>
<tr>
<td>15) New technology</td>
</tr>
<tr>
<td>16) Electronic money transfers</td>
</tr>
<tr>
<td>17) Confidence in third parties’ measures</td>
</tr>
<tr>
<td>18) Countries with a higher risk</td>
</tr>
<tr>
<td>19) Internal control and foreign branches and subsidiaries</td>
</tr>
<tr>
<td>20) Notifications about suspicious operations (transactions)</td>
</tr>
<tr>
<td>21) Disclosure and confidentiality</td>
</tr>
<tr>
<td>22) DNFBP – client’s due diligence</td>
</tr>
<tr>
<td>23) DNFBP – other measures</td>
</tr>
<tr>
<td>Transparency and beneficial ownership of legal entities and formations</td>
</tr>
<tr>
<td>24) Transparency and beneficial owners of legal entities</td>
</tr>
<tr>
<td>25) Transparency and beneficial owners of legal formations</td>
</tr>
<tr>
<td>Powers and liability of the competent bodies and other institutional measures</td>
</tr>
<tr>
<td>26) Regulation and supervision of financial institutions</td>
</tr>
<tr>
<td>27) Powers of supervisory bodies</td>
</tr>
<tr>
<td>28) Regulation and supervision of DNFBP</td>
</tr>
<tr>
<td>29) Financial intelligence units</td>
</tr>
<tr>
<td>30) Liability of law enforcement and investigative agencies</td>
</tr>
<tr>
<td>31) Powers of law enforcement and investigative agencies</td>
</tr>
<tr>
<td>32) Cash couriers</td>
</tr>
<tr>
<td>33) Statistical data</td>
</tr>
<tr>
<td>34) Guiding principles and feedback</td>
</tr>
<tr>
<td>35) Sanctions</td>
</tr>
<tr>
<td>International cooperation</td>
</tr>
<tr>
<td>36) International instruments</td>
</tr>
<tr>
<td>37) Mutual legal assistance</td>
</tr>
<tr>
<td>38) Mutual legal assistance: freezing and confiscation</td>
</tr>
<tr>
<td>39) Extradition</td>
</tr>
<tr>
<td>40) Other forms of cooperation</td>
</tr>
</tbody>
</table>

### Countries and organizations participating in FATF*

<table>
<thead>
<tr>
<th>Countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Argentina</td>
</tr>
<tr>
<td>2. Australia</td>
</tr>
<tr>
<td>3. Austria</td>
</tr>
<tr>
<td>4. Belgium</td>
</tr>
<tr>
<td>5. Brazil</td>
</tr>
<tr>
<td>6. Canada</td>
</tr>
<tr>
<td>7. China</td>
</tr>
<tr>
<td>8. Denmark</td>
</tr>
<tr>
<td>9. Finland</td>
</tr>
<tr>
<td>10. France</td>
</tr>
<tr>
<td>11. Germany</td>
</tr>
<tr>
<td>12. Greece</td>
</tr>
<tr>
<td>13. Hong Kong, China</td>
</tr>
<tr>
<td>14. Iceland</td>
</tr>
<tr>
<td>15. India</td>
</tr>
<tr>
<td>16. Ireland</td>
</tr>
<tr>
<td>17. Italy</td>
</tr>
<tr>
<td>18. Japan</td>
</tr>
<tr>
<td>19. South Korea</td>
</tr>
<tr>
<td>20. Luxembourg</td>
</tr>
<tr>
<td>21. Malaysia</td>
</tr>
<tr>
<td>22. Mexico</td>
</tr>
<tr>
<td>23. The Netherlands</td>
</tr>
<tr>
<td>24. New Zealand</td>
</tr>
<tr>
<td>25. Norway</td>
</tr>
<tr>
<td>26. Portugal</td>
</tr>
<tr>
<td>27. Russian Federation</td>
</tr>
<tr>
<td>28. Singapore</td>
</tr>
<tr>
<td>29. South Africa</td>
</tr>
<tr>
<td>30. Spain</td>
</tr>
<tr>
<td>31. Sweden</td>
</tr>
<tr>
<td>32. Switzerland</td>
</tr>
<tr>
<td>33. Turkey</td>
</tr>
<tr>
<td>34. UK</td>
</tr>
<tr>
<td>35. United States</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Organizations:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. European Commission</td>
</tr>
<tr>
<td>2. Gulf Cooperation Council</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Observer states:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Indonesia</td>
</tr>
<tr>
<td>2. Israel</td>
</tr>
<tr>
<td>3. Saudi Arabia</td>
</tr>
</tbody>
</table>
General Data Protection Regulation ("GDPR")

Organizations covered by GDPR:
- Companies incorporated in the EU and being controllers and/or processors of personal data
- Companies not incorporated in the EU and being controllers and/or processors of personal data and whose activity is related to:
  - Providing goods or services to EU citizens
  - Monitoring the behavior of personal data subjects within the EU

Basic principles of personal data processing

- Legality, fairness, and clarity of personal data processing
- Limiting personal data processing in accordance with the purposes of processing
- Reducing the redundancy of processed personal data
- Ensuring the accuracy and relevance of processed personal data
- Personal data storage time limit
- Ensuring the integrity and confidentiality of processed personal data

Source: analysis of the working group
Note: FATF – Financial Action Task Force
New companies will get access to clients' payment accounts

New companies will be registered, will obtain a license, and will be regulated at the level of the European Union. All barriers for newcomers will be eliminated, which will promote competition in the market. As a result of this, prices for consumers will drop. New companies will get access to clients' payment accounts (account access is defined as "XS2A") to make payments on their behalf (only after preliminary approval).

How will it work?

The organization holding the client's payment account will grant access to the companies via the program interface ("API"). Its operation may be compared with a messenger that enables information exchange: it receives a request from the company and sends a reply.

Strong Customer Authentication (SCA) will improve the security of Internet payments

PSD2 directive is aimed at reducing the probability of fraud with electronic transactions. It should improve customer data protection. When using SCA in electronic transactions, there are two or more independent components from the list below involved:

- Knowledge
  - Information available only to the customer (password, PIN number...)

- Property
  - Items belonging only to the customer (card, etc.)

- Customer
  - Client’s biometric data (fingerprints, voice...)

- Additional component for remote transactions (Internet, mobile devices)

Unique authentication code that dynamically links the transaction with a specific amount and beneficiary

Sources: Informa Knowledge & Networking division
Every time the customer makes a payment, except for the following situations:

- Payment amount is below a certain level
- Beneficiary has already undergone identification

When the customer views their payment account or requests summary information on all their accounts using an additional service:

- Upon the first view of the account (or several accounts)
- Every 90 days

Geographic coverage of transactions is expanded:

All transactions, even those in which one of the parties is outside the EU, will be settled within the framework of the directive. PSD2 will apply to transactions in all types of currency (except cryptocurrency). The directive will increase the awareness of customers and the security level of the European part of transactions.

3

The EPC SDD rulebook on the unconditional right to refund a direct debiting amount becomes a formal legal requirement (effective for up to 8 weeks after making the payment)

4

Charging of additional fees for making most payments by card will be limited (the fee will change according to the interbank fee charging rules)

5

When trying to make a payment without authorization, the customer will not be able to spend more than EUR 50 (previously, EUR 150). A larger amount can be spent only in case of emergency, e.g., if the customer shows unacceptable negligence, or if thieves gain access to the customer’s account

6

Sources: Informa Knowledge & Networking division
Blockchain is a decentralized register of all transactions in a P2P network. Using this technology, participants can settle transactions without a centralized certification center. Potential applications include money transfers, settlements, product distribution, data storage, voting, and many others.

**Principal process flow chart**

1. The user initiates the transaction.
2. The transaction is sent to a network of nodes.
3. The network of nodes checks the transaction and the user status with algorithms known in advance.
4. A verified transaction may include cryptocurrencies, contracts, records, or other information.
5. A new block is then added to the existing blockchain with a permanent and unchanged path.
6. After verification, the transaction will be united with other transactions to set up a new data block for the register.
7. The transaction is completed.

**Benefits**
- Enhanced transparency
- Accurate tracking
- "Eternal" register
- Reduced expenditures

**Disadvantages**
- Complex technology
- Regulatory consequences
- Implementation problems
- Competing platforms

**Cryptocurrency**

Cryptocurrency is an exchange environment created and stored in electronic form in the blockchain using cryptographic methods of encryption to control the creation of monetary units and check money transfers. Bitcoin is the most popular example.

- Does not have value itself, as it is not secured with gold and forex reserves (like the US dollar).
- Has no physical form and only exists online.
- Issuance of new units is not determined by the central bank, and the network is fully decentralized.

**Potential applications**

**Vehicles**
Consumers may use a blockchain to control partial ownership in autonomous vehicles.

**Financial services**
Quicker and cheaper payments may reduce transaction costs by billions of dollars and increase their transparency.

**Voting**
Using a block code, people will be able to vote using a smartphone, tablet, or PC, which will provide an instant and more accurate result.

**Health care**
Encrypted medical information of patients may be shared with several parties with no risk of a breach of confidentiality.

Sources: Informa Knowledge & Networking division
2.6.2

Insurance and pension system

Economic development
The insurance system is extremely small in relation to GDP – 0.4%.

The low level of financial literacy, personal disposable income, and regulatory support from the state complicates the overall situation for development of the country’s insurance system.

The total profitability is growing along with the volume of insurance premiums collected, but remains low, which will attract additional players to the market.

The state’s share of the insurance sector is relatively low compared to Uzbekistan’s financial system as a whole.

High concentration in the capital region.

Insurance companies widely use international reinsurance. The largest share of the outward reinsurance is owned by British companies.

To diversify the reinsurance portfolio, it is necessary to introduce a mandatory state reinsurer that will shift part of the risks of insurance companies onto itself.

The overall insurance system is poorly developed, so the country has great potential for its development.

Uzbekistan has the smallest insurance portfolio in relation to GDP among the benchmarks.

The size of the insurance system relative to GDP is one-thirtieth that of South Korea.

In UZS terms, the insurance premium portfolio is growing rapidly, especially since 2015.

A significant excess of premiums of insurance companies over payments will lead to the emergence of new participants in the insurance market.

Sources: World Bank, State Inspectorate for Insurance Supervision as of 27 June 2018.
Insurance and pension system

Current development level of the insurance system

Dynamics of growth of insurers’ investments

<table>
<thead>
<tr>
<th>Year</th>
<th>Investments (UZS billion)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>526.6</td>
</tr>
<tr>
<td>2014</td>
<td>623.7 (+43.6%)</td>
</tr>
<tr>
<td>2015</td>
<td>756.1</td>
</tr>
<tr>
<td>2016</td>
<td>867.5 (+96.1%)</td>
</tr>
<tr>
<td>2017</td>
<td>1,482.5</td>
</tr>
</tbody>
</table>

**Comments**
- The investment portfolios of insurance companies are growing rapidly due to growth in collected premiums
- The sharp increase in investments in 2017 is due to the weakening of the som against the US dollar

Structure of insurers’ investments at the end of 2016

- **45%** Bank deposits
- **41%** Securities
- **7%** Participation in authorized capital
- **6%** Real estate
- **0.8%** Loans
- **0.2%** Other

**Comments**
- The investment structure of the insurance sector is moderately conservative and shows a high level of diversification
- The high share of bank deposits is not typical for the investment structure of insurance companies, but under Uzbekistan’s current market conditions it can be a rational option
- In the future, with the normalization of the banking service market and the reduction of the key rate, insurers will place a much larger share of their funds in securities

Structure of outwards reinsurance at the end of 2017, %

- **UK** 47%
- **Korea** 16%
- **Russia** 10%
- **China** 6%
- **Germany** 3%
- **Luxembourg** 3%
- **Azerbaijan** 3%
- **Switzerland** 2%
- **Other countries** 10%

**Comments**
- Insurance companies make wide use of international reinsurance mechanisms. The largest share of the outward reinsurance is owned by British companies
- According to the Regulation on Solvency of Insurers and Reinsurers (Reg. No. 1806 dated May 12, 2008), reinsurance of risks abroad is allowed only by approved reinsurers and solvent insurers that have corresponding international ratings

Sources: State Inspectorate for Insurance Supervision as of 27 June 2018
Insurance and pension system

Current development level of the pension system

Key challenges

• The current size of the pension fund of the Republic of Uzbekistan does not match the number of pensioners according to a comparative analysis of international indicators

• The burden on the country’s pension system will continue to grow due to structural demographic changes, even if the proposed pension reform is carried out

Key findings

• The size of the fund does not allow it to adequately cover the pension needs of the population

• The high rate of population growth in recent years will lead to an increase in demands on the pension system by 2035, and consequently to an additional burden on the budget

• 48% of the pension fund is funded through unified social payment, and therefore there is a need to diversify sources of revenue through nonstate sources

• Uzbekistan’s pension system structure should be based on different levels of provision, including mandatory, supplemental, and personal savings

Comments

• The pension fund of Uzbekistan ranks last in its group on payments per pensioner (the size of the fund cannot fully cover the entire pension-age population of the country)

Per pensioner (USD)

• The pension fund of the Republic of Uzbekistan is equal to USD 743 per pensioner. This makes it impossible to ensure that the pension fund is independent of the state budget

Source: World Bank Open Data
**Insurance and pension system**

### Age and sex pyramid of the population of Uzbekistan

The Republic of Uzbekistan is discussing raising the retirement age to 63 years for men (currently 60 years) and to 58 years for women (currently 55) in connection with the concept for the reform of the state pension system.

#### Current development level of the pension system

<table>
<thead>
<tr>
<th>Age Range</th>
<th>Population, million people</th>
</tr>
</thead>
<tbody>
<tr>
<td>0–4</td>
<td>0.8</td>
</tr>
<tr>
<td>5–9</td>
<td>0.8</td>
</tr>
<tr>
<td>10–14</td>
<td>0.4</td>
</tr>
<tr>
<td>15–19</td>
<td>1.2</td>
</tr>
<tr>
<td>20–24</td>
<td>1.6</td>
</tr>
<tr>
<td>25–29</td>
<td>1.6</td>
</tr>
<tr>
<td>30–34</td>
<td>1.2</td>
</tr>
<tr>
<td>35–39</td>
<td>0.8</td>
</tr>
<tr>
<td>40–44</td>
<td>0.4</td>
</tr>
<tr>
<td>45–49</td>
<td>0.4</td>
</tr>
<tr>
<td>50–54</td>
<td>0.4</td>
</tr>
<tr>
<td>55–59</td>
<td>0.4</td>
</tr>
<tr>
<td>60–64</td>
<td>0.4</td>
</tr>
<tr>
<td>65–69</td>
<td>1.2</td>
</tr>
<tr>
<td>70–74</td>
<td>1.6</td>
</tr>
<tr>
<td>75–79</td>
<td>1.2</td>
</tr>
<tr>
<td>80–84</td>
<td>1.2</td>
</tr>
<tr>
<td>85–89</td>
<td>0.8</td>
</tr>
<tr>
<td>90–94</td>
<td>0.4</td>
</tr>
<tr>
<td>95–99</td>
<td>0.4</td>
</tr>
<tr>
<td>100+</td>
<td>0.4</td>
</tr>
</tbody>
</table>

**Note:** 1 - ratio of the number of citizens of retirement age (men aged up to 60 years and women aged up to 55 years); to the number of citizens of working age (men aged 15-59 years and women aged 15-54 years)

Sources: World Bank, Population Pyramid, analysis of the working group
Insurance and pension system

Current development level of the pension system

The current pension system provides for a pension to be awarded to people having at least seven years of employment (pursuant to Convention of the International Labor Organization No. 102, the minimum required length of employment to award retirement pensions is 15 years). Minimum requirements for the length of employment of seven years has a negative impact on the desire of citizens to participate in the state social insurance system 14.3 million people.

The pension benefits of citizens in the Republic of Uzbekistan covers the following main systems:

- state pension benefits (pay-as-you-go pension system based on compulsory social deductions of employees and employers)
- defined contribution pension system (notional defined contribution system based on compulsory and voluntary deductions of an employee)

Concept for the Reform of the State Pension System

For the purpose of implementing advanced mechanisms promoting citizens’ participation on a continuous basis in the social insurance system and pursuant to Minutes No. 1 of the meeting for ensuring stability of the pension system of the Republic of Uzbekistan in the medium term, detecting current problems, and developing proposals for their resolution, approved by the Head of the Presidential Administration of the Republic of Uzbekistan dated 16 September 2018, a draft Concept for the Reform of the State Pension System for Citizens for 2019–2030 is being elaborated.

To accomplish the tasks established by the draft Concept of for the Reform of the State Pension System for Citizens for 2019–2030, measures are being developed in the following main areas:

1. To prevent the social discontent of citizens and prepare them for forthcoming changes in the pension system, it is necessary to announce innovations in advance (e.g., one to three years before their implementation)
2. To avoid any possible budget shortfall in the Pension Fund, to take the relevant preventive measures
3. Elaboration of a mechanism for paying the minimum (guaranteed) portion of pensions from the funds of the state budget
4. Refinement of the mechanism of individual income legalization, including extending coverage of payers of contributions to the self-employed population and labor migrants working abroad
5. As the effective Law of the Republic of Uzbekistan "On State Pension Benefits of Citizens" was approved in 1993, subject to proposed changes in the area of the pension benefits, it is necessary to elaborate and approve the new version of the Law

Implementation of the electronic employment record

It is planned that an electronic personal card will be created for each individual, containing electronic information on the length of employment and salary. Those electronic personal cards will reflect information for the period after 2006 received by electronic information exchange with databases of the State Tax Committee and the People's Bank (INPS and INN). Electronic records of employment will be kept on the basis of insurance contributions paid to the Pension Fund, the mechanism of which was implemented starting in 2016.

There are plans to revise and improve the official website of the Pension Fund before the end of 2018, providing for functions of the personal account of pensioners and employed persons. The electronic personal account will make it possible to check pension amounts, dates of delivery, and actual receipt; and for employed persons, length of employment accumulated.
Reforming the Pension System for Citizens

Implementation of the Pension System reform, aimed at creating a Pension Management Authority independent of the state, representing the interests of citizens.

Key points of pension system reform:

1. Designation of a clear organization structure for an independent Pension Authority. The structure will include the effective allocation of functions and the division of responsibilities within the organization.
2. Development of a long-term development plan for the Pension Authority. The plan includes creating a long-term strategy for sustainable investment, preparing a forecast for (future) obligations (with the support of the Actuarial Settlements and Research Department), ensuring continuity of interaction with participants in the pension plan.
3. Development of a sustainable investment policy for the Pension Authority. The policy includes controlling the balance between risk-earning local/domestic investments and safe-haven investments, attracting highly qualified specialists to make decisions.
4. Development and improvement of channels of communication with the citizens (feedback).
Insurance and pension system

Current development level of the pension system

1 Natural growth

The state does not interfere in the country’s insurance system and takes measures for minimum control over the main forms of insurance

- The low share of compulsory insurance does not create a heavy burden on business
- Slow development of the insurance system
- Additional burden on the state budget

Growth of the insurance system (CAGR)

2017 2035
80% ➞ 90%
+8%

Share of voluntary insurance

2 The insurance system develops slowly; insurance coverage of citizens does not grow

Basic development

The state gradually introduces additional types of compulsory insurance, subsidizing private insurance

- The insurance system is developed more actively
- Protection of the population
- Increased burden on business

Growth of the insurance system (CAGR)

2017 2035
80% ➞ 60%
+12%

Share of voluntary insurance

2 The insurance system develops at a moderate rate; insurance coverage of citizens grows

3 Active assistance

Introduction of a significant number of compulsory forms of insurance, which would greatly limit financial losses of individuals and companies upon the occurrence of negative circumstances

- Increase in funds for the economy
- Broad social protection of the population
- Development of health care and financial services
- Additional burden on business

Growth of the insurance system (CAGR)

2017 2035
80% ➞ 20%
+20%

Share of voluntary insurance

The insurance system develops rapidly; insurance coverage of citizens increases significantly; the burden on the state budget decreases

Source: analysis of the working group

Target development option

80% ➞ 90%
+12%
Insurance and pension system

Strategic options for the pension system

1

Compulsory pension (one level)

The state is the only guarantor of pension income of the population. This type is specific to developing countries or for welfare states that do not have a shortage of resources to form the pension fund.

Examples of countries:
- Moldova
- UK

State

- Basic
- Social support / resource base
- Minimum pension amount

Plus:
- Additional funds in departments
- Motivation of state and municipal employees

Minus:
- Public pressure
- Additional burden on the budget

2

Compulsory pension + savings (two levels)

This type of pension system is characterized by the active involvement of employers in the formation of the pension income of their own employees. The state provides for the poorest sectors of society and makes payments from the budget.

Examples of countries:
- Chile
- Ireland

Private

State

- Defined benefit plan
- Defined contribution plan
- Scoring system
- Escrow pension accounts

Plus:
- Stimulation of the private financial industry

Minus:
- Public pressure
- Additional burden on the budget
- Reduction of sources for replenishing the state budget

3

Compulsory pension + voluntary pension + savings (three levels)

The third level is based mainly on the voluntary and savings types of pensions. The state provides minimum payments to all citizens, but personal savings are needed to achieve a comfortable standard of living. The implementation of the scenario will require the development of accessibility of investment products for private pension investments in capital markets.

Examples of countries:
- USA
- Australia

Private

Defined benefit plan
Defined contribution plan

Plus:
- Reduction of the burden on the budget
- Stimulation of the private financial industry
- Reduction of public pressure
- Reduction of the sources for replenishing the state budget
- Retains risk of rapid growth of state pension obligations

Gradual transition of pension support to a private system of pension support

Target development option

Source: analysis of the working group
Pension system of Canada (3 elements)

1. Old Age Security
This provides a basic level of retirement income for all people 65 years of age and older who have lived in the country for more than 10 years in adulthood. Under the program, three types of benefits are paid:

- Pension. This is a fixed pension paid to all residents who are entitled to it, regardless of their income level.
- Guaranteed income supplement. The amount of the premium depends on income and is in addition to the fixed pension, which is paid to recipients of a fixed pension with low income.
- Allowance/dependent allowance. This is a temporary cash benefit paid to low-income husbands/wives of beneficiaries, as well as widowers/widows between the ages of 60 and 64, until they start receiving a basic fixed pension.

2. Canada Pension Plan
This is a compulsory nationwide distribution pension-funded program based on a system of defined benefits tied to the recipient’s salary. It is funded by payroll tax, which is paid equally by the employer and employee. The state does not make contributions.

Participation in this plan begins at the age of 18. A normal pension is paid upon reaching 65 years of age. Correspondingly adjusted benefits can also be received before and after the age of 65. The program also paid disability benefits and survivor benefits. The average salary for the entire work experience is indexed by the date of reaching the age of 65 in accordance with the growth of the average salary in the country. The 15% of the period of employment when the salary was the lowest is excluded, as are the years during which disability benefits were paid, and (if this leads to an increase in benefits) the years during which the payer had children under 7 years of age. Thus, after about 40 years, the maximum benefit amount is usually reached, equal to 25% of the average earnings during the employment period.

3. Voluntary pension programs
These include traditional professional pension funds created by employers, unions, or industries, and also include personal retirement accounts managed by financial institutions such as banks and insurance companies. Some professional pension funds are funded exclusively by employers, but most are funded by both employers and employees.

Source: analysis of the working group
Insurance and pension systems

Target vision of the insurance system in 2035

Active assistance to insurance system development

- Private insurance system that supports the main areas of the economy and society and is aimed at reducing the total costs of the population, business, and the state
- It is necessary to introduce compulsory medical insurance

Key strategic initiatives

Source: analysis of the working group

Target vision of the pension system in 2035

Three-level pension system

- The pension system consists of three levels: basic state pension, corporate pension, and individual pension
- A private pension system with variable structure of accumulation allows citizens to determine for themselves what income they will have in the future

Figures

Share of the insurance system, % of GDP

<table>
<thead>
<tr>
<th>Year</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP</td>
<td>2.8%</td>
<td>2.8%</td>
<td>2.8%</td>
</tr>
</tbody>
</table>

Share of voluntary insurance

<table>
<thead>
<tr>
<th>Year</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td>80%</td>
<td>80%</td>
<td>80%</td>
</tr>
</tbody>
</table>

Share of compulsory insurance

<table>
<thead>
<tr>
<th>Year</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td>20%</td>
<td>20%</td>
<td>20%</td>
</tr>
</tbody>
</table>

Financing

<table>
<thead>
<tr>
<th>Year</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>USD million</td>
<td>4778 – 5839</td>
<td>647 – 791</td>
<td>647 – 791</td>
</tr>
</tbody>
</table>

Figures

Share of the pension system, % of GDP

<table>
<thead>
<tr>
<th>Year</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP</td>
<td>7%</td>
<td>7%</td>
<td>7%</td>
</tr>
</tbody>
</table>

Amount of the pension fund per capita, USD million

<table>
<thead>
<tr>
<th>Year</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>USD million</td>
<td>2.51</td>
<td>2.51</td>
<td>2.51</td>
</tr>
</tbody>
</table>

Share of the state pension in the total structure of pension payments

<table>
<thead>
<tr>
<th>Year</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td>100%</td>
<td>35%</td>
<td>35%</td>
</tr>
</tbody>
</table>

Financing

<table>
<thead>
<tr>
<th>Year</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>USD million</td>
<td>412 – 503</td>
<td>647 – 791</td>
<td>647 – 791</td>
</tr>
</tbody>
</table>

2025

- Compulsory medical insurance
- Stimulation of private insurance
- Two-level pension system
- Industrial pension
- Introducing an electronic policy

2030

- Development of professional insurance
- Three-level pension system
- Integration of banking, insurance, investment, and savings products

2035
2.6.3

Capital markets

Economic development
Capital markets

Current development level of capital markets

Key challenges

• Very low market capitalization of companies in Uzbekistan
• Ratings of players outside the banking sector are extremely low
• International investors have a relatively low share in turnover compared to developed markets
• A high return on capital is expected, due to the high level of country risks, which significantly limits the investment potential of the Republic of Uzbekistan

Key findings

• Low market capitalization of companies in Uzbekistan compared to emerging markets; the share of banks is 60%. Bank shares are the most traded and make up 86% of turnover
• A high return on capital is expected, due to the high level of country risks, which significantly limits the investment potential of the Republic of Uzbekistan
• Due to the high level of expected return on equity, investors are not inclined to make significant capital infusions into Uzbekistan’s market
• Institutional investors hold securities of the corporate sector of Uzbekistan as "exotic" assets designed to be more profitable than assets of an "investment" nature
• In the corporate sector, the level of communications with investors is extremely low (IR = investor relations)
• The lack of sufficient information about the corporate sector on the exchange portal hinders the active development of the market

Market capitalization of listed companies

As a % of GDP

171 Listed company
1.8 Volume of market capitalization

<table>
<thead>
<tr>
<th>Country</th>
<th>Listed company</th>
<th>Volume of market capitalization</th>
<th>Percent of GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>UZB</td>
<td>5%</td>
<td>120%</td>
<td>171</td>
</tr>
<tr>
<td>UKR</td>
<td>11%</td>
<td>23%</td>
<td>183</td>
</tr>
<tr>
<td>TUR</td>
<td>23%</td>
<td>35%</td>
<td>171</td>
</tr>
<tr>
<td>KAZ</td>
<td>44%</td>
<td>44%</td>
<td>171</td>
</tr>
<tr>
<td>RUS</td>
<td>5%</td>
<td>120%</td>
<td>171</td>
</tr>
<tr>
<td>MYS</td>
<td>11%</td>
<td>23%</td>
<td>183</td>
</tr>
</tbody>
</table>

Market capitalization of companies in the economy’s sectors

<table>
<thead>
<tr>
<th>Sector</th>
<th>Listed company</th>
<th>Volume of market capitalization</th>
<th>Percentage of traded shares</th>
</tr>
</thead>
<tbody>
<tr>
<td>Banks</td>
<td>60%</td>
<td>86%</td>
<td>1,082</td>
</tr>
<tr>
<td>Oil and gas</td>
<td>10%</td>
<td>9%</td>
<td>188</td>
</tr>
<tr>
<td>Construction and materials</td>
<td>10%</td>
<td>9%</td>
<td>163</td>
</tr>
<tr>
<td>Minerals and metals</td>
<td>4%</td>
<td>4%</td>
<td>75</td>
</tr>
<tr>
<td>Other</td>
<td>16%</td>
<td>16%</td>
<td>293</td>
</tr>
</tbody>
</table>

Stock exchange structure

<table>
<thead>
<tr>
<th>Investor Type</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foreign</td>
<td>43%</td>
</tr>
<tr>
<td>Individuals</td>
<td>32%</td>
</tr>
<tr>
<td>Other</td>
<td>25%</td>
</tr>
</tbody>
</table>

Comments

• At the beginning of 2017, there were 191 companies in the exchange quotation list
• Market capitalization lags behind many emerging markets not only in terms of its absolute value, but also in terms of its volume relative to the country’s GDP

Comments

• The listed companies include commercial banks, insurance companies, oil and gas enterprises, construction material producers, agricultural companies, energy companies, metallurgy plants, etc.
• The largest part of the turnover is made up of foreign investors; as the market grows, their share may reach 80% (for example, South Korea)

Source: Center for Coordination and Development of the Securities Market of the Republic of Uzbekistan
Capital markets

Current development level of capital markets

Value of equity in terms of other indicators, 2017

<table>
<thead>
<tr>
<th>Country</th>
<th>Ke(2)</th>
<th>ERP(3)</th>
<th>CRP(4)</th>
<th>RFR(5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Syria</td>
<td>3%</td>
<td>20%</td>
<td>25%</td>
<td>49%</td>
</tr>
<tr>
<td>Somalia</td>
<td>3%</td>
<td>14%</td>
<td>19%</td>
<td>36%</td>
</tr>
<tr>
<td>Liberia</td>
<td>3%</td>
<td>14%</td>
<td>19%</td>
<td>36%</td>
</tr>
<tr>
<td>North Korea</td>
<td>3%</td>
<td>12%</td>
<td>17%</td>
<td>31%</td>
</tr>
<tr>
<td>Venezuela</td>
<td>3%</td>
<td>12%</td>
<td>17%</td>
<td>31%</td>
</tr>
<tr>
<td>Belarus</td>
<td>3%</td>
<td>9%</td>
<td>14%</td>
<td>25%</td>
</tr>
<tr>
<td>Uzbekistan</td>
<td>3%</td>
<td>9%</td>
<td>11%</td>
<td>23%</td>
</tr>
<tr>
<td>Armenia</td>
<td>3%</td>
<td>5%</td>
<td>10%</td>
<td>18%</td>
</tr>
<tr>
<td>Azerbaijan</td>
<td>3%</td>
<td>3%</td>
<td>9%</td>
<td>15%</td>
</tr>
<tr>
<td>Tajikistan</td>
<td>3%</td>
<td>3%</td>
<td>8%</td>
<td>14%</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>3%</td>
<td>3%</td>
<td>8%</td>
<td>13%</td>
</tr>
<tr>
<td>Japan</td>
<td>3%</td>
<td>6%</td>
<td>1%</td>
<td>10%</td>
</tr>
<tr>
<td>South Korea</td>
<td>3%</td>
<td>6%</td>
<td>1%</td>
<td>9%</td>
</tr>
<tr>
<td>Denmark</td>
<td>3%</td>
<td>5%</td>
<td>0%</td>
<td>8%</td>
</tr>
<tr>
<td>Singapore</td>
<td>3%</td>
<td>5%</td>
<td>0%</td>
<td>8%</td>
</tr>
</tbody>
</table>

Comments

- A high return on capital is expected, due to the high level of country risks, which significantly limits the investment potential of the Republic of Uzbekistan
- The high level of return on capital expected significantly limits the number of projects and companies in which local and in particular foreign investors are willing to invest
- The cost of capital can be lowered by reducing the country risk, reducing the risk of doing business, establishing the supremacy of law and the judicial system, and reducing the risk of equity: growth of the corporate governance level, development of corporate culture, acceptance of and compliance with International Financial Reporting Standards (IFRS) and International Standards of Auditing
- Improvement of sovereign credit rating will be an indicator and catalyst for reducing country risk

Value of equity by component

<table>
<thead>
<tr>
<th>Year</th>
<th>Ke(2)</th>
<th>ERP(3)</th>
<th>CRP(4)</th>
<th>RFR(5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>22.7%</td>
<td>11.4%</td>
<td>8.5%</td>
<td>2.7%</td>
</tr>
<tr>
<td>2035</td>
<td>10.7%</td>
<td>5.0%</td>
<td>3.0%</td>
<td>2.7%</td>
</tr>
</tbody>
</table>

Comments

- Since the system will be based on Singapore’s experience, the ERP indicator will decrease to 5% as the key institutions of capital markets develop
- With the further development of the financial system and state institutions, the CRP indicator of the Republic of Uzbekistan will reach 3%, which is equivalent to the level of the most developed countries of Central Asia

Note: 1 - Legal entities, 2 - Ke-cost of share capital, 3 – ERP - equity risk premium, 4 - CRP - country risk premium, 5 - RFR – risk-free rate (based on long-term U.S. government bonds).
Source: Center for Coordination and Development of the Securities Market of the Republic of Uzbekistan

293
Capital markets

Strategic options

1. **Balance between debt instruments and equity**

   The proportional use of debt and equity makes it possible to derive the maximum benefit from a fast-growing market

   **D/E¹ < 1**
   - High financial stability
   - Enterprises less dependent on borrowed capital and liabilities
   - Increasing confidence in the financial institutions of the country among the public and foreign investors

   **D/E¹ > 6**
   - Heavy burden on business, especially during an economic recession
   - Reduction in the capital supply during an economic recession

   **D/E¹ > 9**
   - Not an optimal choice for a country with a fast-growing economy

   **Equity and borrowed funds in equal proportions, on average**

   Primarily: debt instruments

   A less conservative option that is usually typical for more mature economies. A moderate degree of susceptibility to the economic cycle makes it possible to ensure growth in the value of equity in the economic growth phase and supports the capital supply in the economic recession phase

   **D/E¹ > 6**
   - Facilitates a moderate increase in the value of equity
   - Optimal choice for a mature economy

   **D/E¹ > 9**
   - This model is less exposed to market fluctuations
   - More beneficial for equity holders during the growth phase

   **Volume of debt instruments exceeds equity tenfold**

   **High level of borrowed funds in relation to equity**

   Maximum use of debt instruments

   High corporate debt means a low risk appetite as well as low expectations for market growth and expected return of the corporate sector. Characterized by low sensitivity to investment

   **D/E¹ > 9**
   - The high level of debt service puts the corporate sector at risk of bankruptcy in the event of economic shocks

   **Examples of countries:**
   - Singapore
   - Ireland
   - Hungary
   - Japan
   - Australia

   **Examples of countries:**
   - UK
   - Czech Republic

   **Note:** 1 = average ratio of debt instruments to equity in the corporate segment of the country

   **Sources:** OECD Data: Financial corporations debt to equity ratio, analysis of the working group
Capital markets

Strategic options

Maximum use of equity (Islamic financial products: sukuk)

An alternative option involves the rejection of the use of debt instruments in favor of the use of equity instruments, where the Islamic bond market (sukuk financial certificate) is the most promising source of capital.

The international importance of using sukuk is increasing: the Islamic finance market is growing annually by an average of 15–20%.

World practice proves that sukuk production contributes to maintaining a favorable economic situation, especially in times of crisis.

- High financial stability - certificate must be provided with assets: tangible or intangible
- In case of default, sukuk holders have the right to exercise their property rights and sell their share in assets, thereby recovering the bulk of the investment.
- Enterprises are Independent of borrowed capital and liabilities
- An alternative source of raising funds under the conditions of sanctions or the inaccessibility of foreign capital markets
- Does not require changes in current legislation on the issue of securities

D = 0

Examples of countries:
- Iran
- Pakistan

- This model is completely exposed to market fluctuations
- The main condition for organizing the issue of sukuk is compliance with the Sharia canons of financing goals (asset purchase, construction, investment project, business development, etc.) and the certificates themselves.

Absence of debt instruments, borrowed funds

Sources: Islamic Business and Finance Development fund: Attracting investments using Sukuk
Capital markets

Target vision of the insurance system in 2035

Balance between debt and equity
- The capital market meets all modern requirements in terms of regulation, infrastructure, and technology
- High quality of information delivery and high speed of access
- Stable supervision and transparent regulation
- Creation of a securities quotation system through the development of market infrastructure
- Predictive tax policy
- Maintaining the balance between debt and equity financing
- Attraction of international institutional investments
- Development of local companies

| Figures |
|-----------------|-------------|
| Capital market size, USD billion | 2.5 → 114 |
| Capital market size, % of GDP | 3.7% → 80% |
| Share of foreign investors | 43% → 70% |
| Expected return on equity | 22.7% → 11.7% |

| Financing |
|-----------------|-------------|
| USD million, cumulative |
| by 2025 | 1.3 – 1.5 |
| by 2030 | 3.4 – 4.1 |
| by 2035 | 10.8 – 13.1 |

Target structure of capital markets

Instruments
- Government bonds
- Corporate bonds and fixed income securities
- Equity
- Derivative financial instruments

2. Supervisory system
Regulatory bodies and their hierarchy

3. Institutions
Management and ownership
Division of players by type

4. Regulation and standards
Transparent rules
Predictive behavior of the regulator

5. Taxes
Predictive taxation
Tax benefits

6. Infrastructure and technology
High technological level
Organization and stability of trading

1. Basic principles and rules
- Presence of indices
- Capital supply
- Capital demand
- Openness to global players
- Market freedom
- Ability to seek an equilibrium price

Source: Monetary Authority of Singapore
**Capital markets**

**Target vision of the insurance system in 2035**

**Singapore’s case study on increasing capital market capacity**

1. Preparing long-term goals and achieving consensus
   - In the late 1990s, the Prime Minister and Deputy Prime Minister chose a top-down approach to transform Singapore into a major financial center with a full scope of services in Asia
   - This vision has become a national priority and is associated with achievement of the social and economic goals of creating jobs and ensuring a high growth rate of GDP, respectively

2. Creating and expanding the capabilities of regulatory institutions
   - The powers to implement this vision were given to the supreme body: the Monetary Authority of Singapore (MAS)
   - MAS is authorized to take all necessary measures to achieve the vision

3. Managing a wide circle of interested parties
   - The private sector was actively engaged in the development and implementation of the policy
   - The private sector was offered different stimuli to expand their participation in the market

4. Creating a growth driver by identifying the catalyst for change
   - Stock exchanges were united and opened to a wide circle of participants
   - The state bonds market was modernized to create additional points of debt market growth
   - Management of funds and private banking were transformed so as to meet the current challenges of local capital market growth to a fuller extent

5. Ensuring long-term availability of talent
   - The education sector was reformed, for example, with specialized training courses and invitations to foreign universities. Emphasis was placed on research and innovation in academic circles, etc. to create a talent tool for the financial sphere
   - Foreign talent was encouraged to come to and stay in Singapore

6. Investments in strategic advancement
   - Broad advancement and transparency from the government, including the regular involvement of print media, and a high level of development of investor communications by the state and companies
   - Creation of a special promotions division for processing investor roadshows and campaigns

**Introduce MiFID II for the development of capital markets**

- Entities must divide customers into certain categories: a company must know the level of financial literacy, which will be the main factor necessary to provide a more suitable service
- All organizations offering services must fully inform customers about trading terms
- Transactions must be performed immediately after the customer’s request is received
- MiFID helps create a single market so that its participants are provided with more favorable conditions
- Financial services are regulated. Grounds for licensing entities that have permission to carry out activities are considered

**What does MiFID II provide?**

- **Control**
- **Transaction accounting**
- **Commodity derivatives**
- **Market infrastructure**
- **Reporting**
- **Investor protection**

Note: 1 = The Markets in Financial Instruments Directive (EU Directive)
Capital markets

Key strategic initiatives

2025

- Adapt international standards of regulation and control, including standards of corporate governance, reporting of funds and companies (including IFRS and IAS), standards of customer classification, information storage and disclosure, etc.
- Create codes of ethics and standards of conduct for professional market participants
- Join the world’s leading associations of member countries of capital markets, in particular, Asian and European supervisory and regulatory organizations
- Increase the attractiveness of the domestic capital market, introduce individual investment accounts, and provide tax incentives to individuals
- Issue investment-grade government and corporate Eurobonds, as well as government short-term and local currency bonds with a high credit rating
- Development of local brokerage companies in terms of standardization and supervision, and integrate international players into the capital market as participants and/or partners
- Create an independent financial regulator with wide powers based on the example of FCA (Great Britain)
- License financial market employees through testing and checkups

2030

- Create investment incubators and accelerators to integrate investors and business owners, in particular, in innovative areas of development
- Develop a product portfolio that meets the requirements of a modern economy to a greater extent; in particular, ETF for individuals, resource and currency derivatives for manufacturing companies, and structural products for institutional investors
- Develop the technological level and computing power of the ICT infrastructure of exchanges
- Develop the principles of special tax schemes to attract foreign investors

2035

- Creation of liquidity placement systems and integration with banking products in the corporate segment
- Integrate banking, insurance, and investment savings products into the retail segment and transition to a life cycle service model
- Personnel
- Finance
- Technologies
- Legislation and state regulation
- Infrastructure
3. Social development

Framework Development Strategy of the Republic of Uzbekistan to 2035
3.1

Health care

Social development
Health care

Key challenges
- High rates of cardiovascular disease and high infant mortality
- Low funding for the health care system
- Unequal access to health care
- Low wages of health care workers
- Low share of capital expenditures and, consequently, a low level of technological development of health care (lack of facilities with modern equipment)
- The threat of the spread of HIV / AIDS
- Poor medical training

Key findings
- The health of the population is characterized by the average life expectancy at birth (73.3\(^1\) years) and low mortality (4.9 deaths per 1,000 people). Life expectancy is affected by the high rate of cardiovascular disease and high child mortality (shows some of the highest rates according to the WHO)
- The main problem in health care is the current state of funding, which is expressed in:
  - Low health expenditures per capita (the estimated indicator fell to USD 54 per capita in 2018)
  - Unequal access to health care. In most cases secondary and tertiary health care is paid, the share of payments by citizens in the funding of health care is more than 40\(^1\)
  - Undeveloped funding tools. For example, there is no compulsory medical insurance
  - Consequently, the quality of medical care decreases, which may have a negative impact on the health of the population

Health expenditures per capita, USD, 2015

<table>
<thead>
<tr>
<th>Country</th>
<th>Expenditures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uzbekistan</td>
<td>130.00</td>
</tr>
<tr>
<td>Russia</td>
<td>70.00</td>
</tr>
<tr>
<td>China</td>
<td>82.00</td>
</tr>
<tr>
<td>Singapore</td>
<td>27.00</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>90.00</td>
</tr>
<tr>
<td>Total</td>
<td>2,280.30</td>
</tr>
</tbody>
</table>

Health expenditures per capita, USD, 2015

Infant mortality, deaths of children under the age of 5 years per 1,000 newborns, 2016

<table>
<thead>
<tr>
<th>Country</th>
<th>Infant Mortality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uzbekistan</td>
<td>24.1</td>
</tr>
<tr>
<td>Russia</td>
<td>7.7</td>
</tr>
<tr>
<td>China</td>
<td>9.9</td>
</tr>
<tr>
<td>Singapore</td>
<td>2.8</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>11.4</td>
</tr>
</tbody>
</table>

Position in the international rating according to the World Health Organization

Note 1 – According to some experts, the share of personal payments of citizens in financing health care is about 70%
Sources: World Health Organization, analysis of the working group
\(^1\)State statistics committee
Private payments predominate in the health financing system. However, there is no compulsory medical insurance, which limits equal access.

