



NEW ZEALAND

26th

New Zealand ranks 26th among the 131 economies featured in the GI 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 GI aims to capture the multi-dimensional facets of innovation.

The following table shows the rankings of New Zealand over the past three years, noting that data availability and changes to the GI model framework influence year-on-year comparisons of the GI rankings. The statistical confidence interval for the ranking of New Zealand in the GI 2020 is between ranks 25 and 30.

Rankings of New Zealand (2018–2020)

	GII	Innovation inputs	Innovation outputs
2020	26	19	33
2019	25	18	32
2018	22	15	30

- New Zealand performs better in innovation inputs than innovation outputs in 2020.
- This year New Zealand ranks 19th in innovation inputs, lower than last year and lower compared to 2018.
- As for innovation outputs, New Zealand ranks 33rd. This position is lower than last year and lower compared to 2018.

25th

New Zealand ranks 25th among the 49 high-income group economies.

7th

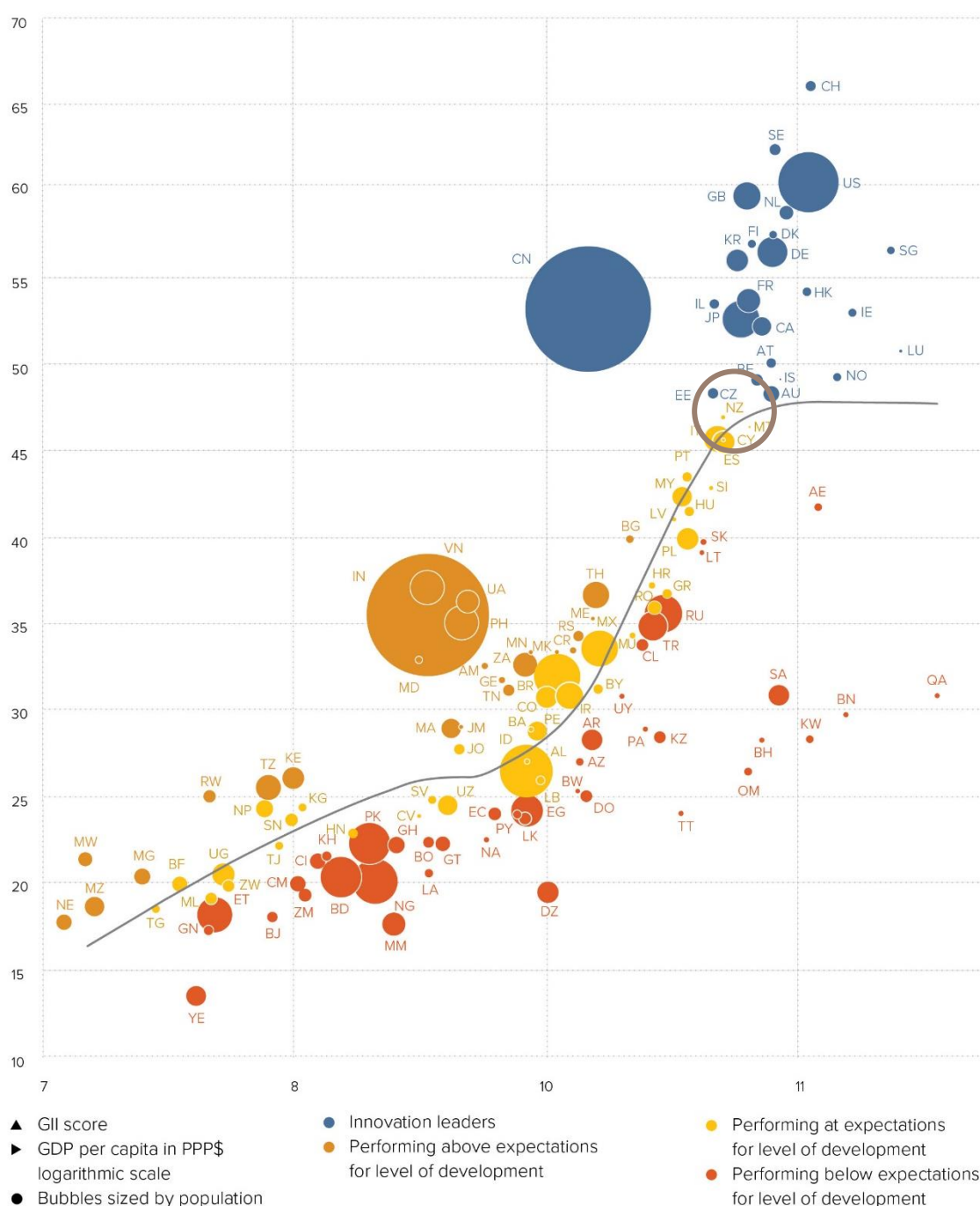
New Zealand ranks 7th among the 17 economies in South East Asia, East Asia, and Oceania.

