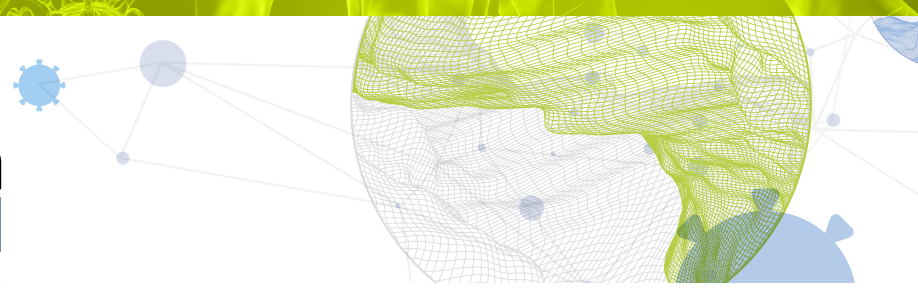




Global Innovation Index 2021



SWITZERLAND

1st

Switzerland ranks 1st among the 132 economies featured in the GII 2021.

The Global Innovation Index (GII) ranks world economies according to their innovation capabilities. Consisting of roughly 80 indicators, grouped into innovation inputs and outputs, the GII aims to capture the multi-dimensional facets of innovation.

The following table shows the rankings of Switzerland over the past three years, noting that data availability and changes to the GII model framework influence year-on-year comparisons of the GII rankings. The statistical confidence interval for the ranking of Switzerland in the GII 2021 is between ranks 1 and 1.

Rankings for Switzerland (2019–2021)

	GII	Innovation inputs	Innovation outputs
2021	1	4	1
2020	1	2	1
2019	1	2	1

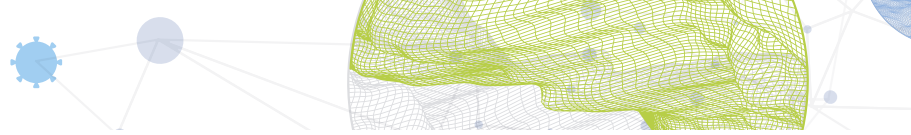
- Switzerland performs better in innovation outputs than innovation inputs in 2021.
- This year Switzerland ranks 4th in innovation inputs, lower than both 2020 and 2019.
- As for innovation outputs, Switzerland ranks 1st. This position is the same as both 2020 and 2019.

1st

Switzerland ranks 1st among the 51 high-income group economies.

1st

Switzerland ranks 1st among the 39 economies in Europe.

