



Global Innovation Index 2021



MYANMAR

127th Myanmar ranks 127th 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 Myanmar 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 Myanmar in the GII 2021 is between ranks 114 and 128.

Rankings for Myanmar (2019–2021)

	GII	Innovation inputs	Innovation outputs
2021	127	128	120
2020	129	129	120
2019			

- Myanmar performs better in innovation outputs than innovation inputs in 2021.
- This year Myanmar ranks 128th in innovation inputs, higher than last year.
- As for innovation outputs, Myanmar ranks 120th. This position is the same as last year.

32nd Myanmar ranks 32nd among the 34 lower middle-income group economies.

17th Myanmar ranks 17th among the 17 economies in South East Asia, East Asia, and Oceania.

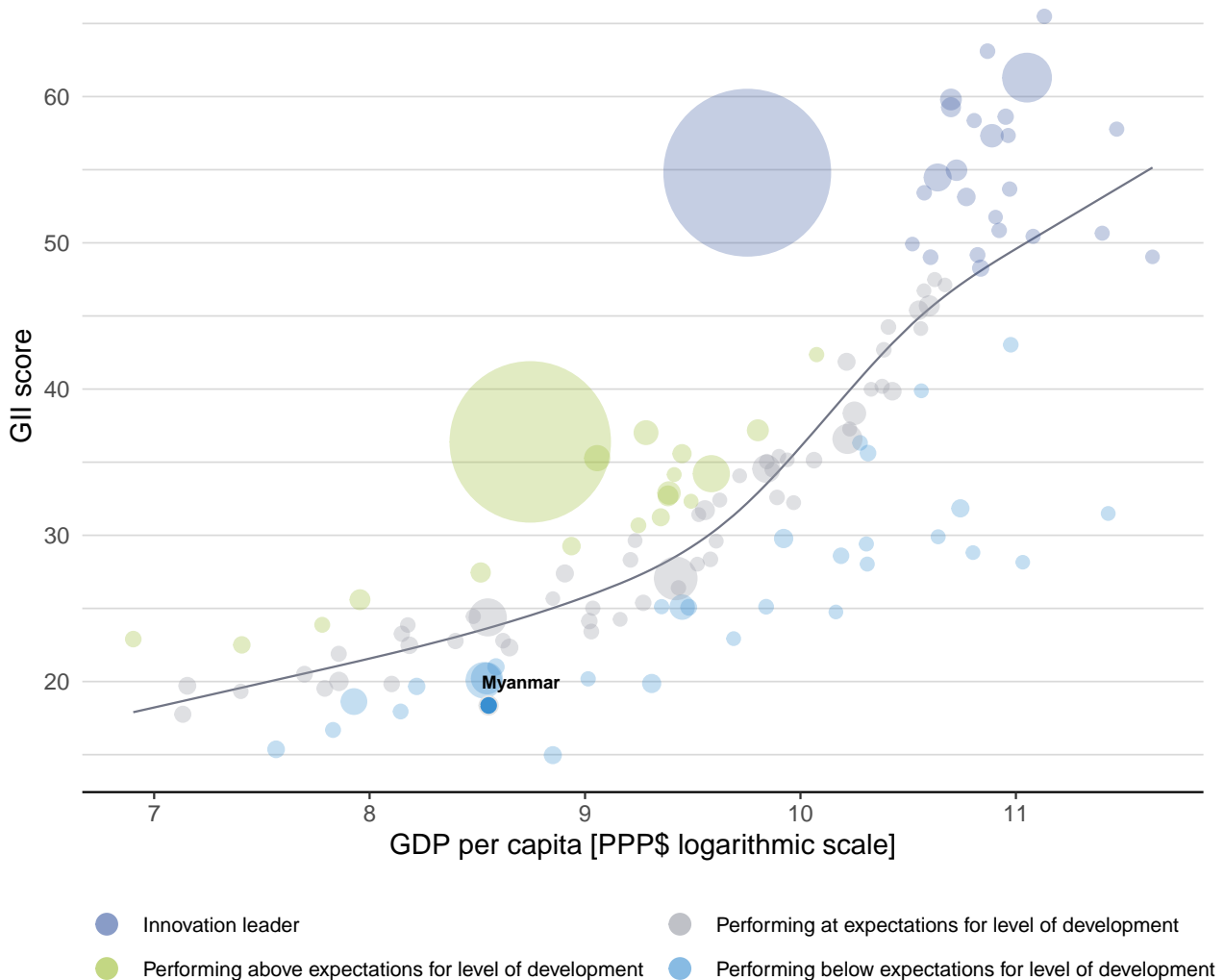


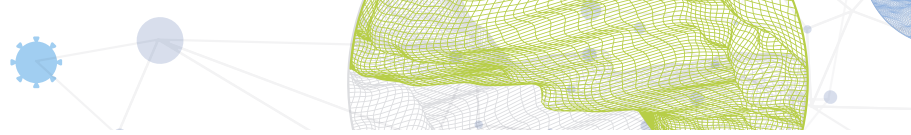
EXPECTED VS. OBSERVED INNOVATION PERFORMANCE

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, Myanmar's performance is below expectations for its level of development.

