

GKI  
RANK 57 /141

GKI  
SCORE

49.9

WORLD  
AVERAGE

47.8

## COUNTRY PERFORMANCE SUMMARY

Thailand is a moderate performer in terms of its knowledge infrastructure. It ranks 57th out of 141 countries in the Global Knowledge Index 2024 and 53rd out of the 59 countries with very high human development.

# THAILAND

## KEY INDICATORS

GDP (US\$ billions): 1,515.914

Population: 71,702,435

HDI: 0.803

## AREAS OF STRENGTH

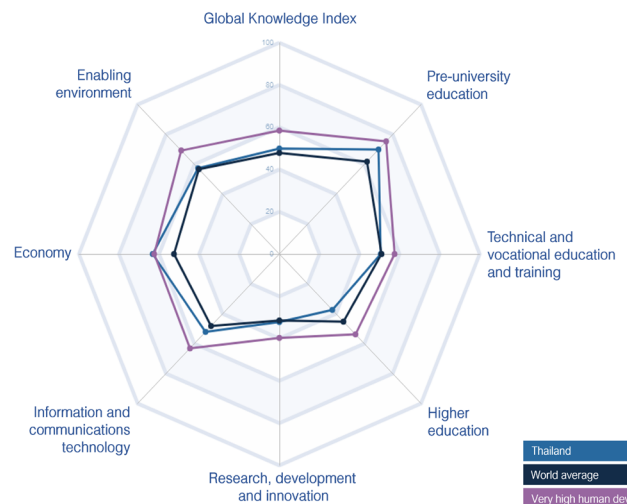
- + Gross intake ratio to the last grade of lower secondary education
- + GERD financed by business enterprises (%)
- + Proportion of children with stimulating home learning environments
- + Labour underutilization rate
- + Firms constrained with inadequately educated workforce (%)

## AREAS OF IMPROVEMENT

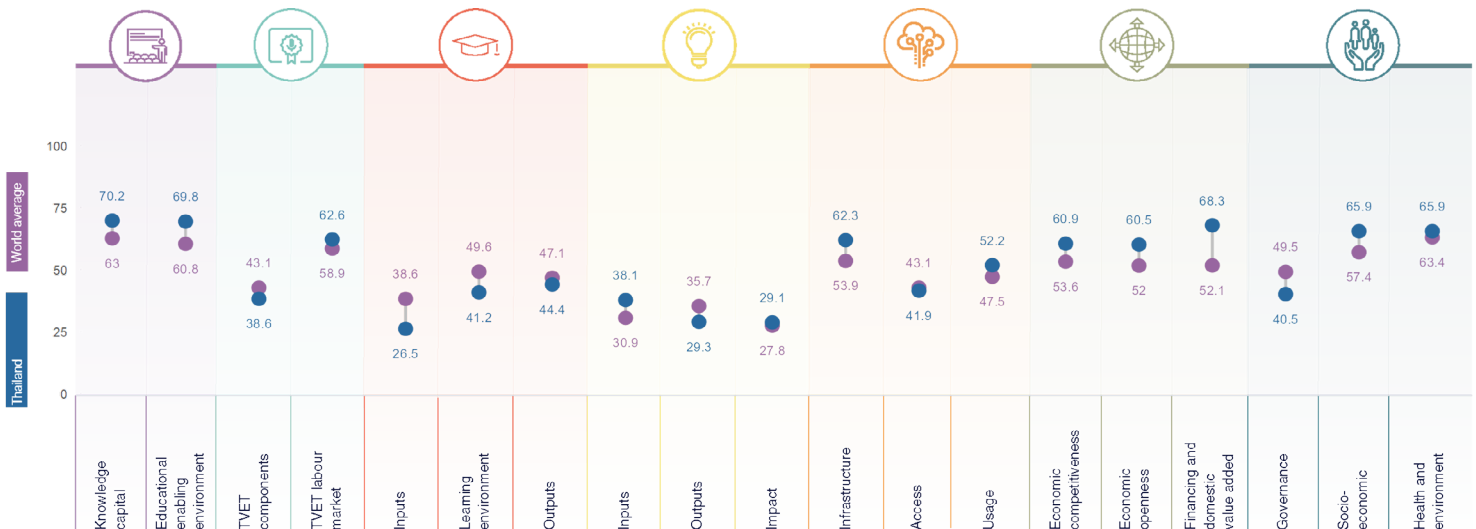
- Government expenditure on primary education (% GDP)
- Participation rate in formal and non-formal education and training
- Firms that spend on R&D (%)
- Average documents per researcher
- GERD financed from abroad (%)

