The entrance to the Confederation Bridge, linking Prince Edward Island to the mainland of Canada

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The state of island economies

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It has been estimated that islands are the homes for more than 600 million people worldwide, or approximately one-tenth of the global population (Baldacchino, 2007). Despite this presence, relatively less attention has been paid to the context of islands, including their challenges, their accomplishments, and their potential. In only a short period of time, the Islands Economic Cooperation Forum has contributed to changing that dialogue. By bringing together world leaders in government, business, and academia, it has served as an international platform for the voices of islanders. This Annual Report contributes to that goal by providing a summary of

the knowledge and ideas presented at the 2017 Forum and presenting the most recent statistics and thought-provoking ideas from island experts. Therefore, this Annual Report represents a snapshot of current conditions and a predictor of future global island economies and societies.

In this chapter, we update a number of the statistical indicators on island economies and demographics that were first provided in the 2016 Annual Report. Unlike last year's version of the Report, we provide fewer measures so that the reader is able to focus on those characteristics that are most critical to better understand island economies. We also divide this analysis into two groups of islands. In the next section, we review and interpret economic and demographic statistics for the most prominent global island states.[1] Following this discussion, we turn our attention to a description of a group of islands that are often overlooked: the semi-autonomous subnational island jurisdictions (SNIJs).

SECTION 1: ISLAND STATES

With the massive wave of decolonization that took place following the Second World War, and the growth in the number of islands that gained their political independence, one might argue that small island states have become increasingly important on the world stage. To give you some perspective, in 1945 when the United Nations (UN) was formed with 51 members, only 6 (11.8%) were islands. By 2015, the number of UN members had grown to 193, and 45 of these (or 23.3%) were either a single island or, more commonly, groups of islands (Watts, 2009).

See Table 1.1 on following pages

One of the most prominent characteristics of these island states is their incredible diversity. This variation is no more obvious than when we compare their total populations and population densities (Table 1.1). At one extreme, we have the country of Indonesia which consists of an archipelago of islands and mainland territory, with a population of over 260 million people. At the other extreme we have the tiny nation of Niue with 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 2017 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 is 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 /km^2) 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

NOTE: The sources and notes for all tables and figures are found at the end of this chapter.

TABLE 1.2: **Crude Birth Rate, Crude Death Rate, and Life Expectancy at Birth, 2016**

Continent	Island Country	Crude Birth Rate /1000	Crude Death Rate /1000	Life Expectancy at Birth
Asia	Japan	7.7	9.8	85
	Singapore	8.6	3.5	85
	Indonesia	16.2	6.5	72.7
	Timor-Leste	33.4	5.9	68.1
	Philippines	23.7	6.1	69.2
	Sri Lanka	15.2	6.2	76.8
	Maldives	16.1	4	75.6
	Bahrain	13.3	2.8	78.9
Europe	Cyprus	11.3	6.8	78.7
	Iceland	13.7	6.4	83
	United Kingdom	12.1	9.4	80.7
	Ireland	14.1	6.6	80.8
	Malta	10.1	9.4	80.4
Africa	Cabo Verde	20	6	72.1
	Madagascar	13.6	6.5	65.9
	Seychelles	13.7	7	74.7
	Mauritius	13	7.1	75.6
	Comoros	26.1	7.2	64.2
	Sao Tome and Principe	32.4	6.8	64.9
Oceania	New Zealand	13.2	7.5	81.2
	Papua New Guinea	23.7	6.6	67.2
	Solomon Islands	24.9	3.8	75.3
	Vanuatu	24	4	73.4
	Fiji	18.6	6.1	72.7
	Tonga	22.2	4.9	76.2
	Samoa	20.4	5.3	73.7
	Nauru	24	5.9	67.1
	Micronesia, Fed. States	20	4.2	72.9
	Marshall Islands	24.4	4.2	73.1
	Kiribati	21.2	7	66.2
	Tuvalu	23.7	8.5	66.5

