



VIET NAM

48th

Viet Nam ranks 48th 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 Viet Nam 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 Viet Nam in the GII 2022 is between ranks 44 and 49.

Rankings for Viet Nam (2020–2022)

GIIYR	GII	Innovation inputs	Innovation outputs
2020	42	62	38
2021	44	60	38
2022	48	59	41

- Viet Nam performs better in innovation outputs than innovation inputs in 2022.
- This year Viet Nam ranks 59th in innovation inputs, higher than both 2021 and 2020.
- As for innovation outputs, Viet Nam ranks 41st. This position is lower than both 2021 and 2020.

2nd

Viet Nam ranks 2nd among the 36 lower-middle-income group economies.

10th

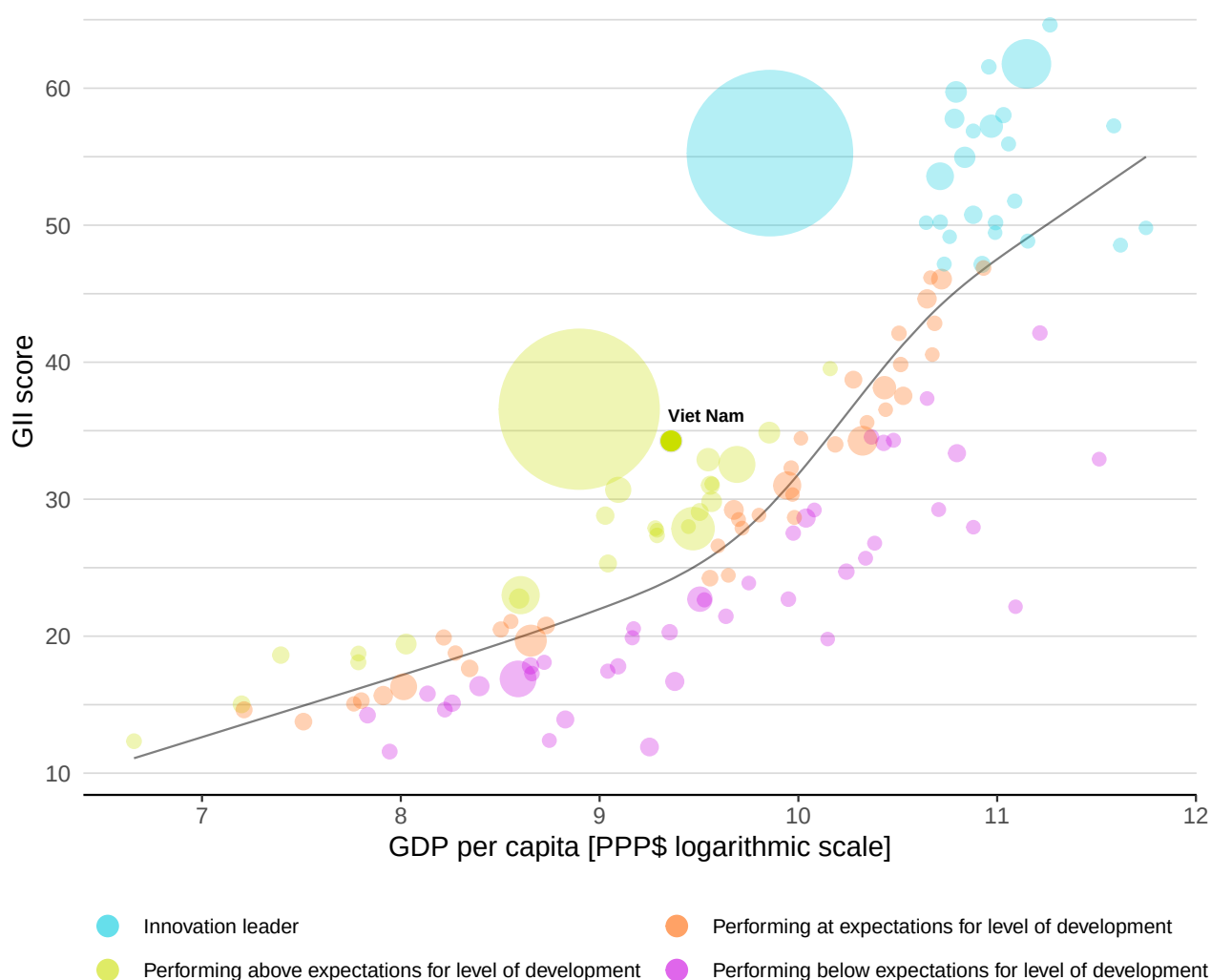
Viet Nam ranks 10th among the 17 economies in South East Asia, East Asia, and Oceania.