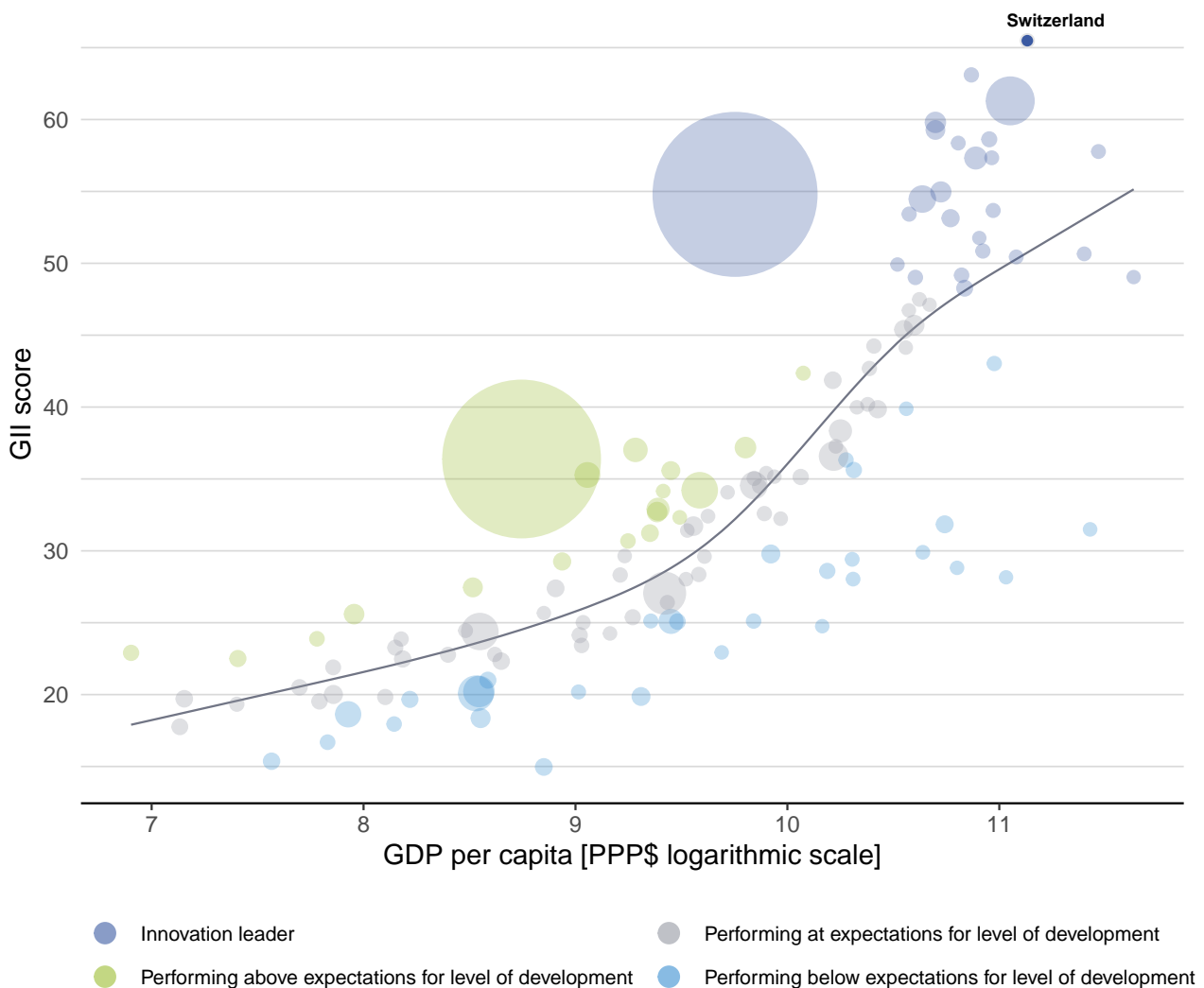


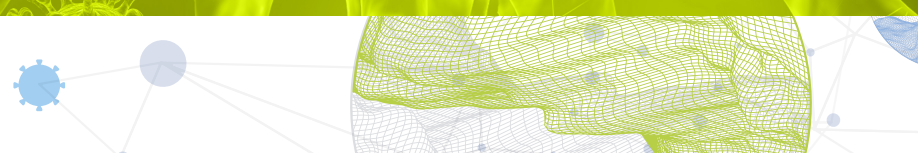
EXPECTED VS. OBSERVED INNOVATION PERFORMANCE

The bubble chart below shows the relationship between income levels (GDP per capita) and innovation performance (GII score). The trend line gives an indication of the expected innovation performance according to income level. Economies appearing above the trend line are performing better than expected and those below are performing below expectations.

Relative to GDP, Switzerland's performance is above expectations for its level of development.

