

VIET NAM

42nd Viet Nam ranks 42nd among the 131 economies featured in the GII 2020.

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 2020 is between ranks 41 and 50.

Rankings of Viet Nam (2018–2020)

| | GII | Innovation inputs | Innovation outputs |
|-------------|------------|--------------------------|---------------------------|
| 2020 | 42 | 62 | 38 |
| 2019 | 42 | 63 | 37 |
| 2018 | 45 | 65 | 41 |

- Viet Nam performs better in innovation outputs than innovation inputs in 2020.
- This year Viet Nam ranks 62nd in innovation inputs, higher than last year and higher compared to 2018.
- As for innovation outputs, Viet Nam ranks 38th. This position is lower than last year and higher compared to 2018.

1st Viet Nam ranks 1st among the 29 lower middle-income group economies.

9th Viet Nam ranks 9th among the 17 economies in South East Asia, East Asia, and Oceania.

Heading the lower middle-income group, Viet Nam ranks 42nd for a second consecutive year – up from 71st back in 2014. Taking the past years together, Viet Nam is among those GII economies in the top 50 to have made the most significant progress in ranking over time. It also holds the record, together with only three other economies, of having been an innovation achiever – a select group of economies whose innovation performance is above expectations for its level of development – for 10 consecutive years.

Viet Nam is among the lower middle-income economies efficiently getting much more outputs relative to innovation inputs. It continues to score above average for its income group in all seven GII areas, and has scores in Market and Business sophistication, as well as in both the output pillars, that are even above average for the upper middle-income group.

Viet Nam's innovation system is characterized by its excelling in the areas of market and business sophistication, where access to credit, in particular Domestic credit to private sector (15) and Microfinance gross loans (11), thrive. Viet Nam's Knowledge absorption (10) and Knowledge diffusion (14) are two other areas of strength, thanks to its leadership in High-technology imports (4), High-technology exports (2) and foreign direct investment (FDI) inflows (19). Viet Nam also performs well in several areas related to Creative outputs, namely, Mobile app creation (10), Creative goods exports (11) and Trademarks by origin (20). Other indicators where Viet Nam ranks among the top 10 include productivity growth (4) and R&D expenditures financed by business (8). It also continues to improve in High- and medium-high-technology manufacturing (23).

This year, Viet Nam makes notable progress in Innovation linkages, with improved performance in University–industry collaboration and State of cluster development. Its ICT infrastructure also improves, making notable progress in ICT access and ICT use.

