GLOBAL INNOVATION INDEX 2020

EL SALVADOR

92nd El Salvador ranks 92nd 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 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 2020 is between ranks 89 and 94.

Rankings of El Salvador (2018–2020)

	GII	Innovation inputs	Innovation outputs
2020	92	95	87
2019	108	97	116
2018	104	97	113

- El Salvador performs better in innovation outputs than innovation inputs in 2020.
- This year El Salvador ranks 95th in innovation inputs, higher than last year and higher compared to 2018.
- As for innovation outputs, El Salvador ranks 87th. This position is higher than last year and higher compared to 2018.

11th El Salvador ranks 11th among the 29 lower middle-income group economies.

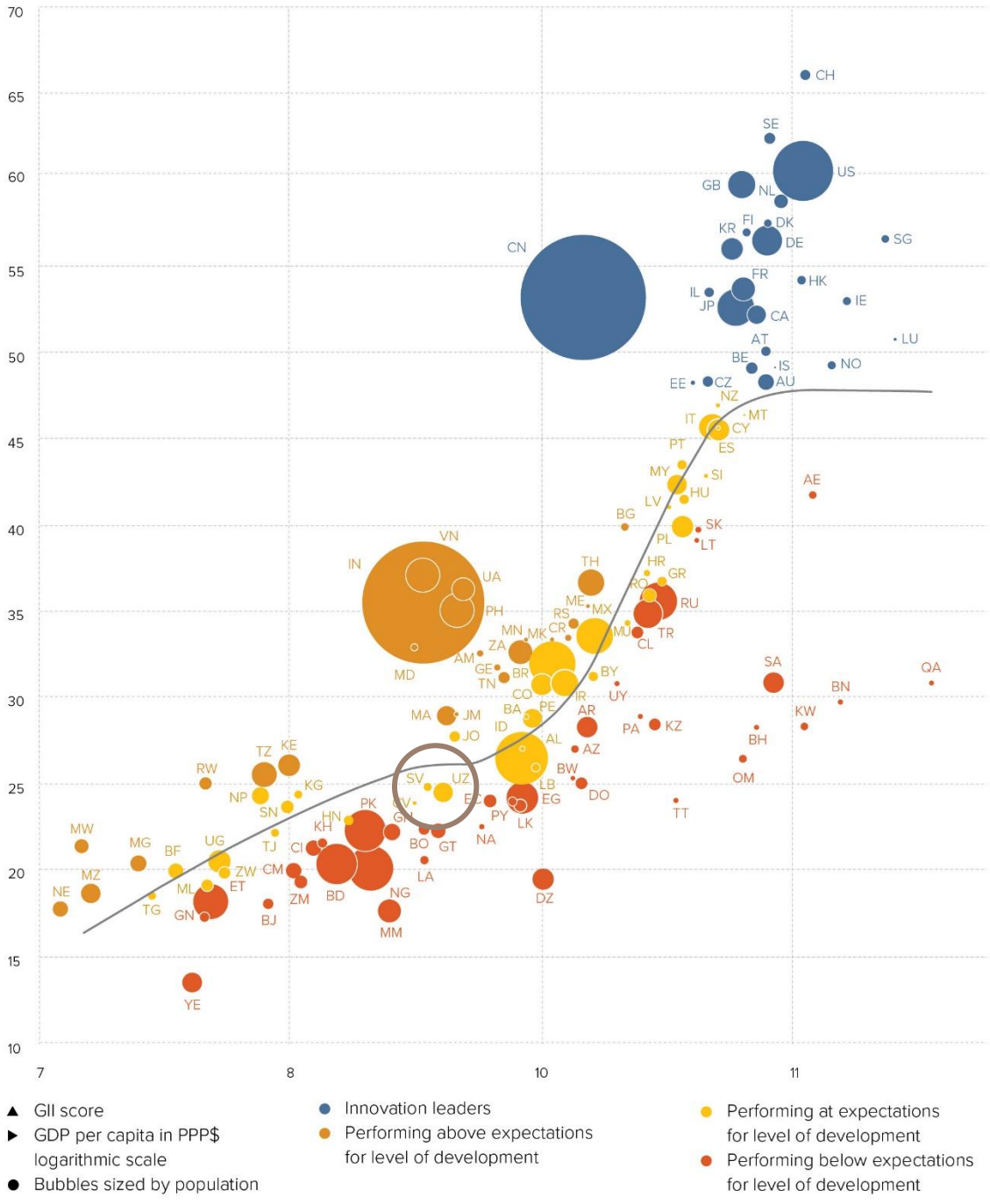
12th El Salvador ranks 12th among the 18 economies in Latin America and the Caribbean.