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, New Zealand's performance matches expectations for its level of development.

The positive relationship between innovation and development

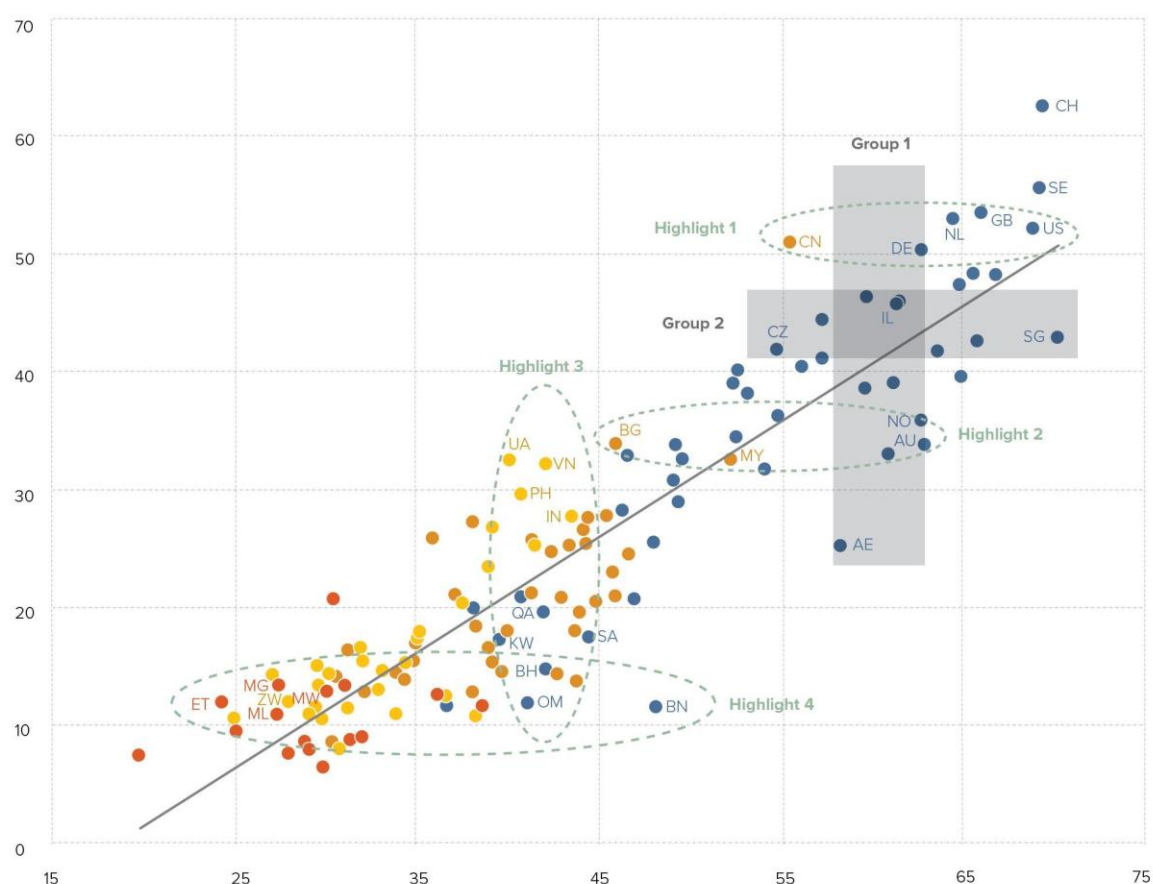


EFFECTIVELY TRANSLATING INNOVATION INVESTMENTS INTO INNOVATION OUTPUTS

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.

