

GKI  
RANK 94 /141

GKI  
SCORE

43.7

WORLD  
AVERAGE

47.8

## COUNTRY PERFORMANCE SUMMARY

Bhutan is a modest performer in terms of its knowledge infrastructure. It ranks 94th out of 141 countries in the Global Knowledge Index 2024 and 5th out of the 24 countries with medium human development.

## AREAS OF STRENGTH

- + Gross fixed capital formation (% GDP)
- + Pupil-trained teacher ratio in pre-primary education
- + Households with Internet access at home (%)
- + Gross enrolment ratio in early childhood education
- + Government expenditure on secondary education (% GDP)

## AREAS OF IMPROVEMENT

- Years of compulsory education in primary and secondary
- Government expenditure on vocational education (%)
- Female-to-male ratio in parliament
- New business density per thousand population
- Chinn-Ito financial openness

## KEY INDICATORS

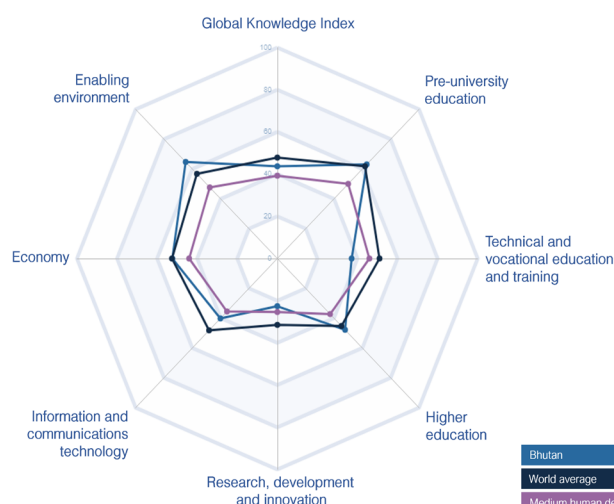
GDP (US\$ billions): 10.981

Population: 786,385

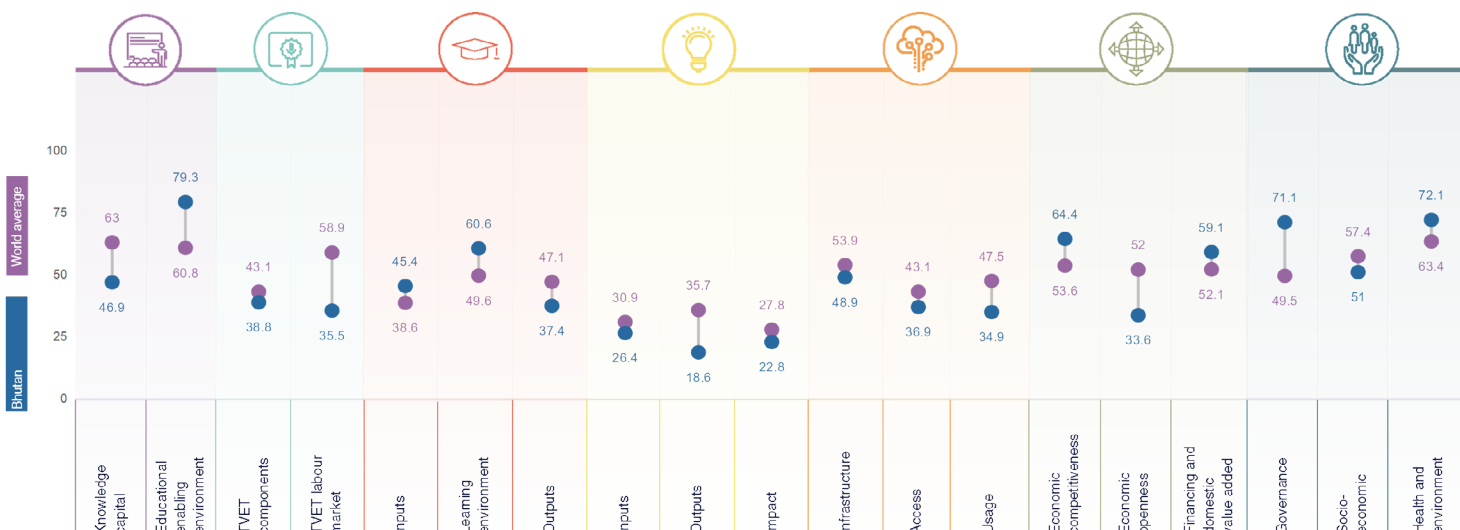
HDI: 0.681

## SECTORAL INDICES

	RANK	VALUE
PRE-UNIVERSITY EDUCATION	82	63.1
TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING	129	37.1
HIGHER EDUCATION	63	47.8
RESEARCH, DEVELOPMENT AND INNOVATION	114	22.6
INFORMATION AND COMMUNICATIONS TECHNOLOGY	96	40.2
ECONOMY	65	52.4
ENABLING ENVIRONMENT	43	64.7



## GKI PILLARS





# BHUTAN

	Rank Value	
<b>PRE-UNIVERSITY EDUCATION</b>	<b>82</b>	<b>63.1</b>
<b>Knowledge capital</b>	<b>109</b>	<b>46.9</b>
Enrolment	85	82.5
Net enrolment rate in primary education	88	89.8
Net enrolment rate in lower secondary education	94	82.7
Net enrolment rate in upper secondary education	75	75
Completion	138	19.4
Years of compulsory education in primary and secondary	136	0
Completion rate in upper secondary education	n/a	n/a
Gross intake ratio to the last grade of lower secondary education	101	38.8
<b>Outcomes</b>	<b>82</b>	<b>38.8</b>
Assessment of 15-year-old students in math, science and reading	n/a	n/a
Learning-adjusted years of schooling	100	38.8
<b>Educational enabling environment</b>	<b>13</b>	<b>79.3</b>
<b>Expenditure</b>	<b>7</b>	<b>55.2</b>
Government expenditure on primary education (% GDP)	4	75.9
Government expenditure on secondary education (% GDP)	4	57
Government funding per primary student (% GDP per capita)	80	32.1