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 matches expectations for its level of development.

The positive relationship between innovation and development



- ▲ GII score
- ▶ GDP per capita in PPP$ logarithmic scale
- ● Bubbles sized by population

- Innovation leaders
- Performing above expectations for level of development

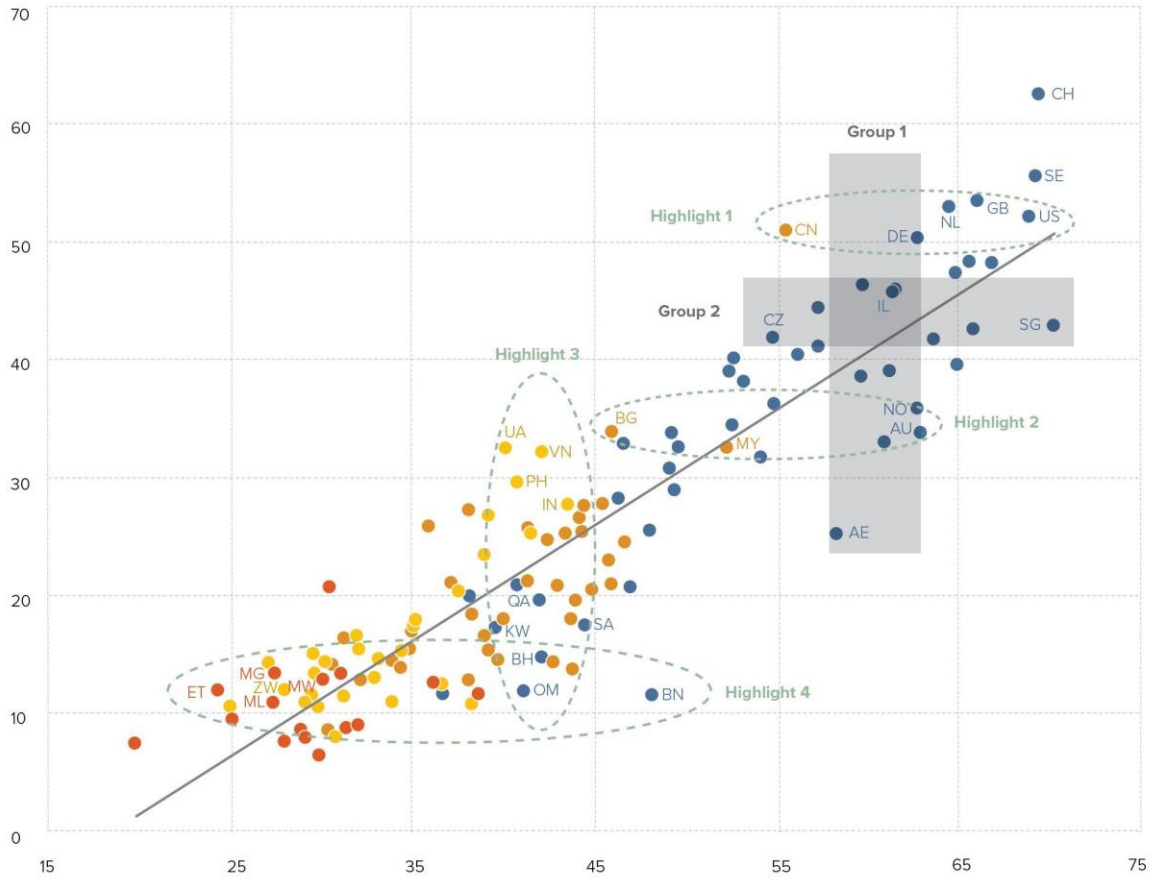
- Performing at expectations for level of development
- Performing below expectations for level of development

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 more innovation outputs relative to its level of innovation investments.

