Global Innovation Index 2021

SLOVENIA

32nd Slovenia ranks 32nd 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 Slovenia 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 Slovenia in the GII 2021 is between ranks 31 and 32.

Rankings for Slovenia (2019–2021)

	GII	Innovation inputs	Innovation outputs
2021	32	27	36
2020	32	29	39
2019	31	33	30

- Slovenia performs better in innovation inputs than innovation outputs in 2021.
- This year Slovenia ranks 27th in innovation inputs, higher than both 2020 and 2019.
- As for innovation outputs, Slovenia ranks 36th. This position is higher than last year but lower than 2019.

31st Slovenia ranks 31st among the 51 high-income group economies.

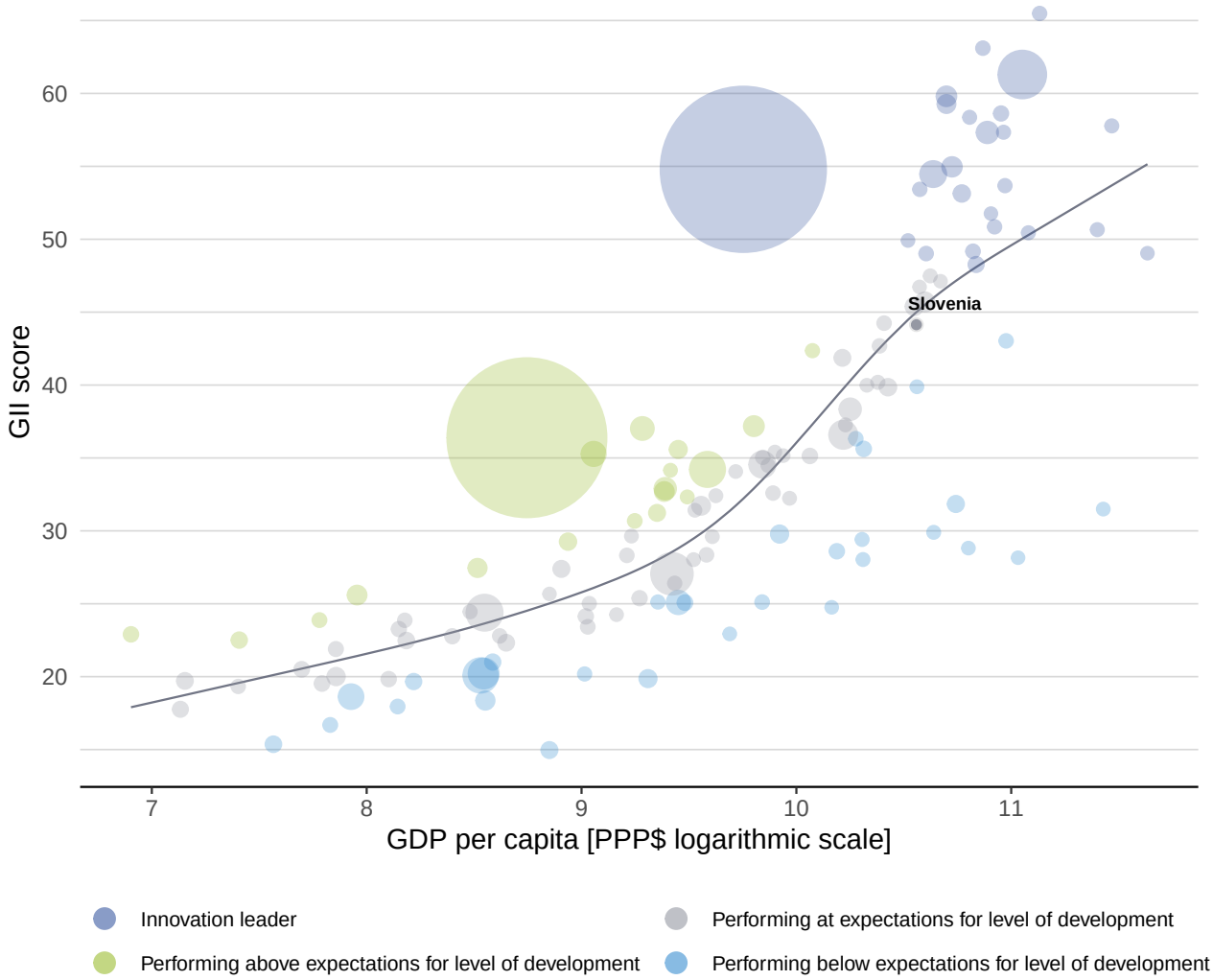
21st Slovenia ranks 21st among the 39 economies in Europe.

