Global Innovation Index 2022

EL SALVADOR

100th El Salvador ranks 100th 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 El Salvador 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 El Salvador in the GII 2022 is between ranks 87 and 101.

Rankings for El Salvador (2020–2022)

GIIYR	GII	Innovation inputs	Innovation outputs
2020	92	95	87
2021	96	100	89
2022	100	101	95

- El Salvador performs better in innovation outputs than innovation inputs in 2022.
- This year El Salvador ranks 101st in innovation inputs, lower than both 2021 and 2020.
- As for innovation outputs, El Salvador ranks 95th. This position is lower than both 2021 and 2020.

19th El Salvador ranks 19th among the 36 lower-middle-income group economies.

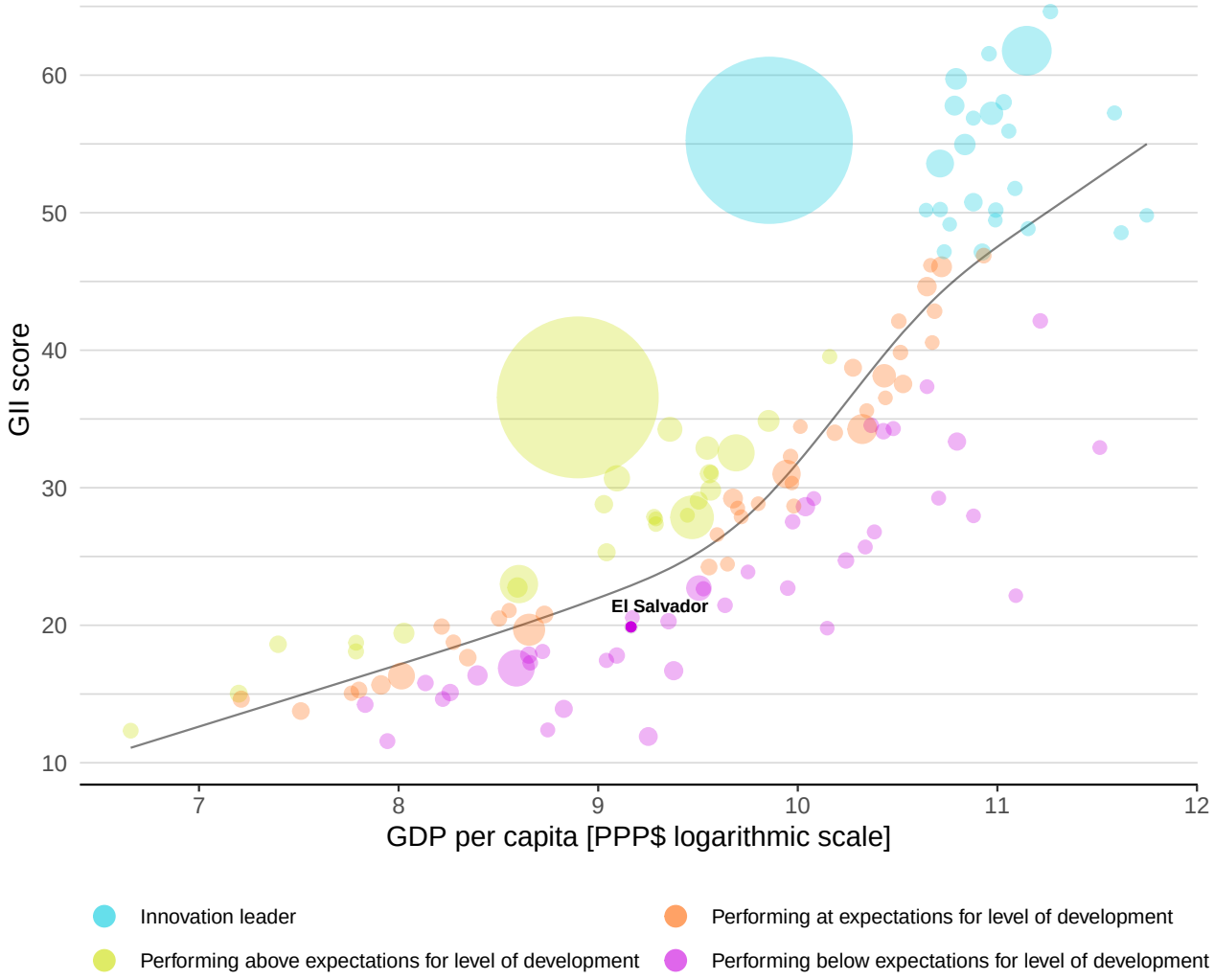
14th El Salvador ranks 14th among the 18 economies in Latin America and the Caribbean.

