



AUSTRIA

17th Austria ranks 17th among the 132 economies featured in the GII 2022.

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 Austria 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 Austria in the GII 2022 is between ranks 15 and 20.

Rankings for Austria (2020–2022)

GIIYR	GII	Innovation inputs	Innovation outputs
2020	19	18	23
2021	18	16	24
2022	17	17	21

- Austria performs better in innovation inputs than innovation outputs in 2022.
- This year Austria ranks 17th in innovation inputs, lower than last year but higher than 2020.
- As for innovation outputs, Austria ranks 21st. This position is higher than both 2021 and 2020.

16th Austria ranks 16th among the 48 high-income group economies.

9th Austria ranks 9th among the 39 economies in Europe.

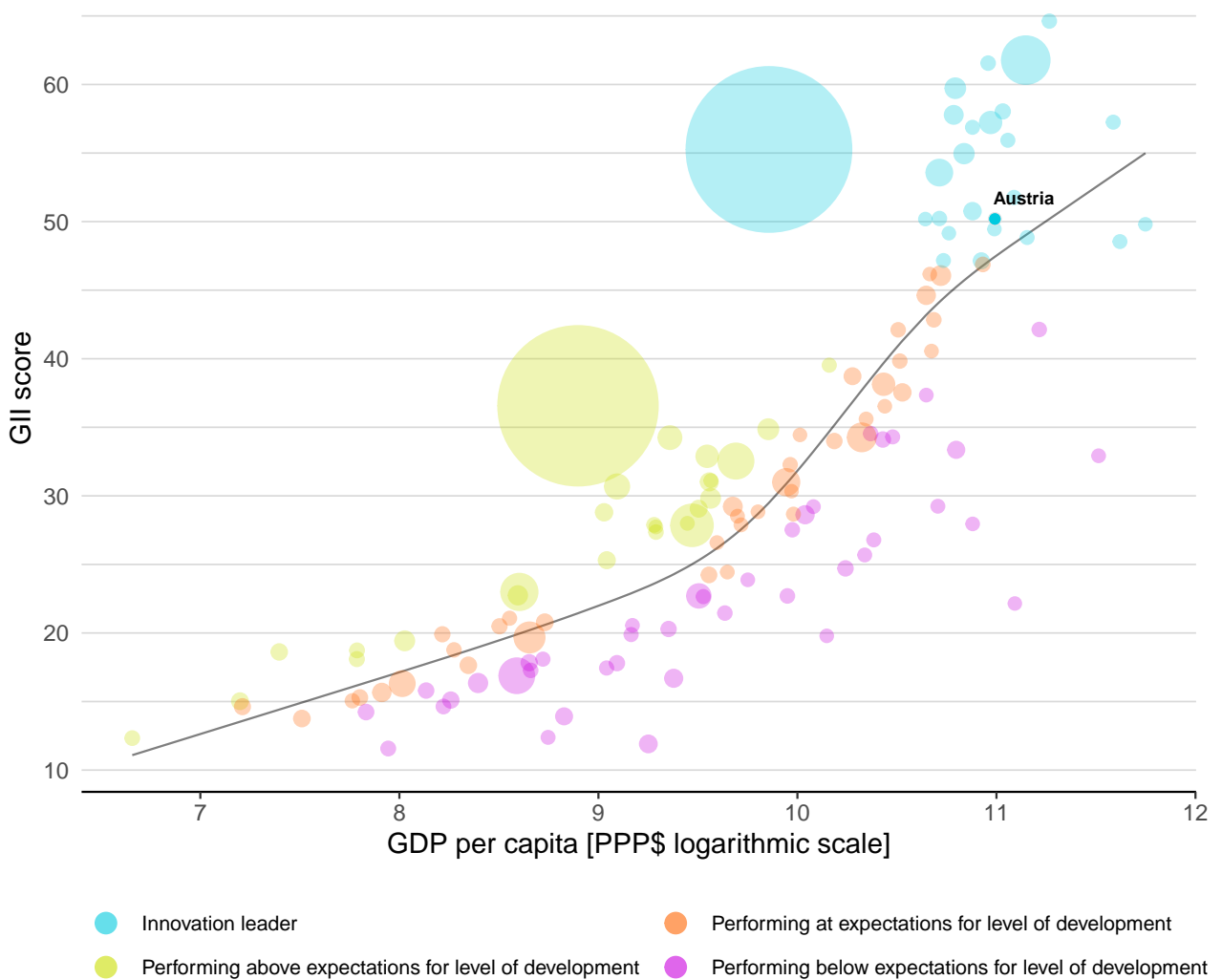


EXPECTED VS. OBSERVED INNOVATION PERFORMANCE

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

The positive relationship between innovation and development



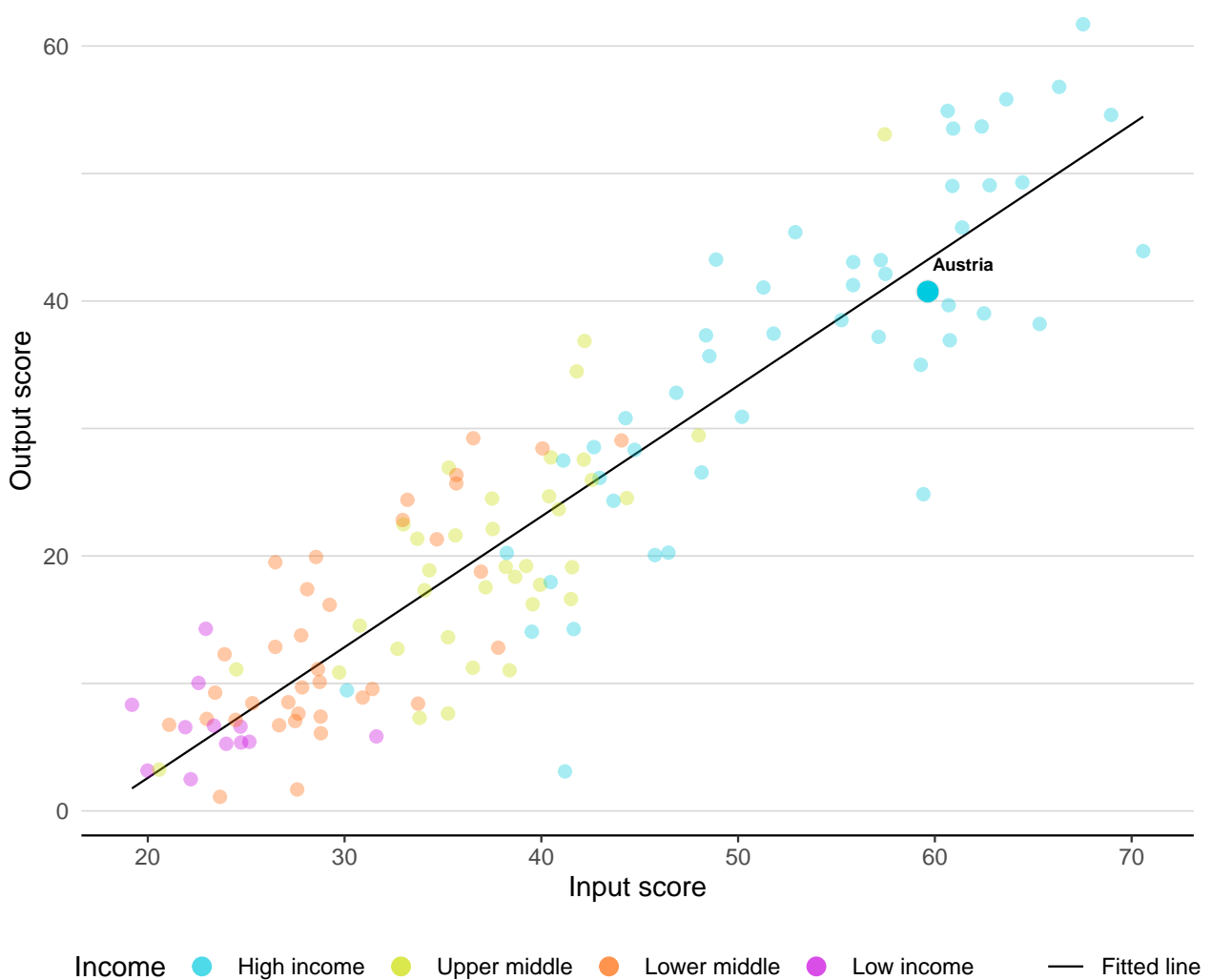


EFFECTIVELY TRANSLATING INNOVATION INVESTMENTS INTO INNOVATION OUTPUTS

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.