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

The positive relationship between innovation and development

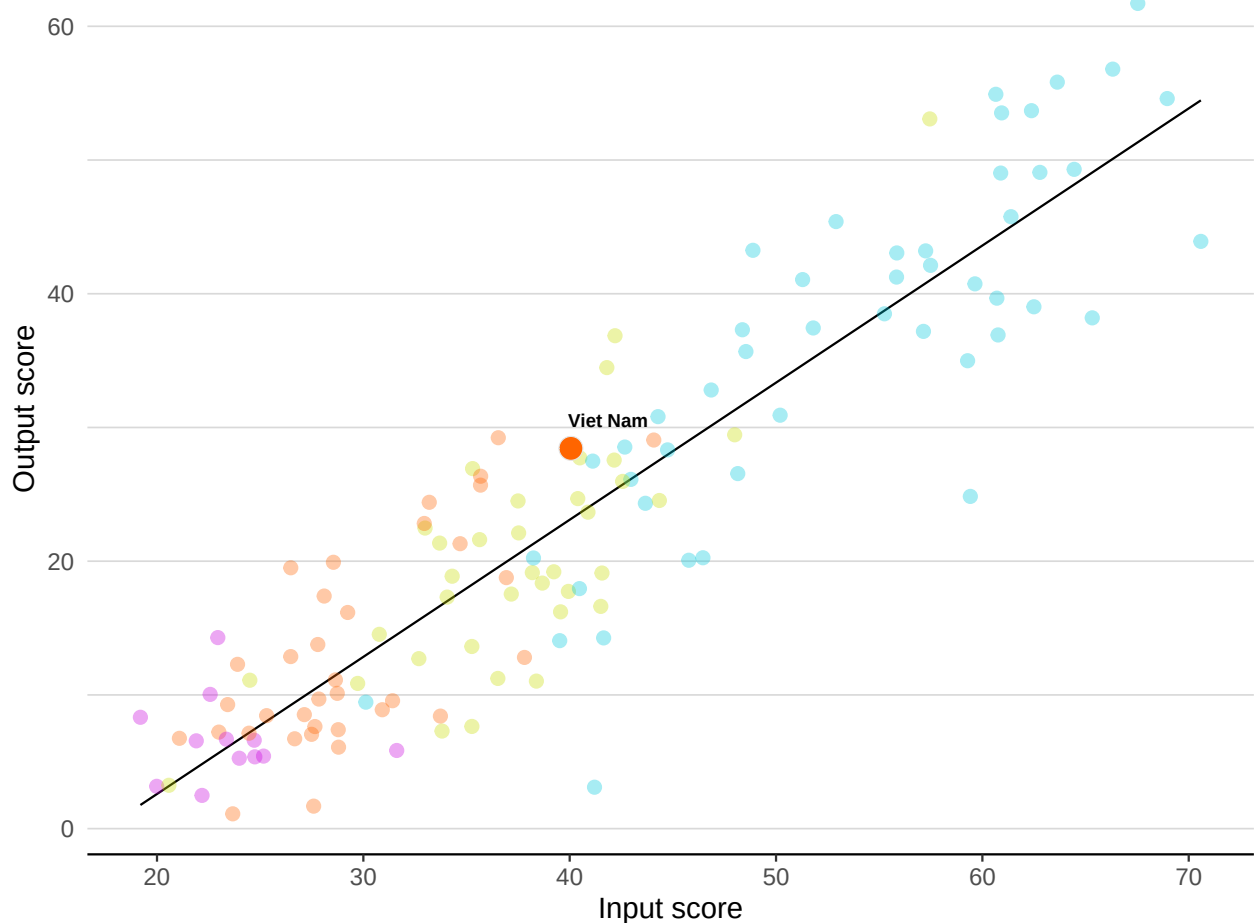


EFFECTIVELY TRANSLATING INNOVATION INVESTMENTS INTO INNOVATION OUTPUTS

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.

Viet Nam produces more innovation outputs relative to its level of innovation investments.

Innovation input to output performance



Income ● High income ● Upper middle ● Lower middle ● Low income — Fitted line

BENCHMARKING AGAINST OTHER LOWER MIDDLE-INCOME GROUP ECONOMIES AND SOUTH EAST ASIA, EAST ASIA, AND OCEANIA

The seven GII pillar scores for Viet Nam



Lower-middle-income group economies

Viet Nam performs above the lower-middle-income group average in all GII pillars.

