

GKI
RANK 32 /141

GKI
SCORE

59.1

WORLD
AVERAGE

47.8

COUNTRY PERFORMANCE SUMMARY

Italy is a strong performer in terms of its knowledge infrastructure. It ranks 32nd out of 141 countries in the Global Knowledge Index 2024 and 32nd out of the 59 countries with very high human development.

ITALY

KEY INDICATORS

GDP (US\$ billions): 3,096.709

Population: 59,499,453

HDI: 0.906

AREAS OF STRENGTH

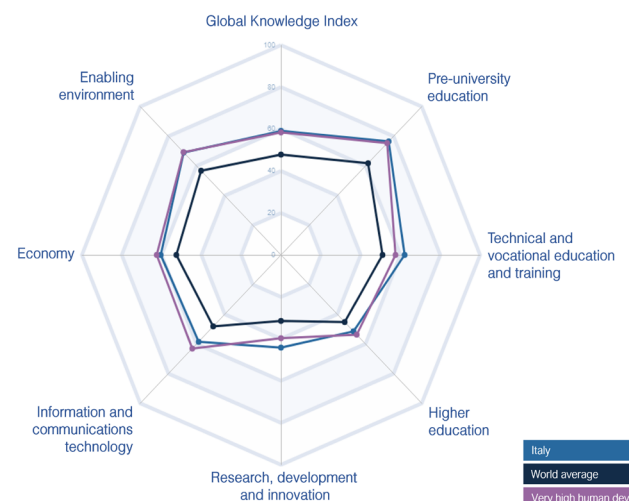
- + Product concentration
- + ISO 9001 quality certificates (per billion GDP)
- + Academic freedom
- + Industrial design applications (per 100 billion GDP)
- + Share of TVET occupations

AREAS OF IMPROVEMENT

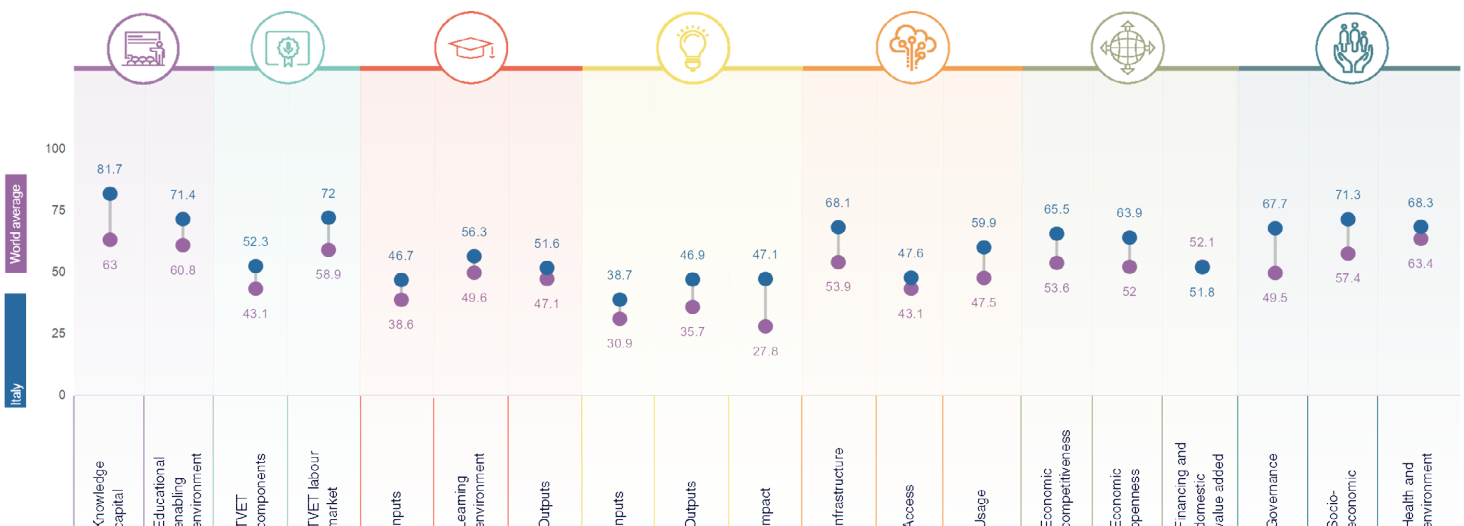
- Tertiary graduates from ICT programmes (%)
- Tax and contribution rate (% profit)
- Firms offering formal training (%)
- Firms producing new products and services (%)
- Enrolment in vocational education, gender parity

SECTORAL INDICES

	RANK	VALUE
PRE-UNIVERSITY EDUCATION	31	76.5
TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING	22	62.1
HIGHER EDUCATION	44	51.5
RESEARCH, DEVELOPMENT AND INNOVATION	25	44.2
INFORMATION AND COMMUNICATIONS TECHNOLOGY	43	58.5
ECONOMY	40	60.4
ENABLING ENVIRONMENT	30	69.1