The positive relationship between innovation and development



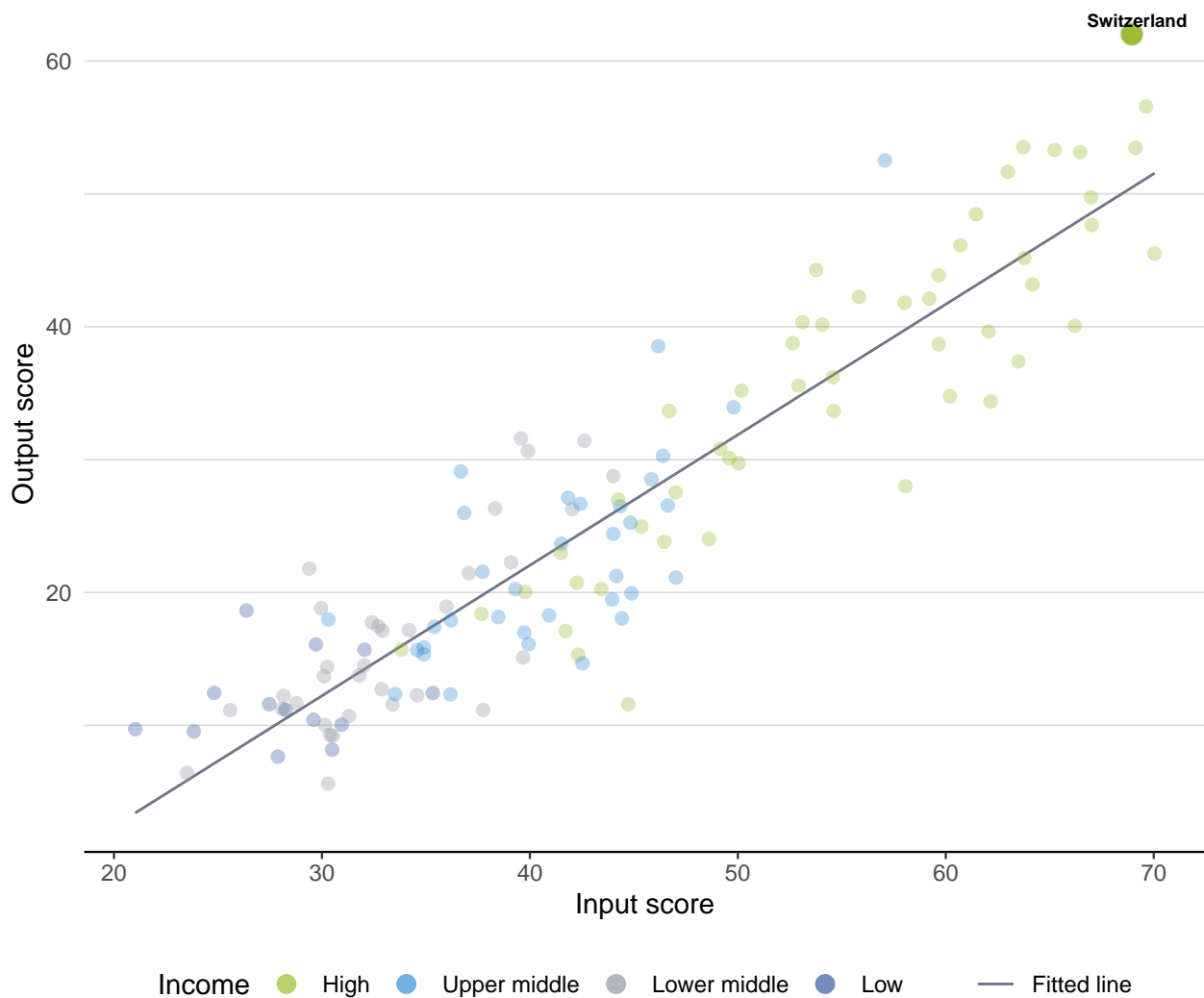


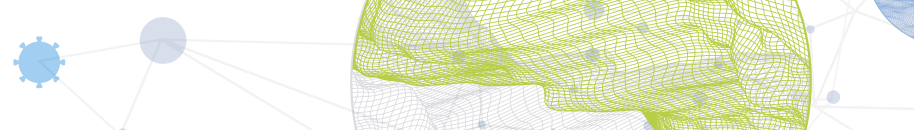
EFFECTIVELY TRANSLATING INNOVATION INVESTMENTS INTO INNOVATION OUTPUTS

The chart below shows the relationship between innovation inputs and innovation outputs. Economies above the line are effectively translating costly innovation investments into more and higher-quality outputs.

Switzerland produces more innovation outputs relative to its level of innovation investments.