The positive relationship between innovation and development



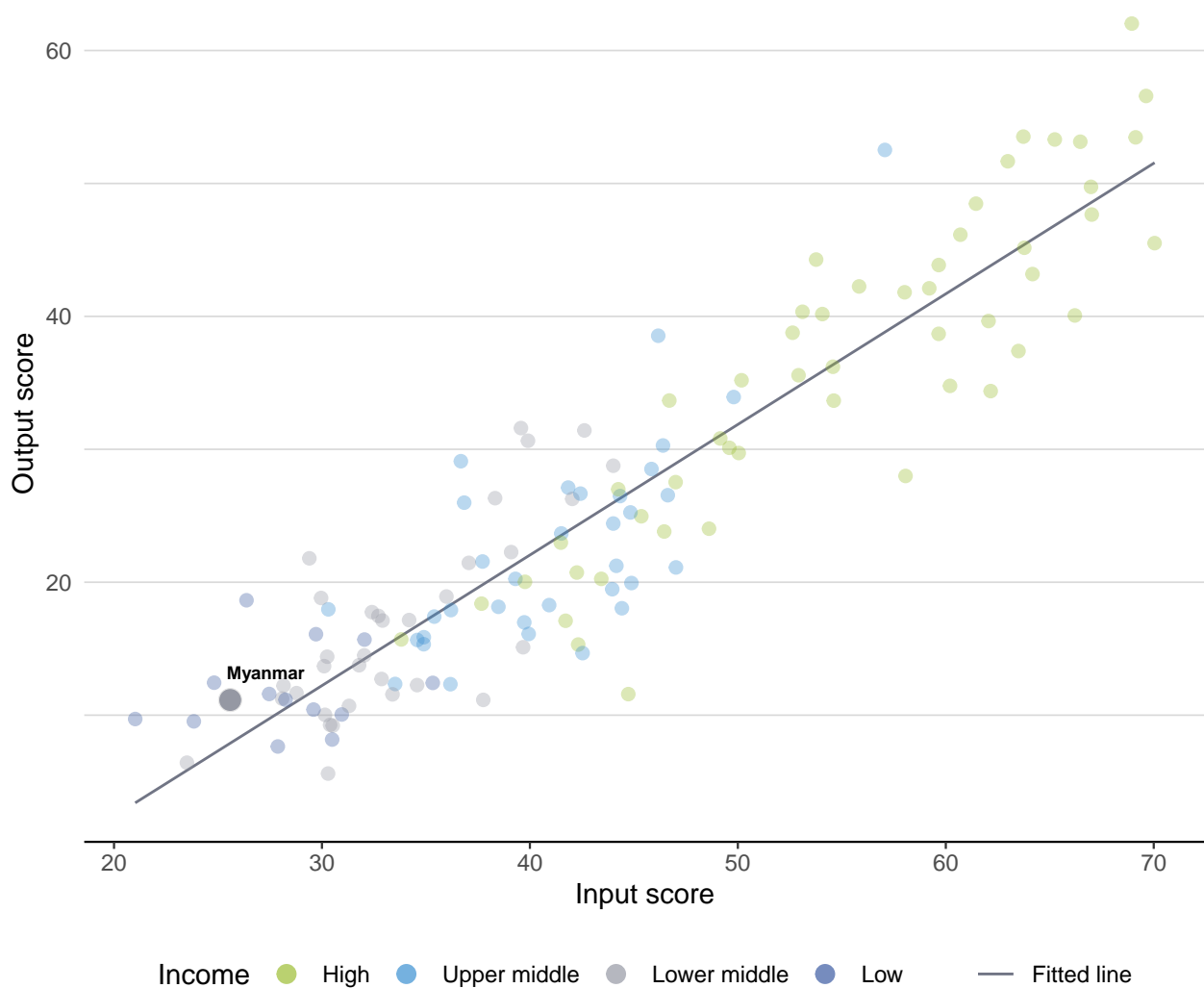


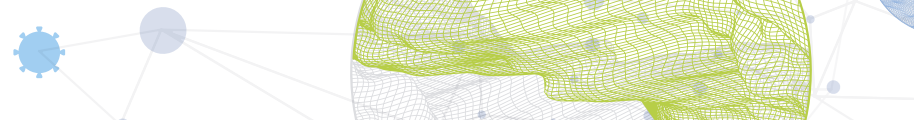
EFFECTIVELY TRANSLATING INNOVATION INVESTMENTS INTO INNOVATION OUTPUTS

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.

Myanmar produces more innovation outputs relative to its level of innovation investments.