Continent	Island Country	Crude Birth Rate /1000	Crude Death Rate /1000	Life Expectancy at Birth
	Palau	11.3	8.1	73.1
	Cook Islands	14	8.4	75.8
	Niue	–	–	–
Caribbean/	Cuba	10.7	8.7	78.7
Americas	Haiti	23	7.6	63.8
	Dominican Republic	18.4	4.7	78.1
	Jamaica	17.9	6.8	73.6
	Bahamas, The	15.3	7.2	72.4
	St. Kitts and Nevis	13.2	7.1	75.7
	Antigua and Barbuda	15.7	5.7	76.5
	St. Vincent and the Grenadines	13.2	7.3	75.3
	St. Lucia	13.3	7.7	77.8
	Grenada	15.5	8.2	74.3
	Barbados	11.7	8.6	75.3
	Trinidad and Tobago	12.7	8.8	72.9
	Dominica	15.1	7.9	77

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 of the developed island countries, such as Malta and the United Kingdom, 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 (i.e., 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, are 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.

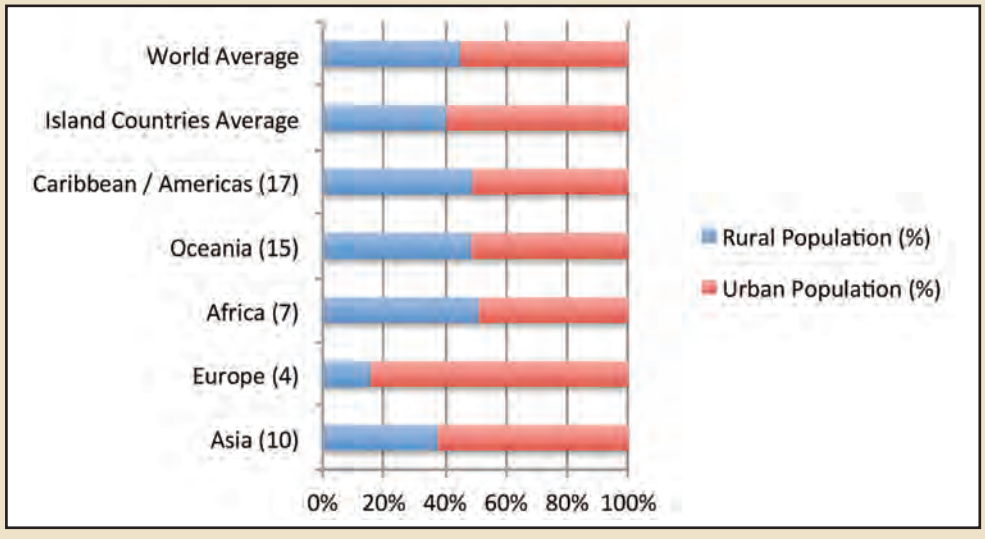
TABLE 1.3: **Percentage of Rural and Urban Populations, 2015 and 2017**

Continent	Island Country	RURAL POPULATION (%)		URBAN POPULATION (%)	
		2015	2017	2015	2017
Asia	Japan	6.5	5.7	93.5	94.3
	Singapore	0	0	100	100
	Indonesia	46.3	44.8	53.7	55.2
	Timor-Leste	67.2	66.0	32.8	34.0
	Brunei Darussalam	22.8	22.2	77.2	77.8
	Philippines	55.6	55.8	44.4	44.2
	Sri Lanka	81.6	81.5	18.4	18.5
	Maldives	54.5	52.5	45.5	47.5
	Bahrain	11.2	11.1	88.8	88.9
Europe	Cyprus	33.1	33.2	66.9	66.8
	Iceland	5.8	5.7	94.1	94.3
	United Kingdom	17.4	16.9	82.6	83.1
	Ireland	36.8	36.2	63.2	63.8
	Malta	4.6	4.4	95.4	95.6
Africa	Cabo Verde	34.5	33.2	65.5	66.8
	Madagascar	64.9	63.6	35.1	36.4
	Seychelles	46.1	45.5	53.9	54.5
	Mauritius	60.3	60.6	39.7	39.4
	Comoros	71.7	71.5	28.3	28.5
	Sao Tome and Principe	34.9	33.8	65.1	66.2
Oceania	New Zealand	13.7	13.6	86.3	86.4
	Papua New Guinea	87.0	86.9	13.0	13.1
	Solomon Islands	77.7	76.8	22.3	23.2
	Vanuatu	73.9	73.2	26.1	26.8
	Fiji	46.3	45.5	53.7	54.5
	Tonga	76.3	76.1	23.7	23.9
	Samoa	80.9	81.2	19.1	18.8
	Nauru	0	0	100.0	100.0
	Micronesia, Fed. Sts.	77.6	77.5	22.4	22.5
	Marshall Islands	27.3	26.8	72.7	73.2
	Kiribati	55.7	55.4	44.3	44.6
	Tuvalu	40.3	38.5	59.7	61.5
	Palau	12.9	11.8	87.1	88.2

