



# Global Innovation Index 2021



## FRANCE

**11th**

France ranks 11th 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 France 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 France in the GII 2021 is between ranks 11 and 13.

### Rankings for France (2019–2021)

	GII	Innovation inputs	Innovation outputs
2021	11	17	10
2020	12	16	12
2019	16	16	14

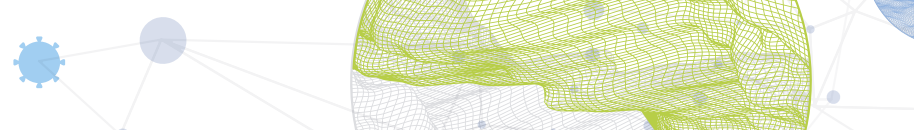
- France performs better in innovation outputs than innovation inputs in 2021.
- This year France ranks 17th in innovation inputs, lower than both 2020 and 2019.
- As for innovation outputs, France ranks 10th. This position is higher than both 2020 and 2019.

**11th**

France ranks 11th among the 51 high-income group economies.

**8th**

France ranks 8th among the 39 economies in Europe.

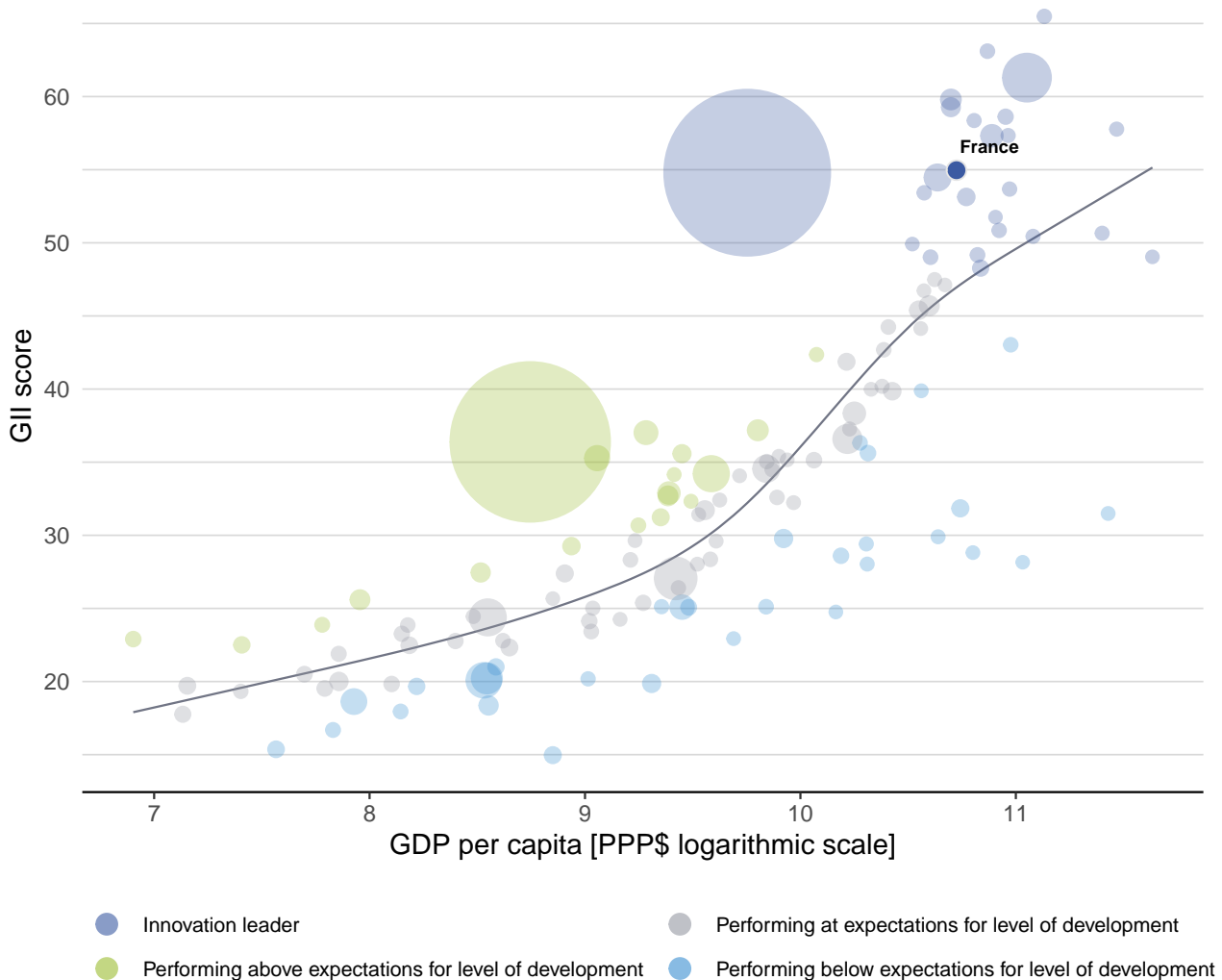


## EXPECTED VS. OBSERVED INNOVATION PERFORMANCE

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, France's performance is above expectations for its level of development.