- **There is no compulsory medical insurance system** in Uzbekistan, and the voluntary medical insurance system is poorly developed.
- The state health care system in Uzbekistan includes the provision of primary medical visits free of charge, but additional services and repeat visits are paid.
- Private payments include payments for medical services rendered in state institutions and private insurance contributions. In the Republic of Uzbekistan, private payments consist almost entirely of citizens' payment for medical services.
- The health care funding systems in other countries, for example, in Singapore, operate based on mandatory contributions from working citizens and state support for the lowest income groups of the population. The amount of mandatory contributions varies depending on the age and general health of a citizen.
- In the opinion of the experts of the working group, official statistical data do not reflect reality; the share of private payments of citizens may reach 70%–80%.

### Average salary of a health care worker

<table>
<thead>
<tr>
<th>USD per month</th>
<th>Uzbekistan</th>
<th>Russia</th>
<th>China</th>
<th>Singapore</th>
<th>Kazakhstan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average salary of a health care worker</td>
<td>285</td>
<td>671</td>
<td>1 004</td>
<td>3 116</td>
<td>480</td>
</tr>
<tr>
<td>Average salary in the country</td>
<td>581</td>
<td>848</td>
<td>3 067</td>
<td>402</td>
<td></td>
</tr>
</tbody>
</table>

- The salary of doctors in Uzbekistan is lower than the average salary in the country.
- Bonuses depend on a doctor's qualifications, length of service, and specialty. For example, the average salary of surgeons of the highest category is USD 351.
- Low doctors’ salaries lead to the development of a shadow economy in the sector. For example, unofficial income from patients may be added to the salaries of medical staff. Also, according to experts, a significant proportion of medical workers cooperate with pharmaceutical companies and receive (often non-ethical) remuneration from them, which negatively affects the quality of medical advice.

Sources: World Health Organization, analysis of the working group
### Life expectancy at birth(a), years, 2016

<table>
<thead>
<tr>
<th>Country</th>
<th>Life Expectancy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uzbekistan</td>
<td>73.7</td>
</tr>
<tr>
<td>Russia</td>
<td>71.9</td>
</tr>
<tr>
<td>China</td>
<td>76.4</td>
</tr>
<tr>
<td>Singapore</td>
<td>82.9</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>71.1</td>
</tr>
</tbody>
</table>

### Total mortality per 1,000 people, deaths, 2016

<table>
<thead>
<tr>
<th>Country</th>
<th>Mortality Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uzbekistan</td>
<td>5</td>
</tr>
<tr>
<td>Russia</td>
<td>13.0</td>
</tr>
<tr>
<td>China</td>
<td>7.3</td>
</tr>
<tr>
<td>Singapore</td>
<td>5.1</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>8.2</td>
</tr>
</tbody>
</table>

### Mortality rate of children under the age of 5 years, per 1,000 children, deaths, 2016

<table>
<thead>
<tr>
<th>Country</th>
<th>Mortality Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uzbekistan</td>
<td>15.4</td>
</tr>
<tr>
<td>Russia</td>
<td>8.0</td>
</tr>
<tr>
<td>China</td>
<td>10.0</td>
</tr>
<tr>
<td>Singapore</td>
<td>2.8</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>10.9</td>
</tr>
</tbody>
</table>

**Comments**

- Uzbekistan has a fairly good average life expectancy. Even though Uzbekistan is one of the leaders in life expectancy among the former Soviet republics and the absolute leader in Central Asia, it lags far behind the leading European and Asian countries, including China and Singapore.
- Uzbekistan is characterized by a low mortality rate, with one of the lowest rates in the world rating according to the World Health Organization (152 out of 183 countries).
- However, there is an acute problem with child mortality under the age of 5 years (82 out of 194 countries).

---

Notes: a = Life expectancy at birth shows the number of years a newborn will live if the mortality rate established at the time of their birth remains unchanged throughout their life; b = including birth complications as well as perinatal complications and nutritional disorders; c = including house collapses, safety violations, etc.
Source: World Health Organization
## Health care

### Current level of development

#### Mortality from cardiovascular diseases, deaths per 1,000 people, 2016

<table>
<thead>
<tr>
<th>Country</th>
<th>Number</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uzbekistan</td>
<td>36</td>
<td>2.9</td>
</tr>
<tr>
<td>Russia</td>
<td>8</td>
<td>7.1</td>
</tr>
<tr>
<td>China</td>
<td>35</td>
<td>3.2</td>
</tr>
<tr>
<td>Singapore</td>
<td>121</td>
<td>1.5</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>23</td>
<td>4.1</td>
</tr>
</tbody>
</table>

#### Mortality from cancer, deaths per 1,000 people, 2016

<table>
<thead>
<tr>
<th>Country</th>
<th>Number</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uzbekistan</td>
<td>155</td>
<td>0.4</td>
</tr>
<tr>
<td>Russia</td>
<td>26</td>
<td>2.5</td>
</tr>
<tr>
<td>China</td>
<td>50</td>
<td>1.7</td>
</tr>
<tr>
<td>Singapore</td>
<td>57</td>
<td>1.5</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>61</td>
<td>1.4</td>
</tr>
</tbody>
</table>

#### Mortality from gastrointestinal illnesses, deaths per 1,000 people, 2016

<table>
<thead>
<tr>
<th>Country</th>
<th>Number</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uzbekistan</td>
<td>100</td>
<td>0.3</td>
</tr>
<tr>
<td>Russia</td>
<td>17</td>
<td>0.5</td>
</tr>
<tr>
<td>China</td>
<td>152</td>
<td>0.2</td>
</tr>
<tr>
<td>Singapore</td>
<td>173</td>
<td>0.1</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>15</td>
<td>0.6</td>
</tr>
</tbody>
</table>

---

**Comments**

- **Uzbekistan has one of the lowest mortality rates from cardiovascular disease in the world** (36th out of 183 countries). 43.9% of deaths are caused by coronary heart disease and 14.4% by strokes.

- Despite its high share in overall mortality (5 ppm), the **mortality rate from cancer in Uzbekistan is one of the lowest in the world**
  - The most common causes of cancer deaths is stomach cancer (12.8% of deaths), lung cancer (10.3%), and breast cancer (9.6%).
  - Among the causes of a high cancer mortality rate are poor or late detection of cancer and poorly developed preventive medicine.

- **Mortality from gastrointestinal illnesses in Uzbekistan is average compared to other countries.** The main causes of death from gastrointestinal illnesses is liver cirrhosis (79.8%), which is caused by hepatitis B (39%), excessive alcohol consumption (26%), and hepatitis C (16%), as well as a lack of timely and quality diagnosis.

---

Source: World Health Organization
Health care

Current level of development

Maternal mortality, deaths per 100,000 newborns, 2015

<table>
<thead>
<tr>
<th>Country</th>
<th>Deaths/100,000</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uzbekistan</td>
<td>106</td>
<td>19</td>
</tr>
<tr>
<td>Russia</td>
<td>118</td>
<td>25</td>
</tr>
<tr>
<td>China</td>
<td>115</td>
<td>27</td>
</tr>
<tr>
<td>Singapore</td>
<td>144</td>
<td>10</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>138</td>
<td>12</td>
</tr>
</tbody>
</table>

Infant mortality, deaths of infants under the age of 28 days per 1,000 newborns, 2016

<table>
<thead>
<tr>
<th>Country</th>
<th>Deaths/1000</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uzbekistan</td>
<td>75</td>
<td>1</td>
</tr>
<tr>
<td>Russia</td>
<td>152</td>
<td>2</td>
</tr>
<tr>
<td>China</td>
<td>135</td>
<td>3</td>
</tr>
<tr>
<td>Singapore</td>
<td>190</td>
<td>4</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>5.90</td>
<td>5</td>
</tr>
</tbody>
</table>

Comments

- **Uzbekistan has an average maternal mortality rate.** According to the WHO, 100% of births in the country are supervised by medical specialists.
  - The causes of deaths include bleeding (45%), infections (12%), and late toxicosis (5%)
  - The care of a doctor during pregnancy and the correct actions of medical personnel may prevent maternal mortality

- **Uzbekistan has a high neonatal mortality rate** (77 out of 183 countries). The main causes of neonatal mortality are complications after premature birth (44% of deaths), fetal asphyxia and birth injuries (42%), and neonatal infections (16%)

Note: based on the rating of the World Health Organization; the rating is based on data for 181 countries; ° – State statistics committee
Number of years lost due to premature death and disability caused by disease (DALYs), thousand years, 2016

- Cardiovascular diseases: 2,274
- Accidental injuries: 769
- Neonatal mortality and diseases: 714
- Mental disorders: 567
- Cancer: 507
- Gastrointestinal diseases: 404
- Infectious diseases: 387
- Neurological diseases: 355
- Respiratory infections: 351
- Sense organ diseases: 333
- Other: 1,919
- Total mortality: 8,579

Noninfectious diseases (70% of all cases) - Dark blue
Infections, birth complications (a) (20% of all cases) - Light blue
Injuries (10% of all cases) - Light gray

Examples

- Total (Singapore): 976
- Total (China): 376,371

Methodology: "Disability-adjusted life years" was used to assess the morbidity rate. This indicator is a linear sum of potential years of life lost due to premature death and disability.

Notes: (a) including birth complications as well as perinatal complications and nutritional disorders; (b) including house collapses, safety violations, etc.
Source: World Health Organization
### Health care

**Current level of development**

#### Number of years lost due to premature death and disability caused by cardiovascular diseases, per 1,000 people, 2016

<table>
<thead>
<tr>
<th>Country</th>
<th>Number of Years Lost</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uzbekistan</td>
<td>72.3</td>
<td>127</td>
</tr>
<tr>
<td>Russia</td>
<td>143.7</td>
<td></td>
</tr>
<tr>
<td>China</td>
<td>68.9</td>
<td></td>
</tr>
<tr>
<td>Singapore</td>
<td>33.0</td>
<td></td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>92.7</td>
<td></td>
</tr>
</tbody>
</table>

#### Number of years lost due to neonatal mortality and diseases, per 1,000 people, 2016

<table>
<thead>
<tr>
<th>Country</th>
<th>Number of Years Lost</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uzbekistan</td>
<td>22.7</td>
<td>77</td>
</tr>
<tr>
<td>Russia</td>
<td>4.9</td>
<td></td>
</tr>
<tr>
<td>China</td>
<td>5.4</td>
<td></td>
</tr>
<tr>
<td>Singapore</td>
<td>1.4</td>
<td></td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>11.3</td>
<td></td>
</tr>
</tbody>
</table>

#### Number of years lost due to premature death and disability caused by accidental injuries, per 1,000 people, 2016

<table>
<thead>
<tr>
<th>Country</th>
<th>Number of Years Lost</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uzbekistan</td>
<td>21.5</td>
<td>121</td>
</tr>
<tr>
<td>Russia</td>
<td>41.9</td>
<td></td>
</tr>
<tr>
<td>China</td>
<td>22.2</td>
<td></td>
</tr>
<tr>
<td>Singapore</td>
<td>41.9</td>
<td></td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>34.6</td>
<td></td>
</tr>
</tbody>
</table>

**Comments**

- Uzbekistan has one of the highest rates of cardiovascular disease in the world. 43.9% of cases are caused by coronary heart disease, 14.4% by stroke, and 25% by hypertension.¹

- Uzbekistan is also characterized by a high level of neonatal illnesses with a fatal outcome. The main causes are complications after premature birth (44%), fetal asphyxia and birth injuries (44%), and neonatal infections (31%).¹

- Accidental injuries also worsen the quality of life. The main causes include traffic accidents (27%), falls (21%), and drownings (10%)

---

¹ State statistics committee
Share of health expenditures in GDP\(^1\), %, 2015

<table>
<thead>
<tr>
<th>Country</th>
<th>Share of Health Expenditures in GDP (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uzbekistan</td>
<td>6.2</td>
</tr>
<tr>
<td>Russia</td>
<td>5.6</td>
</tr>
<tr>
<td>China</td>
<td>5.3</td>
</tr>
<tr>
<td>Singapore</td>
<td>4.3</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>3.9</td>
</tr>
</tbody>
</table>

Health expenditures\(^2\) per capita, purchasing power parity index, 2015, international dollar

<table>
<thead>
<tr>
<th>Country</th>
<th>Health Expenditures per Capita ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uzbekistan</td>
<td>382.8</td>
</tr>
<tr>
<td>Russia</td>
<td>1,414.0</td>
</tr>
<tr>
<td>China</td>
<td>762.2</td>
</tr>
<tr>
<td>Singapore</td>
<td>3,681.3</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>903.3</td>
</tr>
</tbody>
</table>

Comments

- The share of health expenditures in the country’s GDP is average compared to the 189 countries ranked by the WHO.
- However, the share of health expenditures per capita in Uzbekistan is lower than in other countries.
- Uzbekistan is also at a rather low level (122\(^{nd}\) place in the rating) in the health expenditure per capita rating, which was calculated based on purchasing power parity.
- Uzbekistan's low position in the rating is partly explained by the difference in GDP: Uzbekistan's GDP is lower than many other countries participating in the rating, so health expenditures in monetary terms are at a lower level.

Note: 1 = based on the World Health Organization's data, rating based on the data of 189 countries; 2 = includes private and public sector expenditures
Source: World Health Organization
Health care

Current level of development

Share of health expenditures in GDP\(^1\), %, 2010–2015

![Graph showing health expenditures in GDP% from 2010 to 2018.](image)

Health expenditures\(^1\) per capita, USD, 2010–2015

![Graph showing health expenditures per capita in USD from 2010 to 2018.](image)

Comments

- Since 2010, health expenditures have been at 5–6% of GDP, while health expenditures per capita over an 8-year period have been low – lower than in neighboring countries and developed Asian countries.

- Health care funding increased by 40% in 2018, but when calculating the expenditures per capita in US dollars, the amount appeared to be quite small due to the depreciation of the Uzbekistani som against the US dollar. Real health expenditures per capita in Uzbekistani soms increased by 5% in 2018.

Note: 1 = the calculation is based on data of the Ministry of Finance of the Republic of Uzbekistan, the State Statistics Committee of the Republic of Uzbekistan, the World Health Organization; the calculation is based on the assumption of the invariability of private sector expenditures since 2015; 2 = includes expenses of the private and public sectors.

Sources: Ministry of Finance of the Republic of Uzbekistan, State Committee of the Republic of Uzbekistan, World Health Organization, Economist Intelligence Unit, data from open sources.
### Health care

#### Current level of development

<table>
<thead>
<tr>
<th>Available services by type of care</th>
<th>Primary care</th>
<th>Secondary care</th>
<th>Tertiary care</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Consultation with general practitioners</td>
<td>Consultation with doctors of the relevant specializations</td>
<td>High-tech methods of diagnosis and treatment</td>
</tr>
<tr>
<td>Treatment of the most common diseases, injuries, poisonings, and other emergencies</td>
<td></td>
<td></td>
<td>Cardiology</td>
</tr>
<tr>
<td>Examination and treatment of children</td>
<td></td>
<td></td>
<td>Oncology</td>
</tr>
<tr>
<td>Examination and treatment of adolescents 15–17 years old and draft-age persons (18–27 years) according to draft board orders</td>
<td></td>
<td></td>
<td>Orthopedics</td>
</tr>
<tr>
<td>Provision of obstetric services (except for paid institutions)</td>
<td></td>
<td></td>
<td>Ophthalmology</td>
</tr>
<tr>
<td>Immunization and vaccination against a number of infectious diseases</td>
<td></td>
<td></td>
<td>Traumatology and orthopedics</td>
</tr>
<tr>
<td>Acute care</td>
<td></td>
<td></td>
<td>Endocrinology</td>
</tr>
</tbody>
</table>

**Comments**

- Socially vulnerable groups of citizens have the right to receive free medical services of all categories.

- Treatment of illnesses is not available to all categories of citizens. People may receive medical care only in case of a life-threatening emergency. Thus, **diseases are not prevented from worsening**.

- The large number of paid services in the state sector could be the reason for the **development of informal payments in the sector**. According to experts, due to the practice of informal payments, primary care is paid for by the people in most cases.

- The share of the population’s expenses on health care in Uzbekistan is high – payments for medical services make up 45% of all expenses.

**Note:** (a) list of citizens to whom secondary and tertiary care is available free of charge:

- Elderly citizens living alone who need care
- Disabled persons of groups I and II, disabled children
- Legally incompetent and incapacitated citizens
- Persons with socially significant diseases (e.g., HIV)
- Orphans and children left without parental care
- Invalids and war and labor veterans of 1941–1945
- Other persons

Health care

Current level of development

Share of expenditures by source in total health expenditures, %, 2011–2015

<table>
<thead>
<tr>
<th>Year</th>
<th>Share of government expenditures</th>
<th>Share of personal payments from citizens</th>
<th>Share of voluntary medical insurance</th>
<th>Share of other funding sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>52%</td>
<td>45%</td>
<td>3%</td>
<td>1%</td>
</tr>
<tr>
<td>2012</td>
<td>53%</td>
<td>44%</td>
<td>3%</td>
<td>1%</td>
</tr>
<tr>
<td>2013</td>
<td>53%</td>
<td>43%</td>
<td>3%</td>
<td>2%</td>
</tr>
<tr>
<td>2014</td>
<td>52%</td>
<td>45%</td>
<td>3%</td>
<td>0%</td>
</tr>
<tr>
<td>2015</td>
<td>54%</td>
<td>43%</td>
<td>3%</td>
<td>1%</td>
</tr>
</tbody>
</table>

Comments

• The structure of health expenditures has remained virtually unchanged since 2011: government expenditures and private payments from citizens make up the majority of all expenditures.

• Uzbekistan has introduced voluntary medical insurance, but it covers only 3% of total expenditures.

• Since 2011, the voluntary medical insurance sector has not replaced other sources of health care funding.

Source: World Health Organization data
Number of hospital beds per 1000 people as of the last available date

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Uzbekistan</td>
<td>55.9</td>
<td>54.1</td>
<td>47.9</td>
<td>43.9</td>
<td>42.2</td>
<td>41.1</td>
<td>41.1</td>
</tr>
<tr>
<td>Russia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>China</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Singapore</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kazakhstan</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Comments

- The number of hospital beds (including emergency room hospital beds) per 10,000 people has decreased since 2000 both in Uzbekistan and in other countries of the region
  - The available data reflects information on the number of hospital beds in Uzbekistan's public medical facilities that are financed from the state budget or from self-financing
  - Thus, the number of hospital beds available free of charge is lower than the indicated values
  - During the period from 1990–2016, the hospital admission rate for inpatient health care facilities per 100 people also decreased gradually from 24.6 to 15.5 cases
- The number of hospital beds must be considered along with their turnover ratios. The turnover of hospital beds reflects the effectiveness of management in the health care system. For example, Singapore has the lowest number of hospital beds in medical facilities in the group of considered countries, but Singapore’s medical system is characterized as highly effective\(^5\). Data on the turnover of hospital beds in Uzbekistan is not published in open sources, so it is impossible to draw a conclusion about the effectiveness of hospital bed management in medical facilities in the country.

Sources: World Health Organization, State Statistics Committee of the Republic of Uzbekistan, official website of the President of the Republic of Uzbekistan, data from open sources, analysis of the working group
## Health care

### Current level of development

#### Total capital investments in health care, USD million, 2015

<table>
<thead>
<tr>
<th>Area</th>
<th>Evaluation</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information technology</td>
<td><img src="red-x.png" alt="Cross" /></td>
<td>&quot;Smart Medicine&quot; program was launched in 2018</td>
</tr>
<tr>
<td>Electronic accounting or document management system</td>
<td><img src="red-x.png" alt="Cross" /></td>
<td>Since 2017, information from medical records cards is entered into electronic databases, but there is no system for information exchange between healthcare facilities</td>
</tr>
<tr>
<td>Medical equipment</td>
<td><img src="red-x.png" alt="Cross" /></td>
<td>Investments in purchasing equipment are insignificant</td>
</tr>
</tbody>
</table>

#### Level of technical and technological equipment (according to data from open sources)

<table>
<thead>
<tr>
<th>Area</th>
<th>Evaluation</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information technology</td>
<td><img src="red-x.png" alt="Cross" /></td>
<td>&quot;Smart Medicine&quot; program was launched in 2018</td>
</tr>
<tr>
<td>Electronic accounting or document management system</td>
<td><img src="red-x.png" alt="Cross" /></td>
<td>Since 2017, information from medical records cards is entered into electronic databases, but there is no system for information exchange between healthcare facilities</td>
</tr>
<tr>
<td>Medical equipment</td>
<td><img src="red-x.png" alt="Cross" /></td>
<td>Investments in purchasing equipment are insignificant</td>
</tr>
</tbody>
</table>

### Comments

- Capital investments include costs on construction and purchasing equipment, as well as repair works

- **The amount of capital investments in Uzbekistan is insignificant.** According to the official statistical data, in 2012–2015 they amounted to about USD 302 million annually on average, which was much lower than in other countries.

- Unlike countries with a more developed health care system, the Republic of Uzbekistan has no organization that determines the list of priority drugs, medical equipment, and devices for state procurement. Therefore, purchases are made using state funds, international loans, private capital, or through sponsorship. The volume of purchases made are insignificant (e.g. in Kazakhstan, which has half the population, the volume of purchases is 400-600 times higher)

- In 2018, a program for the development and implementation of information technology systems was adopted – "Smart Medicine" (a system of remote communication between doctors and patients) and the "Unified Medical Information Center" (a unified digital database on patients' health)

### Sources

World Health Organization, data from open sources
### Number of people per hospital, 2016

- Surxondaryo region: 6.280
- Namangan region: 6.228
- Samarkand region: 6.085
- Qashqadaryo region: 5.956
- Fergana region: 5.881
- Andizhan region: 5.512
- Khorezm region: 5.442
- Republic of Karakalpakstan: 5.315
- Tashkent region: 5.282
- Jizzakh region: 4.908
- Sirdaryo region: 3.838
- Bukhara region: 3.201
- Navoiy region: 3.103
- Tashkent: 2.618

### Number of people per outpatient polyclinic, 2016

- Surxondaryo region: 45.500
- Namangan region: 22.638
- Samarkand region: 40.269
- Qashqadaryo region: 35.181
- Fergana region: 28.498
- Andizhan region: 21.401
- Khorezm region: 45.971
- Republic of Karakalpakstan: 42.645
- Tashkent region: 35.822
- Jizzakh region: 22.002
- Sirdaryo region: 23.958
- Bukhara region: 24.203
- Navoiy region: 33.139
- Tashkent: 17.727

### Comments

- The "hospital" category includes institutions providing inpatient treatment, the "outpatient polyclinics" category includes institutions providing primary care.

- **The number of people per hospital differs between regions**, and the difference can reach 137%.

- **The number of people per outpatient polyclinic is also unevenly distributed across the regions**: the difference can reach 159%.

- The levels of population coverage with inpatient and outpatient healthcare facilities by district do not correlate with each other.

- **The capacity of outpatient healthcare facilities** differs significantly by region: the difference can reach 138%.

- Tashkent is the region with the highest level of population coverage.

---

Sources: State Statistics Committee of the Republic of Uzbekistan, data from open sources.

1 – Outpatient healthcare facility
Health care

International experience

Number of doctors and nurses\(^1\) per 100,000 people as of the last available date

<table>
<thead>
<tr>
<th>Country</th>
<th>Doctors</th>
<th>Nurses</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uzbekistan</td>
<td>132.5</td>
<td>106.3</td>
<td>238.8</td>
</tr>
<tr>
<td>Russia</td>
<td>126.6</td>
<td>39.8</td>
<td>166.4</td>
</tr>
<tr>
<td>China</td>
<td>94.0</td>
<td>41.5</td>
<td>135.5</td>
</tr>
<tr>
<td>Singapore</td>
<td>22.8</td>
<td>71.2</td>
<td>94.0</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>120.4</td>
<td>85.4</td>
<td>205.8</td>
</tr>
</tbody>
</table>

Number of doctors and paramedical staff per 100,000 people in Uzbekistan, 2000–2016

<table>
<thead>
<tr>
<th>Year</th>
<th>Doctors</th>
<th>Paramedics</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>137.5</td>
<td>76%</td>
<td>137.5</td>
</tr>
<tr>
<td>2005</td>
<td>132.1</td>
<td>78%</td>
<td>132.1</td>
</tr>
<tr>
<td>2010</td>
<td>133.9</td>
<td>80%</td>
<td>133.9</td>
</tr>
<tr>
<td>2013</td>
<td>134.2</td>
<td>80%</td>
<td>134.2</td>
</tr>
<tr>
<td>2014</td>
<td>133.6</td>
<td>80%</td>
<td>133.6</td>
</tr>
<tr>
<td>2015</td>
<td>132.9</td>
<td>80%</td>
<td>132.9</td>
</tr>
<tr>
<td>2016</td>
<td>132.5</td>
<td>80%</td>
<td>132.5</td>
</tr>
</tbody>
</table>

Comments

- Uzbekistan has the largest number of medical specialists per 100,000 people compared to the other countries studied. For example, China suffers an acute shortage of medical personnel.
- Uzbekistan is also characterized by the lowest share of doctors to nursing staff within the group of compared countries.
- The number of medical specialists in Uzbekistan fell by 4%, and the number of doctors in the total number of specialists also decreased.
- The number of doctors per 10,000 people has decreased by 18% since 2010. The same trend is being observed in other CIS countries. For example, in Russia this indicator fell by 20% in 2010–2015, and in Kazakhstan it fell by 7% in 2010–2014.

Note: 1 – Paramedical staff includes nurses, obstetricians, dentists, pharmacists, physician assistants, etc.
Sources: World Health Organization data, State Statistics Committee of the Republic of Uzbekistan, NCBI
Health care

International experience

Sources of health care expenses in South Korea, 2015

- Voluntary medical insurance and other government expenses: 7%
- Personal payments: 37%
- Compulsory medical insurance: 46%

National Health Insurance Program

Working citizens and their relatives:
- Medical insurance that covers all working citizens and their relatives
- Working citizens deduct funds to a personal account that can be used by the payer themselves or their family
- The personal account is a savings account

Pensioners:
- After retirement, medical services are provided through a savings account and the government (15–20% of the cost of services)

Low-income groups:
- The program covers expenses for unemployed and low-income citizens (the state pays the cost)

Sources of funding of the national insurance system, 2015

- Tobacco companies must form 2% of the program's annual budget
- Deductions from collected taxes
- Annual contributions depend on income, property value, age, etc. The amount of deductions is reduced for citizens from rural areas
- Deductions from salary (about 5%) are divided equally between the employee and the employer

Comments

- South Korea's health care system is dominated by the private sector: almost all hospitals and 94% of inpatient facilities were owned by nongovernment owners in 2012

System achievements:

- 100% coverage of the population with health insurance

System disadvantages:

- The highest share of private expenses on health care among OECD countries due to a partial payment system: apart from medical insurance fees, people also pay for treatment, stays in outpatient healthcare facilities, medicines, etc.

Note: Data as of 2013 (NHIS Statistical Yearbook, 2013)
Sources: Korea National Health Insurance Service, International Medical Community, OECD Health Policy Overview, EIU
Health care

International experience

Canadian Patient Safety Institute

The institute was established in 1994. It is a nonprofit organization that aims to support and spread best practices in the medical field to help improve patient safety.

According to the Commonwealth Fund’s forecasts, 400,000 cases related to the violation of patient safety will occur every year in Canada over the next 30 years. This will create an additional burden of USD 2.75 billion on the health care budget.

Patient safety includes the safety of medicines, surgical operations, home treatment, and the prevention of infectious diseases.

Activities of the institute:
1. Improvements in safety: creation of a mechanism to collect information on best practices and then apply this information.
2. Wider coverage of patient safety information in the media
3. Implementation of standards and legal practices to improve patient safety
4. Creation of a unified network of interaction of state bodies

Financing is provided at the cost of the Ministry of Health of Canada

Canadian Institute for Health Information

The institute was established in 1994. It is an independent nonprofit organization that centrally collects data on the health care system and the health of citizens in the country.

The institute has its own databases and own system of standards and reports. Its main partners are the Ministry of Health of Canada and Statistics Canada. The institute’s databases can be used for research. Monitoring medical statistics makes it possible to identify existing problems in health care.

In 2016, the institute released a report on hospitalization due to drug intoxication: 13 Canadians are hospitalized every day with symptoms of drug intoxication. At the same time, the elderly are hospitalized more often than other population groups, and the highest growth rate of drug intoxications is observed among young people. Canada is currently combating drug abuse.

Sources: Canadian Patient Safety Institute, Canadian Institute for Health Information, the Commonwealth Fund
CADTH

Canadian Agency for Drugs and Technologies in Health (CADTH) is an independent nonprofit organization founded in 1989 by the federal, provincial, and territorial governments of Canada. It is responsible for providing unbiased information to the designated persons to help them make informed decisions on the best use of health care technology. CADTH uses the Health Technology Assessment as its methodology.

Health technology assessment

Health Technology Assessment (HTA) is the process of studying the clinical, economic, and social consequences of the development, distribution, and use of medical technologies. HTA allows one to choose the most clinically and economically optimal choice of several medicines. The results obtained during the technology assessment may also be used to determine the economically optimal price of a drug in negotiations with pharmaceutical companies. The main task of HTA is to inform the persons who make decisions of the consequences of implementing health care technologies.

Health technologies include:

Today health technology assessment is used for decision making on funding in all developed countries of the world (USA, England, Europe, Australia, etc.). This approach allows one to make the decision-making process on project funding and the tendering process in healthcare more transparent, and it saves billions of dollars of state funds.

The economic effect from the implementation of just 10 projects whose priority was determined with the help of HTA amounted to GBP 3 billion annually in Great Britain.
**HTA process in Uzbekistan**

**Diagram of the creation of the HTA process in Uzbekistan**

1. **Educational component:**
   - Training personnel for clinical and economic assessment of drugs and medical devices.
   - Educating young scientists and specialists of the Ministry of Health
   - Establishing a laboratory or “HTA and Pharmacoeconomics” department in universities. Preparation of a textbook for economic assessment of HTA

2. **Institutional component:**
   - Creating a structure (Health Technology Assessment (HTA) Center) to elaborate recommendations for the Ministry of Health on the priority of financing drugs and medical devices from the state budget
   - Establishing an Expert Board consisting of leading clinical specialists to elaborate recommendations on the priority of financing of health care technology.
   - Conducting an economic assessment of the health care technology under consideration, preparing systematic reviews of clinical evidence, and calculating the amounts of financing for its implementation.

**What makes HTA different from the existing system?**

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Current practice</th>
<th>Health care technology assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experts to be retained for assessment</td>
<td>Chief specialists, clinical pharmacologists, principal clinicians (at best) or nobody (at worst)</td>
<td>Experts in clinical epidemiology, statistics, economists, principal clinicians.</td>
</tr>
<tr>
<td>Assessment duration</td>
<td>1–3 months</td>
<td>6–12 months</td>
</tr>
<tr>
<td>Materials to be assessed</td>
<td>Documents (study data) provided by drug manufacturers</td>
<td>Results of a systematic review + documents provided by drug manufacturers</td>
</tr>
<tr>
<td>Procedure</td>
<td>Opaque and indefinite</td>
<td>Formalized, uniform for all process participants, and transparent.</td>
</tr>
<tr>
<td>Results</td>
<td>Unstructured report</td>
<td>Systematic review of clinical and economic evidence; economic model.</td>
</tr>
<tr>
<td>Budget effect analysis</td>
<td>None</td>
<td>Volume and substantiation of state resources necessary for implementation of the technology</td>
</tr>
<tr>
<td>Decision-making on financing</td>
<td>Subjective opinion</td>
<td>Impartial opinion based on scientific evidence and the results of clinical and economic assessment.</td>
</tr>
</tbody>
</table>

Source: analysis of the working group
Health care

International experience

Health care funding system in Singapore

**MediSave**
- System of compulsory healthcare deductions, under which an employee makes contributions from their salary (since 2016, 8% to 10.5% depending on age) to a personal account, and the employer makes matching contributions. Funds in the account are used for medical care, hospitalization, surgery, etc. for the insured and their family members.

**MediShield Life**
- Health insurance system in cases where the limit of the amount available under MediSave is exceeded (usually used in case of serious illness). People with high risks of certain illnesses make larger contributions from their income for 10 years under MediShield Life. In addition to this program, it is possible to buy Integrated Shield Plan insurance. The program can be fully paid for through savings under MediSave.

**ElderShield**
- Program participants must be over 40 years old. After joining the program and paying the necessary fees, the participant will be provided access to extended health insurance in old age. Support is provided for 72 months.

**Medifund**
- State-funded medical support for citizens who cannot afford treatment and cannot use the MediSave and MediShield programs. To receive support, their application must be approved. More than 90% of approved applications receive 100% coverage of medical expenses.

Capital health care expenditures are funded from the state budget.

Sources: CPF Singapore, Vox, analysis of the working group
### Health care funding system in China

<table>
<thead>
<tr>
<th>Category</th>
<th>Problem</th>
<th>Resolution</th>
</tr>
</thead>
</table>
| Basic medical insurance for urban workers    | Lack of access to medical insurance for an employee’s family members. Lack of mandatory accession to the medical insurance system | • Insurance coverage was expanded: the insurance program included non-government sector employees, self-employed individuals, and unofficially employed persons  
• The state funded a program to support the most disadvantaged groups of the population in the event of unforeseen medical expenses |
| Cooperative medical insurance system for rural residents | The cooperative system of the rural economy practiced in the 20th century ceased to exist in the 1980s, after which the share of insured persons fell to less than 10%. In the 1990s, 65% of the rural population in need of hospitalization were not hospitalized. Low-income citizens could not afford to pay for insurance | • A new system was partially funded by the state and covered all family members |
| Basic medical insurance for urban residents | Urban residents without official employment were not covered by insurance | • A new system was funded partly by citizens and partly by the government – subsidies from the central office and local government accounted for 36% |
| Basic medical insurance for migrant workers | Migrant workers – citizens migrating from rural to urban areas – did not fall into any of the insurance categories | • Local authorities were required to provide medical insurance to all migrant workers. The sources of funding were insurance contributions from an employee and/or an employer, and for low-income migrants, subsidies from local governments |

Result of the program: increased number of people provided with free medical care

Medical insurance coverage
- 2002: 55.2% of the urban population
- 2002: 20.9% of the rural population
- 2009: 94% of the rural population
### Health care funding system in Southeast Asian countries

**China**
- In 2010, the government established a scholarship for rural medical workers. Program participants received a free five-year medical education and a monthly stipend for the next six years of work in rural areas. Since 2010, 5,000 students have taken part in the program each year. 90.7% of program participants met the conditions and worked in rural areas, while only 2.8% of students who did not participate in the program moved from cities.
- In 2008, the government launched a program for doctors who work in rural areas. They are paid 20,000 yuan (about USD 3,000). According to the results of the program, 1,080 doctors were employed in 828 local medical centers.
- From 2009 to 2013, the government has subsidized training programs for doctors in rural areas. Since 2010, the government has funded the development of medical infrastructure to improve the working conditions of doctors.

**Vietnam**
- In Vietnam, the government launched development programs along with funding and support mechanisms.
- In 2012, there were 1,816 training programs implemented in the country, mostly in rural areas.
- From 2009 to 2014, the government issued laws to support medical specialists in rural areas. For example, medical workers in rural areas could receive a 70% increase in wages for the first five years of work in rural areas. According to a law adopted in 2014, medical workers who had worked in rural areas for more than 3 years could obtain the status of civil servants (stable and promising work in Asian countries).

**Thailand**
- In 1968, Thailand introduced a period of mandatory work in rural areas for graduates of state-funded medical institutes. The duration of such work was three years for doctors and dentists and two years for paramedical staff.

**Cambodia**
- In Cambodia, the government offered midwives USD 15 in medical centers and USD 10 in hospitals for each successful delivery.
- Health care institutions had the right to spend 60% of collected revenue to attract medical specialists to the rural area.
- In 2012, the government (with the participation of sponsors) established the Health Equity Fund to pay for health services for low-income population groups.
- Part of the fund’s money was spent to improve the working conditions of medical personnel in rural areas.
- Also, medical workers in rural areas had access to grants from international organizations.
- In 2012, the Cambodian government announced that all medical workers had been granted the status of civil servants.

