



**GKI RANK** 111 /133

**GKI SCORE** 36.1

**WORLD AVERAGE** 47.5

**COUNTRY PERFORMANCE SUMMARY**

Tajikistan is a weak performer in terms of its knowledge infrastructure. It ranks 111th out of 133 countries in the Global Knowledge Index 2023 and 20th out of the 25 countries with medium human development.

**TAJIKISTAN**

**KEY INDICATORS**

**GDP (US\$ billions): 41.177**  
**Population: 9,750,064**  
**HDI: 0.685**

**AREAS OF STRENGTH**

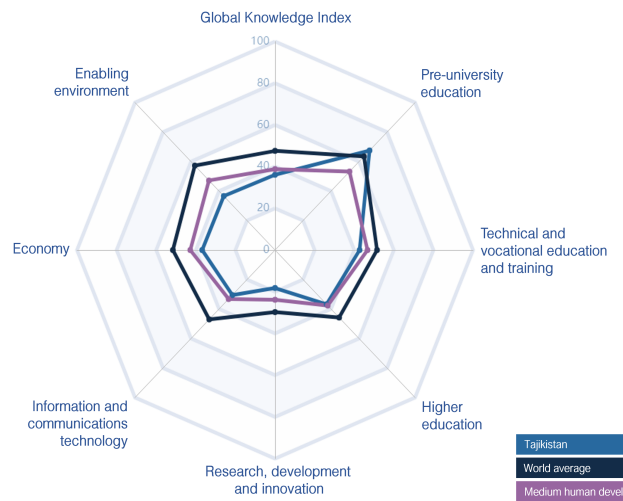
- + Educational attainment rate, doctoral or equivalent
- + Gross fixed capital formation (% GDP)
- + Ecological footprint per capita
- + Gross attendance ratio for tertiary education, wealth parity
- + Firms constrained with inadequately educated workforce (%)

**AREAS OF IMPROVEMENT**

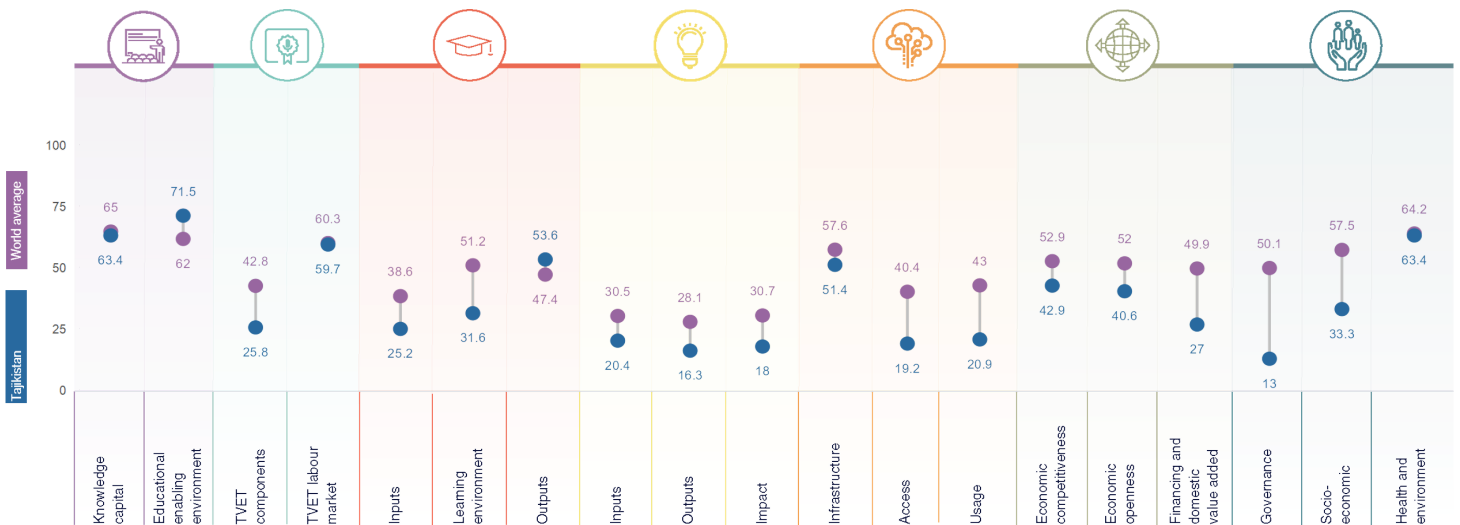
- Intellectual property receipts (% total trade)
- Research institutions prominence
- ISO 9001 quality certificates (per billion GDP)
- GERD financed from abroad (%)
- Internet and telephony competition