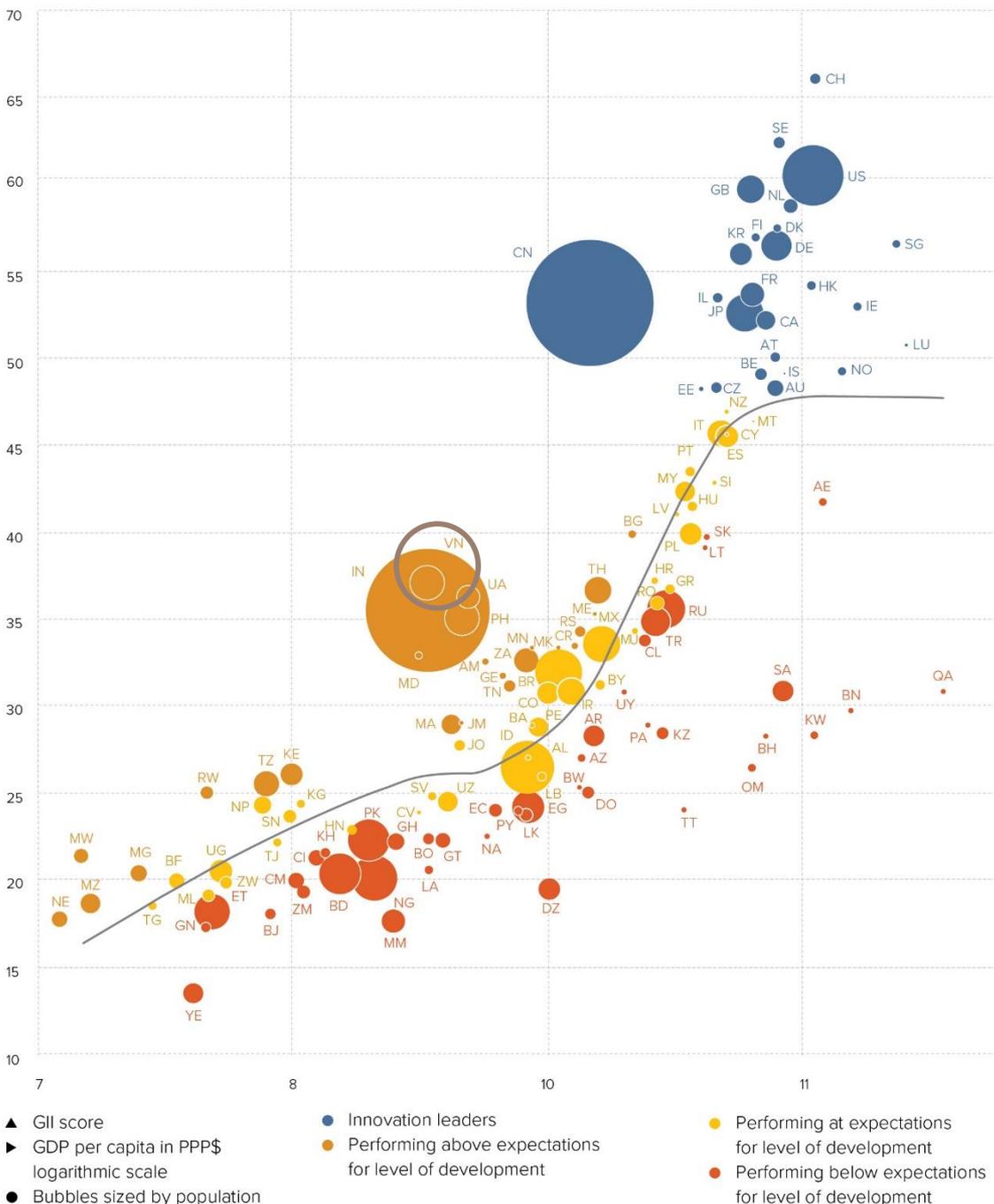
With 33 brands in the top 5,000, Viet Nam ranks 19th in the new GII indicator, Global brand value, led by telecommunications company Viettel Telecom.