### The positive relationship between innovation and development



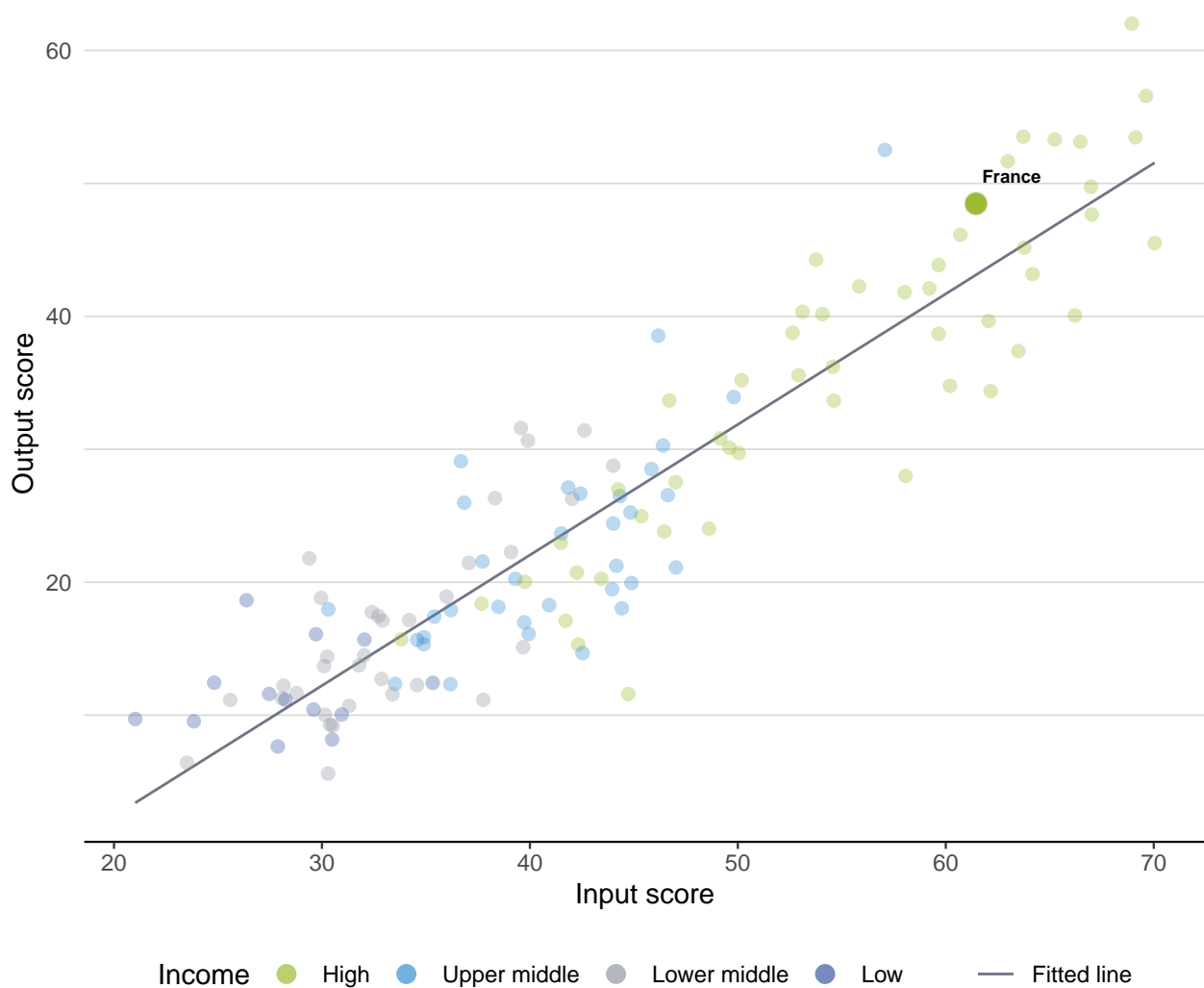


## EFFECTIVELY TRANSLATING INNOVATION INVESTMENTS INTO INNOVATION OUTPUTS

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.

France 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 France

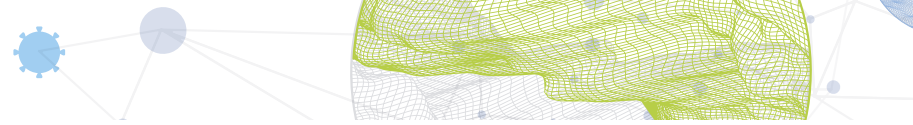


### High-income group economies

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

### Europe

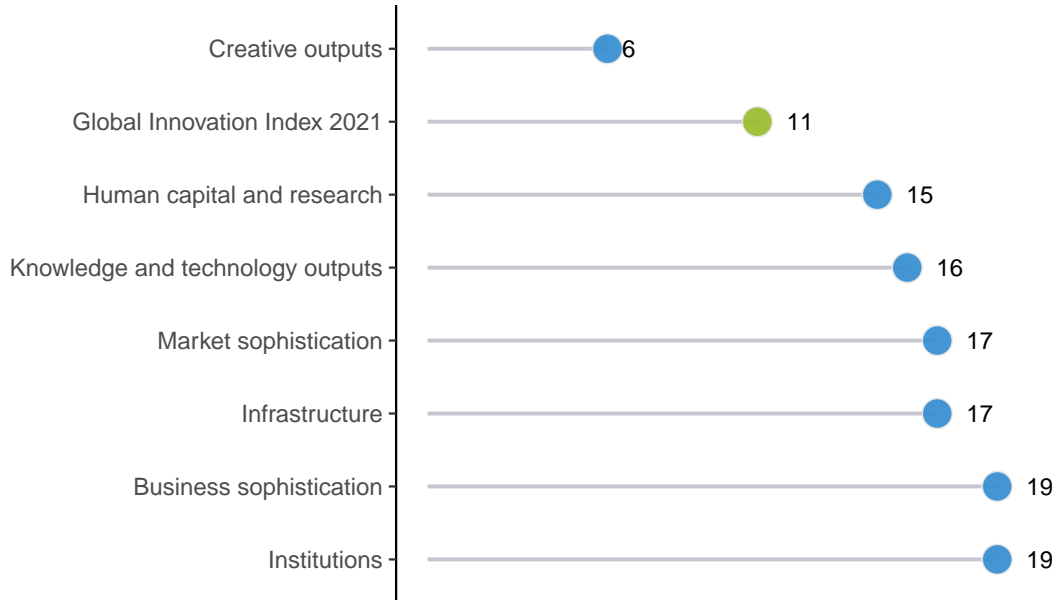
France performs above the regional average in all GII pillars.



## OVERVIEW OF RANKINGS IN THE SEVEN GII 2021 AREAS

France performs best in Creative outputs and its weakest performance is in Institutions and Business sophistication.

### The seven GII pillar ranks for France



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 France in the GII 2021.