Note: data from open sources
Kazakhstan’s experience with digitalization

**Health care**

**Economic effect**

- **Keeping patient-specific record of drugs**
  Savings on the procurement of drugs

- **Efficient use of budget funds for provision of medical aid**
  Extending the scope of services without changing the resource base

- **Decreasing fee-based services in regional diagnostic centers**

- **Decreasing costs through digital data exchange and decreasing duplication of research**

- **Eliminating inefficient labor of health care specialists**

- **Saved by the Ministry of Health of the Republic of Kazakhstan in 2018 due to digitalization**

**Sources:** www.krg.dmed.kz

Website: [https://bnews.kz/ru/news/38_mind_tenge_za_schet_otkaza_ot_bumagi_i_perehoda_na_tsifrovizatsiu_sekonomil_minzdrav_rk?fbclid=IwAR3QtL7o-N6FGCiq-KQzzipXmAhjtJRdmnUNRozgEJHf93yYfCoblgFVfa](https://bnews.kz/ru/news/38_mind_tenge_za_schet_otkaza_ot_bumagi_i_perehoda_na_tsifrovizatsiu_sekonomil_minzdrav_rk?fbclid=IwAR3QtL7o-N6FGCiq-KQzzipXmAhjtJRdmnUNRozgEJHf93yYfCoblgFVfa)
Health care

Strategic options

1

High share of state participation

Provision of services by the state; funding through tax revenues; the private sector and private insurance meet only the needs of the wealthy

Examples of countries:
- UK
- France

+ • Good access for low-income groups to the health care system

− • Quality of health care depends on the amount of tax revenues
  • High risk of being provided low-quality services, especially in secondary and tertiary care
  • Low level of overall innovation development of the system

Guaranteed support for all population groups¹, but with limited opportunities to receive high-quality services

2

Mixed model

Development of private service providers while maintaining state service providers for the low-income population; creation of a national insurance system and development of private insurance; creation of conditions for the development of science and innovation

Examples of countries:
- Canada
- Germany

+ • High accessibility to the health care system
  • Uniform quality at all stages of health care

− • Low development of the private sector
  • Low development of private financing institutions

Wide scope of the population provided with health care of stable quality

3

High share of private sector participation

Provision of medical services is fully delegated to private companies; funding is performed through private insurance companies or payment from citizens; state support is provided only for the low-income population through mechanisms for co-financing expenses

Examples of countries:
- USA

+ • High quality of service, especially in secondary and tertiary care
  • The state as the main regulatory body

− • Incomplete medical coverage
  • High cost of medical services
  • Primary care is poorly developed (since it is less profitable)
  • Poorly developed disease prevention

Low accessibility to high-quality health care

Sources: data from open sources, analysis of the working group.
Note 1 = subject to an adequate number of healthcare facilities and specialist doctors

324
Health care

Target vision 2035

Affordable high-tech medicine based on a developed system of funding, high-quality education, and effective management

- Introduce compulsory medical insurance and develop voluntary medical insurance
- Ensure access to health care in rural areas
- Infrastructure upgrades (repairs, equipment)
- Implement IT tools
- Develop education of doctors and medical workers
- Increase the compensation and social package for doctors (not lower than the average market salary)
- Involve the private sector; develop private-public partnership (PPP) (up to 80%)
- Develop regulation of medical science and research procedures (GCP, project financing)
- Create conditions for innovative development of medicine (tax havens for R&D)
- Create highly innovative medical care centers
- Create the Health Technology Assessment process to secure the transparency of state procurements
- Develop cooperation with international organizations, in particular the International Society for Pharmacoeconomic Research and Results Assessment (ISPOR)

<table>
<thead>
<tr>
<th>Figures</th>
<th>2017</th>
<th>2035</th>
<th>CAGR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health expenditures per capita, USD, (a)</td>
<td>45</td>
<td>1000</td>
<td>19%</td>
</tr>
<tr>
<td>Life expectancy at birth, years (b)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Child mortality, number of deaths of children under the age of 5 years per 1,000 births (c)</td>
<td>15.4</td>
<td>&lt; 10</td>
<td></td>
</tr>
<tr>
<td>Share of health care expenditures through personal payments by citizens, %</td>
<td>43%</td>
<td>&lt; 20%</td>
<td></td>
</tr>
</tbody>
</table>

Health care funding

USD billion, cumulative

Note: (a) estimated data for 2017, (b), (c) data for 2016, (d) data for 2015
Sources: Ministry of Finance of the Republic of Uzbekistan, State Committee of the Republic of Uzbekistan, World Health Organization, Economist Intelligence Unit, data from open sources, analysis of the working group
## Health care

### Key strategic initiatives

<table>
<thead>
<tr>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Develop a legal framework (determine the guaranteed volume of care, implement international regulatory acts, etc.)</td>
<td>Develop private insurance</td>
<td>Develop regulatory mechanisms for medical science and research procedures</td>
</tr>
<tr>
<td>Develop clinical standards and other regulatory acts necessary to introduce an insurance program</td>
<td>Develop medical liability insurance (for doctors)</td>
<td>Create conditions for innovative development of medicine (technology parks, benefits for research centers, involvement of foreign R&amp;D centers)</td>
</tr>
<tr>
<td>Prepare for the implementation of compulsory health insurance, pilot launches, launch of CHI</td>
<td>Develop infrastructure (funds, agents) for financing of private health care providers based on compulsory medical insurance</td>
<td>Attract investments in the technological development of medicine</td>
</tr>
<tr>
<td>Increase wages and benefits for doctors</td>
<td>Develop PPP tools within the projects on the construction of new clinics</td>
<td>Optimize the network of medical and preventive institutions; eliminate the least effective ones</td>
</tr>
<tr>
<td>Increase healthcare affordability for low-income population groups and people living in rural regions</td>
<td>Introduce licensing of doctors’ work and a remuneration system based on establishing wages depending on the performance result</td>
<td>Create highly innovative health care centers (innovative neonatal centers, etc.)</td>
</tr>
<tr>
<td>Implement a Code of Ethics for doctors that regulates the rules of work of medical workers and restricts their cooperation with pharmaceutical companies</td>
<td>Introduce a system for retraining medical personnel</td>
<td>Integrate Uzbekistan’s medical universities into a system of international alliances; advanced training of doctors at international centers</td>
</tr>
<tr>
<td>Create a national plan for the prevention of key illnesses (e.g., cardiovascular disease)</td>
<td>Create conditions for the development of private health care providers</td>
<td>Create the Health Technology Assessment process at the level of the regions and health care facilities</td>
</tr>
<tr>
<td>Elaborate a policy governing the approach to treatment of chronic illnesses</td>
<td>Develop health care regulatory bodies</td>
<td>Infrastructure updates (capital repairs, construction, equipment purchases)</td>
</tr>
<tr>
<td>Develop a program for HIV/AIDS prevention</td>
<td>Develop education (attracting international specialists, upgrading equipment, creating conditions for advanced training)</td>
<td>Introduce IT tools for disease recording and creation of unified republican databases</td>
</tr>
<tr>
<td>Develop the educational and institutional components of the health care technology assessment process</td>
<td></td>
<td>Develop high-tech infrastructure</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Widespread introduction of electronic medical charts</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Develop science (increasing funding of scientific activity in medicine; recruiting international specialists to work in Uzbekistan’s medical universities for both teaching and research)</td>
</tr>
</tbody>
</table>

Source: analysis of the working group
3.2 Social policy

Social development
Key challenges
- Low level of expenditure on social support programs
- High poverty rate: 10% of the population lives in extreme poverty
- High unemployment; support measures only partially solve the problem
- Lack of conditions conducive for people with disabilities
- Number of people in need may be higher than officially registered
- Nonfinancial support system is not developed
- High crime rate
- Discrimination against women

Key findings
- **The model for social protection in Uzbekistan does not correspond to the current state of the economy**
  - The priority of the government – a high level of social support for all citizens – is difficult to achieve due to budget constraints
  - Uzbekistan places an emphasis on financial support of people in need, while developing countries pay more attention to nonfinancial support mechanisms
- **There is no unified, centralized system** for all areas of social support in Uzbekistan
  - There is no unified body to regulate, manage, and coordinate social sector activity; these functions are divided between the Ministry of Finance and the Ministry of Health
  - Criteria for selecting the recipients of social support are not established in accordance with international standards
  - There are no objective statistics on the number of people in need of such support

<table>
<thead>
<tr>
<th>State’s role</th>
<th>Scandinavian model</th>
<th>Uzbekistani model</th>
<th>Asian model</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Protection of the population</strong> (current level of development)</td>
<td><strong>Social development</strong> (current level of development)</td>
<td><strong>Ensuring economic growth</strong> (current level of development)</td>
<td></td>
</tr>
<tr>
<td><strong>Support objectives</strong></td>
<td>Support for all population groups</td>
<td>Support for all groups, with a focus on pensioners</td>
<td>Support for the most needy</td>
</tr>
<tr>
<td><strong>Taxation level (share of tax burden)</strong></td>
<td>60%</td>
<td>40%</td>
<td>10%</td>
</tr>
<tr>
<td><strong>Share of budget expenditures in social sphere[a]</strong></td>
<td>20–25%</td>
<td>22%[a]</td>
<td>5–10%</td>
</tr>
<tr>
<td><strong>Amount of social expenditures per capita</strong></td>
<td>10–13 USD billion</td>
<td>131 USD (b)</td>
<td>2–4 USD billion</td>
</tr>
<tr>
<td><strong>Leading support institutions</strong></td>
<td>State</td>
<td>State</td>
<td>Private companies</td>
</tr>
<tr>
<td><strong>Key support tools</strong></td>
<td>Financial</td>
<td>Financial</td>
<td>Nonfinancial</td>
</tr>
</tbody>
</table>

Note: (a) excluding pension fund expenses, (b) including pensions
Sources: OECD, Ministry of Finance of the Republic of Uzbekistan, State Statistics Committee of the Republic of Uzbekistan, data from open sources, analysis of the working group
Most social spending is aimed at providing financial measures of social support, which does not correspond with the trends in countries with growing economies.

**Financial measures**: direct payments and benefits to recipients of social support (unemployment benefits, maternity benefits, discounted rates for housing and utility services, etc.)

**Nonfinancial measures**: provision of services to recipients of social support (training and consulting for successful employment, etc.)

### Social expenditures from Uzbekistan’s state budget by category of expenditures, UZS billion

<table>
<thead>
<tr>
<th>Year</th>
<th>Social benefits</th>
<th>Credit line</th>
<th>Social security</th>
<th>Data for 9 months of 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>1.4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td>1.5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>1.7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2013</td>
<td>2.1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td>2.1&lt;sup&gt;(a)&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td>3.1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td>3.5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2017</td>
<td>2.9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2018</td>
<td>4.2</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Share of payments in total social expenditures (excluding pensions)**
- **Social benefits**
- **Credit line**
- **Social security**
- **Data for 9 months of 2014**

Sources: Ministry of Finance of the Republic of Uzbekistan, People’s Bank of the Republic of Uzbekistan, Gazeta.uz, data from open sources, analysis of the working group.
The volume of social payments in the Republic of Uzbekistan is increasing due to growth in the amount of social benefits and not due to growth in the number of recipients.

### Current level of development

#### Average amount of social benefits, UZS

![Average amount of social benefits chart]

#### Number of persons receiving pensions and social benefits, thousand people

![Number of persons receiving pensions and social benefits chart]

### Comments

- The average amount of social benefits more than doubled. At the same time, the number of people receiving social benefits increased by only 2%.

- Thus, the increase in the payment amount is not due to an increase in the number of recipients of benefits but due to an increase in the size of social payments.

**Sources:** Ministry of Finance of the Republic of Uzbekistan, People’s Bank of the Republic of Uzbekistan, Gazeta.uz, data from open sources, analysis of the working group
Developing countries focus on several groups of support recipients.

### Recipient of social support in world practice

<table>
<thead>
<tr>
<th>Social support focus on recipient groups</th>
<th>France</th>
<th>USA</th>
<th>UK</th>
<th>China</th>
<th>Singapore</th>
<th>Hong Kong</th>
<th>Uzbekistan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disabled</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Senior citizens</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Families and children

- Families with children
- Families with adopted children
- Multichild families
- Low-income families
- Young families
- Single-parent families
- Victims of domestic violence

### European countries

### Asian countries

Sources: Ministry of Finance of the Republic of Uzbekistan, People’s Bank of the Republic of Uzbekistan, Gazeta.uz, data from open sources, analysis of the working group.
Share of the population living in extreme poverty

- Poverty is one of the main social problems in Uzbekistan
- In Uzbekistan there is no definition of the minimum subsistence level based on the consumer basket
- In the ranking of the Food Security Index 2017, Uzbekistan ranks 78th. The index calculates the availability and quality of food resources in terms of financial capacity and the availability of healthy food in 113 countries

Unemployment rate in Uzbekistan and other countries

- According to international estimates, the unemployment rate in Uzbekistan is 4% above the officially registered rate
- According to unofficial estimates, the unemployment rate in Uzbekistan may be 35%, that is, every third citizen of working age in the country is unemployed
- A significant part (almost one-third) of the working population of the country works abroad. Migration flows are not controlled by the state
- According to experts, the share of Uzbekistan’s shadow economy may be more than 50%

Note 1 = extreme poverty is defined as living on less than USD 1.90 per person per day
Social policy

Existing support measures for low-income families only partially solve the poverty problem

### Financial

**Benefits for low-income families**
- Benefit amount:
  - For families with 1 child: 60% of the minimum wage
  - For families with 2 children: 100% of the minimum wage
  - For families with 3 children: 120% of the minimum wage
  - The minimum wage (as of July 2018) is UZS 184,300

- Benefits for families with 1–2 children may not cover the minimum wage
- Criteria for granting benefits are only realistic for families with the most extreme poverty levels.

### Labor

**Loans to low-income families**
- Up to 100 minimum wages
- 4%
- Up to 3 years

**Commercial banks** (the list is determined by the Central Bank of Uzbekistan)

**Purpose of the loan:**
- Purchase necessary equipment or develop household land plots (farming, gardening)
- Promotion of self-employment for low-income families

### Household

**Home repair**
2018: 25 families from each district

**Provision of housing**
2018: 5 families from each district living in substandard and dilapidated housing

**Purchase of household appliances**
2018: 70 families from each district

- Less than 1% of the low-income population\(^1\) receive this assistance
- There are no food supply programs for low-income families

### Education

**Transport**

Uzbekistan offers no benefits to low-income families for using public transportation

- Provide children from low-income families with free textbooks
- Provide primary school children with free winter clothing and footwear
- Free access to kindergartens and boarding schools

- Lack of incentive mechanisms for graduates of grades 9-11 to receive full education instead of working

---

Note 1 – 10% of Uzbekistan's population live in extreme poverty (about 3 million people), 1,200 families receive assistance, which is less than 300,000 people

Sources: legislation of Uzbekistan, National Association of Electronic Mass Media of the Republic of Uzbekistan, Norma informational and legal website
Social policy

Current level of development

Existing support measures only partially solve the unemployment problem

Employment centers

- Employment of citizens who requested assistance
- Plans for the development of an electronic job bank of Uzbekistan

By the end of 2017, 229,900 people, or 28% of the officially registered unemployed, had found employment

Organization of public work

Participants: citizens recognized as unemployed who received a referral from the Center for Assistance and Employment

Duration: 2 weeks to 3 months of the financial year with an entry in the employment record book

Payment:

- for work organized by public organizations: no more than 5 minimum wages per month (100% compensation from the Public Work Fund)
- For work organized by business entities or nongovernmental nonprofit organizations: no more than 2.5 minimum wages per month (50% compensation from the Public Work Fund)

In 2017, 27,100 people were involved in public work, which is 3% of the officially registered unemployed individuals

Creation of training centers for the unemployed: 240 seats in each center in 12 districts

Areas of training

- Electricity and electronics, information technology, agriculture, construction, repair and maintenance of vehicles and equipment, etc.

Source of funding:

Tashkent, Samarkand, Shakhrisabz:
- Grant from the Government of South Korea

Other regions of Uzbekistan:
- State Employment Promotion Fund, grants from donor countries
- Preferential loans from international financial institutions

In 2017, 6,600 people completed training, which is less than 1% of the officially registered unemployed. This shows the poor coverage of nonfinancial support measures, which greatly reduces their efficacy

Key problems of the labor market have not yet been eliminated: high level of potential unemployment, high share of the informal employment sector, lack of a system for assigning and confirming qualifications, high percentage of uncoordinated migration, lack of reliable data on capacity and structure of the labor market

Note: in 2017 there were 14,357,300 economically active people, and the unemployment rate was 5.8%. 832,723 people were unemployed.

Sources: Norma informational and legal website, Ministry of Employment and Labor Relations of the Republic of Uzbekistan, State Statistics Committee of the Republic of Uzbekistan
Share of the disabled in the total population by country

<table>
<thead>
<tr>
<th>Country</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uzbekistan</td>
<td>1.3</td>
</tr>
<tr>
<td>Malaysia</td>
<td>1.3</td>
</tr>
<tr>
<td>Kyrgyzstan</td>
<td>2.0</td>
</tr>
<tr>
<td>Tajikistan</td>
<td>2.0</td>
</tr>
<tr>
<td>Singapore</td>
<td>3.0</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>3.0</td>
</tr>
<tr>
<td>Mongolia</td>
<td>3.9</td>
</tr>
<tr>
<td>South Korea</td>
<td>5.4</td>
</tr>
<tr>
<td>Japan</td>
<td>6.2</td>
</tr>
<tr>
<td>China</td>
<td>6.3</td>
</tr>
<tr>
<td>Vietnam</td>
<td>7.8</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>8.1</td>
</tr>
<tr>
<td>Russia</td>
<td>9.0</td>
</tr>
</tbody>
</table>

Criteria for recognition of disability in Uzbekistan

It is necessary to go through the medical and labor expert commission and receive an annual medical examination, even in case of severe disability

Comments

- The overly complicated procedure for recognition and confirmation of disability in Uzbekistan often leads to the exclusion of part of the disabled population that needs support
- The criteria for recognizing disability are based on a methodology developed 40 years ago
- The process of recognizing disability is complicated by bureaucracy
- The criteria and procedures for recognizing disability must be optimized in accordance with international practices and standards
- Work on revising the criteria for recognition of disability has already begun in Uzbekistan, but the new criteria have not yet been approved

Sources: UN ESCAP, UNStats, News of Uzbekistan information portal (Upl.uz), official website of the President of Uzbekistan
Social policy

In Uzbekistan, there are not conditions conducive for the life of disabled people, since not all their needs are met

Financial needs

2018:
- Payments to persons disabled since birth: UZS 396,500 per month
- Average salary (according to the State Statistics Committee of Uzbekistan): UZS 1,684 million per month
- Minimum wage: UZS 184,300 per month
- Payments to the disabled are 23% of the average salary, and 196% of the minimum wage

People with group III disabilities do not receive social benefits

Barrier-free environment

2017:
- only 37% of public institutions in Uzbekistan are equipped for the handicapped
- Work on creating a barrier-free environment is at an early stage: a ban on the purchase of city passenger vehicles not adapted for the handicapped was introduced on 1 March 2018
- According to experts, the barrier-free environment is of poor quality

Employment of the disabled

In Uzbekistan, there are benefits for companies who employ the disabled:
- A fixed tax rate for individual entrepreneurs with disabilities
- Assignment of quotas in the amount of 3% on enterprises

In 2017, the employment rate of the disabled was 2% (while the same indicator in South Korea in 2013 was 36%)

Inclusive environment

- In 2014, 38% of children with special educational needs were educated in an inclusive environment
- In 2010, an information campaign on protecting the rights of the disabled was carried out at the state level

Education of the disabled

- The quota for the disabled is 2% of places in higher educational institutions
- There are no statistical data on the disabled receiving an education

Social policy

Current level of development

The system of nonfinancial support for senior citizens is not developed

Needs

Household

- **Tax benefits**: exemption from property tax (up to 60 m²) and land tax (under certain conditions)
- **Reduced utility rates** for pensioners

Transport

- **Right to free transit on the subway** (from 10:00 a.m. to 4:00 p.m.)
- **Right to free transit on other public transport** is granted to certain categories of pensioners

Health and wellness

- **Free medical care only for pensioners living alone**
- **Free health resort care** (about 85,000 places in Uzbekistan) is provided to about 3% of pensioners

Leisure

- **There are plans to open leisure centers** for pensioners in every city in the Republic of Uzbekistan

In 2015, the government program "Year of Attention and Care for the Elderly" was implemented. A series of events were held to support certain groups of senior citizens, veterans, and disabled persons.

Sources: Norma informational website, UzNews, Podrobnno.uz news agency, Gazeta.uz
### Social policy

#### Strategic options

**1. Scandinavian model**

Wide coverage; high tax burden on the population and businesses; high social expenditures per capita; wide financial support; prevalence of the state’s role in providing support

- Large percentage of the population provided with social security
- Need for greater social spending and larger tax revenues
- High tax burden does not contribute to economic growth
- High risks of providing poor-quality services

**Considerable support for all population categories**

**2. Preserve the state’s role in developing CSR**

Support for the most needy and vulnerable population groups, high level of targeted support, medium level of spending on social support, focus on nonfinancial measures, attraction of private providers, including through the development of CSR

- Reduction of the tax burden while maintaining an average level of support
- Improvement of the quality of social support
- Low development of the private sector
- Low level of CSR development

**High coverage through nonfinancial measures**

**3. Minimize support**

Provide support to separate population groups, low taxes, low level of state spending on social support, prevalence of nonfinancial support measures, social support imposed on private companies

- Low taxes contribute to economic growth
- Poor coverage of social protection
- Underdeveloped private sector

**Little support for some population categories**

**Sources:** data from open sources, analysis of the working group.
Effective social security for vulnerable population categories aimed at unlocking their economic potential

- Active use of nonfinancial support measures, involve the private sector in the provision of social support, develop Corporate and Social Responsibility
- Wide and highly targeted social support coverage; support for the most vulnerable people, thus ensuring social stability
- Official statistic base of families in difficult circumstances, systems of social work with families in difficult circumstances at all territorial levels (mahalla, district, city, region, republic)
- Focus the system on the fight against poverty and unemployment, advanced training and employment programs (in particular, building IT centers in each community where young people can learn IT skills for free)
- Restore 11-year education in schools and cancel compulsory 3-year education in vocational education institutions and vocational schools
- Develop social integration tools at the mahalla level
- Develop social information and analytical support
- Implement comprehensive social support for less protected groups of the population: ethnic minorities, women, etc.
- Develop a barrier-free environment that allows all citizens to develop their economic and social potential (an environment that promotes vertical social mobility)
- Implement the WHO Community Rehabilitation Strategy using the existing traditional Mahalla structure
- Implement measures to facilitate the country’s entry into "Tier 2" in the rating "Social progress indicator"
- Create an electronic list of migration management systems; create a single database of departures from and arrivals in the country
- Increase private employment agencies (recruiting), promote their activities
- Improve the system of organized labor migration
- In order not to exceed budget expenditures, the ability of disabled people to work in a more favorable working environment must be promoted, and a special system to encourage them to work effectively must be developed

### Figures

<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th>2035</th>
<th>CAGR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gini index, %</td>
<td>35.3</td>
<td>31.6</td>
<td>-0.6%</td>
</tr>
<tr>
<td>Percentage of the population living in extreme poverty, %(^{(a)})</td>
<td>10</td>
<td>&lt; 1</td>
<td></td>
</tr>
</tbody>
</table>

### Funding\(^{(b)}\)

<table>
<thead>
<tr>
<th></th>
<th>by 2025</th>
<th>by 2030</th>
<th>by 2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>USD billion, cumulative</td>
<td>12.5 – 15.3</td>
<td>22.9 – 28.0</td>
<td>44.7 – 54.6</td>
</tr>
</tbody>
</table>

\(^{(a)}\) Note: less than USD 1.9 per person per day, \(^{(b)}\) excluding social insurance

Sources: Ministry of Finance of the Republic of Uzbekistan, People’s Bank of the Republic of Uzbekistan, data from open sources, UNStats, World Poverty Clock, data from open sources, analysis of the working group
Develop national support priorities and identify key groups to receive support (with a priority on providing support to low-income and unemployed groups)

Detail the targeted criteria for recognizing a person as in need of support

Update and clarify the criteria for recognizing disabilities in accordance with international practices (use of the International classification of functioning, disability and health)

Update and improve the effectiveness of social support infrastructure (social support centers, organizations)

Develop and launch programs and tools to combat poverty and support the unemployed, including

— Training courses
— Trainings sessions to develop skills for employment
— Programs to develop communication with potential employers

Develop a system to train social support personnel (expansion of the number of universities providing training in this area)

Invest in the creation of a barrier-free environment

Launch programs aimed at providing equal opportunities for women (education, employment of women, equal income and opportunities for career progress, stopping domestic violence)

Develop and implement IT systems to organize social support (identification of key social support problems; search for tools)

Launch educational programs based on websites for those needing support

Create and develop social institutions for caring for children, the elderly, and the sick

Facilitate the development of nongovernmental organizations (NGOs) and charities

Technological development of social support

Use of IT tools to identify the population in need

Application of IT tools to determine the individual amount of social support for people in need

Increased application of financial support measures for certain population groups

Expand social support coverage (inclusion of additional categories in the focus of support: young mothers, socially disadvantaged workers, etc.)

Source: analysis of the working group
Establish research centers dedicated to social policy

Implement programs to fight drug, alcohol, and gambling addiction

Develop the "Social work" field of study at universities

Develop corporate social responsibility and involve private companies in social support of vulnerable categories of the population (creation of national ratings of the level of social responsibility of companies; holding round tables with key employers)

Involves private providers in the provision of social support (transfer of social patronage services and other forms of support to private companies)

Develop and implement public awareness programs on the equal rights of women, persons with disabilities and other disadvantaged groups.

Form the official statistical base of families in difficult circumstances

Implement the system of social work with families in difficult circumstances at all territorial levels (mahalla, district, city, region, republic)

Source: analysis of the working group

341
3.3

Human capital

Social development
Human capital

Current level of development

Key challenges

- The need to employ 20.7 million people of working age by 2035
- Lack of an engineering and management personnel reserve for innovative development of the economy
- Unofficial unemployment rate (35%) is several times higher than the official rate (5.8%)
- Almost one-third of the working population of the country works abroad
- There is no relationship between industry-specific higher educational institutions of applied sciences and the sectors of the national economy

Key findings

- The insufficient education level constrains innovative development in Uzbekistan: investments in education are 10 times lower than in developed countries. The situation is aggravated by the low salaries of teachers (30 times less than the salaries of teachers in developed countries), poor material and technical resources, and lack of computer classrooms
- More than 60% of university lecturers do not have academic qualifications
- Uzbekistan has the required number of teachers, but a lack of places and low-quality infrastructure in educational institutions are one of the main problems in the school system
- Low enrollment in colleges and universities: less than 10% of students were enrolled in higher education institutions in 2017
- There is a shortage of higher education institutions (66 universities in 2016)
- Outdated educational infrastructure with a high level of depreciation of fixed assets: 3,644 schools (38%) need major repairs, only 37% of schools have modern computer equipment, and just 7% have access to the internet

Investment in the full education cycle of a student and the return as added value

| Amount of state investments in the student training cycle, USD | 18.909 | 182.103 | 231.263 | 44,202 | 130,887 |
| Amount of added value created by an employee, USD | 77.291 | 2,176.818 | 3,105.898 | 647.313 | 2,169.152 |

Note 1 = education expenditures on the full education cycle of one student (from 3 to 22 years); (b) cumulative labor productivity of one citizen until retirement
Sources: World Bank Open Data, United Nations Department of Economic and Social Affairs Population Division 2017, OECD, data from open sources, analysis of the working group
At present, the many problem areas related to education ministries limit the development of the educational system in Uzbekistan

**List of education ministries**

01 Ministry of Preschool Education (MPrE)

02 Ministry of Public Education (MPE)

03 Ministry of Higher and Specialized Secondary Education (MHSSE)

**Problem areas**

**Lack of an integrated strategy**

- The goals of each ministry are determined individually and do not have a unified development vector set out in a general strategy
- Many areas to be developed may be not touched on by any ministry
- There is no single road map for "raising" specialists from pre-school to post-graduate

**Lack of control over educational results**

- The existing model focuses excessively on building the educational process without paying due attention to the results of educational institutions
- As a result, the quality of education is at risk

**Management crisis in the ministries and supervisory agencies**

- There is not enough expertise in terms of implementation of suggested changes and new concepts
- Lack of qualified managerial personnel
- Lack of innovative methods of governance

**Influence of the supervisory bodies**

- The supervisory bodies have a significant influence on the education ministries
- Many tasks and functions delegated to the ministries by the supervisory bodies are not connected with or conflict with the educational system's development vector

Sources: data from open sources, analysis of the working group.
Today, the average expenditures on education per student in the Republic of Uzbekistan lag significantly behind the same indicators in other emerging countries. Lack of investment in education has a negative impact on the physical infrastructure of educational institutions. According to experts, one big problem is the lack of water and electricity as well as the lack of computer classes in educational institutions in all regions of the country. In the period from 2008 to 2015, the average education spending per student more than doubled, but it is still significantly lower than the same indicators in other developed and developing countries. Despite the existence of state support programs and an annual review of wages, teachers’ salaries in Uzbekistan are lower (by 20–30 times) than in other countries.

In Uzbekistan, there is a general tendency toward a reduction in the number of educational institutions, and those remaining need major repairs. This has a negative impact on educational potential. Classes in some schools in the Republic of Uzbekistan have 45–50 students, which hinders the pupils from receiving a quality education. Over the past 8 years, 72 general education schools have closed in Uzbekistan.

Sources: World Bank Open Data, United Nations Department of Economic and Social Affairs Population Division 2017, OECD, data from open sources, analysis of the working group.
### Current level of development

#### Number of students in higher educational institutions of the Republic of Uzbekistan, people

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Students</td>
<td>268,281</td>
<td>297,689</td>
<td>360,204</td>
</tr>
</tbody>
</table>

#### Average number of people per higher educational institution

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>69.7</td>
<td>162.4</td>
<td>303.0</td>
<td>428.0</td>
</tr>
<tr>
<td>Japan</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Malaysia</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uzbekistan</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turkey</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Share of people with secondary and higher education

<table>
<thead>
<tr>
<th>Year</th>
<th>Net secondary education enrollment value (%)</th>
<th>Net higher education enrollment value (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>90.2%</td>
<td>9.8%</td>
</tr>
<tr>
<td>2012</td>
<td>91.7%</td>
<td>8.3%</td>
</tr>
<tr>
<td>2015</td>
<td>91.5%</td>
<td>8.5%</td>
</tr>
<tr>
<td>2017</td>
<td>90.8%</td>
<td>9.2%</td>
</tr>
</tbody>
</table>

#### Comments

- The inadequate number of higher education institutions and the existence of quotas for entrance to universities significantly slow the development of human capital in the Republic of Uzbekistan.
- At present, there are 98 higher educational institutions and branches in the Republic of Uzbekistan. This indicator in the 2016/2017 academic year was 90, and in the 2017/2018 academic year - 91.
- Despite an increase in the number of higher education institutions by almost 8% from 2008 to 2016, the number of graduates decreased by 20% as a result of the use of quotas (only 9% of applicants annually enter Uzbekistan’s higher education institutions).
- 51 higher educational institutions have an extramural form of study, 22 higher educational institutions have a special extramural form of study, and 9 higher educational institutions offer evening classes.
- In 2018, the 11-class education system was restored in schools and compulsory three-year education in colleges and lyceums was abolished.
- In the 2016/2017 academic year, 15 new educational areas and 14 specialties were introduced; in the 2017/2018 academic year, 8 areas and 10 specialties; in the 2018/2019 academic year, 66 new areas of the bachelor’s program and 48 specialties of the master’s program were introduced.
- The average number of people per higher education institution is 5 times higher than in developed countries, which negatively affects the accessibility of education.
- Today, students who finished secondary school may apply for admission to only one higher education institution.
Human capital

Current level of development

Number of higher educational institutions in the Republic of Uzbekistan

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>23,961</td>
<td>25,107</td>
<td>26,664</td>
</tr>
</tbody>
</table>

5 times

<table>
<thead>
<tr>
<th>USA</th>
<th>Japan</th>
<th>Malaysia Uzbekistan</th>
<th>Turkey</th>
</tr>
</thead>
<tbody>
<tr>
<td>69.7</td>
<td>162.4</td>
<td>303.0</td>
<td>418.6</td>
</tr>
<tr>
<td>428.0</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Number of lecturers in higher educational institutions of the Republic of Uzbekistan, people

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>23,961</td>
<td>25,107</td>
<td>26,664</td>
</tr>
</tbody>
</table>

+6.6%                     +2.1%

Distribution of higher education teachers by academic qualification

<table>
<thead>
<tr>
<th>No degree</th>
<th>Candidate of Science</th>
<th>Doctor of Science</th>
</tr>
</thead>
<tbody>
<tr>
<td>64%</td>
<td>29%</td>
<td>8%</td>
</tr>
</tbody>
</table>

Comments

- The increase in the number of students in turn required an increase in the number of lecturers. The number of lecturers in higher educational institutions of the Republic of Uzbekistan in 2018/2019 increased by 9% compared to the 2016/2017 academic year.
- The low quality of higher education in the Republic of Uzbekistan is caused by the fact that most teachers do not have academic qualifications.
- Since 2017, e-learning forms have been implemented in the system of upgrading qualification of senior executives and the faculty of higher educational institutions. To date, 1,855 participants in these courses have upgraded their qualifications.
- Only one-third of these lecturers have academic qualifications.
- The motivation system does not provide the necessary level of interest in the academic profession among young people.
- The scientific potential of higher educational institutions at the end of the 2017/2018 academic year reached 34.2%, which is 3.1% higher than the indicator at the end of 2016, although it is still low compared to foreign countries where a potential of at least 50% is required for accreditation.
- In February 2017, the Decree of the President of the Republic of Uzbekistan on the transition to a two-stage system of preparation of academic staff was issued.
- The doctorate acceptance quota was doubled.
- Thesis review procedures were simplified. As a result, the number of theses was double that for 2016 and 2.5 times greater based on the results of H1 2018.

Designated ministries

01 MPRe
02 MPE
03 MHSSE

Note 1 – not including temporarily employed teachers
The educational reforms conducted over the last two years have promoted an increase in financing from the state budget.

- Financing for subordinate educational institutions of the Ministry of Higher and Vocational Education increased by 83.7%.
The country has an acute shortage of engineers, technical specialists, and managers needed to implement innovative development.

It is necessary to ensure that the quality and structure of higher education meet the demands of the labor market.

In countries with above average income and at least a 20% share of the manufacturing industry, there are on average 1,500–2,000 engineers and specialists in the natural sciences per 1 million people. In Uzbekistan, the value of the same indicator today is 540 specialists per 1 million people.

There is also a shortage in the reserve pool of managers for the innovative development of Uzbekistan's economy.

**Designated ministries**

Human capital

Strategic options for development of education

1. Model with a high level of state participation

Provision of services by the state; financing through tax revenues. The private sector meets only the needs of the wealthy

- High accessibility of public education to low-income groups of the population
- Quality of education depends on the amount of tax revenues
- High risks of low-quality services, especially in public and higher education
- Low level of innovation development of the system

Examples of countries:
- Germany
- Austria

Overall coverage with quality education subject to adequate tax revenues

2. Mixed model

Development of private service providers while maintaining state service providers for the low-income population; development of the private sector in education; creation of conditions for the development of science and innovation

- High accessibility to the education system
- Uniform quality at all stages of education
- Low level of private sector development
- Poor development of private financing institutions

Examples of countries:
- Brazil
- Canada

Wide coverage of all population groups with high-quality education

3. High share of private players

 Provision of educational services is fully delegated to private companies; funding is performed through private companies or payment from citizens; state support is provided only for the low-income population through mechanisms for co-financing expenses

- High quality of educational services
- Limited coverage of educational services
- High cost of education

Examples of countries:
- UK
- Japan

Low coverage of poor population groups with high-quality education

Sources: data from open sources, analysis of the working group.
### Human capital

#### Strategic options for labor market development

<table>
<thead>
<tr>
<th>Workforce flows</th>
<th>Export of low-skilled workforce</th>
<th>Export of highly skilled workforce</th>
<th>Import of low-skilled workforce</th>
<th>Import of highly skilled workforce</th>
<th>Target development option</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Uzbekistan continues to export workers; the current structure and training level of personnel remains the same to rapidly form a large workforce</td>
<td>There will be changes in the training methodology and programs according to industry needs in the formation of highly qualified personnel potential.</td>
<td>This option is not suitable for Uzbekistan</td>
<td>Recruitment of foreign experts for the development of Uzbekistan’s economy, and use of the internal workforce while preserving the current education level</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Examples of countries: Kyrgyzstan, Tajikistan</td>
<td>Examples of countries: India, China</td>
<td></td>
<td>Examples of countries: Myanmar, Vietnam</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Workforce qualifications

- **Export of low-skilled workforce**
  - Large number of available workers
  - Shortage of highly skilled workforce for the formation of a personnel reserve and economic development

- **Export of highly skilled workforce**
  - Overcoming the job shortage in Uzbekistan
  - Increase in export revenue
  - Professional development of domestic specialists
  - Problem of family and generational disruption
  - Increased drain of highly skilled staff abroad

- **Import of low-skilled workforce**
  - |

- **Import of highly skilled workforce**
  - Experience of foreign highly skilled specialists
  - Need for large investments in recruiting specialists
  - Dependence on foreign specialists

Sources: data from open sources, analysis of the working group.
Human capital is the driving force of economic development. The concept of continuous education has been introduced, which makes it possible to cultivate highly qualified personnel and stimulate the development of innovations:

- Affordable and quality education for all population groups
- Unified development strategy of education ministries
- State system of education quality assessment
- Developed infrastructure; increased number of schools (no more than 27 students per class), universities (170,000 people per university), and kindergartens
- Transition from mass education to inclusive education
- Implement a voucher\(^1\) system of education
- High salaries for lecturers and teachers (higher than the market average), providing lecturers and teachers with a wide range of benefits
- Actively implement online education
- Develop the private education market
- Lower unemployment to 6.2%
- Create a system of expert assessment of the labor market
- Strong protection of migrant labor rights
- Introduce a continuing education system
- Qualifications of specialists meet the needs of the market: the market is dominated by engineers, economists, and managers (more than 70% of workforce)
- Improve the level of professional training of migrant workers
- Increase the prestige of education by promoting the image of an educated person on television, holding open events with popularizers of science and with leading experts in various fields
- Take measures to counter the outflow of qualified personnel abroad
- Decrease the informal sector of the labor market
- Implement a state system of assignment and confirmation of qualifications
- Develop organized labor migration
- Form reliable and complete data on the capacity and structure of the labor market.
- Improve the level of productivity of scientific and pedagogical personnel, including the publication of scientific results in peer-reviewed scientific journals, citation publications on the Hirsch index
- Create internationally recognized scientific schools (for outstanding scientists)

Note 1 = educational system in which students receive state funding in the form of vouchers, which they can use to attend the school of their choice

Key strategic initiatives

- Adapt educational programs at all levels of education to the needs of the economy (increase the number of subjects related to engineering, economics, and business, but preserving education in the field of natural sciences)
- Raise teachers’ salaries and change their social benefits
- Increase the inclusiveness of education and entry of children with disabilities to schools and universities
- Form and implement continuous education based on pilot industry sectors
- Encourage private educational institutions
- Improve protection of migrants’ labor rights (including development of a professional training system)
- Implement a state system of education quality assessment
- Create Foresight Centers at leading higher educational institutions
- Improve the legislative framework to provide maternity leave and ensure pay equality
- Create a system of expert assessment of the labor market
- Improve employment legislation

2025

- Develop and spread new technologies and forms of education in the professional education system
- Create a network of schools that implement experimental and innovative programs to try out new technologies and the content of training and education
- Develop educational projects that allow students to work without discontinuing their education (methodological support of companies, etc.)
- Develop social entrepreneurship and creative industries as a key driver of economic development and job creation (grants for training in creative specialties, etc.)
- Increase the number of employees with the highest scientific degree, incentivize the obtaining of a scientific degree in order to increase the share of highly qualified employees
- Promote international cooperation between universities; recruit foreign teachers to improve the quality of education in colleges and universities
- Expand the list of industries for continuing education
- Develop a voucher educational system
- Introduce high technologies in education (e.g., virtual classrooms, digital paper and ink)

2030

- Develop international cooperation to strengthen mechanisms for monitoring the quality of education, actively develop competition among universities; ensure recognition of qualifications from Uzbekistan’s universities abroad
- Develop virtual workspaces
- Promote the use of artificial intelligence, robots, and drones in agriculture, industry, and the service sector (tax incentives, methodological support)
- Improve the accessibility of preschool education (increase the number of kindergartens, major repairs to existing kindergartens, implement inclusive preschool education)
- Improve material support for schools (lowering the average number of students in a classroom to 27)
- Develop a system of professional and technical education (opening new specialized schools and vocational schools, expanding the list of educational programs with a focus on the target economic sectors)
- Develop a training and retraining system for teachers
- Increase the number of universities (reduce the enrollment per university from 419,000 to 170,000 people)
- Transition to mass online education (introduce online education for all levels of the educational process)

2035

- Note 1 = business unit of a higher educational institution, which assesses strategic areas of social, economic, and innovation development
3.4

Culture

Social development
Culture

Current level of development

Key challenges
- High level of state involvement in the cultural sphere, which hinders its development
- Lack of cultural and leisure facilities
- Despite the measures taken by the government to encourage the creation of private exhibition structures, this type of activity is not widespread
- Large number of libraries and low number of users
- Insufficient use of cultural potential to resolve foreign economic and foreign political challenges
- Lack of modern fiction and professional literature in libraries

Key findings
- The high level of state involvement in the cultural sphere hinders its development (museums are 99% financed from the state budget, while in developed countries they are also funded through income from commercial activities, crowdfunding, various investments and contributions)
- Lack of cultural and leisure facilities (the number of museums per 1 million people on average is 20 times less than in developed countries)
- Despite the measures taken by the government to encourage the creation of private exhibition structures, this type of activity is not widespread (there are only three private exhibitions, but they are characterized by a high share of state participation) There is insufficient experience in private exhibition structures and other limiting factors in the form of a number of reviews and permit documents
- The number of libraries per one million people in Uzbekistan is higher than in developed countries (1.5 times more than in the USA), but the number of users is less than 1%

Cultural Influence Ranking

- The Cultural Influence Ranking assesses countries according to seven criteria: a country is culturally significant in terms of leisure, fashion, happiness (World Happiness Index); its culture is important, modern, prestigious, and popular

Number of museums per 1 million people

<table>
<thead>
<tr>
<th>Country</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uzbekistan</td>
<td>14</td>
</tr>
<tr>
<td>Japan</td>
<td>107</td>
</tr>
</tbody>
</table>

- The number of museums per 1 million people in Uzbekistan remains low compared to developed countries
- The absence of a law on patronage prevents the attraction of private and commercial investments to develop this market segment

Number of libraries per 1 million people

<table>
<thead>
<tr>
<th>Country</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uzbekistan</td>
<td>534</td>
</tr>
<tr>
<td>Japan</td>
<td>26</td>
</tr>
</tbody>
</table>

- Digitizing the book supply and giving citizens access to electronic information resources helps reduce the number of libraries

Sources: Open data portal of the Republic of Uzbekistan, the Japan Times, US News & World Report, analysis of the working group
A more developed society is characterized by a shift in human demand from satisfaction of lower, purely physiological needs to higher needs. At the same time, scientific and technological progress ensures the satisfaction of these needs through supply.