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

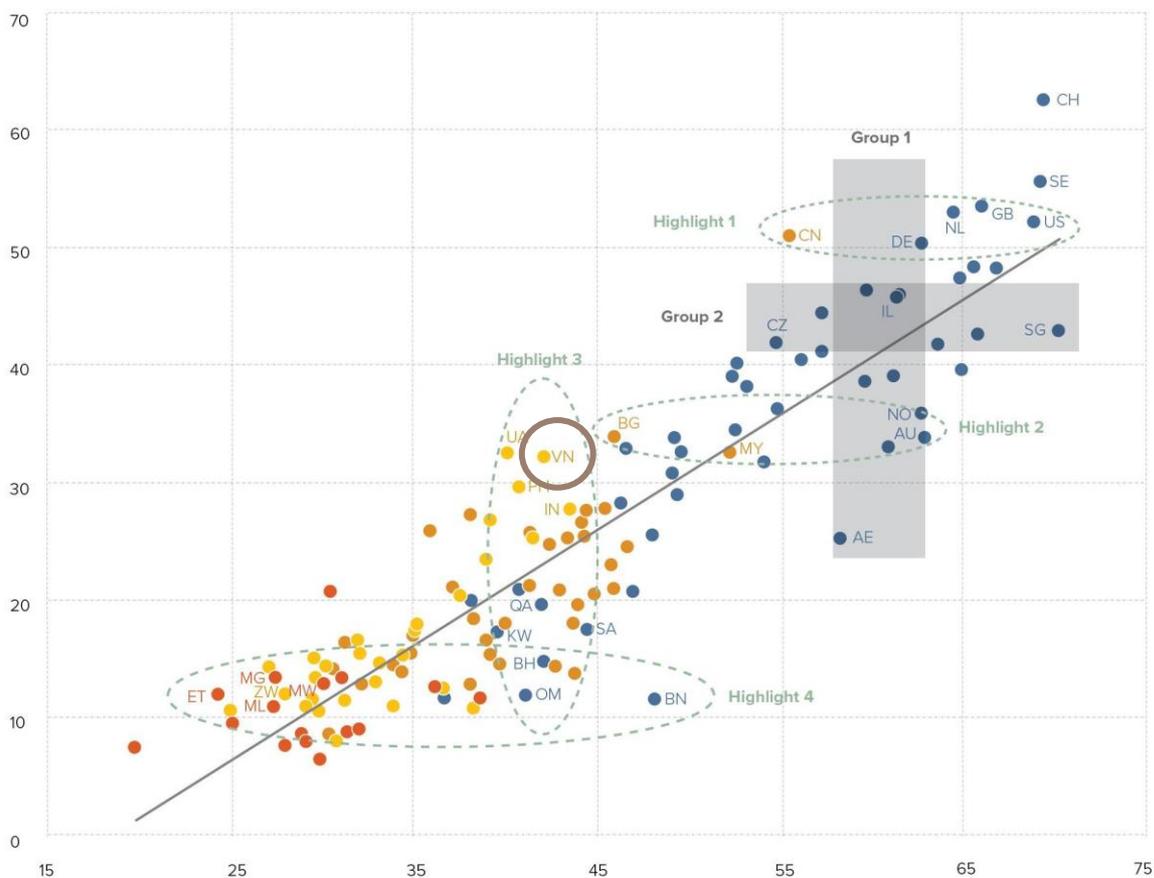


EFFECTIVELY TRANSLATING INNOVATION INVESTMENTS INTO INNOVATION OUTPUTS

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, 2020

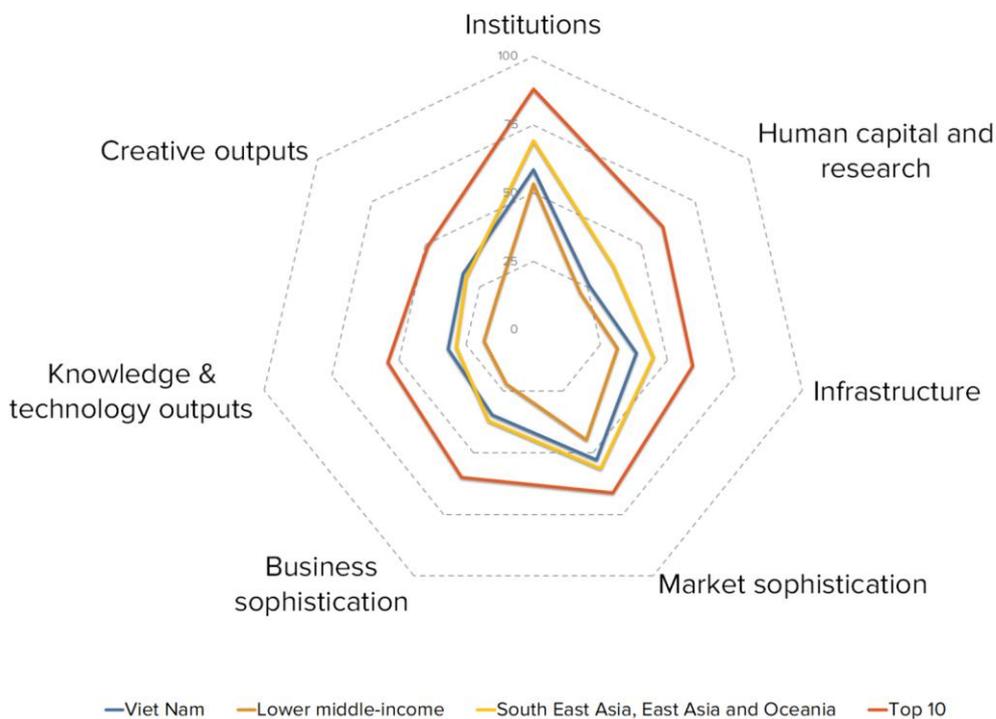


▲ Output score ● High income group ● Lower middle-income group — Fitted values
 ► Input score ● Upper middle-income group ● Low income group

| | | | | | | | |
|----|-------------------|----|------------|----|--------------|----|--------------------------|
| AU | Australia | IN | India | NL | Netherlands | CH | Switzerland |
| BH | Bahrain | IL | Israel | NO | Norway | UA | Ukraine |
| BN | Brunei Darussalam | KW | Kuwait | OM | Oman | AE | United Arab Emirates |
| BG | Bulgaria | MG | Madagascar | PH | Philippines | GB | United Kingdom |
| CN | China | MW | Malawi | QA | Qatar | US | United States of America |
| CZ | Czech Republic | ML | Mali | SA | Saudi Arabia | VN | Viet Nam |
| ET | Ethiopia | MY | Malaysia | SG | Singapore | ZW | Zimbabwe |
| DE | Germany | | | SE | Sweden | | |

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

Viet Nam's scores in the seven GII pillars



Lower middle-income group economies

Viet Nam has high scores all GII pillars, which are above average for the lower middle-income group.