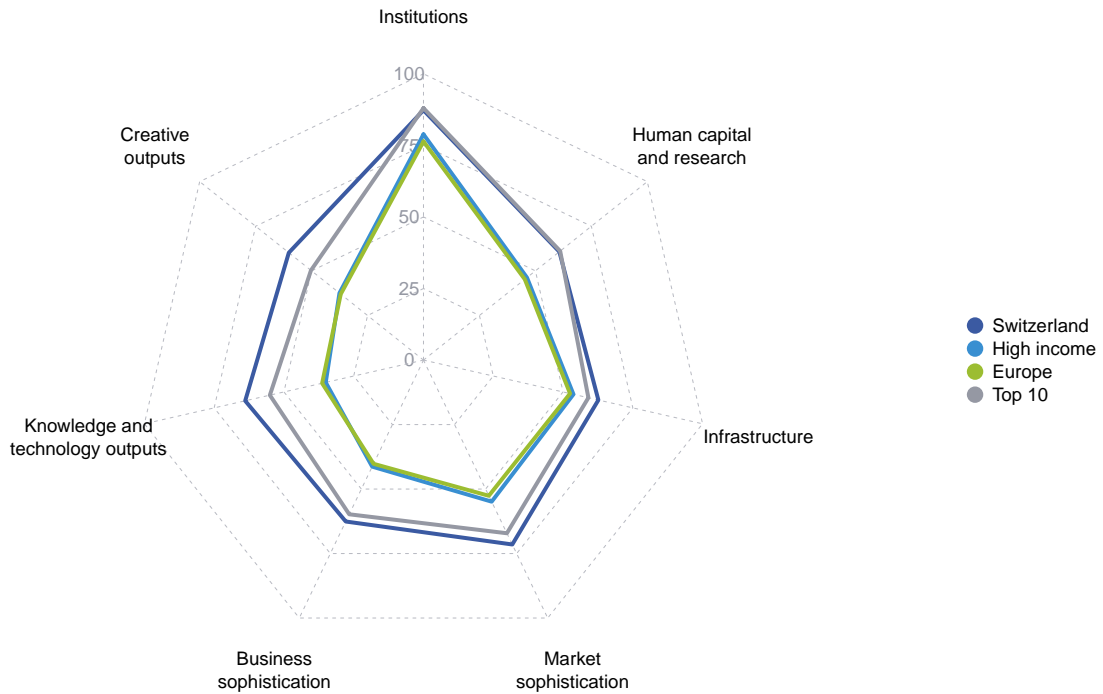
Innovation input to output performance





BENCHMARKING AGAINST OTHER HIGH-INCOME GROUP ECONOMIES AND EUROPE

The seven GII pillar scores for Switzerland

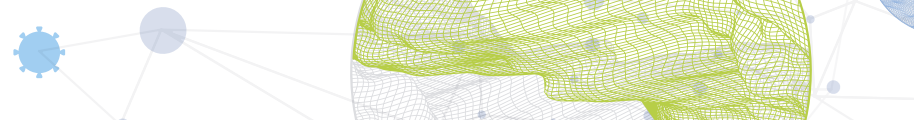


High-income group economies

Switzerland performs above the high-income group average in all GII pillars.

Europe

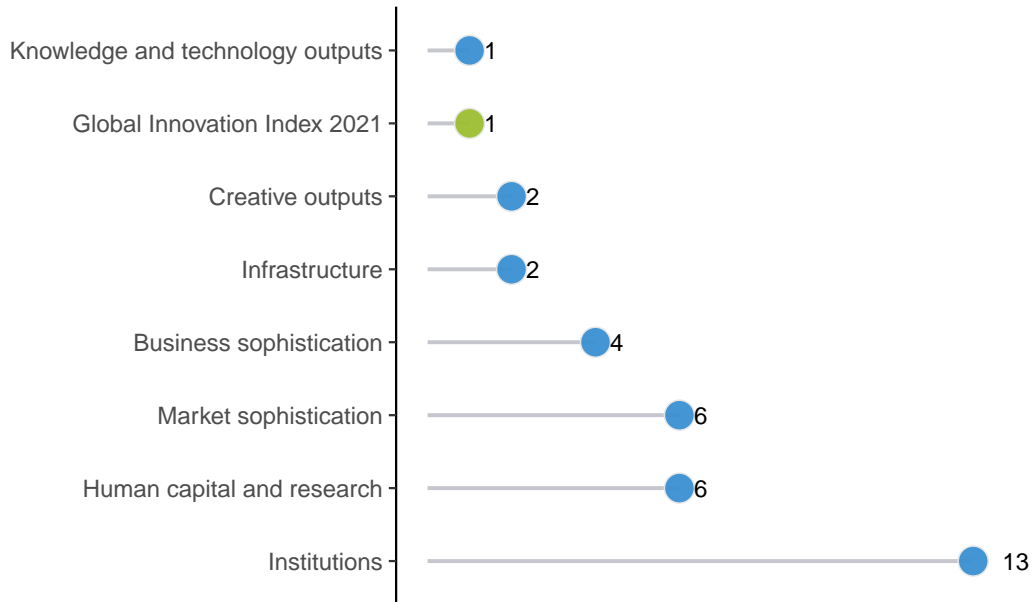
Switzerland performs above the regional average in all GII pillars.