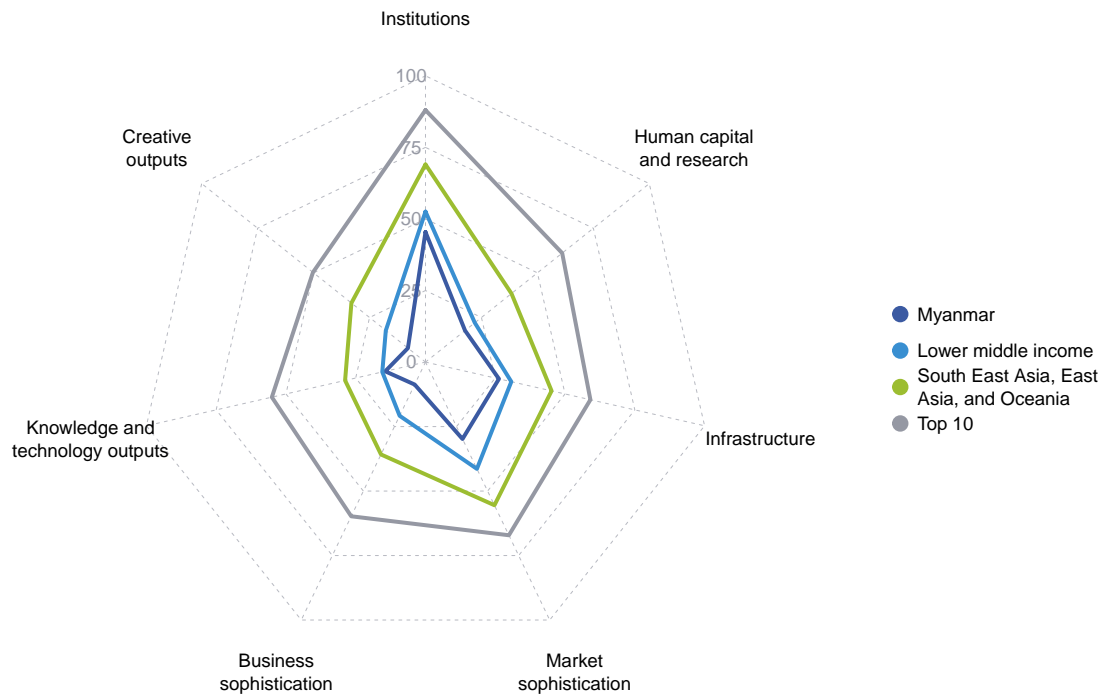
Innovation input to output performance





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

The seven GII pillar scores for Myanmar

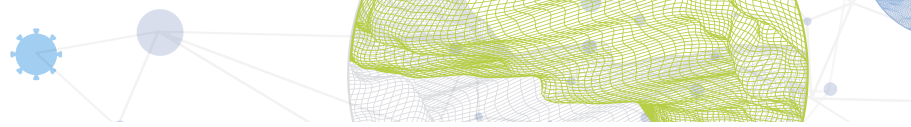


Lower middle-income group economies

Myanmar performs below the lower middle-income group average in all GII pillars.