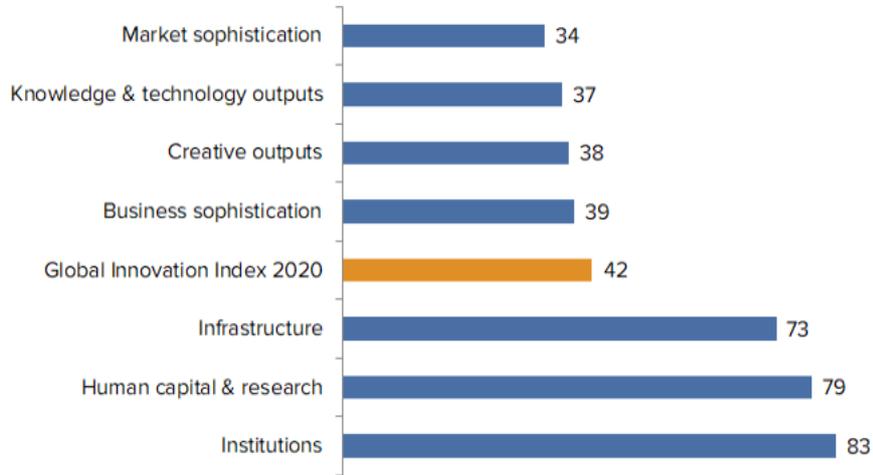
South East Asia, East Asia, and Oceania

Compared to other economies in South East Asia, East Asia, and Oceania, Viet Nam performs:

- above average in two out of the seven pillars: Knowledge & technology outputs and Creative outputs; and
- below average in five out of the seven pillars: Institutions, Human capital & research, Infrastructure, Market sophistication and Business sophistication.

OVERVIEW OF VIET NAM RANKINGS IN THE SEVEN GII AREAS

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



*The highest possible ranking in each pillar is 1.

INNOVATION STRENGTHS AND WEAKNESSES

The table below gives an overview of the strengths and weaknesses of Viet Nam in the GII 2020.

| Strengths | | | Weaknesses | | |
|-----------|--|------|------------|---|------|
| Code | Indicator name | Rank | Code | Indicator name | Rank |
| 4.1 | Credit | 9 | 1.2.3 | Cost of redundancy dismissal, salary weeks | 103 |
| 4.1.2 | Domestic credit to private sector, % GDP | 15 | 1.3.2 | Ease of resolving insolvency* | 106 |
| 4.1.3 | Microfinance gross loans, % GDP | 11 | 2.2.3 | Tertiary inbound mobility, % | 104 |
| 5.1.4 | GERD financed by business, % | 8 | 2.3.3 | Global R&D companies, top 3, mn US\$ | 42 |
| 5.3 | Knowledge absorption | 10 | 3.3.2 | Environmental performance* | 110 |
| 5.3.2 | High-tech imports, % total trade | 4 | 4.2 | Investment | 112 |
| 5.3.4 | FDI net inflows, % GDP | 19 | 5.1.1 | Knowledge-intensive employment, % | 97 |
| 6.2.1 | Growth rate of PPP\$ GDP/worker, % | 4 | 5.3.3 | ICT services imports, % total trade | 126 |
| 6.3 | Knowledge diffusion | 14 | 6.3.3 | ICT services exports, % total trade | 126 |
| 6.3.2 | High-tech net exports, % total trade | 2 | 7.2.1 | Cultural & creative services exports, % total trade | 97 |
| 7.1.1 | Trademarks by origin/bn PPP\$ GDP | 20 | 7.2.3 | Entertainment & Media market/th pop. 15–69 | 52 |
| 7.2.5 | Creative goods exports, % total trade | 11 | | | |
| 7.3.4 | Mobile app creation/bn PPP\$ GDP | 10 | | | |

NOTES: * indicates an index; † indicates a survey question. Strengths and weaknesses are listed for pillars and/or sub-pillars where the data minimum coverage (DMC) requirements were not met. For the sake of caution, these ranks are shown in square brackets [] in the country profile. This is to ensure that incomplete data coverage does not lead to erroneous conclusions being made about strengths or weaknesses, in particular about strong or weak sub-pillar rankings.