Government funding per secondary student (% GDP per capita)	14	55.7
<b>Resources</b>	<b>55</b>	<b>91.8</b>
Pupil-trained teacher ratio in primary education	49	86.8
Pupil-trained teacher ratio in secondary education	15	96.4
Schools with access to computers in primary education (%)	55	85.9
Schools with access to computers in secondary education (%)	53	98.1
<b>Early learning</b>	<b>5</b>	<b>91</b>
Gross enrolment ratio in early childhood education	4	82.8
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	2	99.2
<b>Equity and inclusiveness</b>	<b>n/a</b>	<b>n/a</b>
Completion rate in upper secondary education, gender parity	n/a	n/a
Completion rate in upper secondary education, wealth parity	n/a	n/a
Completion rate in upper secondary education, location parity	n/a	n/a
<b>TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING</b>	<b>129</b>	<b>37.1</b>
<b>TVET components</b>	<b>96</b>	<b>38.8</b>
<b>Continuous training and skilling</b>	<b>64</b>	<b>45.2</b>
Firms offering formal training (%)	72	29.3
Labour force participation rate with short-cycle tertiary education	39	78.2
Participation rate in formal and non-formal education and training	63	28
<b>TVET structure</b>	<b>94</b>	<b>34.3</b>
Government expenditure on vocational education (%)	80	0
Share of students enrolled in secondary vocational programmes	114	3
Share of students enrolled in post-secondary vocational programmes	1	100
<b>TVET quality and qualifications</b>	<b>111</b>	<b>36.8</b>
Extent of staff training	98	51.9
Quality of vocational training	60	55.8
Ratio of high-skill TVET occupations earnings to average wage	107	17.7
Ratio of medium-skill TVET occupations earnings to average wage	87	21.6
<b>TVET labour market</b>	<b>130</b>	<b>35.5</b>
<b>Efficiency of the labour market</b>	<b>124</b>	<b>55.6</b>
Firms constrained with inadequately educated workforce (%)	50	77.2
Employment educational mismatch (%)	102	36.7
Proportion of skilled production workers	95	46.8
Unemployment rate with vocational education	99	61.7
<b>Post-TVET employment</b>	<b>117</b>	<b>26.4</b>
Share of TVET occupations	116	33
Manufacturing employment (%)	106	19.9
<b>Equity and inclusiveness</b>	<b>135</b>	<b>24.4</b>
Enrolment in vocational education, gender parity	n/a	n/a
Vulnerable employment rate	118	24.4