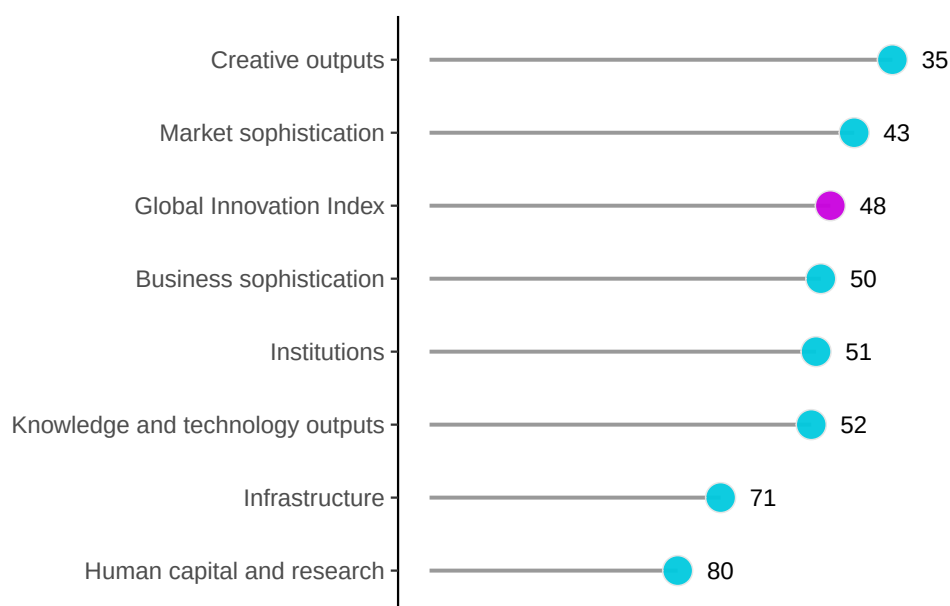
South East Asia, East Asia, and Oceania

Viet Nam performs above the regional average in Creative outputs.

OVERVIEW OF RANKINGS IN THE SEVEN GII 2022 AREAS

Viet Nam performs best in Creative outputs and its weakest performance is in Human capital and research.

The seven GII pillar ranks for Viet Nam



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

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

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

INNOVATION STRENGTHS AND WEAKNESSES

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

Strengths and weaknesses for Viet Nam

Strengths			Weaknesses		
Code	Indicator name	Rank	Code	Indicator name	Rank
4.1.2	Domestic credit to private sector, % GDP	11	2.2.3	Tertiary inbound mobility, %	103
4.3.2	Domestic industry diversification	9	2.3.3	Global corporate R&D investors, top 3, mn USD	38
5.1.4	GERD financed by business, %	10	3.3.2	Environmental performance	128
5.2.2	State of cluster development and depth	14	4.1.3	Loans from microfinance institutions, % GDP	52
5.3.2	High-tech imports, % total trade	1	5.1.1	Knowledge-intensive employment, %	106
5.3.4	FDI net inflows, % GDP	15	5.3.3	ICT services imports, % total trade	130
6.2.1	Labor productivity growth, %	3	6.3.4	ICT services exports, % total trade	120
6.3.3	High-tech exports, % total trade	3	7.2.1	Cultural and creative services exports, % total trade	94
7.2.5	Creative goods exports, % total trade	8	7.2.2	National feature films/mn pop. 15–69	68
7.3.4	Mobile app creation/bn PPP\$ GDP	8	7.2.3	Entertainment and media market/th pop. 15–69	51