## SECTORAL INDICES

	RANK	VALUE
PRE-UNIVERSITY EDUCATION	63	70
TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING	80	50.6
HIGHER EDUCATION	106	37.4
RESEARCH, DEVELOPMENT AND INNOVATION	54	32.2
INFORMATION AND COMMUNICATIONS TECHNOLOGY	61	52.1
ECONOMY	32	63.2
ENABLING ENVIRONMENT	61	57.4



## GKI PILLARS





# THAILAND

		Rank Value	
PRE-UNIVERSITY EDUCATION		63	70
Knowledge capital		68	70.2
Enrolment		72	88
Net enrolment rate in primary education		50	96.3
Net enrolment rate in lower secondary education		70	93.2
Net enrolment rate in upper secondary education		77	74.5
Completion		20	80.5
Years of compulsory education in primary and secondary		68	69.2
Completion rate in upper secondary education		54	72.3
Gross intake ratio to the last grade of lower secondary education		1	100
Outcomes		77	42.2
Assessment of 15-year-old students in math, science and reading		65	23.4
Learning-adjusted years of schooling		61	61.1
Educational enabling environment		55	69.8
Expenditure		72	33.6
Government expenditure on primary education (% GDP)		121	2.5
Government expenditure on secondary education (% GDP)		49	34.9
Government funding per primary student (% GDP per capita)		17	62.3
Government funding per secondary student (% GDP per capita)		57	34.6
Resources		47	95.2
Pupil-trained teacher ratio in primary education		18	95.6
Pupil-trained teacher ratio in secondary education		50	85.3
Schools with access to computers in primary education (%)		32	99.9
Schools with access to computers in secondary education (%)		39	99.9
Early learning		20	78.8
Gross enrolment ratio in early childhood education		54	51.9
Proportion of children who are developmentally on track		24	69.5
Proportion of children with stimulating home learning environments		2	96.4
Pupil-trained teacher ratio in pre-primary education		6	97.4
Equity and inclusiveness		59	71.9
Completion rate in upper secondary education, gender parity		75	84.6
Completion rate in upper secondary education, wealth parity		33	44.7
Completion rate in upper secondary education, location parity		42	86.4
TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING		80	50.6
TVET components		99	38.6
Continuous training and skilling		135	14.1
Firms offering formal training (%)		98	18.7
Labour force participation rate with short-cycle tertiary education		n/a	n/a
Participation rate in formal and non-formal education and training		123	9.4
TVET structure		26	59.9
Government expenditure on vocational education (%)		n/a	n/a
Share of students enrolled in secondary vocational programmes		60	19.8
Share of students enrolled in post-secondary vocational programmes		1	100
TVET quality and qualifications		70	41.8
Extent of staff training		102	49.8
Quality of vocational training		83	50.6
Ratio of high-skill TVET occupations earnings to average wage		22	40.6
Ratio of medium-skill TVET occupations earnings to average wage		65	26.1
TVET labour market		66	62.6
Efficiency of the labour market		21	78.6
Firms constrained with inadequately educated workforce (%)		4	97
Employment educational mismatch (%)		66	60.2
Proportion of skilled production workers		27	78.7
Unemployment rate with vocational education		n/a	n/a
Post-TVET employment		49	50.3
Share of TVET occupations		90	48
Manufacturing employment (%)		29	52.7
Equity and inclusiveness		102	58.7
Enrolment in vocational education, gender parity		79	70.6
Vulnerable employment rate		96	46.8

