Rows of newly planted potatoes, the largest crop of Prince Edward Island

1

JAMES RANDALL
University of Prince Edward Island, Canada

with

ADAM BRIMACOMBE

The ongoing state of island economies

In last year's (2017) Annual Report, the point was made that island states and island territories are incredibly important in their own right and are also important in what they tell us about economic development, connectivity, and interaction more generally throughout the world. In this year's version of the Report, we update the statistics on many of these islands (i.e., in this current chapter); provide additional information on island free trade and port infrastructure; and provide new perspectives on island free trade, free zones, and the many ways that island regulatory, economic, and physical environments affect their futures.

SECTION 1: ISLAND STATES

Island states may be small in size but their global geopolitical presence is much greater than their share of land area and world population would suggest. They have been quite influential in shaping the narrative regarding global sustainable development, for example, through the Sustainable Development Goals (SDGs). As a group, through the Small Island Developing States (SIDS) and the Alliance of Small Island States (AOSIS), they have encouraged world international bodies such as the United Nations to take action to slow, stop, or even reverse human-induced global warming. In Tables 1.1 to 1.14 of this chapter, we update essential statistics on a select group of island states.

See Table 1.1 on following pages

The indicators used throughout the 2018 report demonstrate a prominent characteristic inherent in the island states listed: that of their incredible diversity. This variation can be seen quite clearly when we compare their total populations and population densities (Table 1.1). At one extreme, we have the island archipelago and mainland territory of Indonesia which consists of a population of over 260 million people. At the other extreme, we have the small island nation of Niue consisting of only 1,626 people. The heterogeneity that is so apparent in these population values is also seen in other island characteristics and reinforces the point that islands are not monolithic entities with identical challenges, strategies, and development trajectories. For example, the average annual population growth rates from 2010 to 2018 continue to show considerable variation with the rates of change being generally lower in developed island countries. It should be noted that population growth rates are not measuring the same thing as the Natural Rate of Increase (i.e., the difference between Birth Rate and Death Rate) because overall growth rates also include immigration and emigration. Therefore, islands in the Americas/Caribbean region, which are experiencing positive natural population growth (see Table 1.2) while also experiencing low or negative Growth Rates, are doing so presumably because emigration off the islands is exceeding immigration to the islands. Population density is an interesting characteristic. Small island 'city states' such as Singapore have exceptionally high population densities while large countries such as Indonesia have relatively lower population densities. This characteristic does not account for either the distribution of the population or the carrying capacity of the island. Carrying capacity refers to the ability of a jurisdiction to support its population, whether that is through agriculture, manufacturing, or services. For example, although Iceland has a very low population density, most of the population is confined to the coastal areas while the inhospitable interior is sparsely populated. Iceland's carrying capacity is based less on agricultural production and more on fisheries, tourism, and services. Finally, some archipelagic island countries like the Maldives have a wide variation in population densities across their many islands, with some main islands being densely settled and some more remote islands being uninhabited.

TABLE 1.1: Population, Population Density, and Average Annual Population Growth Rate, 2010 to 2017

Continent	Island Country	Population (people) 2017	Population density (people /km²) 2016	Growth Rate % 2010–2017
Asia	Japan	126,451,398	348	-0.2
	Singapore	5,888,926	7909	1.8
	Indonesia	260,580,739	144	0.9
	Timor-Leste	1,291,358	85	2.4
	Brunei Darussalam	443,593	80	1.6
	Philippines	104,256,076	348	1.6
	Sri Lanka	22,409,381	347	0.8
	Maldives	392,709	1392	-0.1
	Bahrain	1,410,942	1848	2.3
Europe	Cyprus	1,221,549	127	1.3
	Iceland	339,747	3	1.1
	United Kingdom	64,769,452	271	0.5
	Ireland	5,011,102	69	1.2
	Malta	416,338	1365	0.3
Africa	Cabo Verde	560,899	134	1.3
	Madagascar	25,054,161	43	2.5
	Seychelles	93,920	206	0.8
	Mauritius	1,356,388	622	0.6
	Comoros	808,080	428	1.6
	Sao Tome and Principe	201,025	208	1.7
Oceania	New Zealand	4,510,327	18	0.8
	Papua New Guinea	6,909,701	18	1.7
	Solomon Islands	647,581	21	1.9
	Vanuatu	282,814	22	1.9
	Fiji	920,938	49	0.6
	Tonga	106,479	149	-0.1
	Samoa	200,108	69	0.6
	Nauru	9,642	652	0.5
	Micronesia, Fed. States	104,196	150	-0.5
	Marshall Islands	74,539	295	1.6
	Kiribati	108,145	141	1.1

Continent	Island Country	Population (people) 2017	Population density (people /km²) 2016	Growth Rate % 2010–2017
	Tuvalu	11,052	370	0.9
	Palau	21,431	47	0.4
	Cook Islands	9,290	–	-2.8
	Niue	1626 (2015)	–	-0.03 (2014)
Caribbean/	Cuba	11,147,407	110	-0.3
Americas	Haiti	10,646,714	394	1.3
	Dominican Republic	10,734,247	220	1.2
	Jamaica	2,990,561	266	0.7
	Bahamas, The	329,988	39	0.8
	St. Kitts and Nevis	52,715	211	0.7
	Antigua and Barbuda	94,731	229	1.2
	St. Vincent and the Grenadines	102,089	281	-0.3
	St. Lucia	164,994	292	0.3
	Grenada	111,724	316	-0.3
	Barbados	292,336	663	0.3
	Trinidad and Tobago	1,218,208	266	-0.2
	Dominica	73,897	98	0.2

TABLE 1.2: Crude Birth Rate, Crude Death Rate, and Life Expectancy at Birth, 2017

Continent	Island Country	Crude Birth Rate /1000	Crude Death Rate /1000	Life Expectancy at Birth
Asia	Japan	7.7	9.8	85.0
	Singapore	8.6	3.5	85.0
	Indonesia	16.2	6.5	73.0
	Timor-Leste	33.4	5.9	68.4
	Philippines	23.7	6.1	69.4
	Sri Lanka	15.2	6.2	76.9
	Maldives	16.1	4.0	75.8
	Bahrain	13.3	2.8	79.0
Europe	Cyprus	11.3	6.8	78.8
	Iceland	13.7	6.4	83.0
	United Kingdom	12.1	9.4	80.8
	Ireland	14.1	6.6	80.9
	Malta	10.1	9.4	80.5
Africa	Cabo Verde	20.0	6.0	72.4
	Madagascar	31.6	6.5	66.3
	Seychelles	13.7	7.0	74.9
	Mauritius	13.0	7.1	75.8
	Comoros	26.1	7.2	64.6
	Sao Tome and Principe	32.4	6.8	65.3
Oceania	New Zealand	13.2	7.5	81.3
	Papua New Guinea	23.7	6.6	67.3
	Solomon Islands	24.9	3.8	75.6
	Vanuatu	24	4.0	73.7
	Fiji	18.6	6.1	73.0
	Tonga	22.2	4.9	76.4
	Samoa	20.4	5.3	74.0
	Nauru	24.0	5.9	67.4
	Micronesia, Fed. States	20.0	4.2	73.1
	Marshall Islands	24.4	4.2	73.4
	Kiribati	21.2	7.0	66.5
	Tuvalu	23.7	8.5	66.9

Continent	Island Country	Crude Birth Rate /1000	Crude Death Rate /1000	Life Expectancy at Birth
	Palau	11.3	8.1	73.4
	Cook Islands	14.0	8.4	76.0
	Niue	–	–	–
Caribbean/	Cuba	10.7	8.7	78.8
Americas	Haiti	23.0	7.6	64.2
	Dominican Republic	18.4	4.7	78.3
	Jamaica	17.9	6.8	73.7
	Bahamas, The	15.3	7.2	72.6
	St. Kitts and Nevis	13.2	7.1	75.9
	Antigua and Barbuda	15.7	5.7	76.7
	St. Vincent and the Grenadines	13.2	7.3	75.5
	St. Lucia	13.3	7.7	77.9
	Grenada	15.5	8.2	74.5
	Barbados	11.7	8.6	75.5
	Trinidad and Tobago	12.7	8.8	73.1
	Dominica	15.1	7.9	77.0

As is the case for mainland countries, Table 1.2 shows that there is a general distinction between developed and developing island countries in terms of their Birth Rates (BR), Death Rates (DR), and Average Life Expectancies. Almost all the developed island countries, such as Malta and the United Kingdom, continue to show a Birth Rate that is only slightly higher than their Death Rate, or, as in the case of Japan, a Birth Rate that is lower than their Death Rate or a negative Natural Rate of Increase. Average Life Expectancies of developed economy islands in the North Atlantic and Mediterranean, as well as Japan, Singapore, and New Zealand, continue to be consistently higher than island countries in Oceania and the Caribbean/Americas. In general, island states in the Caribbean/Americas have lower Birth Rates and higher Death Rates than island states in Oceania. However, on average there is a greater gap between BR and DR in Oceanic countries than Caribbean/Americas islands. All other factors being equal (e.g., population changes as a result of differences in migration), this means that population increases are going to be greater in Oceanic islands.