New Zealand produces less innovation outputs relative to its level of innovation investments.

Innovation input to output performance, 2020

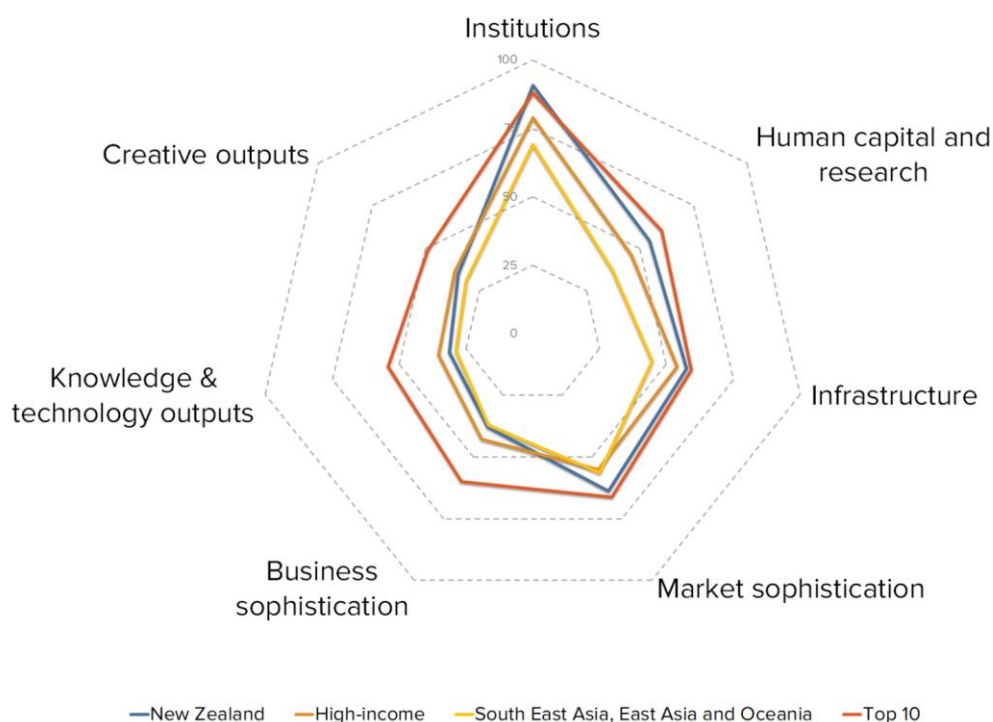


- ▲ Output score
- Input score
- High income group
- Upper middle-income group
- Lower middle-income group
- Low income group
- Fitted values

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 NEW ZEALAND AGAINST OTHER HIGH-INCOME GROUP ECONOMIES AND SOUTH EAST ASIA, EAST ASIA, AND OCEANIA

New Zealand's scores in the seven GII pillars



High-income group economies

New Zealand has high scores in four out of the seven GII pillars: Institutions, Human capital & research, Infrastructure and Market sophistication, which are above average for the high-income group.