Viet Nam

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP\$ (bn)	GDP per capita, PPP\$	
41	59	Lower middle	SEAO	98.2	1,141.3	11,608	
		Score/Value	Rank				
 Institutions		60.6	51	 Business sophistication			
1.1	Political environment	65.2	50	5.1	Knowledge workers	29.4	68
1.1.1	Political and operational stability*	76.4	37	5.1.1	Knowledge-intensive employment, %	10.7	106 ○
1.1.2	Government effectiveness*	54.0	57	5.1.2	Firms offering formal training, %	22.2	69
1.2	Regulatory environment	54.6	96	5.1.3	GERD performed by business, % GDP	0.4	45
1.2.1	Regulatory quality*	41.2	83	5.1.4	GERD financed by business, %	64.1	10 ●
1.2.2	Rule of law*	42.6	70	5.1.5	Females employed w/advanced degrees, %	7.3	85
1.2.3	Cost of redundancy dismissal	24.6	105	5.2	Innovation linkages	26.8	48
1.3	Business environment	62.0	30	5.2.1	University-industry R&D collaboration†	58.2	26
1.3.1	Policies for doing business†	63.3	31	5.2.2	State of cluster development and depth†	65.1	14 ●
1.3.2	Entrepreneurship policies and culture*	60.7	21	5.2.3	GERD financed by abroad, % GDP	0.0	59
		27.2	80	5.2.4	Joint venture/strategic alliance deals/bn PPP\$ GDP	0.0	80
 Human capital and research		27.2	80	5.2.5	Patent families/bn PPP\$ GDP	0.0	73
2.1	Education	55.1	[56]	5.3	Knowledge absorption	38.7	41
2.1.1	Expenditure on education, % GDP	4.1	75	5.3.1	Intellectual property payments, % total trade	0.2	87
2.1.2	Government funding/pupil, secondary, % GDP/cap	n/a	n/a	5.3.2	High-tech imports, % total trade	31.4	1 ●
2.1.3	School life expectancy, years	n/a	n/a	5.3.3	ICT services imports, % total trade	0.1	130 ○
2.1.4	PISA scales in reading, maths and science	502.0	16	5.3.4	FDI net inflows, % GDP	6.1	15 ●
2.1.5	Pupil-teacher ratio, secondary	19.7	93	5.3.5	Research talent, % in businesses	24.1	51
2.2	Tertiary education	20.8	90	 Knowledge and technology outputs		26.0	52
2.2.1	Tertiary enrolment, % gross	28.6	87	6.1	Knowledge creation	8.6	84
2.2.2	Graduates in science and engineering, %	22.7	54	6.1.1	Patents by origin/bn PPP\$ GDP	1.0	66
2.2.3	Tertiary inbound mobility, %	0.4	103 ○	6.1.2	PCT patents by origin/bn PPP\$ GDP	0.0	85
2.3	Research and development (R&D)	5.7	68	6.1.3	Utility models by origin/bn PPP\$ GDP	0.4	37
2.3.1	Researchers, FTE/mn pop.	756.7	60	6.1.4	Scientific and technical articles/bn PPP\$ GDP	9.8	90
2.3.2	Gross expenditure on R&D, % GDP	0.5	59	6.1.5	Citable documents H-index	13.2	58
2.3.3	Global corporate R&D investors, top 3, mn USD	0.0	38 ○ ◇	6.2	Knowledge impact	34.8	40
2.3.4	QS university ranking, top 3*	8.1	66	6.2.1	Labor productivity growth, %	5.6	3 ●
 Infrastructure		42.5	71	6.2.2	New businesses/th pop. 15–64	1.7	66
3.1	Information and communication technologies (ICTs)	72.1	70	6.2.3	Software spending, % GDP	0.3	45
3.1.1	ICT access*	90.5	41	6.2.4	ISO 9001 quality certificates/bn PPP\$ GDP	4.1	65
3.1.2	ICT use*	62.2	69	6.2.5	High-tech manufacturing, %	29.9	44
3.1.3	Government's online service*	65.3	78	6.3	Knowledge diffusion	34.7	44
3.1.4	E-participation*	70.2	70	6.3.1	Intellectual property receipts, % total trade	0.0	100
3.2	General infrastructure	38.5	42	6.3.2	Production and export complexity	42.8	56
3.2.1	Electricity output, GWh/mn pop.	2,467.7	72	6.3.3	High-tech exports, % total trade	37.3	3 ●
3.2.2	Logistics performance*	56.7	38	6.3.4	ICT services exports, % total trade	0.3	120 ○
3.2.3	Gross capital formation, % GDP	31.5	19	 Creative outputs		30.8	35
3.3	Ecological sustainability	17.0	113 ○	7.1	Intangible assets	44.9	28
3.3.1	GDP/unit of energy use	8.1	91	7.1.1	Intangible asset intensity, top 15, %	65.3	30
3.3.2	Environmental performance*	20.1	128 ○ ◇	7.1.2	Trademarks by origin/bn PPP\$ GDP	72.4	24
3.3.3	ISO 14001 environmental certificates/bn PPP\$ GDP	1.8	54	7.1.3	Global brand value, top 5,000, % GDP	88.2	24
 Market sophistication		38.4	43	7.1.4	Industrial designs by origin/bn PPP\$ GDP	2.1	46
4.1	Credit	31.9	47	7.2	Creative goods and services	24.0	50
4.1.1	Finance for startups and scaleups*	37.9	43	7.2.1	Cultural and creative services exports, % total trade	0.0	94 ○
4.1.2	Domestic credit to private sector, % GDP	147.7	11 ● ◆	7.2.2	National feature films/mn pop. 15–69	0.5	68 ○
4.1.3	Loans from microfinance institutions, % GDP	0.1	52 ○	7.2.3	Entertainment and media market/th pop. 15–69	3.0	51 ○
4.2	Investment	11.4	52	7.2.4	Printing and other media, % manufacturing	0.9	55
4.2.1	Market capitalization, % GDP	60.0	31	7.2.5	Creative goods exports, % total trade	7.8	8 ●
4.2.2	Venture capital investors, deals/bn PPP\$ GDP	0.0	77	7.3	Online creativity	9.6	45
4.2.3	Venture capital recipients, deals/bn PPP\$ GDP	0.0	48	7.3.1	Generic top-level domains (TLDs)/th pop. 15–69	2.5	71
4.2.4	Venture capital received, value, % GDP	0.0	40	7.3.2	Country-code TLDs/th pop. 15–69	2.1	70
4.3	Trade, diversification, and market scale	71.8	19	7.3.3	GitHub commit pushes received/mn pop. 15–69	4.5	63
4.3.1	Applied tariff rate, weighted avg., %	1.3	17	7.3.4	Mobile app creation/bn PPP\$ GDP	29.2	8 ●
4.3.2	Domestic industry diversification	98.6	9 ● ◆				
4.3.3	Domestic market scale, bn PPP\$	1,141.3	24				