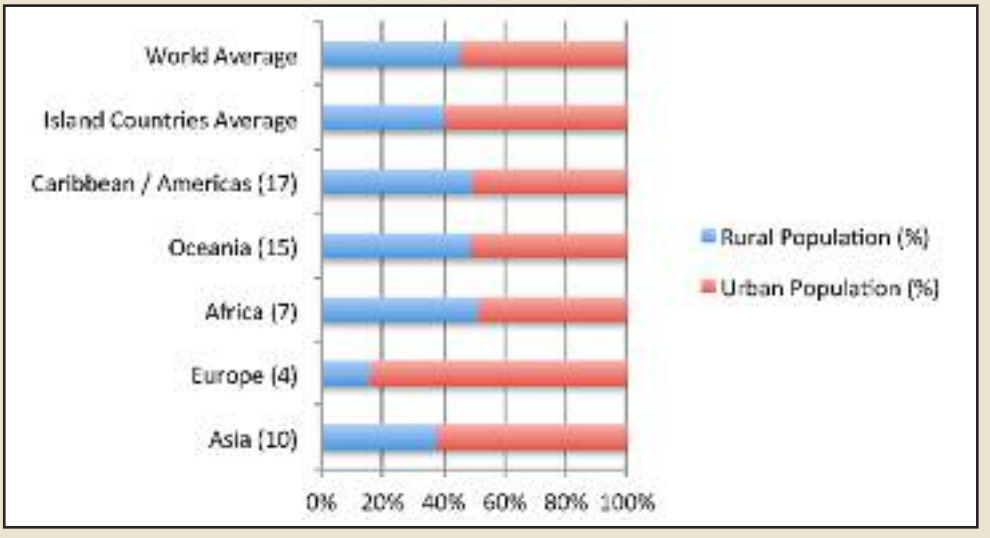
TABLE 1.3: **Percentage of Rural and Urban Populations, 2015 and 2018**

Continent	Island Country	RURAL POPULATION (%)		URBAN POPULATION (%)	
		2015	2018	2015	2018
Asia	Japan	6.5	8.4	93.5	91.6
	Singapore	0	0	100	100
	Indonesia	46.3	44.7	53.7	55.3
	Timor-Leste	67.2	69.4	32.8	30.6
	Brunei Darussalam	22.8	22.4	77.2	77.6
	Philippines	55.6	53.1	44.4	46.9
	Sri Lanka	81.6	81.5	18.4	18.5
	Maldives	54.5	60.2	45.5	39.8
	Bahrain	11.2	10.7	88.8	89.3
Europe	Cyprus	33.1	33.2	66.9	66.8
	Iceland	5.9	6.2	94.1	93.8
	United Kingdom	17.4	16.6	82.6	83.4
	Ireland	36.8	36.8	63.2	63.2
	Malta	4.6	5.4	95.4	94.6
Africa	Cabo Verde	34.5	34.3	65.5	65.7
	Madagascar	64.9	62.8	35.1	37.2
	Seychelles	46.1	43.3	53.9	56.7
	Mauritius	60.3	59.2	39.7	40.8
	Comoros	71.7	71.0	28.3	29.0
	Sao Tome and Principe	34.9	27.2	65.1	72.8
Oceania	New Zealand	13.7	13.5	86.3	86.5
	Papua New Guinea	87.0	86.8	13.0	13.2
	Solomon Islands	77.7	76.3	22.3	23.7
	Vanuatu	73.9	73.2	26.1	26.8
	Fiji	46.3	43.8	53.7	56.2
	Tonga	76.3	76.9	23.7	23.1
	Samoa	80.9	81.8	19.1	18.2
	Nauru	0	0	100.0	100.0
	Micronesia, Fed. Sts.	77.6	77.3	22.4	22.7
	Marshall Islands	27.3	23.0	72.7	77.0
	Kiribati	55.7	45.9	44.3	54.1
	Tuvalu	40.3	37.6	59.7	62.4
	Palau	12.9	20.1	87.1	79.9

Continent	Island Country	RURAL POPULATION (%)		URBAN POPULATION (%)	
		2015	2018	2015	2018
	Cook Islands	25.0 (2014)	24.9	75.0 (2014)	75.1
	Niue	62.0 (2014	55.2	38.0 (2014)	44.8
Caribbean/	Cuba	22.9	23.0	77.1	77.0
Americas	Haiti	41.3	44.7	58.7	55.3
	Dominican Republic	21.1	18.9	78.9	81.1
	Jamaica	45.2	44.3	54.8	55.7
	Bahamas, The	17.1	17.0	82.9	83.0
	St. Kitts and Nevis	67.9	69.2	32.1	30.8
	Antigua and Barbuda	76.2	75.4	23.8	24.6
	St. Vincent + Grenadines	49.4	47.8	50.6	52.2
	St. Lucia	81.5	81.3	18.5	18.7
	Grenada	64.4	63.7	35.6	36.3
	Barbados	68.4	68.6	31.6	31.4
	Trinidad and Tobago	91.5	46.8	8.5	53.2
	Dominica	30.5	29.5	69.5	70.5

The world is becoming a more urbanized place, and this is also reflected in the island countries listed in Table 1.3. Even after only three years (2015 to 2018), almost every island has a higher percentage of their population living in urban areas; the difference is in the level of urbanization. For example, the island city state of Singapore and the small formerly mining-dependent island of Nauru continue to be at 100% urbanization. Other developed island countries with economies focused primarily on services and manufacturing, such as Malta, the United Kingdom, and Japan, have only a small share of their population living in rural areas. However, outside of these cases, many of the small islands of the world are still largely rural, with populations engaged primarily in agriculture and fisheries. As can be seen in the table, it is still not uncommon for islands in Oceania and the Caribbean/Americas to have more than 60% of their population still living in non-urban areas even with the recent increases in urbanization seen in 2018 for some.

FIGURE 1.1: **Percentage of Rural and Urban Populations of Island Countries on Each Continent, 2017**



At a more aggregate level, Figure 1.1 continues to show that island countries are slightly more urbanized than countries in the world as a whole. The highest levels of urbanization among regional groupings of islands are for those found in Europe (the North Atlantic and Mediterranean), while those island countries situated around Africa still have the highest percentage of their populations living in rural areas.

See Table 1.4 on following pages

Gross Domestic Product (GDP) is a measure of the total value of all goods and services produced in a country. Although it does not include goods and services produced and exchanged informally—for example, through the barter system, the volunteer sector, and criminal activities—it is still the most frequently used measure of economic prosperity, change, and comparison. Table 1.4 uses GDP in several ways: first as an aggregate measure of the size of an island's economy, then standardized by the size of the population (i.e., GDP per capita), and finally in terms of how an island's economy has changed over time (i.e., growth rate of GDP from 2015 to 2017, and growth rate of GDP/capita over that same time period).

In terms of the total size of the economy, large island countries such as Japan and the United Kingdom continue to be much greater than all the other islands listed in this Table. However, some 'developing' countries such as Indonesia and the Philippines also have very high levels of GDP. When GDP is standardized by dividing by the population, the basic two-group distinction between developed and developing island states that was apparent when looking at the Gross National Income/ capita reasserts itself. One of the more fascinating aspects of this Table is comparing the growth rate of GDP to the growth rate of GDP/capita. This is really a measure of the difference in the growth of the economy and the growth in the population. If the change in GDP is greater than the change in GDP/capita, it means that the economy is growing faster than the population. If the change in GDP is lower than the change in GDP/capita growth, it means that the population is growing faster than the economy. As seen in the previous report, almost every one of the islands in this table has an economy that is not keeping pace with the growth in the population. Furthermore, the importance of scale of the jurisdiction in interpreting change should not be overlooked. On small islands, a relatively modest increase or decrease in economic production or population can have a much greater impact on the percentage change in GDP and GDP/capita because you are starting from a relatively small base. This can be seen in the case of the small island developing states (SIDS) of Samoa and Nauru whose growth rates may not be persistent over a long period of time. In 2016, they both showed large increases in their GDP/capita (of 5.8% and 5.5% respectively), but this has fallen one year later to 1.8% and -0.4% respectively.

TABLE 1.4: Gross Domestic Product (GDP) and Change in GDP; Per Capita GDP and Change in GDP/capita, 2017

Continent	Island Country	GDP 2017 in millions of USD (World Bank)	Growth rate of GDP % (World Bank)	GDP per capita 2017 in USD (CIA)	Growth rate of GDP per capita % (World Bank)
Asia	Japan	4,872,137	1.7	42,800	1.9
	Singapore	323,907	3.6	93,900	3.5
	Indonesia	1,015,539	5.1	12,400	3.9
	Timor-Leste	2,954,620	-8	5,400	–9.96
	Brunei Darussalam	12,128	1.3	76,900	-3.8
	Philippines	313,595	6.7	8,300	5.1
	Sri Lanka	87,175	3.1	19,100	2.0
	Maldives	3,4,597	8.8	15,500	6.7
	Bahrain	35,307	3.88	48,500	–0.81
Europe	Cyprus	21,652	3.9	37,000	3.5
	Iceland	23.909	7.2	49,200	6.1
	United Kingdom	2,622,434	1.8	44,100	1.1
	Ireland	333,731	7.8	75,500	6.5
	Malta	12,538	6.4	42,200	4.2
Africa	Cabo Verde	1,754	3.9	6,900	2.6
	Madagascar	11,500	4.2	1,600	1.4
	Seychelles	1,486	4.2	21,600	2.9
	Mauritius	13,338	3.8	20,400	3.7
	Comoros	649	2.5	1,600	0.2
	Sao Tome and Principe	391	3.9	3,200	1.6
Oceania	New Zealand	205,853	3.0	38,900	0.9
	Papua New Guinea	21,088,760	2.2)	3,700	0.14
	Solomon Islands	1,303	3.2	2,200	1.2
	Vanuatu	863	4.5	2,700	2.3
	Fiji	5,061	3.8	9,800	3.0
	Tonga	426	2.7	5,600	1.9
	Samoa	857	2.5	5,700	1.8
	Nauru	114	4.2	12,200	-0.4
	Micronesia, Fed. Sts.	336	2.0	3,400	1.4

Continent	Island Country	GDP 2017 in millions of USD (World Bank)	Growth rate of GDP % (World Bank)	GDP per capita 2017 in USD (CIA)	Growth rate of GDP per capita % (World Bank)
	Marshall Islands	199	2.5	3,400	2.4
	Kiribati	196	3.1	2,000	1.3
	Tuvalu	40	3.2	3,800	2.4
	Palau	292	-4	16,200	-5
	Cook Islands	–	–	16,700(2010)	–
	Niue	–	–	5,800 (2003)	–
Caribbean/	Cuba	87,132.8 (2015)	4.4 (2015)	12,300	–
Americas	Haiti	8,408	1.17	1,800	-0.1
	Dominican Republic	75,932	4.6	16,900	3.4
	Jamaica	14,768	0.5	9,200	0.2
	Bahamas, The	12,162	1.4	31,200	0.4
	St. Kitts and Nevis	946	1.7	26,800	0.8
	Antigua + Barbuda	1,532	3.3	26,300	2.3
	St. Vincent+Grenadines	790	1.6	11,500	1.4
	St. Lucia	1,712	2.7	14,400	2.2
	Grenada	1,119	3.7	14,900	3.2
	Barbados	4,797	1.7	18,700	1.4
	Trinidad and Tobago	22,105	-2.3	31,400	-2.6
	Dominica	563	-4.2	11,100	-4.7