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

The positive relationship between innovation and development

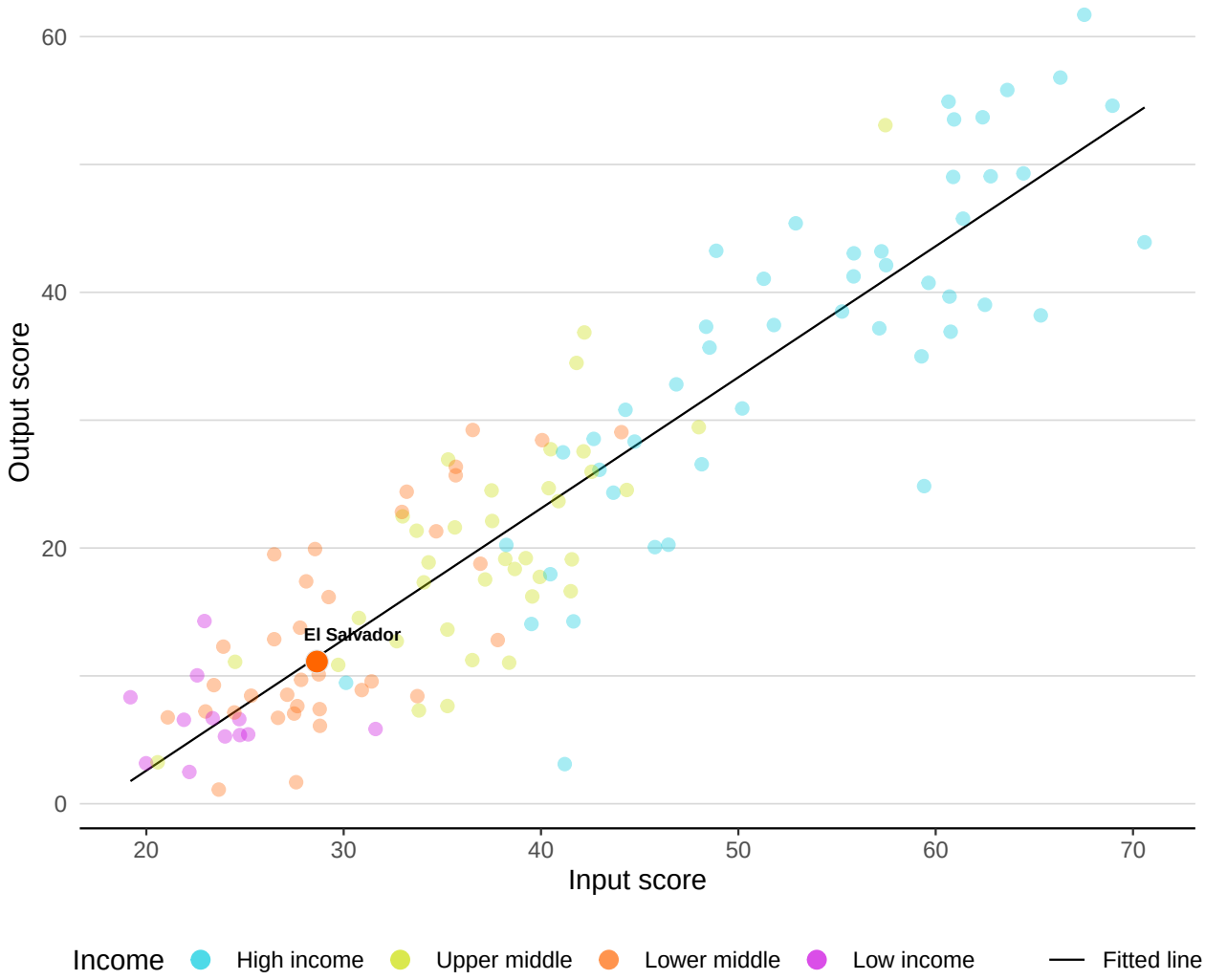


EFFECTIVELY TRANSLATING INNOVATION INVESTMENTS INTO INNOVATION OUTPUTS

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.

El Salvador produces less innovation outputs relative to its level of innovation investments.

