

GKI RANK 1 /133

GKI SCORE 69.1
WORLD AVERAGE 47.5

COUNTRY PERFORMANCE SUMMARY

Switzerland is a leading performer in terms of its knowledge infrastructure. It ranks 1st out of 133 countries in the Global Knowledge Index 2023 and 1st out of the 61 countries with very high human development.

SWITZERLAND

AREAS OF STRENGTH

- + Fixed-broadband subscriptions by speed per hundred people
- + University-industry collaboration in R&D
- + Quality of vocational training
- + Extent of staff training
- + Control of corruption

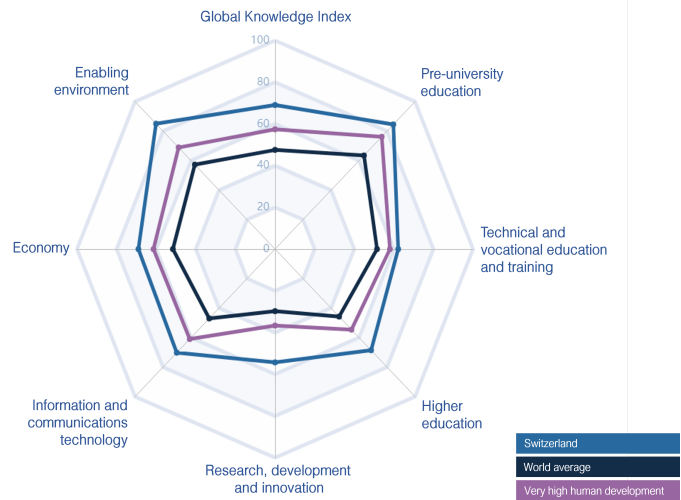
AREAS OF IMPROVEMENT

- Foreign direct investment, net inflows (% GDP)
- Participation rate in formal and non-formal education and training
- Ratio of high-skill TVET occupations earnings to average wage
- Ratio of medium-skill TVET occupations earnings to average wage
- Share of students enrolled in post-secondary vocational programmes

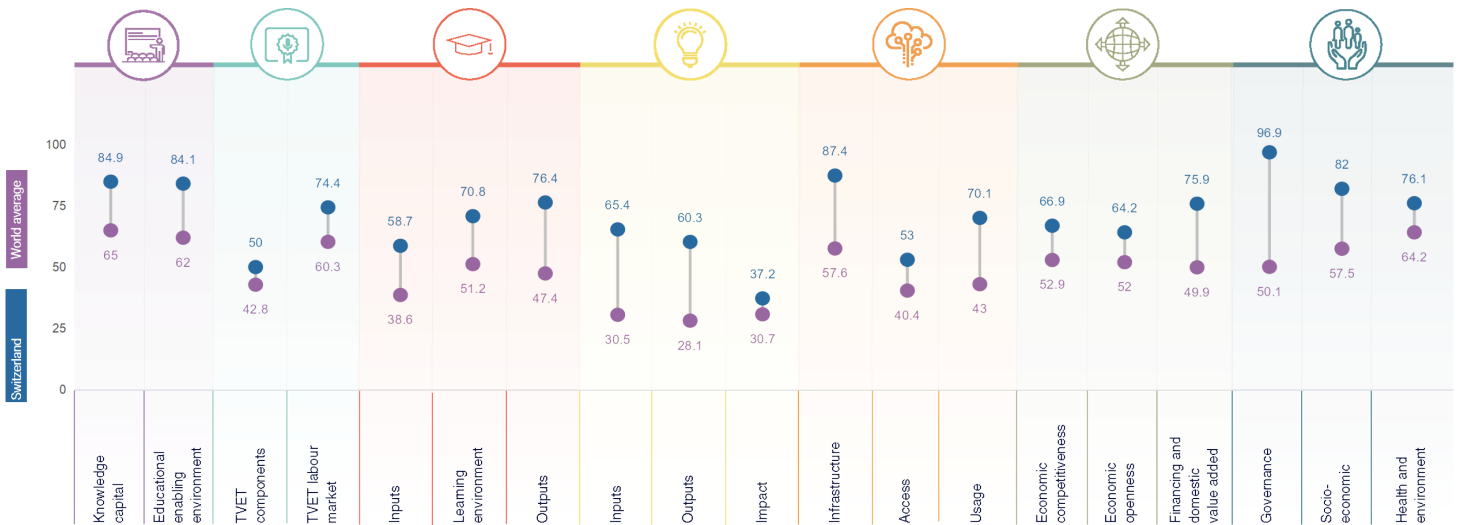
KEY INDICATORS
GDP (US\$ billions): 622.649
Population: 8,691,407
HDI: 0.962

SECTORAL INDICES

	RANK	VALUE
PRE-UNIVERSITY EDUCATION	5	84.5
TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING	22	62.2
HIGHER EDUCATION	1	68.6
RESEARCH, DEVELOPMENT AND INNOVATION	3	54.3
INFORMATION AND COMMUNICATIONS TECHNOLOGY	13	70.2
ECONOMY	8	69
ENABLING ENVIRONMENT	5	85