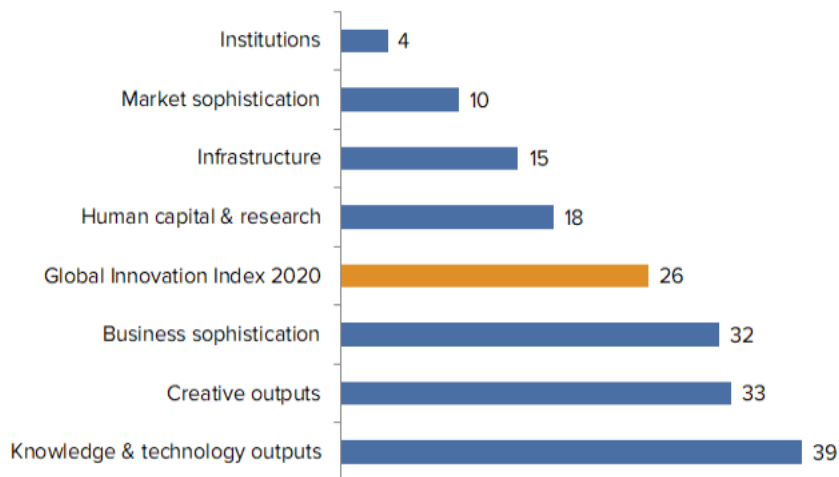
Conversely, New Zealand scores below average for its income group in three GII pillars: Business sophistication, Knowledge & technology outputs and Creative outputs.

South East Asia, East Asia, and Oceania

New Zealand performs above the regional average in all GII pillars.

OVERVIEW OF NEW ZEALAND RANKINGS IN THE SEVEN GII AREAS

New Zealand performs best in Institutions 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 New Zealand in the GII 2020.

Strengths			Weaknesses		
Code	Indicator name	Rank	Code	Indicator name	Rank
1	Institutions	4	2.1.5	Pupil-teacher ratio, secondary	68
1.1	Political environment	8	2.2.2	Graduates in science & engineering, %	62
1.1.1	Political and operational stability*	2	3.3.1	GDP/unit of energy use	73
1.2	Regulatory environment	3	5.3.4	FDI net inflows, % GDP	108
1.2.1	Regulatory quality*	4	6.2.1	Growth rate of PPP\$ GDP/worker, %	71
1.2.2	Rule of law*	5	6.2.5	High- and medium-high-tech manufacturing, %	69
1.2.3	Cost of redundancy dismissal, salary weeks	1	6.3	Knowledge diffusion	77
1.3.1	Ease of starting a business*	1	6.3.2	High-tech net exports, % total trade	67
2.1.3	School life expectancy, years	8	6.3.3	ICT services exports, % total trade	79
2.2.3	Tertiary inbound mobility, %	6	6.3.4	FDI net outflows, % GDP	119
3.1	Information & communication technologies (ICTs)	8	7.2.5	Creative goods exports, % total trade	65
4.1	Credit	3			
4.1.1	Ease of getting credit*	1			
4.1.2	Domestic credit to private sector, % GDP	7			
4.2.1	Ease of protecting minority investors*	3			
6.2.2	New businesses/th pop. 15–64	4			

NOTES: * indicates an index; † indicates a survey question.

STRENGTHS

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

- Institutions (4): exhibits strengths in the sub-pillars Political environment (8) and Regulatory environment (3) and in the indicators Political and operational stability (2), Regulatory quality (4), Rule of law (5), Cost of redundancy dismissal (1) and Ease of starting a business (1).
- Human capital & research (18): shows strengths in the indicators School life expectancy (8) and Tertiary inbound mobility (6).
- Infrastructure (15): demonstrates strengths in the sub-pillar Information & communication technologies (8).
- Market sophistication (10): displays strengths in the sub-pillar Credit (3) and in the indicators Ease of getting credit (1), Domestic credit to private sector (7) and Ease of protecting minority investors (3).
- Knowledge & technology outputs (39): reveals strengths in the indicator New businesses (4).

WEAKNESSES

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

- Human capital & research (18): exhibits weaknesses in the indicators Pupil-teacher ratio (68) and Graduates in science & engineering (62).
- Infrastructure (15): displays weaknesses in the indicator GDP/unit of energy use (73).
- Business sophistication (32): demonstrates weaknesses in the indicator FDI net inflows (108).
- Knowledge & technology outputs (39): reveals weaknesses in the sub-pillar Knowledge diffusion (77) and in the indicators Growth rate of PPP\$ GDP/worker (71), High- and medium-high-tech manufacturing (69), High-tech net exports (67), ICT services exports (79) and FDI net outflows (119).
- Creative outputs (33): shows weaknesses in the indicator Creative goods exports (65).