**SECTORAL INDICES**

	RANK	VALUE
PRE-UNIVERSITY EDUCATION	70	67.5
TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING	108	42.7
HIGHER EDUCATION	99	36.8
RESEARCH, DEVELOPMENT AND INNOVATION	122	18.2
INFORMATION AND COMMUNICATIONS TECHNOLOGY	106	30.5
ECONOMY	120	36.8
ENABLING ENVIRONMENT	125	36.6



**GKI PILLARS**





# TAJIKISTAN

Rank Value

Rank Value

## PRE-UNIVERSITY EDUCATION 70 67.5

### Knowledge capital 84 63.4

Enrolment 87 79.4

Net enrolment rate in primary education 73 90.9

Net enrolment rate in lower secondary education 76 91.9

Net enrolment rate in upper secondary education 100 55.5

Completion 77 69.7

Years of compulsory education in primary and secondary 66 69.2

Completion rate in upper secondary education 55 76.9

Gross intake ratio to the last grade of lower secondary education 71 62.9

Outcomes 86 41.1

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

Learning-adjusted years of schooling 93 41.1

### Educational enabling environment 47 71.5

Expenditure n/a n/a

Government expenditure on primary education (% GDP) n/a n/a

Government expenditure on secondary education (% GDP) n/a n/a

Government funding per primary student (% GDP per capita) n/a n/a

Government funding per secondary student (% GDP per capita) n/a n/a

Resources 63 82.2

Pupil-trained teacher ratio in primary education 42 82.2

Pupil-trained teacher ratio in secondary education n/a n/a

Schools with access to computers in primary education (%) n/a n/a

Schools with access to computers in secondary education (%) n/a n/a

Early learning 91 50.7

Gross enrolment ratio in early childhood education 115 7.3

Proportion of children who are developmentally on track n/a n/a

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

Pupil-trained teacher ratio in pre-primary education 18 94.1

Equity and inclusiveness 58 81.7

Completion rate in upper secondary education, gender parity 93 81.3

Completion rate in upper secondary education, wealth parity 12 82.1

Completion rate in upper secondary education, location parity n/a n/a

## TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING 108 42.7

### TVET components 126 25.8

Continuous training and skilling 98 29.2

Firms offering formal training (%) 68 29.2

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 128 2.2

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

Share of students enrolled in secondary vocational programmes 112 2.2

Share of students enrolled in post-secondary vocational programmes n/a n/a

TVET quality and qualifications 40 45.9

Extent of staff training 116 43.6

Quality of vocational training 86 48.2

Ratio of high-skill TVET occupations earnings to average wage n/a n/a

Ratio of medium-skill TVET occupations earnings to average wage n/a n/a

### TVET labour market 78 59.7

Efficiency of the labour market 40 72.7

Firms constrained with inadequately educated workforce (%) 13 87

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

Proportion of skilled production workers 78 49.9

Unemployment rate with vocational education 70 81.3

Post-TVET employment 106 30.9

Share of TVET occupations 85 44.8

Manufacturing employment (%) 120 17.1

Equity and inclusiveness 60 75.5

Enrolment in vocational education, gender parity n/a n/a

Vulnerable employment rate 65 75.5

## HIGHER EDUCATION 99 36.8

### Inputs 112 25.2

Expenditure 115 0.9

Government expenditure per tertiary student 111 0.9

Teaching staff compensation (% tertiary expenditure) n/a n/a

Enrolment 127 0.8

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