STRENGTHS

GII strengths for Viet Nam are found in four of the seven GII pillars.

- Market sophistication (34): has strengths in the sub-pillar Credit (9) and in the indicators Domestic credit to private sector (15) and Microfinance gross loans (11).
- Business sophistication (39): displays strengths in the sub-pillar Knowledge absorption (10) and in the indicators GERD financed by business (8), High-tech imports (4) and FDI net inflows (19).
- Knowledge & technology outputs (37): reveals strengths in the sub-pillar Knowledge diffusion (14) and in the indicators productivity growth (4) and High-tech net exports (2).
- Creative outputs (38): has strengths in the indicators Trademarks by origin (20), Creative goods exports (11) and Mobile app creation (10).

WEAKNESSES

GII weaknesses for Viet Nam are found in all seven GII pillars.

- Institutions (83): exhibits weaknesses in the indicators Cost of redundancy dismissal (103) and Ease of resolving insolvency (106).
- Human capital & research (79): has weaknesses in the indicators Tertiary inbound mobility (104) and Global R&D companies (42).
- Infrastructure (73): the indicator Environmental performance (110) is a weakness.
- Market sophistication (34): the sub-pillar Investment (112) is a weakness.
- Business sophistication (39): demonstrates weaknesses in indicators Knowledge-intensive employment (97) and ICT services imports (126).
- Knowledge & technology outputs (37): the indicator ICT services exports (126) is a weakness.
- Creative outputs (38): has weaknesses in the indicators Cultural & creative services exports (97) and Entertainment & Media market (52).