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 Viet Nam.

Missing data for Viet Nam

Code	Indicator name	Economy year	Model year	Source
2.1.2	Government funding/pupil, secondary, % GDP/cap	n/a	2018	UNESCO Institute for Statistics
2.1.3	School life expectancy, years	n/a	2019	UNESCO Institute for Statistics

Outdated data for Viet Nam

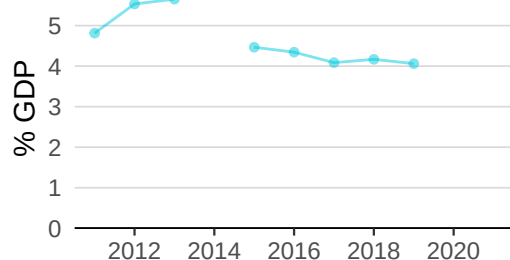
Code	Indicator name	Economy year	Model year	Source
1.3.2	Entrepreneurship policies and culture	2017	2021	Global Entrepreneurship Monitor
2.1.1	Expenditure on education, % GDP	2019	2020	UNESCO Institute for Statistics
2.1.4	PISA scales in reading, maths and science	2015	2018	OECD, PISA
2.2.2	Graduates in science and engineering, %	2016	2020	UNESCO Institute for Statistics
2.3.1	Researchers, FTE/mn pop.	2019	2020	UNESCO Institute for Statistics
2.3.2	Gross expenditure on R&D, % GDP	2019	2020	UNESCO Institute for Statistics
3.2.1	Electricity output, GWh/mn pop.	2019	2020	International Energy Agency
4.1.1	Finance for startups and scaleups	2017	2021	Global Entrepreneurship Monitor
4.3.2	Domestic industry diversification	2018	2019	United Nations Industrial Development Organization
5.1.2	Firms offering formal training, %	2015	2019	World Bank Enterprise Surveys
5.1.3	GERD performed by business, % GDP	2017	2020	UNESCO Institute for Statistics
5.1.4	GERD financed by business, %	2017	2019	UNESCO Institute for Statistics
5.2.3	GERD financed by abroad, % GDP	2017	2019	UNESCO Institute for Statistics
5.3.1	Intellectual property payments, % total trade	2019	2020	World Trade Organization and United Nations Conference on Trade and Development
5.3.3	ICT services imports, % total trade	2019	2020	World Trade Organization and United Nations Conference on Trade and Development
5.3.5	Research talent, % in businesses	2017	2020	UNESCO Institute for Statistics
6.2.5	High-tech manufacturing, %	2018	2019	United Nations Industrial Development Organization
6.3.1	Intellectual property receipts, % total trade	2019	2020	World Trade Organization and United Nations Conference on Trade and Development

Code	Indicator name	Economy year	Model year	Source
6.3.4	ICT services exports, % total trade	2019	2020	World Trade Organization and United Nations Conference on Trade and Development