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

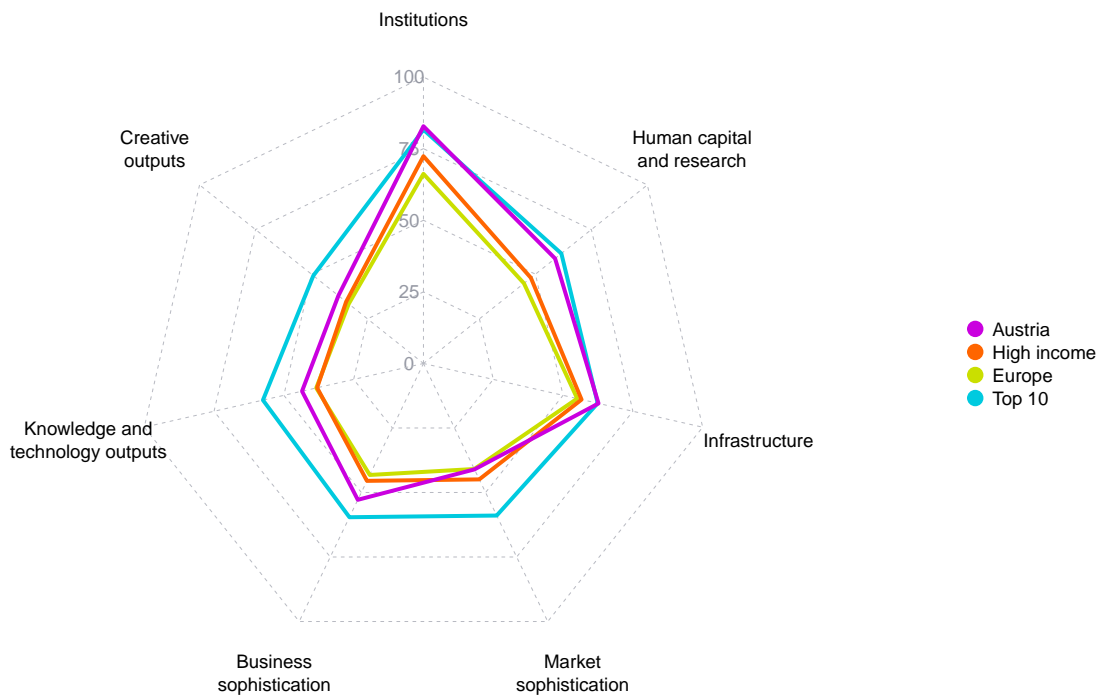
Innovation input to output performance





BENCHMARKING AGAINST OTHER HIGH-INCOME GROUP ECONOMIES AND EUROPE

The seven GII pillar scores for Austria



High-income group economies

Austria performs above the high-income group average in six pillars, namely: Institutions; Human capital and research; Infrastructure; Business sophistication; Knowledge and technology outputs; and, Creative outputs.

Europe

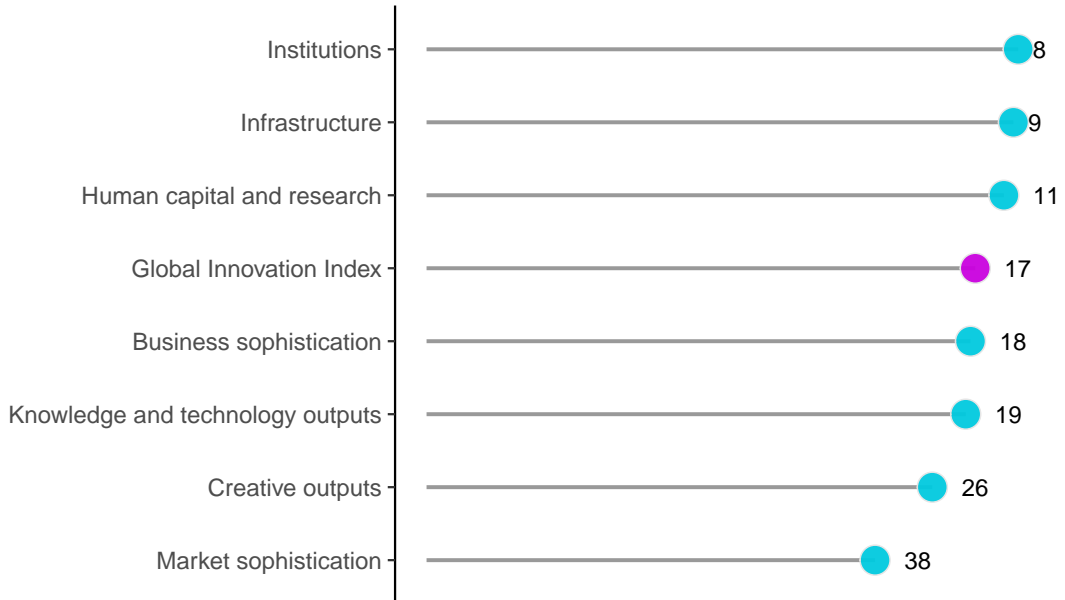
Austria performs above the regional average in all GII pillars.



OVERVIEW OF RANKINGS IN THE SEVEN GII 2022 AREAS

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

The seven GII pillar ranks for Austria



Note: The highest possible ranking in each pillar is 1.

The full WIPO Intellectual Property Statistics profile for Austria can be found at:

https://www.wipo.int/ipstats/en/statistics/country_profile/profile.jsp?code=AT.



INNOVATION STRENGTHS AND WEAKNESSES

The table below gives an overview of the indicator strengths and weaknesses of Austria in the GII 2022.