Innovation input to output performance



BENCHMARKING AGAINST OTHER LOWER MIDDLE-INCOME GROUP ECONOMIES AND LATIN AMERICA AND THE CARIBBEAN

The seven GII pillar scores for El Salvador

Lower-middle-income group economies

El Salvador performs above the lower-middle-income group average in two pillars, namely: Infrastructure; and, Business sophistication.

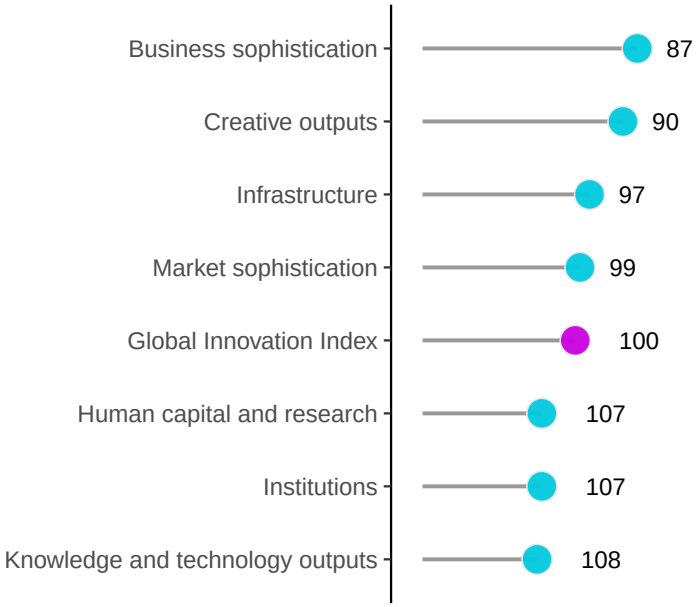
Latin America and the Caribbean

El Salvador performs below the regional average in all GII pillars.

OVERVIEW OF RANKINGS IN THE SEVEN GII 2022 AREAS

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

The seven GII pillar ranks for El Salvador



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

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

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

INNOVATION STRENGTHS AND WEAKNESSES

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

Strengths and weaknesses for El Salvador

Strengths			Weaknesses		
Code	**Indicator name**	**Rank**	**Code**	**Indicator name**	**Rank**
3.3.1	GDP/unit of energy use	53	1.3.1	Policies for doing business	119
4.1.2	Domestic credit to private sector, % GDP	55	2.1.5	Pupil-teacher ratio, secondary	114
5.1.2	Firms offering formal training, %	16	2.2.3	Tertiary inbound mobility, %	102
5.3.1	Intellectual property payments, % total trade	40	2.3.3	Global corporate R&D investors, top 3, mn USD	38
5.3.2	High-tech imports, % total trade	39	2.3.4	QS university ranking, top 3	72
6.3.2	Production and export complexity	54	5.2.4	Joint venture/strategic alliance deals/bn PPP$ GDP	121
6.3.3	High-tech exports, % total trade	51	6.1.2	PCT patents by origin/bn PPP$ GDP	101
6.3.4	ICT services exports, % total trade	50	6.1.4	Scientific and technical articles/bn PPP$ GDP	129
7.1.2	Trademarks by origin/bn PPP$ GDP	40	6.1.5	Citable documents H-index	126
7.2.5	Creative goods exports, % total trade	56	7.2.1	Cultural and creative services exports, % total trade	108

GII 2022 rank

El Salvador

100

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP$ (bn)	GDP per capita, PPP$
95	101	Lower middle	LCN	6.5	62.3	9,551