GKI PILLARS





SWITZERLAND

Rank Value

Rank Value

PRE-UNIVERSITY EDUCATION 5 84.5

Knowledge capital 19 84.9

Enrolment	24	96.7
Net enrolment rate in primary education	12	99.5
Net enrolment rate in lower secondary education	5	99.7
Net enrolment rate in upper secondary education	40	90.9
Completion	27	80.1
Years of compulsory education in primary and secondary	42	76.9
Completion rate in upper secondary education	15	93.8
Gross intake ratio to the last grade of lower secondary education	46	69.7
Outcomes	22	77.7
Assessment of 15-year-old students in math, science and reading	19	73.8
Learning-adjusted years of schooling	24	81.6

Educational enabling environment 6 84.1

Expenditure	27	44.9
Government expenditure on primary education (% GDP)	48	36.8
Government expenditure on secondary education (% GDP)	49	33.9
Government funding per primary student (% GDP per capita)	10	68.1
Government funding per secondary student (% GDP per capita)	30	41
Resources	1	100
Pupil-trained teacher ratio in primary education	n/a	n/a
Pupil-trained teacher ratio in secondary education	n/a	n/a
Schools with access to computers in primary education (%)	1	100
Schools with access to computers in secondary education (%)	1	100
Early learning	7	91.6
Gross enrolment ratio in early childhood education	7	91.6
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	n/a	n/a
Equity and inclusiveness	1	99.9
Completion rate in upper secondary education, gender parity	2	99.9
Completion rate in upper secondary education, wealth parity	n/a	n/a
Completion rate in upper secondary education, location parity	1	100

TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING 22 62.2

TVET components 33 50

Continuous training and skilling	47	48.9
Firms offering formal training (%)	n/a	n/a
Labour force participation rate with short-cycle tertiary education	12	89.6
Participation rate in formal and non-formal education and training	105	8.1
TVET structure	58	50.7
Government expenditure on vocational education (%)	25	46.6
Share of students enrolled in secondary vocational programmes	12	54.8
Share of students enrolled in post-secondary vocational programmes	73	50.6
TVET quality and qualifications	22	50.3
Extent of staff training	1	80.4
Quality of vocational training	1	89.5
Ratio of high-skill TVET occupations earnings to average wage	102	10.4
Ratio of medium-skill TVET occupations earnings to average wage	101	21.2

TVET labour market 16 74.4

Efficiency of the labour market	12	82.8
Firms constrained with inadequately educated workforce (%)	n/a	n/a
Employment educational mismatch (%)	29	75.7
Proportion of skilled production workers	n/a	n/a
Unemployment rate with vocational education	23	89.9
Post-TVET employment	30	58.1
Share of TVET occupations	21	71.5
Manufacturing employment (%)	52	44.6
Equity and inclusiveness	41	82.2
Enrolment in vocational education, gender parity	66	74.9
Vulnerable employment rate	29	89.6

HIGHER EDUCATION 1 68.6

Inputs 7 58.7

Expenditure	7	54.1
Government expenditure per tertiary student	4	58
Teaching staff compensation (% tertiary expenditure)	31	50.2
Enrolment	23	51.2
Enrolment in bachelor's or equivalent level (%)	29	37.2
Enrolment in master's, doctoral or equivalent (%)	20	65.1
Resources	39	70.8
Pupil-teacher ratio in tertiary education	9	92.1
Researchers in higher education (%)	51	49.4

Learning environment 19 70.8

Diversity and academic freedom	23	70.8
Teachers in tertiary education, gender parity	75	57.6
Inbound mobility rate	10	64.6
Academic freedom	31	90.3
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 1 76.4

Attainment	1	88.5
Educational attainment rate, bachelor's or equivalent	n/a	n/a
Educational attainment rate, master's or equivalent	5	76.9
Educational attainment rate, doctoral or equivalent	1	100
Employment	35	84
Labour force participation rate with advanced education	50	77.7
Unemployment rate with advanced education	32	90.3
Impact	13	56.7
University-industry collaboration in R&D	1	79.2
Citable documents per R&D personnel in higher education	21	34.2

RESEARCH, DEVELOPMENT AND INNOVATION 3 54.3

Inputs 4 65.4

Inputs of R&D institutions	9	57.7
GERD (% GDP)	6	59.5
GERD per researcher	10	48.2
Researchers per thousand labour force	18	60.2
Tertiary graduates from STEM programmes (%)	43	63
Inputs of RDI in business enterprises	5	65.7
GERD performed by business enterprises (%)	4	53.6
GERD financed by business enterprises (%)	4	82.9
Researchers in business enterprises (%)	21	60.5
Firms that spend on R&D (%)	n/a	n/a
Inputs of societal innovation	4	80.4
High-skilled employment (%)	14	70.3
Intellectual property payments (% total trade)	1	100
State of cluster development	3	70.7