Strengths and weaknesses for Austria

Strengths			Weaknesses		
Code	Indicator name	Rank	Code	Indicator name	Rank
1.2.2	Rule of law	7	4.2.1	Market capitalization, % GDP	49
1.2.3	Cost of redundancy dismissal	1	5.3.1	Intellectual property payments, % total trade	55
1.3.1	Policies for doing business	4	5.3.2	High-tech imports, % total trade	76
2.3.2	Gross expenditure on R&D, % GDP	7	5.3.4	FDI net inflows, % GDP	128
3.1.3	Government's online service	7	6.1.3	Utility models by origin/bn PPP\$ GDP	35
3.1.4	E-participation	6	6.2.1	Labor productivity growth, %	95
3.2.2	Logistics performance	4	6.2.2	New businesses/th pop. 15–64	95
3.3.2	Environmental performance	8	7.1.1	Intangible asset intensity, top 15, %	40
4.3.2	Domestic industry diversification	5	7.2.4	Printing and other media, % manufacturing	47
5.2.3	GERD financed by abroad, % GDP	4	7.3.4	Mobile app creation/bn PPP\$ GDP	46
6.3.2	Production and export complexity	7			

Austria

17

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP\$ (bn)	GDP per capita, PPP\$
21	17	High	EUR	9.0	531.4	59,406

		Score/ Value	Rank			Score/ Value	Rank
 Institutions		82.8	8 ●	 Business sophistication		52.8	18
1.1 Political environment		84.5	13	5.1 Knowledge workers		57.3	23
1.1.1 Political and operational stability*		83.6	16	5.1.1 Knowledge-intensive employment, %		43.5	25
1.1.2 Government effectiveness*		85.3	10	5.1.2 Firms offering formal training, %		42.6	28
1.2 Regulatory environment		93.2	6 ●	5.1.3 GERD performed by business, % GDP		2.2	7
1.2.1 Regulatory quality*		79.9	18	5.1.4 GERD financed by business, %		50.1	29
1.2.2 Rule of law*		93.0	7 ●	5.1.5 Females employed w/advanced degrees, %		18.8	36 ◇
1.2.3 Cost of redundancy dismissal		8.0	1 ●	5.2 Innovation linkages		57.5	8 ●
1.3 Business environment		70.8	15	5.2.1 University-industry R&D collaboration†		62.4	19
1.3.1 Policies for doing business†		83.4	4 ● ◆	5.2.2 State of cluster development and depth†		66.9	11
1.3.2 Entrepreneurship policies and culture*	○	58.1	25	5.2.3 GERD financed by abroad, % GDP		0.5	4 ● ◆
 Human capital and research		58.8	11	5.2.4 Joint venture/strategic alliance deals/bn PPP\$ GDP		0.0	43 ◇
2.1 Education				5.2.5 Patent families/bn PPP\$ GDP		3.5	11
2.1.1 Expenditure on education, % GDP	○	63.0	20	5.3 Knowledge absorption		43.7	29
2.1.2 Government funding/pupil, secondary, % GDP/cap		5.2	35	5.3.1 Intellectual property payments, % total trade		0.8	55 ○
2.1.3 School life expectancy, years		25.9	18	5.3.2 High-tech imports, % total trade		7.9	76 ○
2.1.4 PISA scales in reading, maths and science		16.0	37	5.3.3 ICT services imports, % total trade		3.5	11
2.1.5 Pupil-teacher ratio, secondary		491.0	27	5.3.4 FDI net inflows, % GDP		-4.5	128 ○
2.2 Tertiary education		9.3	24	5.3.5 Research talent, % in businesses		62.9	8
2.2.1 Tertiary enrolment, % gross		58.5	4 ● ◆	 Knowledge and technology outputs		43.5	19
2.2.2 Graduates in science and engineering, %		86.5	15	6.1 Knowledge creation		48.8	14
2.2.3 Tertiary inbound mobility, %		30.6	15 ◆	6.1.1 Patents by origin/bn PPP\$ GDP		9.0	11
2.3 Research and development (R&D)		17.6	10	6.1.2 PCT patents by origin/bn PPP\$ GDP		3.0	11
2.3.1 Researchers, FTE/mn pop.		54.9	19	6.1.3 Utility models by origin/bn PPP\$ GDP		0.6	35 ○
2.3.2 Gross expenditure on R&D, % GDP		5,751.6	10	6.1.4 Scientific and technical articles/bn PPP\$ GDP		40.6	22
2.3.3 Global corporate R&D investors, top 3, mn USD		3.2	7 ●	6.1.5 Citable documents H-index		44.2	18
2.3.4 QS university ranking, top 3*		57.9	24	6.2 Knowledge impact		34.9	38
 Infrastructure		62.7	9 ●	6.2.1 Labor productivity growth, %		-0.2	95 ○
3.1 Information and communication technologies (ICTs)				6.2.2 New businesses/th pop. 15-64		0.5	95 ○ ◇
3.1.1 ICT access*		91.5	8 ●	6.2.3 Software spending, % GDP		0.5	17
3.1.2 ICT use*		91.0	37	6.2.4 ISO 9001 quality certificates/bn PPP\$ GDP		7.5	35
3.1.3 Government's online service*		82.5	15	6.2.5 High-tech manufacturing, %		45.8	17
3.1.4 E-participation*		94.7	7 ●	6.3 Knowledge diffusion		46.7	21
3.2 General infrastructure		97.6	6 ●	6.3.1 Intellectual property receipts, % total trade		0.6	27
3.2.1 Electricity output, GWh/mn pop.		56.1	11	6.3.2 Production and export complexity		83.2	7 ●
3.2.2 Logistics performance*		7,759.0	22	6.3.3 High-tech exports, % total trade		7.3	25
3.2.3 Gross capital formation, % GDP		92.1	4 ●	6.3.4 ICT services exports, % total trade		4.0	27
3.3 Ecological sustainability		26.9	38	 Creative outputs		38.0	26
3.3.1 GDP/unit of energy use		40.6	30	7.1 Intangible assets		43.8	30
3.3.2 Environmental performance*		14.0	32	7.1.1 Intangible asset intensity, top 15, %		61.5	40 ○
3.3.3 ISO 14001 environmental certificates/bn PPP\$ GDP		66.5	8 ●	7.1.2 Trademarks by origin/bn PPP\$ GDP		56.9	41
 Market sophistication		41.0	38 ◇	7.1.3 Global brand value, top 5,000, % GDP		60.7	32
4.1 Credit				7.1.4 Industrial designs by origin/bn PPP\$ GDP		5.6	20
4.1.1 Finance for startups and scaleups*	○	40.3	28	7.2 Creative goods and services		30.3	29
4.1.2 Domestic credit to private sector, % GDP		46.0	22	7.2.1 Cultural and creative services exports, % total trade		1.2	22
4.1.3 Loans from microfinance institutions, % GDP		93.3	32	7.2.2 National feature films/mn pop. 15-69		6.6	18
4.2 Investment		n/a	n/a	7.2.3 Entertainment and media market/th pop. 15-69		58.6	7
4.2.1 Market capitalization, % GDP		15.5	41 ◇	7.2.4 Printing and other media, % manufacturing		1.0	47 ○
4.2.2 Venture capital investors, deals/bn PPP\$ GDP		28.7	49 ○ ◇	7.2.5 Creative goods exports, % total trade		0.9	46
4.2.3 Venture capital recipients, deals/bn PPP\$ GDP		0.2	25	7.3 Online creativity		34.1	20
4.2.4 Venture capital received, value, % GDP		0.1	36 ◇	7.3.1 Generic top-level domains (TLDs)/th pop. 15-69		35.5	18
4.3 Trade, diversification, and market scale		0.0	37 ◇	7.3.2 Country-code TLDs/th pop. 15-69		63.0	10
4.3.1 Applied tariff rate, weighted avg., %		67.2	24	7.3.3 GitHub commit pushes received/mn pop. 15-69		29.6	23
4.3.2 Domestic industry diversification		1.5	20	7.3.4 Mobile app creation/bn PPP\$ GDP		8.2	46 ○
4.3.3 Domestic market scale, bn PPP\$		99.6	5 ●				
		531.4	43				