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, Slovenia's performance is at expectations for its level of development.

The positive relationship between innovation and development

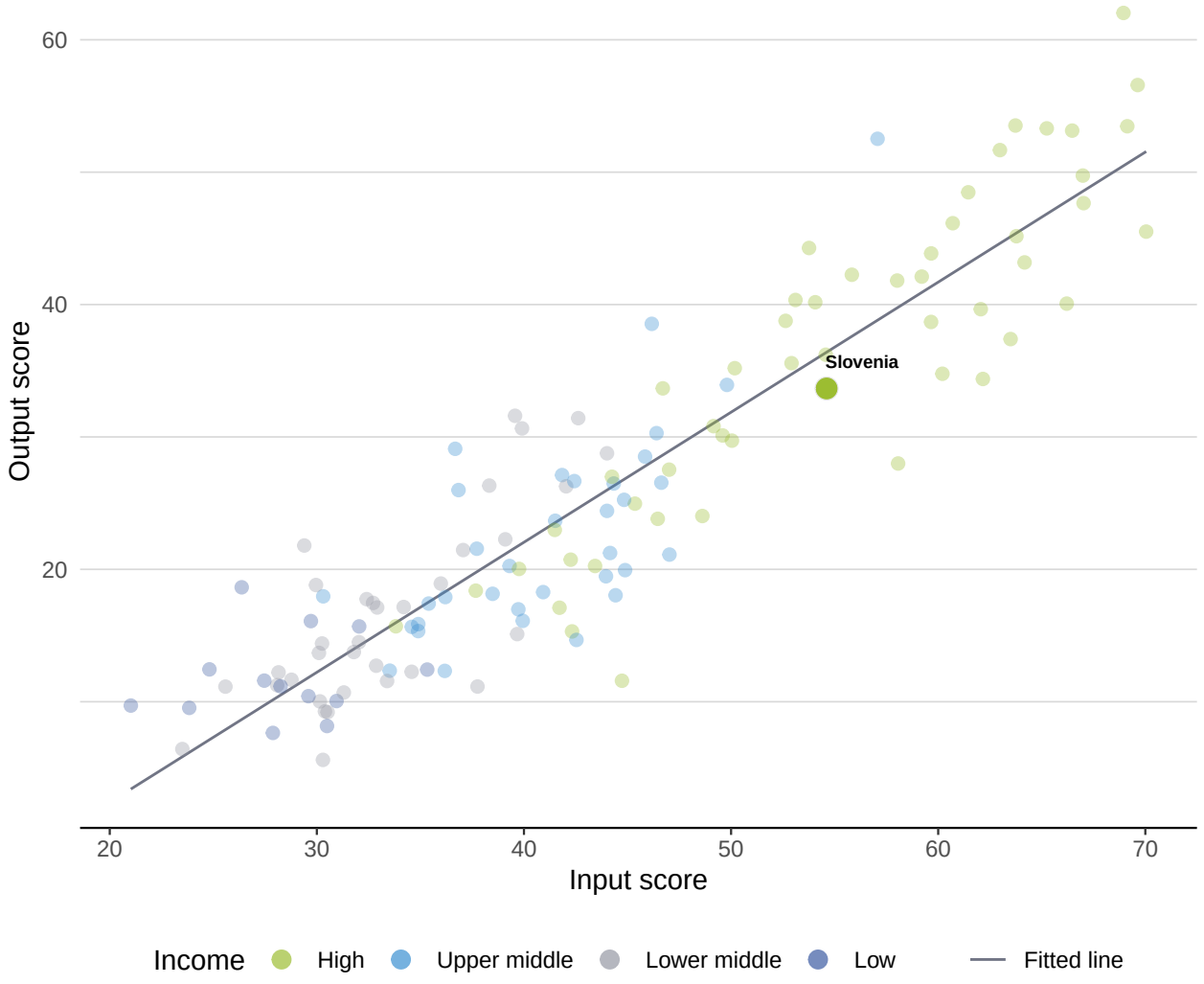


EFFECTIVELY TRANSLATING INNOVATION INVESTMENTS INTO INNOVATION OUTPUTS

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.