South East Asia, East Asia, and Oceania

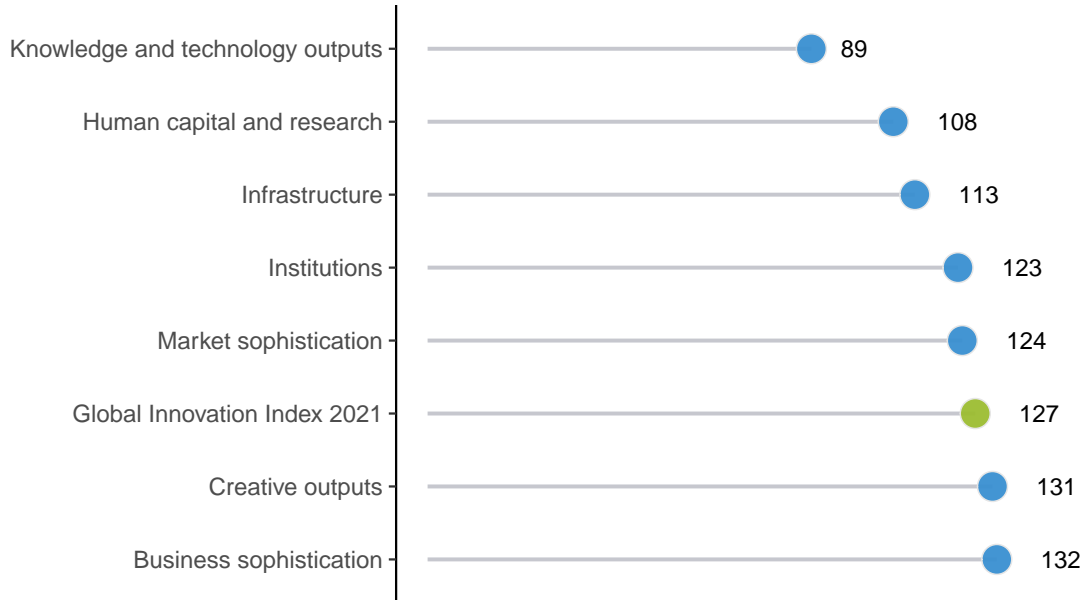
Myanmar performs below the regional average in all GII pillars.



OVERVIEW OF RANKINGS IN THE SEVEN GII 2021 AREAS

Myanmar performs best in Knowledge and technology outputs and its weakest performance is in Business sophistication.

The seven GII pillar ranks for Myanmar



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 Myanmar in the GII 2021.

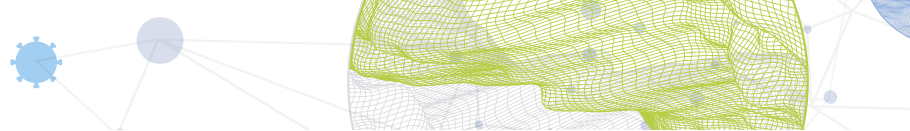
Strengths and weaknesses for Myanmar

Strengths			Weaknesses		
Code	Indicator name	Rank	Code	Indicator name	Rank
1.3.1	Ease of starting a business	58	1.1.2	Government effectiveness	130
2.2.2	Graduates in science and engineering, %	9	2.1.1	Expenditure on education, % GDP	113
3.2.3	Gross capital formation, % GDP	20	2.2.3	Tertiary inbound mobility, %	110
3.3.1	GDP/unit of energy use	29	2.3.3	Global corporate R&D investors, top 3, mn US\$	41
4.1.3	Microfinance gross loans, % GDP	42	2.3.4	QS university ranking, top 3	74
4.3	Trade, diversification, and market scale	60	3.1.3	Government's online service	128
4.3.1	Applied tariff rate, weighted avg., %	24	3.1.4	E-participation	129
4.3.3	Domestic market scale, bn PPP\$	55	3.3.2	Environmental performance	130
5.3.4	FDI net inflows, % GDP	29	4.1	Credit	130
6.2	Knowledge impact	48	4.1.1	Ease of getting credit	129
6.2.1	Labor productivity growth, %	1	4.2	Investment	130
7.2.5	Creative goods exports, % total trade	47	5.1	Knowledge workers	132
			5.1.2	Firms offering formal training, %	98
			5.1.4	GERD financed by business, %	102
			5.2.5	Patent families/bn PPP\$ GDP	100

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP\$ (bn)	GDP per capita, PPP\$	GII 2020 rank
120	128	Lower middle	SEAO	54.4	275.5	5,179	129