		Rank Value	
HIGHER EDUCATION		106	37.4
Inputs		115	26.5
Expenditure		84	14.8
Government expenditure per tertiary student		71	6.2
Teaching staff compensation (% tertiary expenditure)		68	23.3
Enrolment		80	15.8
Enrolment in bachelor's or equivalent level (%)		68	24
Enrolment in master's, doctoral or equivalent (%)		86	7.7
Resources		105	48.8
Pupil-teacher ratio in tertiary education		79	69
Researchers in higher education (%)		79	28.6
Learning environment		102	41.2
Diversity and academic freedom		105	37
Teachers in tertiary education, gender parity		49	76.6
Inbound mobility rate		85	3.6
Academic freedom		109	30.8
Equity and inclusiveness		35	45.5
Gross attendance ratio for tertiary education, gender parity		54	73.6
Gross attendance ratio for tertiary education, wealth parity		21	19.5
Gross attendance ratio for tertiary education, location parity		29	43.4
Outputs		79	44.4
Attainment		84	12.7
Educational attainment rate, bachelor's or equivalent		68	28.3
Educational attainment rate, master's or equivalent		82	6.9
Educational attainment rate, doctoral or equivalent		92	2.8
Employment		14	88.5
Labour force participation rate with advanced education		35	81.9
Unemployment rate with advanced education		9	95.1
Impact		93	31.9
University-industry collaboration in R&D		46	52.4
Citable documents per R&D personnel in higher education		76	11.4
RESEARCH, DEVELOPMENT AND INNOVATION		54	32.2
Inputs		35	38.1
Inputs of R&D institutions		52	33.8
GERD (% GDP)		33	21.6
GERD per researcher		64	18
Researchers per thousand labour force		47	18.3
Tertiary graduates from STEM programmes (%)		14	77.2
Inputs of RDI in business enterprises		16	49.1
GERD performed by business enterprises (%)		24	18.4
GERD financed by business enterprises (%)		1	100
Researchers in business enterprises (%)		11	74
Firms that spend on R&D (%)		110	4.1
Inputs of societal innovation		57	35.7
High-skilled employment (%)		96	16.4
Intellectual property payments (% total trade)		16	42.5
State of cluster development		65	48.2
Outputs		100	29.3
Outputs of R&D institutions		108	27.9
Average documents per researcher		99	5.7
Citations per document		85	31.3
Resident patent applications (per 100 billion GDP)		77	46.7
Outputs of RDI in business enterprises		84	24.1
Intellectual property receipts (% total trade)		59	14.3
Industrial design applications (per 100 billion GDP)		33	69.3
PCT applications (per 100 billion GDP)		69	2.3
Firms producing new products and services (%)		100	10.6
Outputs of societal innovation		63	37.3
Trademark applications (per 100 billion GDP)		88	9.7
Cultural goods exports (% exports)		19	88.3
Printing and publishing output (% manufactured output)		64	13.8
Impact		60	29.1
Quality		50	28.7
Research institutions prominence		42	19.5
Growth of innovative companies		66	46.8
ISO 9001 quality certificates (per billion GDP)		30	25.8
ISO 14001 environmental certificates (per billion GDP)		34	22.6
Linkages		83	12.6
GERD financed from abroad (%)		89	1.3
Joint ventures per strategic alliance deals (per billion GDP)		46	9.9
Computer software spending (% GDP)		42	26.6
Business development		37	46
New business density per thousand population		80	6.2
Firms with products and services new to the market (%)		10	85.8