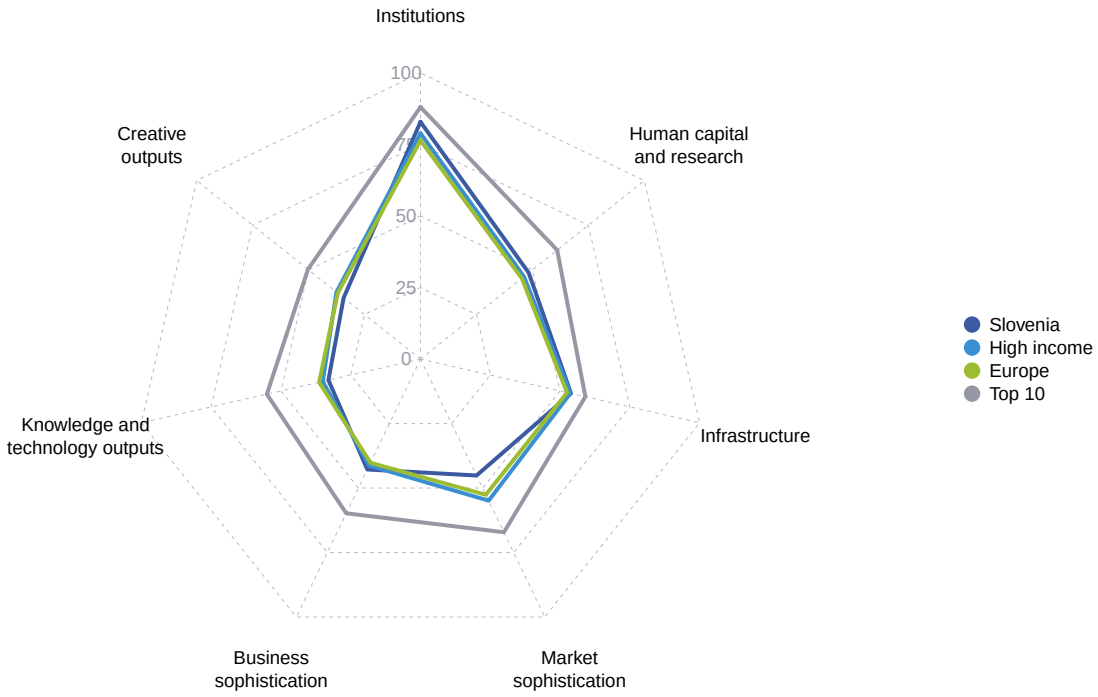
Slovenia produces less innovation outputs relative to its level of innovation investments.

Innovation input to output performance



BENCHMARKING AGAINST OTHER HIGH-INCOME GROUP ECONOMIES AND EUROPE

The seven GII pillar scores for Slovenia



High-income group economies

Slovenia performs above the high-income group average in four pillars, namely: Institutions; Human capital and research; Infrastructure; and, Business sophistication.

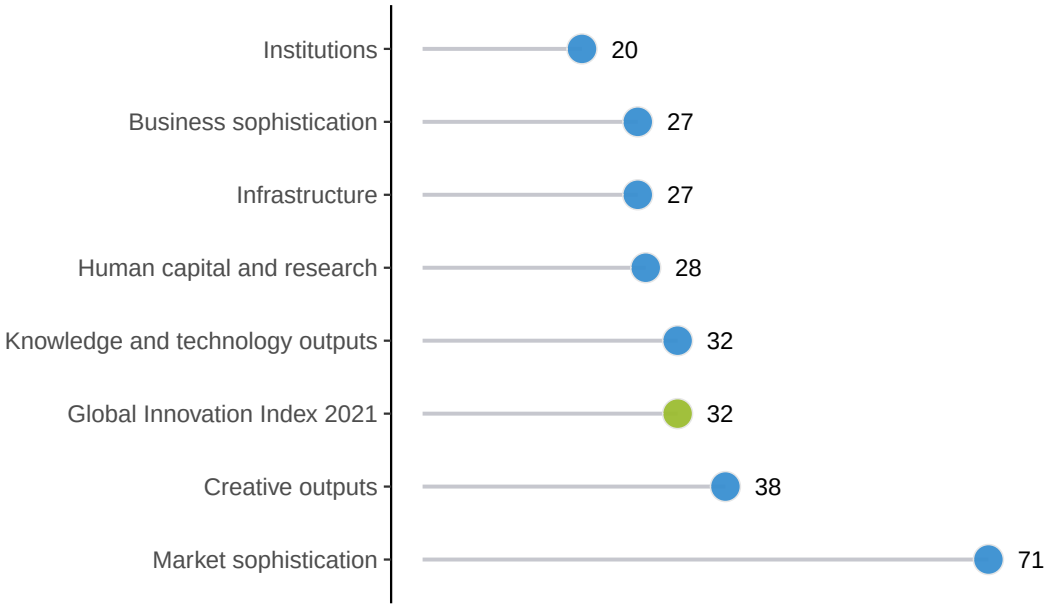
Europe

Slovenia performs above the regional average in four pillars, namely: Institutions; Human capital and research; Infrastructure; and, Business sophistication.