		Score/ Value	Rank	
Institutions		**45.3**	**107**	
1.1	**Political environment**	53.7	85	
1.1.1	Political and operational stability*	65.5	74	
1.1.2	Government effectiveness*	42.0	91	
1.2	**Regulatory environment**	53.0	99	
1.2.1	Regulatory quality*	44.5	76	◆
1.2.2	Rule of law*	26.3	109	
1.2.3	Cost of redundancy dismissal	22.9	98	
1.3	**Business environment**	29.0	[113]	
1.3.1	Policies for doing business†	29.0	119 ○	◇
1.3.2	Entrepreneurship policies and culture*	n/a	n/a	
Human capital and research		**17.6**	**107**	
2.1	**Education**	32.1	115	
2.1.1	Expenditure on education, % GDP ◴	3.4	98	
2.1.2	Government funding/pupil, secondary, % GDP/cap	13.5	86	
2.1.3	School life expectancy, years ◴	12.5	87	
2.1.4	PISA scales in reading, maths and science	n/a	n/a	
2.1.5	Pupil-teacher ratio, secondary ◴	27.6	114 ○	◇
2.2	**Tertiary education**	20.2	91	
2.2.1	Tertiary enrolment, % gross	29.9	85	
2.2.2	Graduates in science and engineering, % ◴	21.8	57	
2.2.3	Tertiary inbound mobility, %	0.4	102 ○	
2.3	**Research and development (R&D)**	0.6	103	
2.3.1	Researchers, FTE/mn pop. ◴	73.0	93	
2.3.2	Gross expenditure on R&D, % GDP ◴	0.2	92	
2.3.3	Global corporate R&D investors, top 3, mn USD	0.0	38 ○	◇
2.3.4	QS university ranking, top 3*	0.0	72 ○	◇
Infrastructure		**33.6**	**97**	
3.1	**Information and communication technologies (ICTs)**	60.3	92	
3.1.1	ICT access*	71.1	95	
3.1.2	ICT use*	44.5	98	
3.1.3	Government's online service*	57.6	92	
3.1.4	E-participation*	67.9	75	
3.2	**General infrastructure**	15.8	119	
3.2.1	Electricity output, GWh/mn pop. ◴	942.6	98	
3.2.2	Logistics performance*	24.7	92	
3.2.3	Gross capital formation, % GDP	16.3	113	◇
3.3	**Ecological sustainability**	24.7	74	
3.3.1	GDP/unit of energy use	11.6	53 ●	
3.3.2	Environmental performance*	40.8	70	◆
3.3.3	ISO 14001 environmental certificates/bn PPP$ GDP	0.4	90	
Market sophistication		**23.6**	**[99]**	
4.1	**Credit**	22.3	[78]	
4.1.1	Finance for startups and scaleups*	n/a	n/a	
4.1.2	Domestic credit to private sector, % GDP	62.1	55 ●	
4.1.3	Loans from microfinance institutions, % GDP	n/a	n/a	
4.2	**Investment**	4.2	[85]	
4.2.1	Market capitalization, % GDP	n/a	n/a	
4.2.2	Venture capital investors, deals/bn PPP$ GDP ◴	0.0	56	
4.2.3	Venture capital recipients, deals/bn PPP$ GDP	n/a	n/a	
4.2.4	Venture capital received, value, % GDP	n/a	n/a	
4.3	**Trade, diversification, and market scale**	44.4	93	
4.3.1	Applied tariff rate, weighted avg., %	1.9	60	◆
4.3.2	Domestic industry diversification	n/a	n/a	
4.3.3	Domestic market scale, bn PPP$	62.3	97	