| Output rank | Input rank | Income | Region | Population (mn) | GDP, PPP\$ | GDP per capita, PPP\$ | GII 2019 rank | |
|-------------------------------------|--|--------------|-------------|-----------------|---|---|---------------|-----------|
| 38 | 62 | Lower middle | SEAO | 96.5 | 770.2 | 7,041.6 | 42 | |
| | | | | Score/Value | Rank | | | |
| INSTITUTIONS | | | | 58.5 | 83 | | | |
| 1.1 | Political environment | 60.8 | 55 | ◆ | 5.1 | Knowledge workers | 30.5 | 63 |
| 1.1.1 | Political and operational stability* | 82.1 | 29 | ◆ | 5.1.1 | Knowledge-intensive employment, % | 13.5 | 97 ○ |
| 1.1.2 | Government effectiveness* | 50.1 | 72 | ◆ | 5.1.2 | Firms offering formal training, % | 22.2 | 66 |
| 1.2 | Regulatory environment | 53.2 | 98 | | 5.1.3 | GERD performed by business, % GDP | 0.4 | 42 ◆ |
| 1.2.1 | Regulatory quality* | 31.6 | 99 | | 5.1.4 | GERD financed by business, % | 64.1 | 8 ◆◆ |
| 1.2.2 | Rule of law* | 46.6 | 64 | ◆ | 5.1.5 | Females employed w/advanced degrees, % | 6.0 | 84 |
| 1.2.3 | Cost of redundancy dismissal, salary weeks | 24.6 | 103 | ○ | 5.2 | Innovation linkages | 19.3 | 75 |
| 1.3 | Business environment | 61.6 | 101 | | 5.2.1 | University/industry research collaboration† | 42.0 | 65 |
| 1.3.1 | Ease of starting a business* | 85.1 | 88 | | 5.2.2 | State of cluster development† | 52.6 | 42 |
| 1.3.2 | Ease of resolving insolvency* | 38.0 | 106 | ○ | 5.2.3 | GERD financed by abroad, % GDP | 0.0 | 65 |
| HUMAN CAPITAL & RESEARCH | | | | 26.0 | 79 | | | |
| 2.1 | Education | 48.4 | [60] | | 5.2.4 | JV-strategic alliance deals/bn PPP\$ GDP | 0.0 | 59 |
| 2.1.1 | Expenditure on education, % GDP | 4.2 | 67 | | 5.2.5 | Patent families 2+ offices/bn PPP\$ GDP | 0.0 | 87 |
| 2.1.2 | Government funding/pupil, secondary, % GDP/cap | n/a | n/a | | 5.3 | Knowledge absorption | 53.6 | 10 |
| 2.1.3 | School life expectancy, years | n/a | n/a | | 5.3.1 | Intellectual property payments, % total trade | n/a | n/a |
| 2.1.4 | PISA scales in reading, maths, & science | 502.0 | 16 | ◆ | 5.3.2 | High-tech imports, % total trade | 26.8 | 4 ◆◆ |
| 2.1.5 | Pupil-teacher ratio, secondary | 17.6 | 87 | | 5.3.3 | ICT services imports, % total trade | 0.0 | 126 ○◇ |
| 2.2 | Tertiary education | 22.7 | 87 | | 5.3.4 | FDI net inflows, % GDP | 6.3 | 19 ◆◆ |
| 2.2.1 | Tertiary enrolment, % gross | 28.5 | 83 | | 5.3.5 | Research talent, % in business enterprise | 24.1 | 51 |
| 2.2.2 | Graduates in science & engineering, % | 22.7 | 53 | | KNOWLEDGE & TECHNOLOGY OUTPUTS | | | |
| 2.2.3 | Tertiary inbound mobility, % | 0.2 | 104 | ○ | 6.1 | Knowledge creation | 11.1 | 75 |
| 2.3 | Research & development (R&D) | 7.0 | 69 | | 6.1.1 | Patents by origin/bn PPP\$ GDP | 0.9 | 66 |
| 2.3.1 | Researchers, FTE/mn pop. | 707.7 | 58 | | 6.1.2 | PCT patents by origin/bn PPP\$ GDP | 0.0 | 82 |
| 2.3.2 | Gross expenditure on R&D, % GDP | 0.5 | 64 | | 6.1.3 | Utility models by origin/bn PPP\$ GDP | 0.5 | 36 |
| 2.3.3 | Global R&D companies, avg. exp. top 3, mn \$US | 0.0 | 42 | ○◇ | 6.1.4 | Scientific & technical articles/bn PPP\$ GDP | 7.9 | 61 |
| 2.3.4 | QS university ranking, average score top 3* | 9.2 | 65 | | 6.1.5 | Citable documents H-index | 12.8 | 59 |