### Strengths and weaknesses for France

Strengths			Weaknesses		
Code	Indicator name	Rank	Code	Indicator name	Rank
2.3.3	Global corporate R&D investors, top 3, mn US\$	7	2.1.5	Pupil-teacher ratio, secondary	59
3.1.2	ICT use	10	3.2.3	Gross capital formation, % GDP	60
3.3.2	Environmental performance	5	3.3.1	GDP/unit of energy use	49
4.3	Trade, diversification, and market scale	8	4.1.1	Ease of getting credit	94
4.3.3	Domestic market scale, bn PPP\$	10	4.3.1	Applied tariff rate, weighted avg., %	25
6.1.5	Citable documents H-index	5	5.3.4	FDI net inflows, % GDP	80
6.2.3	Software spending, % GDP	9	6.1.3	Utility models by origin/bn PPP\$ GDP	57
6.3.3	High-tech exports, % total trade	10	6.2.1	Labor productivity growth, %	103
7.1	Intangible assets	3	6.3.4	ICT services exports, % total trade	50
7.1.1	Trademarks by origin/bn PPP\$ GDP	7	7.2.4	Printing and other media, % manufacturing	53
7.1.2	Global brand value, top 5,000, % GDP	6			
7.1.3	Industrial designs by origin/bn PPP\$ GDP	8			

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP\$ (bn)	GDP per capita, PPP\$	GII 2020 rank
10	17	High	EUR	65.3	2,954.2	45,454	12