OVERVIEW OF RANKINGS IN THE SEVEN GII 2021 AREAS

Slovenia performs best in Institutions and its weakest performance is in Market sophistication.

The seven GII pillar ranks for Slovenia



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 Slovenia in the GII 2021.

Strengths and weaknesses for Slovenia

Strengths			Weaknesses		
Code	**Indicator name**	**Rank**	**Code**	**Indicator name**	**Rank**
1.3	Business environment	7	4.1	Credit	102
1.3.2	Ease of resolving insolvency	8	4.1.1	Ease of getting credit	101
4.3.2	Domestic industry diversification	10	4.1.2	Domestic credit to private sector, % GDP	79
5.1.4	GERD financed by business, %	11	4.2.2	Market capitalization, % GDP	65
5.2.3	GERD financed by abroad, % GDP	12	4.3.3	Domestic market scale, bn PPP$	88
5.3.5	Research talent, % in businesses	11	5.2.2	State of cluster development and depth	74
6.1.4	Scientific and technical articles/bn PPP$ GDP	4	5.3.2	High-tech imports, % total trade	86
6.2.4	ISO 9001 quality certificates/bn PPP$ GDP	12	6.1.3	Utility models by origin/bn PPP$ GDP	50
6.3.2	Production and export complexity	10	6.2.1	Labor productivity growth, %	81
7.2.2	National feature films/mn pop. 15–69	9	6.2.3	Software spending, % GDP	89
7.3.4	Mobile app creation/bn PPP$ GDP	12	7.1.2	Global brand value, top 5,000, % GDP	66

Slovenia

GII 2021 rank **32**

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP$ (bn)	GDP per capita, PPP$	GII 2020 rank
36	27	High	EUR	2.1	79.7	38,506	32

		Score/ Value	Rank	
Institutions		**82.9**	**20**	
1.1	**Political environment**	**76.0**	**31**	
1.1.1	Political and operational stability*	78.6	34	
1.1.2	Government effectiveness*	74.7	28	
1.2	**Regulatory environment**	**83.9**	**23**	
1.2.1	Regulatory quality*	69.9	33	
1.2.2	Rule of law*	76.2	25	
1.2.3	Cost of redundancy dismissal	10.7	34	
1.3	**Business environment**	**88.7**	**7**	● ◆
1.3.1	Ease of starting a business*	93.0	39	
1.3.2	Ease of resolving insolvency*	84.4	8	●
Human capital and research		**48.3**	**28**	
2.1	**Education**	**59.6**	**31**	
2.1.1	Expenditure on education, % GDP	4.8	48	
2.1.2	Government funding/pupil, secondary, % GDP/cap	22.8	29	
2.1.3	School life expectancy, years	17.6	15	
2.1.4	PISA scales in reading, maths and science	503.7	11	
2.1.5	Pupil-teacher ratio, secondary	15.1	72	◇
2.2	**Tertiary education**	**44.3**	**23**	
2.2.1	Tertiary enrolment, % gross	77.1	24	
2.2.2	Graduates in science and engineering, %	27.2	27	
2.2.3	Tertiary inbound mobility, %	4.5	53	
2.3	**Research and development (R&D)**	**41.1**	**25**	
2.3.1	Researchers, FTE/mn pop.	5,052.3	17	
2.3.2	Gross expenditure on R&D, % GDP	2.0	17	
2.3.3	Global corporate R&D investors, top 3, mn US$	51.9	27	
2.3.4	QS university ranking, top 3*	11.3	63	
Infrastructure		**53.9**	**27**	
3.1	**Information and communication technologies (ICTs)**	**82.1**	**25**	
3.1.1	ICT access*	84.8	20	
3.1.2	ICT use*	72.5	40	
3.1.3	Government's online service*	85.3	24	
3.1.4	E-participation*	85.7	29	
3.2	**General infrastructure**	**34.6**	**41**	
3.2.1	Electricity output, GWh/mn pop.	7,605.7	27	
3.2.2	Logistics performance*	58.9	34	
3.2.3	Gross capital formation, % GDP	21.9	70	
3.3	**Ecological sustainability**	**45.1**	**24**	
3.3.1	GDP/unit of energy use	11.1	57	
3.3.2	Environmental performance*	72.0	18	
3.3.3	ISO 14001 environmental certificates/bn PPP$ GDP	5.6	18	
Market sophistication		**45.1**	**71**	
4.1	**Credit**	**30.5**	**102**	○ ◇
4.1.1	Ease of getting credit*	45.0	101	○ ◇
4.1.2	Domestic credit to private sector, % GDP	42.5	79	○ ◇
4.1.3	Microfinance gross loans, % GDP	n/a	n/a	
4.2	**Investment**	**30.5**	**67**	
4.2.1	Ease of protecting minority investors*	78.0	18	
4.2.2	Market capitalization, % GDP	13.7	65	○
4.2.3	Venture capital investors, deals/bn PPP$ GDP	n/a	n/a	
4.2.4	Venture capital recipients, deals/bn PPP$ GDP	0.0	49	
4.3	**Trade, diversification, and market scale**	**74.4**	**47**	
4.3.1	Applied tariff rate, weighted avg., %	1.8	25	
4.3.2	Domestic industry diversification	98.2	10	●
4.3.3	Domestic market scale, bn PPP$	79.7	88	○