TABLE 1.5: **Gross National Income (GNI) per Capita, 2017**

Continent	Island Country	Gross National Income per capita, Purchasing Power Parity (international $) (World Bank)
Asia	Japan	44,850
	Singapore	90,570
	Indonesia	11,900
	Timor-Leste	6,330
	Brunei Darussalam	83,760
	Philippines	10,030
	Sri Lanka	12,470
	Maldives	15,350
	Bahrain	42,930
Europe	Cyprus	33,610
	Iceland	53,280
	United Kingdom	42,560
	Ireland	61,910
	Malta	36,740
Africa	Cabo Verde	6,570
	Madagascar	1,510
	Seychelles	26,860
	Mauritius	22,570
	Comoros	1,570
	Sao Tome and Principe	3,370
Oceania	New Zealand	39,740
	Papua New Guinea	4,040
	Solomon Islands	2,270
	Vanuatu	3,170
	Fiji	9,090
	Tonga	6,050
	Samoa	6,390
	Nauru	17,960
	Micronesia, Fed. Sts.	4,210
	Marshall Islands	5,560
	Kiribati	3,850
	Tuvalu	5,780
	Palau	13,950

Continent	Island Country	Gross National Income per capita, Purchasing Power Parity (international $) (World Bank)
	Cook Islands	N/A
	Niue	N/A
Caribbean/	Cuba	18,630 (2011)
Americas	Haiti	1,830
	Dominican Republic	15,290
	Jamaica	8,690
	Bahamas, The	29,790
	St. Kitts and Nevis	26,300
	Antigua and Barbuda	22,980
	St. Vincent and the Grenadines	11,770
	St. Lucia	13,230
	Grenada	14,410
	Barbados	17,830
	Trinidad and Tobago	30,520
	Dominica	10,170

Gross National Income (or GNI) is a measure of the total value of all goods and services produced in a country (i.e., the GDP) plus all income received from other countries, including interest and dividends. Table 1.5 shows that developed island economies continue to exhibit very high GNI levels per capita (e.g., Singapore 90,570 USD, Brunei Darussalam 83,760 USD, Iceland 53,280 USD, and Ireland 61,910 USD). Although these island countries have increased their GNI per capita, most developing island countries, especially those in Oceania, still exhibit very low values. For example, the Solomon Islands, Madagascar, and the Comoros continue to have only one-tenth the GNI/capita as in the developed islands.

Caution needs to be exercised when interpreting these values. First, GNI does not account for income distribution across the population. A highly inequitable distribution of wealth may not be conducive to development. Furthermore, this variable does not account for 'income' earned informally, where cash or informal and reciprocal exchange is more prominent. This is especially the case in developing islands. Regardless, two patterns are apparent: on average, the GNI per capita appears to be much higher in the Americas/Caribbean than in Oceania. This could be attributed to the importance of tourism and financial services. The GNI levels for heavily populated islands in both regions with tourism-reliant Cuba (18,630 USD) and Trinidad and Tobago (30,520 USD) exhibit higher values compared to that of Papua New Guinea (4,040 USD). Another interesting comparison that reflects the importance of tourism is between the two island countries that share Hispaniola: Haiti and the Dominican Republic (DR). Haiti is one of the poorest countries in the Western Hemisphere and the GNI/capita bears this out, with a value of only 1,830 USD compared to the DR with a GNI/capita of 15,290 USD.

TABLE 1.6: **Labour Force, Participation Rate, and Unemployment Rate**

Continent	Island Country	Labour Force est. (2017)	Labour Force participation rate % (World Bank)	Unemployment Rates % est. (2017)
Asia	Japan	66,504,000	77	2.9
	Singapore	3,267,000	76	2.2
	Indonesia	127,111,000	68	5.6
	Timor-Leste	283,000	40	4.4
	Philippines	44,643,000	64	5.7
	Sri Lanka	8,725,000	58	4.5
	Maldives	220,000	69	2.9
	Bahrain	865,000	74	3.8
Europe	Cyprus	616,000	74	11.8
	Iceland	211,000	89	2.8
	United Kingdom	33,870,000	77	4.4
	Ireland	2,263,000	71	6.4
	Malta	217,000	69	4.4
Africa	Cabo Verde	230,000	63	9.0
	Madagascar	13,054,000	88	2.1
	Seychelles	39,560 (2006)	–	4.1
	Mauritius	606,000	66	6.9
	Comoros	211,000	44	6.5 (2014)
	Sao Tome + Principe	68,000	60	12.2
Oceania	New Zealand	2,662,000	80	4.9
	Papua New Guinea	3,696,000	71	2.5 (2014)
	Solomon Islands	267,000	72	NA
	Vanuatu	125,000	71	1.7 (1999)
	Fiji	377,000	61.5	5.5
	Tonga	41,000	61	1.1 (2011)
	Samoa	39,000	33	NA
	Cook Islands	5,774 (2011)	71 (2011)	8.2 (2011)
	Niue	663 (2001)	–	12 (2001)
Caribbean/	Cuba	5,249,000	65	2.2
Americas	Haiti	5,014,000	69	40.6

Continent	Island Country	Labour Force est. (2017)	Labour Force participation rate % (World Bank)	Unemployment Rates % est. (2017)
Caribbean/	Dominican Republic	5,081,000	71	5.5
Americas	Jamaica	1,502,000	73	10.4
	Bahamas, The	238,000	74	10.0
	St. Kitts and Nevis	18,170 (1995)	–	4.5 (1997)
	Antigua and Barbuda	30,000 (1991)	–	11 (2014)
	St. Vincent + Grenadines	58,000	75	18.8 (2008)
	St. Lucia	99,000	75	20 (2003)
	Grenada	59,900 (2013)	–	24.0
	Barbados	152,000	78	10.5
	Trinidad and Tobago	674,000	70	4.5
	Dominica	25,000 (2007)	–	23 (2014)

For most islanders and other analysts, labour force participation and the unemployment rates displayed in Table 1.6 are the most important economic variables due to their direct relevance of these indicators for the everyday lives of their populations. Table 1.6 for the 2018 Annual Report displays the overall labour force, labour force participation, and unemployment rates for the island countries listed. The rate of change in all three variables has seen a slight shift since the 2017 report, in that the unemployment rate, for the most part, has decreased while the labour force and labour force participation has seen a slight increase.

The labour force participation rate (LFPR) is a measure of those currently employed or actively looking for employment from among all those who could potentially be in the labour force. According to this measure, one of the healthiest island economies continues to be the island of Madagascar located off the east coast of Africa. Even though it faces socioeconomic and developmental challenges as suggested by other indicators throughout this report, it displays one of the highest LFPR at 88%. By contrast, the lowest labour force participation rates are in Timor-Leste (40%), Samoa (33%), and Comoros (44%).

Based on the unemployment rates in this table, several island countries are almost at full employment, such as Singapore (2.2%), Iceland (2.8%), Cuba (2.2%), and Madagascar (2.1%). Two major outliers in this category continue to be Haiti with an unemployment rate of 40% and Grenada with 24%. Together, both Caribbean islands have much higher levels of unemployment than any other island country listed. However, Grenada has seen a positive rate of change in this indicator by 9 percentage points from 33% in the 2017 report. However, this still occupies the second highest unemployment rate among the list of island countries.

TABLE 1.7: **Human Development Index, 2017**

Island Country	Island Country Ranking	World Ranking	Value
Ireland	1	4	0.938
Iceland	2	6	0.935
Singapore	3	9	0.932
United Kingdom	4	14	0.922
New Zealand	5	16	0.917
Japan	6	19	0.909
Malta	7	29	0.878
Cyprus	8	32	0.869
Brunei Darussalam	9	39	0.853
Bahrain	10	43	0.846
Bahamas	11	54	0.807
Barbados	12	58	0.800
Palau	13	60	0.798
Seychelles	14	62	0.797
Mauritius	15	65	0.790
Trinidad and Tobago	16	69	0.784
Antigua and Barbuda	17	70	0.780
St. Kitts and Nevis	18	72	0.778
Cuba	19	73	0.777
Grenada	20	75	0.772
Sri Lanka	21	76	0.770
St. Lucia	22	90	0.747
Fiji	23	92	0.741
Dominican Republic	24	94	0.736
Jamaica	25	97	0.732
Tonga	26	98	0.726
St. Vincent and the Grenadines	27	99	0.723
Maldives	28	101	0.717
Dominica	29	103	0.715
Samoa	30	104	0.713
Philippines	31	113	0.699
Indonesia	32	116	0.694
Cabo Verde	33	125	0.654

Island Country	Island Country Ranking	World Ranking	Value
Micronesia, Fed. States	34	131	0.627
Timor-Leste	35	132	0.625
Kiribati	36	134	0.612
Vanuatu	37	138	0.603
Sao Tome and Principe	38	143	0.589
Solomon Islands	39	152	0.546
Papua New Guinea	40	153	0.544
Madagascar	41	161	0.519
Comoros	42	165	0.503
Haiti	43	168	0.498

The Human Development Index is a composite indicator that incorporates variables across three dimensions: the economy (Gross National Income/capita), education (mean years of schooling), and health (Average Life Expectancy at birth). With a theoretical range of between 0 and 1, the higher the value, the greater the level of development of the population in that jurisdiction. Values greater than 0.800 are considered Very High (green rows), values between 0.700 and 0.799 are considered High (red rows), values between 0.550 and 0.699 are considered Medium (blue rows), and any value less than 0.550 is considered Low (brown rows). It is not uncommon for islands to score relatively high compared to mainland countries, especially in comparison to Gross Domestic Product by itself. As shown in Table 1.7, only five of the islands fall into the Low category: Papua New Guinea, Solomon Islands, Madagascar, Comoros, and Haiti. The remaining island countries continue to fall in the Very High or High Groups; this includes the new addition of Barbados in the High Human Development category. Not surprisingly, the island countries in the developed world are all in the Very High category. However, the top six island countries in this category have changed their World Ranking since 2017, with Singapore (9th), New Zealand (16th), and Japan (19th) dropping by between two and four positions. At the same time, Ireland (4th), Iceland (6th), and the United Kingdom (14th) have risen in their ranking by two to four positions.

The difference in value between the Very High category island countries and the five Low ranking ones can be attributed to their balance of trade, with the former recording trade surpluses and the latter trade deficits. An association exists between high human development indicators and trade liberalization which is magnified in the context of small islands with Singapore being the best example.

