

GKI RANK 78 /133

GKI SCORE 44.8

WORLD AVERAGE 47.5

COUNTRY PERFORMANCE SUMMARY

Uzbekistan is a moderate performer in terms of its knowledge infrastructure. It ranks 78th out of 133 countries in the Global Knowledge Index 2023 and 14th out of the 28 countries with high human development.

AREAS OF STRENGTH

- + Adult literacy rate
- + Government expenditure on secondary education (% GDP)
- + Completion rate in upper secondary education, wealth parity
- + Ease of starting a business
- + Net enrolment rate in lower secondary education

AREAS OF IMPROVEMENT

- Ratio of high-skill TVET occupations earnings to average wage
- Ratio of medium-skill TVET occupations earnings to average wage
- Enrolment in master's, doctoral or equivalent (%)
- Citable documents per R&D personnel in higher education
- PCT applications (per 100 billion GDP)

UZBEKISTAN

KEY INDICATORS

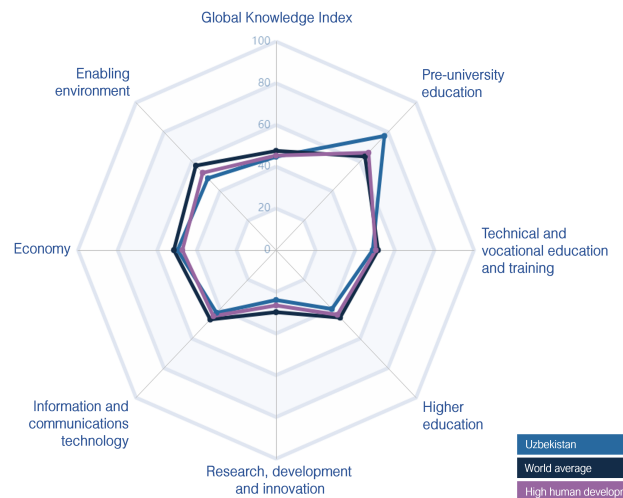
GDP (US\$ billions): 287.795

Population: 34,081,449

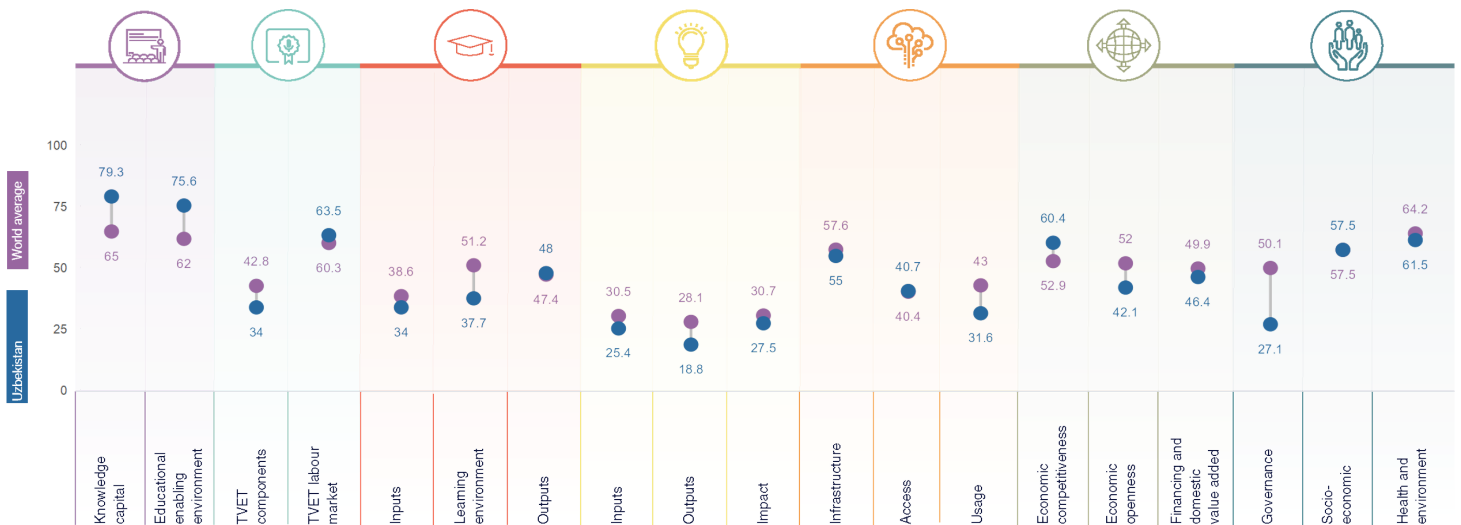
HDI: 0.727

SECTORAL INDICES

	RANK	VALUE
PRE-UNIVERSITY EDUCATION	32	77.4
TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING	83	48.8
HIGHER EDUCATION	85	39.9
RESEARCH, DEVELOPMENT AND INNOVATION	91	23.9
INFORMATION AND COMMUNICATIONS TECHNOLOGY	82	42.5
ECONOMY	71	49.7
ENABLING ENVIRONMENT	93	48.7