Enrolment in master's, doctoral or equivalent (%) 124 0.8

Resources 30 73.8

Pupil-teacher ratio in tertiary education 63 73.8

Researchers in higher education (%) n/a n/a

### Learning environment 113 31.6

Diversity and academic freedom 120 24.3

Teachers in tertiary education, gender parity 68 59.6

Inbound mobility rate 90 3

Academic freedom 123 10.4

Equity and inclusiveness 50 38.9

Gross attendance ratio for tertiary education, gender parity 73 37.5

Gross attendance ratio for tertiary education, wealth parity 8 33.7

Gross attendance ratio for tertiary education, location parity 24 45.5

### Outputs 46 53.6

Attainment 13 55.3

Educational attainment rate, bachelor's or equivalent 74 24

Educational attainment rate, master's or equivalent 31 41.8

Educational attainment rate, doctoral or equivalent 1 100

Employment 101 67.4

Labour force participation rate with advanced education 117 56.5

Unemployment rate with advanced education 82 78.3

Impact 63 38.3

University-industry collaboration in R&D 95 38.3

Citable documents per R&D personnel in higher education n/a n/a

## RESEARCH, DEVELOPMENT AND INNOVATION 122 18.2

### Inputs 101 20.4

Inputs of R&D institutions 61 28.1

GERD (% GDP) 107 1.5

GERD per researcher n/a n/a

Researchers per thousand labour force n/a n/a

Tertiary graduates from STEM programmes (%) 62 54.8

Inputs of RDI in business enterprises 112 7.2

GERD performed by business enterprises (%) n/a n/a

GERD financed by business enterprises (%) n/a n/a

Researchers in business enterprises (%) n/a n/a

Firms that spend on R&D (%) 87 7.2

Inputs of societal innovation 116 18.2

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

Intellectual property payments (% total trade) 114 0

State of cluster development 120 36.4

### Outputs 118 16.3

Outputs of R&D institutions 117 20.8

Average documents per researcher n/a n/a

Citations per document 116 16.1

Resident patent applications (per 100 billion GDP) 109 25.5

Outputs of RDI in business enterprises 109 6.2

Intellectual property receipts (% total trade) 114 0

Industrial design applications (per 100 billion GDP) 115 0.3

PCT applications (per 100 billion GDP) 91 0.7

Firms producing new products and services (%) 80 23.9

Outputs of societal innovation 71 17.4

Trademark applications (per 100 billion GDP) 101 8.7

Cultural goods exports (% exports) n/a n/a

Printing and publishing output (% manufactured output) 26 26.1

### Impact 121 18

Quality 128 11.3

Research institutions prominence 115 0

Growth of innovative companies 82 44.9

ISO 9001 quality certificates (per billion GDP) 133 0

ISO 14001 environmental certificates (per billion GDP) 131 0.3

Linkages 117 3.6

GERD financed from abroad (%) 99 0

Joint ventures per strategic alliance deals (per billion GDP) 68 5.5

Computer software spending (% GDP) 97 5.2

Business development 60 39.1

New business density per thousand population 114 0.5

Firms with products and services new to the market (%) 17 77.8



# TAJIKISTAN

	Rank	Value		Rank	Value
<b>INFORMATION AND COMMUNICATIONS TECHNOLOGY</b>			<b>106 30.5</b>		
<b>Infrastructure</b>			<b>87 51.4</b>		
Coverage	82	58.7			
3G/4G mobile network coverage (% population)	105	81.4			
Secure Internet servers per 1 million population	106	36.1			
Investment in telecommunication services (% GDP)	n/a	n/a			
Quality	n/a	n/a			
Mobile upload and download speeds	n/a	n/a			
Fixed-broadband upload and download speeds	n/a	n/a			
Fixed-broadband subscriptions by speed per hundred people	n/a	n/a			