Outputs 1 60.3

Outputs of R&D institutions	8	55.4
Average documents per researcher	19	35.2
Citations per document	19	48.4
Resident patent applications (per 100 billion GDP)	2	82.6
Outputs of RDI in business enterprises	1	79.2
Intellectual property receipts (% total trade)	1	100
Industrial design applications (per 100 billion GDP)	17	37.7
PCT applications (per 100 billion GDP)	1	100
Firms producing new products and services (%)	n/a	n/a
Outputs of societal innovation	7	51.3
Trademark applications (per 100 billion GDP)	28	39.9
Cultural goods exports (% exports)	1	100
Printing and publishing output (% manufactured output)	65	14

Impact 34 37.2

Quality	20	47.6
Research institutions prominence	15	73.7
Growth of innovative companies	13	62.6
ISO 9001 quality certificates (per billion GDP)	26	28.3
ISO 14001 environmental certificates (per billion GDP)	27	25.9
Linkages	10	45
GERD financed from abroad (%)	68	9.9
Joint ventures per strategic alliance deals (per billion GDP)	9	61.8
Computer software spending (% GDP)	9	63.3
Business development	114	19
New business density per thousand population	31	19
Firms with products and services new to the market (%)	n/a	n/a



SWITZERLAND

	Rank	Value		Rank	Value
INFORMATION AND COMMUNICATIONS TECHNOLOGY			ENABLING ENVIRONMENT		
Infrastructure	3	87.4	Governance	1	96.9
Coverage	5	90.5	Political environment	2	95.7
3G/4G mobile network coverage (% population)	17	100	Peace and stability	5	92.5
Secure Internet servers per 1 million population	5	93.3	Voice and accountability	3	99
Investment in telecommunication services (% GDP)	9	78.3	Quality of institutions	4	98.1
Quality	8	73.3	Rule of law	7	97.2
Mobile upload and download speeds	8	48.7	Control of corruption	2	99.5
Fixed-broadband upload and download speeds	8	71.2	Government effectiveness	6	97.6
Fixed-broadband subscriptions by speed per hundred people	1	100	Socio-economic	10	82
Affordability	10	98.3	Gender equity	14	85.4
Fixed broadband basket (% GNI per capita)	14	96.2	Female-to-male ratio in parliament	20	71.6
Mobile broadband basket (% GNI per capita)	15	98.6	Female-to-male labour force participation	31	86
Internet and telephony competition	1	100	Female-to-male ratio in Internet usage	49	98.6
Access	31	53	Social inclusion	23	90.4
Subscriptions	36	62.8	Social protection coverage (% population)	19	96.5
Active mobile-broadband subscriptions per hundred inhabitants	52	41.5	Adult literacy rate	n/a	n/a
International Internet bandwidth per user	64	50.6	Youth not in employment, education or training (%)	23	84.3
Households with Internet access at home (%)	11	96.1	Standard of living	6	70.3
Skills and employment	26	43.3	Poverty headcount ratio (% population)	30	79.3
Individuals with standard ICT skills (%)	15	63	GDP per capita	6	61.2
Tertiary graduates from ICT programmes (%)	96	18.1	Health and environment	6	76.1
ICT employment (%)	19	48.8	Health	4	93.7
Usage	11	70.1	Universal health coverage	10	86.3
Services	39	57.8	Healthy life expectancy (years)	3	96.5
Government online services	47	76.8	Under-five mortality rate	26	98.4
Fixed broadband Internet traffic per subscription	52	21.9	Environmental performance	44	58.5
Mobile broadband Internet traffic per subscription	19	37.3	Renewable energy consumption (%)	64	27.4
Internet users (%)	19	95.3	Ecological footprint per capita	84	71.1
Outcomes	8	82.4	Natural hazard exposure	20	77
ICT PCT patent applications (per 100 billion GDP)	1	100			
E-participation	39	70.5			
Internet activities by individuals (%)	14	79.8			
Trade in digitally deliverable services (% total trade)	5	79.2			
ECONOMY	8	69			
Economic competitiveness	23	66.9			
Infrastructure investment	23	61.2			
Gross fixed capital formation (% GDP)	30	30.9			
Logistics performance	3	77.5			
Transport productive capacity	16	76.6			
Building quality control	105	60			
Business agility	25	72.5			
Ease of starting a business	67	88.4			
Insolvency recovery rate	40	50.8			
Entrepreneurial employee activity rate	4	79.3			
Extent of corporate transparency	49	71.4			
Economic openness	26	64.2			
Trade and diversification	22	61.7			
Trade (% GDP)	26	31.3			
High-technology trade (% total trade)	15	50.5			
Product concentration	77	72.1			
Market concentration	35	92.9			
Financial openness	44	66.7			
Chinn-Ito financial openness	1	100			
Foreign direct investment, net inflows (% GDP)	131	0			
Debt dynamics	1	100			
Financing and domestic value added	3	75.9			
Financing and taxes	5	79.9			
Domestic credit to private sector (% GDP)	5	63.6			
MSME financing gap (% GDP)	n/a	n/a			
Tax and contribution rate (% profit)	35	78.8			
Bank non-performing loans (%)	6	97.1			
Domestic value added	3	71.9			
Medium- and high-tech activities value added	2	83.1			
Industry and services value added (% GDP)	6	69.6			
Labour underutilization rate	33	80.4			
Output per worker	4	54.3			

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