TABLE 1.8: **Consumer Price Index, Compared to Base Year of 2010**

Continent	Island Country	2010	2015	2016	2017
Asia	Japan	100	104	104	104
	Singapore	100	113	113	113
	Indonesia	100	132	137	142
	Timor-Leste	100	143	141	142
	Brunei Darussalam	100	100	102	99
	Philippines	100	116	120	120
	Sri Lanka	100	131	134	147
	Maldives	100	132	135	136
	Bahrain	100	111	114	115
Europe	Cyprus	100	102	100	101
	Iceland	100	118	120	122
	United Kingdom	100	112	113	116
	Ireland	100	105	105	105
	Malta	100	108	109	110
Africa	Cabo Verde	100	109	107	108
	Madagascar	100	140	149	161
	Seychelles	100	121	120	123
	Mauritius	100	120	121	125
	Comoros	100	98	–	–
	Sao Tome and Principe	100	154	162	172
Oceania	New Zealand	100	108	109	111
	Papua New Guinea	100	128	136	–
	Solomon Islands	100	125	126	126.54
	Vanuatu	100	107	108	–
	Fiji	100	116	121	125
	Tonga	100	110	113	–
	Samoa	100	108	110	112
Caribbean/	Haiti	100	139	158	181
Americas	Dominican Republic	100	123	124	129
	Jamaica	100	141	144	151
	Bahamas, The	100	110	109	111
	St. Kitts and Nevis	100	106	105	106

Continent	Island Country	2010	2015	2016	2017
Caribbean/ Americas	Antigua and Barbuda	100	110	110	112
	St. Vincent and Grenadines	100	105	105	107
	St. Lucia	100	111	108	108
	Grenada	100	104	106	107
	Barbados	100	117	119	124
	Trinidad and Tobago	100	134	138	140
	Dominica	100	103	103	103

The Consumer Price Index measures the cost of living in a jurisdiction and how it has changed. For the updated 2018 report, it continues to be useful to show how the cost of living has changed in a given place relative to a base year as it may be misleading to compare changes across different countries. In Table 1.8, the base year is 2010 and the values for 2015, 2017, and now 2018 suggest how much that cost of living has changed over five, seven, and now eight years respectively. For example, the cost of living in Japan increased by 4% from 2010 to 2015 and has remained the same from 2015 to 2016 and from 2016 to 2017. In 2018, island countries such as Sao Tome and Principe (72% from 62%), Haiti (81% from 58%), Jamaica (51% from 44%), and Madagascar (61%) continue to see very high levels of inflation in the cost of goods and services over the same seven-year period. However, most island countries continue to see very little change over this period (e.g., Cyprus, Ireland, Dominica).

FIGURE 1.2: **GINI Coefficients of National Incomes, Various Dates**

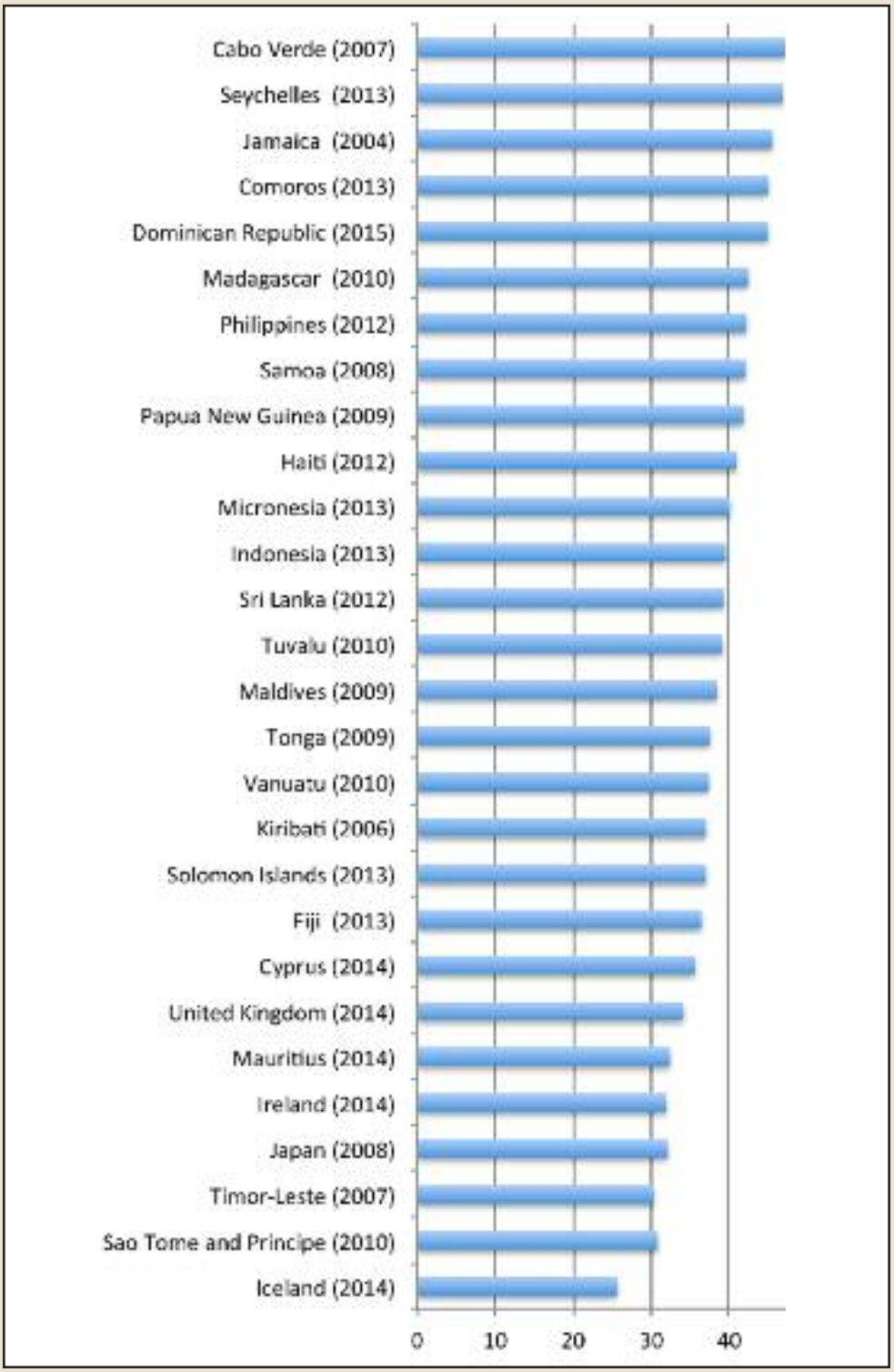


FIGURE 1.2 provides a list of island countries in accordance with their Gini Coefficients (GC). A Gini Coefficient measures the degree of equality in the distribution of income within a jurisdiction. If every household in a country had the same household income, the Gini Coefficient for that country would be 0.0. At the other (hypothetical) extreme, if all national income in a country was concentrated in one household, the Gini Coefficient for that place would be 1.0. In this Figure, the values have been multiplied by 100 so they range from 0 to 100. This measure is a useful complement to the Gross Domestic Product/capita and the Human Development Index because, unlike those other indicators, the GC measures the geographical or class distribution of a measure of well-being or wealth. Although in general this Figure shows a similar pattern among island countries, with the most developed islands having the most equal distributions of income, there are some exceptions. For example, the country of Timor-Leste, which shares the island of Timor with Indonesia, has one of the most equal distributions of income, while at the same time it continues to have a relatively low GDP/capita and a Medium to Low Human Development Index value. Part of the explanation for this anomaly may be the high proportion of the population living in rural areas. Sao Tome and Principe is another island country that also exhibits this trend. Both cases reinforce the view that a population that is primarily agrarian would be expected to have a more equal distribution of wealth.

TABLE 1.9: Foreign Direct Investment, Net Current, 2017 (in 100 million USD)

Continent	Island Country	2017 FDI Inflows	2017 FDI Outflows	Total FDI
Asia	Japan	10,430	160,449	170,879
	Singapore	62,006	24,682	86,688
	Indonesia	23,063	2,912	25,975
	Timor-Leste	7	0	7
	Philippines	9,524	1,614	11,138
	Sri Lanka	1,375	72	1,447
	Bahrain	519	229	748
Europe	Cyprus	6,343	1,332	7,675
	Iceland	-5	-85	-90
	United Kingdom	15,090	99,614	114,704
	Ireland	28,975	18,614	47,589
	Malta	3,185	-7,115	-3,930
Africa	Cabo Verde	109	-14	95
	Madagascar	389	-1	388
	Seychelles	192	6	198
	Mauritius	293	61	354
	Comoros	9	0	9
	Sao Tome + Principe	41	0	41
Oceania	New Zealand	3,572	582	4,154
	Papua New Guinea	-200	0	-200
	Solomon Islands	37	6	43
	Vanuatu	25	1	26
	Fiji	270	-23	247
	Tonga	14	1	15
	Samoa	9	0	0
	Micronesia, Fed. Sts.	0	0	0
	Marshall Islands	21	0	21
	Kiribati	1	0	1
	Tuvalu	0.3	0	0.3
	Palau	35	0	35
	Cook Islands	16	1,133	1,149
Caribbean/	Haiti	375	0	375
Americas	Dominican Republic	3,570	27	3,597
	Jamaica	888	43	931

Continent	Island Country	2017 FDI Inflows	2017 FDI Outflows	Total FDI
Caribbean/	Bahamas, The	928	132	1,060
Americas	St. Kitts and Nevis	127	0	127
	Antigua + Barbuda	61	2	63
	St. Vincent +Grenadines	87	5	92
	St. Lucia	92	22	114
	Grenada	79	0	79
	Barbados	286	-28	258
	Trinidad + Tobago	179	84	263
	Dominica	19	-4	15

Foreign Direct Investment (FDI) measures the inflows and outflows of investment capital to and from a jurisdiction. For the data in Table 1.9 from the United Nations Conference on Trade and Development (UNCTAD), FDI is defined as "an investment made to acquire lasting interest in enterprises operating outside of the economy of the investor." Inflows represent investments to companies in that jurisdiction while outflows are investments by a jurisdiction's companies elsewhere in the world. Both can vary considerably. This can be seen in the contrasts between two of the most successful island economies, Japan and Singapore. Japanese companies received about 10.4 billion USD in FDI (1 billion less than in 2016) but they send more than ten times that amount (160 billion USD) outside of the country. In comparison to 2016 levels, Japanese outflows have seen an increase of 15 billion USD. In contrast, Singapore receives approximately three times more in FDI (62.0 billion USD) than they send elsewhere (24.7 billion USD). Table 1.9 demonstrates that most island states receive more investment than they send. One such example is that of the FDI for the Indian Ocean island state of Seychelles in 2017, in which it received 192 million USD but sent out only 6 million USD. The total of inflows and outflows combined could be considered an indicator of the openness of an economy. Large developed capitalist islands such as Japan, the United Kingdom, and Ireland continue to have large total FDI values. Certain small islands such as Singapore that have built their economies on the basis of trade in financial services show a large total Foreign Direct Investment. Islands in the Caribbean/Americas tend to show a higher level of FDI flowing into their economies and a higher total FDI than do island countries in Oceania. For certain island economies that are very small in scale, such as Tuvalu and Micronesia, the level of FDI shows up as a zero.