| INFRASTRUCTURE | | | | 38.4 | 73 | | | |
| 3.1 | Information & communication technologies (ICTs) | 62.8 | 76 | ◆ | 6.2 | Knowledge impact | 37.2 | 21 |
| 3.1.1 | ICT access* | 53.6 | 86 | | 6.2.1 | Growth rate of PPP\$ GDP/worker, % | 6.1 | 4 ◆◆ |
| 3.1.2 | ICT use* | 55.0 | 65 | ◆ | 6.2.2 | New businesses/th pop. 15-64 | 1.1 | 81 |
| 3.1.3 | Government's online service* | 73.6 | 58 | | 6.2.3 | Computer software spending, % GDP | 0.0 | 37 |
| 3.1.4 | E-participation* | 69.1 | 71 | | 6.2.4 | ISO 9001 quality certificates/bn PPP\$ GDP | 5.3 | 52 ◆ |
| 3.2 | General infrastructure | 29.3 | 55 | | 6.2.5 | High- and medium-high-tech manufacturing, % | 40.0 | 23 ◆ |
| 3.2.1 | Electricity output, kWh/mn pop. | 2,079.3 | 76 | ◆ | 6.3 | Knowledge diffusion | 46.7 | 14 |
| 3.2.2 | Logistics performance* | 56.5 | 38 | ◆ | 6.3.1 | Intellectual property receipts, % total trade | n/a | n/a |
| 3.2.3 | Gross capital formation, % GDP | 26.3 | 41 | | 6.3.2 | High-tech net exports, % total trade | 33.2 | 2 ◆◆ |
| 3.3 | Ecological sustainability | 23.0 | 86 | | 6.3.3 | ICT services exports, % total trade | 0.1 | 126 ○ |
| 3.3.1 | GDP/unit of energy use | 7.4 | 85 | | 6.3.4 | FDI net outflows, % GDP | 0.3 | 86 |
| 3.3.2 | Environmental performance* | 33.4 | 110 | ○ | CREATIVE OUTPUTS | | | |
| 3.3.3 | ISO 14001 environmental certificates/bn PPP\$ GDP | 2.0 | 43 | ◆ | 7.1 | Intangible assets | 38.7 | 33 |
| MARKET SOPHISTICATION | | | | 53.0 | 34 | | | |
| 4.1 | Credit | 67.6 | 9 | ◆◆ | 7.1.1 | Trademarks by origin/bn PPP\$ GDP | 85.5 | 20 ◆◆ |
| 4.1.1 | Ease of getting credit* | 80.0 | 23 | | 7.1.2 | Global brand value, top 5,000, % GDP | 100.8 | 19 ◆ |
| 4.1.2 | Domestic credit to private sector, % GDP | 133.3 | 15 | ◆◆ | 7.1.3 | Industrial designs by origin/bn PPP\$ GDP | 2.7 | 43 |
| 4.1.3 | Microfinance gross loans, % GDP | 3.9 | 11 | ◆◆ | 7.1.4 | ICTs & organizational model creation† | 54.4 | 63 |
| 4.2 | Investment | 25.9 | 112 | ○ | 7.2 | Creative goods and services | 27.7 | 32 |
| 4.2.1 | Ease of protecting minority investors* | 54.0 | 88 | | 7.2.1 | Cultural & creative services exports, % total trade | 0.0 | 97 ○ |
| 4.2.2 | Market capitalization, % GDP | 48.6 | 32 | | 7.2.2 | National feature films/mn pop. 15-69 | 1.2 | 83 |
| 4.2.3 | Venture capital deals/bn PPP\$ GDP | 0.0 | 63 | | 7.2.3 | Entertainment & Media market/th pop. 15-69 | 2.3 | 52 ○ |
| 4.3 | Trade, competition, and market scale | 65.5 | 49 | | 7.2.4 | Printing and other media, % manufacturing | 0.9 | 66 |
| 4.3.1 | Applied tariff rate, weighted avg., % | 4.4 | 82 | | 7.2.5 | Creative goods exports, % total trade | 5.6 | 11 ◆◆ |
| 4.3.2 | Intensity of local competition† | 63.2 | 91 | | 7.3 | Online creativity | 25.7 | 42 |
| 4.3.3 | Domestic market scale, bn PPP\$ | 770.2 | 32 | | 7.3.1 | Generic top-level domains (TLDs)/th pop. 15-69 | 2.4 | 72 ◆ |
| | | | | | 7.3.2 | Country-code TLDs/th pop. 15-69 | 2.2 | 67 ◆ |
| | | | | | 7.3.3 | Wikipedia edits/mn pop. 15-69 | 43.5 | 75 ◆ |
| | | | | | 7.3.4 | Mobile app creation/bn PPP\$ GDP | 57.6 | 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 II 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 Viet Nam.