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 appendices for details, including the year of the data, at https://www.wipo.int/global_innovation_index/en/2022. 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 indicators that are either missing or outdated for Austria.

Missing data for Austria

Code	Indicator name	Economy year	Model year	Source
4.1.3	Loans from microfinance institutions, % GDP	n/a	2020	International Monetary Fund, Financial Access Survey (FAS)

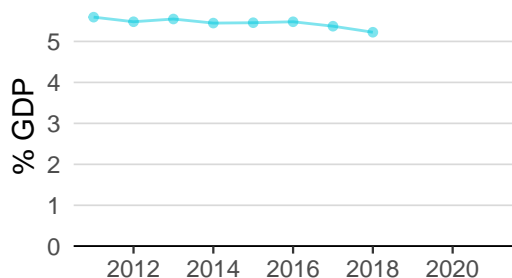
Outdated data for Austria

Code	Indicator name	Economy year	Model year	Source
1.3.2	Entrepreneurship policies and culture	2020	2021	Global Entrepreneurship Monitor
2.1.1	Expenditure on education, % GDP	2018	2020	UNESCO Institute for Statistics
4.1.1	Finance for startups and scaleups	2020	2021	Global Entrepreneurship Monitor

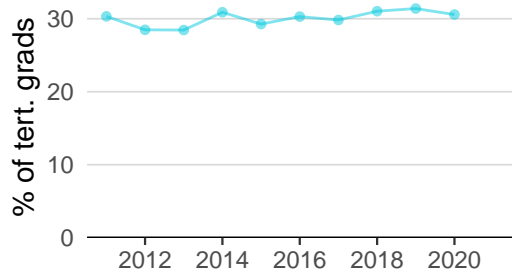
AUSTRIA'S INNOVATION SYSTEM

As far as practicable, the plots below present unscaled indicator data.