GKI PILLARS





UZBEKISTAN

Rank Value

Rank Value

PRE-UNIVERSITY EDUCATION 32 77.4

Knowledge capital 38 79.3

Enrolment 71 86.8

Net enrolment rate in primary education 71 91

Net enrolment rate in lower secondary education 7 99.5

Net enrolment rate in upper secondary education 83 69.8

Completion 4 87

Years of compulsory education in primary and secondary 3 92.3

Completion rate in upper secondary education 9 96.2

Gross intake ratio to the last grade of lower secondary education 29 72.4

Outcomes 45 64

Assessment of 15-year-old students in math, science and reading n/a n/a

Learning-adjusted years of schooling 51 64

Educational enabling environment 32 75.6

Expenditure 38 42

Government expenditure on primary education (% GDP) 45 37.1

Government expenditure on secondary education (% GDP) 5 57

Government funding per primary student (% GDP per capita) 31 55.5

Government funding per secondary student (% GDP per capita) 81 18.3

Resources 47 93.2

Pupil-trained teacher ratio in primary education 37 83.8

Pupil-trained teacher ratio in secondary education 25 93.5

Schools with access to computers in primary education (%) 40 97.7

Schools with access to computers in secondary education (%) 58 97.7

Early learning 45 70.3

Gross enrolment ratio in early childhood education 70 40.3

Proportion of children who are developmentally on track 15 74.7

Proportion of children with stimulating home learning environments n/a n/a

Pupil-trained teacher ratio in pre-primary education 12 95.9

Equity and inclusiveness 14 97.1

Completion rate in upper secondary education, gender parity 16 98.2

Completion rate in upper secondary education, wealth parity 4 93

Completion rate in upper secondary education, location parity 1 100

TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING 83 48.8

TVET components 102 34

Continuous training and skilling 119 18.6

Firms offering formal training (%) 89 18.6

Labour force participation rate with short-cycle tertiary education n/a n/a

Participation rate in formal and non-formal education and training n/a n/a

TVET structure 44 54.1

Government expenditure on vocational education (%) n/a n/a

Share of students enrolled in secondary vocational programmes 89 8.2

Share of students enrolled in post-secondary vocational programmes 1 100

TVET quality and qualifications 127 29.3

Extent of staff training 50 60.7

Quality of vocational training 57 56.3

Ratio of high-skill TVET occupations earnings to average wage 113 0

Ratio of medium-skill TVET occupations earnings to average wage 114 0

TVET labour market 65 63.5

Efficiency of the labour market 57 69.1

Firms constrained with inadequately educated workforce (%) 10 90.1

Employment educational mismatch (%) n/a n/a

Proportion of skilled production workers 98 33.1

Unemployment rate with vocational education 59 84.1

Post-TVET employment 72 45.6

Share of TVET occupations 75 50.1

Manufacturing employment (%) 59 41.2

Equity and inclusiveness 57 75.9

Enrolment in vocational education, gender parity 29 87.8

Vulnerable employment rate 81 63.9

HIGHER EDUCATION 85 39.9

Inputs 93 34

Expenditure 28 38.8

Government expenditure per tertiary student 93 3.1

Teaching staff compensation (% tertiary expenditure) 10 74.5

Enrolment 129 0.2

Enrolment in bachelor's or equivalent level (%) n/a n/a

Enrolment in master's, doctoral or equivalent (%) 128 0.2

Resources 67 62.9

Pupil-teacher ratio in tertiary education 84 62.7