The development of culture spurs the advancement of higher needs in society: cognitive, aesthetic, and the need for self-realization. This, in turn, is one of the determining factors in fostering scientific and technological progress.

**Top 6 countries according to the Cultural Influence Ranking**

1. France  
2. UK  
3. USA  
4. Germany  
5. Canada  
6. Japan

Uzbekistan Not included in the rating

Sources: World Economic Forum, International Monetary Fund (IMF), analysis of the working group
Culture

Current level of development

Private exhibitions

Despite the measures taken by the Government of Uzbekistan to encourage the creation of private exhibition structures, this type of activity is not widespread. At present, three exhibitions are known, but even they are characterized by a predominant share of state participation.

Number of UNESCO world heritage sites

<table>
<thead>
<tr>
<th>Country</th>
<th>UNESCO sites</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>23</td>
</tr>
<tr>
<td>Japan</td>
<td>19</td>
</tr>
<tr>
<td>Turkey</td>
<td>18</td>
</tr>
<tr>
<td>Malaysia</td>
<td>5</td>
</tr>
<tr>
<td>Uzbekistan</td>
<td>5</td>
</tr>
</tbody>
</table>

UNESCO world heritage sites in Uzbekistan

- Itchan Kala
- Historical center of the city of Bukhara
- Historical center of the city of Shakhrisabz
- Samarkand: a crossroads of cultures
- Western Tien Shan (Chatkal nature reserve)

Sources: Open data portal of the Republic of Uzbekistan, Turkish Statistical Institute, the Japan Times, Annual Report of National Library of Malaysia
# Culture

## Current level of development

### Number of libraries per 1 million people

- **USA**: 367
- **Japan**: 26
- **Malaysia**: 449
- **Turkey**: 364
- **Uzbekistan**: 534

### Number of movie theaters per 1 million people

- **USA**: 18
- **Japan**: 12
- **Malaysia**: 5
- **Turkey**: 8
- **Uzbekistan**: 2

### Number of museums per 1 million people, 2016

- **USA**: 107
- **Japan**: 298
- **Malaysia**: 83
- **Turkey**: 417
- **Uzbekistan**: 14

## Comments

- Despite the large number of libraries in Uzbekistan, only 0.3% of the country's population uses libraries.
- There are 312 cinemas in Uzbekistan, but only 68 of them are currently in use.

Sources: Open data portal of the Republic of Uzbekistan, Statista, Statistics of Japan
Note: data for 2016, 1 = data for 2012
Culture

Strategic options

1

Private financing model

Sources of financing

- High level of cultural development due to a significant share of private business participation
  - Examples of countries: USA, Russia

- In an unstable economy, the cultural sphere "suffers" first

Lack of government interference

2

Diversified financing model

Sources of financing

- A diversified approach to financing reduces intra-industry risks
  - High share of private (unique) cultural and leisure sites
  - Examples of countries: UK, Finland

- High share of financing through donations, which may cause some difficulties in the economies of developing countries

Diversified approach to financing

3

State financing model

Sources of financing

- Significant share of financing comes from the income from commercial activities, which improves the quality of the cultural environment
  - Examples of countries: France, Sweden, Germany

- High degree of state participation, which may affect the quality and innovative component of the cultural environment

The foundation is state financing

Source: analysis of the working group
• Modernize and develop regional and district centers of culture and leisure; introduce cultural centers to help socially under-adapted population groups, create various leisure programs with attention paid to inclusiveness
• Create a national code of ethics and professional/industry standards
• Involve private business in cultural projects (construction of private exhibition facilities and other culture and leisure facilities)
• Create motivation systems to improve corporate culture
• Open specialized archival centers at universities for art to preserve intangible assets (performances, films, concerts, conferences)
• Open branches of foreign art universities
• Form a positive image and increase of prestige of Uzbekistan through online platforms, encyclopedias, and museums
• Develop the concepts of cultural mediation and international cultural law
• Promote the creation and development of second-hand bookstore networks
• Republish works written by academics and outstanding scientists of Uzbekistan, textbooks, and culture and art books

<table>
<thead>
<tr>
<th>Figures</th>
<th>2017</th>
<th>2035</th>
<th>CAGR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cultural Influence Ranking</td>
<td></td>
<td>Top 40</td>
<td>11%</td>
</tr>
<tr>
<td>Share of state participation in the cultural sphere</td>
<td></td>
<td>99%</td>
<td>20%</td>
</tr>
<tr>
<td>Number of libraries per 1 million people</td>
<td>534</td>
<td>100</td>
<td>-9%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Investment</th>
<th>USD billion, cumulative</th>
</tr>
</thead>
<tbody>
<tr>
<td>by 2025</td>
<td>0.4-0.5</td>
</tr>
<tr>
<td>by 2030</td>
<td>2.9-3.6</td>
</tr>
<tr>
<td>by 2035</td>
<td>10.3-12.6</td>
</tr>
</tbody>
</table>

Sources: State Statistics Committee of the Republic of Uzbekistan, US News & World Report, analysis of the working group
### Key strategic initiatives

<table>
<thead>
<tr>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Develop and approve professional standards for employees of cultural institutions</td>
<td>Apply qualification requirements for employees; retraining; advanced training</td>
<td>Ensure the inflow of qualified personnel</td>
</tr>
<tr>
<td>Form a national code of ethics</td>
<td>Form qualification requirements and professional standards for employees, retraining, and advanced training</td>
<td>Implement professional standards for employees of cultural institutions</td>
</tr>
<tr>
<td>Advance cultural development training programs (culture of speech, etiquette, etc.) in educational institutions with a focus on the international experience of Russia, Germany, the USA, France, Great Britain, and Japan</td>
<td>Approve a national code of ethics</td>
<td>Implement a national code of ethics</td>
</tr>
<tr>
<td>Form the concept of a national brand</td>
<td>Modernize and develop regional and district centers of culture management; modernize cultural centers to help socially under-adapted population groups</td>
<td>Implement cultural centers to help socially under-adapted population groups</td>
</tr>
<tr>
<td>Digitalize Uzbek printed items by involving volunteers</td>
<td>Reorganize inefficient cultural institutions</td>
<td>Reorganize inefficient cultural institutions</td>
</tr>
<tr>
<td>Create interactive museums</td>
<td>Implement the concept of a national brand</td>
<td>Implement cultural development training programs (culture of speech, etiquette, etc.) in educational institutions</td>
</tr>
<tr>
<td>Create conditions and incentives to attract private business</td>
<td>Introduce comprehensive measures to preserve world heritage sites</td>
<td>Ensure access of citizens of Uzbekistan to the electronic information resource</td>
</tr>
<tr>
<td></td>
<td>Create virtual museums</td>
<td>Create virtual museums</td>
</tr>
<tr>
<td></td>
<td>Engage private investors in culture and leisure projects</td>
<td>Engage private investors in culture and leisure projects</td>
</tr>
<tr>
<td></td>
<td>Create an incentive mechanism for employees of cultural institutions and motivation for corporate culture; update qualification requirements for workers; retraining; advanced training; create prerequisites for the emergence of competitive specialists and managers in the public sector; preserve and develop the potential of cultural sphere employees</td>
<td>Create an incentive mechanism for employees of cultural institutions and motivation for corporate culture; update qualification requirements for workers; retraining; advanced training; create prerequisites for the emergence of competitive specialists and managers in the public sector; preserve and develop the potential of cultural sphere employees</td>
</tr>
<tr>
<td></td>
<td>Modernize and develop regional and district centers of culture management</td>
<td>Modernize and develop regional and district centers of culture management</td>
</tr>
<tr>
<td></td>
<td>Reorganize inefficient cultural institutions</td>
<td>Reorganize inefficient cultural institutions</td>
</tr>
<tr>
<td></td>
<td>Take comprehensive measures to preserve world heritage sites</td>
<td>Take comprehensive measures to preserve world heritage sites</td>
</tr>
<tr>
<td></td>
<td>Create an electronic information resource; provide access to citizens of Uzbekistan</td>
<td></td>
</tr>
</tbody>
</table>
The environment

Social development
The environment

Key challenges

- Shortage of the water required to satisfy the growing needs of the population, agriculture and industry
- Soil salinization and pesticide pollution
- Desertification associated with deforestation
- Waste processing
- Aral Sea crisis
- Climate change
- Biodiversity conservation
- Transition to sustainable development
- Lack of education on environmental issues, ethical production and ethical consumption

Key findings

- In 2018, Uzbekistan ranked 52nd out of 156 countries in terms of progress in the attainment of sustainable development goals, which is high. However, this represented a fall of five positions compared to 2017
- Although Uzbekistan is not in the Top 100 countries by ecological footprint, the country runs up an environmental deficit, which indicates that its activity harms the global environment
- The State Committee of the Republic of Uzbekistan for Ecology and Environmental Protection has developed measures to prevent the consequences of climate change
- Over 35% of the population do not have access to centralized water supply, 11% depend on water imports due to the absence of alternatives
- The forest cover of the Republic of Uzbekistan is shrinking as a result of illegal logging and desertification: since 2005 forest cover has decreased by 2.3% and accounted for 7.6% of the total area in 2015
- At present, the share of saline soils exceeds 50%
- There are 221 SHW^2 burial and disposal landfills in Uzbekistan. At present, 33.4 million tons of SHW have accumulated
- In 1995–2015 the energy generated by renewable energy sources (RES) grew by 3.3% annually. However, the share of RES in the total volume of generated electricity remains low compared to global best practice

UN Sustainable Development Goals

- Adopted in 2015 as part of the new sustainable development program "Transformation of Our World: Sustainable Development Agenda to 2030"
- Includes 17 goals and 169 targets to be achieved by UN member states by 2030
- In 2016, 17 Sustainable Development Goals officially entered into force in Uzbekistan
- Sustainable development is defined as development that meets the needs of the present, without compromising on the ability of future generations to meet their own needs
- Sustainable development is contingent on the coordination of three key components: economic growth, social integration, and environmental protection

Notes: 1 = The ecological footprint includes the biologically productive area and water used by people to produce resources and required for the absorption of waste 2 = Solid household waste
In 2018, Uzbekistan ranked 52nd out of 156 countries in terms of progress in the attainment of sustainable development goals, which is high. However, this represented a fall of five positions in the rating compared to 2017, which indicates in general negative trends from the perspective of attaining Sustainable Development Goals. Today, in accordance with the UN Sustainable Development Goals in Uzbekistan, special attention is being paid to reducing the adverse impact of waste on the environment and public health.
**Environment**

**Current level of development: climate change**

**Key threats caused by climate change**

<table>
<thead>
<tr>
<th>Defense capability</th>
<th>Food safety</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Example of the USA:</td>
<td></td>
</tr>
<tr>
<td>- In October 2014, the Department of Defense published the Climate Change Adaptation Roadmap, which announced the beginning of work to protect the US defense capability from possible consequences</td>
<td></td>
</tr>
<tr>
<td>- US Secretary of Defense Chuck Hagel called global warming a &quot;threat multiplier&quot; and noted that climate change might facilitate the materialization of other threats, from the dissemination of disease to acts of terrorism</td>
<td></td>
</tr>
<tr>
<td>• Research and intergovernmental organizations unanimously emphasize the urgency of the threat to food safety in the world</td>
<td></td>
</tr>
<tr>
<td>• Climate change involves risks related to sufficient growth of agricultural products, which may result in changes in agricultural practices and the diet of the population</td>
<td></td>
</tr>
<tr>
<td>• Example of Australia: in 2018 the government allocated a total of USD 1.8 billion to support farmers due to unprecedented drought</td>
<td></td>
</tr>
</tbody>
</table>

"Limiting global warming to 1.5 °C will require 'rapid and far-reaching' transitions processes concerning land, energy, industrial systems, and also buildings, transport and cities. Global carbon dioxide (CO$_2$) emissions caused by human activities will need to be reduced by almost 45% by 2030 versus 2010 levels to reach a "clean zero" by approximately 2050."

*IPCC press release, 8 October 2018*

**Measures to prevent the consequences of climate change adopted in Uzbekistan**

<table>
<thead>
<tr>
<th>Energy consumption</th>
<th>Forest fund</th>
<th>Motor transport</th>
</tr>
</thead>
<tbody>
<tr>
<td>• At least 30% of energy consumption should be derived from renewable energy sources by 2030</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Expand the forest cover of the country by 2030</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Improve the quality of forestation and the diversity of species through increased mechanization in restoration of forests</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Implement new forestation technology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Conduct research on rapid forestation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Introduce motor transport standards</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Introduce Euro-6 motor fuel standards</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: State Committee of the Republic of Uzbekistan for Ecology and Environmental Protection, analysis of the working group

Note: 1 = Intergovernmental Panel on Climate Change; 2 = According to the data provided by the State Committee of the Republic of Uzbekistan for Ecology and Environmental Protection
**Environment**

**Current level of development: climate change**

**Ecological footprint,**
gha\(^1\) per person, 2014\(^2\)

- **Qatar**
  - Carbon footprint: 15.7
  - Grazing land: -14.2
  - Fishing ground: 82

- **Luxembourg**
  - Carbon footprint: 12.3
  - Grazing land: -10.9
  - Fishing ground: 10

- **UAE**
  - Carbon footprint: 9.8
  - Grazing land: -9.1
  - Fishing ground: 185

- **USA**
  - Carbon footprint: 8.4
  - Grazing land: -6.6
  - Fishing ground: 6,280

- **Japan**
  - Carbon footprint: 4.7
  - Grazing land: -4.1
  - Fishing ground: 1,217

- **Malaysia**
  - Carbon footprint: 4.4
  - Grazing land: -2.0
  - Fishing ground: 234

- **Turkey**
  - Carbon footprint: 3.2
  - Grazing land: -1.7
  - Fishing ground: 343

- **Uzbekistan**
  - Carbon footprint: 2.2
  - Grazing land: -1.3
  - Fishing ground: 102

- xx - environmental surplus/shortage, gha per person, is calculated by the formula (biopotential per capita) – (ecological footprint per capita)

- xx - amount of carbon dioxide emissions, megatons, 2014

**Comments**

- The Ecological Footprint Index is prepared by the Global Footprint Network and includes 190 countries.
- The ecological footprint includes the biologically productive area and water used by people to produce resources and required for the absorption of waste.
- Although Uzbekistan is not in the Top 100 countries by ecological footprint, the country runs up an environmental deficit, which indicates that its activity harms the global environment.
- At the same time, the amount of carbon dioxide emissions is low and accounts for only 0.3% of total global emissions.
- In 2017, Uzbekistan signed the Paris Agreement, which is intended to improve the environmental situation through activities to reduce emissions, modernization and energy efficiency measures.

**Source:** Global Footprint Network, World Resources Institute, analysis of the working group

**Note:** 1 = global hectare: a hectare of a biologically active area or water area with the average global bioproductivity indicator for a certain year; 2 = rating issued in 2018, included data for 2014.
Main stages of the decline in biodiversity in the Aral Sea as a result of salinization:

- **1971–1976:** salinity exceeded 12–14 g/l, brackish water species of freshwater origin disappeared (carp, grass carp, river perch, Aral Spined Loach, European carp)

- **1986–1989:** salinity exceeded 23–25 g/l, brackish water species of Caspian origin disappeared (sand smelt, stone moroko, sabre carp)

- **1990–2000:** salinity exceeded 80–100 g/l, sea species disappeared (pike-perch, catfish, pike)

### Consequences of the desiccation of the Aral Sea

**Environment:**
- Disappearance of 90% of fauna as a result of increased water salinity
- Increase in climate drought and continentality
- Appearance and continuous growth of the Aralkum Desert with an area of 38 km²
- Disappearance of the natural barrier: the Aral Sea used to offer protection against the spread of dangerous bacteria that appeared in connection with biological weapons tests on Vozrozhdeniya Island (Barkhan biochemical training center; years of activity 1942–1992)

**Economy:**
- Termination of fishing
- Unsuitability of water for the irrigation of rice, cotton and wheat

**Social aspects:**
- Increase in illnesses in the region: constant dust storms (75 million tons of dust annually) disperse sand and toxic chemicals from the bottom of the drying sea
- During 2012–2018, the population of the coastal city Muynak dropped by 25%
Project for the construction of an earth bank and dam with a flood gate

**Project description:**
- In 1990–1998 the government of Uzbekistan built an earth bank to separate the Small and the Large Aral. In 2001, with the support of the World Bank, the construction of a dam with a flood gate began. It was completed in 2005

**Budget:**
- USD 85 million

**Result:**
- Over the first eight months the water level rose 2 meters
- The water area increased by 18%
- Water salinity halved (from 20 to 10 g/l)
- Freshwater species of fish (pike-perch, European carp) returned

Project for creating windbreak forests

**Project description:**
- The State Forestry Committee of the Republic of Uzbekistan elaborated a special program to accelerate the planting of windbreak forests (shelterbelts) on the drained bottom of the Aral Sea. The project is scheduled for completion by 2017–2019. A draft Resolution of the Government of the Republic of Uzbekistan was prepared and submitted for approval on this issue

**Budget:**
- UZS 890 billion (USD 110 million)

**Expected result:**
- Planting of windbreak forests with a total area of 1.5 million ha on the drained bottom of the Aral Sea;
- Prevention of the penetration of salt and dust in surrounding areas
- Anchoring of moving sands
- Reduction in wind erosion.

Additional options to resolve the existing problem

- Reduce water intake for the irrigation of fields; modernize the entire irrigation system
- Develop an international general water strategy
- Replace cotton plantations with winter wheat
- Create a monitoring system

Sources: Data of the IFAS agency; World Bank; Astrakhan Newsletter of Environmental Education; analysis of the working group

1 – At the exchange rate of USD 1 = UZS 8,065
Current level of development: water

Supply of water to the population of Uzbekistan, million people, 2017

- Population with access to the main water supply line: 63%
- Population dependent on water imports: 26%
- Population using alternative water sources: 11%

Population with access to the main water supply line, million people, 2017

- Population with home connections to the network: 66%
- Using outdoor standpipes: 34%

Population using alternative water sources, million people, 2017

- Wells, pumps: 75%
- Rivers, streams, channels, ponds: 17%
- Springs: 8%

Including the following breakdown:

- Population dependent on water imports
- Population using alternative water sources

Comments

- Over 35% of the population do not have access to centralized water supply, 11% depend on water imports due to the absence of alternatives.
- However, about one-third of the population with access to the main water supply line need to use standpipes.
- A quarter of the population using alternative sources need to use natural sources of water supply.
- In some districts of Uzbekistan a high level of ground water is observed (e.g., Central Kyzylkum). With the development of desalination technology, ground water may form the basis for a decentralized autonomous freshwater supply system.

Sources: Ministry of Housing and Communal Services, analysis of the working group.
Environment

Current level of development: water

The national project "Water" is aimed at the restoration and environmental rehabilitation of water bodies

Water resources yield capacity, GDP/m3 of pure water

| Source: International benchmarking, analysis of the working group |

Guidelines for action

- Elimination of shortages of water resources
- Increased efficiency of water resource use by businesses and individuals

Preservation and restoration of water bodies

- Reduction of the adverse man-made impact on water bodies
- Restoration and environmental rehabilitation of water bodies that lost their self-purification capacity
- Monitoring of water bodies, including at border areas

Protection of the population and economic facilities from floods and other adverse impacts of water

- Increase in the performance reliability of hydraulic facilities by bringing them to a safe technical condition
- Supply of hard protection structures to the population and economic entities, taking into account economic expediency

Volume of domestic renewable water resources per capita, m³ per capita

<table>
<thead>
<tr>
<th>Uzbekistan</th>
<th>World</th>
</tr>
</thead>
<tbody>
<tr>
<td>531</td>
<td>5,921</td>
</tr>
</tbody>
</table>

Water resources yield capacity, GDP/m³ of pure water

<table>
<thead>
<tr>
<th>Uzbekistan</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.95</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>World</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.9</td>
</tr>
</tbody>
</table>

Source: International benchmarking, analysis of the working group
Environment

Current level of development: soil and forest areas

Share of saline land in Uzbekistan today,
‘000 hectares

- In the most densely settled part of Uzbekistan, Fergana Valley, about 84% of irrigated land is saline
- In Xorazm Region, 95% of utilized irrigated lands are eroded

Over 50% of soil in Uzbekistan is saline

Share of arable land in the agricultural zone %, 2015

<table>
<thead>
<tr>
<th>Country</th>
<th>Share</th>
<th>Average carbon content in topsoil %, 2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Malaysia</td>
<td>12.2%</td>
<td>3.5%</td>
</tr>
<tr>
<td>Japan</td>
<td>93.4%</td>
<td>2.3%</td>
</tr>
<tr>
<td>USA</td>
<td>37.5%</td>
<td>1.5%</td>
</tr>
<tr>
<td>Turkey</td>
<td>53.6%</td>
<td>1.0%</td>
</tr>
<tr>
<td>Uzbekistan</td>
<td>16.4%</td>
<td>0.5%</td>
</tr>
</tbody>
</table>

Average carbon content in topsoil %, 2008

- The share of arable land is low
- Low carbon content also indicates a low level of soil fertility
- Over half the soil in Uzbekistan remains saline, and in some regions the share of saline soils may reach 95%
- The UN Stockholm Convention on Persistent Organic Pollutants has not been adopted yet
Share of forest cover in the total area
\%
2015

<table>
<thead>
<tr>
<th>Country</th>
<th>Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan</td>
<td>68.5</td>
</tr>
<tr>
<td>Malaysia</td>
<td>67.6</td>
</tr>
<tr>
<td>USA</td>
<td>33.9</td>
</tr>
<tr>
<td>Turkey</td>
<td>15.2</td>
</tr>
<tr>
<td>Uzbekistan</td>
<td>7.6</td>
</tr>
</tbody>
</table>

Share of forest cover in Uzbekistan (over time)
\%

<table>
<thead>
<tr>
<th>Year</th>
<th>Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>7.8</td>
</tr>
<tr>
<td>2010</td>
<td>7.7</td>
</tr>
<tr>
<td>2015</td>
<td>7.6</td>
</tr>
<tr>
<td>2030</td>
<td>10.0</td>
</tr>
</tbody>
</table>

Comments

- Notwithstanding the project of the International Fund for Saving the Aral Sea to create protective forest ranges on the Akkum ridge and the Akhantai section of the dry bottom of the Aral Sea with an area of 20 ha, the area of the forest cover in Uzbekistan is shrinking.
- The main reasons for the decrease in the share of forest cover are:
  - Legal and illegal logging
  - The spread of deserts
- Implementation of the project elaborated by the State Forestry Committee of the Republic of Uzbekistan for planting windbreak forests on the drained bottom of the Aral Sea will make it possible to increase the size of the forested area of Uzbekistan, which is forecast to reach 10% by 2030.

In 2018, the country's first waste treatment plant opened in Surxondaryo Region of Uzbekistan. The capacity of the plant equals approximately 182,000 tons of waste per year. The plant collects, sorts and processes more than 10 types of waste from Termez and Angora Regions, and also produces finished products based on them.

There are 221 SHW burial and disposal landfills in Uzbekistan. At present, 33.4 million tons of SHW have accumulated.

Penalties for environmental pollution exist in Uzbekistan, but they are ineffective.

**Comments**

- **SHW amount\(^1\) per capita, kg/year**
  - USA: 760 kg/year
  - Japan: 410 kg/year
  - Uzbekistan: 165 kg/year

- **Annual SHW amount, million t**
  - USA: 230 million t
  - Japan: 52 million t
  - Uzbekistan: 5 million t

- **SHW structure**
  - USA: 34% Food waste, 33% Paper, 20% Other
  - Japan: 24% Food waste, 37% Paper, 28% Other
  - Uzbekistan: 3.4% Food waste, 25% Paper, 50% Other

- **Penalties for contaminating protected natural areas, million**
  - USA: 5.0 million
  - Japan: 75.0 million
  - Uzbekistan: 45.0 million

**Source:** Uzbekistan Utilities Services Company, State Committee for Environmental Protection of the Republic of Uzbekistan

**Notes:**

1 - Solid household waste

Waste treatment plant in Surxondaryo Region
At present, hydropower accounts for 100% of the power generated by RES in Uzbekistan. Despite the vast potential from the use of solar and wind power, today natural gas, coal, and petroleum products are the main sources of electricity in Uzbekistan. In 2017, they accounted for 85.8% of the total.

In 1995–2015 electricity generated by RES grew by 3.3% annually. However, the share of RES in the total volume of generated electricity remains low compared to global best practice.

Uzbekistan plans to allocate from the state budget UZS 314.1 billion (USD 81 million) on the development of renewable energy sources in Uzbekistan and attract UZS 20.5 trillion (USD 5.3 billion) in the form of foreign investments by 2025.

Solar power is capable of covering 98% of the total technical potential of RES in the country. However, the use of only one source of electricity involves economic risks. Combined use of different RES is the best solution from the perspective of risk assessment, economic costs and efficiency.

Source: International Energy Agency, State Committee, Association of Alternative Fuels and Energy of Uzbekistan, analysis of the working group
Notes: 1 = Renewable energy sources
Key challenges

- Processing has still not become a driving force of the agricultural sector.
- Climate change is exacerbating the difficulties of agricultural production in semi-arid and desert areas, creating a threat for the population.
- The high risk is attributable to the lack of food safety: the absence of fully-fledged laboratories certified in line with international standards on food safety and quality control, and conformity with technical requirements.
- Valuable food products, such as fruit and vegetables (especially, organic products and certified organic products), are important exports. The lack of an effective food product safety system prevents Uzbekistan from maximizing participation in international trade.

Key findings

- Reform of the food product safety system in Uzbekistan to support complete harmonization with the EU and other key international markets is difficult. However, it is strategically important for the growth and prosperity of the country in view of its natural competitive advantage in the agribusiness sector. Implementation of significant structural reforms in legislative, statutory, institutional, and infrastructural areas and ongoing political support will be required.
- Pursuant to the Law of the Republic of Uzbekistan on Food Product Safety, responsibility for the monitoring of food product safety is allocated between several agencies, mostly controlled by and subordinate to the Ministry of Health, the Ministry of the Economy, the Ministry of Agriculture, and the Ministry of Water Resources. The roles and obligations of those institutions sometimes overlap, while there are also some clear gaps in the system.
- The current national institutional system of food product safety in the Republic of Uzbekistan consists of: (i) authorized state structures (Ministry of the Economy, Ministry of Agriculture and Reclamation, Ministry of Health, State Quarantine Inspection for Veterinary and Phytosanitary Safety, Uzstandard Agency); (ii) operators of the food industry (chemicals, drugs for animals, feeds and feed additives, primary production entities, finished products, trade, public nutrition, etc.); (iii) service providers (conformity assessment structures, including laboratories and suppliers of services for production quality control, private veterinary services, etc.)
- Regarding the state authorities, there are some systemic problems, such as (i) the lack of clear allocation and differentiation of functions between them; (ii) the lack of coordination and connection between them; (iii) insufficient financing; (iv) inadequate personnel recruitment system and the low qualifications of personnel; (v) low-performing technical equipment, including laboratory infrastructure; (vi) low performance discipline; (vii) corruption.
Impact of climate change

The goal of adapting to climate change should be a more sustainable agricultural sector. To accomplish this goal, the application of a Climate Proofing Tool and subsequent adjustments to production and processing in individual value chains is required.

Production safety and undernourishment

Lack of production safety in the Republic of Uzbekistan is seasonal in nature and is connected to demographic growth. One-third of the population of about 33 million people experience food shortages. The proposed measures include analysis of factors causing undernourishment and the development of preventive measures, focusing on the potential of existing production and supply chains.

Food product safety system

Comprehensive institutional reform in food product safety: Three groups of measures are proposed: establishment of agricultural aggregating companies, strengthening of the analytical and technical potential to ensure the safety and quality of food products at the national level, and the creation of a Food Alliance as a legal entity bringing together the state and private sectors.

Agricultural insurance

Insurance of agricultural microlending and an index-based insurance system can play a critical role in ensuring food safety and better tolerance of national agricultural production to climate change-related risks. Analysis of the most vulnerable chains and development of the appropriate arrangement has been proposed.

Agrochemical imports and transit management

Production of biogas and biodiesel, production of forage, grasslands for cattle breeding and strengthening organic production were defined as the main additional activity types for the development of the value chain.
Agricultural production and food product safety: the accession of the Republic of Uzbekistan to the World Trade Organization (WTO) in 2019 will require far-reaching reforms of technical regulation (standardization, conformity assessment) and metrology. The Law of the Republic of Uzbekistan "On the Fundamentals of Technical Regulation in Uzbekistan" and a new version of the Law of the Republic of Uzbekistan "On Ensuring Unity of Measurements," akin to the "technical constitution of the country," define the legal framework National Infrastructure of Quality of the Republic of Uzbekistan. The National Infrastructure of Quality (NIQ) means the uniform system of related activities for the development of technical requirements, both compulsory and voluntary, for the production and/or associated processes of design (including research), production, construction, assembly, set-up, storage, transportation, sale, operation, and utilization ("technical regulation facilities") pursuant to requirements of technical regulation and for metrology purposes.

Development of technical regulations is primarily lagging behind owing to the lack of appropriate institutions in the Republic of Uzbekistan capable of developing technical regulations on the basis of international standards.

Due to the requirements of the Customs Union, the Development Programs of Technical Regulations must be revised to take account of the application of the technical regulations of the Eurasian Customs Union in the Republic of Uzbekistan.

The Commission of the Customs Union has approved a series of decisions setting compulsory requirements on the access of products to the markets of countries of the Customs Union. These are uniform veterinary (veterinary-sanitary) requirements for products subject to veterinary control in the case of imports into the Customs Union; Uniform sanitary-epidemiological and hygienic requirements for products subject to sanitary-epidemiological oversight (control); and standards of different categories setting compulsory requirements for products subject to the compulsory assessment (confirmation) of conformity.

Requirements on compulsory tracing by manufacturers are formalized in the legislation of the countries of the Customs Union regarding staple foods and food products. Pursuant to the requirements of the Commission of the Customs Union, livestock products may only be imported into the Customs Union from third party farms or entities included in the Register of organizations and individuals engaged in production, processing, and/or storage.
Analysis of current issues on the primary production of raw materials for particular value chains

- In the area of nutrition, the government must cooperate with various international organizations to take measures that would entail a significant improvement in the state of nutrition of the population.

- Climate change has an adverse impact on the availability of water for the agricultural sector, where the high costs of source materials for primary production also jeopardize the relative stability of food production and supply. The success of agricultural production varies from region to region, and depends to a large extent on an increase in the number of extreme climate conditions, such as extended drought periods. To date, sustainable production and the provision of food resources may not be supported by proper management of all risks and implementation of the principles of a sustainable agricultural sector.

Brief description of the main issues

- Processing has still not become the driving force of the agricultural sector. The development priority of the processing industry is indisputable as that sector, as an integral part of the agricultural sector, forms real domestic demand for the production of specific types of agricultural products.

- The following factors hinder the development of value chains in the agricultural sector: (1) limited access to "cheap" loans; (2) "weak" marketing and the lack of profitable markets for agricultural products and processed goods that result in low purchase prices, low labor productivity, and low crop yield.

- The combination of semi-arid and desert areas, the dependence of the agricultural sector on irrigation and progressive climate changes mean that bad harvests can affect whole regions, posing a risk to the feeding of the population.

- Another risk is attributable to the lack of safety of food products: In the Soviet era the region was notorious for the excessive use of agrochemicals. After the collapse of the Soviet Union, use of agrochemicals decreased sharply. The agrochemicals used in those days were so-called persistent pollutants—that is, metabolites remain in the soil for many years and poison future crops. However, in recent years, use of agrochemicals has abruptly increased, and the origin (mainly imports from China), composition and use are not subject to control.

- No laboratories have been certified in line with international standards for the control of food safety and quality and conformity with technical requirements in the country. As a result, no research is conducted on food products in terms of background radiation, residual antibiotics, etc., and there has been an increase in the number of genetically modified and counterfeit goods, including dubious agricultural chemicals.

- Furthermore, there are still serious gaps and issues in the area of food product safety. "Safe" food is defined as food that meets the acceptable level of risk for consumer health. The current food product safety system in Uzbekistan, based on standards inherited from the Soviet Union, is complicated as different institutions share partially overlapping obligations, while monitoring institutions are weak and insufficient to ensure conformity with international standards.

- The safety of food products is essential in Uzbekistan. Valuable food products, such as fruit and vegetables, are important export goods—in other words, the lack of an effective system of food product safety prevents Uzbekistan from maximizing its involvement in international trade. Moreover, food product safety rules provide means for human protection from health risks connected with unsafe food.
**Brief description of the main issues**

Many associated issues in the area of food product safety were investigated within the framework of the FAO program/projects (such as the Program of Food Safety and Balanced Nutrition in SA (2014–2017); Strengthening the national monitoring system of agricultural crops, forecasting crop yield, and consultancy service for farmers that will be integrated in the Information System of Food Safety (GCP/EC). Increased risks at the primary production level are observed at the following stages: application of pesticides, use of animal-derived drugs, while the use of feed additives affect the health of animals. At the stage of production, storage and transportation of food products, the increased risk for safety of food products is connected with potential microbiological contamination from all sources; the production of finished food products; imports of food safety facilities; and the public nutrition system.

**Alternative solutions**

- Safety of alimentary and food products
- Resilience to climate change
- Development of the most vulnerable part of value chains.

**What should be done? Key aspects**

Possible measures:

- Analysis of the food safety level of households at national and delegated levels
- Multiple indicators (set of food safety indicators proposed by FAO/WFP/IFAD 2013)
- Assessment of changes in the food safety of households through the comparison of current and previous trends
- HFSA should be based on the same indicators
- Assessment of potential cause-and-effect relations between factors determining production safety
- Propose and implement appropriate counteracting measures

These measures correspond to the National Strategy of Sustainable Development (2021–2035), UN Framework Program for Providing Aid for Development Purposes (2017–2020), while GDP is a Strategic Plan (2020–2050) and facilitates the accomplishment of Millennium Development Goals 1, 3.
Infrastructure development

Alimentary and food safety system:
(challenge and possibility to improve economic development in Uzbekistan)

Four bodies to control the safety of food products:

• State Sanitary and Epidemiological Service (SES) at the Ministry of Health
• State Veterinary Service at the Ministry of Agriculture and Amelioration
• State Inspection for Plant Quarantine at the Ministry of Health and Amelioration
• State Agency for Standardization and Metrology, KG Standard Center at the Ministry of the Economy

Current events related to the anticipated accession of the Republic of Uzbekistan to the WTO will affect the plan to create an integrated food control system based on one agency. This agency will be responsible for the regulation of the food safety system and will promote improvements in the safety of food products, strengthen protection of consumer health in the Republic of Uzbekistan. In this case, food products may be produced and sold in the country without a special permit if they do not harm consumer health and meet the general standards set by the legislation on HACCP/ISO 220003. However, manufacturers, carriers, importers, and retail sellers will assume liability for products that they transfer for circulation. They will ensure and document the safety and quality of their services through the use of internal controls.
Suggested measures

1. Agricultural company that is aggregator

A commercial entity responsible for ensuring a five-level food safety system along the whole value chain supported by the safety program. The five-level food safety system is based on specifications, inspections, and information at five key checkpoints: fields, production/processing/facilities, transport, distribution warehouses, and kitchen/consumer.

1.1. The aggregator approach will ensure the following:

- Unlike other wholesale markets, farmers may sell large or small quantities of products through this sales channel.
- Farm products may preserve farm identity and be sold at local or regional level.
- The aggregator will work with farmers to provide technical support at farms, ensure harvest planning, and pre-production planning pursuant to market forecasts.
- The aggregator will serve as the marketing expert and distributor that will enable a farmer to spend more time on agriculture and decrease the marketing and distribution costs of an individual farmer.
- Aggregators and marketing cooperatives may be useful for procurements of packaging materials, labels, and marketing materials through group-wide procurements to decrease the costs of materials for an individual manufacturer.

1.2. Strengthen the analytical and technical potential for the safety and quality of food products (Complex Laboratory) at national level. A laboratory is the most important part of the chain responsible for analysis of food safety and quality. Due to numerous consumer concerns and the scope of food safety and quality issues, technical aid is often needed. Foodborne diseases usually arise due to incorrect handling, cooking, or storage of food products. The proper hygienic practice before, during, and after cooking may decrease the chances of becoming ill. Food product monitoring to ensure prevention of foodborne diseases is called food product safety. Foodborne diseases may also be caused by the large number of toxins that affect the environment. Preserving agents or drugs in food may also cause foodborne diseases.
Proposed measures

1.3. Human resources: the personnel of laboratories and inspectors will receive training on food product safety based on international food safety standards after the development of the required training methodology, timetable, program, materials, practical guidance, and standard operating procedures, starting from school. There will be an increase in the number of certified specialists in safe agriculture

1.4. A centralized information management monitoring center, laboratory, and group of auditors/inspectors for food product safety should be established to serve as the basis for implementation of the five-level food safety system in the country.

1.5. Establishment of the Food Alliance, bringing together the state and private sectors

Sustainability of food production and farming
Food Alliance certification is designed for agricultural entities, food industry entities and distributors that engage in:

- Protection, preservation, and improvement of the soil, water, the habitat of wild animals, and biodiversity.
- Savings on power, the reduction and treatment of waste
- Reduction in the use of pesticides and other toxic or dangerous materials.
- Support for transparent and traceable supply chains
- Support for safe and fair labor conditions
- Guarantee of the integrity of food products without the use of genetically engineered or artificial ingredients.
- The healthy and humane treatment of animals.
- Ongoing improvements to practices
Proposed measures

2. International Certification Standard Center

Original Food Alliance sustainability standard for farms.
- The crop farming operator covers fruit, vegetable and cereal crops, and seed farming.
- The livestock breeding operator covers beef, cattle and bison, sheep and goats, herbivorous animals, pigs, domestic fowl, eggs, and dairy products.
- The aquaculture operator covers fish, trout, carps and related fish, oysters, prawns, crayfish, and seafood.
- The forestry and greenhouse operator covers woody ornamental plants, annual plants, perennial plants, leaves of plants, flowering plants in pots and cut flowers.
- The food product processing operator covers packaging, processing, and distribution of facilities and resources.