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP\$	GDP per capita, PPP\$	GII 2019 rank
33	19	High	SEAO	4.8	206.2	35,744.0	25
Score/Value Rank				Score/Value Rank			
INSTITUTIONS 90.9 4 ● ◆				BUSINESS SOPHISTICATION 37.9 32			
1.1	Political environment	90.5	8 ● ◆	5.1	Knowledge workers	41.0	[43]
1.1.1	Political and operational stability*.....	96.4	2 ● ◆	5.1.1	Knowledge-intensive employment, %.....	n/a	n/a
1.1.2	Government effectiveness*.....	87.5	12	5.1.2	Firms offering formal training, %.....	n/a	n/a
1.2	Regulatory environment	97.4	3 ● ◆	5.1.3	GERD performed by business, % GDP.....	0.8	30
1.2.1	Regulatory quality*.....	94.0	4 ● ◆	5.1.4	GERD financed by business, %.....	46.4	36
1.2.2	Rule of law*.....	95.6	5 ● ◆	5.1.5	Females employed w/advanced degrees, %.....	19.5	29
1.2.3	Cost of redundancy dismissal, salary weeks.....	8.0	1 ● ◆	5.2	Innovation linkages	35.7	29
1.3	Business environment	84.7	19	5.2.1	University/industry research collaboration*.....	59.5	24
1.3.1	Ease of starting a business*.....	100.0	1 ● ◆	5.2.2	State of cluster development.....	49.5	49
1.3.2	Ease of resolving insolvency*.....	69.5	33	5.2.3	GERD financed by abroad, % GDP.....	0.1	35
HUMAN CAPITAL & RESEARCH 54.4 18				5.2.4	JV-strategic alliance deals/bn PPP\$ GDP.....	0.1	19
2.1	Education	61.5	14	5.2.5	Patent families 2+ offices/bn PPP\$ GDP.....	1.9	21
2.1.1	Expenditure on education, % GDP.....	6.4	10 ◆	5.3	Knowledge absorption	37.2	35
2.1.2	Government funding/pupil, secondary, % GDP/cap.....	21.1	46	5.3.1	Intellectual property payments, % total trade.....	1.6	18
2.1.3	School life expectancy, years.....	18.8	8 ● ◆	5.3.2	High-tech imports, % total trade.....	10.2	28
2.1.4	PISA scales in reading, maths, & science.....	502.9	13	5.3.3	ICT services imports, % total trade.....	1.5	43
2.1.5	Pupil-teacher ratio, secondary.....	13.6	68 ○ ◆	5.3.4	FDI net inflows, % GDP.....	1.0	108 ○
2.2	Tertiary education	53.6	11	5.3.5	Research talent, % in business enterprise.....	31.2	41
2.2.1	Tertiary enrolment, % gross.....	82.0	15	KNOWLEDGE & TECHNOLOGY OUTPUTS 31.2 39			
2.2.2	Graduates in science & engineering, %.....	21.2	62 ○	6.1	Knowledge creation	47.5	17
2.2.3	Tertiary inbound mobility, %.....	19.6	6 ● ◆	6.1.1	Patents by origin/bn PPP\$ GDP.....	5.1	22
2.3	Research & development (R&D)	48.1	21	6.1.2	PCT patents by origin/bn PPP\$ GDP.....	1.2	26
2.3.1	Researchers, FTE/mn pop.....	5,529.5	11	6.1.3	Utility models by origin/bn PPP\$ GDP.....	n/a	n/a
2.3.2	Gross expenditure on R&D, % GDP.....	1.4	27	6.1.4	Scientific & technical articles/bn PPP\$ GDP.....	29.7	10 ◆
2.3.3	Global R&D companies, avg. exp. top 3, mn \$US.....	47.9	31	6.1.5	Citable documents H-index.....	34.8	27