TABLE 1.10: **Rankings and Scores of Globalization Index, 2015**

Island Country	GLOBALIZATION INDEX				Economic globalization	Social globalization	Political globalization
	Island country ranking	World ranking	Score	Change in World ranking 2014-15			
United Kingdom	1	8	87.23	–	77.58	88.05	97.82
Ireland	2	13	83.53	-11	86.19	88.12	76.27
Singapore	3	23	80.01	-3	92.47	80.63	66.98
New Zealand	4	32	75.00	-2	70.39	86.88	76.73
Malta	5	34	77.51	2	86.73	83.30	62.50
Japan	6	35	77.30	4	64.10	76.32	91.48
Cyprus	7	38	75.60	-24	74.93	85.82	66.05
Iceland	8	48	70.62	2	64.65	85.33	61.90
Mauritius	9	52	69.60	4	80.12	73.30	55.38
Bahrain	10	67	65.95	-24	74.05	71.45	52.84
Jamaica	11	72	64.36	13	56.89	67.71	68.62
Philippines	12	74	64.08	14	48.20	59.27	84.76
Trinidad and Tobago	13	75	63.73	-7	62.37	70.49	58.62
Seychelles	14	77	63.29	3	77.64	72.82	39.80
Brunei Darussalam	15	82	62.15	-30	64.59	75.48	48.27
Indonesia	16	83	62.04	-1	44.23	52.91	88.97
Dominican Republic	17	86	61.52	-27	56.00	64.90	63.67
Barbados	18	93	59.94	–	52.03	81.26	47.49
Cuba	19	98	59.24	36	–	52.58	69.79
Fiji	20	102	56.76	-16	48.94	67.91	52.99
Antigua and Barbuda	21	105	56.38	15	66.86	70.61	35.67
Sri Lanka	22	112	54.45	-2	33.74	49.95	49.95
St. Lucia	23	115	53.87	33	57.55	68.44	38.40
Papua New Guinea	24	116	53.68	22	62.47	41.15	57.91
Grenada	25	119	30.0	-17	47.29	68.92	44.60
Timor-Leste	26	125	52.70	33	74.97	53.75	34.70
Dominica	27	127	52.59	37	55.76	70.41	35.13
Samoa	28	132	51.35	17	51.49	70.89	32.71
Cape Verde	29	137	50.81	-4	50.50	65.46	38.27
Maldives	30	138	50.65	18	67.68	68.95	22.24
Vanuatu	31	139	50.56	–	65.00	60.68	32.34

Island Country	GLOBALIZATION INDEX				Economic globalization	Social globalization	Political globalization
	Island country ranking	World ranking	Score	Change in World ranking 2014-15			
St. Vincent + Grenadines	32	141	50.11	31	48.52	73.32	31.43
Bahamas	33	145	48.23	-49	37.54	73.03	33.87
Palau	34	149	47.91	-9	–	80.33	12.44
Haiti	35	150	47.33	19	52.94	40.20	48.98
Tonga	36	151	47.12	31	54.76	66.43	25.52
Madagascar	37	153	46.78	–	38.57	38.29	63.49
Marshall Islands	38	156	45.74	46	–	72.33	12.77
Micronesia	39	157	45.66	33	–	62.44	13.97
St. Kitts and Nevis	40	161	45.47	10	52.22	71.21	20.17
Kiribati	41	165	44.56	9	72.97	57.44	15.08
Sao Tome and Principe	42	166	44.37	21	57.61	57.17	23.78
Solomon Islands	43	177	40.97	17	50.41	55.07	20.88
Comoros	44	179	40.20	10	39.87	47.74	34.25

The Globalization Index in Table 1.10 is a composite indicator of the openness of an economy compiled by the KOF Swiss Economic Institute. It incorporates three dimensions: the economic (extent of cross-border trade and investment and revenue flows in relation to a country's GDP, as well as the impact of restrictions on trade and capital transactions); social (cross-border flows of information, people, access to the Internet, the presence of major global corporations); and political (numbers of embassies, international organizations to which a country belongs, United Nations peacekeeping missions, and bilateral/multilateral agreements signed since 1945). The Western capitalist island countries tend to be ranked the highest on this list across all three dimensions. However, since the 2017 report, there have been changes—albeit minimal—in the ranking of most of these developed island economies. For example, the United Kingdom has replaced Ireland as the top-ranking country across all three dimensions with the latter dropping to second place. Bahrain and Cyprus have both dropped in world ranking by 24 places each. Brunei Darussalam has dropped in ranking by 30 places from 52nd in 2017 to 82nd in 2018. An interesting development in Table 1.10 has occurred in those places where the value of one of the component scores is much higher or lower than one would expect from the overall score. For example, although Singapore and Bahrain continue to be very open economically and socially,

their political globalization scores are low. Furthermore, Cuba, Papua New Guinea, and Madagascar score relatively higher on the political openness dimension compared to their overall score.

Constructed by the World Intellectual Property Organization (WIPO), the Global Innovation Index in Table 1.11 measures the innovation performance of countries across seven dimensions and multiple variables. Five of those dimensions represent inputs to innovation, including institutions/environment (regulatory, political, business), human capital and research (education; research and development), infrastructure, market sophistication (credit and investment climate), and business sophistication (knowledge workers and innovation linkages). The remaining two dimensions are measures of innovation outputs, such as knowledge and technology (e.g., patents, new businesses) and creativity (e.g., trademarks, printing and publishing, online creativity). The rankings and scores have changed little from the previous Report's figures. It continues to show a greater divide between the island countries in the developed world, with islands in the North Atlantic/Mediterranean having higher values than island countries elsewhere in the world. The final Efficiency Ratio column is simply a ratio of the Output Sub-Index over the Input Sub-Index; it represents a surrogate measure of how effective those jurisdictions use their inputs. On this measure, Ireland, Iceland, and Malta continue to be more efficient than places that have more innovative capacities.

TABLE 1.11: **Global Innovation Index, 2018**

Island Country	Global Innovation Index				Innovation Output Sub-Index		Innovation Input Sub-Index		Efficiency Ratio	
	Island country ranking	World ranking	Score	Change in World ranking 2017-18	World ranking	Score	World ranking	Score	World ranking	Score
United Kingdom	1	4	60.10	1	6	52.37	4	67.89	21	0.77
Singapore	2	5	59.8	2	15	45.43	1	74.23	63	0.61
Ireland	3	10	57.20	–	9	51.25	18	63.14	13	0.81
Japan	4	13	55.00	1	18	44.49	12	65.41	44	0.68
New Zealand	5	22	51.30	-1	30	39.17	15	63.41	59	0.62
Iceland	6	23	51.24	–	19	44.3	22	58.22	23	0.76
Malta	7	26	50.3	–	14	45.84	28	54.74	7	0.84
Cyprus	8	29	47.80	1	22	42.30	33	53.36	18	0.79
Brunei Darussalam	9	67	32.80	4	112	15.63	37	50.05	124	0.31
Bahrain	10	72	31.70	-5	74	22.41	70	41.05	84	0.55
Philippines	11	73	31.60	–	68	24.00	82	34.14	62	0.61
Mauritius	12	75	31.30	-11	89	19.40	61	42.72	105	0.47
Jamaica	13	81	39.40	3	76	22.03	83	38.75	80	0.57
Indonesia	14	2	29.8	2	73	22.47	90	37.12	66	0.61
Dominican Republic	15	87	29.30	-8	77	21.9	92	36.77	71	0.60
Sri Lanka	16	88	28.70	2	80	21.06	95	36.26	78	0.58
Madagascar	17	111	24.80	5	85	20.21	119	29.30	40	0.69

TABLE 1.12: **Quality of Port Infrastructure, WEF, 2017**

Continent	Island Country	2017 Quality of Port Infrastructure
Asia	Japan	5.3
	Singapore	6.7
	Indonesia	4.0
	Timor-Leste	2.4
	Brunei Darussalam	3.9
	Phillippines	2.9
	Sri Lanka	4.5
	Maldives	–
	Bahrain	5.1
Europe	Cyprus	4.6
	Iceland	5.9
	United Kingdom	5.5
	Ireland	5.1
	Malta	5.3
Africa	Cape Verde	3.6
	Madagascar	3.6
	Seychelles	4.5
	Mauritius	4.2
	Comoros	–
	Sao Tome et Principe	–
Oceania	New Zealand	5.5
	Papua New Guinea	–
	Solomon Islands	–
	Vanuatu	–
	Fiji	–
	Tonga	–
	Samoa	–
	Nauru	–
	Micronesia, Fed. Sts.	–
	Marshall Islands	–
	Kiribati	–
	Tuvalu	–
	Palau	–
	Cook Islands	–
	Niue	–

Continent	Island Country	2017 Quality of Port Infrastructure
Caribbean/ Americas	Haiti	2.6
	Dominican Republic	4.8
	Jamaica	4.9
	Bahamas, The	–
	St. Kitts and Nevis	–
	Antigua and Barbuda	–
	St. Vincent and the Grenadines	–
	St. Lucia	–
	Grenada	–
	Barbados	5.6
	Trinidad and Tobago	3.8
	Dominica	–

Note: WEF is an abbreviation for the World Economic Forum's Global Competitiveness Report.

Given the emphasis of this year's Report on the island marine economy and trade, we felt it was important to provide several additional data files to complement these themes. These include the role and significance of international trade as a share of island states' economies and an assessment of the quality of island seaport infrastructure. This last characteristic is provided in Table 1.12 as part of the World Economic Forum's Global Competitiveness Report. The values in the table range from one to seven, where one suggests that the island state's ports are "extremely underdeveloped" and seven is associated with countries whose ports are "well developed and efficient." Although the data is missing for many of the islands' ports that are part of this Report, those that are listed show a wide variation in this assessment of their quality. The ports with the best ratings are in Singapore, with a value of 6.7. Given the importance of international trade to this small island state, this should not come as a surprise. At the other extreme in these ratings are Timor-Leste located on the eastern end of the island of Timor in Southeast Asia (with a rating of 2.4) and, at 2.6, the other "divided" island state of Haiti on the Caribbean island of Hispaniola. Unlike some of the other economic development indicators referred to earlier, there does not seem to be any world regional pattern to the quality of port infrastructure. However, in general, higher rankings here are linked to islands that have a high level of trade dependency (Tables 1.13 and 1.14), which may, arguably, lead to higher rates of human development (Table 1.7). Ireland, Iceland, and Malta, for example, are small island states (SIS) that have high levels of human development, very open and trade-dependent economies, while having well developed port infrastructures.