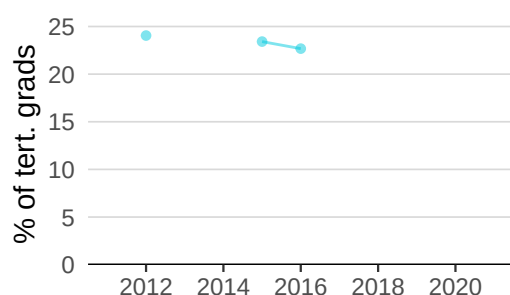
VIET NAM'S INNOVATION SYSTEM

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

Innovation inputs



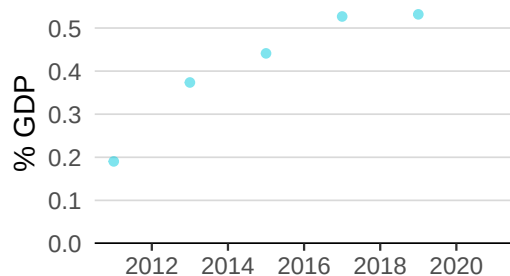
2.1.1 Expenditure on education was equal to 4.1% GDP in 2019—down by 3 percentage points from the year prior—and equivalent to an indicator rank of 75.



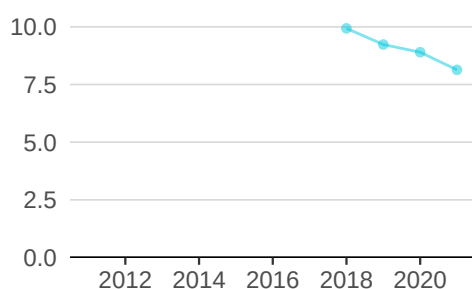
2.2.2 Graduates in science and engineering was equal to 22.7% of tert. grads in 2016—down by 3 percentage points from the year prior—and equivalent to an indicator rank of 54.



2.3.1 Researchers was equal to 756.7 FTE/mn pop. in 2019 and equivalent to an indicator rank of 60.



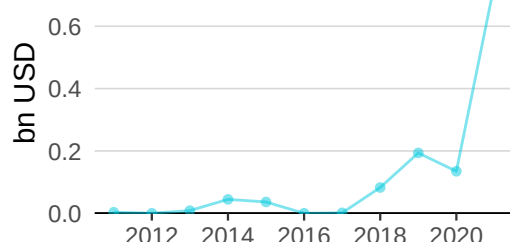
2.3.2 Gross expenditure on R&D was equal to 0.5% GDP in 2019 and equivalent to an indicator rank of 59.



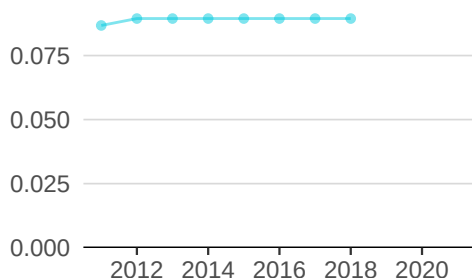
2.3.4 QS university ranking was equal to 8.1 in 2021—down by 9 percentage points from the year prior—and equivalent to an indicator rank of 66.



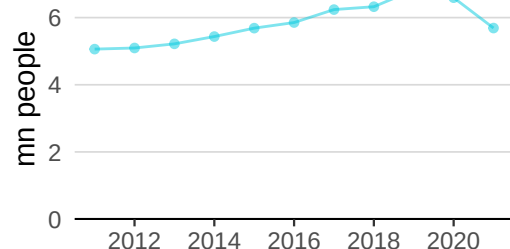
3.1.1 ICT access was equal to 9.1 in 2020 and equivalent to an indicator rank of 41.



4.2.4 Venture capital received was equal to 0.7 bn USD in 2021—up by 446 percentage points from the year prior—and equivalent to an indicator rank of 40.

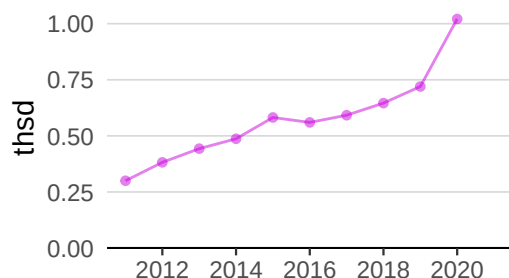


4.3.2 Domestic industry diversification was equal to 0.1 in 2018—effectively unchanged from the year prior—and equivalent to an indicator rank of 9.