	Score/Value	Rank		Score/Value	Rank
 <b>Institutions</b>	83.4	19	 <b>Business sophistication</b>	50.4	19
<b>1.1 Political environment</b>	79.9	22	<b>5.1 Knowledge workers</b>	61.0	16
1.1.1 Political and operational stability*	76.8	37	5.1.1 Knowledge-intensive employment, %	46.4	15
1.1.2 Government effectiveness*	81.4	19	5.1.2 Firms offering formal training, %	n/a	n/a
<b>1.2 Regulatory environment</b>	86.3	17	5.1.3 GERD performed by business, % GDP	1.4	16
1.2.1 Regulatory quality*	81.1	18	5.1.4 GERD financed by business, %	56.7	16
1.2.2 Rule of law*	83.9	19	5.1.5 Females employed w/advanced degrees, %	23.4	19
1.2.3 Cost of redundancy dismissal	13.0	40	<b>5.2 Innovation linkages</b>	40.9	23
<b>1.3 Business environment</b>	83.9	22	5.2.1 University-industry R&D collaboration†	54.1	31
1.3.1 Ease of starting a business*	93.1	35	5.2.2 State of cluster development and depth†	58.2	28
1.3.2 Ease of resolving insolvency*	74.6	24	5.2.3 GERD financed by abroad, % GDP	0.2	25
			5.2.4 Joint venture/strategic alliance deals/bn PPP\$ GDP	0.1	29
			5.2.5 Patent families/bn PPP\$ GDP	3.2	13
 <b>Human capital and research</b>	55.4	15	<b>5.3 Knowledge absorption</b>	49.3	13
<b>2.1 Education</b>	60.5	26	5.3.1 Intellectual property payments, % total trade	1.7	17
2.1.1 Expenditure on education, % GDP	5.5	20	5.3.2 High-tech imports, % total trade	9.9	35
2.1.2 Government funding/pupil, secondary, % GDP/cap	25.9	15	5.3.3 ICT services imports, % total trade	2.5	18
2.1.3 School life expectancy, years	15.8	39	5.3.4 FDI net inflows, % GDP	1.9	80
2.1.4 PISA scales in reading, maths and science	493.7	25	5.3.5 Research talent, % in businesses	62.8	8
2.1.5 Pupil-teacher ratio, secondary	13.3	59			
<b>2.2 Tertiary education</b>	42.0	38	 <b>Knowledge and technology outputs</b>	44.3	16
2.2.1 Tertiary enrolment, % gross	67.6	38	<b>6.1 Knowledge creation</b>	44.8	19
2.2.2 Graduates in science and engineering, %	25.4	36	6.1.1 Patents by origin/bn PPP\$ GDP	7.5	13
2.2.3 Tertiary inbound mobility, %	8.8	28	6.1.2 PCT patents by origin/bn PPP\$ GDP	2.7	14
<b>2.3 Research and development (R&amp;D)</b>	63.7	12	6.1.3 Utility models by origin/bn PPP\$ GDP	0.1	57
2.3.1 Researchers, FTE/mn pop.	4,687.2	20	6.1.4 Scientific and technical articles/bn PPP\$ GDP	25.9	36
2.3.2 Gross expenditure on R&D, % GDP	2.2	14	6.1.5 Citable documents H-index	78.9	5
2.3.3 Global corporate R&D investors, top 3, mn US\$	86.1	7	<b>6.2 Knowledge impact</b>	41.5	22
2.3.4 QS university ranking, top 3*	68.8	11	6.2.1 Labor productivity growth, %	-2.0	103
			6.2.2 New businesses/th pop. 15-64	4.8	31