	Score/ Value	Rank		Score/ Value	Rank
 Institutions	45.4	123	 Business sophistication	8.7	132
1.1 Political environment	35.8	127	5.1 Knowledge workers	3.3	132
1.1.1 Political and operational stability*	57.1	106	5.1.1 Knowledge-intensive employment, %	4.9	118
1.1.2 Government effectiveness*	25.1	130	5.1.2 Firms offering formal training, %	5.9	98
1.2 Regulatory environment	45.6	113	5.1.3 GERD performed by business, % GDP	n/a	n/a
1.2.1 Regulatory quality*	23.6	117	5.1.4 GERD financed by business, %	0.0	102
1.2.2 Rule of law*	18.7	126	5.1.5 Females employed w/advanced degrees, %	6.0	91
1.2.3 Cost of redundancy dismissal	23.1	98	5.2 Innovation linkages	1.6	[131]
1.3 Business environment	54.9	119	5.2.1 University-industry R&D collaboration†	n/a	n/a
1.3.1 Ease of starting a business*	89.3	58	5.2.2 State of cluster development and depth†	n/a	n/a
1.3.2 Ease of resolving insolvency*	20.4	128	5.2.3 GERD financed by abroad, % GDP	0.0	82
			5.2.4 Joint venture/strategic alliance deals/bn PPP\$ GDP	0.0	90
			5.2.5 Patent families/bn PPP\$ GDP	0.0	100
 Human capital and research	17.7	108	5.3 Knowledge absorption	21.1	86
2.1 Education	20.1	127	5.3.1 Intellectual property payments, % total trade	0.2	90
2.1.1 Expenditure on education, % GDP	1.9	113	5.3.2 High-tech imports, % total trade	7.3	72
2.1.2 Government funding/pupil, secondary, % GDP/cap	10.0	92	5.3.3 ICT services imports, % total trade	1.1	68
2.1.3 School life expectancy, years	10.7	102	5.3.4 FDI net inflows, % GDP	4.0	29
2.1.4 PISA scales in reading, maths and science	n/a	n/a	5.3.5 Research talent, % in businesses	n/a	n/a
2.1.5 Pupil-teacher ratio, secondary	27.2	112	 Knowledge and technology outputs	14.4	89
2.2 Tertiary education	32.7	66	6.1 Knowledge creation	2.7	[123]
2.2.1 Tertiary enrolment, % gross	18.8	99	6.1.1 Patents by origin/bn PPP\$ GDP	n/a	n/a
2.2.2 Graduates in science and engineering, %	33.7	9	6.1.2 PCT patents by origin/bn PPP\$ GDP	n/a	n/a
2.2.3 Tertiary inbound mobility, %	0.0	110	6.1.3 Utility models by origin/bn PPP\$ GDP	n/a	n/a
2.3 Research and development (R&D)	0.1	118	6.1.4 Scientific and technical articles/bn PPP\$ GDP	1.9	126
2.3.1 Researchers, FTE/mn pop.	29.1	102	6.1.5 Citable documents H-index	3.2	122
2.3.2 Gross expenditure on R&D, % GDP	0.0	114	6.2 Knowledge impact	33.5	48
2.3.3 Global corporate R&D investors, top 3, mn US\$	0.0	41	6.2.1 Labor productivity growth, %	7.3	1
2.3.4 QS university ranking, top 3*	0.0	74	6.2.2 New businesses/th pop. 15–64	0.4	104
			6.2.3 Software spending, % GDP	n/a	n/a
 Infrastructure	26.3	113	6.2.4 ISO 9001 quality certificates/bn PPP\$ GDP	0.8	115
3.1 Information and communication technologies (ICTs)	32.3	122	6.2.5 High-tech manufacturing, %	12.4	84
3.1.1 ICT access*	38.0	112	6.3 Knowledge diffusion	7.1	110
3.1.2 ICT use*	38.9	99	6.3.1 Intellectual property receipts, % total trade	0.0	88
3.1.3 Government's online service*	25.9	128	6.3.2 Production and export complexity	21.4	108
3.1.4 E-participation*	26.2	129	6.3.3 High-tech exports, % total trade	1.3	68
3.2 General infrastructure	25.1	79	6.3.4 ICT services exports, % total trade	0.6	99
3.2.1 Electricity output, GWh/mn pop.	457.2	110	 Creative outputs	7.9	131
3.2.2 Logistics performance*	11.7	119	7.1 Intangible assets	10.6	[128]
3.2.3 Gross capital formation, % GDP	32.4	20	7.1.1 Trademarks by origin/bn PPP\$ GDP	24.2	83
3.3 Ecological sustainability	21.6	91	7.1.2 Global brand value, top 5,000, % GDP	7.6	65
3.3.1 GDP/unit of energy use	14.3	29	7.1.3 Industrial designs by origin/bn PPP\$ GDP	n/a	n/a
3.3.2 Environmental performance*	25.1	130	7.1.4 ICTs and organizational model creation†	n/a	n/a
3.3.3 ISO 14001 environmental certificates/bn PPP\$ GDP	0.1	127	7.2 Creative goods and services	7.2	92
			7.2.1 Cultural and creative services exports, % total trade	0.2	67
 Market sophistication	29.8	124	7.2.2 National feature films/mn pop. 15–69	0.9	87
4.1 Credit	8.6	130	7.2.3 Entertainment and media market/th pop. 15–69	n/a	n/a
4.1.1 Ease of getting credit*	10.0	129	7.2.4 Printing and other media, % manufacturing	0.4	94
4.1.2 Domestic credit to private sector, % GDP	25.7	104	7.2.5 Creative goods exports, % total trade	0.9	47
4.1.3 Microfinance gross loans, % GDP	0.3	42	7.3 Online creativity	3.0	129
4.2 Investment	10.1	130	7.3.1 Generic top-level domains (TLDs)/th pop. 15–69	0.1	127
4.2.1 Ease of protecting minority investors*	22.0	129	7.3.2 Country-code TLDs/th pop. 15–69	0.0	127
4.2.2 Market capitalization, % GDP	n/a	n/a	7.3.3 Wikipedia edits/mn pop. 15–69	16.5	127
4.2.3 Venture capital investors, deals/bn PPP\$ GDP	0.0	72	7.3.4 Mobile app creation/bn PPP\$ GDP	0.0	91
4.2.4 Venture capital recipients, deals/bn PPP\$ GDP	0.0	57			
4.3 Trade, diversification, and market scale	70.8	60			
4.3.1 Applied tariff rate, weighted avg., %	1.8	24			
4.3.2 Domestic industry diversification	76.4	86			
4.3.3 Domestic market scale, bn PPP\$	275.5	55			