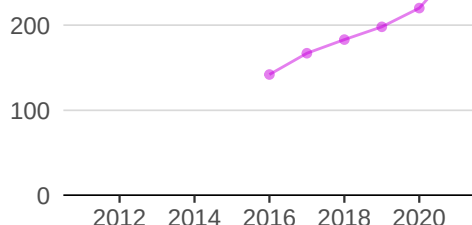


5.1.1 Knowledge-intensive employment was equal to 5.7 mn people in 2021—down by 14 percentage points from the year prior—and equivalent to an indicator rank of 106.

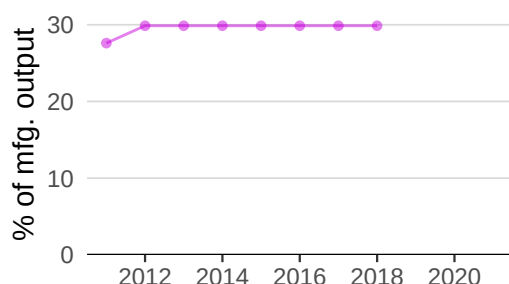
Innovation outputs



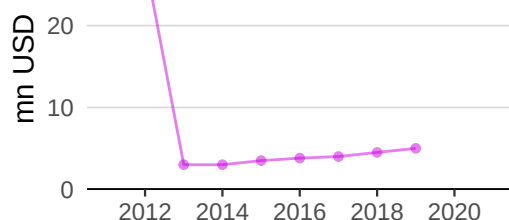
6.1.1 Patents by origin was equal to 1.0 thsd in 2020—up by 42 percentage points from the year prior—and equivalent to an indicator rank of 66.



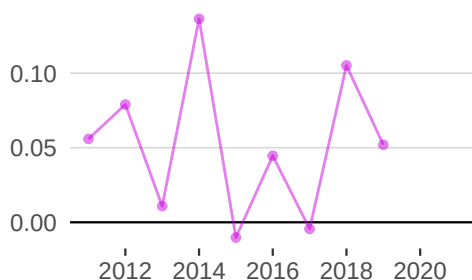
6.1.5 Citable documents H-index was equal to 269.0 in 2021—up by 22 percentage points from the year prior—and equivalent to an indicator rank of 58.



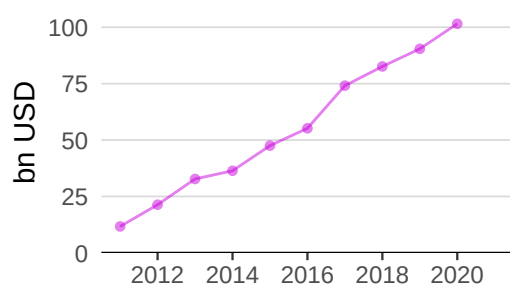
6.2.5 High-tech manufacturing was equal to 29.9% of mfg. output in 2018—effectively unchanged from the year prior—and equivalent to an indicator rank of 44.



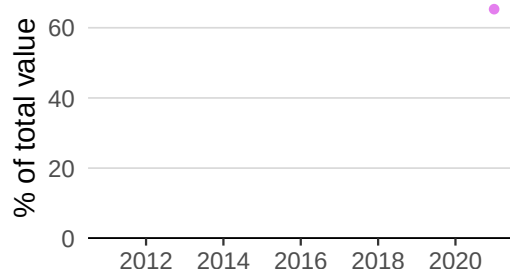
6.3.1 Intellectual property receipts was equal to 5.0 mn USD in 2019—up by 11 percentage points from the year prior—and equivalent to an indicator rank of 100.



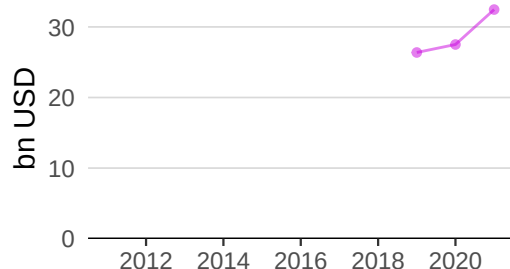
6.3.2 Production and export complexity was equal to 0.1 in 2019—down by 51 percentage points from the year prior—and equivalent to an indicator rank of 56.



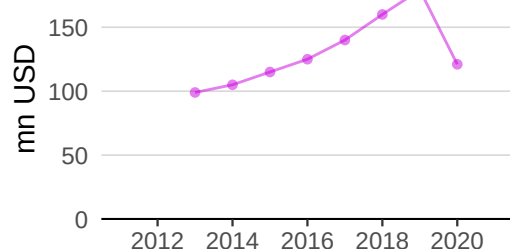
6.3.3 High-tech exports was equal to 101.5 bn USD in 2020—up by 12 percentage points from the year prior—and equivalent to an indicator rank of 3.