			6.2.3 Software spending, % GDP	0.5	9
			6.2.4 ISO 9001 quality certificates/bn PPP\$ GDP	6.7	41
			6.2.5 High-tech manufacturing, %	51.4	10
 <b>Infrastructure</b>	57.1	17	<b>6.3 Knowledge diffusion</b>	46.7	18
<b>3.1 Information and communication technologies (ICTs)</b>	87.7	16	6.3.1 Intellectual property receipts, % total trade	1.8	14
3.1.1 ICT access*	86.5	17	6.3.2 Production and export complexity	75.6	16
3.1.2 ICT use*	85.5	10	6.3.3 High-tech exports, % total trade	13.4	10
3.1.3 Government's online service*	88.2	18	6.3.4 ICT services exports, % total trade	2.1	50
3.1.4 E-participation*	90.5	18			
<b>3.2 General infrastructure</b>	42.2	23	 <b>Creative outputs</b>	52.6	6
3.2.1 Electricity output, GWh/mn pop.	8,392.9	18	<b>7.1 Intangible assets</b>	68.9	3
3.2.2 Logistics performance*	83.4	16	7.1.1 Trademarks by origin/bn PPP\$ GDP	99.4	7
3.2.3 Gross capital formation, % GDP	22.7	60	7.1.2 Global brand value, top 5,000, % GDP	171.1	6
<b>3.3 Ecological sustainability</b>	41.4	33	7.1.3 Industrial designs by origin/bn PPP\$ GDP	13.0	8
3.3.1 GDP/unit of energy use	12.0	49	7.1.4 ICTs and organizational model creation†	70.9	19
3.3.2 Environmental performance*	80.0	5	<b>7.2 Creative goods and services</b>	27.5	30
3.3.3 ISO 14001 environmental certificates/bn PPP\$ GDP	2.0	42	7.2.1 Cultural and creative services exports, % total trade	1.1	26
			7.2.2 National feature films/mn pop. 15-69	6.8	33
			7.2.3 Entertainment and media market/th pop. 15-69	49.5	17
			7.2.4 Printing and other media, % manufacturing	1.0	53
			7.2.5 Creative goods exports, % total trade	1.8	31
 <b>Market sophistication</b>	61.0	17	<b>7.3 Online creativity</b>	45.3	25
<b>4.1 Credit</b>	47.2	43	7.3.1 Generic top-level domains (TLDs)/th pop. 15-69	41.2	18
4.1.1 Ease of getting credit*	50.0	94	7.3.2 Country-code TLDs/th pop. 15-69	24.9	27
4.1.2 Domestic credit to private sector, % GDP	107.6	21	7.3.3 Wikipedia edits/mn pop. 15-69	78.8	12
4.1.3 Microfinance gross loans, % GDP	n/a	n/a	7.3.4 Mobile app creation/bn PPP\$ GDP	32.2	15
<b>4.2 Investment</b>	48.2	21			
4.2.1 Ease of protecting minority investors*	68.0	44			
4.2.2 Market capitalization, % GDP	92.7	14			
4.2.3 Venture capital investors, deals/bn PPP\$ GDP	0.2	17			
4.2.4 Venture capital recipients, deals/bn PPP\$ GDP	0.1	9			
<b>4.3 Trade, diversification, and market scale</b>	87.6	8			
4.3.1 Applied tariff rate, weighted avg., %	1.8	25			
4.3.2 Domestic industry diversification	95.0	25			
4.3.3 Domestic market scale, bn PPP\$	2,954.2	10			

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 France.