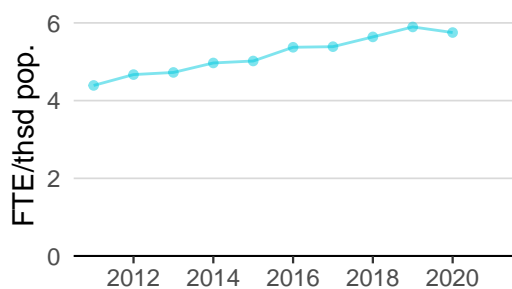
Innovation inputs



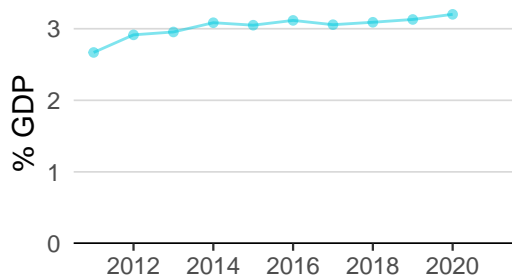
2.1.1 Expenditure on education was equal to 5.2% GDP in 2018—down by 3 percentage points from the year prior—and equivalent to an indicator rank of 35.



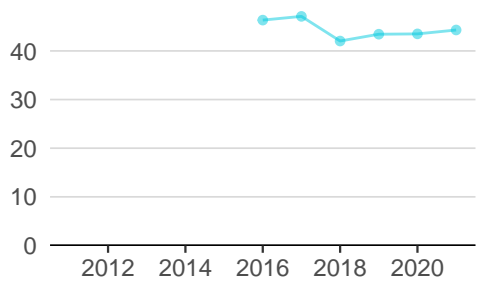
2.2.2 Graduates in science and engineering was equal to 30.6% of tert. grads in 2020—down by 3 percentage points from the year prior—and equivalent to an indicator rank of 15.



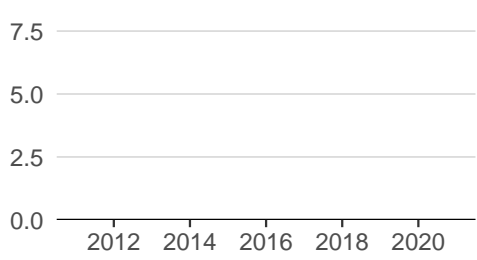
2.3.1 Researchers was equal to 5.8 FTE/thsd pop. in 2020—down by 2 percentage points from the year prior—and equivalent to an indicator rank of 10.



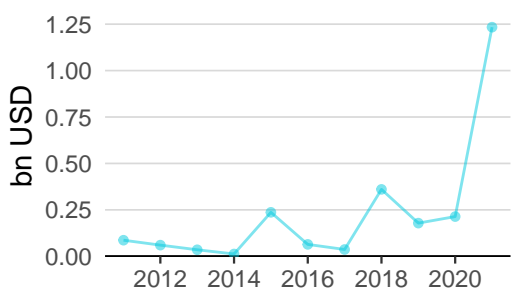
2.3.2 Gross expenditure on R&D was equal to 3.2% GDP in 2020—up by 2 percentage points from the year prior—and equivalent to an indicator rank of 7.



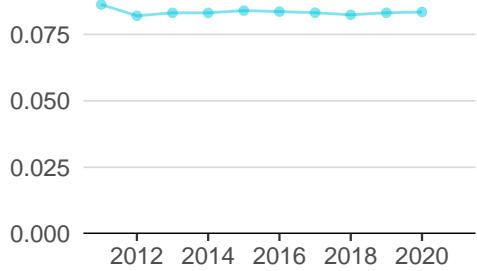
2.3.4 QS university ranking was equal to 44.3 in 2021—up by 2 percentage points from the year prior—and equivalent to an indicator rank of 26.



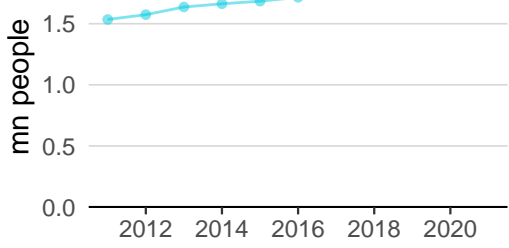
3.1.1 ICT access was equal to 9.1 in 2020 and equivalent to an indicator rank of 37.



4.2.4 Venture capital received was equal to 1.2 bn USD in 2021—up by 477 percentage points from the year prior—and equivalent to an indicator rank of 37.

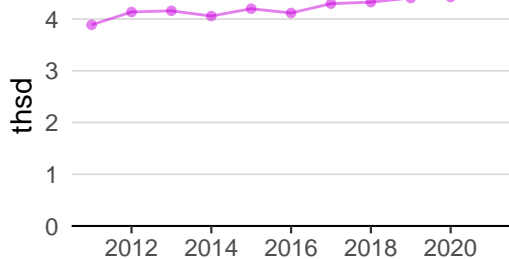


4.3.2 Domestic industry diversification was equal to 0.1 in 2020—effectively unchanged from the year prior—and equivalent to an indicator rank of 5.

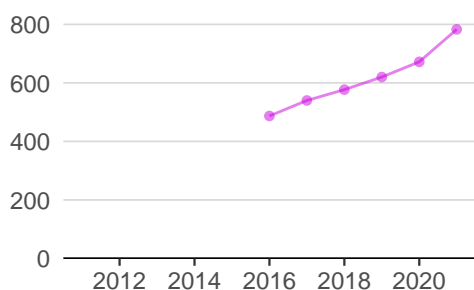


5.1.1 Knowledge-intensive employment was equal to 1.9 mn people in 2021—effectively unchanged from the year prior—and equivalent to an indicator rank of 25.