TABLE 1.13: Imports and Exports of Goods and Services (% of GDP) in 2010, 2016

Continent	Island Country	2010 Imports %	2010 Exports %	2016 Imports %	2016 Exports %
Asia	Japan	13.58	15.04	–	–
	Singapore	173.70	199.75	146.27	172.15
	Indonesia	22.40	24.30	18.31	19.08
	Timor-Leste	114.74	9.86	–	–
	Brunei Darussalam	27.96	67.41	37.38	46.04
	Philippines	36.62	34.80	36.93	27.97
	Sri Lanka	26.81	19.55	29.08	21.44
	Maldives	72.88	86.40	89.03	93.76
	Bahrain	50.94	69.54	–	–
Europe	Cyprus	57.48	50.21	62.43	62.02
	Iceland	43.47	53.67	42.55	49.10
	United Kingdom	30.97	28.26	29.99	28.09
	Ireland	86.72	103.39	96.74	119.93
	Malta	154.17	153.26	129.50	141.43
Africa	Cape Verde	61.77	32.67	–	–
	Madagascar	43.05	24.97	35.60	32.50
	Seychelles	108.08	93.80	–	–
	Mauritius	62.22	51.24	–	–
	Comoros	51.68	16.48	47.40	17.30
	Sao Tome et Principe	–	–	–	–
Oceania	New Zealand	27.97	30.26	–	–
	Papua New Guinea	–	–	–	–
	Solomon Islands	82.31	50.04	–	–
	Vanuatu	52.74	46.63	–	–
	Fiji	63.89	57.84	–	–
	Tonga	60.25	13.31	–	–
	Samoa	53.12	29.22	49.88	29.35
	Palau	75.34	52.05	–	–
	Kiribati	79.89	13.32	101.04	11.70
Caribbean/	Haiti	–	–	–	–
Americas	Dominican Republic	33.26	22.65	28.90	25.17
	Jamaica	49.59	31.34	47.25	31.13
	Bahamas, The	49.24	40.75	44.03	40.39

Continent	Island Country	2010 Imports %	2010 Exports %	2016 Imports %	2016 Exports %
Caribbean/ Americas	St. Kitts and Nevis	52.10	30.10	60.75	43.91
	Antigua and Barbuda	59.14	45.63	47.39	42.72
	St. Vincent + Grenadines	57.13	26.89	51.08	25.70
	St. Lucia	63.41	49.03	53.17	47.77
	Grenada	49.23	23.83	41.85	23.71
	Barbados	50.37	46.20	–	–
	Trinidad and Tobago	31.10	54.67	50.67	48.14
	Dominica	53.57	35.57	54.93	41.54

There is a pervasive notion that small islands are isolated and disconnected from the world economy. Although the total volume of trade to and from small islands may be small as a share of world trade, Tables 1.13 and 1.14 reveal that trade, and therefore the degree to which small island states are economically connected to the rest of the world, is extremely important to many of these places. The Organization for Cooperation and Development (OECD) defines trade openness as a percentage of Gross Domestic Product (GDP); or the degree to which international trade constitutes a share of an economy as determined by the aggregate sum of imports and exports. By measuring the value of imports and exports combined as a share of the total GDP in 2010 and 2016, Table 1.13 represents one indicator of the overall importance of trade (imports and exports) to these island countries. This Table shows that almost one-third of the island countries listed with data in 2016 had their value of trade that was greater than their total Gross Domestic Product. In addition to the obvious example of Singapore, several smaller island archipelagos such as the Maldives, Kiribati, and St. Kitts and Nevis were also highly trade-dependent. Ireland and Malta are interesting examples of 'gateway' trading islands, with a high percentage of imports and exports flowing to and from other European Union members. This high dependence on international trade makes these island jurisdictions particularly vulnerable to fluctuations in the larger global economy.

From this same Table, the least trade-dependent island countries tend to be those that have a larger internal economy, such as Japan, the United Kingdom, Indonesia, and the Philippines. This is not to say that these are not major international trading nations; in absolute terms they have extensive trade relationships. It is just that this international trade is overshadowed by the even larger internal production and consumption of goods and services. To put this into the context of populations, Singapore

TABLE 1.14: **Trade (% of GDP) in 2010, 2016**

Continent	Island Country	2010	2016
Asia	Japan	28.61	–
	Singapore	373.44	318.42
	Indonesia	46.70	37.39
	Timor Leste	124.60	–
	Brunei	95.37	83.43
	Philippines	71.42	64.90
	Sri Lanka	46.36	50.52
	Maldives	159.28	182.80
	Bahrain	120.47	–
Europe	Cyprus	107.69	124.45
	Iceland	97.14	91.65
	United Kingdom	59.22	58.08
	Ireland	190.11	216.67
	Malta	307.42	270.93
Africa	Cape Verde	94.44	–
	Madagascar	68.02	68.10
	Seychelles	201.88	–
	Mauritius	113.46	–
	Comoros	68.16	64.70
	Sao Tome et Principe	–	–
Oceania	New Zealand	58.23	–
	Papua New Guinea	–	–
	Solomon Islands	132.35	–
	Vanuatu	99.37	–
	Fiji	121.73	–
	Tonga	73.56	–
	Samoa	82.34	79.23
	Palau	127.39	–
	Kiribati	93.21	112.74
Caribbean/ Americas	Haiti	–	–
	Dominican Republic	55.91	54.07
	Jamaica	80.92	78.38

Continent	Island Country	2010	2016
Caribbean/ Americas	Bahamas, The	89.99	84.41
	St. Kitts and Nevis	82.20	104.66
	Antigua and Barbuda	104.78	90.10
	St. Vincent and the Grenadines	84.02	76.78
	St. Lucia	112.43	100.93
	Grenada	73.06	65.56
	Barbados	96.58	–
	Trinidad and Tobago	85.76	98.82
	Dominica	89.13	96.47

has a population of 5.9 million (Table 1.1) whereas Japan's population of 121 million is ten times greater. Given that figures are provided for 2010 and 2016, it is useful to ask if there has been any systematic change in the degree of trade dependence over this six-year period. In fact, there has not been much change. Of the 25 island states with data available from both dates, there has been virtually no change in the mean share of trade as a percent of GDP. In 2010 it was 108.8% of GDP and in 2016 it had declined only slightly to 106.7% of GDP. Although these mean values could be influenced by extreme outliers, in 2010 there does not seem to be any systematic trends taking place between these two points in time.

In Table 1.14 we take the total imports and exports from Table 1.13 and disaggregate them into their two component parts. This allows us to distinguish between four groups: 1) those places with a relatively even balance between imports and exports and a high level of trade dependence; 2) those that are balanced but with a low share of trade as a proportion of their overall economies; 3) those where imports are relatively much more important than exports; and, finally, 4) those where exports are significantly more important than imports. The "balanced high trade" group is roughly the same group as identified in Table 1.13 as highly trade-dependent overall. This includes Singapore, Malta, and Ireland. Although we do not have 2016 numbers, we should include the Seychelles in this group based on their 2010 data. Those in the second "balanced low trade" group, including Japan, the UK, and Indonesia, also correspond with the low overall trade percentage group from 1.13. They are joined by the Dominican Republic (28.9% imports; 25.2% imports).

Perhaps more interesting are those places where either imports or exports differ significantly. In the Comoros, Samoa, Timor-Leste, Cape Verde, Kiribati, St. Vincent &

the Grenadines, and Grenada, imports greatly exceed exports as a share of total GDP. Many of these small island countries generate significant international cash from either resource exports or international tourism and, because of either an absence of domestic producers or a preference for international suppliers, this produces a trade imbalance that favours imports. Although conceptually we need to include the last category—i.e., those places where there is a trade imbalance that favours exports over imports—other than perhaps Brunei Darussalam there are no examples among those listed where they are relatively oriented towards exports over imports. This tells us that, no matter how well connected they are with the rest of the world, most island states have relatively small economies specializing in fewer, low-value goods and services that are unlikely to generate a positive balance of payments, especially when compared to the imports of high-value good and services.

SECTION 2: SUBNATIONAL ISLAND JURISDICTIONS

Although most attention has focused on island states, there are many more 'quasi-independent' island jurisdictions that are just as important as the independent island countries. Sometimes called subnational island jurisdictions (SNIJs), it is often difficult to categorize these places. They include islands that are fairly autonomous within a larger federation/country, such as the state of Hawai'i in the United States, Hainan in China, Prince Edward Island in Canada, and Tasmania in Australia. SNIJs may also include territories, dependencies, or autonomous regions that are remnants of a colonial past, such as Martinique, Guadeloupe and French Polynesia (France), the British Virgin Islands, Cayman Islands, and Anguilla (United Kingdom), Greenland (Denmark), the Azores (Portugal), and the Canary Islands (Spain). Some of them have a more recent colonial strategic relationship, such as the American territories of Guam, American Samoa, Puerto Rico, and the US Virgin Islands. And they also include oddities, such as the United Kingdom's distant and tiny Pitcairn Island, the home of the descendants of the British ship HMS *Bounty* mutineers, or the Isle of Man and the Channel Islands of Guernsey and Jersey that are much closer to mainland France than they are to Britain. In the Pacific, the Cook Islands and Niue are jurisdictions 'in free association' with the unlikely neo-colonial country of New Zealand, and Åland, an island archipelago in the Baltic Sea, is an autonomous region of Finland whose citizens identify much more with Sweden culturally and linguistically than they do with Finland. Stuart (2009) and her colleagues list a total of 116 of these SNIJs that cross all of these categories.

These islands tend to receive less attention than island states because their collective voice internationally is subsumed within the larger federal or state entities of which they are a part. For the same reason, data on these politically semiautonomous island jurisdictions are more difficult to obtain and are less comparable among

the various islands. However, this does not diminish their importance and the need to describe their economic and demographic characteristics. This next section represents a modest attempt to describe some of the most important features of a selection of these islands using data that are provided primarily by the national or regional island governments of which they are a part. Several of these islands, including Bali, Gotland, Hawai'i, Jeju, Phuket, and Prince Edward Island, are sister islands of Hainan province.

As seen in Table 1.15, SNIJ's exhibit a diversity similar to that of Small Island States. At one extreme is Greenland, the largest island and SNIJ in the world at roughly 2.2 million km^2. It occupies the designation of "autonomous constituent country" within the Kingdom of Denmark. In the case of island studies as a discipline, it is important to note that the real extent of places may not be reflected in larger populations, larger economies, or the overall carrying capacity of a jurisdiction. For example, Greenland's population of over 56,000 is concentrated primarily in the capital of Nuuk and other small fishing outports along the coast with virtually no population in the interior ice sheet.

