# GLOBAL INNOVATION INDEX 2020



# THE PHILIPPINES

# **50th**

The Philippines ranks 50th 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 the Philippines 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 the Philippines in the GII 2020 is between ranks 45 and 53.

#### Rankings of the Philippines (2018–2020)

	GII	Innovation inputs	Innovation outputs
2020	50	70	41
2019	54	76	42
2018	73	82	68

- The Philippines performs better in innovation outputs than innovation inputs in 2020.
- This year the Philippines ranks 70th in innovation inputs, higher than last year and compared to 2018.
- As for innovation outputs, the Philippines ranks 41st. This position is higher than last year and compared to 2018.



The Philippines ranks 4th among the 29 lower middle-income group economies.



The Philippines ranks 11th among the 17 economies in South East Asia, East Asia, and Oceania.



The Philippines is one of the economies to have registered the most significant progress in their GII ranking over time. This year it achieves its best rank ever, making it into the top 50 - in 2014, it still ranked 100th. This may in part be due to methodological factors, but is also certainly due to improved innovation performance.

The economy stands out for the innovativeness of its business sector and the innovation outcomes produced by its investments. Among its highest ranking indicators, Utility models by origin ranks 8th globally and Productivity growth 6th. The Philippines is also well integrated into global trade, ranking 1st in High-technology imports, 3rd in High-technology exports, 8th in ICT services exports and 10th in Creative goods exports.

In the new GII indicator, Global brand value, the country ranks 33rd and is among the economies outperforming in this metric, producing more valuable brands than could be predicted from its income level.

Its innovation profile shows top 25 rankings for indicators such as Graduates in science and engineering, GDP per unit of energy use, Market capitalization, Research talent in business enterprises and High-technology manufacturing. It also ranks 7th globally for Firms offering formal training.

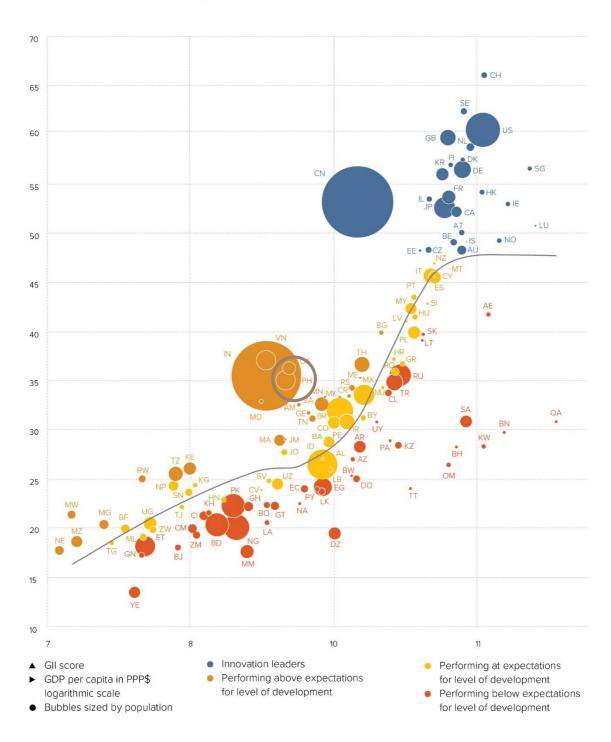
The Philippines is currently implementing a new innovation act, in an effort to foster innovation in the economy and make it a vital component of national development and sustainable economic growth. The act places innovation at the center of its development policies and proposes the GII as a measurement tool.

#### **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, the Philippines performance is above expectations for its level of development.

#### The positive relationship between innovation and development



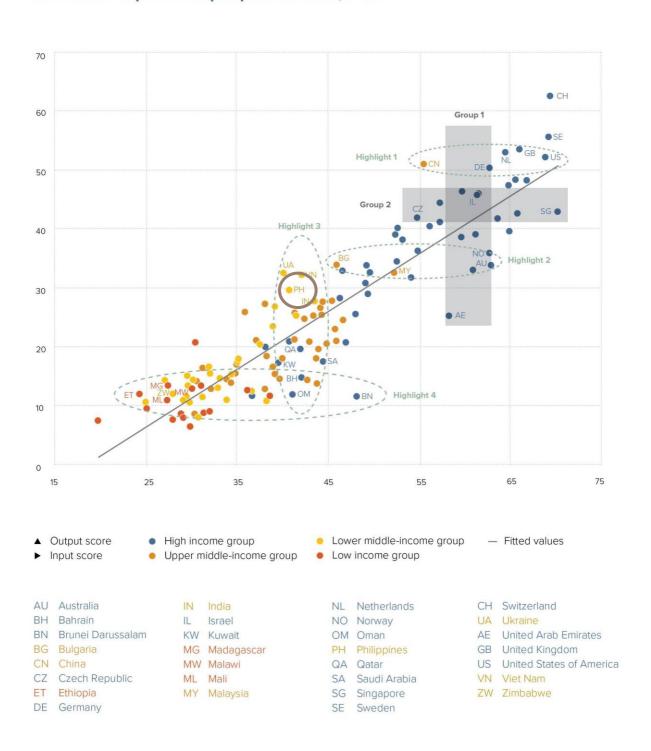


# EFFECTIVELY TRANSLATING INNOVATION INVESTMENTS INTO INNOVATION OUTPUTS

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.