		Score/ Value	Rank	
Business sophistication		**23.1**	**87**	
5.1	**Knowledge workers**	27.1	73	
5.1.1	Knowledge-intensive employment, % ◴	12.4	98	
5.1.2	Firms offering formal training, % ◴	53.8	16 ●	◆
5.1.3	GERD performed by business, % GDP ◴	0.1	70	
5.1.4	GERD financed by business, %	31.5	57	
5.1.5	Females employed w/advanced degrees, % ◴	4.2	95	
5.2	**Innovation linkages**	13.7	126 ○	◇
5.2.1	University-industry R&D collaboration†	29.8	116	
5.2.2	State of cluster development and depth†	34.8	116	
5.2.3	GERD financed by abroad, % GDP ◴	0.0	76	
5.2.4	Joint venture/strategic alliance deals/bn PPP$ GDP ◴	0.0	121 ○	
5.2.5	Patent families/bn PPP$ GDP	0.0	84	
5.3	**Knowledge absorption**	28.5	74	
5.3.1	Intellectual property payments, % total trade	1.0	40 ●	◆
5.3.2	High-tech imports, % total trade	10.1	39 ●	
5.3.3	ICT services imports, % total trade	0.7	100	
5.3.4	FDI net inflows, % GDP	1.8	82	
5.3.5	Research talent, % in businesses	n/a	n/a	
Knowledge and technology outputs		**10.3**	**108**	
6.1	**Knowledge creation**	1.1	128 ○	
6.1.1	Patents by origin/bn PPP$ GDP	0.1	116	
6.1.2	PCT patents by origin/bn PPP$ GDP	0.0	101 ○	◇
6.1.3	Utility models by origin/bn PPP$ GDP	0.1	62	
6.1.4	Scientific and technical articles/bn PPP$ GDP	1.6	129 ○	
6.1.5	Citable documents H-index	1.6	126 ○	
6.2	**Knowledge impact**	4.9	[121]	
6.2.1	Labor productivity growth, %	n/a	n/a	
6.2.2	New businesses/th pop. 15–64	0.4	101	
6.2.3	Software spending, % GDP	0.1	100	
6.2.4	ISO 9001 quality certificates/bn PPP$ GDP	3.4	71	
6.2.5	High-tech manufacturing, %	n/a	n/a	
6.3	**Knowledge diffusion**	24.8	60	
6.3.1	Intellectual property receipts, % total trade	0.0	75	
6.3.2	Production and export complexity	43.8	54 ●	◆
6.3.3	High-tech exports, % total trade	2.8	51 ●	
6.3.4	ICT services exports, % total trade	2.8	50 ●	
Creative outputs		**12.0**	**[90]**	
7.1	**Intangible assets**	21.3	[75]	
7.1.1	Intangible asset intensity, top 15, %	n/a	n/a	
7.1.2	Trademarks by origin/bn PPP$ GDP	57.0	40 ●	
7.1.3	Global brand value, top 5,000, % GDP	n/a	n/a	
7.1.4	Industrial designs by origin/bn PPP$ GDP	0.2	109	
7.2	**Creative goods and services**	4.0	[105]	
7.2.1	Cultural and creative services exports, % total trade ◴	0.0	108 ○	
7.2.2	National feature films/mn pop. 15–69	n/a	n/a	
7.2.3	Entertainment and media market/th pop. 15–69	n/a	n/a	
7.2.4	Printing and other media, % manufacturing	n/a	n/a	
7.2.5	Creative goods exports, % total trade	0.7	56 ●	
7.3	**Online creativity**	1.4	95	
7.3.1	Generic top-level domains (TLDs)/th pop. 15–69	2.5	73	◆
7.3.2	Country-code TLDs/th pop. 15–69	0.6	97	
7.3.3	GitHub commit pushes received/mn pop. 15–69	2.4	79	
7.3.4	Mobile app creation/bn PPP$ GDP	0.2	91	

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 El Salvador.

Missing data for El Salvador

Code	Indicator name	Economy year	Model year	Source
1.3.2	Entrepreneurship policies and culture	n/a	2021	Global Entrepreneurship Monitor
2.1.4	PISA scales in reading, maths and science	n/a	2018	OECD, PISA
4.1.1	Finance for startups and scaleups	n/a	2021	Global Entrepreneurship Monitor
4.1.3	Loans from microfinance institutions, % GDP	n/a	2020	International Monetary Fund, Financial Access Survey (FAS)
4.2.1	Market capitalization, % GDP	n/a	2020	World Federation of Exchanges
4.2.3	Venture capital recipients, deals/bn PPP$ GDP	n/a	2021	Refinitiv
4.2.4	Venture capital received, value, % GDP	n/a	2021	Refinitiv
4.3.2	Domestic industry diversification	n/a	2019	United Nations Industrial Development Organization
5.3.5	Research talent, % in businesses	n/a	2020	UNESCO Institute for Statistics
6.2.1	Labor productivity growth, %	n/a	2021	The Conference Board
6.2.5	High-tech manufacturing, %	n/a	2019	United Nations Industrial Development Organization
7.1.1	Intangible asset intensity, top 15, %	n/a	2021	Brand Finance
7.1.3	Global brand value, top 5,000, % GDP	n/a	2021	Brand Finance
7.2.2	National feature films/mn pop. 15–69	n/a	2019	OMDIA
7.2.3	Entertainment and media market/th pop. 15–69	n/a	2021	PwC, GEMO
7.2.4	Printing and other media, % manufacturing	n/a	2019	United Nations Industrial Development Organization

Outdated data for El Salvador

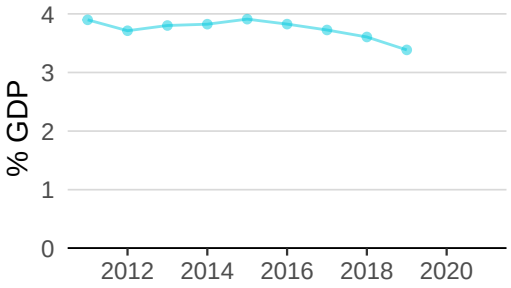
Code	Indicator name	Economy year	Model year	Source
2.1.1	Expenditure on education, % GDP	2019	2020	UNESCO Institute for Statistics
2.1.3	School life expectancy, years	2014	2019	UNESCO Institute for Statistics
2.1.5	Pupil-teacher ratio, secondary	2018	2019	UNESCO Institute for Statistics
2.2.2	Graduates in science and engineering, %	2019	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