Innovation input to output performance, 2020



▲ Output score
► Input score

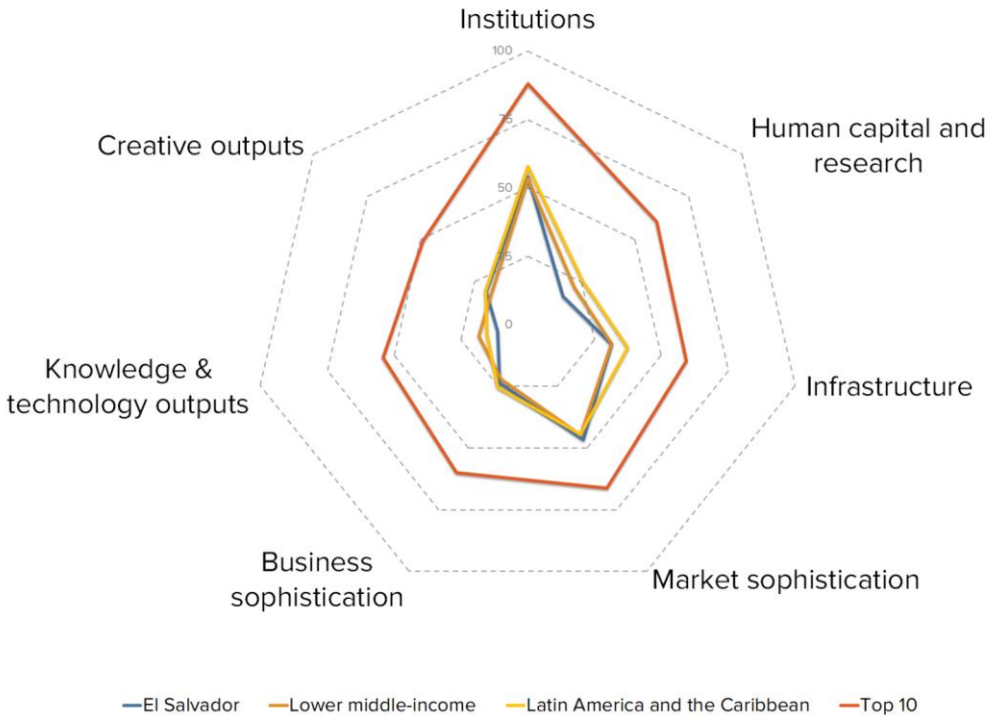
● High income group
● Upper middle-income group
● Lower middle-income group
● Low income group

— Fitted values

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

El Salvador's scores in the seven GII pillars



Lower middle-income group economies

El Salvador has high scores in five out of the seven GII pillars: Institutions, Infrastructure, Market sophistication, Business sophistication and Creative outputs, which are above average for the lower middle-income group.

Conversely, El Salvador scores below average for its income group in two pillars: Human capital and research and Knowledge & technology outputs.