2.3.4	QS university ranking, average score top 3*.....	50.7	18	6.2	Knowledge impact	26.3	60
INFRASTRUCTURE 57.7 15				6.2.1	Growth rate of PPP\$ GDP/worker, %.....	0.7	71 ○
3.1	Information & communication technologies (ICTs)	90.5	8 ● ◆	6.2.2	New businesses/th pop. 15-64.....	17.8	4 ● ◆
3.1.1	ICT access*.....	85.6	12	6.2.3	Computer software spending, % GDP.....	0.0	55
3.1.2	ICT use*.....	82.9	13	6.2.4	ISO 9001 quality certificates/bn PPP\$ GDP.....	5.1	54
3.1.3	Government's online service*.....	95.1	9	6.2.5	High- and medium-high-tech manufacturing, %.....	14.1	69 ○
3.1.4	E-participation*.....	98.3	5 ◆	6.3	Knowledge diffusion	19.9	77 ○
3.2	General infrastructure	41.0	21	6.3.1	Intellectual property receipts, % total trade.....	0.7	23
3.2.1	Electricity output, kWh/mn pop.....	9,023.2	17	6.3.2	High-tech net exports, % total trade.....	1.1	67 ○
3.2.2	Logistics performance*.....	84.7	15	6.3.3	ICT services exports, % total trade.....	1.1	79 ○
3.2.3	Gross capital formation, % GDP.....	24.1	59	6.3.4	FDI net outflows, % GDP.....	0.0	119 ○
3.3	Ecological sustainability	41.5	34	CREATIVE OUTPUTS 34.9 33			
3.3.1	GDP/unit of energy use.....	8.5	73 ○	7.1	Intangible assets	35.4	37
3.3.2	Environmental performance*.....	71.3	19	7.1.1	Trademarks by origin/bn PPP\$ GDP.....	90.1	18 ◆
3.3.3	ISO 14001 environmental certificates/bn PPP\$ GDP.....	3.7	28	7.1.2	Global brand value, top 5,000, % GDP.....	18.8	48
MARKET SOPHISTICATION 63.9 10				7.1.3	Industrial designs by origin/bn PPP\$ GDP.....	2.3	49
4.1	Credit	85.8	3 ● ◆	7.1.4	ICTs & organizational model creation*.....	71.3	18
4.1.1	Ease of getting credit*.....	100.0	1 ● ◆	7.2	Creative goods and services	21.5	48
4.1.2	Domestic credit to private sector, % GDP.....	158.3	7 ● ◆	7.2.1	Cultural & creative services exports, % total trade.....	0.4	57
4.1.3	Microfinance gross loans, % GDP.....	n/a	n/a	7.2.2	National feature films/mn pop. 15-69.....	6.1	37
4.2	Investment	38.6	63	7.2.3	Entertainment & Media market/th pop. 15-69.....	53.5	14
4.2.1	Ease of protecting minority investors*.....	86.0	3 ● ◆	7.2.4	Printing and other media, % manufacturing.....	1.8	21
4.2.2	Market capitalization, % GDP.....	43.8	35	7.2.5	Creative goods exports, % total trade.....	0.5	65 ○
4.2.3	Venture capital deals/bn PPP\$ GDP.....	0.1	34	7.3	Online creativity	47.1	23
4.3	Trade, competition, and market scale	67.4	44	7.3.1	Generic top-level domains (TLDs)/th pop. 15-69.....	32.1	20
4.3.1	Applied tariff rate, weighted avg., %.....	1.4	15	7.3.2	Country-code TLDs/th pop. 15-69.....	64.6	10 ◆
4.3.2	Intensity of local competition*.....	70.8	52	7.3.3	Wikipedia edits/mn pop. 15-69.....	80.4	24
4.3.3	Domestic market scale, bn PPP\$.....	206.2	63	7.3.4	Mobile app creation/bn PPP\$ GDP.....	12.3	40