3. Global climate change: agriculture is more resilient to climate change

Insufficient attention has been paid to climate change and its impact on agricultural production in the country at the level of national policy or by farmers. The first objective will be to increase awareness among the respective partnership organizations about the anticipated impact of climate change on water use in agriculture and advise them about appropriate adaptive measures. Cooperation with the agricultural crop and harvest forecasting monitoring project proposed by the EU/FAO (Annex 5) may serve as a good basis. The goal of the project is the creation of an Early Warning System (EWS) for the timely provision of information about hazards and the impact of weather on cattle breeding and grasslands.

Possible measures:
- Implement the EWS and deliver training on its use to monitor the climate in individual value chains in order to implement the appropriate adaptive measures
- Improve production technologies with a focus on the efficient use of irrigation water and rain water.
- Assist with approaches to drainage basins and practices for the protection, preservation, and management of land and water resources (water sources, protection of soil in upper catchment areas, recovery of grasslands, etc.)
- Train instructors (specialists on the dissemination of knowledge, suppliers of climate change services and sustainability practices)
- Provide consultancy services to politicians to improve the political and institutional environment and develop the potential to adapt to climate change.
- Assist with the exchange of knowledge about climate change and agriculture between practitioners and politicians.

Global climate change infrastructure: a special center may be established to coordinate services for isolated projects in order to mitigate risks associated with the threats of climate change, establish partnership relations and consolidate the fragmented actions of all interested donors in the country. The center could also manage the work of the digital system online.
Proposed measures

4. Weather index insurance schemes for agriculture

Insurance of agricultural microloans to assist adaptation to climate change

It is worth noting that insurance is a high-cost service that is more appropriate for extreme risks; therefore, it is advisable to combine such products as traditional insurance with index-linked insurance or a combination of insurance and incidental loans. First of all, it is important to promote a culture of credit and savings that would support the purchase of insurance. The World Bank has elaborated recommended Guidance “Weather Index Insurance for Agriculture: Guidance or Development Practitioners. The following set of measures may be implemented, adapted in line with the requirements of a specific country:

- Assessment of potential risks in the insurance scheme (insurance of the harvest, prices, etc.)
- Analysis and identification of variables that affect crop development that are tested and independently measured
- Availability and reliability of data on weather and climate necessary for indexation (potential cooperation with the Climatic Program of the World Bank, the harvest and crop yield forecasting monitoring project proposed by the EU/FAO (Annex 5)
- Comparison of harvest growth models with climate/weather models
- Development of an appropriate arrangement (private, private/public, cooperative) for the distribution of costs and expert analysis of the role of the state. On the one hand, index-linked insurance policies are expensive, which makes the involvement of the state compulsory; on the other hand, deficiencies in the state budget can make a new insurance scheme unreliable.
- Creation and testing of a pilot scheme (for a particular crop or subject to regional characteristics)
- Adjustment of legal and institutional frameworks to prepare for inclusion in the scheme
Years of unstable and slow growth demonstrate that the country cannot use economic integration to improve the well-being of the population: 34% of the country’s population still live below the poverty line, and the unemployment level, especially among women, is high. Moreover, the foreign trade deficit has constantly increased owing to unstable exports and dependence on imports of energy resources.

The slow progress is attributable to the country’s permanent dependence on agricultural and raw material resources, cash remittances and external aid. Economic development is also hampered by the low “survivability” of export relations, which curbs the ability of the country to unleash its growth potential. A decrease in the share of trade of components and details results in a decrease in participation in the international added value chain, and the low technological level of exports prevents the formation of production ties and cooperative effects that increase social and economic well-being.

However, the access of exporters to trade information about international standards and rules and permanent changes in the tariff and nontariff policies of countries that are trade partners is insufficient. Nevertheless, despite ongoing difficulties, owing to the country’s population (currently 33 million) some sectors of the economy may be developed that are competitive at an international level. Agriculture, due to high-quality agricultural crops, processing and livestock, consumer goods industry and tourism, has significant potential, in particular in the event of implementation of cutting-edge methods and technologies.
6. Value added chains: review of opportunities to expand the Program of Economic Development of Uzbekistan

Organic farming – "Ecological Farm"

Ecological farming is a high-quality objective in sustainable agriculture. Ecological farming is not the same as organic farming, although they have much in common, and they are not necessarily compatible. Ecological farming comprises all methods, including, but not limited to, organic farming, that restore ecosystem services, such as: prevention of soil erosion, intrusion and retention of water, capture of carbon in the form of humus, increase in biological diversity, etc. Many methods (full-cycle, atypical, cover crops, strip drilling, terrace growing, shelter belts, clipping grasslands, etc.) and technologies are used, enabling the preservation and restoration of the ecosystem of ground, water, and the environment.

The Academic Institute of Microbiology: innovative project for the production of biofertilizers for agriculture. JV Green Bio Tech LLC was established, and the production of biofertilizers that are optimal for the climatic zone of the country was launched. The program stipulates the organization of a site for an ecological farm and provides technologies with characteristics that guarantee higher crop yields and sustainable production as part of the project.

Production of feeds for cattle breeding

At present, the demand for feeds for livestock and fishery, such as prescribed balanced organic compound feeds based on local resources, is significantly higher than for existing feeds of inferior quality available at local markets.

Biodiesel production

Biodiesel is the most widespread biofuel in Europe. It is produced from oils or fats by transesterification and is a liquid whose composition is similar to that of fossil/mineral diesel fuel. In terms of the chemical composition, it consists of methyl (or ethyl) ethers of fatty acids (FAMEs). Raw materials for biodiesel production are animal fat, vegetable oil, soy, rape, Jatropha, Makhua, mustard, flax, sunflower, palm oil, hemp, field pennycress, Pongamia pinnata, and algae. At present, clear biodiesel (B100) reduces emissions up to 60% compared to second-generation B100 diesel fuel.

Biogas production

Biogas is produced as landfill gas (LFG) or digested gas. Anaerobic reactors that process agricultural waste or energy crops are often called biogas plants. It can be produced using anaerobic boiling pots. These plants can be fed with energy crops, such as corn silage or biodegradable waste, including sewage sludge and food waste. During the process, the sealed reservoir transforms biomass waste into methane, producing renewable energy that may be used for heating, electricity, and other operations where a conventional engine is used, for example, GE Jenbacher or Caterpillar gas engines. Other combustion engines, such as gas turbines, are suitable for transforming biogas into electricity and heat.

The organizations responsible include the Ministry of the Economy, the Ministry of Agriculture, and the Ministry of Health; the Council for Business Development and Investments, which provides a discussion platform between the state and the private sector; the Chamber of Commerce and Industry; business associations in advanced supply chains, especially in the agriculture and food industry; service providers in supply chains; consultancy bodies, R&D institutes; municipal and regional/district authorities; relevant organizations in civil society competent in national and local economic development and the green economy (economic club, ecological, consumer, and nongovernment organizations), and cooperatives. Private entities and service providers have already received some support from previous programs, while state entities have weak capabilities, in particular at municipal and regional levels.
Anticipated impact of new components

Adaptation measures for climate change will become an integral part of program support for sustainable agriculture. Sustainable agriculture principles will be implemented to save water resources and prevent soil erosion. This will result in preservation of soil fertility. Microinsurance loans will also be used. They will be provided to farmers as insurance against harvest losses in case of climate change. The food safety and quality program will become an important part of broader measures in the area of food safety, together with the development of rural districts designed to assist with the integration of climate change aspects in the development policy of the national economy.

- The anticipated results from implementation of the food product safety and food security program in the Republic are presented below
- Annual increase in the gross quantity of processed goods by UZS million
- Annual actual growth in the processing industry and agriculture
- Growth in the number of small and medium agricultural processing enterprises
- Growth in private investments in the industry
- Open marketing and consultancy centers in each district
- Creation of jobs in the processing industry
- Annual increase in tax revenues from the processing industry

Risk assessment

- Constant risk of political instability, including instability caused by the rapid progress of Islamization,
- Fragility of governmental structures and associated lack of continuity in the work and policy of the government.
- Threat of the resumption of political and ethnic disturbances in the regions

The success of work in the supply chain and promotion of exports will be contingent on external global and regional economic factors, in particular, the anticipated accession of Uzbekistan to the WTO. Businesses and industry in general have not been properly prepared for the consequences of Uzbekistan’s access to the WTO, which could have a significant impact on their competitiveness.

Ecologically sustainable development and the monitoring of climatic risks are new challenges for Uzbekistan. The current incentive system does not promote prevention. Greater ecological sensitization and in-depth work are required to convince political stakeholders that preventive measures are a necessary and more effective way of resolving ecological problems than to subsequently eliminate actual damage.

Measures related to the strengthening of monitoring and control of food product safety have a positive side effect, promoting the strengthening of fragile state institutes. The promotion of communications between the state and private sector and also society in bodies and organizations supported by the program is key.
Environment

Strategic options

1

Focus on reducing emissions and creating resource-saving production

- Introduce restrictions (limits) at state level in the form of emission and pollution permits for a certain enterprise, city as a whole, river basin, etc. (the standard is determined by industry-specific ministries and departments)
- Set public energy consumption targets from renewable sources for the economy, including in the transport sector;
- Develop environmental standards for products.

Examples of countries:

| Japan | China | USA |

- Control over the activity of each individual enterprise
- The norms established by the state may significantly exceed the regenerative capability of natural resources

2

Focus on the maximum permissible level of annual use of natural resources

Introduce restrictions at state level, whereby natural resources are used only within their regenerative capability

Examples of countries:

| France | Germany | Switzerland | The Netherlands |

- Due consideration of natural resource reserves and their regenerative capability mitigates the risk that the environment of a region of the country might be destroyed
- There is no incentive for the complete transition to resource-saving or environmentally sound production

Environmental control over all industries as a whole

Sources: Analysis of the working group

388
Uzbekistan is harmoniously improving each component of the Sustainable Development Goals, with a focus on the implementation of measures to control climate change, improve the water supply, develop the SHW management system, expand forest cover, resolve the Aral Sea crisis and make the transition to renewable energy.

- "Water of Uzbekistan" national project (introduction of modern technologies in water supply and irrigation systems, including the concreting of water channels, which reduces water losses by 30–40%)

- "Waste" national project (introduction of SHW processing complexes to recover heat or electricity for subsequent export; introduction of "green" tariffs: at the moment the technical potential of Uzbekistan in the field of RES is underutilized by 40%)

- Take comprehensive measures to ensure the localization, restoration, and improvement of the environmental condition in areas with a high level of environmental damage (the Aral Sea region, central Fergana region, Xorazm Region) and take restrictive state measures to eliminate the accumulated damage.

- Elaborate and implement complex measures for the fixation of moving sands on the drained bottom of the Aral Sea and in the Aral Sea region, ensuring landscape gardening of cities and settlements in the Aral Sea region.

- Involve state environmental agencies in the development of large projects with potential environmental consequences and risks.

- "Greening" of the population’s consciousness from preschool age.

- Develop a domestic and industrial waste recycling system.

### Figures

<table>
<thead>
<tr>
<th>Environment Performance Index (ranking)</th>
<th>2017</th>
<th>2035</th>
<th>CAGR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top 60</td>
<td>136th</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Population with access to drinking water:</th>
<th>2017</th>
<th>2035</th>
<th>CAGR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban</td>
<td>98%</td>
<td>100%</td>
<td>0.1%</td>
</tr>
<tr>
<td>Rural</td>
<td>81%</td>
<td>100%</td>
<td>1.2%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sustainable Development Goals Index</th>
<th>2017</th>
<th>2035</th>
<th>CAGR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water resources yield capacity (GDP/m³)</td>
<td>0.53</td>
<td>14.9</td>
<td>20.4%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Annual water intake for agricultural needs</th>
<th>2017</th>
<th>2035</th>
<th>CAGR</th>
</tr>
</thead>
<tbody>
<tr>
<td>90%</td>
<td>70%</td>
<td>-1.4%</td>
<td></td>
</tr>
</tbody>
</table>

### Investment

<table>
<thead>
<tr>
<th></th>
<th>by 2025</th>
<th>by 2030</th>
<th>by 2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>USD billion, cumulative</td>
<td>0.7–0.9</td>
<td>2.2–2.7</td>
<td>5.9–7.2</td>
</tr>
</tbody>
</table>

Sources: World Bank, State Statistics Committee, analysis of the working group.
**Environment**

### Key strategic initiatives

<table>
<thead>
<tr>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compile a climate change control budget according to UN recommendations</td>
<td>Take measures to reduce waste and the consumption of environmentally harmful materials</td>
<td>Change the approach to urban planning (create infrastructure for riding bicycles, creation of places for parking/charging electric vehicles, improvement of air quality)</td>
</tr>
<tr>
<td>Approve environmental training programs for educational institutions and foster environmentally responsible attitudes among the population</td>
<td>Analyze and implement best global practice in drip irrigation, including aeroponics, based on the successful experience of drip irrigation in Morocco, Israel, Turkey, and other countries.</td>
<td>Change the approach to building design (use of geothermal heat pumps to heat and cool buildings; design buildings to factor in solar radiation and minimize buildings overheating)</td>
</tr>
<tr>
<td>Develop and implement a set of measures to restore the Aral sea</td>
<td></td>
<td>Develop and implement a geoinformation system that includes the collection, storage, analysis, and graphic visualization of data</td>
</tr>
<tr>
<td>Develop anti-desertification and anti-drought measures</td>
<td></td>
<td>Implement modern water supply and irrigation systems applicable in the conditions of the Republic of Uzbekistan</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Plan and build waste treatment facilities to recover heat or electricity</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Take measures to ensure the involvement of state environmental agencies in the development of large projects with potential environmental consequences and risks</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Develop environmentally advantageous industry sectors</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Develop water desalinization technology</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Develop and implement systems to monitor the quantity and quality of water consumed and also the quality of the soil</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Develop and implement comprehensive measures to ensure the localization, restoration, and improvement of the environment in the Aral Sea area</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Modernize of services aimed at monitoring and protecting the Republic of Uzbekistan from cross-border environmental pollution</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Take measures to strengthen cooperation with the global community to resolve environmental problems</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Develop and implement environmentally sound and resource-efficient technologies (alternative energy sources)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Introduce innovative technologies and approaches to the creation of forest plantings, the cultivation of planting material, improvement of pastures, adaptation to climate change, etc.</td>
</tr>
</tbody>
</table>

**Sources:** Analysis of the working group
### Key strategic initiatives

#### 2025
- Compile a climate change control budget according to UN recommendations
- Approve environmental training programs for educational institutions and foster environmentally responsible attitudes among the population
- Develop and implement a set of measures to restore the Aral sea
- Develop anti-desertification and anti-drought measures

#### 2030
- Take measures to reduce waste and the consumption of environmentally harmful materials
- Analyze and implement best global practice in drip irrigation, including aeroponics, based on the successful experience of drip irrigation in Morocco, Israel, Turkey, and other countries.

#### 2035
- Change the approach to urban planning (create infrastructure for riding bicycles, creation of places for parking/charging electric vehicles, improvement of air quality)
- Change the approach to building design (use of geothermal heat pumps to heat and cool buildings; design buildings to factor in solar radiation and minimize buildings overheating)
- Develop and implement a geoinformation system that includes the collection, storage, analysis, and graphic visualization of data
- Implement modern water supply and irrigation systems applicable in the conditions of the Republic of Uzbekistan
- Plan and build waste treatment facilities to recover heat or electricity
- Take measures to ensure the involvement of state environmental agencies in the development of large projects with potential environmental consequences and risks
- Develop environmentally advantageous industry sectors
- Develop water desalinization technology
- Develop and implement systems to monitor the quantity and quality of water consumed and also the quality of the soil
- Develop and implement comprehensive measures to ensure the localization, restoration, and improvement of the environment in the Aral Sea area
- Modernize of services aimed at monitoring and protecting the Republic of Uzbekistan from cross-border environmental pollution
- Take measures to strengthen cooperation with the global community to resolve environmental problems
- Develop and implement environmentally sound and resource-efficient technologies (alternative energy sources)
- Introduce innovative technologies and approaches to the creation of forest plantings, the cultivation of planting material, improvement of pastures, adaptation to climate change, etc.

Sources: Analysis of the working group
4. Development of technology and innovations

Concept of the Development Strategy of the Republic of Uzbekistan until 2035
Science, technology, and innovations: Development of technology and innovation
Key challenges

- Problems with the availability of highly educated personnel in the labor market, particularly in the field of IT
- Inefficient research financing system, as well as reduced financing
- Problems with commercialization of inventions
- Low level of development of innovation infrastructure (in particular, free economic zones [FEZs] and business incubators)
- Interference of the state in business affairs
- Underdeveloped telecommunications infrastructure
- Problems with statistical data
- Basic science is fragmented and isolated from the global research community

Key findings

- Innovative development of the Republic of Uzbekistan is at the initial stage; according to most indicators of innovative development, Uzbekistan lags far behind the leading countries
- Small share of innovative enterprises in the total number of companies (0.34% of the total number)
- Uzbekistan is a net importer of high-tech and science-intensive products, but their share in total imports is only 10.8%
- The current state of government regulation does not promote innovation – Uzbekistan holds low positions in international ratings such as the Doing Business Index, Economic Freedom Index, and Corruption Perceptions Index
- Poor development of basic science: Uzbekistan performs 0.02% of world research, with low citation rates
- Research scientists make up a small portion of the employed population (0.21%), and their absolute number is also small – 31,900 people
- Problems with intellectual property protection

Number of innovative companies

Number of innovative enterprises and share of new innovative enterprises, number and %

<table>
<thead>
<tr>
<th>Year</th>
<th>New innovative enterprises</th>
<th>Share of innovative companies in the total number of companies</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>338.0</td>
<td>0.11%</td>
</tr>
<tr>
<td>2013</td>
<td>842.0</td>
<td>0.32%</td>
</tr>
<tr>
<td>2014</td>
<td>1,601.0</td>
<td>0.6%</td>
</tr>
<tr>
<td>2015</td>
<td>2,134.0</td>
<td>0.78%</td>
</tr>
<tr>
<td>2016</td>
<td>2,374.0</td>
<td>0.85%</td>
</tr>
</tbody>
</table>

Financing of innovation in the Republic of Uzbekistan

R&D expenditures, USD billion, 2015

<table>
<thead>
<tr>
<th>Country</th>
<th>Expenditures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan</td>
<td>144.3</td>
</tr>
<tr>
<td>Germany</td>
<td>97.1</td>
</tr>
<tr>
<td>UK</td>
<td>49.1</td>
</tr>
<tr>
<td>Sweden</td>
<td>16.2</td>
</tr>
<tr>
<td>Uzbekistan</td>
<td>0.1</td>
</tr>
</tbody>
</table>

- R&D financing in Uzbekistan amounted to USD 133 million in 2015
- In developed countries, R&D funding is ten times greater: from USD 16.2 billion in Sweden to USD 599 billion in the United States

Sources: State Statistics Committee of the Republic of Uzbekistan, World Bank, National Science Foundation (US), World and National Economy journal, analysis of the working group.
Science, technology, and innovation:

Methodology for assessing the state of science, technology, and innovation

1. Companies' potential
   - Level of production development
     - Production of medium- and high-tech goods
   - Technology level
     - R&D expenditures
     - R&D personnel
   - New developments
     - Patents
     - Trademarks
     - Industrial designs

2. Human capital
   - Education
     - Access
     - Quality
   - Workforce
     - Availability
     - Education
     - Demand
   - Basic science
     - Intensity
     - Quality

3. Financing of innovation
   - Investment climate
     - Investment freedom
   - Traditional financing
     - Access to lending
   - Venture financing
     - Access to venture financing

4. Infrastructure
   - Basic infrastructure
     - ICT
   - Innovation infrastructure
     - Traditional industrial infrastructure
     - Commercialization infrastructure

5. Government regulation
   - Specific regulation
     - Intellectual property protection
     - Standards and certifications
   - General regulation
     - Property rights protection
     - Corruption
     - Judicial system
     - Quality of state management

6. Demand
   - State demand
     - State procurement
   - Corporate demand
     - Corporate demand
   - Consumer demand
     - Consumer demand

Sources: international benchmarking, analysis of the working group
By the absolute indicator of the total number of research scientists, Uzbekistan is at a comparable level with Ireland (22,000) and Hungary (25,000) with its 31,900 people. However, in terms of the relative size of the share in the employed population, Uzbekistan (at 0.21%) lags behind the comparable countries: in Ireland, the share is 1.04%, while in Hungary it is 0.56%.
Science, technology, and innovation:

Share of research scientists in the economy, 2016*

Uzbekistan lags far behind the leading countries in terms of both share and patent activity, while the number of active patents is decreasing

• In the Republic of Uzbekistan, there are 17.1 patent applications per 1 million people and 30.2 current patents per 1 million people

Indicators of patent activity in the Republic of Uzbekistan, 2012 – 2016

Number of patent applications and share of approved patents

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Patent Applications</th>
<th>Share of Approved Patents</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>510</td>
<td>65.7% (34.3%)</td>
</tr>
<tr>
<td>2013</td>
<td>557</td>
<td>67.0% (33.0%)</td>
</tr>
<tr>
<td>2014</td>
<td>568</td>
<td>68.5% (31.5%)</td>
</tr>
<tr>
<td>2015</td>
<td>507</td>
<td>69.8% (30.2%)</td>
</tr>
<tr>
<td>2016</td>
<td>555</td>
<td>70.1% (29.9%)</td>
</tr>
</tbody>
</table>

• With a slight increase in the number of patent applications (2.1% per year), the share of approved patents decreased from 34.3% to 29.9%

Number of current patents

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Patents</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>1,016</td>
</tr>
<tr>
<td>2013</td>
<td>1,155</td>
</tr>
<tr>
<td>2014</td>
<td>1,141</td>
</tr>
<tr>
<td>2015</td>
<td>1,081</td>
</tr>
<tr>
<td>2016</td>
<td>977</td>
</tr>
</tbody>
</table>

• The number of current patents dropped to 977 patents in 2016

Sources: WIPO, World Bank, analysis of the working group
Despite a positive trend in the number of applications and valid trademarks, Uzbekistan lags behind competitor countries.

In the Republic of Uzbekistan, there are 160.3 applications for trademark registration per 1 million people and 615.4 valid trademarks per 1 million people.

Note: * or last available year (until 2014)
Sources: World Bank, Ministry of Innovation Development of the Republic of Uzbekistan, analysis of the project team
Despite a positive trend in the number of applications and valid trademarks, Uzbekistan lags behind competitor countries.

### Number of applications for trademark registration and share of approved applications

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of applications</th>
<th>Share of approved applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>5,096</td>
<td>17.7%</td>
</tr>
<tr>
<td>2013</td>
<td>4,625</td>
<td>100.9%</td>
</tr>
<tr>
<td>2014</td>
<td>4,817</td>
<td>11.0%</td>
</tr>
<tr>
<td>2015</td>
<td>5,094</td>
<td>10.4%</td>
</tr>
<tr>
<td>2016</td>
<td>5,192</td>
<td>23.9%</td>
</tr>
</tbody>
</table>

- With a slight increase in the number of applications (0.5% per year), the share of approved applications decreased to 76.1%.

### Number of existing trademarks

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of existing trademarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>15,302</td>
</tr>
<tr>
<td>2013</td>
<td>16,421</td>
</tr>
<tr>
<td>2014</td>
<td>17,967</td>
</tr>
<tr>
<td>2015</td>
<td>18,852</td>
</tr>
<tr>
<td>2016</td>
<td>19,930</td>
</tr>
</tbody>
</table>

- The number of valid trademarks is increasing by 6.8% per year.
In the Republic of Uzbekistan, there are 7.1 applications for registration of industrial designs per 1 million people and 2.8 registered industrial designs per 1 million people. The number of applications for registration of industrial designs is growing, but the number of registrations is unstable.

In the Republic of Uzbekistan, there are 7.1 applications for registration of industrial designs per 1 million people and 2.8 registered industrial designs per 1 million people.

Sources: WIPO, World Bank, analysis of the project team
Science, technology, and innovation:

Indicators of industrial design registration activity in the Republic of Uzbekistan, 2012–2016

The number of applications for registration of industrial designs is growing, but the number of registrations is unstable

**Number of applications for registration of industrial designs**

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>179</td>
</tr>
<tr>
<td>2013</td>
<td>174</td>
</tr>
<tr>
<td>2014</td>
<td>193</td>
</tr>
<tr>
<td>2015</td>
<td>238</td>
</tr>
<tr>
<td>2016</td>
<td>230</td>
</tr>
</tbody>
</table>

The number of applications for registration of industrial designs increased by 6.5% from 2012 to 2016.

**Number of registrations of industrial designs**

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Registrations</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>110</td>
</tr>
<tr>
<td>2013</td>
<td>147</td>
</tr>
<tr>
<td>2014</td>
<td>89</td>
</tr>
<tr>
<td>2015</td>
<td>138</td>
</tr>
<tr>
<td>2016</td>
<td>91</td>
</tr>
</tbody>
</table>

The number of registrations of industrial designs decreased by 4.6% from 2012 to 2016.

The number of registrations of industrial designs is unstable and varies from 90 to 150.

Sources: WIPO, World Bank, analysis of the project team
Development of basic science

Poor development of basic science: Uzbekistan performs only 0.02% of world research, with low citation rates

Uzbekistan's share in the number of publications and citations of scientific papers, 2016

- Uzbekistan performs 0.02% of the world's scientific research
- The number of citations of Uzbek research is even lower – 0.01% of world citations

Scientific paper citation indices, 2016

Citation indices of Uzbekistan: 1.06 citations per paper, whereas the median for the reference group is 3.26 citations; Hirsch index* is 83, whereas the median is 396

Note: * Hirsch index is a quantitative measure of a country's productivity based on the number of publications and the number of citations of those publications (a higher value means higher productivity)

Sources: Scimago Journal & Country Rank, Scopus, analysis of the working group
Access to education, especially higher education, lags behind. This leads to a lack of people with higher education and, as a result, to a lack of highly qualified personnel.

- In most countries, the level of access to secondary education reaches 100% and above, while in Uzbekistan it is 93%.
- The level of access to higher education in Uzbekistan is the lowest in the reference group: 9.2%.

Share of the population over age 25 with higher education* in the group of reference countries

- In Uzbekistan, 15.8% of the population over 25 years old have higher education (bachelor's, master's, doctoral degree, or similar).
- According to this indicator, Uzbekistan is in the 4th quartile of the countries of the reference group.

Note: * data for 2016; in the absence of data, data for previous years was used (up to 2014 inclusive) ** If the indicator value is above 100%, it is shown as 100% on the graph

Sources: UNESCO, World Bank, analysis of the working group
In 2015, Uzbekistan had the lowest share of R&D expenditures among the leading countries in innovative development, though the trends were positive.

Level of innovative development according to the share of R&D expenditures in GDP in 2015 and the average annual growth rate (2011–2015)

- The share of R&D expenditures in GDP in Uzbekistan was 0.2%; the annual growth rate was 2.3%.
- The latest available data on the share of R&D expenditures in GDP is for 2015; the number of countries with available data is 39.

Sources: World Bank, analysis of the working group.
The volume and structure of R&D expenditures from traditional sources (government and business) differ significantly from developed countries.

R&D expenditures, USD billion, 2015

- R&D financing in Uzbekistan amounted to USD 133 million in 2015
- In developed countries, R&D funding is ten times greater: from USD 16.2 billion in Sweden to USD 599 billion in the United States

Structure of R&D expenditures, USD million, 2015–2013*

- In the USA, companies are the main source of R&D financing, and government funds make up only 23%
- At the initial stage of innovative development, R&D is stimulated through state funds – like in the Republic of Uzbekistan (59%)

Note: * Data on the Republic of Uzbekistan for 2013, on the USA for 2015

Sources: World Bank, National Science Foundation (US), World and National Economy journal, analysis of the working group
Science, technology, and innovation:

Venture financing in international practice (2017)

There is no venture financing in Uzbekistan, but the Fund to Support Innovative Development and Ideas has been established, and tax incentives were introduced for venture funds.

Volume of venture financing in North and South America
USD billion

<table>
<thead>
<tr>
<th>Year</th>
<th>Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>83</td>
</tr>
<tr>
<td>2016</td>
<td>76</td>
</tr>
<tr>
<td>2017</td>
<td>88</td>
</tr>
</tbody>
</table>

Volume of venture financing in Europe
EUR billion

<table>
<thead>
<tr>
<th>Year</th>
<th>Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>14</td>
</tr>
<tr>
<td>2016</td>
<td>15</td>
</tr>
<tr>
<td>2017</td>
<td>19</td>
</tr>
</tbody>
</table>

Venture financing in Uzbekistan

- There is no data on the existence of venture funds or venture investments in Uzbekistan.
- According to the Ministry of Innovative Development, Uzbekistan ranks 92nd in the Global Innovation Index in terms of venture capital transactions.
- In 2018, the Fund for Support of Innovative Development and Ideas was established under the auspices of the Ministry of Innovative Development of the Republic of Uzbekistan.
- No information is available on the initial results of the fund’s activities or on the volume of planned investments.
- Measures are taken to stimulate venture activity: in Uzbekistan, venture funds created to co-finance high-tech entrepreneurial startups are exempt from all types of taxes and mandatory payments until 1 January 2023.
- The investment climate is characterized as difficult; in particular, Uzbekistan has 0 points and occupies last place in the "Investment Freedom" section according to the Economic Freedom rating.

Venture financing is at the initial stage of development in the Republic of Uzbekistan.

Sources: Statista, data from open sources, analysis of the project team.
Infrastructure development

Infrastructure is characterized by a low degree of development

Infrastructure for innovation development

Basic infrastructure

Components:
• Access to information and communication technologies (119th place in GII*)
• Use of ICT (90th place in GII*)

Problems:
• Insufficient broadband internet coverage
• Low mobile internet geographic coverage

Level of development: Low

ICT

Innovation infrastructure

Components:
• Electricity generation (79th place in GII*)
• Logistics performance (116th place in GII*)

Components:
• Traditional industrial clusters
• Research institutes, research technological institutes, etc.

Problems:
• Shortage of electricity in some regions
• Low maneuvering capacity (approx. 6%) based on thermal energy
• High level of losses in the old distribution networks
• High cost of logistics

Level of development: Below average

Other basic infrastructure

Traditional industrial infrastructure

Commercialization infrastructure

Components:
• Free economic zones (18 FEZs in 11 regions)
• Technology parks (1 active = Yashnabad technology park)
• Special small industrial zones (in 8 regions of Uzbekistan, 306 ha)
• Business incubators, etc.

Problems:
• High level of depreciation of fixed assets
• Outdated equipment
• Staff shortage

Level of development: Medium

Components:
• Traditional industrial clusters
• Research institutes, research technological institutes, etc.

Problems:
• Small number of residents and, as a result, low rates of job creation
• Low interest from foreign investors

Level of development: Low

Sources: GII, Ministry of Innovation Development data, data from open sources, analysis of the working group
Note: * Positions in GII are given according to the data of the Ministry of Innovation Development presented at Uzbekistan 2035 Forum
Science, technology, and innovation:

Uzbekistan in international ratings

Current government regulation does not contribute to innovation development

<table>
<thead>
<tr>
<th>Index of Economic Freedom</th>
<th>Corruption Perceptions Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>2017</td>
</tr>
<tr>
<td>152 out of 180</td>
<td>157 out of 180</td>
</tr>
</tbody>
</table>

The Republic of Uzbekistan is not represented in important ratings: International Property Rights Index, ICT Development Index, Global Innovation Index, Ease of Doing Business Index, Bloomberg Innovation Index, Global Competitiveness Report

Intellectual property protection and copyright

- Main regulatory documents: the Law on Trademarks, Service Marks and Appellations of Origin; the Law on Copyright and Related Rights; and the Law on Inventions, Utility Models, and Industrial Designs
- The Intellectual Property Agency is a member of WIPO
- The number of cases related to intellectual property is increasing (22 cases related to intellectual property and their rights were considered in 2011, and more than 80 cases in 2017)
- Open sources provide information that there is unfair competition in intellectual property in the country, in particular, foreign companies cannot enter the Uzbek market due to the illegal takeover of brands by national companies (for example, the Turkish company Kalekim)

- The Ministry of Innovation Development of the Republic of Uzbekistan was established in 2017 to establish state work in the field of innovation support
- Active work on the introduction of E-Government is performed

Sources: data of the relevant indices, data from open sources, analysis of the project team
Science, technology, and innovation:

Export and import of high-tech and science-based products

Uzbekistan is a net importer of high-tech and science-intensive products, but their share in total imports is only 6.2%

Trade balance* for high-tech and science-based products**

<table>
<thead>
<tr>
<th>Year</th>
<th>Export and Import Balance</th>
<th>Share of High-Tech Imports in Total Imports</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>-611.0</td>
<td>5.8%</td>
</tr>
<tr>
<td>2012</td>
<td>-518.2</td>
<td>4.4%</td>
</tr>
<tr>
<td>2013</td>
<td>-583.4</td>
<td>4.5%</td>
</tr>
<tr>
<td>2014</td>
<td>-774.9</td>
<td>6%</td>
</tr>
<tr>
<td>2015</td>
<td>-718.6</td>
<td>6%</td>
</tr>
<tr>
<td>2016</td>
<td>-716.3</td>
<td>6.2%</td>
</tr>
</tbody>
</table>

- Uzbekistan shows a **negative trade balance** for high-tech and science-intensive products, while the share of high-tech imports increased slightly

Share of high-tech and science-based products** in imports

<table>
<thead>
<tr>
<th>Country</th>
<th>Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>Korea</td>
<td>28.7%</td>
</tr>
<tr>
<td>Japan</td>
<td>24.5%</td>
</tr>
<tr>
<td>million</td>
<td>22.4%</td>
</tr>
<tr>
<td>Germany</td>
<td>17.8%</td>
</tr>
<tr>
<td>UK</td>
<td>17.0%</td>
</tr>
<tr>
<td>Uzbekistan</td>
<td>6.2%</td>
</tr>
</tbody>
</table>

- High-tech and science-intensive products make up about 20% of imports in developed countries

Sources: UN Comtrade, State Statistics Committee of the Republic of Uzbekistan, analysis of the working group
Note: * with the exception of natural uranium (code 525.11 according to SITC Rev. 4) ** According to Eurostat classification
The share of Uzbekistan’s high-tech exports amounted to 0.2%, or USD 27 million.
Science, technology, and innovation:

Proportion of the population living in extreme poverty (a)

Consumer demand for high-tech products is limited by low incomes of the population

- Uzbekistan ranks 125th in terms of GDP based on PPP per capita (of 185 countries) at the end of 2017

Note: (a) = extreme poverty is defined as income of less than $1.90 per person per day
Sources: World Poverty Clock, Food Security Index, Gazeta.uz
Science, technology, and innovation:

International experience: technology transfer model in Singapore

Singapore is one of the global leaders in the development of innovation and ranks 5th place in the Global Innovation Index 2018. A successful technology transfer model is one of the factors that made Singapore a leader in innovation.

Technology Transfer Network offices

Description:
• Founded in 2008 as an initiative of eight Singapore universities
• The key goals are:
  – support for filing and updating patents
  – training of professionals in the field of technology transfer
  – joint marketing
  – development of leading practices in technology transfer

Performance results:
• As of 2015, membership extended to 25 organizations, including those from other Asian countries, USA, Canada, Europe, and New Zealand

Online catalog in technology universities (technology offer database)

Description:
• Keeps accounts of technology developed in the universities
• The technology is sent selectively for assessment to different companies
• Companies may then request a business plan based on the technology they are interested in and may purchase a license

Performance results:
• The instrument allows annual provision of a number of exclusive licenses to companies that will be able to use the development in the best possible way

Corp Lab@University Scheme

Description:
• The program allows foreign and local companies to request university research studies
• Through the program, companies may also open their own laboratories in Singapore’s higher educational institutions

Performance results:
• The first collaboration was the Rolls-Royce laboratory on the campus of Nanyang Technological University
• Plans are to finish 32 joint research projects within 5 years

Sources: data from open sources, analysis of the working group
Science, technology, and innovation:

Prerequisites for ICT development

In both developed and developing economies, the role of modern, affordable, high-speed information channels for digital communications plays a significant role in the development of the economy as a whole. In this regard, there are a number of circumstances that affect the development of the industry in the future.

- In Central Asia, there are no technically serious, large data centers in the TIR3+ category. Existing data centers and communication channels are low-power and unreasonably expensive, and do not meet the real needs of the state, industry, and private consumers.
- Uzbekistan is equidistant from the largest active communication nodes of the Internet (China (Shanghai), Europe (Frankfurt, Amsterdam), Middle East).
- Uzbekistan occupies a strategically advantageous geographical position in Central Asia and is a key regional player.
- In Uzbekistan (as well as in other countries of the region) there is an urgent need to gain access to high-speed communication channels.

Creating a large data center in the Republic of Uzbekistan will allow the state to occupy a temporarily vacant niche of the largest regional information hub. The availability of high-tech means of processing and storing data, modern high-speed communications will ensure effective modernization, digitization of the economy and government as well as allow the export of ICT services to surrounding countries.

The possibility of accelerated development of the ICT sphere is being addressed by serious administrative and organizational decisions on reorganizing the management of the industry and how the economy as a whole is monitored, simultaneously attracting large investors (including in the form of PPPs); this requires a special preferential status of the main investors in the industry, specialized enterprises, and a dedicated group of highly qualified specialists in the next 10-15 years. The task of creating the largest regional information "hub" should be achieved in stages; only in this case can we eliminate the accumulated technological gaps in a relatively short time.
Science, technology, and innovation:

The vision of ICT development

Establishment of the legal and regulatory framework

- Development and adoption of a set of regulations and by-laws to ensure the development of the ICT sector as a whole, protection of investment in the industry, strict legal regulation of interaction between providers and users
- During the development of legal norms, it is necessary to limit the functions of state bodies to strictly regulatory and control functions, making it impossible for them to use modern information technologies and cyber-security to restrict the introduction and development of modern high technologies with licenses and other permits

Development of basic infrastructure

- Laying of new trunk fiber-optic communication lines (international and domestic) with at least triple redundancy in the three largest traffic nodes: European (Frankfurt-Amsterdam), Asian (Shanghai), and Middle East
- Channel-forming equipment on communication lines implies that at the first stage of the project the potential throughput capacity is 60-70% of the laid design capacity, with a gradual expansion of throughput through reengineering, taking into account the latest technological developments
- Simultaneous construction in the Republic of Uzbekistan of three equally powerful data centers, backing up each other’s work, each of which must meet at least the TIR3+ standard
- The planned capacity of the channels for traffic and the data center for the storage and processing of information is measured, respectively, in hundreds of terabytes and petabytes, which is orders of magnitude higher than the current figures, but meets modern technological requirements of the market and government

R&D and ICT human resources policy

- Active personnel training of specialists needed to implement modern technological solutions and their later technical support, including the organization of special departments in specialized universities with the prospective creation of their own scientific and practical school
- Realization of close connections between special departments of universities and operating enterprises at the stage of assessing theoretical and practical knowledge, conducting internships for students, and subsequent competitive and objective selection of talented and hardworking students, with the guaranteed provision of well-paid jobs in Uzbekistan for graduates with the highest level of competence

Information and cyber-security as part of the state security strategy

- Translation of all republic-wide digital communications to IPv6 addressing with mandatory full-fledged implementation at basic data centers and with the largest providers of SORM2-3, LAVINA, etc.
- Development and implementation of a classification system of strategic importance and degree of protection of objects, a system of requirements for public and private objects according to the degree of their strategic importance in the structure of the economy in order to ensure their information security and resistance to cyber attacks
- Creation and implementation of a proprietary system platform (OS) in all government structures with the goal of guaranteed protection against leaks of state, scientific, technological, and particularly important commercial information
**Science, technology, and innovation:**

**Strategic options**

1

**Uzbekistan is an importer of new technologies**

*Uzbekistan increases its GDP at the expense of traditional industries. Implementation and development of technologies are carried out by foreign experts, which has no impact on the development of science and R&D in the country*

- Possibility of using advanced technologies
- Lack of motivation to develop science
- Lack of long-term incentives for advanced training of staff
- Lack of incentives for innovative development

The current situation is maintained

2

**Uzbekistan is a part of global innovation development**

*Most technologies are imported. Uzbekistan actively invests and creates new technologies in some industries (for example, traditional ones)*

- Increased labor productivity in key industries
- Uzbek companies join global supply chains
- Possibility of applying technology spin-off models for the development of adjacent industries
- Investments of private companies in applied technology
- The current profile of industries will not fully match global growth trends
- Multiple sectors of the economy (services) will need imported technologies

Innovative leadership in expert areas

3

**Uzbekistan is the world’s innovation center**

*Innovation development in all sectors of the economy. Investments in the development of skills and search for specialists. Global R&D center*

- Ability to launch SMEs quickly, with long-term effect of support
- Need for significant investment in innovative development
- Lack of qualified personnel to rapidly develop advanced technologies
- Lack of developed high-tech production facilities for testing innovation

Investments in the development of skills, including nonpriority ones

Sources: data from open sources, analysis of the working group
Science, technology, and innovation:

Uzbekistan is an innovation hub in industries that are locomotives of economic growth. Most technologies are imported. In certain industries (e.g., traditional industries), Uzbekistan actively invests in the creation and development of new technologies:

- Renovation and construction of telecommunications infrastructure, including broadband.
- Creation of a development and support system for basic research, and reformation of the higher education system.
- Stimulation of private financing for the funding of educational institutions, in particular targeted scholarship programs and endowment funds.
- Increased R&D financing, including development of venture financing of startups with participation of international investment funds.
- Involvement of foreign companies (South Korean, Japanese, German, etc.) in creating R&D centers to develop internal skills.
- Development of private education (focus on universities) as well as recruitment of world renowned experts, in particular to develop technical higher education.
- Protection of intellectual property rights: combating piracy, plagiarism, and the copying of international trademarks.
- Renovation and creation of innovative infrastructure for commercialization in each region of Uzbekistan (technology parks, business incubators, FEZs).
- Tax and customs benefits for innovation centers (10+ years for long-term investment).
- Creation of a technology transfer system.
- Popularization of science, as well as promoting the study of the sciences in English.