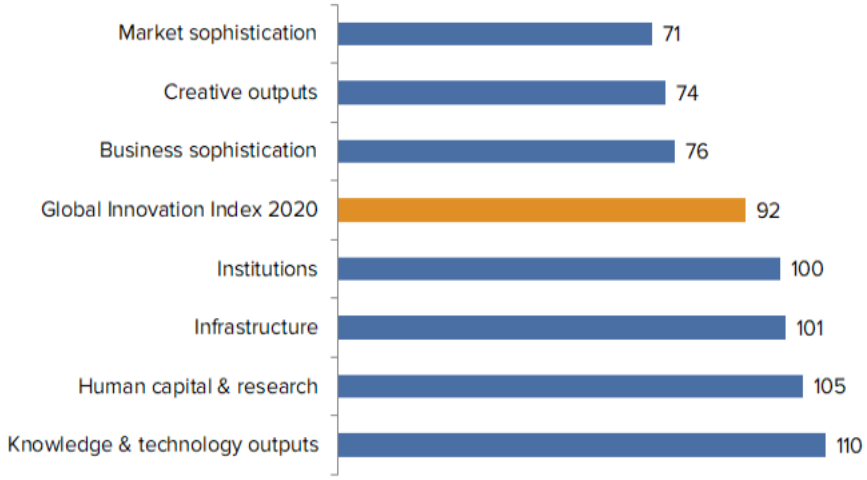
Latin America and the Caribbean

Compared to other economies in Latin America and the Caribbean, El Salvador performs:

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

OVERVIEW OF EL SALVADOR RANKINGS IN THE SEVEN GII AREAS

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



*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 El Salvador in the GII 2020.

Strengths

Code	Indicator name	Rank
3.3.1	GDP/unit of energy use	43
4.1.1	Ease of getting credit*	23
4.3.2	Intensity of local competition†	40
5.1.2	Firms offering formal training, %	12
5.3.1	Intellectual property payments, % total trade	24
5.3.2	High-tech imports, % total trade	46
6.3	Knowledge diffusion	50
6.3.1	Intellectual property receipts, % total trade	27
6.3.2	High-tech net exports, % total trade	49
6.3.3	ICT services exports, % total trade	51
7.1	Intangible assets	48
7.1.1	Trademarks by origin/bn PPP$ GDP	25

Weaknesses

Code	Indicator name	Rank
2.3.3	Global R&D companies, top 3, mn US$	42
2.3.4	QS university ranking, average score top 3*	77
5.2	Innovation linkages	125
5.2.1	University/industry research collaboration†	120
5.2.4	JV–strategic alliance deals/bn PPP$ GDP	121
5.2.5	Patent families 2+ offices/bn PPP$ GDP	101
6.1	Knowledge creation	131
6.1.1	Patents by origin/bn PPP$ GDP	125
6.1.4	Scientific & technical articles/bn PPP$ GDP	128
6.1.5	Citable documents H-index	126
6.3.4	FDI net outflows, % GDP	126
7.3.4	Mobile app creation/bn PPP$ GDP	99

STRENGTHS

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

- Infrastructure (101): the indicator GDP/unit of energy use (43) demonstrates a strength.
- Market sophistication (71): shows strengths in the indicators Ease of getting credit (23) and Intensity of local competition (40).
- Business sophistication (76): displays strengths in the indicators Firms offering formal training (12), Intellectual property payments (24) and High-tech imports (46).
- Knowledge & technology outputs (110): reveals strengths in the sub-pillar Knowledge diffusion (50) and in the indicators Intellectual property receipts (27), High-tech net exports (49) and ICT services exports (51).
- Creative outputs (74): demonstrates strengths in the sub-pillar Intangible assets (48) and in the indicator Trademarks by origin (25).

WEAKNESSES

GII weaknesses for El Salvador are found in four of the seven GII pillars.

- Human capital & research (105): exhibits weaknesses in the indicators Global R&D companies (42) and QS university ranking (77).
- Business sophistication (76): demonstrates weaknesses in the sub-pillar Innovation linkages (125) and in the indicators University/industry research collaboration (120), JV–strategic alliance deals (121) and Patent families (101).
- Knowledge & technology outputs (110): displays weaknesses in the sub-pillar Knowledge creation (131) and in the indicators Patents by origin (125), Scientific & technical articles (128), Citable documents H-index (126) and FDI net outflows (126).
- Creative outputs (74): the indicator Mobile app creation (99) reveals a weakness.