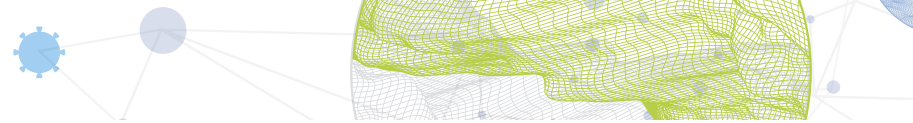
OVERVIEW OF RANKINGS IN THE SEVEN GII 2021 AREAS

Switzerland performs best in Knowledge and technology outputs and its weakest performance is in Institutions.

The seven GII pillar ranks for Switzerland



Note: The highest possible ranking in each pillar is one.

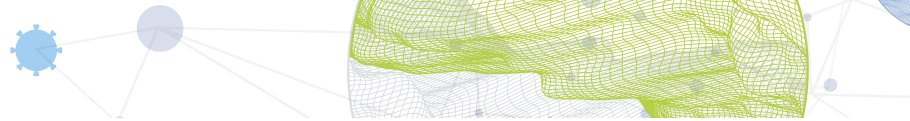


INNOVATION STRENGTHS AND WEAKNESSES

The table below gives an overview of the strengths and weaknesses of Switzerland in the GII 2021.








Strengths and weaknesses for Switzerland

Strengths			Weaknesses		
Code	Indicator name	Rank	Code	Indicator name	Rank
1.1	Political environment	3	1.3.1	Ease of starting a business	66
1.1.2	Government effectiveness	2	3.2.3	Gross capital formation, % GDP	67
1.2.2	Rule of law	3	4.1.1	Ease of getting credit	61
2.3	Research and development (R&D)	3	4.2.1	Ease of protecting minority investors	92
3.1.2	ICT use	1	4.3.1	Applied tariff rate, weighted avg., %	95
3.3	Ecological sustainability	2	4.3.2	Domestic industry diversification	49
3.3.2	Environmental performance	3	5.3.2	High-tech imports, % total trade	93
4.2.2	Market capitalization, % GDP	3	5.3.4	FDI net inflows, % GDP	81
5.2.1	University-industry R&D collaboration	2	6.2.1	Labor productivity growth, %	67
5.2.5	Patent families/bn PPP\$ GDP	1	7.2.4	Printing and other media, % manufacturing	41
6.1	Knowledge creation	1			
6.1.1	Patents by origin/bn PPP\$ GDP	1			
6.1.2	PCT patents by origin/bn PPP\$ GDP	1			
6.1.4	Scientific and technical articles/bn PPP\$ GDP	3			
6.2	Knowledge impact	2			
6.2.3	Software spending, % GDP	2			
6.2.5	High-tech manufacturing, %	2			
6.3.1	Intellectual property receipts, % total trade	1			
6.3.2	Production and export complexity	2			
7.1.2	Global brand value, top 5,000, % GDP	2			

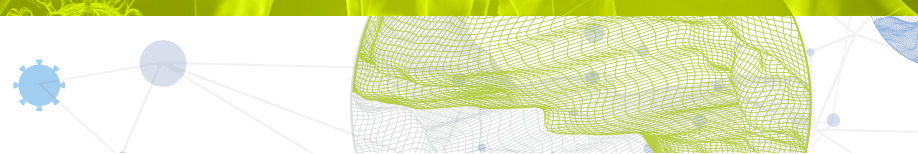


Strengths			Weaknesses		
Code	Indicator name	Rank	Code	Indicator name	Rank
7.2	Creative goods and services	3			
7.2.3	Entertainment and media market/th pop. 15–69	2			
7.3.2	Country-code TLDs/th pop. 15–69	1			

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP\$ (bn)	GDP per capita, PPP\$	GII 2020 rank
1	4	High	EUR	8.7	590.9	68,340	1