Affordability	126	44.1			
Fixed broadband basket (% GNI per capita)	92	73			
Mobile broadband basket (% GNI per capita)	117	59.4			
Internet and telephony competition	132	0			
Access	115	19.2			
Subscriptions	130	15.2			
Active mobile-broadband subscriptions per hundred inhabitants	125	8.2			
International Internet bandwidth per user	132	10.9			
Households with Internet access at home (%)	113	26.5			
Skills and employment	76	23.2			
Individuals with standard ICT skills (%)	n/a	n/a			
Tertiary graduates from ICT programmes (%)	81	23.2			
ICT employment (%)	n/a	n/a			
Usage	120	20.9			
Services	109	28.4			
Government online services	111	39.7			
Fixed broadband Internet traffic per subscription	n/a	n/a			
Mobile broadband Internet traffic per subscription	n/a	n/a			
Internet users (%)	125	17.2			
Outcomes	130	13.5			
ICT PCT patent applications (per 100 billion GDP)	n/a	n/a			
E-participation	113	25			
Internet activities by individuals (%)	n/a	n/a			
Trade in digitally deliverable services (% total trade)	129	1.9			
<b>ECONOMY</b>			<b>120 36.8</b>		
<b>Economic competitiveness</b>			<b>103 42.9</b>		
Infrastructure investment	89	44			
Gross fixed capital formation (% GDP)	13	43.8			
Logistics performance	97	37.5			
Transport productive capacity	120	14.6			
Building quality control	45	80			
Business agility	104	41.8			
Ease of starting a business	32	93.2			
Insolvency recovery rate	87	32.2			
Entrepreneurial employee activity rate	n/a	n/a			
Extent of corporate transparency	106	0			
Economic openness	99	40.6			
Trade and diversification	82	47.5			
Trade (% GDP)	86	12.9			
High-technology trade (% total trade)	62	23.1			
Product concentration	97	65.5			
Market concentration	74	88.6			
Financial openness	99	33.7			
Chinn-Ito financial openness	85	18			
Foreign direct investment, net inflows (% GDP)	95	33.1			
Debt dynamics	57	50			
Financing and domestic value added	132	27			
Financing and taxes	131	31.2			
Domestic credit to private sector (% GDP)	127	1.3			
MSME financing gap (% GDP)	58	75.9			
Tax and contribution rate (% profit)	129	39.7			
Bank non-performing loans (%)	106	7.8			
Domestic value added	119	22.7			
Medium- and high-tech activities value added	116	3.1			
Industry and services value added (% GDP)	121	22			
Labour underutilization rate	92	59.5			
Output per worker	103	6.3			
<b>ENABLING ENVIRONMENT</b>			<b>125 36.6</b>		
<b>Governance</b>			<b>128 13</b>		
Political environment	125	12.5			
Peace and stability	103	21.2			
Voice and accountability	132	3.9			
Quality of institutions	128	13.5			
Rule of law	130	6.1			
Control of corruption	112	23.6			
Government effectiveness	128	10.8			
<b>Socio-economic</b>			<b>121 33.3</b>		
Gender equity	121	49			
Female-to-male ratio in parliament	69	37			
Female-to-male labour force participation	108	61.1			
Female-to-male ratio in Internet usage	n/a	n/a			
Social inclusion	130	16			
Social protection coverage (% population)	86	24.5			
Adult literacy rate	n/a	n/a			
Youth not in employment, education or training (%)	131	7.5			
Standard of living	84	35			
Poverty headcount ratio (% population)	61	67			
GDP per capita	111	3			
<b>Health and environment</b>			<b>79 63.4</b>		
<b>Health</b>			<b>94 67.3</b>		
Universal health coverage	82	67.3			
Healthy life expectancy (years)	95	60.6			
Under-five mortality rate	100	74			
<b>Environmental performance</b>			<b>43 59.5</b>		
Renewable energy consumption (%)	44	40.3			
Ecological footprint per capita	14	96.3			
Natural hazard exposure	103	42			

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