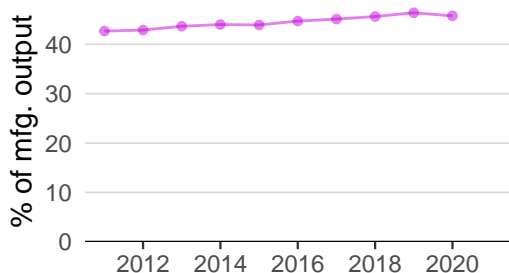
Innovation outputs



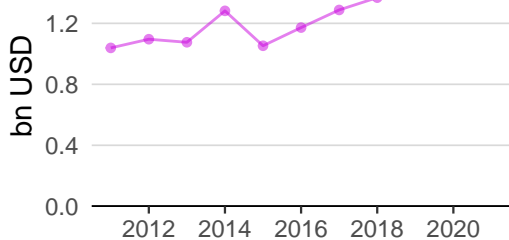
6.1.1 Patents by origin was equal to 4.4 thsd in 2020—effectively unchanged from the year prior—and equivalent to an indicator rank of 11.



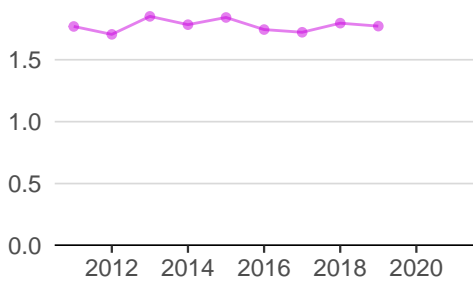
6.1.5 Citable documents H-index was equal to 783.0 in 2021—up by 17 percentage points from the year prior—and equivalent to an indicator rank of 18.



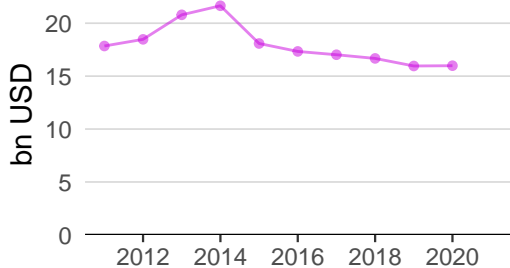
6.2.5 High-tech manufacturing was equal to 45.8% of mfg. output in 2020—down by 1 percentage point from the year prior—and equivalent to an indicator rank of 17.



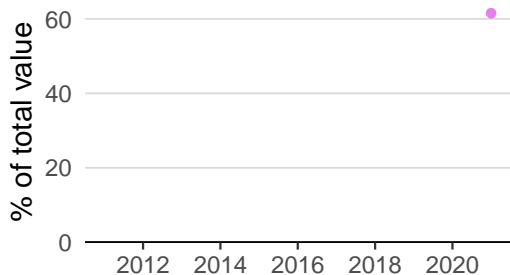
6.3.1 Intellectual property receipts was equal to 1.5 bn USD in 2020—up by 6 percentage points from the year prior—and equivalent to an indicator rank of 27.



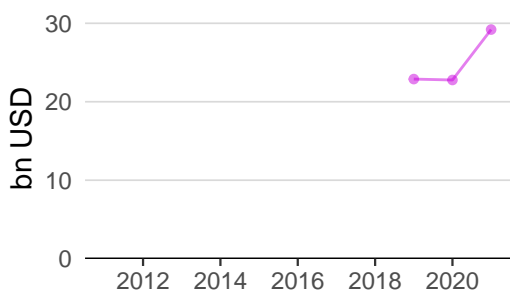
6.3.2 Production and export complexity was equal to 1.8 in 2019—down by 1 percentage point from the year prior—and equivalent to an indicator rank of 7.



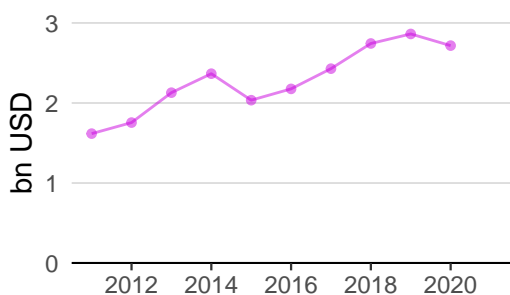
6.3.3 High-tech exports was equal to 16.0 bn USD in 2020—effectively unchanged from the year prior—and equivalent to an indicator rank of 25.



7.1.1 Intangible asset intensity was equal to 61.5% of total value in 2021 and equivalent to an indicator rank of 40.



7.1.3 Global brand value was equal to 29.2 bn USD in 2021—up by 28 percentage points from the year prior—and equivalent to an indicator rank of 32.



7.2.1 Cultural and creative services exports was equal to 2.7 bn USD in 2020—down by 5 percentage points from the year prior—and equivalent to an indicator rank of 22.