	Rank Value	
<b>HIGHER EDUCATION</b>	<b>63</b>	<b>47.8</b>
<b>Inputs</b>	<b>44</b>	<b>45.4</b>
<b>Expenditure</b>	<b>n/a</b>	<b>n/a</b>
Government expenditure per tertiary student	n/a	n/a
Teaching staff compensation (% tertiary expenditure)	n/a	n/a
<b>Enrolment</b>	<b>97</b>	<b>9.5</b>
Enrolment in bachelor's or equivalent level (%)	102	9.5
Enrolment in master's, doctoral or equivalent (%)	n/a	n/a
<b>Resources</b>	<b>20</b>	<b>81.2</b>
Pupil-teacher ratio in tertiary education	47	81.2
Researchers in higher education (%)	n/a	n/a
<b>Learning environment</b>	<b>43</b>	<b>60.6</b>
<b>Diversity and academic freedom</b>	<b>50</b>	<b>60.6</b>
Teachers in tertiary education, gender parity	79	54.8
Inbound mobility rate	4	84.5
Academic freedom	103	42.4
<b>Equity and inclusiveness</b>	<b>n/a</b>	<b>n/a</b>
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
<b>Outputs</b>	<b>112</b>	<b>37.4</b>
<b>Attainment</b>	<b>92</b>	<b>9.8</b>
Educational attainment rate, bachelor's or equivalent	89	16.5
Educational attainment rate, master's or equivalent	79	7.6
Educational attainment rate, doctoral or equivalent	83	5.2
<b>Employment</b>	<b>118</b>	<b>65.7</b>
Labour force participation rate with advanced education	120	62.3
Unemployment rate with advanced education	108	69.1
<b>Impact</b>	<b>74</b>	<b>36.6</b>
University-industry collaboration in R&D	102	36.6
Citable documents per R&D personnel in higher education	n/a	n/a
<b>RESEARCH, DEVELOPMENT AND INNOVATION</b>	<b>114</b>	<b>22.6</b>
<b>Inputs</b>	<b>76</b>	<b>26.4</b>
<b>Inputs of R&amp;D institutions</b>	<b>n/a</b>	<b>n/a</b>
GERD (% GDP)	n/a	n/a
GERD per researcher	n/a	n/a
Researchers per thousand labour force	n/a	n/a
Tertiary graduates from STEM programmes (%)	n/a	n/a
<b>Inputs of RDI in business enterprises</b>	<b>57</b>	<b>26.3</b>
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 (%)	46	26.3
<b>Inputs of societal innovation</b>	<b>94</b>	<b>26.4</b>
High-skilled employment (%)	57	35.1
Intellectual property payments (% total trade)	126	0
State of cluster development	91	44.2
<b>Outputs</b>	<b>137</b>	<b>18.6</b>
<b>Outputs of R&amp;D institutions</b>	<b>134</b>	<b>19.2</b>
Average documents per researcher	n/a	n/a
Citations per document	133	9.9
Resident patent applications (per 100 billion GDP)	116	28.4
<b>Outputs of RDI in business enterprises</b>	<b>50</b>	<b>32.7</b>
Intellectual property receipts (% total trade)	112	1.2
Industrial design applications (per 100 billion GDP)	100	39.6
PCT applications (per 100 billion GDP)	n/a	n/a
Firms producing new products and services (%)	36	57.3
<b>Outputs of societal innovation</b>	<b>139</b>	<b>3.4</b>
Trademark applications (per 100 billion GDP)	118	3.4
Cultural goods exports (% exports)	n/a	n/a
Printing and publishing output (% manufactured output)	n/a	n/a
<b>Impact</b>	<b>93</b>	<b>22.8</b>
<b>Quality</b>	<b>100</b>	<b>14.6</b>
Research institutions prominence	117	2.1
Growth of innovative companies	74	45.9
ISO 9001 quality certificates (per billion GDP)	90	5
ISO 14001 environmental certificates (per billion GDP)	81	5.4
<b>Linkages</b>	<b>n/a</b>	<b>n/a</b>
GERD financed from abroad (%)	n/a	n/a
Joint ventures per strategic alliance deals (per billion GDP)	n/a	n/a
Computer software spending (% GDP)	n/a	n/a
<b>Business development</b>	<b>102</b>	<b>30.9</b>
New business density per thousand population	130	0.2
Firms with products and services new to the market (%)	68	61.7