<table>
<thead>
<tr>
<th>Main areas of development</th>
<th>Main areas to undergo changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Telecommunications infrastructure</td>
<td>Innovative development</td>
</tr>
<tr>
<td>Financing</td>
<td>Human capital</td>
</tr>
<tr>
<td>R&amp;D centers</td>
<td>Demand</td>
</tr>
<tr>
<td>Education</td>
<td>Intellectual property rights</td>
</tr>
<tr>
<td>Intellectual property rights</td>
<td>Financing of innovation</td>
</tr>
<tr>
<td>Commercialization</td>
<td>Infrastructure</td>
</tr>
<tr>
<td>Benefits</td>
<td>Government regulation</td>
</tr>
</tbody>
</table>

**Target vision 2035**

- R&D expenditures: 0.2% in 2017, 1% by 2035.

**Global Innovation index (rating position)**: - in 2017, Top 50 by 2035.

**Investment USD billion, cumulative**:

- By 2025: 12.7-15.6
- By 2030: 20.5-25.1
- By 2035: 50.9-62.2

**Figures**

<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global Innovation index (rating position)</td>
<td>-</td>
<td>Top 50</td>
</tr>
<tr>
<td>R&amp;D expenditures</td>
<td>0.2%</td>
<td>1%</td>
</tr>
</tbody>
</table>

Sources: State Statistics Committee of the Republic of Uzbekistan, World Bank, National Science Foundation (US), World and National Economy journal, analysis of the project team.
Science, technology, and innovation:

Target vision 2035

2025
- Development of telecommunications for business, government, and people
- Drafting of legislation on intellectual property rights
- Upgrading of the telecom infrastructure with the priority on broadband networks
- Creation of state information systems
- Increasing the attractiveness of the IT industry
- Formation of the rating of innovative companies in Uzbekistan
- Expansion of state grant programs to support science (in particular basic science)
- Involvement of foreign companies in creating R&D centers
- Creation of private education and formation of new universities, as well as recruitment of world renowned experts, in particular to develop technical higher education
- Creation and reformation of innovation infrastructure in each region of Uzbekistan (FEZs, innopolises, innovation centers, business incubators, etc.)
- Introduction of additional measures to provide tax and customs benefits to innovation centers
- Creation of experience expansion services: direct collaboration of scientists and students with farmers
- Creation of a system for accelerated training of personnel
- Implementation of an ethical foundation of education
- Update of the system of research institutes and research technological institutes
- Replacement of outdated national standards with international ones
- Development of the Fund to Support Innovative Development and Ideas: increased financing and consulting work
- Protection of intellectual property rights: combating copying and plagiarism, piracy, and copying of international trademarks

2030
- Creation of an online platform to provide grants in support of science
- Creation of technology transfer offices
- Creation of an integrated educational system to establish links between fundamental science represented by integrated universities and research institutes/technical institutes and applied technologies represented by R&D Departments of the companies.
- PPP development
- Creation of a state management system taking into account all IT technologies
- Creation of educational centers of large companies in Uzbekistan
- Creation of domestic data centers in Uzbekistan
- Development of venture financing
- Development of high-tech and science-intensive export
- Use of blockchain technology in government administration
- Expansion of methods for financing R&D and startups
- Creation of regional innovation hubs
- Development and implementation of measures for state stimulation of demand for innovative local products, including through a government order to promote development of high-tech enterprises
- Comprehensive development of the National Information and Communication System of the Republic of Uzbekistan

2035
- Establishment of expertise and an innovation hub in Central Asia
- Green and resource-saving technologies
- Attraction of high-tech production (with no world analogs) is planned
- Creation of energy efficient and green infrastructure
- Development of technologies in industries that are locomotives of economic growth
- Creation and maintenance of the register of branch tasks on the basis of the priorities approved by the government

Source: analysis of the working group
Science, technology, and innovation:

Key strategic initiatives

- **2025**
  - Launch of the technology transfer system
  - Expansion of sources of scholarships for gifted youth, provision of benefits and donations to young specialists
  - Creation of a system of local and foreign practical training
  - Increasing the prestige of the country’s institutions of higher education (enter the global ratings), including by participating in international educational exhibitions and competitions
  - Attraction of students from former Soviet states and other foreign countries for study
  - Unification of the higher education system with global standards, in particular a prohibition on the improper use of student labor
  - Increase in the internet speed by a factor of 8, development of mobile internet (enter Top 90 of Telecommunication Infrastructure Index)
  - Creation of conditions for the development of private educational institutions providing short- and medium-term specialized IT courses, including with foreign faculty

- **2030**
  - Development of an online platform for the provision of grants, financing for start-up projects, receipt of online local and foreign commissions in support of the IT industry

- **2035**

Source: analysis of the working group
Appendix to the Breakdown

Concept of the Development Strategy of the Republic of Uzbekistan until 2035
Tax system

Appendix to the Breakdown
Key challenges

- High tax burden
- Frequent changes in tax rates
- Complexity and instability of the tax legislation (The Tax Code is not a directly applicable law.)
- Significant difference in the level of tax burden between the simplified tax system and the common tax system
- Wide use of "tax schemes" to evade taxation
- Widespread practice of supporting business entities through tax and customs benefits
- Lack of taxation concepts recognized at the international level
- Imperfection of tax control and administration

Key findings

- Indirect taxes provide 54% of the budget. Their share in the tax revenue increases, and the share of direct taxes decreases. (VAT provides more than one-third of the budget.)
- The main taxpayer is industry that provides 65.7% of tax payments among large entities. In industry, more than 52% of taxes are provided by the food and fuel industries.
- Frequent changes in tax rates negatively affect the investment climate.
- The Tax Code is not a directly applicable law, which leads to a significant number of bylaws. Tax rates are annually established by decisions of the president of the Republic of Uzbekistan.
- The Republic of Uzbekistan has a high tax burden that hinders the development of the economy, in particular, the marginal rate on investments is 49% (23% in Georgia).
- The high tax rate on the wages fund leads to concealing the real number of employees and the wages fund by taxpayers (about 50% of the nominal salary level).
- The practice of supporting business entities through tax and customs benefits, including individual ones, which negatively affects fair competition due to the absence of an effective system of monitoring and control of the efficacy of such benefits (the total amount of targeted fiscal benefits in 2017 is more than UZS 48 trillion).
- Significant difference in the tax burden level between the business entities that pay taxes under the simplified and common tax systems
- Extensive use of “tax schemes” for tax evasion, expressed primarily in the artificial fragmentation of business into small companies that can apply a more profitable simplified taxation system (confirmed by the ratio of the number of entities applying the "simplified tax system" to the number of entities applying the standard regime, 1 to 10)
- Significant share of the shadow economy as well as developed corrupt practices
- Uzbekistan ranks 64th among 190 countries in the Tax System Efficiency section of the Doing Business rating.
- Imperfect information exchange mechanisms between the government bodies and organizations, forms and methods of electronic tax administration and tax control
### Tax system

#### Main taxes

<table>
<thead>
<tr>
<th>National</th>
<th>Local</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Corporate income tax</td>
<td>• Property tax</td>
</tr>
<tr>
<td>• personal income tax</td>
<td>• Land tax</td>
</tr>
<tr>
<td>• Value-added tax</td>
<td>• Tax on gasoline, diesel, and gas consumption</td>
</tr>
<tr>
<td>• Excise tax</td>
<td>• Fee for the right to the retail sale of certain types of goods and provide certain types of services</td>
</tr>
<tr>
<td>• Taxes and special payments for subsoil users</td>
<td>• Fixed tax on certain types of business activities</td>
</tr>
<tr>
<td>• Tax on use of water resources</td>
<td></td>
</tr>
<tr>
<td>• unified social tax</td>
<td></td>
</tr>
<tr>
<td>• Insurance contributions of citizens to the nonbudgetary Pension Fund</td>
<td></td>
</tr>
<tr>
<td>• mandatory contributions to state special-purpose funds</td>
<td></td>
</tr>
<tr>
<td>• Contributions to the Republican Road Fund</td>
<td></td>
</tr>
<tr>
<td>• State fee</td>
<td></td>
</tr>
<tr>
<td>• Customs payments</td>
<td></td>
</tr>
<tr>
<td>• unified tax payment</td>
<td></td>
</tr>
<tr>
<td>• Unified land tax</td>
<td></td>
</tr>
<tr>
<td>• Property tax</td>
<td></td>
</tr>
<tr>
<td>• Land tax</td>
<td></td>
</tr>
<tr>
<td>• Tax on gasoline, diesel, and gas consumption</td>
<td></td>
</tr>
<tr>
<td>• Fee for the right to the retail sale of certain types of goods and provide certain types of services</td>
<td></td>
</tr>
<tr>
<td>• Fixed tax on certain types of business activities</td>
<td></td>
</tr>
</tbody>
</table>

#### Tax rates

- Tax rates are annually established by decisions of the president of the Republic of Uzbekistan.
- Frequent changes in tax rates negatively affect the investment climate, as they make it impossible to calculate the investment attractiveness of projects due to the uncertainty of tax rates.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Corporate income tax</td>
<td>9</td>
<td>9</td>
<td>8</td>
<td>7.5</td>
<td>7.5</td>
<td>7.5</td>
<td>14</td>
<td>12</td>
</tr>
<tr>
<td>Dividend tax</td>
<td>10*</td>
<td>10*</td>
<td>10*</td>
<td>10*</td>
<td>10*</td>
<td>10*</td>
<td>10*</td>
<td>10*</td>
</tr>
<tr>
<td>Personal income tax (maximum)</td>
<td>22</td>
<td>22</td>
<td>22</td>
<td>23</td>
<td>23</td>
<td>23</td>
<td>22.5</td>
<td>12</td>
</tr>
<tr>
<td>Value-added tax</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Unified social tax</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td>25**</td>
<td>25**</td>
<td>25**</td>
<td>25**</td>
<td>12</td>
</tr>
<tr>
<td>Unified tax payment for small and private businesses</td>
<td>6*</td>
<td>6*</td>
<td>6*</td>
<td>6*</td>
<td>5*</td>
<td>5*</td>
<td>5*</td>
<td>canceled</td>
</tr>
<tr>
<td>Turnover tax (turnover up to UZS 1 billion)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>Corporate income tax</td>
<td>3.5</td>
<td>3.5</td>
<td>4</td>
<td>4</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Tax on improvement and development of social infrastructure</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>canceled</td>
<td>0</td>
</tr>
</tbody>
</table>

* Since 2012, 5% for industry; since 2015, 5% for construction
** Since 2015, 15% for small and private businesses

Sources: Tax Code of Uzbekistan, Center for Economic Research, analysis of the working group
**Tax system**

**Structure of tax revenues by type of taxes, UZS trillion**

<table>
<thead>
<tr>
<th>Year</th>
<th>Other revenues</th>
<th>Resource payments and property tax</th>
<th>Direct taxes</th>
<th>Indirect taxes</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>21.3</td>
<td>10%</td>
<td>25%</td>
<td>49%</td>
</tr>
<tr>
<td>2013</td>
<td>26.2</td>
<td>10%</td>
<td>24%</td>
<td>51%</td>
</tr>
<tr>
<td>2014</td>
<td>31.7</td>
<td>10%</td>
<td>23%</td>
<td>53%</td>
</tr>
<tr>
<td>2015</td>
<td>36.5</td>
<td>10%</td>
<td>24%</td>
<td>53%</td>
</tr>
<tr>
<td>2016</td>
<td>41.0</td>
<td>12%</td>
<td>24%</td>
<td>52%</td>
</tr>
<tr>
<td>2017</td>
<td>49.7</td>
<td>10%</td>
<td>23%</td>
<td>53%</td>
</tr>
<tr>
<td>2018</td>
<td>62.2</td>
<td>10%</td>
<td>21%</td>
<td>54%</td>
</tr>
</tbody>
</table>

- Indirect taxes provide 54% of the budget. Their share in the tax revenue increases, and the share of direct taxes decreases.

**Structure of tax revenues to the budget by specific taxes, 2018**

- VAT provides more than 1/3 of the budget revenues
- VAT, excise tax, subsoil use tax and personal income tax provide 67.2% of the budget.

Sources: Ministry of Finance, Center for Economic Research, analysis of the working group
The main taxpayer is industry that provides 65.7% of tax payments.

The food and fuel industries provide more than 52% of tax payments.
The Republic of Uzbekistan has a high tax burden that hinders the development of the economy.

Ratio of revenues of the state budget and extra-budgetary funds to GDP of individual Asian countries in 2015 (in %), data of the Asian Development Bank

Comparison of marginal effective tax rates*

Sources: National Agency of Project Management (NAPM), Asian Development Bank, analysis of the working group
• The amount of benefits provided in 2017 amounted to UZS 48.8 trillion, while the main part of the benefits relates to customs benefits.

• Benefits on the main taxes and other obligatory payments are established by the Tax Code of the Republic of Uzbekistan and, in particular, by decisions of the president with respect to individual taxpayers or investment projects (according to the inventory of benefits, more than 230 such decisions).

• This situation leads to instability and unpredictability of the tax system, which can adversely affect both the investment climate and the economy as a whole.
## Tax regimes in the Republic of Uzbekistan

<table>
<thead>
<tr>
<th>Standard tax regime</th>
<th>Simplified tax regime</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Brief description</strong></td>
<td><strong>Brief description</strong></td>
</tr>
<tr>
<td>The standard tax regime provides for the payment of a wide range of taxes and other obligatory payments, which is expressed in a significant tax burden on taxpayers.</td>
<td>The simplified tax regime provides for the replacement of some generally established taxes with the following taxes:</td>
</tr>
<tr>
<td></td>
<td>• Unified tax payment</td>
</tr>
<tr>
<td></td>
<td>• Unified land tax</td>
</tr>
<tr>
<td></td>
<td>• Fixed tax on certain types of business activities</td>
</tr>
</tbody>
</table>

The unified tax payment is made instead of the following taxes and payments:

- Corporate income tax
- Property tax
- Mandatory contributions to state special-purpose funds

Legal entities that are payers of the unified tax payment may pay value-added tax on a voluntary basis.

### Criteria for application

- Large taxpayers
- Manufacturers of excisable products
- Entities that are engaged in the extraction of minerals and are payers of the extraction tax
- Parties to production sharing agreements
- Other taxpayers that do not meet the established criteria for small businesses

Small business entities (micro and small entities)

Application of the simplified tax regime is mandatory for certain categories of taxpayers (sales and food service companies, lotteries, etc.).

Sources: Tax Code, analysis of the working group
Comparison of tax burden on large and small companies

- The tax burden is distributed unevenly: the tax burden on large companies applying the common tax regime is 3.6 times higher than the tax burden on small companies that can apply the simplified tax regime.

**Number of taxpayers using simplified and common tax systems**

- Over the last five years, the total number of taxpayers has grown by 26% to 153,000 tax paying companies
- In 2017, the number of taxpayers using the common tax system decreased by 15% compared to 2013, to 10,000 companies.
- The number of taxpayers using the simplified tax system increased by 34,000 to 153,000 companies in 2017.
- There is the problem of artificially splitting companies to apply the simplified tax regime to reduce the tax burden.

Sources: Center for Economic Research, analysis of the working group
Uzbekistan ranks 64th among 190 countries in the Tax System Efficiency section of the Doing Business rating.

The number of payments per year in Uzbekistan is slightly higher than in comparable countries.

Uzbekistan’s time use indicator is better than the average value in the sample (206 hours on average).

The total rate in Uzbekistan is above the average for the sample (35.7% on average).

Uzbekistan’s index of procedures after filing reports and paying taxes is better than the average value for the sample (54 on average).
On June 29, 2018, the president of the Republic of Uzbekistan with his Decree No. UP-5468 approved the Tax Policy Reformation Concept of the Republic of Uzbekistan.

According to the President’s Decree, from January 1, 2019:

- Reduction of the tax burden on the labor remuneration fund through
- Improved taxation of the payers of common and simplified taxes with the optimization of turnover (revenue) taxes and improved criteria for starting application of the simplified tax system
- Implementation of measures to mitigate the adverse impact of tax policy improvement on the taxpayers of the simplified tax system
- Improvement of the calculation and payment procedure of value added tax and excise tax

The main areas of tax policy improvement according to the President’s Decree are:

- Reduction of the tax burden on the economy
- Elimination of disproportions in the tax burden level between the business entities that pay taxes under the simplified and common tax systems
- Optimization of the number of taxes through their unification and consolidation
- Assurance of macroeconomic stability
- Simplification of tax laws, elimination of discrepancies and collisions
- Assurance of tax legislation stability and direct application of the Tax Code
- Retention of a favorable regime for foreign investors
- Improvement of tax control forms and mechanisms

Comparison of the current and suggested tax rates and other mandatory payments

<table>
<thead>
<tr>
<th>Tax/mandatory payment</th>
<th>Current rates</th>
<th>Proposed rates</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income tax</td>
<td>14%</td>
<td>12%</td>
<td>-2%</td>
</tr>
<tr>
<td>Tax on income in the form of dividends and interest</td>
<td>10%</td>
<td>5%</td>
<td>-5%</td>
</tr>
<tr>
<td>Unified tax payment</td>
<td>5%</td>
<td>4%</td>
<td>-1%</td>
</tr>
<tr>
<td>Mandatory contributions to state special-purpose funds</td>
<td>3.2%</td>
<td>0%</td>
<td>-3.2%</td>
</tr>
<tr>
<td>VAT</td>
<td>20%</td>
<td>20%</td>
<td>0%</td>
</tr>
<tr>
<td>Property tax</td>
<td>5%</td>
<td>2%</td>
<td>-3%</td>
</tr>
<tr>
<td>Personal income tax</td>
<td>7.5%–22.5%</td>
<td>12%</td>
<td></td>
</tr>
<tr>
<td>Unified social tax</td>
<td>25% / 15%</td>
<td>12%</td>
<td>-3%</td>
</tr>
<tr>
<td>Insurance contributions of citizens</td>
<td>8%</td>
<td>0%</td>
<td>-8%</td>
</tr>
</tbody>
</table>

Sources: data from open sources, analysis of the working group.
## Impact on the budget (1/2)

<table>
<thead>
<tr>
<th>Provisions of the Tax Policy Reformation Concept of the Republic of Uzbekistan</th>
<th>Expected impact on the budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cancellation of a large number of targeted fiscal benefits</td>
<td>Increase in budget revenues due to cumulative tax receipts</td>
</tr>
<tr>
<td>Expansion of the circle of VAT payers (20%)</td>
<td>Increase in budget revenues due to the increase in VAT receipts (a group of indirect taxes)</td>
</tr>
<tr>
<td>Introduction of a single personal income tax rate of 12% for all citizens</td>
<td>Increase in the proceeds from income tax by expanding the database of taxpayers through their &quot;unshadowing&quot; (a group of direct taxes)</td>
</tr>
<tr>
<td>Cancellation of mandatory deductions to the state special-purpose funds, which are charged on the turnover (revenue) of legal entities (3.2% of net revenue of the payers of standard taxes)</td>
<td>The absence of direct receipt of funds to the nonbudgetary funds (Pension, Road, School Funds). Therefore, if the activity (demand for financing) of these funds remains unchanged, the burden on the budget increases</td>
</tr>
<tr>
<td>Cancellation of insurance fees of citizens to the nonbudgetary Pension Fund that are withheld from personal income in the form of labor remuneration (8% of wages)</td>
<td>The absence of direct receipt of funds to the nonbudgetary Pension Fund. Therefore, if the activity (demand for financing) of the fund remains unchanged, the burden on the budget increases</td>
</tr>
<tr>
<td>Reduction of the unified social tax rate for business entities from 25% (15%) to 12%</td>
<td>The absence of direct receipt of funds mostly to the nonbudgetary Pension Fund. Therefore, if the activity (demand for financing) of the fund remains unchanged, the burden on the budget increases</td>
</tr>
<tr>
<td>Reduction of the income tax rate for business entities from 14% to 12%, for commercial banks, from 22% to 20%</td>
<td>Reduction in budget revenues in the form of proceeds from income tax (a group of direct taxes) if income of business entities remains at the current level</td>
</tr>
<tr>
<td>Introduction of a 20% income tax for communications service providers and cancellation of the excess profit tax assessment for them, depending on their profitability</td>
<td>Reduction of budget revenues in the form of proceeds from property tax (a group of direct taxes) if the cumulative value of property remains at the current level</td>
</tr>
<tr>
<td>Reduction of the corporate property tax rate from 5% to 2%</td>
<td></td>
</tr>
<tr>
<td>Reformation of the simplified tax system</td>
<td>Taking into account the above clauses and the fact that most taxpayers in Uzbekistan apply the simplified tax system, and that its cancellation will increase the number of taxpayers of national taxes, it is impossible to unequivocally measure the impact on the budget.</td>
</tr>
</tbody>
</table>

Sources: data from open sources, analysis of the working group.
Implementation of the Tax Reform Concept will increase budget revenues by UZS 26.3 trillion in 2019. However, it will require expenses to be increased by UZS 46.3 trillion in the same period.

Revenues of the state budget of the Republic of Uzbekistan, excluding targeted funds, UZS trillion

<table>
<thead>
<tr>
<th>2019 budget revenues with preservation of the budget structure</th>
<th>Increase in the number of VAT payers</th>
<th>Cancellation of tax and customs benefits</th>
<th>&quot;Unshadowing&quot; of some individuals due to the introduction of a single income tax rate</th>
<th>Reformation of the simplified tax system (some taxpayers choose the common tax system)</th>
<th>Reduction of the property tax rate</th>
<th>2019 budget revenues, taking into account the Tax Reform Concept</th>
</tr>
</thead>
<tbody>
<tr>
<td>68.1</td>
<td>16.2</td>
<td>12.2</td>
<td>0.1</td>
<td>0.9</td>
<td>1.4</td>
<td>94.4</td>
</tr>
</tbody>
</table>

Expenses of the state budget of the Republic of Uzbekistan, excluding targeted funds, UZS trillion

<table>
<thead>
<tr>
<th>2019 budget expenses with preservation of the budget structure</th>
<th>Cancellation of mandatory contributions to the state special-purpose funds, which are charged on the turnover of legal entities</th>
<th>Reduction of the unified social tax rate</th>
<th>Cancellation of insurance fees of citizens to the nonbudgetary Pension Fund that are withheld from personal income</th>
<th>2019 budget expenses, taking into account the Tax Reform Concept</th>
</tr>
</thead>
<tbody>
<tr>
<td>68.7</td>
<td>36.2</td>
<td>5.7</td>
<td>4.5</td>
<td>115.0</td>
</tr>
</tbody>
</table>
Tax system

Strategic options

1

Anglo-Saxon option

Characteristics: Prevalence of direct taxes

- Relative stability and predictability
- Tax burden imposed on citizens

Examples of countries:
- USA
- UK

2

Mixed option

Characteristics:
- Combines the features of various models
- Diversification of the revenue structure of the state budget

- Independence of the budget revenues from specific taxes or group of taxes and, as a result, flexible tax and budget policy
- Possible frequent amendments to the regulatory framework
- Potentially high expenditures on tax administration

- The mixed model is optimal for economies in which budget revenues are highly dependent on the situation in foreign markets.
- The mixed model allows rapid adaptation to changes in external factors by manipulating interest rates, expanding the base of taxpayers, granting/canceling benefits, etc.

Examples of countries:
- South Korea
- Japan

3

Continental option

Characteristics:
- Priority of indirect taxes
- High contributions to social insurance

- Relative stability and predictability
- High level of social protection of the population
- High tax burden

Examples of countries:
- Germany
- The Netherlands

4

Latin American option

Characteristics:
- Typical of inflation economies
- High share of indirect taxes

- Protection from inflation phenomena
- Due to the specifics of indirect tax collection, savings on tax administration

Examples of countries:
- Chile
- Peru
**Tax system**

**Target vision of the tax system in 2035**

**Goal:**
Creation of the modern soft tax system stimulating growth of investments and revenues of the budget of the Republic of Uzbekistan

**Objectives:**
- Further optimization of the tax burden by reducing the share of indirect taxes to 35%
- Compliance with a tax regime that ensures growth in tax revenues to the budget and allows competing in capital markets to attract foreign investments
- Transition to the principles of long-term tax administration
- Development of a special mechanism for investors with freezing of tax rates
- Development of an effective mechanism for granting benefits to taxpayers engaged in priority sectors of Uzbekistan’s economy
- Further optimization and simplification of the tax legislation to ensure its stability and predictability for taxpayers

**Areas of tax system reformation:**
- **General tax system structure:** transition to long-term tax administration; improvement of taxation principles and the legal regulation of the tax system
- **Tax structure:** reduction in the share of indirect taxes; increase in the share of personal income tax in the long term
- **System of taxes and fees:** identification of conceptual problems broken down by individual taxes, implementation of the best global practices and trends in the field of taxation Indirect taxes, including VAT (BEPS, automatic tax information exchange, MLI, CbCr, CFC, TP, etc.)*
- **Tax and customs benefits:** cancellation of targeted benefits; introduction of industry benefits to stimulate certain industries
- **Special mechanisms for investors:** development of special mechanisms (similar to SPIC)** with freezing of tax rates for investors to attract long-term investments
- **Tax control and administration:** improvement of tax control procedures and settlement of tax disputes through the introduction of ICT and automation tools as well as advanced training of employees of tax authorities
- **System of legal liability:** improvement in the system of legal liability for the violation of tax legislation

<table>
<thead>
<tr>
<th>Figures</th>
<th>2017/2018</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doing Business rating</td>
<td>74</td>
<td>Top 20</td>
</tr>
<tr>
<td>Taxation rating (Doing Business, DB)</td>
<td>64</td>
<td>Top 20</td>
</tr>
<tr>
<td>Index of procedures after filing reports and paying taxes (0 = the lowest, 100 = the highest)</td>
<td>48.17 points</td>
<td>&gt; 80 points</td>
</tr>
<tr>
<td>Share of indirect taxes in tax revenues of the budget</td>
<td>54%</td>
<td>&lt;35%</td>
</tr>
</tbody>
</table>

**Tax structure,**
% of tax revenues of the budget

<table>
<thead>
<tr>
<th>Corporate income tax</th>
<th>Personal income tax</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>100%</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>3.4%</td>
<td>3.4%</td>
<td></td>
</tr>
<tr>
<td>3.4%</td>
<td>3.4%</td>
<td></td>
</tr>
<tr>
<td>3.4%</td>
<td>3.4%</td>
<td></td>
</tr>
</tbody>
</table>

**Changes in the tax structure:**
- The target state is calculated based on the benchmark of Japan and South Korea
- Increased personal income tax is associated with a 1.4-fold increase in the number of employed people by 2035, the legalization of incomes, and the increased level of wages. (An increase in personal income tax is the practice of developed countries.)

---

Note: *BEPS = Base erosion and profit shifting (transfer of revenues and profits to jurisdictions with low taxes); MLI = multilateral convention to implement tax treaty-related measures to prevent BEPS; CbCr = country-by-country reports on BEPS; CFC = controlled foreign company; TP = transfer pricing; **SPIC = special investment contract.

Sources: data from open sources, analysis of the working group.
Appendices

Development Strategy Framework of the Republic of Uzbekistan to 2035
Appendix 1
Glossary