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 New Zealand.

Missing data

Code	Indicator name	Country year	Model year	Source
4.1.3	Microfinance gross loans, % GDP	n/a	2018	Microfinance Information Exchange
5.1.1	Knowledge-intensive employment, %	n/a	2018	International Labour Organization
5.1.2	Firms offering formal training, %	n/a	2018	World Bank
6.1.3	Utility models by origin/bn PPP\$ GDP	n/a	2018	World Intellectual Property Organization

Outdated data

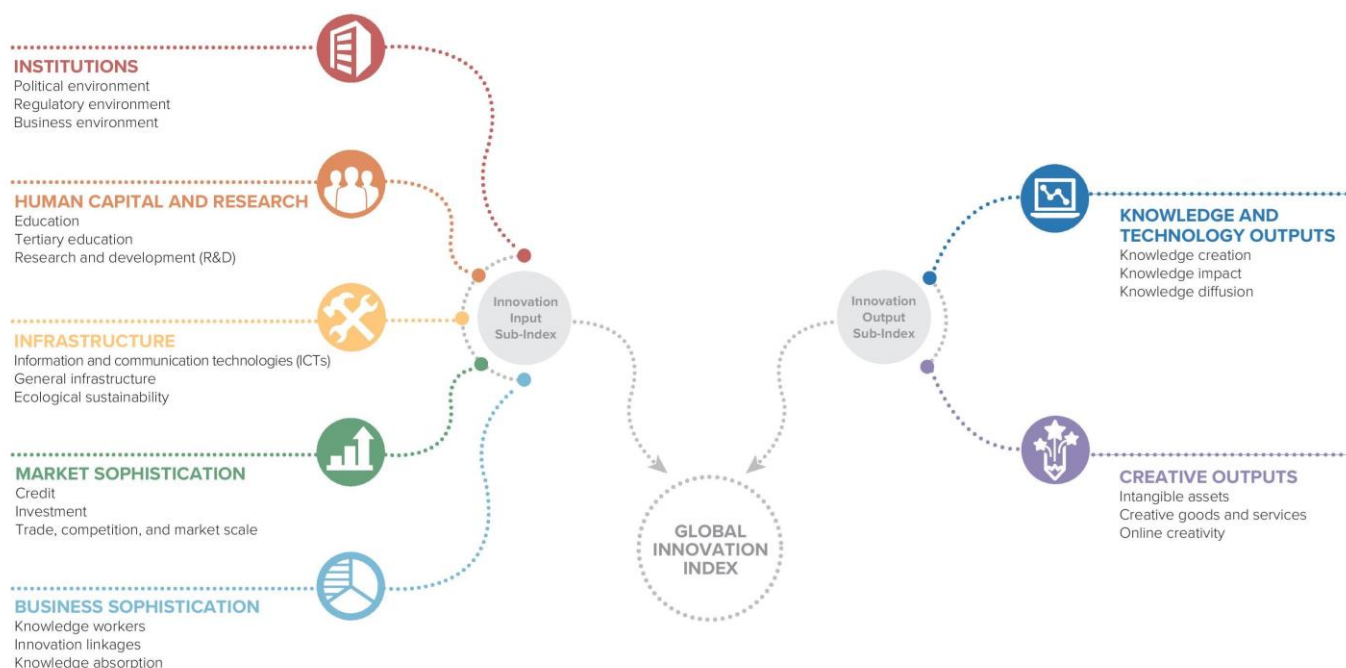
Code	Indicator name	Country year	Model year	Source
2.1.1	Expenditure on education, % GDP	2016	2018	UNESCO Institute for Statistics
2.1.5	Pupil-teacher ratio, secondary	2017	2018	UNESCO Institute for Statistics
2.3.1	Researchers, FTE/mn pop.	2017	2018	UNESCO Institute for Statistics; Eurostat; OECD – 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
4.3.1	Applied tariff rate, weighted avg., %	2017	2018	World Bank
5.1.3	GERD performed by business, % GDP	2017	2018	UNESCO Institute for Statistics; Eurostat; OECD – Main Science and Technology Indicators
5.1.5	Females employed w/advanced degrees, %	2013	2018	International Labour Organization
5.3.5	Research talent, % in business enterprise	2017	2018	UNESCO Institute for Statistics; Eurostat; OECD – Main Science and Technology Indicators
6.2.5	High- and medium-high-tech manufacturing, %	2015	2017	United Nations Industrial Development Organization
7.2.4	Printing and other media, % manufacturing	2015	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 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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