Researchers in higher education (%) 32 63.1

Learning environment 105 37.7

Diversity and academic freedom 98 37.7

Teachers in tertiary education, gender parity 41 80.4

Inbound mobility rate 93 2.6

Academic freedom 108 30.3

Equity and inclusiveness n/a n/a

Gross attendance ratio for tertiary education, gender parity n/a n/a

Gross attendance ratio for tertiary education, wealth parity n/a n/a

Gross attendance ratio for tertiary education, location parity n/a n/a

Outputs 64 48

Attainment 45 34.5

Educational attainment rate, bachelor's or equivalent 56 34.5

Educational attainment rate, master's or equivalent n/a n/a

Educational attainment rate, doctoral or equivalent n/a n/a

Employment 49 81.6

Labour force participation rate with advanced education 96 67.3

Unemployment rate with advanced education 8 95.8

Impact 105 28.1

University-industry collaboration in R&D 35 56

Citable documents per R&D personnel in higher education 99 0.2

RESEARCH, DEVELOPMENT AND INNOVATION 91 23.9

Inputs 77 25.4

Inputs of R&D institutions 77 23.1

GERD (% GDP) 102 2.3

GERD per researcher 99 2.2

Researchers per thousand labour force 68 6.6

Tertiary graduates from STEM programmes (%) 12 81.5

Inputs of RDI in business enterprises 77 20.3

GERD performed by business enterprises (%) 68 1.2

GERD financed by business enterprises (%) 40 52.5

Researchers in business enterprises (%) 56 15.4

Firms that spend on R&D (%) 81 11.9

Inputs of societal innovation 60 35.2

High-skilled employment (%) n/a n/a

Intellectual property payments (% total trade) 65 10.5

State of cluster development 29 59.9

Outputs 108 18.8

Outputs of R&D institutions 97 27.3

Average documents per researcher 93 7.5

Citations per document 113 17.7

Resident patent applications (per 100 billion GDP) 39 56.6

Outputs of RDI in business enterprises 97 9.1

Intellectual property receipts (% total trade) 103 0.1

Industrial design applications (per 100 billion GDP) 64 6.3

PCT applications (per 100 billion GDP) 119 0

Firms producing new products and services (%) 72 29.9

Outputs of societal innovation 94 11.5

Trademark applications (per 100 billion GDP) 53 26.8

Cultural goods exports (% exports) 79 3.2

Printing and publishing output (% manufactured output) 97 4.5

Impact 81 27.5

Quality 47 37

Research institutions prominence 55 54.2

Growth of innovative companies 25 57.8

ISO 9001 quality certificates (per billion GDP) 66 10.9

ISO 14001 environmental certificates (per billion GDP) 30 24.9

Linkages 111 6.3

GERD financed from abroad (%) 96 0.6

Joint ventures per strategic alliance deals (per billion GDP) 89 3.2

Computer software spending (% GDP) 77 15.3

Business development 59 39.1

New business density per thousand population 50 11.1

Firms with products and services new to the market (%) 55 67.2



UZBEKISTAN

	Rank	Value		Rank	Value
INFORMATION AND COMMUNICATIONS TECHNOLOGY			82 42.5		
Infrastructure			76 55		
Coverage	109	50.6			
3G/4G mobile network coverage (% population)	99	87			
Secure Internet servers per 1 million population	75	49.1			
Investment in telecommunication services (% GDP)	109	15.9			
Quality			68 22.2		
Mobile upload and download speeds	90	5.9			
Fixed-broadband upload and download speeds	50	15.6			
Fixed-broadband subscriptions by speed per hundred people	50	45.2			
Affordability			53 92		
Fixed broadband basket (% GNI per capita)	52	88.4			
Mobile broadband basket (% GNI per capita)	62	93.6			
Internet and telephony competition	79	94.1			