GKI PILLARS





ITALY

	Rank Value	
PRE-UNIVERSITY EDUCATION	31	76.5
Knowledge capital	25	81.7
Enrolment	35	95.3
Net enrolment rate in primary education	61	94.9
Net enrolment rate in lower secondary education	54	96.8
Net enrolment rate in upper secondary education	27	94.3
Completion	16	82
Years of compulsory education in primary and secondary	3	92.3
Completion rate in upper secondary education	29	86.4
Gross intake ratio to the last grade of lower secondary education	41	67.3
Outcomes	33	67.7
Assessment of 15-year-old students in math, science and reading	30	57.7
Learning-adjusted years of schooling	34	77.7
Educational enabling environment	48	71.4
Expenditure	39	43.6
Government expenditure on primary education (% GDP)	84	27.1
Government expenditure on secondary education (% GDP)	44	36.9
Government funding per primary student (% GDP per capita)	9	66.8
Government funding per secondary student (% GDP per capita)	35	43.4
Resources	91	70.6
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 (%)	82	44.3
Schools with access to computers in secondary education (%)	59	97
Early learning	30	75.2
Gross enrolment ratio in early childhood education	14	75.2
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	15	96.1
Completion rate in upper secondary education, gender parity	46	92.2
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	62.1
TVET components	27	52.3
Continuous training and skilling	96	37.1
Firms offering formal training (%)	109	11.6
Labour force participation rate with short-cycle tertiary education	34	79
Participation rate in formal and non-formal education and training	91	20.8
TVET structure	7	75.6
Government expenditure on vocational education (%)	n/a	n/a
Share of students enrolled in secondary vocational programmes	15	51.1
Share of students enrolled in post-secondary vocational programmes	1	100
TVET quality and qualifications	56	44.1
Extent of staff training	56	60.4
Quality of vocational training	39	61.4
Ratio of high-skill TVET occupations earnings to average wage	74	23.4
Ratio of medium-skill TVET occupations earnings to average wage	50	31.1
TVET labour market	21	72
Efficiency of the labour market	62	70.4
Firms constrained with inadequately educated workforce (%)	47	78.5
Employment educational mismatch (%)	39	74.4
Proportion of skilled production workers	93	47.6
Unemployment rate with vocational education	62	81
Post-TVET employment	7	73.2
Share of TVET occupations	6	84.1
Manufacturing employment (%)	14	62.2
Equity and inclusiveness	65	72.4
Enrolment in vocational education, gender parity	94	61.1
Vulnerable employment rate	44	83.7

	Rank Value	
HIGHER EDUCATION	44	51.5
Inputs	39	46.7
Expenditure	54	30.7
Government expenditure per tertiary student	31	22.7
Teaching staff compensation (% tertiary expenditure)	49	38.8
Enrolment	8	57.2
Enrolment in bachelor's or equivalent level (%)	46	30.1
Enrolment in master's, doctoral or equivalent (%)	6	84.2
Resources	97	52.3
Pupil-teacher ratio in tertiary education	83	67.3
Researchers in higher education (%)	68	37.2
Learning environment	57	56.3
Diversity and academic freedom	60	56.3
Teachers in tertiary education, gender parity	67	63.8
Inbound mobility rate	59	10.3
Academic freedom	5	94.7
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	54	51.6
Attainment	58	27.3
Educational attainment rate, bachelor's or equivalent	73	26.8
Educational attainment rate, master's or equivalent	35	43.6
Educational attainment rate, doctoral or equivalent	63	11.4
Employment	67	80.6
Labour force participation rate with advanced education	84	73.3
Unemployment rate with advanced education	52	87.9
Impact	37	47
University-industry collaboration in R&D	28	60.8
Citable documents per R&D personnel in higher education	24	33.3
RESEARCH, DEVELOPMENT AND INNOVATION	25	44.2
Inputs	33	38.7
Inputs of R&D institutions	39	39
GERD (% GDP)	28	26
GERD per researcher	26	34.5
Researchers per thousand labour force	30	38.5
Tertiary graduates from STEM programmes (%)	55	56.9
Inputs of RDI in business enterprises	35	37.9
GERD performed by business enterprises (%)	22	19.7
GERD financed by business enterprises (%)	19	66.4
Researchers in business enterprises (%)	29	53
Firms that spend on R&D (%)	89	12.4
Inputs of societal innovation	43	39
High-skilled employment (%)	52	37.9
Intellectual property payments (% total trade)	53	17.8
State of cluster development	25	61.3
Outputs	24	46.9
Outputs of R&D institutions	24	51.3
Average documents per researcher	23	32
Citations per document	33	51.9
Resident patent applications (per 100 billion GDP)	17	70.1
Outputs of RDI in business enterprises	25	43.7
Intellectual property receipts (% total trade)	19	40.6
Industrial design applications (per 100 billion GDP)	5	94
PCT applications (per 100 billion GDP)	28	24.8
Firms producing new products and services (%)	96	15.6
Outputs of societal innovation	39	41.2
Trademark applications (per 100 billion GDP)	48	18.3
Cultural goods exports (% exports)	18	88.4
Printing and publishing output (% manufactured output)	53	16.7
Impact	7	47.1
Quality	1	69.1
Research institutions prominence	9	68.8
Growth of innovative companies	41	53
ISO 9001 quality certificates (per billion GDP)	3	96.9
ISO 14001 environmental certificates (per billion GDP)	10	57.8
Linkages	30	32.3
GERD financed from abroad (%)	35	22.3
Joint ventures per strategic alliance deals (per billion GDP)	45	10.5
Computer software spending (% GDP)	6	64.1
Business development	59	39.9
New business density per thousand population	54	11.6
Firms with products and services new to the market (%)	45	68.1