Development Strategy Framework of the Republic of Uzbekistan to 2035
<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>AISP (Account Information Service Providers)</td>
<td>Companies providing information on financial service accounts</td>
</tr>
<tr>
<td>ANZSOG (The Australia and New Zealand School of Government)</td>
<td>Educational institution located in Carlton, Australia, which specializes in strategic management and policy</td>
</tr>
<tr>
<td>API (Application Programming Interface)</td>
<td>Set of procedures, protocols, and functions used to create software applications through which various software components may interact with each other</td>
</tr>
<tr>
<td>ASPSP (Account Servicing Payment Service Provider)</td>
<td>Special service provider used to maintain the payer’s account in the context of the banking ecosystem, which allows payments initiated by other parties to the transaction, subject to its approval by the client</td>
</tr>
<tr>
<td>B2B (“Business to Business”)</td>
<td>Information and economic interaction between corporate entities</td>
</tr>
<tr>
<td>Basel II and Basel III</td>
<td>Documents of the Basel Committee on Banking Supervision on the capital adequacy ratio requirements of banks</td>
</tr>
<tr>
<td>BASF (Badische Anilin &amp; Soda-Fabrik)</td>
<td>German company operating in the agricultural industry, the world’s largest chemical producer. The company has implemented a number of training programs for farmers</td>
</tr>
<tr>
<td>Big Data</td>
<td>Term used to denote operations related to the processing of big arrays (over 2.5 PB) of structured and unstructured data</td>
</tr>
<tr>
<td>Broadband</td>
<td>Broadband transfer: data transfer technology via network, where the data are transferred in the form of modulated radio frequency signals</td>
</tr>
<tr>
<td>CAGR</td>
<td>Compound annual growth rate</td>
</tr>
<tr>
<td>CapEx</td>
<td>Company expenses used to purchase, upgrade and maintain various assets, e.g., such as equipment, property, and industrial capacities</td>
</tr>
<tr>
<td>CIR (Cost-to-income Ratio)</td>
<td>Financial indicator that shows the ratio of company expenses to its revenue for a certain period</td>
</tr>
<tr>
<td>Civil Service College (CSC), Singapore</td>
<td>State institution (college) in Singapore that specializes in staff training for civil service and in providing consultancy services to government agencies</td>
</tr>
<tr>
<td>Corruption Perceptions Index</td>
<td>Index calculated on the methodology of the international non-governmental organization Transparency International to evaluate the prevalence of corruption in the public sector of a certain country</td>
</tr>
<tr>
<td>D/E (Debt-to-Equity)</td>
<td>Financial indicator that shows the ratio of the equity and debt of interest holders (shareholders) used to finance the current assets of the company</td>
</tr>
<tr>
<td>Elder Shield</td>
<td>Insurance program for the citizens of Singapore older than 40</td>
</tr>
<tr>
<td>Term</td>
<td>Definition</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>EPC SDD (European payments council sepa direct debit)</td>
<td>Direct debiting system introduced by the European Payments Council (EPC), which enables secure and efficient payments by clients for goods and services in SEPA nations (EU, Norway, Iceland, Lichtenstein, and Switzerland)</td>
</tr>
<tr>
<td>ETF (Exchange Traded Funds)</td>
<td>Index funds whose shares are traded on an exchange</td>
</tr>
<tr>
<td>FATF (Financial Action Task Force)</td>
<td>Intergovernmental organization founded in 1989 to develop financial measures to counter money laundering</td>
</tr>
<tr>
<td>Federal Employee Education and Assistance Fund Scholarship Program</td>
<td>Program launched by a non-profit public organization in the USA, which provides financial support in the form of educational grants and subsidies to low-income citizens</td>
</tr>
<tr>
<td>FinCEN</td>
<td>The bureau for countering financial crimes in the USA, which collects and analyzes information on financial operations in order to counter money laundering and the financing of terrorism in the country and abroad, and also other financial crimes</td>
</tr>
<tr>
<td>GCP</td>
<td>Good clinical practice. The term means an international standard of ethical rules and the quality of research, which sets out the principles of development, conduct, documentation, and the reporting of research that requires human involvement in clinical studies</td>
</tr>
<tr>
<td>GDPR</td>
<td>The General Data Protection Regulation in the member states of the European Union</td>
</tr>
<tr>
<td>GII (Global Innovation Index)</td>
<td>Index that evaluates the innovation development level in a country. It is prepared annually by the consortium of Cornell University (USA), INSEAD School of Business (France), and the World Intellectual Property Organization</td>
</tr>
<tr>
<td>IIOC (Industrial Internet of Customers)</td>
<td>System automating the purchase/sale process based on new technology</td>
</tr>
<tr>
<td>IIOM (Industrial Internet of Machines)</td>
<td>System of machine interaction based on special sensors and controllers in the industrial sector</td>
</tr>
<tr>
<td>Indigo Index</td>
<td>Index that evaluates the economy’s ability to adapt and develop when transitioning from the use of raw materials and natural resources to the use of innovations and technologies. The index is prepared by the international organization Global Perspectives</td>
</tr>
<tr>
<td>IPO (Initial Public Offering)</td>
<td>Initial (first) public offering of company shares in the market</td>
</tr>
<tr>
<td>Just-in-time</td>
<td>Logical concept based on the idea of making deliveries just in time. It is one of the main lean production principles in a company</td>
</tr>
<tr>
<td>KYC (Know your Client)</td>
<td>Term on banking regulation for financial institutions and for other companies working with the money of private individuals, which means that they should identify and establish the identity of the counterparty before concluding a financial transaction</td>
</tr>
<tr>
<td>Mayor’s Graduate Scholarship Program (New York City)</td>
<td>Postgraduate study program for the full-time employees of local government agencies in New York</td>
</tr>
<tr>
<td>Medifund</td>
<td>State-funded medical support for the citizens of Singapore who cannot afford treatment and cannot use the MediSave and MediShield programs</td>
</tr>
<tr>
<td>Term</td>
<td>Definition</td>
</tr>
<tr>
<td>-------------------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>MediSave</td>
<td>System of compulsory healthcare deductions in Singapore, whereby an employee makes contributions from their salary (since 2016, 8% to 10.5% depending on age) to a personal account, and the employer makes equal contributions</td>
</tr>
<tr>
<td>MediShield</td>
<td>Health insurance system for the citizens of Singapore in cases where the limit of the available amount under MediSave is exceeded (usually used in the case of serious illness). Citizens predisposed to illness make larger deductions from their income for 10 years under MediShield Life</td>
</tr>
<tr>
<td>Middle Office/Back Office</td>
<td>Groups of business units or processes responsible for the verification and actual processing of the client’s transactions/an operational and accounting business unit supporting the operation of the business units managing the assets and liabilities of the company implementing the core activity of a financial institution</td>
</tr>
<tr>
<td>MIFID (Markets in Financial Investment Derivatives)</td>
<td>Trade market for derivative financial instruments</td>
</tr>
<tr>
<td>National Health Insurance Program</td>
<td>Special program in South Korea that offers health insurance to working citizens and their relatives, provides health care services to pensioners, and covers the medical expenses of poor and low-income families</td>
</tr>
<tr>
<td>OpEx</td>
<td>Operational expenditures, in other words, expenses borne by a company during its daily activities (e.g., net cost of products, rent, etc.)</td>
</tr>
<tr>
<td>P2P</td>
<td>Type of financial relationship between individuals, which involves the transfer of money without a financial intermediary where the parties involved do not use third-party services</td>
</tr>
<tr>
<td>PISP (Payment Initiation Service Providers)</td>
<td>Companies that allow users to pay directly from their bank account, without using their debit or credit card, through a third party such as Visa or MasterCard</td>
</tr>
<tr>
<td>PR (Public Relations)</td>
<td>Technology for creating and implementing under socioeconomic and political systems of competition of an object image into a social group’s values to establish this image as important in life</td>
</tr>
<tr>
<td>PSD2 (Payment Services Directives)</td>
<td>The European Union Directive that controls competition and legislation in the payment services market</td>
</tr>
<tr>
<td>Public Service Agreement (UK Program)</td>
<td>Document describing the strategic goals and tasks of UK governmental departments for a three-year period. PSAs were abolished in June 2010 by the Coalition Government.</td>
</tr>
<tr>
<td>Regulatory Impact Analysis (RIA)</td>
<td>Document reflecting the socioeconomic consequences of a certain state regulation. RIA are conducted in many countries, although their scope, contents, role, and impact on policy formation differ</td>
</tr>
<tr>
<td>ROA (Return on Assets)</td>
<td>Indicator that shows the business profitability of the company against company assets. It is calculated as the ratio of the company’s net profit to total assets</td>
</tr>
<tr>
<td>ROE (Return on Equity)</td>
<td>Indicator of the profitability of equity, which shows the ratio of net profit to the equity of a company</td>
</tr>
<tr>
<td>Term</td>
<td>Definition</td>
</tr>
<tr>
<td>------</td>
<td>------------</td>
</tr>
<tr>
<td>SCA</td>
<td>Strong Customer Authentication (SCA) is a new compulsory online payment authentication method (or customer verification method before the acceptance of an online payment), which will be introduced in Europe in 2019 and will ensure greater data safety compared to previous methods.</td>
</tr>
<tr>
<td>Solvency 2</td>
<td>Regulatory act of the European Union that establishes requirements on the regulation of the activities of insurance business representatives. The directive outlines the key structural components of regulation and supervision of the activity of insurance companies.</td>
</tr>
<tr>
<td>Study Leave Program for Abu Dhabi Government Employees</td>
<td>Incentive program for UAE citizens working in the government of Abu Dhabi in certain areas of priority significance for the country. It provides them with an opportunity to complete their undergraduate studies or postgraduate studies in the leading universities of the UAE and abroad.</td>
</tr>
<tr>
<td>SDG Index (Sustainable Development Goals Index)</td>
<td>UN index that evaluates the progress of a certain country in terms of international cooperation based on a set of social, legal, economic, and environmental development goals.</td>
</tr>
<tr>
<td>Technology Transfer Network</td>
<td>Technology transfer using any information channels from one individual or collective carrier to another.</td>
</tr>
<tr>
<td>Technology transfer office</td>
<td>Hub in the technology transfer structure.</td>
</tr>
<tr>
<td>TEU (Twenty-foot equivalent unit)</td>
<td>A twenty-foot equivalent is a reference unit of the measure of truck capacity. It is widely used in the carriage of containers.</td>
</tr>
<tr>
<td>EPI (Environmental Performance Index)</td>
<td>Composite indicator for a certain country, which is determined by the Yale Center for Environmental Law and Policy, and shows a country's progress in natural resource management and the environment.</td>
</tr>
<tr>
<td>TPP (Third-Party Providers)</td>
<td>External providers offering payment solutions and services for clients.</td>
</tr>
<tr>
<td>WPFI (World Press Freedom Index)</td>
<td>Index that shows the state of freedom of media in a certain country, which is determined by the international nongovernmental organization Reporters Without Borders.</td>
</tr>
<tr>
<td>Equity Value and its Components</td>
<td>Financial term that indicates the minimum one-year level of return that a company should ensure for its ordinary shareholders for profit expectations and risk. ERP is the equity risk premium, Ke is the cost of equity, CRP is the country risk premium, RFR is the risk-free rate.</td>
</tr>
<tr>
<td>APA (Architectural Planning Assignments)</td>
<td>Set of requirements for the intended use, main parameters, and location of an architectural facility on a certain territory, and binding environmental, technical, organizational, and other conditions of design engineering and the construction of the facility, as stipulated by government legislation.</td>
</tr>
<tr>
<td>ABS (Agribusiness Sector)</td>
<td>Group of economic sectors engaged in the production and processing of raw agricultural materials and in the manufacturing of products to be sold from them.</td>
</tr>
<tr>
<td>ATS (Automatic Telephone Station)</td>
<td>System of mechanisms that enables the automatic connection and maintenance of telephone communications between subscribers using special devices.</td>
</tr>
<tr>
<td>Term</td>
<td>Definition</td>
</tr>
<tr>
<td>-------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Business Incubator</td>
<td>Company supporting small businesses. The purpose of a business incubator is to create favorable conditions for the appearance and development of start-ups and young innovative enterprises in order to strengthen and enhance their competitiveness and adjust to the external economic environment</td>
</tr>
<tr>
<td>Blockchain</td>
<td>Distributed data storage technology</td>
</tr>
<tr>
<td>UAV (Unmanned Aerial Vehicle)</td>
<td>Aircraft without crew on board</td>
</tr>
<tr>
<td>GDP (Gross Domestic Product)</td>
<td>Macroeconomic indicator that shows the market value of all the final goods and services manufactured within a certain period of time in a particular country</td>
</tr>
<tr>
<td>GAV (Gross Added Value)</td>
<td>Indicator that shows the difference between the value of goods and services produced (output) and the value of goods and services fully consumed in the production process</td>
</tr>
<tr>
<td>WHO (World Health Organization)</td>
<td>Special institution of the United Nations (UN) whose main task is to resolve the international health care problems of the world’s population</td>
</tr>
<tr>
<td>Renewable Energy Sources (RES)</td>
<td>Energy generated from inexhaustible sources</td>
</tr>
<tr>
<td>GRP (Gross Regional Product)</td>
<td>Economic indicator that shows the market value of all goods manufactured within a certain period of time in a particular region (particular open economic system)</td>
</tr>
<tr>
<td>WTO (World Trade Organization)</td>
<td>International trade organization whose main tasks are to carry out trade negotiations between member states, carry out consultations between the stakeholders, and settle trade disputes</td>
</tr>
<tr>
<td>FEA (Foreign Economic Activity)</td>
<td>Area of economic activity of state and business, which is associated with the system of economic, production and commercial relations of enterprises, with a focus on the global market</td>
</tr>
<tr>
<td>HEI (Higher Educational Institution)</td>
<td>Educational institution of higher professional education</td>
</tr>
<tr>
<td>SC (State Committee)</td>
<td>Federal executive authority responsible for intersectoral coordination on issues falling within its competence, and functional regulation in a certain area of activity</td>
</tr>
<tr>
<td>Guarantee Fund</td>
<td>Institutions founded by governmental authorities to support small and medium businesses; they are usually funded from the state budget and provide sureties in the country</td>
</tr>
<tr>
<td>Global Indicators of Regulatory Governance (World Bank, Scores)</td>
<td>The indicators reflect the quality of the legislative process, the quality and accessibility of the legislative framework for the population in the country. A corresponding rating is prepared based on this indicator</td>
</tr>
<tr>
<td>MMP (Metals and Mining Plant)</td>
<td>Industrial enterprise specializing in the fabrication of metallurgical products</td>
</tr>
<tr>
<td>Term</td>
<td>Definition</td>
</tr>
<tr>
<td>-------------------------------------------</td>
<td>---------------------------------------------------------------------------</td>
</tr>
<tr>
<td>MMI (Metals and Mining Industry)</td>
<td>Group of metals and mining and industry sectors in a certain country</td>
</tr>
<tr>
<td>Public-Private Partnership (PPP)</td>
<td>System of relations between private business, on the one hand, and the public sector, on the other hand, maintained on the basis of a cooperation agreement in order to attract investments and consolidate resources</td>
</tr>
<tr>
<td>GPP (Gas Processing Plant)</td>
<td>Industrial enterprise processing natural and associated gas</td>
</tr>
<tr>
<td>HPP (Hydropower Plant)</td>
<td>Power plant using water flows as the energy source</td>
</tr>
<tr>
<td>CCP (Cash and Credit Policy)</td>
<td>Actions of specialized government institutions in the monetary and currency market intended to control the exchange rate, inflation rate, employment and economic growth stability. As a rule, central banks are responsible for the implementation of a cash and credit policy</td>
</tr>
<tr>
<td>HUS (Housing and Utility Services)</td>
<td>Group of economic sectors aimed at supporting the functioning of residential buildings</td>
</tr>
<tr>
<td>AI (Artificial Intelligence)</td>
<td>Term used to denote the intelligence of machines and computers and their ability to perform creative and technologically sophisticated tasks</td>
</tr>
<tr>
<td>IIA (Individual Investment Account)</td>
<td>Trust management account of an individual, which has certain tax benefits established by the state. Such an account involves an investment diversification method</td>
</tr>
<tr>
<td>Immigration</td>
<td>The population of one country (state) entering another country for temporary or permanent residence, considered in relation to the country where the migrants enter.</td>
</tr>
<tr>
<td>ICT (Information and Communications Technology)</td>
<td>Methods, software and hardware, the primary task of which is to receive, process, and transfer information</td>
</tr>
<tr>
<td>The World Justice Project: Rule of Law Index</td>
<td>Indicator that shows the adequacy of the legal framework based on universal principles of the rule of law in a certain country. The rating is prepared by the international organization World Justice Project</td>
</tr>
<tr>
<td>Food Security Index</td>
<td>Index that shows the accessibility and quality of food resources in a country in terms of the affordability and availability of healthy food. The index is prepared by the analytical agency Economist Intelligence Unit</td>
</tr>
<tr>
<td>Democracy Index (The Economist)</td>
<td>Indicator that shows the level of democracy in a country, determined using the methodology of the research organization The Economist Intelligence Unit</td>
</tr>
<tr>
<td>Web Index</td>
<td>Indicator characterizing the level of influence of the Internet on society in a certain country. The index is determined by the World Wide Web Foundation</td>
</tr>
<tr>
<td>E-Government Development Index (EGDI), 2018</td>
<td>Composite indicator characterizing the preparedness and opportunities of national government agencies to use information and communications technology for interaction with citizens. The rating is compiled by the UN</td>
</tr>
<tr>
<td>Index of Economic Freedom</td>
<td>Index that shows the lack of government intervention or obstruction in the production, distribution and consumption of goods and services, except for the protection required for citizens and the support of freedom. It is calculated by the Wall Street Journal and the Heritage Foundation research center</td>
</tr>
</tbody>
</table>
| IE (Individual Entrepreneur)              | Individual doing business without founding an organization }
<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>DI (Development Institutes)</td>
<td>Organizations stimulating innovative processes and infrastructure development, primarily through the use of public-private partnership mechanisms</td>
</tr>
<tr>
<td>Gini Index</td>
<td>Economic term reflecting the degree of inequality in income distribution in different population groups</td>
</tr>
<tr>
<td>KPI (Key Performance Indicators)</td>
<td>The metrics of success achieved by a business, the government, and representatives of other sectors in a certain area</td>
</tr>
<tr>
<td>CSR (Corporate Social Responsibility)</td>
<td>Concept whereby business representatives must carry out a range of social activities stipulated by the laws of a certain country</td>
</tr>
<tr>
<td>Small and Medium Enterprises (SME)</td>
<td>Economic sector that includes medium, small and micro enterprises</td>
</tr>
<tr>
<td>Mbps</td>
<td>Mbit per second. The transfer speed of a certain volume of data</td>
</tr>
<tr>
<td>SB&amp;PE (Small Business and Private Entrepreneurship)</td>
<td>Economic sector that includes small and micro companies, and private entrepreneurs</td>
</tr>
<tr>
<td>MHSSE (Ministry of Higher and Specialized Secondary Education)</td>
<td>Government body responsible for the control and development of a certain educational level in the country</td>
</tr>
<tr>
<td>IPCC (Intergovernmental Panel on Climate Change)</td>
<td>Organization whose purpose is to assess the risks of global climate change caused by man-made factors</td>
</tr>
<tr>
<td>MPrE (Ministry of Preschool Education)</td>
<td>Government body responsible for the control and development of a certain (preschool) educational level in the country</td>
</tr>
<tr>
<td>Doing Business Index</td>
<td>Indicator that shows the level of ease of doing business in a certain country. The higher the country position in this rating, the more favorable the business environment for opening and running a business. The rating is compiled by the World Bank</td>
</tr>
<tr>
<td>Migration</td>
<td>Displacement, resettlement, for example, of the population within a country or from one country to another, animals from one area to another, etc.</td>
</tr>
<tr>
<td>MPE (Ministry of Public Education)</td>
<td>Government body responsible for the control and development of a certain educational level in the country</td>
</tr>
<tr>
<td>Top-Down (Model based on top-down implementation of initiatives)</td>
<td>Approach in which analysis should be started from the top levels of a certain hierarchy</td>
</tr>
<tr>
<td>Bottom-Up (Model based on bottom-up implementation of initiatives)</td>
<td>Approach in which analysis should be started from the bottom levels of a certain hierarchy</td>
</tr>
<tr>
<td>SMB (Small and Medium Business)</td>
<td>Economic sector that includes small and medium businesses and micro enterprises. This term is identical to the term SME, and is mostly used in the banking sector</td>
</tr>
<tr>
<td>Term</td>
<td>Definition</td>
</tr>
<tr>
<td>-----------------------------------------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>IFRS (International Financial Reporting Standards)</td>
<td>Set of documents (principles, explanations, standards) that establish the rules for generating the financial reports of a company. This accounting system is used in more than 100 countries</td>
</tr>
<tr>
<td>IFAS (International Fund for Saving the Aral Sea)</td>
<td>The fund established to overcome the environmental crisis and improve the socioeconomic position in the Aral Sea basin. The fund was established in 1993 according to the decision of the heads of the Central Asian countries</td>
</tr>
<tr>
<td>RDI (Research and Development Institute)</td>
<td>State institution established to conduct research and development work</td>
</tr>
<tr>
<td>R &amp; D (Research and Development, R&amp;D)</td>
<td>Scope of work aimed at obtaining new knowledge and its practical application in creating a new thing or technology</td>
</tr>
<tr>
<td>RDTI (Research and Development Technical Institute)</td>
<td>State institution established to conduct research and comprehensive testing</td>
</tr>
<tr>
<td>RLA (Regulatory Legal Act)</td>
<td>Official document published and approved in a certain form by a legal body within its competence and aimed at establishing, amending, and/or abolishing certain rules in a country or an association</td>
</tr>
<tr>
<td>ORP (Oil Refinery Plant)</td>
<td>Industrial enterprise established to refine crude oil into fuel and other oil products</td>
</tr>
<tr>
<td>CHI (Compulsory Health Insurance)</td>
<td>Form of compulsory human health insurance established by the state, which covers part of the cost of treatment</td>
</tr>
<tr>
<td>UN (United Nations)</td>
<td>International organization founded in 1945 to support and build international peace and security, and develop partnerships between countries</td>
</tr>
<tr>
<td>CCPU (Combined-Cycle Power Unit)</td>
<td>Power generating plant running on two engines: steam power and gas turbine</td>
</tr>
<tr>
<td>ID (Industrial Designs)</td>
<td>Object of intellectual rights related to the external appearance of a product of industrial production</td>
</tr>
<tr>
<td>CML</td>
<td>Measures to prevent the illegal receipt of money (money laundering)</td>
</tr>
<tr>
<td>One-In-One-Out Principle</td>
<td>Approach whereby a newly adopted legislative act will supersede the previous legislative act on the same issue</td>
</tr>
<tr>
<td>Regulatory Guillotine</td>
<td>Approach that involves the process of counting, verification, analysis, and exclusion from the legislative framework of laws that are no longer mandatory</td>
</tr>
<tr>
<td>Sunset Clause</td>
<td>Principle in governmental policy whereby a certain law will become null and void after a certain date, unless further legislative measures are taken to extend its validity period</td>
</tr>
<tr>
<td>Term</td>
<td>Definition</td>
</tr>
<tr>
<td>------</td>
<td>------------</td>
</tr>
<tr>
<td>Government Transformation Program (GTP)</td>
<td>The program implemented by the Government of Malaysia in seven key areas to improve the lives of the population. The program was launched in 2010 and is part of the country’s vision, “Vision 2020”</td>
</tr>
<tr>
<td>DFI (Derivative Financial Instrument)</td>
<td>Agreement whose terms require one party to deliver the underlying assets to the other party in the transaction at a fixed price and within the agreed-upon timeframe</td>
</tr>
<tr>
<td>Ecological Footprint rating</td>
<td>Indicator showing the measure of human impact on habitat in a particular country. The rating is compiled by the World Wildlife Fund (WWF)</td>
</tr>
<tr>
<td>LPI rating (Logistics Performance Index)</td>
<td>Indicator that demonstrates the relative efficiency of logistics and the development of the transport complex in a country. The rating of countries is compiled based on this indicator by the World Bank</td>
</tr>
<tr>
<td>Hospitality rating</td>
<td>Ranking of countries based on the number of countries, whose citizens may enter the country without a visa, receive a visa upon arrival, or are issued with an electronic entry permit. The rating is compiled by the World Economic Forum nongovernmental organization</td>
</tr>
<tr>
<td>Rating of banking assets to GDP</td>
<td>Ranking of countries by volume of banking assets from larger to smaller. The rating is compiled by the International Monetary Fund</td>
</tr>
<tr>
<td>United Nations rating of the development telecommunications infrastructure (Telecommunication Infrastructure Index, TII)</td>
<td>Ranking of countries based on a composite index that includes the following parts: the number of Internet users per 100 residents; the number of landline phone users per 100 residents; the number of mobile subscribers per 100 residents; the number of wireless broadband access users per 100 residents; the number of fixed broadband access users per 100 residents. The rating is compiled by the UN</td>
</tr>
<tr>
<td>Rating of countries by the International Monetary Fund (IMF Rating)</td>
<td>Ranking of countries in terms of GDP. The calculation methodology is determined by the International Monetary Fund (IMF)</td>
</tr>
<tr>
<td>Country rating based on the contribution of tourism to GDP</td>
<td>Rating based on an indicator showing the dependence of the national economy of a particular country on the tourism sector. The rating is compiled by the experts of the World Travel and Tourism Council (WTTC)</td>
</tr>
<tr>
<td>Country rating by competitiveness of the tourism industry</td>
<td>Ranking of countries in accordance with a complex indicator that assesses the quality of the welcome of tourists in a particular country (components of the indicator are estimates of the country's historical and cultural heritage, development of the economy, transport, mobile communications, health care, people's openness, etc.)</td>
</tr>
<tr>
<td>Country rating by tourist export</td>
<td>Ranking of countries in order from larger to smaller based on the number of visits by foreign tourists. The rating is compiled by the World Tourism Organization (UNWTO)</td>
</tr>
<tr>
<td>Country rating by level of investment in the tourism industry</td>
<td>Ranking of countries in order from larger to smaller according to the amount of money invested by the state in the development of the tourism sector. The rating is prepared by the World Travel and Tourism Council (WTTC)</td>
</tr>
<tr>
<td>Cultural Influence Ranking</td>
<td>Rating based on a comprehensive indicator assessing the government’s influence in art, fashion, and other cultural attributes calculated by Y&amp;R’s BAV Group and The Wharton School of the University of Pennsylvania</td>
</tr>
<tr>
<td>World Bank Worldwide Governance Indicators (Government Performance Index)</td>
<td>Rating of countries in terms of the quality and efficiency of government management. It is calculated according to the methodology and global research of the World Bank</td>
</tr>
<tr>
<td>Term</td>
<td>Definition</td>
</tr>
<tr>
<td>------</td>
<td>------------</td>
</tr>
<tr>
<td>Republic of Karakalpakstan</td>
<td>Republic of Karakalpakstan</td>
</tr>
<tr>
<td>Republic of Uzbekistan</td>
<td>Republic of Uzbekistan</td>
</tr>
<tr>
<td>“Up-or-out” system for civil servants</td>
<td>System of employee development in organizations, whereby the employees at an organization have only one choice: either to grow professionally or leave the organization.</td>
</tr>
<tr>
<td>CIS (Commonwealth of Independent States)</td>
<td>International organization regulating cooperation relations between countries that were formerly part of the USSR</td>
</tr>
<tr>
<td>JV (joint venture)</td>
<td>Form of joint activity that involves the use of resources by both parties in the transaction, the sharing of risks, the granting of rights to the parties to the project to the net assets of the joint activity.</td>
</tr>
<tr>
<td>FEZ (Free economic zone)</td>
<td>Limited part of a country's territory within which a special business scheme is established, granted to commercial organizations and the representative offices of foreign companies registered in this zone</td>
</tr>
<tr>
<td>T.O.E. (Tonne of oil equivalent)</td>
<td>Energy unit used in the international energy industry</td>
</tr>
<tr>
<td>MSW (Municipal solid waste)</td>
<td>Unsuitable for further use food and household items or goods that have lost their consumptive qualities, the largest part of consumer waste</td>
</tr>
<tr>
<td>IIOT Technologies (Industrial Internet of Things)</td>
<td>Multilevel system of the interaction of various objects, including sensors and controllers installed on the nodes and aggregates of an industrial facility, the means for the transmission of collected data and their visualization, powerful analytical tools to interpret received information</td>
</tr>
<tr>
<td>Technopark</td>
<td>Organization managed by specialists whose main goal is to increase the well-being of the local community through the promotion of an innovative culture, the competitiveness of innovative business and scientific organizations</td>
</tr>
<tr>
<td>TM (Trademark)</td>
<td>Term used to refer to the individualization of the products of a particular legal entity or individual entrepreneur</td>
</tr>
<tr>
<td>Fuel and energy complex (FEC)</td>
<td>Sector of the economy that refers to the totality of production, processes and material devices for the extraction of fuel and energy resources, their transformation, transportation and distribution, and the consumption of both primary and transformed types of energy carriers</td>
</tr>
<tr>
<td>CCI</td>
<td>Chamber of Commerce and Industry</td>
</tr>
<tr>
<td>TRACECA</td>
<td>Program of international cooperation between the European Union and partner countries on the organization of the transport corridor &quot;Europe – Caucasus – Asia&quot;</td>
</tr>
<tr>
<td>TSE</td>
<td>Trade and service enterprises</td>
</tr>
<tr>
<td>CHPP</td>
<td>Thermal power plant</td>
</tr>
<tr>
<td>UzCHHM</td>
<td>Uzbek Combine of High-Melting and Heat-Resistant Metals</td>
</tr>
<tr>
<td>Urbanization</td>
<td>The process of increasing the role of cities, urban culture, and “urban relations” in the development of society, increase in the urban population compared to the rural population</td>
</tr>
<tr>
<td>STS</td>
<td>Simplified tax system</td>
</tr>
<tr>
<td>Term</td>
<td>Definition</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>FI</td>
<td>Financial institution</td>
</tr>
<tr>
<td>FT</td>
<td>Financial terrorism</td>
</tr>
<tr>
<td>CA (Central Asia)</td>
<td>Central Asia Region</td>
</tr>
<tr>
<td>CAREC</td>
<td>Central Asian Regional Economic Cooperation</td>
</tr>
<tr>
<td>FIS</td>
<td>Fixed income securities</td>
</tr>
<tr>
<td>BSC</td>
<td>Business support center</td>
</tr>
<tr>
<td>ESC (Export Support Center)</td>
<td>Organization that is usually represented by a state institution promoting the development of a country’s exports and providing various support measures to exporters</td>
</tr>
<tr>
<td>Extreme poverty</td>
<td>Acute shortage of food, drinking water, access to health services, and lack of housing and access to education</td>
</tr>
<tr>
<td>Emigration</td>
<td>Resettlement from one country to another for economic, political and personal reasons. Specified in relation to the country which has been left</td>
</tr>
<tr>
<td>LE (Legal entity)</td>
<td>Officially registered company engaging in operational and economic activities</td>
</tr>
<tr>
<td>UNESCO</td>
<td>Specialized institute of the United Nations Educational, Scientific and Cultural Organization.</td>
</tr>
<tr>
<td>Argentina Top Wines</td>
<td>Organization uniting more than a dozen wineries focused on the export of products</td>
</tr>
<tr>
<td>“Design-to-cost”</td>
<td>Design in accordance with the specific cost</td>
</tr>
<tr>
<td>“Golden share”</td>
<td>Conditional name stipulated in legislation on the share in a company to be owned by the state or municipality as a shareholder. Serves as a measure of state control over the state enterprise due to be privatized</td>
</tr>
<tr>
<td>Camelina</td>
<td>Dual-purpose product: - For the production of aviation biofuel and biodiesel - For feeding cattle</td>
</tr>
<tr>
<td>5G</td>
<td>Fifth generation cellular network technology used by operators, following 2G, 3G and 4G</td>
</tr>
</tbody>
</table>
2. Forecast Target Development Indicators of Uzbekistan to 2035

Framework Development Strategy of the Republic of Uzbekistan to 2035
Limitation of liability

The information contained herein is general in nature and was prepared without regard to the specific circumstances of any person or organization. Although we always strive to provide prompt and accurate information, we cannot guarantee that this information will be accurate at the time of its receipt or will remain accurate in future. Any actions based on this information should only be taken after consultation with experts and a thorough analysis of the specific situation.

The information provided in the document is based on publicly available data and the data provided to the working group of the project by BUYUK KELAJAK. It reflects the views and conditions prevailing at the time of the study, which may change over time. When preparing the project, the working group assumed—without further independent evaluation—the completeness, accuracy, and reliability of the information that formed the basis of the document, including information from open sources and provided by third parties. The working group of the project is not liable for any errors and/or inaccuracies in the document caused by the incompleteness, unreliability or inaccuracy of the data received from third parties and also from open sources.

Assumptions about the future development of a particular trend or situation expressed by the working group of the project in the document are prepared for illustrative purposes—the figures are a quantitative reflection of the scenarios, options, and strategic initiatives described in the Framework Development Strategy of the Republic of Uzbekistan to 2035 and depend on political and management decisions made or not made regarding implementation of the initiatives of the strategy.

The working group of the project conducted the analysis in good faith, but gives no guarantees, explicit or implicit, as to the accuracy, completeness, or correctness of the assumptions, calculations, or results. The working group of the project does not assume liability for any actions, decisions or judgments based on the information provided in the document. Parties are advised to conduct their own analysis and due diligence before making any decision or undertaking any obligation based on the information contained in this document.

Note: 1 - Third parties mean any individuals or legal entities
## 2.1. Purpose of the forecast model

The purpose of the forecast model is to determine the values of the target macroeconomic development indicators of the Republic of Uzbekistan by 2035.

The calculation is based on both quantitative data obtained from open sources in Uzbekistan and the databases of international organizations, and also qualitative assessments and scenarios formed as a result of the interviews of the working group with industry experts.

<table>
<thead>
<tr>
<th>Goals</th>
<th>Forecast model</th>
<th>Input data</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Calculate the main macroeconomic indicators characterizing the level of economic development</td>
<td></td>
<td>Statistical data</td>
</tr>
<tr>
<td>2. Determine the structure of the economy, the main sources of income and expenditures</td>
<td></td>
<td>Forecasts</td>
</tr>
<tr>
<td>3. Determine the structure of GDP components and target values</td>
<td></td>
<td>Scenarios</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Main parameters</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Expert evaluations</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Global trends</td>
</tr>
</tbody>
</table>

Source: Analysis of the working group
2.2. Principles for building the forecasting model

The international benchmarks of the fastest developing countries in Asia were used to forecast the key indicators of Uzbekistan for 2035.

The calculations are based on international data on 34 indicators characterizing the current situation of the Republic of Uzbekistan based on the following approaches:

- **Benchmarking**: Selection of target values based on indicators of countries used as development benchmarks. Selection of benchmarks for forecasting purposes based on a comparison of the previous dynamics of the selected economic systems and the country itself.

- **Evaluation based on trends**: Evaluation of growth rates based on internal and external dynamics that have a direct impact on an indicator. Evaluation of growth rates based on historical trends for comparable countries over a long period of time.

- **Evaluation based on drivers**: Key factors and their current values are determined for key forecast indicators. Based on analysis of a set of factors, a conclusion is drawn about the growth rate of a calculated indicator.

### Advantages and limitations:

- **Provides a target vision**
  - Possible error in the choice of benchmarks
  - Does not take into account differences in the external environment (e.g., international market conditions)

- **The forecast is simple.**
  - Does not take into account factors influencing the attainment of certain results
  - Does not take into account changes in the external environment (e.g., international market conditions)

- **Reflects cause-and-effect relationships**
  - Possible error in determining the nature of the relationship between a factor and a calculated indicator.
  - Possible error in determining the dynamics of factors.

### 34 key indicators:

- GDP (nominal)
- GDP per capita
- GAV (gross added value)
- Tax revenues
- Contribution of AIC to GAV
- Contribution of industry to GAV
- Contribution of service sector to GAV
- Share of AIC in GAV
- Share of industry in GAV
- Share of service sector in GAV
- AIC output
- Industrial output
- Service sector output
- Population
- Working-age population
- Employed population
- Employment in AIC
- Industrial employment
- Employment in service sector
- Registered unemployment rate
- Level of real wages
- Amount of public debt
- Inflation
- Number of SMEs
- Added value per SME
- Annual volume of investments in Uzbekistan
- Volume of exports of goods and services
- Volume of imports of goods and services
- Weighted average exchange rate of UZS/USD
- Amount of VAT

Source: Analysis of the working group
2.3. Main parameters of the forecasting model

Indicators were calculated for the period from 2017 to 2035 with a step of 1 year. The US dollar was chosen as the calculation currency to level out any volatility.

- The horizon for calculations is 18 years (2017–2035) and includes the vision to 2035.
- Minimum calculation step is equal to one year.
- Payment currency: US dollars
- Calculations were made using Microsoft Excel.

Source: Analysis of the working group
2.4. Main blocks of the forecasting model

The main block of the forecasting model is the calculation of macroeconomic indicators on the basis of the benchmarks of the fastest growing countries in Asia.

Key prerequisites

- Starting point of the calculation: the values of the key macroeconomic indicators of the Republic of Uzbekistan for 2017
- The growth dynamics of gross indicators correspond with GDP growth.
- The structure of the economy—the ratio of AIC, industry, and services—is gradually changing as it approaches the values of benchmark countries: Malaysia, Turkey, South Korea.
- The dynamics of certain industry indicators are based on the historical dynamics of the countries serving as development role models set out in the Framework Development Strategy of Uzbekistan.

Macroeconomic block

<table>
<thead>
<tr>
<th>Year</th>
<th>Country</th>
<th>GDP per capita, USD</th>
<th>Rank in the Doing Business international rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>Slovenia</td>
<td>478.5</td>
<td>49th</td>
</tr>
<tr>
<td>2017</td>
<td>Uzbekistan</td>
<td>11,362</td>
<td>50th</td>
</tr>
<tr>
<td>2017</td>
<td>Lithuania</td>
<td>86</td>
<td>51st</td>
</tr>
</tbody>
</table>

Nominal GDP, USD billion

- 2017: 48.7
- 2035: 478.5

GDP per capita, USD per person

- 2017: 1,485
- 2035: 11,362

Output of the agribusiness sector, USD ‘000 per employed person

- 2017: 2,247
- 2035: 15,585

Industrial output, USD ‘000 per employed person

- 2017: 27,046
- 2035: 4,672

Service sector output, USD ‘000 per employed person

- 2017: 3,452
- 2035: 21,968

Registered unemployment, % of the able-bodied population

- 2017: 8.9
- 2035: 6.2

Share of the population below the poverty line ($1.95/day), %

- 2017: 10
- 2035: 0.5

Life expectancy at birth, years

- 2017: 72.3
- 2035: 80

Limitations of the model include:

- The impact of inflation and the purchasing power of the national currency was not calculated.
- Different population growth scenarios were not calculated.

Source: Analysis of the working group
2.5. Results of the calculation. Macroeconomic block: scenarios of key indicators

**Evolutionary scenario**

- Continuation of the current course of development of the country with minimal institutional changes
- The initial period of interest from global public and transnational investors (2019–2025) is followed by a gradual decline in investments, as interest in the Eastern region and emerging markets declines.
- Target GDP level will not be reached by 2035 due to the lack of sufficient investments.

**Dynamic scenario**

- Gradual transition to the market system
- Private funds are the main source of investment, including public-private partnership programs in infrastructure projects, private investments in the fuel and energy complex, as well as the projects of international corporations in Uzbekistan, which will result in investments in industry and agriculture.
- The target GDP level will be reached by 2035 thanks to the faster growth of investments, both public and private, in the amount of USD 993 billion–USD 1,213 billion.

**Dynamics of nominal and real GDP**

<table>
<thead>
<tr>
<th>Year</th>
<th>Nominal GDP</th>
<th>Real GDP, 2017 prices</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>49</td>
<td>50</td>
</tr>
<tr>
<td>2025</td>
<td>50</td>
<td>32</td>
</tr>
<tr>
<td>2030</td>
<td>71</td>
<td>30</td>
</tr>
<tr>
<td>2035</td>
<td>166</td>
<td>35</td>
</tr>
</tbody>
</table>

CAGR:
- +7.0%
- -0.8%

<table>
<thead>
<tr>
<th>Year</th>
<th>Nominal GDP</th>
<th>Real GDP, 2017 prices</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>49</td>
<td>54</td>
</tr>
<tr>
<td>2020</td>
<td>35</td>
<td>49</td>
</tr>
<tr>
<td>2025</td>
<td>78</td>
<td>49</td>
</tr>
<tr>
<td>2030</td>
<td>243</td>
<td>122</td>
</tr>
<tr>
<td>2035</td>
<td>479</td>
<td>+13.5%</td>
</tr>
</tbody>
</table>

CAGR:
- +5.2%

**Global ranking**

<table>
<thead>
<tr>
<th>Year</th>
<th>Position</th>
<th>Nominal GDP in 2017</th>
<th>Nominal GDP in 2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>84</td>
<td>48.9</td>
<td>48.7</td>
</tr>
<tr>
<td>2035</td>
<td>66</td>
<td>48.9</td>
<td>167.1</td>
</tr>
</tbody>
</table>

**Real GDP:**

- Calculated using the same assumptions as the evolutionary scenario: decrease in inflation from 14% to 5%, a slight strengthening in the Uzbek som from UZS 8,130 per dollar in 2017 to UZS 7,000 per dollar in 2035.

**Nominal GDP:**

- The forecast under the dynamic scenario takes into account the goal of being ranked in the Top 50 countries.
- The EIU and Euromonitor forecasts serve as the basis.
- Growth rates are correlated with similar historical cases (including Brazil, China, Indonesia, South Korea, Malaysia, Singapore, Thailand, China, Kazakhstan).

Source: International Monetary Fund, World Bank, Ministry of the Economy of the Republic of Uzbekistan, Euromonitor, EIU, USDA, analysis of the working group
2.5. Results of the calculation. Macroeconomic block: scenarios of key indicators

International experience

Historical analysis shows the possibility of growth inherent in the dynamic scenario

Average CAGR of nominal GDP growth by country, 2002–2017

<table>
<thead>
<tr>
<th>Country</th>
<th>Average CAGR 2002–2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Myanmar</td>
<td>16.8%</td>
</tr>
<tr>
<td>Turkmenistan</td>
<td>16.2%</td>
</tr>
<tr>
<td>Qatar</td>
<td>15.5%</td>
</tr>
<tr>
<td>China</td>
<td>15.2%</td>
</tr>
<tr>
<td>Mongolia</td>
<td>15.1%</td>
</tr>
<tr>
<td>Sudan</td>
<td>14.8%</td>
</tr>
<tr>
<td>Ghana</td>
<td>14.6%</td>
</tr>
<tr>
<td>Azerbaijan</td>
<td>13.3%</td>
</tr>
<tr>
<td>Argentina</td>
<td>13.3%</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>13.3%</td>
</tr>
<tr>
<td>Vietnam</td>
<td>13.2%</td>
</tr>
</tbody>
</table>

Nominal GDP of China, USD trillion, 2002–2017

Source: International Monetary Fund, World Bank, Ministry of the Economy of the Republic of Uzbekistan, Euromonitor, EIU, USDA, analysis of the working group
2.5. Results of the calculation. Macroeconomic block: scenarios of key indicators

Target inflation levels under the targeting policy (dynamic scenario)

Target inflation levels in Uzbekistan
per calendar year, %

- **2018–2025**: linear decline from 14.4% to 5%
- **2026–2030**: targeting at the level of 5%
- **2031–2035**: targeting at the level of 4.5%

- **Target inflation will equal 4.5% by 2035.** This indicator was calculated based on international benchmarks, including Singapore and Brazil.

- **Over the longer term, target inflation may be 2%–3%,** which is the optimal value if the economy is stable.

- **The period required to attain the target inflation rate in the Republic of Uzbekistan will equal about seven years after the start of the targeting policy.** A similar period of inflation decline was observed in the Czech Republic and in Brazil.

- **The proposed scenario for the attainment of target inflation is more conservative compared to Mexico where target inflation was attained within three years.**

- **The interest rate of the Central Bank of Uzbekistan on short-term loans remains the main inflation targeting tool.** An increase in this rate would reduce lending to the real sector of the economy. As a result, the population and business reduce their expenses, and demand for goods and services declines, which contributes to the slowdown of price growth.

- **The maintenance of a high interest rate could have an adverse effect on the national economy.** Based on the example of Brazil, inflation targeting based on high key rate instruments caused a decline in economic growth and the deterioration of a number of macroeconomic indicators, including state debt.

- **Additional inflation targeting tools facilitating a reduction in lending to the real sector may include an increase in the required reserves and the withdrawal of funds from the financial market through the sale of government securities.**

- **Successful inflation targeting is contingent on consideration of several external factors that affect inflation:**
  - Rising prices of key imports
  - Rising prices of agricultural goods caused by a bad harvest
  - State price controls on certain goods
  - Increase in government expenditure
  - Existence of monopolies in some industries

Sources: EIU, data of central banks, analysis of the working group
2.5. Results of the calculation. Macroeconomic block: scenarios of key indicators

International examples of inflation targeting

- **Czech Republic**
  - Target inflation: 3%
  - Decline in inflation by 3%
  - Time required to attain target inflation: **seven years**

- **Mexico**
  - Target inflation: 3%
  - Decline in inflation by 10%
  - Time required to attain target inflation: **four years**

- **Brazil**
  - Target inflation: 4.5%
  - Decline in inflation by 3.5%
  - Time required to attain target inflation: **six years**

Sources: EIU, data of central banks, analysis of the working group
2.5. Results of the calculation. Macroeconomic block: scenarios of key indicators

There are different growth scenarios for macroeconomic indicators. The model is based on the target scenario (dynamic).

<table>
<thead>
<tr>
<th>Key indicators of Uzbekistan, 2035</th>
<th>Unit of measure</th>
<th>2017</th>
<th>Evolutionary scenario 2035</th>
<th>Dynamic scenario 2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Share of AIC in GAV</td>
<td>% of GAV</td>
<td>19%</td>
<td>16%</td>
<td>Armenia 8%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Georgia 35%</td>
</tr>
<tr>
<td>Share of industry in GAV</td>
<td>% of GAV</td>
<td>33%</td>
<td>33%</td>
<td>Belarus 58%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>South Korea 33%</td>
</tr>
<tr>
<td>Share of service sector in GAV</td>
<td>% of GAV</td>
<td>48%</td>
<td>51%</td>
<td>Armenia 18.8</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Georgia 13.9</td>
</tr>
<tr>
<td>Employed population</td>
<td>million</td>
<td>12.8</td>
<td>13.9</td>
<td>calculation</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>calculation</td>
</tr>
<tr>
<td>Employment in AIC</td>
<td>% of able-bodied population</td>
<td>29%</td>
<td>24%</td>
<td>Egypt 12%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Malaysia 12%</td>
</tr>
<tr>
<td>Industrial employment</td>
<td>% of able-bodied population</td>
<td>24%</td>
<td>24%</td>
<td>Ukraine 59%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Bulgaria 12%</td>
</tr>
<tr>
<td>Employment in service sector</td>
<td>% of able-bodied population</td>
<td>47%</td>
<td>51%</td>
<td>Kyrgyzstan 6%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>South Korea 370.5</td>
</tr>
<tr>
<td>Registered unemployment</td>
<td>% of population</td>
<td>9%</td>
<td>8%</td>
<td>Slovakia 5%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Malaysia 55,124.0</td>
</tr>
<tr>
<td>Real wages</td>
<td>USD per capita</td>
<td>182.0</td>
<td>212.8</td>
<td>calculation</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>calculation</td>
</tr>
<tr>
<td>Inflation</td>
<td>% compared to previous year</td>
<td>14%</td>
<td>11%</td>
<td>Belarus 5%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>South Korea 5%</td>
</tr>
<tr>
<td>Amount of investment</td>
<td>USD million</td>
<td>910.0</td>
<td>16,292.0</td>
<td>calculation</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>calculation</td>
</tr>
</tbody>
</table>

Sources: World Bank Data
2.5. Description of the results of the calculation. Macroeconomic block: scenarios of key indicators

By 2035, the nominal GDP of Uzbekistan will increase from USD 48.7 billion to USD 479 billion, an annual increase of 13.5% on the horizon 2017 – 2035 due to economic restructuring and a three-fold boost in productivity.

### The presented values are the result of calculations based on the dynamic development scenario, as it is the target scenario in the Framework Development Strategy of Uzbekistan to 2035.

### Agribusiness sector:

<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th>2035</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Share of AIC in GAV, % of total GAV</td>
<td>19.2</td>
<td>8.4</td>
<td>Benchmark: Turkey, Malaysia</td>
</tr>
<tr>
<td>Contribution of AIC to GAV, USD billion</td>
<td>8.3</td>
<td>35.7</td>
<td>Benchmark: Turkey, Malaysia</td>
</tr>
<tr>
<td>Share of the population employed in the agricultural sector, % of total number of employed</td>
<td>29</td>
<td>12.2</td>
<td>Benchmark: Turkey, Malaysia</td>
</tr>
<tr>
<td>AIC output, USD '000 per person employed in AIC</td>
<td>2.2</td>
<td>15.6</td>
<td>Calculation by the working group</td>
</tr>
</tbody>
</table>

### Industry:

<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th>2035</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Share of industry in GAV, % of total GAV</td>
<td>32.9</td>
<td>34.7</td>
<td>Benchmark: South Korea, Malaysia</td>
</tr>
<tr>
<td>Contribution of industry to GAV in real terms, USD billion</td>
<td>14.2</td>
<td>147.9</td>
<td>Benchmark: South Korea, Malaysia</td>
</tr>
<tr>
<td>Share of employed people in industry, % of total number of employed people</td>
<td>23.9</td>
<td>29.1</td>
<td>Benchmark: Turkey, Malaysia</td>
</tr>
<tr>
<td>Industrial output, USD’000 per person employed in industry</td>
<td>4.6</td>
<td>27.0</td>
<td>Calculation by the working group</td>
</tr>
</tbody>
</table>

### Service sector:

<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th>2035</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Share of the service sector in GAV, % of total GAV</td>
<td>47.9</td>
<td>56.9</td>
<td>Benchmark: South Korea, Malaysia</td>
</tr>
<tr>
<td>Contribution of the service sector to GAV, USD billion</td>
<td>20.7</td>
<td>242.3</td>
<td>Benchmark: South Korea, Malaysia</td>
</tr>
<tr>
<td>Share of employed people in service sector, % of total number of employed people</td>
<td>47.1</td>
<td>58.7</td>
<td>Benchmark: Turkey, Malaysia</td>
</tr>
<tr>
<td>Output of service sector, USD ‘000 per person employed in the service sector</td>
<td>3.4</td>
<td>22.0</td>
<td>Calculation by the working group</td>
</tr>
</tbody>
</table>

### General indicators

<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th>2035</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population size, million people</td>
<td>32.8</td>
<td>42.1</td>
<td>Forecast: World Bank Data</td>
</tr>
<tr>
<td>GDP per capita, USD ‘000</td>
<td>1.5</td>
<td>11.4</td>
<td>Calculation by the working group</td>
</tr>
<tr>
<td>Registered unemployment rate, % of the working-age population</td>
<td>8.9</td>
<td>6.2</td>
<td>Benchmark: South Korea, Malaysia, Singapore</td>
</tr>
<tr>
<td>Value added per 1 SME, USD ‘000</td>
<td>113</td>
<td>272.7</td>
<td>Benchmark: Median level of developed countries</td>
</tr>
<tr>
<td>Annual volume of investments, USD billion</td>
<td>0.9</td>
<td>129.2</td>
<td>Calculation by the working group</td>
</tr>
<tr>
<td>Debt burden of the state budget, % of GDP</td>
<td>16</td>
<td>38.7</td>
<td>Benchmark: Taiwan</td>
</tr>
<tr>
<td>Inflation rate, change in consumer prices, % compared to the previous year</td>
<td>14.4</td>
<td>4.5</td>
<td>Benchmark: Singapore</td>
</tr>
</tbody>
</table>

Source: Analysis of the working group
Additional calculations

Forecast Target Development Indicators of Uzbekistan to 2035
State budget of the Republic of Uzbekistan in 2018–2035

Additional calculations
State budget of the Republic of Uzbekistan in 2018–2035

Forecast state budget of the Republic of Uzbekistan

Forecast of the state budget surplus/deficit, based on retention of the budget structure* and with due regard for the tax reform framework, USD billion

- A budget deficit is anticipated until 2024
- Implementation of tax reforms leads to a significant increase in budget expenditures in 2019
- To attain a budget surplus within six years, starting from 2025, it will be necessary to limit the growth rate of budget expenditures to 13.5% annually.
- The tax reform framework stipulates a significant increase in the burden on the state budget, in particular, due to the cancelation of mandatory contributions to state special-purpose funds, which are charged on the turnover (revenue) of legal entities; cancelation of insurance fees of citizens to the extra-budgetary pension fund; decrease in the unified social tax rate for business entities from 25% (15%) to 12%, which will the allocation of UZS 46.3 trillion (USD 6 billion) from the budget to cover the expenses previously covered from extra-budgetary funds.
- The attainment of the budget deficit is projected by 2025. A rise in public debt, widely seen as an effective public debt financing instrument, is forecast
- The main increase in budget revenues is attributable to the expansion of the range of VAT payers (UZS +16.2 trillion in 2019, or USD 2.1 billion) and cancelation of targeted fiscal benefits. (On cancelation of 25% of benefits, the cumulative increase in budget revenues will equal UZS +12.2 trillion or USD +1.6 billion.)