Access			68 40.7		
Subscriptions			40 62.6		
Active mobile-broadband subscriptions per hundred inhabitants	47	42.9			
International Internet bandwidth per user	69	49.8			
Households with Internet access at home (%)	19	95			
Skills and employment			90 18.9		
Individuals with standard ICT skills (%)	74	9			
Tertiary graduates from ICT programmes (%)	61	28.8			
ICT employment (%)	n/a	n/a			
Usage			93 31.6		
Services			90 40.9		
Government online services	55	74.4			
Fixed broadband Internet traffic per subscription	87	4.4			
Mobile broadband Internet traffic per subscription	84	9.8			
Internet users (%)	79	75.1			
Outcomes			104 22.4		
ICT PCT patent applications (per 100 billion GDP)	104	0.4			
E-participation	53	61.4			
Internet activities by individuals (%)	71	8			
Trade in digitally deliverable services (% total trade)	96	19.7			
ECONOMY			71 49.7		
Economic competitiveness			37 60.4		
Infrastructure investment	72	47.8			
Gross fixed capital formation (% GDP)	11	43.9			
Logistics performance	87	40			
Transport productive capacity	88	33.8			
Building quality control	69	73.3			
Business agility			24 73.1		
Ease of starting a business	7	96.2			
Insolvency recovery rate	75	37.4			
Entrepreneurial employee activity rate	n/a	n/a			
Extent of corporate transparency	13	85.7			
Economic openness			91 42.1		
Trade and diversification	71	50			
Trade (% GDP)	87	12.8			
High-technology trade (% total trade)	60	23.8			
Product concentration	71	73.7			
Market concentration	71	89.4			
Financial openness	92	34.3			
Chinn-Ito financial openness	86	16.4			
Foreign direct investment, net inflows (% GDP)	48	36.7			
Debt dynamics	57	50			
Financing and domestic value added			79 46.4		
Financing and taxes			60 60.5		
Domestic credit to private sector (% GDP)	84	11.5			
MSME financing gap (% GDP)	52	77			
Tax and contribution rate (% profit)	44	76			
Bank non-performing loans (%)	63	77.3			
Domestic value added			97 32.4		
Medium- and high-tech activities value added	80	21.9			
Industry and services value added (% GDP)	124	19.4			
Labour underutilization rate	38	79.6			
Output per worker	94	8.6			
			ENABLING ENVIRONMENT		
			93 48.7		
			Governance		
			103 27.1		
			Political environment		
			106 26.1		
			Peace and stability		
			74 39.6		
			Voice and accountability		
			122 12.6		
			Quality of institutions		
			104 28.1		
			Rule of law		
			105 24.5		
			Control of corruption		
			89 38.2		
			Government effectiveness		
			112 21.7		
			Socio-economic		
			68 57.5		
			Gender equity		
			83 65		
			Female-to-male ratio in parliament		
			44 50.5		
			Female-to-male labour force participation		
			115 54.5		
			Female-to-male ratio in Internet usage		
			92 90		
			Social inclusion		
			70 64.1		
			Social protection coverage (% population)		
			65 41		
			Adult literacy rate		
			2 100		
			Youth not in employment, education or training (%)		
			86 51.3		
			Standard of living		
			61 43.3		
			Poverty headcount ratio (% population)		
			26 80.3		
			GDP per capita		
			96 6.4		
			Health and environment		
			88 61.5		
			Health		
			73 78		
			Universal health coverage		
			60 74.8		
			Healthy life expectancy (years)		
			75 69.7		
			Under-five mortality rate		
			73 89.3		
			Environmental performance		
			108 45		
			Renewable energy consumption (%)		
			122 1.1		
			Ecological footprint per capita		
			51 87		
			Natural hazard exposure		
			100 47		

*All values are normalized to a scale from 0 (worst) to 100 (best).