The Philippines produces more innovation outputs relative to its level of innovation investments.

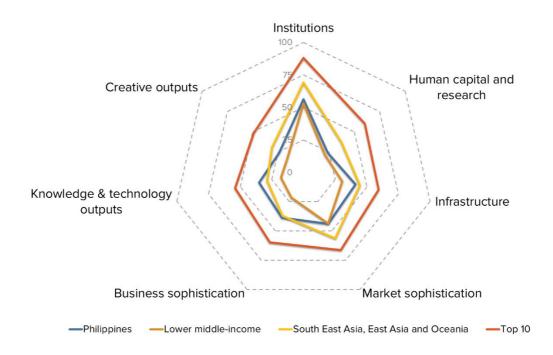
#### Innovation input to output performance, 2020





## BENCHMARKING THE PHILIPPINES AGAINST OTHER LOWER MIDDLE-INCOME ECONOMIES AND SOUTH EAST ASIA, EAST ASIA, AND OCEANIA

#### The Philippines' scores in the seven GII pillars



#### Lower middle-income group economies

The Philippines has high scores in 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, the Philippines performs:

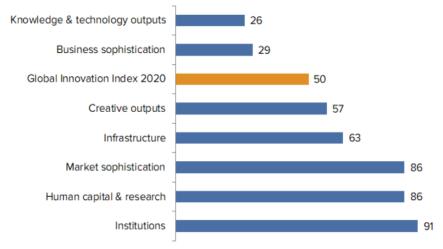
- above average in two of the seven GII pillars: Business sophistication and Knowledge & technology outputs; and
- below average in five of the seven GII pillars: Institutions, Human capital & research, Infrastructure, Market sophistication and Creative outputs.





#### **OVERVIEW OF THE PHILIPPINES RANKINGS IN THE SEVEN GII AREAS**

The Philippines performs best in Knowledge & technology outputs and its weakest performance is in Institutions.



<sup>\*</sup>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 the Philippines in the GII 2020.

Strengths			Weaknesses				
Code	Indicator name	Rank	Code	Indicator name	Rank		
3.1.4	E-participation*	19	1.2.3	Cost of redundancy dismissal, salary weeks	113		
3.3.1	GDP/unit of energy use	19	1.3.1	Ease of starting a business*	124		
4.3	Trade, competition, and market scale	20	2.1	Education	114		
4.3.3	Domestic market scale, bn PPP\$	26	2.1.1	Expenditure on education, % GDP	106		
5.1.2	Firms offering formal training, %	7	2.1.4	PISA scales in reading, maths & science	78		
5.3	Knowledge absorption	7	2.3.3	Global R&D companies, top 3, mn US\$	42		
5.3.2	High-tech imports, % total trade	1	4.1	Credit	118		
6	Knowledge & technology outputs	26	4.1.1	Ease of getting credit*	113		
6.1.3	Utility models by origin/bn PPP\$ GDP	8	4.1.3	Microfinance gross loans, % GDP	70		
6.2.1	Growth rate of PPP\$ GDP/worker, %	6	5.2.3	GERD financed by abroad, % GDP	91		
6.3	Knowledge diffusion	8	6.1.4	Scientific & technical articles/bn PPP\$ GDP	125		
6.3.2	High-tech net exports, % total trade	3	6.2.2	New businesses/th pop. 15–64	109		
6.3.3	ICT services exports, % total trade	8					
7.2.5	Creative goods exports, % total trade	10					



#### **STRENGTHS**

GII strengths for the Philippines are found in five of the seven GII pillars.

- Infrastructure (63): demonstrates strengths in the indicators E-participation (19) and GDP per unit of energy use (19).
- Market sophistication (86): has strengths in the sub-pillar Trade, competition, and market scale (20) and in one of its indicators Domestic market scale (26).
- Business sophistication (29): displays strengths in the sub-pillar Knowledge absorption (7) and in the indicators Firms offering formal training (7) and High-tech imports (1).
- Knowledge & technology outputs (26): reveals strengths in the sub-pillar Knowledge diffusion (8) and in four indicators: Utility models by origin (8), Productivity growth (6), High-tech exports (3) and ICT services exports (8).
- Creative outputs (57): the indicator Creative goods exports (10) is a strength.