	Score/Value	Rank		Score/Value	Rank
 Institutions	87.3	13	 Business sophistication	62.6	4
1.1 Political environment	92.4	3	5.1 Knowledge workers	71.4	5
1.1.1 Political and operational stability*	89.3	6	5.1.1 Knowledge-intensive employment, %	51.0	6
1.1.2 Government effectiveness*	94.0	2	5.1.2 Firms offering formal training, %	n/a	n/a
1.2 Regulatory environment	93.9	7	5.1.3 GERD performed by business, % GDP	2.3	6
1.2.1 Regulatory quality*	87.0	12	5.1.4 GERD financed by business, %	68.6	6
1.2.2 Rule of law*	97.0	3	5.1.5 Females employed w/advanced degrees, %	20.0	31
1.2.3 Cost of redundancy dismissal	10.1	31	5.2 Innovation linkages	63.9	4
1.3 Business environment	75.5	47	5.2.1 University-industry R&D collaboration†	77.1	2
1.3.1 Ease of starting a business*	88.4	66	5.2.2 State of cluster development and depth†	70.6	4
1.3.2 Ease of resolving insolvency*	62.6	44	5.2.3 GERD financed by abroad, % GDP	0.2	26
			5.2.4 Joint venture/strategic alliance deals/bn PPP\$ GDP	0.2	12
			5.2.5 Patent families/bn PPP\$ GDP	8.5	1
 Human capital and research	60.7	6	5.3 Knowledge absorption	52.4	11
2.1 Education	61.3	24	5.3.1 Intellectual property payments, % total trade	3.1	6
2.1.1 Expenditure on education, % GDP	5.1	34	5.3.2 High-tech imports, % total trade	6.2	93
2.1.2 Government funding/pupil, secondary, % GDP/cap	24.7	17	5.3.3 ICT services imports, % total trade	3.7	4
2.1.3 School life expectancy, years	16.4	27	5.3.4 FDI net inflows, % GDP	1.9	81
2.1.4 PISA scales in reading, maths and science	498.2	21	5.3.5 Research talent, % in businesses	49.7	25
2.1.5 Pupil-teacher ratio, secondary	9.7	25	 Knowledge and technology outputs	63.9	1
2.2 Tertiary education	45.1	21	6.1 Knowledge creation	86.6	1
2.2.1 Tertiary enrolment, % gross	61.4	49	6.1.1 Patents by origin/bn PPP\$ GDP	15.6	1
2.2.2 Graduates in science and engineering, %	25.2	38	6.1.2 PCT patents by origin/bn PPP\$ GDP	8.3	1
2.2.3 Tertiary inbound mobility, %	17.7	9	6.1.3 Utility models by origin/bn PPP\$ GDP	n/a	n/a
2.3 Research and development (R&D)	75.8	3	6.1.4 Scientific and technical articles/bn PPP\$ GDP	56.6	3
2.3.1 Researchers, FTE/mn pop.	5,450.5	11	6.1.5 Citable documents H-index	66.1	10
2.3.2 Gross expenditure on R&D, % GDP	3.2	6	6.2 Knowledge impact	55.4	2
2.3.3 Global corporate R&D investors, top 3, mn US\$	90.0	6	6.2.1 Labor productivity growth, %	-0.1	67
2.3.4 QS university ranking, top 3*	83.9	4	6.2.2 New businesses/th pop. 15-64	4.5	33