ITALY

Rank Value	
INFORMATION AND COMMUNICATIONS TECHNOLOGY	43 58.5
Infrastructure	35 68.1
Coverage	23 71.6
3G/4G mobile network coverage (% population)	1 100
Secure Internet servers per 1 million population	34 78.9
Investment in telecommunication services (% GDP)	33 35.8
Quality	40 41.5
Mobile upload and download speeds	51 18.6
Fixed-broadband upload and download speeds	36 37.6
Fixed-broadband subscriptions by speed per hundred people	32 68.3
Affordability	32 91.2
Fixed broadband basket (% GNI per capita)	29 78.8
Mobile broadband basket (% GNI per capita)	30 97.8
Internet and telephony competition	80 96.9
Access	57 47.6
Subscriptions	76 60.5
Active mobile-broadband subscriptions per hundred inhabitants	65 48
International Internet bandwidth per user	105 50.1
Households with Internet access at home (%)	67 83.5
Skills and employment	51 34.7
Individuals with standard ICT skills (%)	27 51.3
Tertiary graduates from ICT programmes (%)	112 8.9
ICT employment (%)	34 44
Usage	37 59.9
Services	44 59.4
Government online services	59 76.2
Fixed broadband Internet traffic per subscription	44 32.6
Mobile broadband Internet traffic per subscription	16 43.2
Internet users (%)	51 85.6
Outcomes	35 60.4
ICT PCT patent applications (per 100 billion GDP)	32 59.4
E-participation	59 65.8
Internet activities by individuals (%)	41 62.4
Trade in digitally deliverable services (% total trade)	26 53.9
ECONOMY	40 60.4
Economic competitiveness	27 65.5
Infrastructure investment	54 54.6
Gross fixed capital formation (% GDP)	86 36.9
Logistics performance	17 67.5
Transport productive capacity	71 40.6
Building quality control	74 73.3
Business agility	19 76.3
Ease of starting a business	78 86.8
Insolvency recovery rate	33 71.4
Entrepreneurial employee activity rate	18 47.1
Extent of corporate transparency	1 100
Economic openness	31 63.9
Trade and diversification	33 58.1
Trade (% GDP)	87 14.5
High-technology trade (% total trade)	36 28.5
Product concentration	2 93.8
Market concentration	10 95.6
Financial openness	43 69.6
Chinn-Ito financial openness	1 100
Foreign direct investment, net inflows (% GDP)	92 38.7
Debt dynamics	55 70
Financing and domestic value added	73 51.8
Financing and taxes	117 48.3
Domestic credit to private sector (% GDP)	46 26.1
MSME financing gap (% GDP)	n/a n/a
Tax and contribution rate (% profit)	133 31.3
Bank non-performing loans (%)	53 87.4
Domestic value added	40 55.4
Medium- and high-tech activities value added	23 45.1
Industry and services value added (% GDP)	38 77.8
Labour underutilization rate	106 51.8
Output per worker	17 46.7

Rank Value	
ENABLING ENVIRONMENT	30 69.1
Governance	42 67.7
Political environment	32 70.5
Peace and stability	49 58.5
Voice and accountability	23 82.6
Quality of institutions	45 64.8
Rule of law	54 58.5
Control of corruption	43 68.9
Government effectiveness	48 67
Socio-economic	30 71.3
Gender equity	59 71.8
Female-to-male ratio in parliament	51 47.7
Female-to-male labour force participation	96 69.9
Female-to-male ratio in Internet usage	65 97.9
Social inclusion	28 87.9
Social protection coverage (% population)	33 88.5
Adult literacy rate	19 98.6
Youth not in employment, education or training (%)	48 76.6
Standard of living	33 54.2
Poverty headcount ratio (% population)	53 69
GDP per capita	24 39.4
Health and environment	34 68.3
Health	13 90.9
Universal health coverage	24 83.8
Healthy life expectancy (years)	13 89.4
Under-five mortality rate	8 99.4
Environmental performance	115 45.8
Renewable energy consumption (%)	91 18.2
Ecological footprint per capita	97 69.1
Natural hazard exposure	107 50

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