Code	Indicator name	Economy year	Model year	Source
3.2.1	Electricity output, GWh/mn pop.	2019	2020	International Energy Agency
4.2.2	Venture capital investors, deals/bn PPP$ GDP	2020	2021	Refinitiv
5.1.1	Knowledge-intensive employment, %	2020	2021	International Labour Organization
5.1.2	Firms offering formal training, %	2016	2019	World Bank Enterprise Surveys
5.1.3	GERD performed by business, % GDP	2019	2020	UNESCO Institute for Statistics
5.1.5	Females employed w/advanced degrees, %	2020	2021	International Labour Organization
5.2.3	GERD financed by abroad, % GDP	2018	2019	UNESCO Institute for Statistics
5.2.4	Joint venture/strategic alliance deals/bn PPP$ GDP	2020	2021	Refinitiv
7.2.1	Cultural and creative services exports, % total trade	2019	2020	World Trade Organization and United Nations Conference on Trade and Development

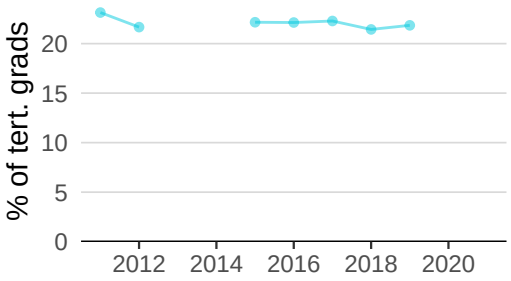
EL SALVADOR'S INNOVATION SYSTEM

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

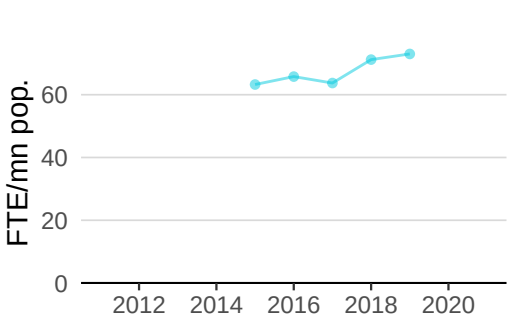
Innovation inputs



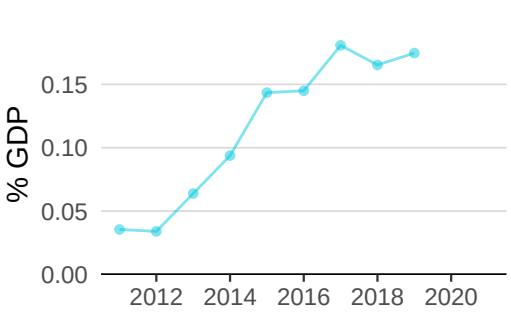
2.1.1 Expenditure on education was equal to 3.4% GDP in 2019–down by 6 percentage points from the year prior–and equivalent to an indicator rank of 98.



2.2.2 Graduates in science and engineering was equal to 21.8% of tert. grads in 2019–up by 2 percentage points from the year prior–and equivalent to an indicator rank of 57.

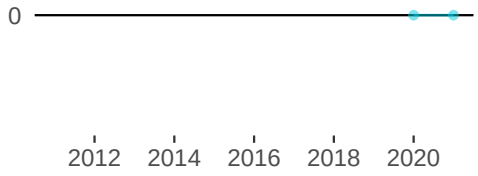


2.3.1 Researchers was equal to 73.0 FTE/mn pop. in 2019–up by 3 percentage points from the year prior–and equivalent to an indicator rank of 93.

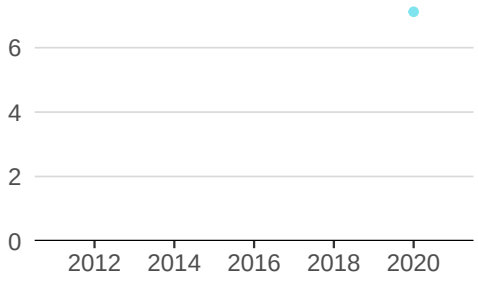


2.3.2 Gross expenditure on R&D was equal to 0.2% GDP in 2019–up by 6 percentage points from the year prior–and equivalent to an indicator rank of 92.