Missing data

| Code | Indicator name | Country year | Model year | Source |
|-------|--|--------------|------------|---------------------------------|
| 2.1.2 | Government funding/pupil, secondary, % GDP/cap | n/a | 2016 | UNESCO Institute for Statistics |
| 2.1.3 | School life expectancy, years | n/a | 2017 | UNESCO Institute for Statistics |
| 5.3.1 | Intellectual property payments, % total trade | n/a | 2018 | World Trade Organization |
| 6.3.1 | Intellectual property receipts, % total trade | n/a | 2018 | World Trade Organization |

Outdated data

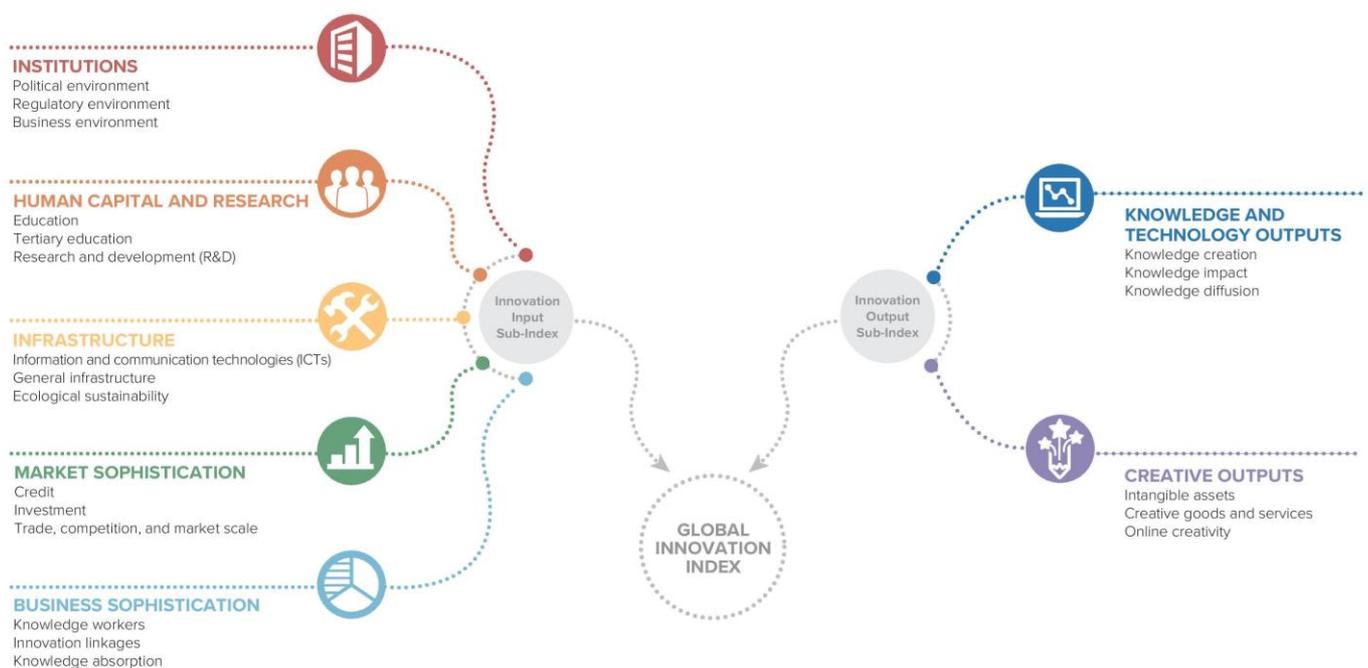
| Code | Indicator name | Country year | Model year | Source |
|-------|---|--------------|------------|--|
| 2.1.4 | PISA scales in reading, maths & science | 2015 | 2018 | OECD Programme for International Student Assessment (PISA) |
| 2.2.1 | Tertiary enrolment, % gross | 2016 | 2017 | UNESCO Institute for Statistics |
| 2.2.2 | Graduates in science & engineering, % | 2016 | 2017 | UNESCO Institute for Statistics |
| 2.2.3 | Tertiary inbound mobility, % | 2016 | 2017 | UNESCO Institute for Statistics |
| 2.3.1 | Researchers, FTE/mn pop. | 2017 | 2018 | UNESCO Institute for Statistics; Eurostat; OECD – Main Science and Technology Indicators |
| 2.3.2 | Gross expenditure on R&D, % GDP | 2017 | 2018 | UNESCO Institute for Statistics; Eurostat; OECD – Main Science and Technology Indicators |
| 4.1.3 | Microfinance gross loans, % GDP | 2017 | 2018 | Microfinance Information Exchange |
| 5.1.2 | Firms offering formal training, % | 2014 | 2018 | World Bank |
| 5.1.3 | GERD performed by business, % GDP | 2017 | 2018 | UNESCO Institute for Statistics; Eurostat; OECD – Main Science and Technology Indicators |
| 5.3.2 | High-tech imports, % total trade | 2017 | 2018 | United Nations, COMTRADE |
| 5.3.3 | ICT services imports, % total trade | 2017 | 2018 | World Trade Organization |
| 5.3.5 | Research talent, % in business enterprise | 2017 | 2018 | UNESCO Institute for Statistics; Eurostat; OECD – Main Science and Technology Indicators |
| 6.2.2 | New businesses/th pop. 15–64 | 2016 | 2018 | World Bank |
| 6.3.2 | High-tech net exports, % total trade | 2017 | 2018 | United Nations, COMTRADE |
| 6.3.3 | ICT services exports, % total trade | 2017 | 2018 | World Trade Organization |
| 7.2.2 | National feature films/mn pop. 15–69 | 2011 | 2017 | UNESCO Institute for Statistics |

ABOUT THE GLOBAL INNOVATION INDEX

The Global Innovation Index (GII) is co-published by Cornell University, INSEAD, and the World Intellectual Property Organization (WIPO), a specialized agency of the United Nations. In 2020, the GII presents its 13th edition devoted to the theme *Who Will Finance Innovation?*

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.

Framework of the Global Innovation Index 2020



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.



www.globalinnovationindex.org



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GII app for android