EL SALVADOR

GII 2020 rank

92

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP$	GDP per capita, PPP$	GII 2019 rank
87	95	Lower middle	LCN	6.5	55.7	7,257.4	108

		Score/Value	Rank	
INSTITUTIONS		**54.0**	**100**	
1.1	**Political environment**	**48.2**	**93**	
1.1.1	Political and operational stability*	64.3	83	
1.1.2	Government effectiveness*	40.2	96	
1.2	**Regulatory environment**	**51.8**	**100**	
1.2.1	Regulatory quality*	40.8	72	◆
1.2.2	Rule of law*	25.2	115	
1.2.3	Cost of redundancy dismissal, salary weeks	22.9	96	
1.3	**Business environment**	**62.1**	**96**	
1.3.1	Ease of starting a business*	78.6	111	
1.3.2	Ease of resolving insolvency*	45.6	83	
HUMAN CAPITAL & RESEARCH		**16.4**	**105**	
2.1	**Education**	**26.5**	**115**	
2.1.1	Expenditure on education, % GDP	3.6	87	
2.1.2	Government funding/pupil, secondary, % GDP/cap	14.3	84	
2.1.3	School life expectancy, years	11.6	95	
2.1.4	PISA scales in reading, maths, & science	n/a	n/a	
2.1.5	Pupil-teacher ratio, secondary	27.6	114	◇
2.2	**Tertiary education**	**21.8**	**89**	
2.2.1	Tertiary enrolment, % gross	29.4	82	
2.2.2	Graduates in science & engineering, %	21.4	59	
2.2.3	Tertiary inbound mobility, %	0.5	97	
2.3	**Research & development (R&D)**	**1.0**	**107**	
2.3.1	Researchers, FTE/mn pop. ⏲	63.7	91	
2.3.2	Gross expenditure on R&D, % GDP ⏲	0.2	93	
2.3.3	Global R&D companies, avg. exp. top 3, mn $US	0.0	42	○ ◇
2.3.4	QS university ranking, average score top 3*	0.0	77	○ ◇
INFRASTRUCTURE		**31.4**	**101**	
3.1	**Information & communication technologies (ICTs)**	**52.5**	**93**	
3.1.1	ICT access*	48.5	92	
3.1.2	ICT use*	33.7	103	
3.1.3	Government's online service*	62.5	90	
3.1.4	E-participation*	65.2	81	
3.2	**General infrastructure**	**15.4**	**118**	
3.2.1	Electricity output, kWh/mn pop	857.1	99	
3.2.2	Logistics performance*	23.7	97	
3.2.3	Gross capital formation, % GDP	20.0	98	
3.3	**Ecological sustainability**	**26.3**	**77**	◆
3.3.1	GDP/unit of energy use	11.1	43	●
3.3.2	Environmental performance*	43.1	82	◆
3.3.3	ISO 14001 environmental certificates/bn PPP$ GDP	0.3	97	
MARKET SOPHISTICATION		**46.7**	**71**	
4.1	**Credit**	**42.1**	**62**	
4.1.1	Ease of getting credit*	80.0	23	●
4.1.2	Domestic credit to private sector, % GDP	52.5	65	
4.1.3	Microfinance gross loans, % GDP	0.4	38	
4.2	**Investment**	**36.0**	**[69]**	
4.2.1	Ease of protecting minority investors*	36.0	116	◇
4.2.2	Market capitalization, % GDP	n/a	n/a	
4.2.3	Venture capital deals/bn PPP$ GDP	n/a	n/a	
4.3	**Trade, competition, and market scale**	**62.1**	**68**	
4.3.1	Applied tariff rate, weighted avg., %	1.9	55	◆
4.3.2	Intensity of local competition+	72.8	40	● ◆
4.3.3	Domestic market scale, bn PPP$	55.7	98	