Note: * Excluding special-purpose funds and the Reconstruction and Development Fund
Sources: Data of the Ministry of Finance, analysis of the working group
The forecasting model of the state budget is based on growth in revenue and expenditure items in proportion to the growth of Uzbekistan’s economy and is conservative in structure.

**Key prerequisites**

- The starting point of the calculation is the current structure and size of Uzbekistan’s budget.
- The structure of the budget remains unchanged due to the conservatism of assumptions.
- In 2019 the budget was adjusted according to the Tax Reform Framework.
- The growth in revenue items is calculated pro rata to the GDP growth rate. The key prerequisites are growth in the tax base due to the development of the economy.
- Growth in public expenditure is limited to 13.5% per year—the average rate of economic growth due to population and inflation growth and rising living standards in Uzbekistan.

**Revenues**

From 2018 to 2035 state budget revenues will amount to USD 1,047 billion. This is mainly due to direct and indirect taxes, the abolition of targeted fiscal incentives, resource rents and private property taxes.

**Expenditure**

In the period from 2018 to 2035, state budget expenditure will amount to USD 876 billion, primarily allocated to support agriculture, industry, infrastructure and social welfare.

Source: Analysis of the working group
Strategic initiatives will be implemented primarily at the expense of non-tax revenues and the state budget surplus.

Some social problems can be resolved through targeted international programs and grants. The released funds can be allocated to the development of priority areas of the economy.
On 29 June 2018 the President of the Republic of Uzbekistan through Decree No. UP-5468 approved the Tax Policy Reform Framework of the Republic of Uzbekistan.

According to the Presidential Decree, effective 1 January 2019:

- Decrease in the tax burden on the payroll fund through improved taxation of the payers of standard and simplified taxes with the optimization of turnover (revenue) taxes and improved criteria to start application of the simplified tax system
- Implementation of measures to mitigate the adverse impact of improvements to tax policy for taxpayers in the simplified tax system
- Improvement of the procedure for the calculation and payment of value added tax and excise tax

According to the Presidential Decree, the key areas of improvements to tax policy include:

- Decrease in the tax burden on the economy;
- Elimination of imbalances in the tax burden between business entities that pay taxes under the simplified and standard tax systems;
- Optimization of the number of taxes through unification and consolidation
- Guaranteed macroeconomic stability
- Simplification of tax laws, elimination of discrepancies and inconsistencies
- Guarantee of the stability of tax legislation and the direct application of the Tax Code
- Retention of a favorable regime for foreign investors
- Improvement in tax control forms and mechanisms

- The framework does not affirm the principles of long-term tax administration. (Further amendments to tax rates are possible.)
- There are no specific timeframes and volumes on the decrease of tax and customs benefits.
- Indirect taxes predominate in the structure of budget tax revenues.
- There is no source to finance extra-budgetary funds after the cancelation of payments.

### Comparison of the current tax rates and proposed tax rates and other mandatory payments

<table>
<thead>
<tr>
<th>Tax/mandatory payment</th>
<th>Current rates</th>
<th>Proposed rates</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income tax</td>
<td>14%</td>
<td>12%</td>
<td>-2%</td>
</tr>
<tr>
<td>Tax on income in the form of dividends and interest</td>
<td>10%</td>
<td>5%</td>
<td>-5%</td>
</tr>
<tr>
<td>Unified tax payment</td>
<td>5%</td>
<td>4%</td>
<td>-1%</td>
</tr>
<tr>
<td>Mandatory contributions to state special-purpose funds</td>
<td>3.2%</td>
<td>0%</td>
<td>-3.2%</td>
</tr>
<tr>
<td>VAT</td>
<td>20%</td>
<td>20%</td>
<td>0%</td>
</tr>
<tr>
<td>Property tax</td>
<td>5%</td>
<td>2%</td>
<td>-3%</td>
</tr>
<tr>
<td>Personal income tax</td>
<td>7.5%–22.5%</td>
<td>12%</td>
<td></td>
</tr>
<tr>
<td>Unified social tax</td>
<td>25% / 15%</td>
<td>12%</td>
<td>-3%</td>
</tr>
<tr>
<td>Insurance contributions of citizens</td>
<td>8%</td>
<td>0%</td>
<td>-8%</td>
</tr>
</tbody>
</table>

Sources: Data from open sources, analysis of the working group.
## Impact on the budget (1/2)

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cancelation of a large number of targeted fiscal benefits</td>
<td>Increase in budget revenues due to cumulative tax receipts</td>
</tr>
<tr>
<td>Expansion of the range of VAT payers (20%)</td>
<td>Increase in budget revenues due to increase in VAT receipts group of indirect taxes</td>
</tr>
<tr>
<td>Introduction of a single personal income tax rate of 12% for all citizens</td>
<td>Increase in the personal income revenue by expanding the database of taxpayers as their “come out into the open” (declare their incomes) (group of direct taxes)</td>
</tr>
<tr>
<td>Cancelation of mandatory deductions to the state special-purpose funds charged on the turnover (revenue) of legal entities (3.2% of the net revenue of the payers of standard taxes)</td>
<td>No direct remittances to extra-budgetary funds (Pension Fund, Road Fund, School Fund). Therefore, if the activity (demand for financing) of these funds remains unchanged, the burden on the budget will increase</td>
</tr>
<tr>
<td>Cancelation of insurance fees of citizens to the extra-budgetary pension fund withheld from personal income in the form of remuneration (8% of wages)</td>
<td>No direct remittances to the extra-budgetary pension fund. Therefore, if the activity (demand for financing) of the fund remains unchanged, the burden on the budget will increase</td>
</tr>
<tr>
<td>Decrease in the unified social tax rate for business entities from 25% (15%) to 12%</td>
<td>No direct remittances, primarily to the extra-budgetary pension fund. Therefore, if the activity (demand for financing) of the fund remains unchanged, the burden on the budget will increase</td>
</tr>
<tr>
<td>Decrease in the income tax rate for business entities from 14% to 12%, for commercial banks, from 22% to 20%</td>
<td>Decrease in budget revenues from corporate income tax (group of direct taxes) if the income of business entities remains at the current level</td>
</tr>
<tr>
<td>Decrease in the corporate property tax rate from 5% to 2%</td>
<td>Reduction of budget revenues in the form of proceeds from property tax (a group of direct taxes) if the cumulative value of property remains at the current level</td>
</tr>
<tr>
<td>Reform of the simplified tax system</td>
<td>Taking into account the above clauses and the fact that most taxpayers in Uzbekistan apply the simplified tax system, and that its cancelation will increase the number of taxpayers of national taxes, it is impossible to unequivocally measure the impact on the budget.</td>
</tr>
</tbody>
</table>

Sources: Data from open sources, analysis of the working group.
Implementation of the Tax Reform Framework will increase budget revenues by UZS 26.3 trillion in 2019. However, this will require an increase in expenses by UZS 46.3 trillion in the same period.

State budget revenues of the Republic of Uzbekistan, excluding targeted funds, UZS trillion

<table>
<thead>
<tr>
<th>2019 budget revenues, with preservation of the budget structure</th>
<th>Increase in the number of VAT payers</th>
<th>Cancelation of tax and customs benefits</th>
<th>Some individuals &quot;come out into the open&quot; - start declaring revenues - due to the introduction of a single income tax rate</th>
<th>Reform of the simplified tax system (some taxpayers choose the standard tax system)</th>
<th>Decrease in the property tax rate</th>
<th>2019 budget revenues, taking into account the Tax Reform Framework</th>
</tr>
</thead>
<tbody>
<tr>
<td>68.1</td>
<td>16.2</td>
<td>12.2</td>
<td>0.1</td>
<td>0.9</td>
<td>1.4</td>
<td>94.4</td>
</tr>
</tbody>
</table>

State budget revenues of the Republic of Uzbekistan, excluding targeted funds, UZS trillion

<table>
<thead>
<tr>
<th>2019 budget expenses with preservation of the budget structure</th>
<th>Cancelation of mandatory contributions to state special-purpose funds collected on the turnover of legal entities</th>
<th>Decrease in the unified social tax rate</th>
<th>Cancelation of the insurance fees of citizens to the extra-budgetary pension fund withheld from personal income</th>
<th>2019 budget expenses, taking into account the Tax Reform Framework</th>
</tr>
</thead>
<tbody>
<tr>
<td>68.7</td>
<td>36.2</td>
<td>5.7</td>
<td>4.5</td>
<td>115.0</td>
</tr>
</tbody>
</table>

Sources: Data from open sources, analysis of the working group.
### State budget of the Republic of Uzbekistan in 2018–2035

#### Total expenses and revenues of the state budget of the Republic of Uzbekistan for 2018–2025 by sources of income and main expense items

<table>
<thead>
<tr>
<th>Source of Income</th>
<th>Amount (USD million)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenues</td>
<td>166,283 million</td>
<td></td>
</tr>
<tr>
<td>1. Direct taxes</td>
<td>21,969</td>
<td>13.2%</td>
</tr>
<tr>
<td>2. Indirect taxes</td>
<td>82,928</td>
<td>49.9%</td>
</tr>
<tr>
<td>3. Other revenues and non-tax revenues</td>
<td>46,406</td>
<td>27.9%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Expense Item</th>
<th>Amount (USD million)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expenditure</td>
<td>177,490 million</td>
<td></td>
</tr>
<tr>
<td>1. Other expenses</td>
<td>27,231</td>
<td>15.3%</td>
</tr>
<tr>
<td>2. Payment of interest on state loans</td>
<td>6,130</td>
<td>3.5%</td>
</tr>
<tr>
<td>3. Expenses on the economy</td>
<td>61,163</td>
<td>34.5%</td>
</tr>
<tr>
<td>4. VAT on final goods</td>
<td>62,897</td>
<td>35.6%</td>
</tr>
<tr>
<td>5. Excise taxes</td>
<td>14,681</td>
<td>8.3%</td>
</tr>
<tr>
<td>6. Property tax</td>
<td>1,685</td>
<td>0.9%</td>
</tr>
</tbody>
</table>

#### Key Details
- **Expenditures**
  - **Expenses on the economy**: 61,163 million USD (34.5%)
  - **Payment of interest on state loans**: 6,130 million USD (3.5%)
  - **Other expenses**: 27,231 million USD (15.3%)

- **Revenues**
  - **Direct taxes**: 21,969 million USD (13.2%)
  - **Indirect taxes**: 82,928 million USD (49.9%)
  - **Other revenues and non-tax revenues**: 46,406 million USD (27.9%)

#### Additional Details
- **Personal income tax**: 4,418 million USD (2.6%)
- **Corporate tax**: 3,025 million USD (1.7%)
- **Unified tax on SB&PE**: 3,881 million USD (2.2%)
- **Other indirect taxes**: 5,350 million USD (3.2%)
- **Other direct taxes**: 11,066 million USD (6.5%)
- **Other property taxes**: 5,584 million USD (3.3%)
- **Other social security contributions**: 5,584 million USD (3.3%)
- **Other education expenses**: 34,564 million USD (20.1%)
- **Other health expenses**: 16,945 million USD (9.9%)
- **Other culture and sports expenses**: 2,065 million USD (1.2%)
- **Other science expenses**: 690 million USD (0.4%)
- **Other social assistance payments**: 1,265 million USD (0.7%)
- **Other organization of public work expenses**: 316 million USD (0.2%)
- **Other financing of central investments**: 5,401 million USD (3.0%)
- **Other financing of the judicial system**: 389 million USD (0.2%)
- **Other financing of prosecution, the justice system, and the state authorities**: 3,881 million USD (2.2%)
- **Other financing of local government**: 922 million USD (0.5%)
- **Other reserve fund of the Cabinet of Ministers, reserve funds**: 1,135 million USD (0.6%)
- **Other credit lines for the financing of construction by banks**: 656 million USD (0.4%)
- **Other expenses of state funds included in the budget**: 64,355 million USD (36.3%)
- **Other expenses of state funds included in the budget**: 64,355 million USD (36.3%)

- **Total revenues**: 166,283 million USD
- **Total expenses**: 177,490 million USD

---

468
State budget of the Republic of Uzbekistan in 2018–2035

Total expenses and revenues of the state budget of the Republic of Uzbekistan for 2026–2030 by sources of income and main expenses

- **Expenses**
  - **Other expenses**: 16,736 million USD (7.0%)
  - **Payment of interest on state loans**: 17,667 million USD (7.4%)
  - **Other**: 38,911 million USD (19.6%)
  - **Direct taxes**: 21.3% of total expenses
  - **Indirect taxes**: 47.0% of total expenses

- **Revenues**
  - **Other**: 23,898 million USD (8.2%)
  - **Reserve fund of the Cabinet of Ministers, reserve funds**: 1,321 million USD (0.6%)
  - **Reserve fund of the Cabinet of Ministers, reserve funds**: 1,626 million USD (0.7%)
  - **Corporate tax**: 7,127 million USD (21.3%)
  - **Unified tax on SB&PE**: 4,793 million USD (17.0%)
  - **Excise taxes**: 8,632 million USD (32.5%)
  - **VAT on final goods**: 104,523 million USD (32.5%)
  - **Other**: 35,852 million USD (19.6%)
  - **Other income**: 94,683 million USD (51.4%)

- **Total expenses and revenues**: 291,272 million USD (100%)

- **Other expenses of state funds included in the budget**: 69,300 million USD (29.0%)
- **Financing of prosecution, the justice system, and the state authorities**: 5,560 million USD (2.3%)
- **Financing of the judicial system**: 558 million USD (0.2%)
- **Funding of central investments**: 7,738 million USD (3.2%)
- **NGOs and civil society**: 38 million USD (0.2%)
- **Organization of public work**: 1,813 million USD (0.7%)
- **Social assistance, payments**: 8,001 million USD (36.6%)
- **Science**: 989 million USD (4.9%)
- **Culture and sports**: 2,959 million USD (1.5%)
- **Health**: 24,280 million USD (12.9%)
- **Education**: 49,525 million USD (26.4%)
- **Tax on resources**: 17,852 million USD (9.0%)
- **Property tax**: 2,451 million USD (1.3%)
- **Land tax**: 3,595 million USD (1.9%)
- **Other**: 16,542 million USD (8.8%)
- **Corporate tax**: 7,127 million USD (3.7%)
- **Unified tax on SB&PE**: 4,793 million USD (2.5%)
- **Excise taxes**: 8,632 million USD (4.5%)
- **VAT on final goods**: 104,523 million USD (55.3%)

- **Total budget financing of the central authorities**: 94,683 million USD (51.4%)

- **Total budget financing of the local authorities**: 69,300 million USD (36.6%)

- **Total budget financing of NGOs, public bodies, and other**: 23,898 million USD (12.9%)

- **Total budget financing of functions of the central government over the period 2026–2030**: 136,839 million USD (71.0%)

- **Expense on the economy**: 7.4% of total expenses
State budget of the Republic of Uzbekistan in 2018–2035

Total expenses and revenues of the state budget of the Republic of Uzbekistan 2031–2035 by sources of income and main items of expenses
Investments:
Areas and sources

Additional calculations
The forecasting model for calculating the volume of investments makes it possible to determine the most important sources and is indicative of the most critical prerequisites for maximizing revenues.

Key prerequisites

- Investments are shown in the context of the most important sources of investments for developing economies using the example of the historical dynamics of such countries as Malaysia, South Korea, Turkey, and, to a lesser extent, Georgia, Azerbaijan, and Kazakhstan, to adjust by regional specifics.
- The starting point of the calculation is the current structure and size of funds, sources of investments, and the volume of liabilities of the banking system of the Republic of Uzbekistan.
- For each source of investment, a unique set of parameters is collected depending on its specifics, while different growth rates are used on the basis of qualitative assessments and development scenarios.

2019–2025
- Significant flow of investments, both under the public-private partnership scheme and due to the entry of international companies into the market
- The main areas of investments are industry, energy, and agriculture.
- Owing to high economic growth (8.3%), public borrowing can be performed at a relatively low cost and the amount of public borrowing can be increased.

2025–2030
- The dynamics of the first five years will continue. However, thanks to the proactive development of market mechanisms and the formation of a banking system, a more important role will be played by bank project financing.

2030–2035
- The state maintains a significant role—accounting for more than 20% of investments.
- Private direct investment, investment through capital markets and private banks are coming to the fore.

The limitations of the model include:
- The impact of inflation and purchasing power of the national currency was not calculated.
- The impact of the introduction of additional taxes, the cancelation of existing taxes, or changes in the tax rate, was not calculated.
- Different population growth scenarios were not calculated.

Source: Analysis of the working group
## Investments: Main areas

### Sources of expenditure

<table>
<thead>
<tr>
<th>#</th>
<th>Category</th>
<th>2019–2035 (USD billion)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The executive</td>
<td>0.5 – 0.6</td>
</tr>
<tr>
<td>2</td>
<td>The legislature</td>
<td>0.4 – 0.5</td>
</tr>
<tr>
<td>3</td>
<td>The judiciary</td>
<td>-</td>
</tr>
<tr>
<td>4</td>
<td>Agriculture</td>
<td>67.9 – 83.0</td>
</tr>
<tr>
<td>5</td>
<td>Textile industry</td>
<td>21.0 – 25.6</td>
</tr>
<tr>
<td>6</td>
<td>Fuel and energy complex</td>
<td>70.2 – 85.8</td>
</tr>
<tr>
<td>7</td>
<td>Metals and mining industry</td>
<td>43.2 – 52.8</td>
</tr>
<tr>
<td>8</td>
<td>Automotive industry</td>
<td>41.6 – 50.9</td>
</tr>
<tr>
<td>9</td>
<td>Chemical industry</td>
<td>40.6 – 49.6</td>
</tr>
<tr>
<td>10</td>
<td>Transport</td>
<td>28.7 – 35.0</td>
</tr>
<tr>
<td>11</td>
<td>Construction industry and infrastructure</td>
<td>129.9 – 158.7</td>
</tr>
<tr>
<td>12</td>
<td>Tourism</td>
<td>39.6 – 48.4</td>
</tr>
<tr>
<td>13</td>
<td>Small business and private entrepreneurs</td>
<td>30.0 – 36.8</td>
</tr>
<tr>
<td>14</td>
<td>Banks and compliance</td>
<td>17.4 – 21.2</td>
</tr>
<tr>
<td>15</td>
<td>Insurance system</td>
<td>4.8 – 5.8</td>
</tr>
<tr>
<td>16</td>
<td>Pension system</td>
<td>0.6 – 0.8</td>
</tr>
<tr>
<td>17</td>
<td>Capital markets</td>
<td>10.8 – 13.1</td>
</tr>
<tr>
<td>18</td>
<td>Health care</td>
<td>132.2 – 161.5</td>
</tr>
<tr>
<td>19</td>
<td>Social policy</td>
<td>44.7 – 54.6</td>
</tr>
<tr>
<td>20</td>
<td>Human capital</td>
<td>145.6 – 178.0</td>
</tr>
<tr>
<td>21</td>
<td>Culture</td>
<td>10.3 – 12.6</td>
</tr>
<tr>
<td>22</td>
<td>Environment</td>
<td>5.9 – 7.2</td>
</tr>
<tr>
<td>23</td>
<td>Science, technology, and innovations</td>
<td>50.9 – 62.2</td>
</tr>
</tbody>
</table>

**Total expenditure: (USD billion)**

940 – 1 149

Sources: World Bank data, open data of the UN, the Central Bank of Uzbekistan, analysis of the working group
## Investment: main sources

<table>
<thead>
<tr>
<th>Sources of financing</th>
<th>2019 USD billion</th>
<th>2019–2035 USD billion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Private investments, including public-private partnership (direct foreign,</td>
<td>4.0</td>
<td>263–322</td>
</tr>
<tr>
<td>corporate and private investments, investments of public-private partnerships)</td>
<td>Includeing PPP</td>
<td>157–191</td>
</tr>
<tr>
<td>2. Public reserves</td>
<td>4.8</td>
<td>166–202</td>
</tr>
<tr>
<td>3. Capital markets (investment in corporate securities)</td>
<td>0.082</td>
<td>192–234</td>
</tr>
<tr>
<td>4. Other corporate funds (investments of insurance funds and deposits of legal</td>
<td>1.1</td>
<td>112–137</td>
</tr>
<tr>
<td>entities)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Other funds of individuals (deposits of individuals and international money</td>
<td>1.7</td>
<td>113–138</td>
</tr>
<tr>
<td>transfers)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Public debt (borrowings on foreign markets)</td>
<td>0.9</td>
<td>122–149</td>
</tr>
<tr>
<td>7. Privatization proceeds (proceeds from the sale of state property)</td>
<td>5.4</td>
<td>25–31</td>
</tr>
<tr>
<td>8. Funds under the programs of international organizations (transfers and grants</td>
<td>0.004</td>
<td>0.05–0.06</td>
</tr>
<tr>
<td>under the programs of international organizations)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Average GDP growth rate:
- **13.5%**

### Total investment received:
- **993–1,213**

Sources: World Bank data, open data of the UN, the Central Bank of Uzbekistan, analysis of the working group
Private investments, including public-private partnership (direct foreign, corporate and private investments, investments of public-private partnerships)

The maximum volume of private investments in Uzbekistan is achieved, while public-private partnership mechanisms are retained, even after private investors enter the market.

**USD 263–322 billion**

Investments are carried out both under the public-private partnership scheme and without state participation. Thanks to an improved investment climate, the rate of investment growth is high. The investment volume will begin to decline after 2030 as the economy becomes saturated with investments.

Revenues from private direct and corporate investments, investments of individuals under the public-private partnership scheme

- Investment under the PPP scheme, private direct investments, and also through the entry of foreign corporations
- Investment areas: Fuel and energy, water supply and utilities, infrastructure, telecommunications, industry, agriculture, electricity
- The government maintains active growth of PPP projects, even with the arrival of private investors
- Decrease in investment growth rates because the market matures and the return on projects decreases

Public reserves

The main driver of investments is growth in business activity in the country and the increase in the tax base.

**USD 166–202 billion**

Investments are made at the expense of extra-budget state targeted funds (or directly from the budget in case of the termination of financing of targeted funds). There is a significant increase in the tax base due to the maximum possible transition to the formal economy, transparent taxation, and cashless payment system.

Receipt of public funds

- High growth rate of the tax base—13.1%
- The tax base grows faster than GDP due to the growth in tax collection and the decrease in the informal economy to 0%.
- Starting in 2026, 40% of the collected funds will be allocated to the capitalization of the private pension system.
- An amount not exceeding the income of the funds of the previous year is spent annually.
- Interest is charged on the difference between income and expenses.

Note: (1) Total amount of funds received from the source for the period from 2019 to 2035
Sources: World Bank data, UN Open data, Central Bank of the Republic of Uzbekistan, Ministry of Finance of the Republic of Uzbekistan
The maximum funds received through capital markets is achieved with a high rate of economic growth and a high share of foreign investors.

**USD 192–234 billion (1)**

Complete reform of capital markets, ensuring the transparency and stability of the system, together with a significant inflow of private investments and high GDP growth will ensure high growth in market capitalization, with 70% secured by foreign investments.

Revenues through capital markets depend on the GDP growth rate, the relative size of capital markets to GDP, and the share of foreign investors. The relative size of the capital market depends on the level of development of the system, including stock exchanges, information and analytical services, the share of public companies, the quality of the reporting and communications of companies. The share of foreign investors depends on the GDP growth rate, as it directly affects the ROE of companies, and on investment opportunities that also depend on the rate of economic development.

**USD 112–137 billion (1)**

The volume of liabilities of legal entities doubles on average every five years thanks to the increased confidence of local and international companies and active business growth. Significant growth in the volume of insurance assets due to the introduction of compulsory health insurance

The maximum growth of funds of legal entities requires increased confidence from local and international companies toward the banking system.

**Attraction of the liabilities of legal entities mainly** depends on two factors: the rates of economic development and business activity as well as the level of development of the banking system. Therefore, the revenue growth scenarios depend on the GDP growth rate, the decrease in the state’s share in the banking system, and growth in the confidence of business entities in the banking system.

**Growth in the revenues of the insurance system** depends on an increase in the number of types of compulsory insurance, which will ensure the growth of insurance premiums and, as a result, the amount of funds placed in state securities and the securities of Uzbek corporations. The significant inflow of funds is due to compulsory health insurance, which is only introduced in the dynamic scenario.

---

Note: (1) Total amount of funds received from the source for the period from 2019 to 2035
Sources: World Bank data, UN Open data, Central Bank of the Republic of Uzbekistan, Ministry of Finance of the Republic of Uzbekistan
The growth of revenues from individuals depends on the development of the banking sector, the financial literacy of the population, and the social security level.

**USD 113–138 billion (1)**

The banking system is becoming reliable and transparent. Banks offer a wide range of savings products. The penetration of banking services reaches 100%. Due to the development of social security, 30% of money transfers from abroad will be channeled into savings.

The attraction of the liabilities of legal entities depends mainly on the growth of the real disposable income of the population and increased public confidence in the banking system. Penetration of banking services also plays an important role: the target level for 2035 is 100% (60% in 2017). As the penetration of banking products grows, the volume of liabilities of individuals will increase.

**Savings from international transfers** depend on the living standards of the population. The higher the volume of services provided by the state, the higher the amount of savings. As of 2018 the volume of transfers from abroad amounted to USD 5 billion. Owing to low living standards, less than 10% is directed into savings.

The increase in public debt should be coordinated with GDP growth to avoid an excessive debt burden and a respective increase in the risk of default.

**USD 122–149 billion (1)**

The increased growth rate of public debt in 2025 is attributable to an increase in GDP and greater potential for growth in the debt burden without any decrease in the sovereign credit rating. Significant increase in the debt burden after 2025.

The amount of debt for a particular year is calculated as a percentage of the debt burden in GDP. The proceeds are calculated as the difference between the debt amount of the current year and the debt amount of the previous year minus the repayment of the principal, if repayment occurs in that year.

Note: (1) Total amount of funds received from the source for the period from 2019 to 2035

Sources: World Bank data, UN Open data, Central Bank of the Republic of Uzbekistan, Ministry of Finance of the Republic of Uzbekistan
Privatization proceeds
(proceeds from the sale of state property)

The maximum impact of privatization is achieved through the gradual entry of private investors into the capital of state-owned companies.

**USD 25–31 billion (1)**

The state’s share in the economy gradually declines. The state sells the shares of strategic assets to active investors. In addition, inefficient assets are gradually sold.

<table>
<thead>
<tr>
<th>Year</th>
<th>Privatization proceeds</th>
<th>Cost of state property</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>5.4 billion</td>
<td>-19%</td>
</tr>
<tr>
<td>2025</td>
<td>1.6 billion</td>
<td></td>
</tr>
<tr>
<td>2030</td>
<td>0.6 billion</td>
<td></td>
</tr>
<tr>
<td>2035</td>
<td>0.2 billion</td>
<td></td>
</tr>
</tbody>
</table>

- The initial value of property for sale is USD 21.7 billion.
- A 30% increase in revenues is achieved through auction sales.
- Up to 25% of a company’s assets and shares are sold annually.
- Unsold property increases in value by 8% per year.

The scenario of “slow” privatization, when no more than 10% of state assets are sold annually as the unsold part grows in value, is the most effective in revenue terms. However, one of the essential problems of Uzbekistan’s economy is the high level of state ownership, which may deter investors from entering the local market. Insufficiently active privatization may send the signal to investors that the state is not ready to step aside from management of the economy. In addition, due to the virtual illiquidity of the market, some investors may not agree to acquire less than 25% of the capital of an asset.

Funds under the programs of international organizations
(transfers and grants under the programs of international organizations)

Non-repayable transfers from international organizations decrease as the country’s economy grows and the number of social projects requiring investment falls.

**($88–$108) billion (1)**

International organizations will contribute a smaller amount to the budget each year due to a significant increase in living standards. In addition, the Republic of Uzbekistan will have its own resources to resolve social problems.

<table>
<thead>
<tr>
<th>Year</th>
<th>Expenses on investment programs</th>
</tr>
</thead>
<tbody>
<tr>
<td>2021</td>
<td>0.004</td>
</tr>
<tr>
<td>2025</td>
<td>0.003</td>
</tr>
<tr>
<td>2030</td>
<td>0.003</td>
</tr>
<tr>
<td>2035</td>
<td>0.002</td>
</tr>
</tbody>
</table>

- A small number of domestic projects fall within the scope of transfers.
- Decrease in transfers due to the sufficiency of internal funds.
- Rapid economic growth.
- Ability to independently control external cash receipts.

Note: (1) Total amount of funds received from the source for the period from 2019 to 2035
Sources: World Bank data, UN Open data, Central Bank of the Republic of Uzbekistan, Ministry of Finance of the Republic of Uzbekistan
Analytical summary on the privatization of state assets

Additional calculations
Privatization scenarios

Only phased privatization will make it possible to achieve a growth rate of 8.3% per year, as it will send the "right" signal to the market: Uzbekistan is ready for liberalization, but only with strategic investors.

"Wholesale privatization"
- Wholesale privatization will not maximize the value of the assets being sold.
- Property might be transferred to potentially undesirable investors.
- This might lead to shock phenomena in key economic areas.

Retention of state property
- Will hinder access to additional sources of investment at the beginning of development.
- Impedes private international investments.
- Requires additional financing for ineffective entities.

Phased complete privatization
- Sends a signal to investors about economic "denationalization."
- Makes it possible to obtain "fair" value for the shareholding of the asset being privatized.
- Makes it possible to dispose of inefficient assets without shock phenomena.
- Restricts the access of potentially undesirable investors to the market.
- Will increase the efficiency and market value of strategic assets.

"25% + 1" → "50%–1" → "Golden share"

The investor enters the capital of the asset and facilitates its enhanced performance. The investor has no power of veto.

The investor increases its participation interest and facilitates an increase in the market potential and value of the asset. The state reserves the right to take the final decision.

The investor buys back the property from the state. The state retains a "golden share", in other words, the power of veto and dividends, but disengages itself from operational control.

Source: Analysis of the working group
Privatization: results of the calculations

At present, more than 200 state-owned assets with a total value of USD 733 million are scheduled for privatization, while there are no plans to privatize 61 assets.

Property not planned for privatization according to the Decree of the President of the Republic of Uzbekistan

<table>
<thead>
<tr>
<th>Property value by category, in USD billion (3 quartiles)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power: 11.4</td>
</tr>
<tr>
<td>Metallurgy: 4.7</td>
</tr>
<tr>
<td>Railways: 2.4</td>
</tr>
<tr>
<td>Aviation: 1.7</td>
</tr>
<tr>
<td>Banks: 0.7</td>
</tr>
<tr>
<td>Oil &amp; gas: 0.4</td>
</tr>
<tr>
<td>Other: 21.7</td>
</tr>
<tr>
<td>Total: 29.3</td>
</tr>
</tbody>
</table>

Examples of business entities not planned for privatization

- Navoi Mining and Metallurgical Plant
- Vostok
- Uzbekistan Cotton Certification Center Sifat
- Uzmaqhsusimpex
- JSC Uzbektelecom
- Center of Radio Communication, Broadcasting, and Television
- LLC Uzimpexaloka
- JSC Uzgeoburguneftgaz
- JSC Uzbekgeofizika

Property scheduled for privatization according to the Decree of the President of the Republic of Uzbekistan

<table>
<thead>
<tr>
<th>Property value by category, in USD million</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shares: 360</td>
</tr>
<tr>
<td>Buildings and structures: 224</td>
</tr>
<tr>
<td>Shares in state enterprises: 91</td>
</tr>
<tr>
<td>Property complex: 58</td>
</tr>
<tr>
<td>Total: 733</td>
</tr>
</tbody>
</table>

---

Note: 1 = Based on the assessment of comparative analysis of a range of selected assets by comparative multipliers. Information on 17 out of 61 companies was found.

Source: 2 = State Committee of the Republic of Uzbekistan for Assistance to Privatized Enterprises and Competition Development (Goskomkonkurentsiya).
Privatization: breakdown

A selective calculation of the value of state property from the list of property not planned for sale by comparative indicators shows that the value may range from USD 9 billion to USD 22 billion.

Range of values of state-owned companies

USD million

<table>
<thead>
<tr>
<th>Industry</th>
<th>Company Name</th>
<th>EV (million USD) 1st quartile</th>
<th>EV (million USD) 3rd quartile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total value</td>
<td></td>
<td>3,144.9</td>
<td>9,163.1</td>
</tr>
<tr>
<td>Energy</td>
<td>JSC Uzbenergo</td>
<td>1,733.6</td>
<td>11,357.5</td>
</tr>
<tr>
<td>Railway</td>
<td>JSC Uzbekistan Railways</td>
<td>1,377.0</td>
<td>2,532.2</td>
</tr>
<tr>
<td>Metallurgy</td>
<td>Navoi Mining and Metallurgical Plant</td>
<td>1,152.5</td>
<td>2,119.5</td>
</tr>
<tr>
<td>Metallurgy</td>
<td>Almalyk Mining and Metallurgical Complex</td>
<td>585.9</td>
<td>1,653.8</td>
</tr>
<tr>
<td>Aviation</td>
<td>Uzbekistan Airways</td>
<td>545.8</td>
<td>545.8</td>
</tr>
<tr>
<td>Banking</td>
<td>National Bank for Foreign Economic Activity of Uzbekistan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oil &amp; gas</td>
<td>JSC Uztransgaz</td>
<td>291.8</td>
<td>405.0</td>
</tr>
<tr>
<td>Telecommunications</td>
<td>JSC Uzbektelecom</td>
<td>131.0</td>
<td>236.4</td>
</tr>
<tr>
<td>Banking</td>
<td>Xalq Bank</td>
<td>172.6</td>
<td>172.6</td>
</tr>
<tr>
<td>Car manufacturing</td>
<td>Uzavtosanoat</td>
<td>13.7</td>
<td>24.3</td>
</tr>
<tr>
<td>Oil &amp; gas</td>
<td>Uzbekgeofizika</td>
<td>9.9</td>
<td>13.7</td>
</tr>
<tr>
<td>Oil &amp; gas</td>
<td>Uzbekneftegaz</td>
<td>1.7</td>
<td>2.4</td>
</tr>
<tr>
<td>Wine production</td>
<td>Uzvinosanoat-Holding</td>
<td>0.8</td>
<td>2.3</td>
</tr>
<tr>
<td>Construction materials</td>
<td>Ozqurilishmateriallari</td>
<td>0.7</td>
<td>1.4</td>
</tr>
<tr>
<td>Chemicals</td>
<td>Uzkinmyosanoat</td>
<td>0.6</td>
<td>0.7</td>
</tr>
<tr>
<td>Agriculture</td>
<td>Uzdonmakhsulot</td>
<td>0.3</td>
<td>0.5</td>
</tr>
<tr>
<td>Oil &amp; gas</td>
<td>Uzneftegazdobycha</td>
<td>0.1</td>
<td>0.2</td>
</tr>
</tbody>
</table>

Note: The comparison is made as of 31 August 2018. EV (enterprise value) is the valuation of a company, which takes into account all the sources of its financing: debt, preferred shares, minority interest, and the ordinary shares of the company. Sources: Reports of companies, open data.
The framework was developed with the support and assistance of the following parties

### Administration of the President of the Republic of Uzbekistan
- Administration of the President of the Republic of Uzbekistan

### The executive
- Office of the Prosecutor General of the Republic of Uzbekistan
- State Committee of the Republic of Uzbekistan for Investments
- State Committee of the Republic of Uzbekistan for Roads
- State Committee of the Republic of Uzbekistan for Geology and Mineral Resources
- State Committee of the Republic of Uzbekistan for Land Resources, Geodesy, Cartography, and State Cadastre
- State Committee of the Republic of Uzbekistan for Tourism Development
- State Statistics Committee of the Republic of Uzbekistan
- State Committee of the Republic of Uzbekistan for Environmental Protection
- State Inspectorate for Control and Supervision over the Technical Condition and Safety of Large and Especially Important Water Management Facilities under the Ministry of Emergency Situations of the Republic of Uzbekistan
- State Committee of the Republic of Uzbekistan for International Relations and Friendly Ties with Foreign Countries
- State Forestry Committee of the Republic of Uzbekistan
- State Committee of the Republic of Uzbekistan for Assistance to Privatized Enterprises and the Development of Competition
- Ministry of Foreign Trade of the Republic of Uzbekistan
- Ministry of Water Resources of the Republic of Uzbekistan
- Ministry of Higher and Specialized Secondary Education of the Republic of Uzbekistan
- Ministry of Primary School Education of the Republic of Uzbekistan
- Ministry of Housing and Utilities Services of the Republic of Uzbekistan
- Ministry of Employment and Labor Relations of the Republic of Uzbekistan
- Ministry of Health of the Republic of Uzbekistan
- Ministry of Innovation Development of the Republic of Uzbekistan
- Ministry of Foreign Affairs of the Republic of Uzbekistan
- Ministry of Culture of the Republic of Uzbekistan
- Ministry of Public Education of the Republic of Uzbekistan
- Ministry for Development of Information and Communication Technologies of the Republic of Uzbekistan
- Ministry of Agriculture of the Republic of Uzbekistan
- Ministry of Construction of the Republic of Uzbekistan
- Ministry of Finance of the Republic of Uzbekistan
- Ministry of the Economy of the Republic of Uzbekistan
- Ministry of Justice of the Republic of Uzbekistan
- Uzbek Agency of Automobile Transport
- Central Bank of the Republic of Uzbekistan

### The legislature
- Office of the Legislative Chamber of Oliy Majlis
- Senate of Oliy Majlis of the Republic of Uzbekistan

### The judiciary
- Supreme Court of the Republic of Uzbekistan

### Nongovernmental organizations, support institutions, companies
- Uzavtosanoat JSC
- Uzbekistan Airways (Ўзбекистон Ҳаво Йўллари)
- JSC Toshshahartranshizmat
- JSC Uzbekistan Railway
- JSC Uzpakhtasanoat
- JSC Uzbekneftegaz
- JSC Uzbekenergo
- JSC Uzdonmakhsulot
- JSC Uzsharobsanoat
- JSC Uzkinimyosanoat
- Uzbektekstilprom Association
- Uzbekcharmsanoat Association
- Forecasting and Macroeconomic Research Institute
- Regional Producers of the Republic of Uzbekistan
- Fund for the Support of Exports of Small Businesses and Private Enterprises
- Uzbekozikovkatholding Holding Company