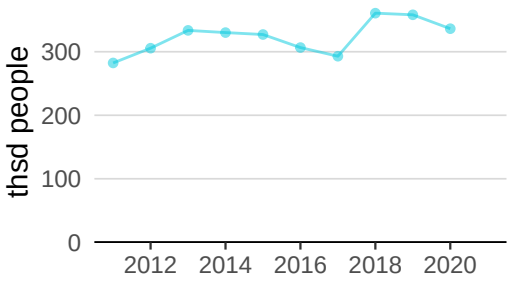
2.3.4 QS university ranking was equal to 0.0 in 2021–effectively unchanged from the year prior–and equivalent to an indicator rank of 72.



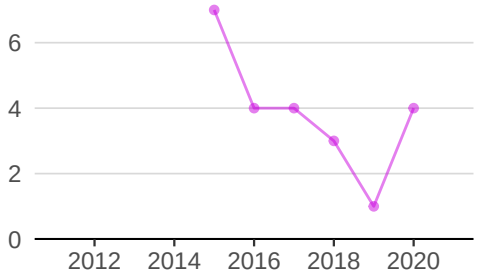
3.1.1 ICT access was equal to 7.1 in 2020 and equivalent to an indicator rank of 95.



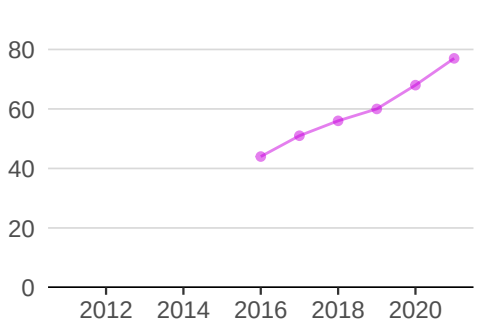
5.1.1 Knowledge-intensive employment was equal to 336.3 thsd people in 2020–down by 6 percentage points from the year prior–and equivalent to an indicator rank of 98.



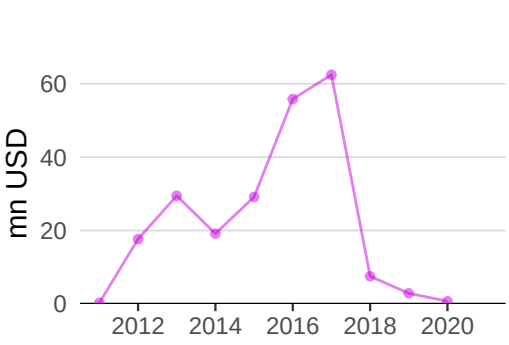
Innovation outputs



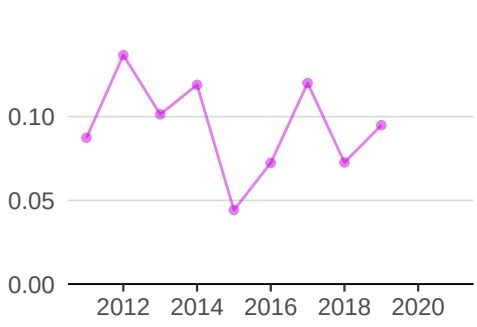
6.1.1 Patents by origin was equal to 4.0 in 2020–up by 300 percentage points from the year prior–and equivalent to an indicator rank of 116.



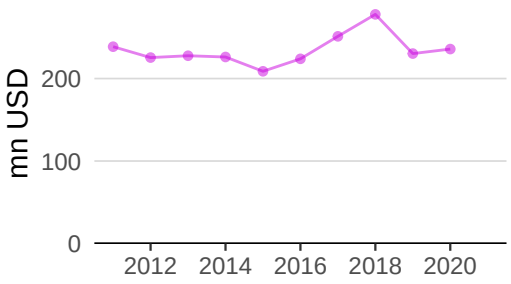
6.1.5 Citable documents H-index was equal to 77.0 in 2021–up by 13 percentage points from the year prior–and equivalent to an indicator rank of 126.



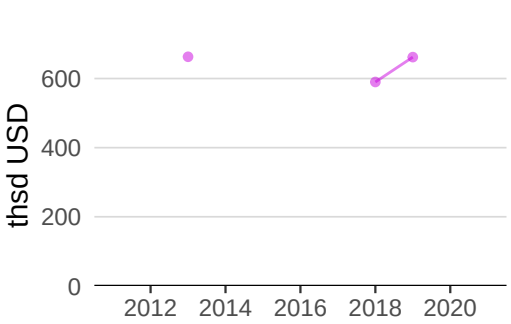
6.3.1 Intellectual property receipts was equal to 0.7 mn USD in 2020–down by 75 percentage points from the year prior–and equivalent to an indicator rank of 75.