		Score/Value	Rank	
BUSINESS SOPHISTICATION		**23.7**	**76**	
5.1	**Knowledge workers**	**28.7**	**71**	
5.1.1	Knowledge-intensive employment, %	12.8	100	
5.1.2	Firms offering formal training, % ⏲	53.8	12	● ◆
5.1.3	GERD performed by business, % GDP ⏲	0.1	69	
5.1.4	GERD financed by business, %	31.2	56	
5.1.5	Females employed w/advanced degrees, %	4.8	91	
5.2	**Innovation linkages**	**10.8**	**125**	○ ◇
5.2.1	University/industry research collaboration+	27.2	120	○ ◇
5.2.2	State of cluster development+	32.1	117	◇
5.2.3	GERD financed by abroad, % GDP	0.0	74	
5.2.4	JV-strategic alliance deals/bn PPP$ GDP	0.0	121	○
5.2.5	Patent families 2+ offices/bn PPP$ GDP	0.0	101	○ ◇
5.3	**Knowledge absorption**	**31.5**	**56**	
5.3.1	Intellectual property payments, % total trade	1.3	24	● ◆
5.3.2	High-tech imports, % total trade	9.0	46	●
5.3.3	ICT services imports, % total trade	0.5	102	
5.3.4	FDI net inflows, % GDP	1.9	86	
5.3.5	Research talent, % in business enterprise	n/a	n/a	
KNOWLEDGE & TECHNOLOGY OUTPUTS		**11.3**	**110**	
6.1	**Knowledge creation**	**1.1**	**131**	○ ◇
6.1.1	Patents by origin/bn PPP$ GDP	0.1	125	○
6.1.2	PCT patents by origin/bn PPP$ GDP	0.0	85	
6.1.3	Utility models by origin/bn PPP$ GDP	0.1	61	
6.1.4	Scientific & technical articles/bn PPP$ GDP	0.5	128	○
6.1.5	Citable documents H-index	2.5	126	○
6.2	**Knowledge impact**	**5.0**	**[124]**	
6.2.1	Growth rate of PPP$ GDP/worker, %	n/a	n/a	
6.2.2	New businesses/th pop. 15-64	0.6	93	
6.2.3	Computer software spending, % GDP	0.0	103	◇
6.2.4	ISO 9001 quality certificates/bn PPP$ GDP	3.1	71	
6.2.5	High- and medium-high-tech manufacturing, %	n/a	n/a	
6.3	**Knowledge diffusion**	**27.8**	**50**	●
6.3.1	Intellectual property receipts, % total trade	0.5	27	● ◆
6.3.2	High-tech net exports, % total trade	2.8	49	●
6.3.3	ICT services exports, % total trade	2.2	51	●
6.3.4	FDI net outflows, % GDP	-0.9	126	○ ◇
CREATIVE OUTPUTS		**19.2**	**74**	
7.1	**Intangible assets**	**30.8**	**48**	●
7.1.1	Trademarks by origin/bn PPP$ GDP	75.6	25	●
7.1.2	Global brand value, top 5,000, % GDP	n/a	n/a	
7.1.3	Industrial designs by origin/bn PPP$ GDP	0.4	90	
7.1.4	ICTs & organizational model creation+	42.7	103	
7.2	**Creative goods and services**	**5.6**	**[102]**	
7.2.1	Cultural & creative services exports, % total trade	0.0	107	
7.2.2	National feature films/mn pop. 15-69	n/a	n/a	
7.2.3	Entertainment & 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	57	
7.3	**Online creativity**	**9.6**	**85**	
7.3.1	Generic top-level domains (TLDs)/th pop. 15-69	2.4	73	◆
7.3.2	Country-code TLDs/th pop. 15-69	0.6	96	
7.3.3	Wikipedia edits/mn pop. 15-69	38.9	80	
7.3.4	Mobile app creation/bn PPP$ GDP ⏲	0.0	99	○

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 El Salvador.

Missing data

Code	Indicator name	Country year	Model year	Source
2.1.4	PISA scales in reading, maths & science	n/a	2018	OECD Programme for International Student Assessment (PISA)
4.2.2	Market capitalization, % GDP	n/a	2018	World Federation of Exchanges
4.2.3	Venture capital deals/bn PPP$ GDP	n/a	2019	Thomson Reuters
5.3.5	Research talent, % in business enterprise	n/a	2018	UNESCO Institute for Statistics; Eurostat; OECD – Main Science and Technology Indicators
6.2.1	Growth rate of PPP$ GDP/worker, %	n/a	2019	The Conference Board
6.2.5	High- & medium-high-tech manufacturing, %	n/a	2017	United Nations Industrial Development Organization
7.1.2	Global brand value, top 5,000, % GDP	n/a	2019	Brand Finance
7.2.2	National feature films/mn pop. 15–69	n/a	2017	UNESCO Institute for Statistics
7.2.3	Entertainment & Media market/th pop. 15–69	n/a	2018	PwC
7.2.4	Printing & other media, % manufacturing	n/a	2017	United Nations Industrial Development Organization