		Score/ Value	Rank	
Business sophistication		**42.8**	**27**	
5.1	**Knowledge workers**	**59.2**	**18**	
5.1.1	Knowledge-intensive employment, %	43.2	22	
5.1.2	Firms offering formal training, %	44.0	23	
5.1.3	GERD performed by business, % GDP	1.5	14	
5.1.4	GERD financed by business, %	62.6	11	●
5.1.5	Females employed w/advanced degrees, %	21.8	26	
5.2	**Innovation linkages**	**32.6**	**30**	
5.2.1	University-industry R&D collaboration†	49.6	40	
5.2.2	State of cluster development and depth†	45.4	74	○
5.2.3	GERD financed by abroad, % GDP	0.3	12	●
5.2.4	Joint venture/strategic alliance deals/bn PPP$ GDP	0.0	49	
5.2.5	Patent families/bn PPP$ GDP	1.7	23	
5.3	**Knowledge absorption**	**36.6**	**37**	
5.3.1	Intellectual property payments, % total trade	0.6	63	
5.3.2	High-tech imports, % total trade	6.6	86	○
5.3.3	ICT services imports, % total trade	1.5	50	
5.3.4	FDI net inflows, % GDP	2.8	56	
5.3.5	Research talent, % in businesses	60.7	11	●
Knowledge and technology outputs		**33.0**	**32**	
6.1	**Knowledge creation**	**33.9**	**29**	
6.1.1	Patents by origin/bn PPP$ GDP	4.4	21	
6.1.2	PCT patents by origin/bn PPP$ GDP	1.1	28	
6.1.3	Utility models by origin/bn PPP$ GDP	0.2	50	○
6.1.4	Scientific and technical articles/bn PPP$ GDP	56.1	4	● ◆
6.1.5	Citable documents H-index	19.2	43	
6.2	**Knowledge impact**	**38.5**	**28**	
6.2.1	Labor productivity growth, %	–0.9	81	○
6.2.2	New businesses/th pop. 15–64	3.1	45	
6.2.3	Software spending, % GDP	0.1	89	○ ◇
6.2.4	ISO 9001 quality certificates/bn PPP$ GDP	21.0	12	● ◆
6.2.5	High-tech manufacturing, %	41.2	23	
6.3	**Knowledge diffusion**	**26.5**	**43**	
6.3.1	Intellectual property receipts, % total trade	0.2	43	
6.3.2	Production and export complexity	81.3	10	●
6.3.3	High-tech exports, % total trade	5.4	33	
6.3.4	ICT services exports, % total trade	1.7	66	
Creative outputs		**34.3**	**38**	
7.1	**Intangible assets**	**36.3**	**48**	
7.1.1	Trademarks by origin/bn PPP$ GDP	68.4	26	
7.1.2	Global brand value, top 5,000, % GDP	6.7	66	○
7.1.3	Industrial designs by origin/bn PPP$ GDP	2.7	39	
7.1.4	ICTs and organizational model creation†	61.9	38	
7.2	**Creative goods and services**	**23.6**	**42**	
7.2.1	Cultural and creative services exports, % total trade	0.9	34	
7.2.2	National feature films/mn pop. 15–69	14.1	9	●
7.2.3	Entertainment and media market/th pop. 15–69	n/a	n/a	
7.2.4	Printing and other media, % manufacturing	1.5	28	
7.2.5	Creative goods exports, % total trade	0.8	49	
7.3	**Online creativity**	**41.1**	**29**	
7.3.1	Generic top-level domains (TLDs)/th pop. 15–69	20.9	28	
7.3.2	Country-code TLDs/th pop. 15–69	28.5	24	
7.3.3	Wikipedia edits/mn pop. 15–69	74.9	23	
7.3.4	Mobile app creation/bn PPP$ GDP	36.7	12	●