#### **WEAKNESSES**

GII weaknesses for the Philippines are found in five of the seven GII pillars.

- Institutions (91): exhibits weaknesses in the indicators Cost of redundancy dismissal (113) and Ease of starting a business (124).
- Human capital & research (86): has weaknesses in the sub-pillar Education (114) and in three indicators: Expenditure on education (106), PISA scales (78) and R&D-intensive global companies (42).
- Market sophistication (86): shows weaknesses in the sub-pillar Credit (118) and in two of its three indicators: Ease of getting credit (113) and Microfinance gross loans (70).
- Business sophistication (29): the indicator R&D financed by abroad (91) is a weakness.
- Knowledge & technology outputs (26): displays weaknesses in the indicators Scientific & technical articles (125) and New businesses (109).

### **PHILIPPINES**

**50** 

-	out rank	Input rank	Income	Regio			ulation (r		GDP per capita, PPP\$		2019 rai
	41	70	Lower middle	SEAC	)		108.1	1,025.8	8,268.3		54
			S	core/Value	Rank				Sc	ore/Value	Rank
1	INSTITU	ITIONS		56.3	91			BUSINESS SOPHIS	TICATION	38.6	29
	Political	anvironment		55.6	72		5.1	Knowledge workers		40.0	45
			l stability*		83	•	5.1.1		mployment, %	25.5	57
2			ess*		68		5.1.2		aining, %	59.8	7
							5.1.3		usiness, % GDP	0.1	68
	Regulato	ry environme	nt	50.1	104		5.1.4	GERD financed by bus	iness, %	38.0	47
1					67		5.1.5		advanced degrees, %	12.4	58
2	Rule of la	w*		34.2	94			W. Martin Colonia Color of Europe Property and Color	NO. AND STATE OF THE STATE OF T		
3	Cost of re	edundancy dis	missal, salary weeks	27.4	113	0	5.2	Innovation linkages		21.3	64
							5.2.1	University/industry rese	earch collaboration+	57.5	27
					94		5.2.2		pment+	48.1	60
1			ess*			0 0	5.2.3		oad, % GDP	0.0	91
2	Ease of re	esolving insolv	ency*	55.1	60		5.2.4		eals/bn PPP\$ GDP	0.1	32
							5.2.5	Patent families 2+ office	es/bn PPP\$ GDP	0.0	84
				22.0	00		F 2	Vd-dbti-	_	E4 E	-
•	HUMAN	CAPITAL &	RESEARCH	23.9	86		5.3		n	54.5	7
	Education			20.0	44.5	0	5.3.1 5.3.2		yments, % total trade	0.7 27.7	55 1
1	Educatio	П	on, % GDP.©	26.6	114	0 \$			tal trade		
2					n/a	00	5.3.3 5.3.4		s total trade	0.9	77 57
3			il, secondary, % GDP/cap.		79		5.3.5			51.8	21
3 4			years maths, & science		79	0	0.0.0	nesearch talent, % in D	usiness enterprise	31.0	21
5			ondary		106	0					
	r upir teut	siici idilo, secc	oridary	20.0	100		<u>~</u>	KNOWLEDGE & TEC	HNOLOGY OUTPUTS	35.1	26
	Tertiary e	education		39.0	47					1000000	landed 10
.1			OSS		75		6.1	Knowledge creation		14.9	65
.2			engineering, %		22		6.1.1		PP\$ GDP	0.6	81
.3			y, %		n/a		6.1.2	,	on PPP\$ GDP	0.0	91
							6.1.3		/bn PPP\$ GDP	2.4	8
1	Research	& developme	ent (R&D)	6.2	73		6.1.4		rticles/bn PPP\$ GDP	1.1	125 (
.1			op. <u>Ö</u>		87		6.1.5	Citable documents H-ii	ndex	14.7	54
.2	Gross exp	penditure on R	&D, % GDP	0.2	95						
.3	Global R&	D companies, a	vg. exp. top 3, mn \$US		42	0 0	6.2	Knowledge impact		33.1	34
4	QS unive	rsity ranking, a	verage score top 3*	20.6	51	•	6.2.1	Growth rate of PPP\$ G	DP/worker, %	5.2	6
							6.2.2	New businesses/th por	p. 15-64	0.3	109 (
							6.2.3		ending, % GDP	0.0	54
X							6.2.4		cates/bn PPP\$ GDP	3.9	64
	N TOWNSON FOR SWIMMING DO				(100000		6.2.5	High- and medium-high	h-tech manufacturing, %	38.6	25
			cation technologies (ICTs		62	•					_
1					91		6.3	•		57.2	8 (
2					84		6.3.1		ceipts, % total trade	0.0	78
3			ervice*		30	•	6.3.2		% total trade	31.4	3 (
4	E-particip	ation		93.8	19	• +	6.3.3		6 total tradeP	5.5 1.0	8 <b>(</b> 56
!	General i	nfrastructure		24.6	75		0.5.4	r Di Het Outilows, 76 GD	· · · · · · · · · · · · · · · · · · ·	1.0	50
.1			nn pop		98						
.2			штрор		59		1	CREATIVE OUTPUT	TS	24.2	57
.3			% GDP		37		Ĥ	CKLATIVE OUTPU	13		3,
_	2.233 00)				07		7.1	Intangible assets		28.2	64
	Ecologica	al sustainabili	ty	29.7	63		7.1.1		on PPP\$ GDP		75
.1					19	• +	7.1.2		5,000, % GDP		33
.2			nce*		92	v/100 151	7.1.3		rigin/bn PPP\$ GDP	1.0	69
.3			certificates/bn PPP\$ GDP.		60	•	7.1.4		nodel creation+		39
								J		10000	
							7.2	Creative goods and se	ervices	29.3	29
ı	MARKE	T SOPHISTIC	CATION	43.9	86		7.2.1		ces exports, % total trade	0.1	78
						023	7.2.2		nn pop. 15-69	0.8	91
ŝ						0 0	7.2.3		market/th pop. 15-69	3.3	50
						0 0	7.2.4		dia, % manufacturing	0.6	80
2			ite sector, % GDP		71	_	7.2.5	Creative goods export	s, % total trade	6.1	10
3	Microfina	nce gross loar	ns, % GDP	0.0	70	U	7.0			44.5	-
	laure -						7.3			11.0	82
1			rit / investors*		85		7.3.1		ns (TLDs)/th pop. 15-69	1.1	93
.1			rity investors*		71 17		7.3.2		pop. 15-69	0.4	104
.2			GDP		17	•	7.3.3		p. 15-69	44.1	72
.3	venture o	apitai deals/bi	n PPP\$ GDP	0.0	69		7.3.4	Mobile app creation/bi	n PPP\$ GDP	1.5	67
	Trade	mnotitie	d market scale	74.4	20	• •					
.1			d market scale		58	• :					
	Applied to		nted avg., %		27	X					
2	Intoncit	of local comes	tition+								