# BHUTAN

## Rank Value

INFORMATION AND COMMUNICATIONS TECHNOLOGY			96	40.2
Infrastructure			90	48.9
Coverage			93	53
3G/4G mobile network coverage (% population)			83	95.3
Secure Internet servers per 1 million population			72	51.2
Investment in telecommunication services (% GDP)			113	12.5
Quality			101	8.7
Mobile upload and download speeds			65	14.8
Fixed-broadband upload and download speeds			92	10.4
Fixed-broadband subscriptions by speed per hundred people			115	0.8
Affordability			69	85
Fixed broadband basket (% GNI per capita)			74	66.3
Mobile broadband basket (% GNI per capita)			66	94.2
Internet and telephony competition			81	94.4
Access			92	36.9
Subscriptions			51	66.6
Active mobile-broadband subscriptions per hundred inhabitants			69	47.2
International Internet bandwidth per user			93	53.1
Households with Internet access at home (%)			4	99.6
Skills and employment			117	7.2
Individuals with standard ICT skills (%)			78	6.6
Tertiary graduates from ICT programmes (%)			n/a	n/a
ICT employment (%)			82	7.8
Usage			103	34.9
Services			85	45.5
Government online services			89	58.9
Fixed broadband Internet traffic per subscription			108	0.8
Mobile broadband Internet traffic per subscription			26	37.1
Internet users (%)			52	85.4
Outcomes			126	24.3
ICT PCT patent applications (per 100 billion GDP)			n/a	n/a
E-participation			84	49.3
Internet activities by individuals (%)			80	14.9
Trade in digitally deliverable services (% total trade)			133	8.5
ECONOMY			65	52.4
Economic competitiveness			31	64.4
Infrastructure investment			20	64.1
Gross fixed capital formation (% GDP)			1	100
Logistics performance			100	37.5
Transport productive capacity			73	39
Building quality control			46	80
Business agility			47	64.6
Ease of starting a business			84	86.4
Insolvency recovery rate			n/a	n/a
Entrepreneurial employee activity rate			n/a	n/a
Extent of corporate transparency			88	42.9
Economic openness			131	33.6
Trade and diversification			117	42
Trade (% GDP)			66	19.7
High-technology trade (% total trade)			n/a	n/a
Product concentration			101	64.2
Market concentration			n/a	n/a
Financial openness			133	25.1
Chinn-Ito financial openness			88	16.3
Foreign direct investment, net inflows (% GDP)			126	34
Debt dynamics			n/a	n/a
Financing and domestic value added			37	59.1
Financing and taxes			32	65.3
Domestic credit to private sector (% GDP)			42	27.4
MSME financing gap (% GDP)			8	94.2
Tax and contribution rate (% profit)			98	53.3
Bank non-performing loans (%)			57	86.5
Domestic value added			48	52.9
Medium- and high-tech activities value added			n/a	n/a
Industry and services value added (% GDP)			78	70.8
Labour underutilization rate			42	79.3
Output per worker			96	8.7

## Rank Value

ENABLING ENVIRONMENT			43	64.7
Governance			39	71.1
Political environment			40	65
Peace and stability			20	76.9
Voice and accountability			62	53.1
Quality of institutions			33	77.2
Rule of law			38	71.7
Control of corruption			20	90.1
Government effectiveness			43	69.8
Socio-economic			87	51
Gender equity			94	63.9
Female-to-male ratio in parliament			135	4.5
Female-to-male labour force participation			28	87.3
Female-to-male ratio in Internet usage			1	100
Social inclusion			116	43.6
Social protection coverage (% population)			121	9.6
Adult literacy rate			95	61.6
Youth not in employment, education or training (%)			84	59.6
Standard of living			54	45.5
Poverty headcount ratio (% population)			22	80.9
GDP per capita			85	10
Health and environment			9	72.1
Health			91	70.3
Universal health coverage			98	60.4
Healthy life expectancy (years)			53	69.5
Under-five mortality rate			97	81.1
Environmental performance			29	73.8
Renewable energy consumption (%)			8	85.7
Ecological footprint per capita			108	63.8
Natural hazard exposure			30	72

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