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

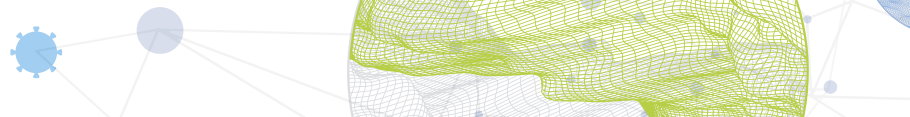
The following tables list data that are either missing or outdated for Myanmar.

Missing data for Myanmar

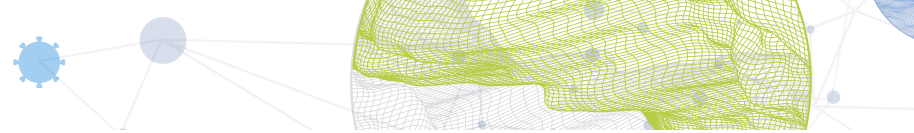
Code	Indicator name	Economy year	Model year	Source
2.1.4	PISA scales in reading, maths and science	n/a	2018	OECD Programme for International Student Assessment (PISA)
4.2.2	Market capitalization, % GDP	n/a	2019	World Federation of Exchanges
5.1.3	GERD performed by business, % GDP	n/a	2019	UNESCO Institute for Statistics; Eurostat; OECD - Main Science and Technology Indicators
5.2.1	University-industry R&D collaboration	n/a	2020	World Economic Forum
5.2.2	State of cluster development and depth	n/a	2020	World Economic Forum
5.3.5	Research talent, % in businesses	n/a	2019	UNESCO Institute for Statistics; Eurostat; OECD - Main Science and Technology Indicators
6.1.1	Patents by origin/bn PPP\$ GDP	n/a	2019	World Intellectual Property Organization
6.1.2	PCT patents by origin/bn PPP\$ GDP	n/a	2020	World Intellectual Property Organization
6.1.3	Utility models by origin/bn PPP\$ GDP	n/a	2019	World Intellectual Property Organization
6.2.3	Software spending, % GDP	n/a	2020	IHS Markit
7.1.3	Industrial designs by origin/bn PPP\$ GDP	n/a	2019	World Intellectual Property Organization
7.1.4	ICTs and organizational model creation	n/a	2018	World Economic Forum
7.2.3	Entertainment and media market/th pop. 15–69	n/a	2020	PwC