#### **DATA AVAILABILITY**

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

#### 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
2.2.3	Tertiary inbound mobility, %	n/a	2017	UNESCO Institute for Statistics

#### **Outdated data**

Code	Indicator name	Country	Model	Source	
	indicator name	year	year		
2.1.1	Expenditure on education, % GDP	2009	2018	UNESCO Institute for Statistics	
2.1.5	Pupil-teacher ratio, secondary	2017	2018	UNESCO Institute for Statistics	
2.3.1	Researchers, FTE/mn pop.	2015	2018	UNESCO Institute for Statistics; Eurostat; OECD - Main Science and Technology Indicators	
2.3.2	Gross expenditure on R&D, % GDP	2015	2018	UNESCO Institute for Statistics; Eurostat; OECD - Main Science and Technology Indicators	
5.1.2	Firms offering formal training, %	2014	2018	World Bank	
5.1.3	GERD performed by business, % GDP	2015	2018	UNESCO Institute for Statistics; Eurostat; OECD - Main Science and Technology Indicators	
5.1.4	GERD financed by business, %	2015	2017	UNESCO Institute for Statistics; Eurostat; OECD - Main Science and Technology Indicators	
5.1.5	Females employed w/advanced degrees, %	2016	2018	International Labour Organization	
5.2.3	GERD financed by abroad, % GDP	2015	2017	UNESCO Institute for Statistics	
5.3.5	Research talent, % in business enterprise	2015	2018	UNESCO Institute for Statistics; Eurostat; OECD Main Science and Technology Indicators	
6.2.5	High- & medium-high-tech manufacturing, %	2016	2017	United Nations Industrial Development Organization	
7.2.2	National feature films/mn pop. 15–69	2013	2017	UNESCO Institute for Statistics	
7.2.4	Printing & other media, % manufacturing	2016	2017	United Nations Industrial Development Organization	

#### 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 13<sup>th</sup> 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 INSTITUTIONS Political environment Regulatory environment Business environment **HUMAN CAPITAL AND RESEARCH** KNOWLEDGE AND Education **TECHNOLOGY OUTPUTS** Tertiary education Research and development (R&D) Knowledge creatio Knowledge impact Knowledge diffusion Information and communication technologies (ICTs) General infrastructure Ecological sustainability MARKET SOPHISTICATION CREATIVE OUTPUTS Intangible assets Investment Creative goods and services Online creativity Trade, competition, and market scale GLOBAL INNOVATION INDEX **BUSINESS SOPHISTICATION** Knowledge workers Knowledge absorption

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.