TABLE 1.15: **Area of island, in km^2 (Subnational)**

Bali, Indonesia	5,780
Gotland, Sweden	3,184
Greenland, Denmark	2,166,000
Hainan Island, China	35,400
Hawai'i, USA	28,311
Java, Indonesia	128,297
Jeju, South Korea	1,849
Luzon, Philippines	104,688
Okinawa, Japan	1,207
Phuket, Thailand	576
Prince Edward Island, Canada	5,660
Taiwan, China	36,193
Tasmania, Australia	68,401

At the other extreme is the tourist-dependent island province of Phuket, in the Thailand archipelago. It is only 576 km^2 in size but contains almost seven times the population of Greenland. These land areas do not include the marine Exclusive Economic Zones (EEZ). As with island states, these EEZs for SNIJs are often many times larger than their land areas. Yet, the difference between those affiliated with SNIJs and those of island states is based in jurisdiction. Decision-making and management control over the resources within these marine waters may be ambiguous and partly shared with the larger federal or national government.

TABLE 1.16: **Population Characteristics (Subnational)**

	Year	Population	Population Density people/km²	Population Growth Rate % over 1 year
Bali, Indonesia	2014	4,225,000	730	2.15
Gotland, Sweden	2017	58,595	18.5	1.10
Greenland, Denmark	2017	56,171	0.14	-0.03
Hainan Island, China	2016	9,171,300	260	1.07
Hawai'i, USA	2017	1,427,538	50.57	0.24
Java, Indonesia	2015	141,300,000	1,136	1.01
Jeju, South Korea	2016	661,190	357.6	3.02
Luzon, Philippines	2015	53,336,134	480	1.95
Okinawa, Japan	2015	1,434,138	1,206.20	3.00
Phuket, Thailand	2017	537,900	990.6	0.34
Prince Edward Island, Canada	2018	153,244	25.1	1.80
Taiwan, China	2018	23,716,146	669	3.00
Tasmania, Australia	2017	519,166	7.70	0.13

Although the population of several of these SNIJs was alluded to above, Tables 1.16 to 1.18 provide a more complete description of the population and demographic characteristics of the 13 SNIJs listed. In Table 1.13, the populations of islands such as Java, Indonesia (141 million), Luzon, Philippines (53 million), Taiwan (23.7 million), and Hainan (9.2 million) show that several of these islands are not only among the most populous islands in the world, but they are also among the largest jurisdictions in the world.

Even though some SNIJs such as Gotland, Sweden, and Greenland, Denmark, may have similar populations, their respective population densities of 18.5 and 0.14 persons per km² reflect differences in their economies. As noted earlier, Greenland's economy is still based primarily on fishing and seafood processing with populations hugging the coastline. On the other hand, Gotland's population is more evenly distributed and is based on agricultural activities and tourism.

High population densities in places such as Phuket, Luzon, Okinawa, Java, and Bali also reflect a high degree of urbanization. Many of these densely populated island jurisdictions are also among the fastest-growing places. For example, Okinawa, Jeju, and Taiwan have all experienced a one-year population growth of approximately 3%.

TABLE 1.17: **Birth and Death Rates (Subnational)**

	Year	Crude Birth x / 1,000 people	Crude Death x 1,000 people	Fertility Rate x 1,000 people	
Bali, Indonesia	2010	–	–	2.13	
Gotland, Sweden	2016	8.80	11.10	1.90	(Sweden)
Greenland, Denmark	2016	14.80	8.70	2.00	
Hainan Island, China	2016	14.57	6.00	1.50	
Hawai'i, USA	2016	12.60	7.70	1.97	
Java, Indonesia	2014	17.04	6.34	2.18	(Indonesia)
Jeju, South Korea	2013	9.10	5.70	1.43	
Luzon, Philippines	2015	21.30	5.50	2.60	
Okinawa, Japan	2013	–	7.74	1.94	
Phuket, Thailand	2012	25.18	4.71	–	
Prince Edward Island, Canada	2015	8.90	9.00	1.63	
Taiwan, China	2018	–	–	1.13	
Tasmania, Australia	2016	12.00	8.90	1.90	

Populations can increase when in-migration exceeds outmigration and when birth rates exceed death rates. Although the data are not available for all of these subnational island jurisdictions, Table 1.17 shows that birth rates are much higher than death rates in several of these islands. For example, the difference between Phuket's birth rate of 25.18/1,000 population and death rate of 4.71/1,000 means that the natural rate of increase was greater than 20/1,000. Similar large differences in birth and death rates are apparent in Luzon and Java. The birth and death rates on islands such as Prince Edward Island, Canada, are almost identical, suggesting that the population is neither increasing nor decreasing as a result of natural demographic change.

TABLE 1.18: Life Expectancy, by Gender (Subnational)

	Year	Life Expectancy (females, in years)	Life Expectancy (males, in years)	
Bali, Indonesia	–	–	–	
Gotland, Sweden	2016	83.1	79.90	
Greenland, Denmark	2017est	75.5	69.90	
Hainan Island, China	2010	80.01	73.20	
Hawai'i, USA	2014	84.72	78.00	
Java, Indonesia	–	–	–	
Jeju, South Korea	–	–	–	
Luzon, Philippines	2010	75.4	68.70	
Okinawa, Japan	2016	87.02	79.40	
Phuket, Thailand	2016	79	72.00	(Thailand)
Prince Edward Island, Canada	2015	83.2	78.60	
Taiwan, China	2017	83.6	77.10	
Tasmania, Australia	2015	82.5	78.80	

Life expectancy is not only a characteristic of the demographics of a jurisdiction, it also reflects the health system and infrastructure of the place in question. Table 1.18 shows that Okinawa, Japan, has the highest female life expectancy at just over 87 years, and the second-highest male life expectancy at 79.4 years of age. Unlike many of the economic indicators, life expectancies only show modest differences between islands in the developed and developing worlds. The lowest life expectancies for both males and females continues to be in Luzon, Philippines, followed closely by Greenland.

TABLE 1.19: Rural and Urban (Subnational)

	Year	Rural Population %	Urban Population %	
Bali, Indonesia	2013	5.7	94.3	
Gotland, Sweden	2016	59	41	
Greenland, Denmark	2017	13	87	
Hainan Island, China	2010	50.3	49.7	
Hawai'i, USA	2014	8.1	91.9	
Java, Indonesia	2018	44.7	55.3	(Indonesia)
Jeju, South Korea	2016	5	95	
Luzon, Philippines	2010	54.7	45.3	(Philippines)
Okinawa, Japan	2016	20	80	
Phuket, Thailand	2017	82	18	
Prince Edward Island, Canada	2016	60	40	
Taiwan, China	2018	22	78	
Tasmania, Australia	2008	20	80	

The percentages of the SNIJ populations living in rural and urban areas (Table 1.19) continues to mirror those of the island states (Table 1.3). The economies of many of the SNIJs in this sample are agricultural and this is reflected in a larger proportion of the population living in rural areas. For example, Bali, Java, and Prince Edward Island all have populations that are at least 60% rural. Some of the islands are highly urbanized with a vast majority of residents living in built-up urban areas. For example, in Hawai'i, US, more than 90% of the population lives in urban centres and in Tasmania, Australia, 80% of the population lives in cities.

TABLE 1.20: **Labour Force Characteristics (Subnational)**

	Year	Labour Force	Labour Force Participation Rate %	Unemployment Rate %
Bali, Indonesia	–	–	–	–
Gotland, Sweden	2016	27,000	47.00	6.4
Greenland, Denmark	2015	26,840	47.70	9.10
Hainan Island, China	2016	5,581,400	61.00	2.40
Hawai'i, USA	2016	688,900	97.00	2.20
Java, Indonesia	–	–	–	–
Jeju, South Korea	2016	–	67.00	–
Luzon, Philippines	2015	–	–	–
Okinawa, Japan	2010	650,307	89.00	5.10
Phuket, Thailand	2013	167,883	–	0.50
Prince Edward Island, Canada	2017	81,700	66.00	9.80
Taiwan, China	2018	11,454,000	59.03	3.70
Tasmania, Australia	2015	259,200	61.60	6.50

The total labour force (Table 1.20) is usually a surrogate indicator for population. Labour force participation rates may be defined differently in different jurisdictions, but they are normally a measure of those currently employed or actively looking for a job as a share of the total employable working-age population. A low participation rate is a warning of potential problems in the economy. Despite the missing data, the highest labour force participation rates continue to be in Hawai'i at 97% and Okinawa at 89%. When this indicator is combined with the unemployment rate, you have a more complete picture of employment. Some jurisdictions are experiencing full employment, a situation that may be less than 100% due to job mobility and seasonality of jobs. Phuket is reporting an unemployment rate of only 0.5% and several others (e.g., Hainan at 2.4% and Hawai'i at 2.2%) are also close to full employment status.

TABLE 1.21: Gross Domestic Product (Subnational)

	Year	Gross Domestic Product (GDP) in USD	GDP per capita in USD
Bali, Indonesia	2010	4,935,104,252	1,268
Gotland, Sweden	2012	2,345,180,970	41,194
Greenland, Denmark	2015	2,200,000,000	39,569
Hainan Island, China	2016	62,277,364,980	6,814
Hawai'i, USA	2016	73,252,000,000	51,577
Java, Indonesia	2010	310,473,486,174	1,127
Jeju, South Korea	2013	11,933,295,920	41,172
Luzon, Philippines	2012	154,051,608	2,227
Okinawa, Japan	2011	33,855,556,720	23,867
Phuket, Thailand	2009	1,880,512,500	5,695
Prince Edward Island, Canada	2017	4,883,000,000	22,358
Taiwan, China	2017	579,300,000,000	24,577
Tasmania, Australia	2016	22,000,884,000	42,382

As was the case with population, the total value of the goods and services produced on these SNIJs—namely, the Gross Domestic Product—is considerable and highly variable. For example, Taiwan had a GDP of 579 billion USD in 2017. If this was compared to the GDP on island states (Table 1.4), it would be the fourth-largest island economy, behind only Japan, the United Kingdom, and Indonesia. The smallest economies from this group at approximately 2 billion USD are Phuket, Greenland, and Gotland. This makes the economies of these SNIJs still larger than 20 of the island state economies listed in Table 1.4. Although it does not account for the purchasing power of this income, the GDP per capita for these subnational islands shows a similar level of variation as in island states. The 'wealthier' islands of Tasmania, Gotland, and Jeju have per capita Gross Domestic Products that are more than 20 times greater than in Bali, Java, and Luzon.