Outdated data

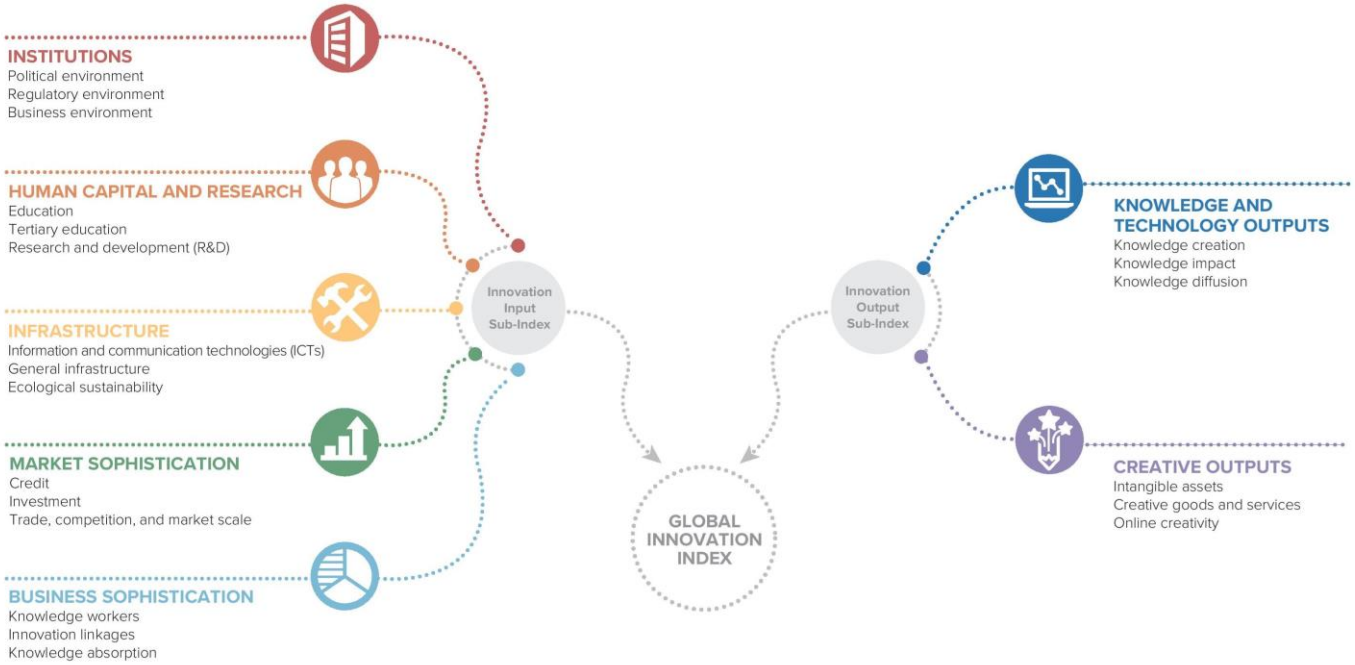
Code	Indicator name	Country year	Model year	Source
2.3.1	Researchers, FTE/mn pop.	2017	2018	UNESCO Institute for Statistics; Eurostat; OECD – Main Science and Technology Indicators
2.3.2	Gross expenditure on R&D, % GDP	2017	2018	UNESCO Institute for Statistics; Eurostat; OECD – Main Science and Technology Indicators
5.1.2	Firms offering formal training, %	2015	2018	World Bank
5.1.3	GERD performed by business, % GDP	2017	2018	UNESCO Institute for Statistics; Eurostat; OECD – Main Science and Technology Indicators
7.3.4	Mobile app creation/bn PPP$ GDP	2018	2019	App Annie

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.