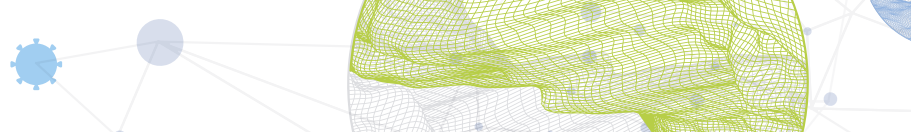
### Missing data for France

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

### Outdated data for France

Code	Indicator name	Economy year	Model year	Source
2.1.5	Pupil-teacher ratio, secondary	2018	2019	UNESCO Institute for Statistics
4.2.2	Market capitalization, % GDP	2018	2019	World Federation of Exchanges

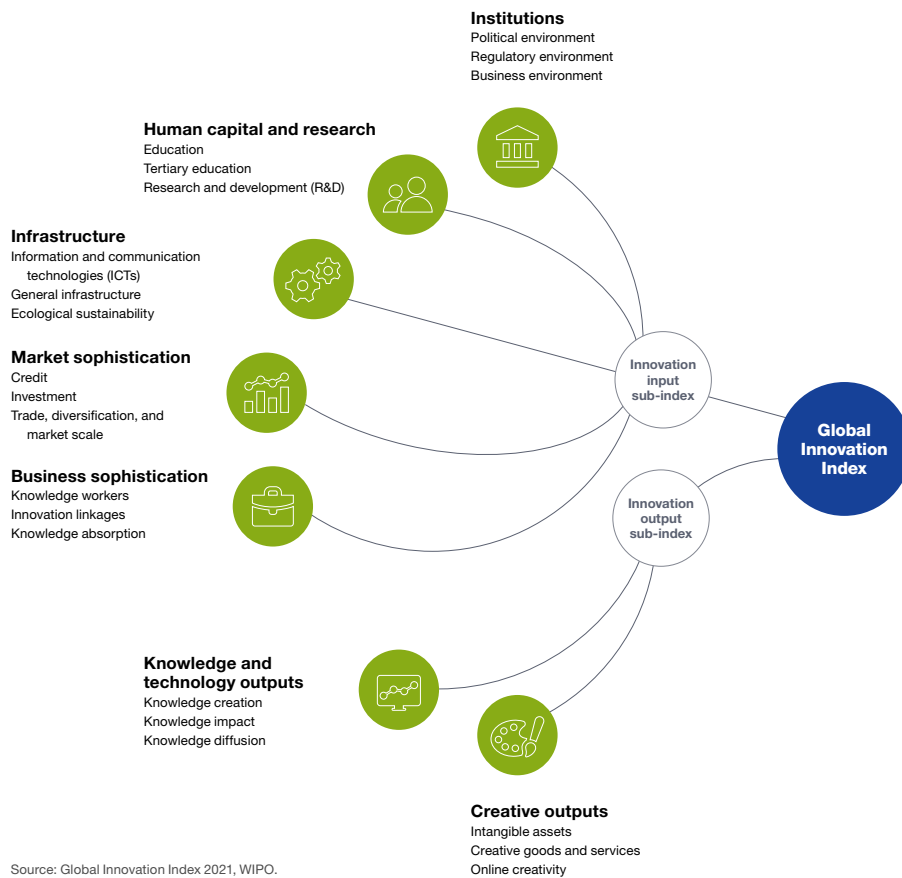




## ABOUT THE GLOBAL INNOVATION INDEX

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.