7.1.1 Intangible asset intensity was equal to 65.3% of total value in 2021 and equivalent to an indicator rank of 30.



7.1.3 Global brand value was equal to 32.5 bn USD in 2021—up by 18 percentage points from the year prior—and equivalent to an indicator rank of 24.



7.2.1 Cultural and creative services exports was equal to 121.0 mn USD in 2020—down by 32 percentage points from the year prior—and equivalent to an indicator rank of 94.

VIET NAM'S INNOVATION TOP PERFORMERS

2.3.3 Global corporate R&D investors

Firm	Industry	R&D	R&D Growth	R&D Intensity	Rank
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No observations

Source: European Commission's Joint Research Centre (<https://iri.jrc.ec.europa.eu/scoreboard/2021-eu-industrial-rd-investment-scoreboard>).

2.3.4 QS university ranking

University	Score	Rank
VIETNAM NATIONAL UNIVERSITY - HO CHI MINH CITY	12.8	801-1000
VIETNAM NATIONAL UNIVERSITY- HANOI	11.6	801-1000

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
VINGROUP	1
BANK FOR FOREIGN TRADE	2
VIETNAM DAIRY PRODUCTS	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
VIETTEL	Telecoms	1
VNPT	Telecoms	2
VINAMILK	Food	3

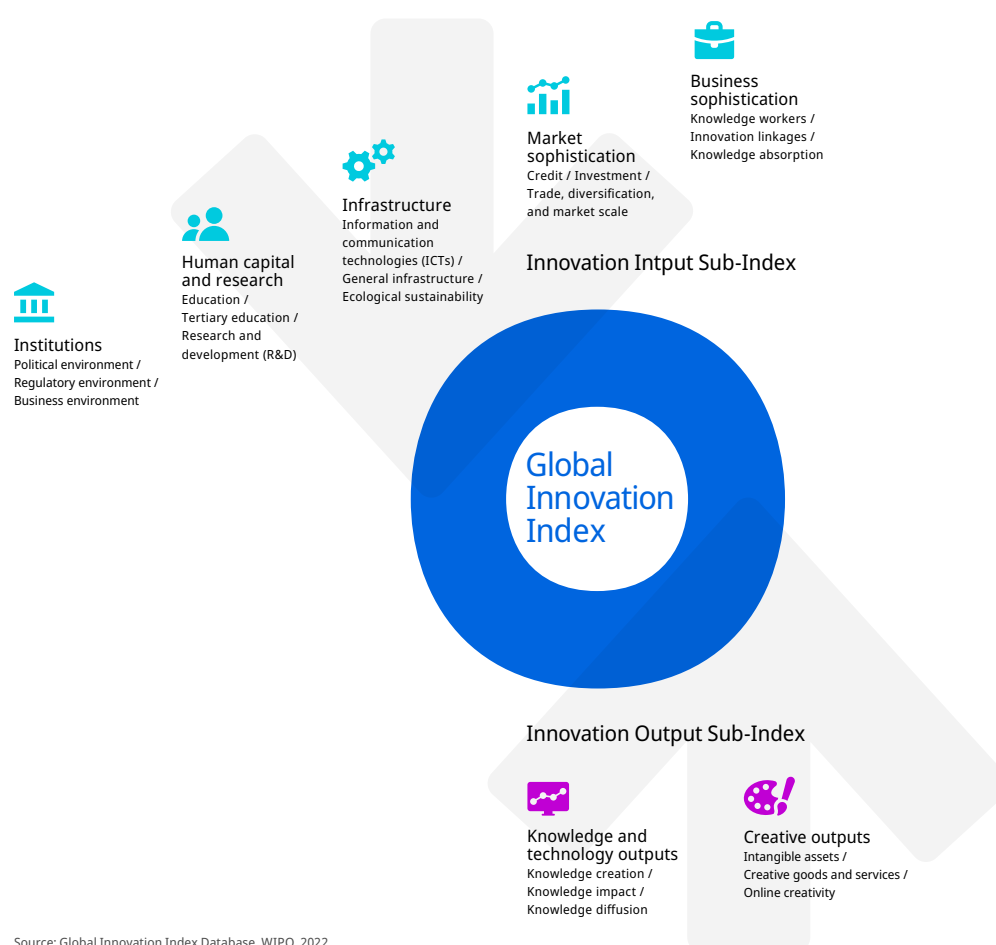
Source: Brand Finance (<https://brandirectory.com>).

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.