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Rank Value	
<b>INFORMATION AND COMMUNICATIONS TECHNOLOGY</b>	<b>61 52.1</b>
<b>Infrastructure</b>	<b>50 62.3</b>
Coverage	66 60.1
3G/4G mobile network coverage (% population)	57 98.4
Secure Internet servers per 1 million population	61 59.3
Investment in telecommunication services (% GDP)	74 22.5
<b>Quality</b>	<b>34 44.2</b>
Mobile upload and download speeds	44 20.4
Fixed-broadband upload and download speeds	11 77
Fixed-broadband subscriptions by speed per hundred people	67 35.3
<b>Affordability</b>	<b>77 82.7</b>
Fixed broadband basket (% GNI per capita)	80 63.6
Mobile broadband basket (% GNI per capita)	84 90.3
Internet and telephony competition	82 94.1
<b>Access</b>	<b>76 41.9</b>
<b>Subscriptions</b>	<b>24 71.6</b>
Active mobile-broadband subscriptions per hundred inhabitants	23 60.7
International Internet bandwidth per user	34 62.6
Households with Internet access at home (%)	47 91.5
<b>Skills and employment</b>	<b>105 12.1</b>
Individuals with standard ICT skills (%)	73 10
Tertiary graduates from ICT programmes (%)	91 20.5
ICT employment (%)	89 5.8
<b>Usage</b>	<b>57 52.2</b>
<b>Services</b>	<b>38 62.4</b>
Government online services	60 76.1
Fixed broadband Internet traffic per subscription	43 32.8
Mobile broadband Internet traffic per subscription	10 52.5
Internet users (%)	43 88.4
<b>Outcomes</b>	<b>77 42</b>
ICT PCT patent applications (per 100 billion GDP)	93 33
E-participation	40 75.3
Internet activities by individuals (%)	65 30.1
Trade in digitally deliverable services (% total trade)	82 29.7
<b>ECONOMY</b>	<b>32 63.2</b>
<b>Economic competitiveness</b>	<b>44 60.9</b>
Infrastructure investment	63 53.1
Gross fixed capital formation (% GDP)	63 40.3
Logistics performance	32 62.5
Transport productive capacity	95 29.5
Building quality control	46 80
<b>Business agility</b>	<b>39 68.7</b>
Ease of starting a business	42 92.4
Insolvency recovery rate	25 76.3
Entrepreneurial employee activity rate	43 20.6
Extent of corporate transparency	12 85.7
<b>Economic openness</b>	<b>45 60.5</b>
<b>Trade and diversification</b>	<b>8 67.8</b>
Trade (% GDP)	27 32.8
High-technology trade (% total trade)	8 53.5
Product concentration	9 92.5
Market concentration	47 92.5
<b>Financial openness</b>	<b>67 53.2</b>
Chinn-Ito financial openness	76 41.7
Foreign direct investment, net inflows (% GDP)	90 38.9
Debt dynamics	54 79
<b>Financing and domestic value added</b>	<b>11 68.3</b>
<b>Financing and taxes</b>	<b>8 77.2</b>
Domestic credit to private sector (% GDP)	7 62.2
MSME financing gap (% GDP)	24 86.7
Tax and contribution rate (% profit)	36 72.3
Bank non-performing loans (%)	52 87.6
<b>Domestic value added</b>	<b>31 59.3</b>
Medium- and high-tech activities value added	26 44.5
Industry and services value added (% GDP)	17 82.6
Labour underutilization rate	4 96.8
Output per worker	81 13.4

Rank Value	
<b>ENABLING ENVIRONMENT</b>	<b>61 57.4</b>
<b>Governance</b>	<b>78 40.5</b>
Political environment	99 31.5
Peace and stability	93 31.6
Voice and accountability	100 31.4
<b>Quality of institutions</b>	<b>67 49.5</b>
Rule of law	60 54.7
Control of corruption	88 35.8
Government effectiveness	60 58
<b>Socio-economic</b>	<b>48 65.9</b>
<b>Gender equity</b>	<b>81 66.7</b>
Female-to-male ratio in parliament	104 24.1
Female-to-male labour force participation	73 78.2
Female-to-male ratio in Internet usage	67 97.9
<b>Social inclusion</b>	<b>49 78.1</b>
Social protection coverage (% population)	54 69.3
Adult literacy rate	63 87.8
Youth not in employment, education or training (%)	46 77.3
<b>Standard of living</b>	<b>37 52.8</b>
Poverty headcount ratio (% population)	8 90.3
GDP per capita	66 15.4
<b>Health and environment</b>	<b>53 65.9</b>
<b>Health</b>	<b>36 83.1</b>
Universal health coverage	29 82
Healthy life expectancy (years)	41 72.8
Under-five mortality rate	54 94.6
<b>Environmental performance</b>	<b>100 48.7</b>
Renewable energy consumption (%)	86 19.7
Ecological footprint per capita	62 84.5
Natural hazard exposure	121 42

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