AUSTRIA'S INNOVATION TOP PERFORMERS

2.3.3 Global corporate R&D investors

Firm	Industry	R&D	R&D Growth	R&D Intensity	Rank
		[mn EUR]	[%]	[%]	
AMS	Technology Hardware & Equipment	475	61.7	13.6	315
S&T	Technology Hardware & Equipment	202	8.4	16.1	653
VOESTALPINE	Industrial Metals & Mining	153	-12.1	1.4	840

Source: European Commission's Joint Research Centre (<https://iri.jrc.ec.europa.eu/scoreboard/2021-eu-industrial-rd-investment-scoreboard>).
Note: European Commission's Joint Research Centre ranks the top 2,500 firms by R&D investment annually.

2.3.4 QS university ranking

University	Score	Rank
UNIVERSITY OF VIENNA	50.4	151=
TECHNISCHE UNIVERSITÄT WIEN	46.1	180=
GRAZ UNIVERSITY OF TECHNOLOGY	36.4	277=

Source: QS Quacquarelli Symonds Ltd (<https://www.topuniversities.com/university-rankings/world-university-rankings/2022>).
Note: QS Quacquarelli Symonds Ltd annually assesses over 1,200 universities across the globe and scores them between [0,100].
Ranks can represent a single value "x", a tie "x=" or a range "x-y".

7.1.1 Intangible asset intensity, top 15

Firm	Rank
VERBUND	1
OMV	2
AMS-OSRAM	3

Source: Brand Finance (<https://brandirectory.com/reports/gift-2021>).
Note: Brand Finance only provides within economy ranks.

7.1.3 Global brand value, top 5,000

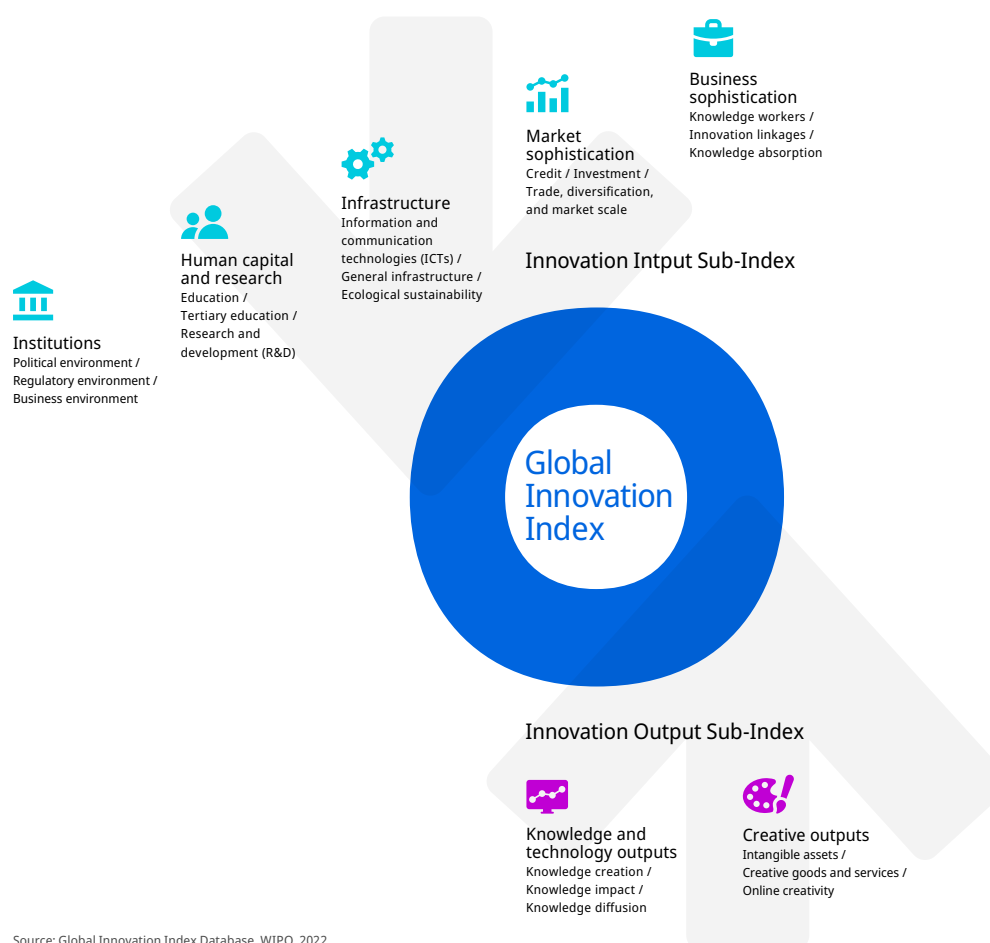
Brand	Industry	Rank
RED BULL	Soft Drinks	1
ERSTE GROUP	Banking	2
A1	Telecoms	3

Source: Brand Finance (<https://brandirectory.com>).
Note: Rank corresponds to within economy ranks.

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.