			6.2.3 Software spending, % GDP	0.7	2
 Infrastructure	62.7	2	6.2.4 ISO 9001 quality certificates/bn PPP\$ GDP	12.7	23
3.1 Information and communication technologies (ICTs)	87.8	15	6.2.5 High-tech manufacturing, %	68.5	2
3.1.1 ICT access*	87.2	15	6.3 Knowledge diffusion	49.7	12
3.1.2 ICT use*	90.4	1	6.3.1 Intellectual property receipts, % total trade	5.9	1
3.1.3 Government's online service*	82.9	36	6.3.2 Production and export complexity	94.0	2
3.1.4 E-participation*	90.5	18	6.3.3 High-tech exports, % total trade	7.2	25
3.2 General infrastructure	42.1	24	6.3.4 ICT services exports, % total trade	2.6	43
3.2.1 Electricity output, GWh/mn pop.	8,222.5	20	 Creative outputs	60.2	2
3.2.2 Logistics performance*	86.1	13	7.1 Intangible assets	63.4	5
3.2.3 Gross capital formation, % GDP	22.0	67	7.1.1 Trademarks by origin/bn PPP\$ GDP	66.2	29
3.3 Ecological sustainability	58.1	2	7.1.2 Global brand value, top 5,000, % GDP	236.0	2
3.3.1 GDP/unit of energy use	23.4	6	7.1.3 Industrial designs by origin/bn PPP\$ GDP	5.4	23
3.3.2 Environmental performance*	81.5	3	7.1.4 ICTs and organizational model creation†	77.4	9
3.3.3 ISO 14001 environmental certificates/bn PPP\$ GDP	3.7	24	7.2 Creative goods and services	47.5	3
			7.2.1 Cultural and creative services exports, % total trade	0.6	39
 Market sophistication	71.5	6	7.2.2 National feature films/mn pop. 15-69	19.4	6
4.1 Credit	69.2	7	7.2.3 Entertainment and media market/th pop. 15-69	97.4	2
4.1.1 Ease of getting credit*	65.0	61	7.2.4 Printing and other media, % manufacturing	1.1	41
4.1.2 Domestic credit to private sector, % GDP	174.6	4	7.2.5 Creative goods exports, % total trade	3.7	13
4.1.3 Microfinance gross loans, % GDP	n/a	n/a	7.3 Online creativity	66.3	4
4.2 Investment	70.6	10	7.3.1 Generic top-level domains (TLDs)/th pop. 15-69	59.2	11
4.2.1 Ease of protecting minority investors*	50.0	92	7.3.2 Country-code TLDs/th pop. 15-69	100.0	1
4.2.2 Market capitalization, % GDP	237.8	3	7.3.3 Wikipedia edits/mn pop. 15-69	76.6	16
4.2.3 Venture capital investors, deals/bn PPP\$ GDP	0.4	7	7.3.4 Mobile app creation/bn PPP\$ GDP	25.8	22
4.2.4 Venture capital recipients, deals/bn PPP\$ GDP	0.1	8			
4.3 Trade, diversification, and market scale	74.6	46			
4.3.1 Applied tariff rate, weighted avg., %	6.1	95			
4.3.2 Domestic industry diversification	90.5	49			
4.3.3 Domestic market scale, bn PPP\$	590.9	34			