CONCLUSIONS

The data presented in this chapter show that the economies and societies of island states and subnational island jurisdictions are both substantial and highly differentiated. Some are among the most populous and economically robust jurisdictions in the world, while others are small in size, in numbers of people, and in the scale of their formal economies. As is the case with mainland jurisdictions, we should not be surprised to find the challenges and accomplishments of islands to be very contextual. The openness and innovation of some island economies also rivals those of mainland states. For example, Singapore is ranked first in the world in innovation input (Table 1.11) and Ireland is the third most 'globalized' world jurisdiction (Table 1.11). Some islands are among the most important sources of international investment capital (e.g., Japan), while companies in places like Indonesia and Cyprus are much more likely to receive capital investment than send it elsewhere (both from Table 1.9).

This discussion of the status of island economies would not be complete without a comment on the availability, accuracy, and comparability of data. The contributors to this Annual Report are among the leading experts on island economic change and free trade and they take care and attention that their analyses and conclusions are evidence-based. Moreover, the confidence we place in national and international policy decisions is also dependent on the accuracy of the data. It could be argued that the economic and demographic data on island states is relatively accurate and comparable to the data available for mainland jurisdictions. Even so, it is not unusual to find that data for the smallest island states can be outdated and unreliable. This is even more problematic with composite indicators such as the Globalization and Innovation indices, where multiple variables are bundled into aggregate measures. The data challenges are magnified when we turn our attention to the many subnational island jurisdictions. As suggested from the tables in this chapter, it is not uncommon for even basic data on the population and the economies of these places to be outdated or missing. Since the statistics for these places are normally compiled by individual national governments, there may also be problems associated with the comparability of the data that does exist. The CIA World Factbook and the United Nations may provide basic economic data on a small subset of SNIJs, but this set of islands rarely includes island provinces or states such as Hainan, Hawai'i, or the Åland Islands that are part of larger mainland federations. Researchers are thus forced to undertake their research and draw conclusions using subsets of places for which they are more confident of the accuracy of the data. If we truly wish to understand island economies and implement effective policy, we must pursue a coordinated approach at a global scale to compile the data that at least rivals that available for non-island states.

SOURCES AND NOTES FOR TABLES AND FIGURES

Table 1.1:
Population and Population Growth rates are from the CIA World Factbook; Population density is from the World Bank (data.world- bank.org/indicator/en.PoP.dnst). A dashed line in a cell (-) indicates missing values.

Table 1.2:
From the CIA World Factbook, various links (www.cia.gov/library/publications/the-world-factbook/). No information was available for Niue.

Table 1.3:
From the CIA World Factbook.

Figure 1.1:
Averages based on the data provided in Table 1.3.

Table 1.4:
From the CIA World Factbook (www.cia.gov/library/publications/the-world-factbook/rankorder/2001rank.html) and the World Bank (data.worldbank.org/indicator/nY.GdP.mKtP.cd).

Table 1.5:
From the World Bank.

Table 1.6:
Data on the labour force and the labour force participation rate are from the World Bank. The unemployment rates are from the CIA World Factbook. Values listed may not necessarily correspond to the data from these sources because the latter are updated when new information is available.
Data for the Cook Islands is from the Ministry of Finance & Economic Management, Government of the Cook Islands, 'Economic activity and Labour Force 2015' (www.mfem.gov.ck/statistics/census-and-surveys/economic-activity-and-labour-force).

Table 1.7:
From the United Nations Development Program (UNDP)
(http://www.hdr.undp.org/sites/default/files/2018_human_development_statistical_update.pdf).

Table 1.8:
From the World Bank. Blank cells indicate that the values have not been updated since 2015.

Figure 1.2:
From the Development Research Group, World Bank (data.worldbank.org/indicator/si.PoV.Gini).

Table 1.9:
From the World Investment Report 2018, United Nations Conference on Trade and Development (UNCTAD)
(https://unctad.org/en/PublicationsLibrary/wir2018_en.pdf).

Table 1.10:
From the KOF Swiss Federal Institute of Technology in Zurich (globalization.kof.ethz.ch/).

Table 1.11:
From the World Intellectual Property Organization (WIPO) (www.wipo.int/edocs/pubdocs/en/wipo_pub_gii_2017-annex1.pdf). For the 2018 source material, see (https://www.globalinnovationindex.org/analysis-indicator).

Table 1.12:
From the World Bank (https://data.worldbank.org/indicator/IQ.WEF.PORT.XQ). Data for Timor-Leste and Barbados are from 2013.

Table 1.13:
From the trade stats section under 'development' in the World Bank's World Integrated Data Solutions (WITS) database. For 2010 and 2016 imports, see:
https://wits.worldbank.org/CountryProfile/en/country/bycountry/startyear/LTST/endyear/LTST/indicator/NE-IMP-GNFS-ZS. For exports, see: https://wits.worldbank.org/CountryProfile/en/country/bycountry/startyear/LTST/endyear/LTST/indicator/NE-EXP-GNFS-ZS.

Table 1.14:
From the trade stats section under 'development' in the World Bank's World Integrated Data Solutions (WITS) database. For 2010 and 2016 trade as % of GDP, see: https://wits.worldbank.org/CountryProfile/en/country/by-country/startyear/LTST/endyear/LTST/indicator/NE-TRD-GNFS-ZS

Table 1.15:
From individual pages in Wikipedia.

Table 1.16:
Population data for Bali and Jeju are from www.knoema.com. Other Subnational Island Jurisdictions' (SNIJ) data are from the following sources:
Gotland: www.gotland.se/86116 and www.citypopulation.de/php/sweden-gotland.php?adm2id=0980; Greenland: data.worldbank.org/ and tradingeconomics.com/greenland/population-density-people-per-sq-km-wb-data.html;
Hainan*:* www.statista.com/statistics/279013/population-in-china-by-region/; Hawai'i: census.hawaii.gov/home/population-estimate/; Java: citypopulation.de/indonesia-mU.html; Luzon: psa.gov.ph/; Okinawa: www.knoema.com and www.japanupdate.com/ 2016/03/okinawa-population-grows-at-highest-rate-in-nation/; Phuket: www.citypopulation.de/php/thailand-prov-admin.php?adm2id=83; Prince Edward Island: www.princeedwardisland.ca/sites/default/files/publications/web_asr.pdf. For the Prince Edward Island Population Report 2018, see (https://www.princeedwardisland.ca/sites/default/files/publications/pt_pop_rep_1.pdf); *Taiwan:* www.worldometers.info/world-population/taiwan-population/; Tasmania: stat.abs.gov.au/itt/r.jsp?databyregion and www.popula-tion.net.au/population-of-tasmania/.

Table 1.17:
Data on this table for Bali, Jeju, Hainan, Luzon, Okinawa, and Phuket are from www.knoema.com. Data for Gotland and Greenland are from the World Bank. Other SNIJ data are from the following sources: Hawai'i: health.hawaii.gov/vitalstatistics/preliminary-2016/; Java: factsanddetails.com/indonesia/People_and_life/sub6_2a/entry-3972.html; Prince Edward Island: www.statcan.gc.ca/pub/84f0210x/2009000/t005-eng.htm; Taiwan: www.worldometers.com; Tasmania: http://www.justice.tas.gov.au/bdm/about_us/life_event_statistics. Fertility rates for Gotland and Java are at the country level.

Table 1.18:
Data on this table are from the following sources: Gotland: www.gotland.se/86116; Greenland: the CIA World Factbook; Hainan: www.stats.hainan.gov.cn/2017nj/indexeh.htm; Hawai'i: www.worldlifeexpectancy.com/usa/hawaii-life-expectancy; Luzon: www.knoema.com; Okinawa: stats-japan.com/t/tdfk/okinawa; Phuket: www.who.int/countries/tha/en/; Prince Edward Island: www.statcan.gc.ca/tables-tableaux/sum-som/l01/cst01/health26-eng.htm; Taiwan: www.indexmundi.com/taiwan/life_expectancy_at_birth.html; Tasmania: www.abs.gov.au/aUsstats/abs@.nsf/Previousproducts /3101.0feature%20article-1jun%202016. Values for Phuket are for the country of Thailand as a whole.

Table 1.19:
Data on this table are from the following sources:
Bali: www.knoema.com; Gotland: www.citypopulation.de/php/sweden-got-land.php; Greenland: the World Bank; Hainan: www.stats.hainan.gov.cn; Hawai'i: files.hawaii.gov/dbedt/census/census_2010/ other/2010urban_rural_report.pdf; Jeju: www.citypopulation.de; Luzon: psa.gov.ph/tags/urban-rural classification (for the Philippines as a whole); Okinawa: dc-office.org/basedata#p1; Phuket: www.citypopulation.de/php/thai-land-prov-admin.php?adm2id=83; Prince Edward Island: www.princeedwardisland.ca/sites/default/files/publications/web_asr.pdf; Taiwan: www.worldometers.info; Tasmania: www.tas-maniatopten.com/lists/population_centres.php. Values for Luzon are for the Philippines as a whole. Values for Java are for Indonesia as a whole.

Table 1.20:
Data on this table are from the following sources:
Gotland: www.gotland.se/86116; Greenland: /www.indexmundi.com/green land/labor_force.html; Hainan: www.stats.hainan.gov.cn/2017nj/indexeh.htm and www.knoema.com; Hawai'i: health.hawaii.gov/vitalstatistics/preliminary-2016/ and http://dbedt.hawaii.gov/economic/qser/labor-force/ for 2018 update; Jeju: www.hiwi.org/gsipub/index.asp?docid=417; Okinawa: stats- japan.com/t/tdfk/okinawa; Phuket: www.knoema.com; Prince Edward Island: https://www.princeedwardisland.ca/sites/default/files/publications/fin_statcan_labo.pdf; Taiwan: tradingeconomics.com/taiwan/unemployment-rate; Tasmania: stat.abs.gov.au/ and www.knoema.com for 2015 data.

Table 1.21
Data for Bali, Gotland, Hainan, Java, Jeju, Luzon, Okinawa, Phuket, and Taiwan are from www.knoema.com. Other SNIJ data are from the following sources: Greenland: tradingeconomics.com/greenland/gdp; Hawai'i: www.deptofnumbers.com/gdp/hawaii/; Prince Edward Island: www.princeedwardisland.ca/sites/default/files/publications/web_asr.pdf; Tasmania: www.treasury.tas.gov.au/documents/state-accounts.pdf.