Outdated data for Myanmar

Code	Indicator name	Economy year	Model year	Source
2.1.5	Pupil-teacher ratio, secondary	2018	2019	UNESCO Institute for Statistics



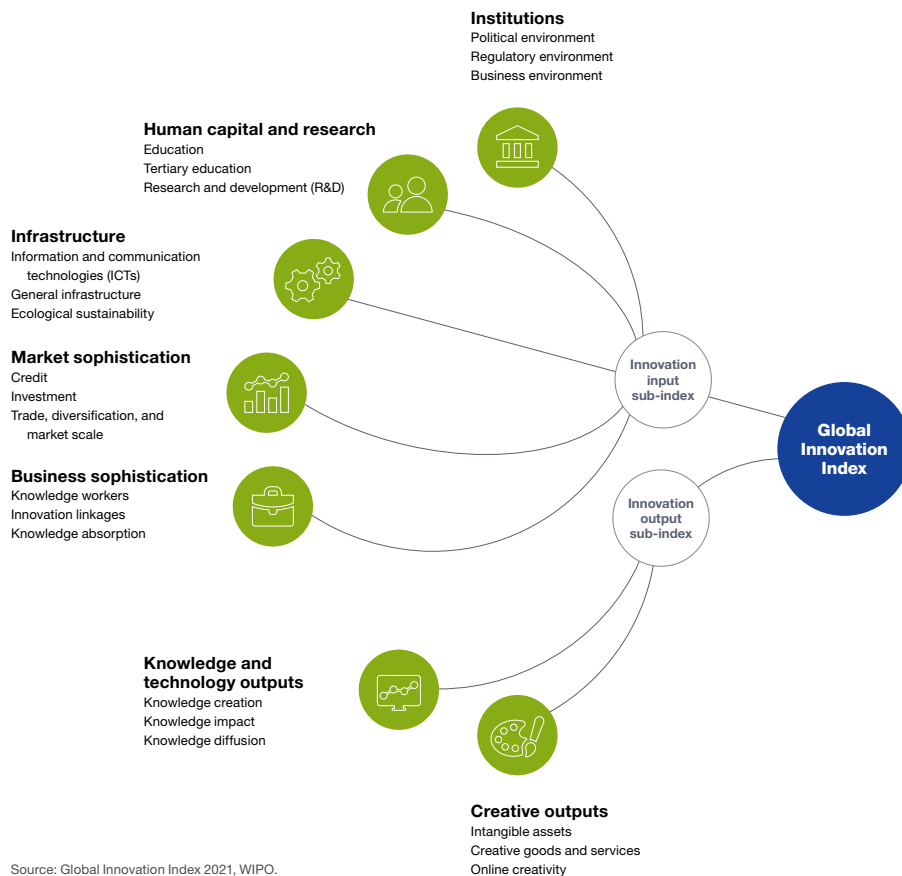
Code	Indicator name	Economy year	Model year	Source
2.3.1	Researchers, FTE/mn pop.	2017	2019	UNESCO Institute for Statistics; Eurostat; OECD - Main Science and Technology Indicators
2.3.2	Gross expenditure on R&D, % GDP	2017	2019	UNESCO Institute for Statistics; Eurostat; OECD - Main Science and Technology Indicators
5.1.2	Firms offering formal training, %	2016	2019	World Bank
5.1.4	GERD financed by business, %	2017	2018	UNESCO Institute for Statistics; Eurostat; OECD - Main Science and Technology Indicators
5.2.3	GERD financed by abroad, % GDP	2017	2018	UNESCO Institute for Statistics
6.2.5	High-tech manufacturing, %	2013	2018	United Nations Industrial Development Organization
7.1.1	Trademarks by origin/bn PPP\$ GDP	2012	2019	World Intellectual Property Organization
7.2.2	National feature films/mn pop. 15–69	2015	2017	UNESCO Institute for Statistics
7.2.4	Printing and other media, % manufacturing	2011	2018	United Nations Industrial Development 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.



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.