6.3.2 Production and export complexity was equal to 0.1 in 2019–up by 31 percentage points from the year prior–and equivalent to an indicator rank of 54.



6.3.3 High-tech exports was equal to 235.8 mn USD in 2020–up by 2 percentage points from the year prior–and equivalent to an indicator rank of 51.



7.2.1 Cultural and creative services exports was equal to 662.0 thsd USD in 2019–up by 12 percentage points from the year prior–and equivalent to an indicator rank of 108.

EL SALVADOR'S INNOVATION TOP PERFORMERS

2.3.3 Global corporate R&D investors

Firm	Industry	R&D	R&D Growth	R&D Intensity	Rank

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

No observations

Source: QS Quacquarelli Symonds Ltd (https://www.topuniversities.com/university-rankings/world-university-rankings/2022).

7.1.1 Intangible asset intensity, top 15

Firm	Rank

No observations

Source: Brand Finance (https://brandirectory.com/reports/gift-2021).

7.1.3 Global brand value, top 5,000

Brand	Industry	Rank

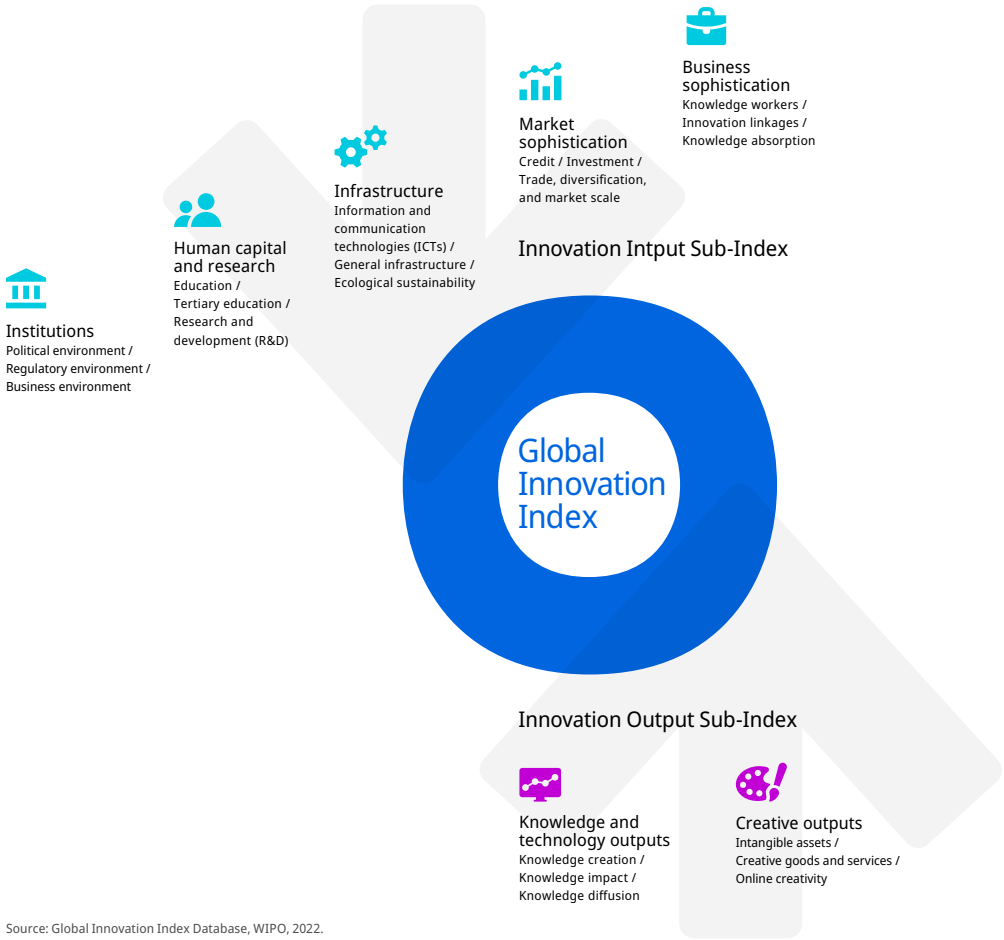
No observations

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

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.



Source: Global Innovation Index Database, WIPO, 2022.

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.