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 Slovenia.

Missing data for Slovenia

Code	Indicator name	Economy year	Model year	Source
4.1.3	Microfinance gross loans, % GDP	n/a	2018	Microfinance Information Exchange
4.2.3	Venture capital investors, deals/bn PPP$ GDP	n/a	2020	Refinitiv Eikon
7.2.3	Entertainment and media market/th pop. 15–69	n/a	2020	PwC

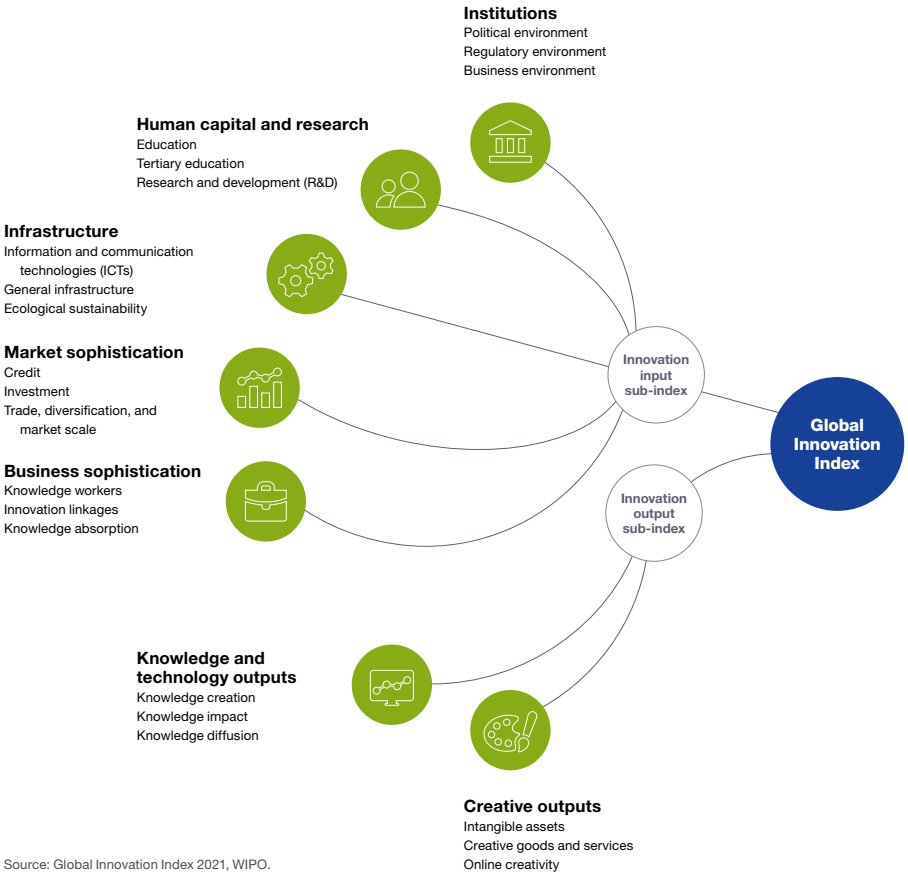
Outdated data for Slovenia

Code	Indicator name	Economy year	Model year	Source
2.1.5	Pupil-teacher ratio, secondary	2018	2019	UNESCO Institute for Statistics
6.1.1	Patents by origin/bn PPP$ GDP	2018	2019	World Intellectual Property Organization
6.1.3	Utility models by origin/bn PPP$ GDP	2010	2019	World Intellectual Property Organization
7.1.1	Trademarks by origin/bn PPP$ GDP	2018	2019	World Intellectual Property Organization
7.1.3	Industrial designs by origin/bn PPP$ GDP	2018	2019	World Intellectual Property 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.



Source: Global Innovation Index 2021, WIPO.

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.