NOTES: ● indicates a strength; ○ a weakness; ◆ an income group strength; ◇ an income group weakness; * an index; † a survey question. ⊙ indicates that the economy's data are older than the base year; see Appendix IV for details, including the year of the data, at <http://globalinnovationindex.org>. Square brackets [] indicate that the data minimum coverage (DMC) requirements were not met at the sub-pillar or pillar level.



DATA AVAILABILITY

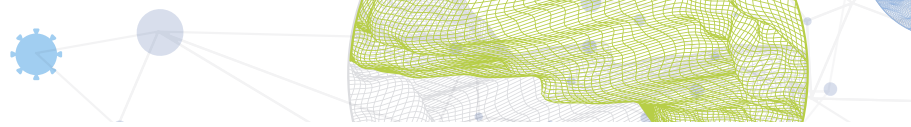
The following tables list data that are either missing or outdated for Switzerland.

Missing data for Switzerland

Code	Indicator name	Economy year	Model year	Source
4.1.3	Microfinance gross loans, % GDP	n/a	2018	Microfinance Information Exchange
5.1.2	Firms offering formal training, %	n/a	2019	World Bank
6.1.3	Utility models by origin/bn PPP\$ GDP	n/a	2019	World Intellectual Property Organization

Outdated data for Switzerland

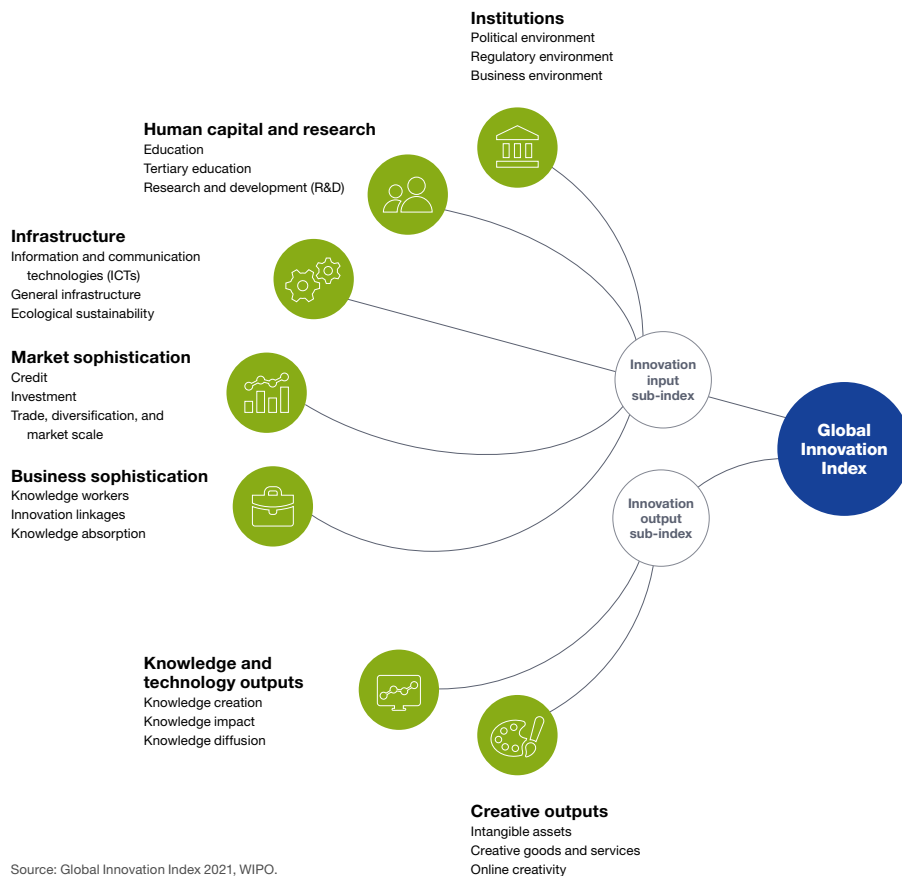
Code	Indicator name	Economy year	Model year	Source
2.1.5	Pupil-teacher ratio, secondary	2018	2019	UNESCO Institute for Statistics
2.3.1	Researchers, FTE/mn pop.	2017	2019	UNESCO Institute for Statistics; Eurostat; OECD - Main Science and Technology Indicators
2.3.2	Gross expenditure on R&D, % GDP	2017	2019	UNESCO Institute for Statistics; Eurostat; OECD - Main Science and Technology Indicators
4.1.2	Domestic credit to private sector, % GDP	2016	2019	International Monetary Fund
5.1.3	GERD performed by business, % GDP	2017	2019	UNESCO Institute for Statistics; Eurostat; OECD - Main Science and Technology Indicators
5.1.4	GERD financed by business, %	2017	2018	UNESCO Institute for Statistics; Eurostat; OECD - Main Science and Technology Indicators
5.2.3	GERD financed by abroad, % GDP	2017	2018	UNESCO Institute for Statistics
5.3.5	Research talent, % in businesses	2017	2019	UNESCO Institute for Statistics; Eurostat; OECD - Main Science and Technology Indicators
7.2.4	Printing and other media, % manufacturing	2014	2018	United Nations Industrial Development Organization



ABOUT THE GLOBAL INNOVATION INDEX

The Global Innovation Index (GII) is published by the World Intellectual Property Organization (WIPO), a specialized agency of the United Nations.

Recognizing that innovation is a key driver of economic development, the GII aims to provide an innovation ranking and rich analysis referencing around 130 economies. Over the last decade, the GII has established itself as both a leading reference on innovation and a “tool for action” for economies that incorporate the GII into their innovation agendas.



The Index is a ranking of the innovation capabilities and results of world economies. It measures innovation based on criteria that include institutions, human capital and research, infrastructure, credit, investment, linkages; the creation, absorption and diffusion of knowledge; and creative outputs.

The GII has two sub-indices: the Innovation Input Sub-Index and the Innovation Output Sub-Index, and seven pillars, each consisting of three sub-pillars.