Continent	Island Country	RURAL POPULATION (%)		URBAN POPULATION (%)	
		2015	2017	2015	2017
	Cook Islands	25.0 (2014)	25.0	75.0 (2014)	75.0
	Niue	62.0 (2014	44.0	38.0 (2014)	44.0
Caribbean/	Cuba	22.9	22.7	77.1	77.3
Americas	Haiti	41.4	39.1	58.7	60.9
	Dominican Republic	21.0	19.4	78.9	80.6
	Jamaica	45.2	44.7	54.8	55.3
	Bahamas, The	17.1	17.0	82.9	83.0
	St. Kitts and Nevis	67.9	67.7	32.1	32.3
	Antigua and Barbuda	76.2	77.0	23.8	23.0
	St. Vincent + Grenadines	49.5	48.8	50.6	51.2
	St. Lucia	81.5	81.4	18.5	18.6
	Grenada	64.4	64.3	35.6	35.7
	Barbados	68.5	68.6	31.6	31.4
	Trinidad and Tobago	91.6	91.7	8.5	8.3
	Dominica	30.5	29.9	69.5	70.1

The world is becoming a more urbanized place. Table 1.3 shows that island countries are also becoming more urbanized. Even after only two years (2015 to 2017), almost every island had a higher percentage of their population living in urban places. Some, like the island city-state of Singapore and the small mining-based island of Nauru, were already 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. It is not uncommon for islands in Oceania and the Caribbean/Americas to have more than 60% of their population still living in non-urban areas.

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



At a more aggregate level, Figure 1.1 shows 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 have the highest percentage of their populations living in rural areas.

GROSS DOMESTIC PRODUCT

See Table 1.4 on following pages

Gross Domestic Product (GDP) is a measure of the total value of all the 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 2016, 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 are much greater than all of the other islands listed in this Table. However, there are some "developing" countries such as Indonesia and the Philippines that 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 population is growing faster than the economy. If the change in GDP/capita is lower than GDP/capita growth, it means that the economy is growing faster than the population. In almost every one of the islands in this table, the economy is not keeping pace with the growth in the population. It is also important to note the importance of scale of the jurisdiction in interpreting change. 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. So, for example, small island developing states (SIDS) such as Samoa and Nauru can show large increases in the GDP/capita (of 5.8% and 5.5% respectively) but this growth rate might not be persistent over a longer time period.

TABLE 1.4: Gross Domestic Product (GDP) and Change in GDP; Per Capita GDP and Change in GDP/capita, 2016

Continent	Island Country	GDP 2016 in millions of USD (World Bank)	Growth rate of GDP % (World Bank)	GDP per capita 2016 in USD (CIA)	Growth rate of GDP per capita % (World Bank)
Asia	Japan	4,939,384	1.0	41,300	1.1
	Singapore	296,966	2.0	87,900	0.7
	Indonesia	932,259	5.0	11,700	3.8
	Timor-Leste	1,441 (2015)	4.3 (2015)	4,200	–
	Brunei Darussalam	11,400	-2.5	76,900	-3.8
	Philippines	304,905	6.9	7,700	5.3
	Sri Lanka	81,322	4.4	12,300	3.2
	Maldives	3,591	4.1	15,500	2.0
	Bahrain	31,859	–	50,700	–
Europe	Cyprus	19,802	2.8	35,000	2.7
	Iceland	20,047	7.2	49,200	6.1
	United Kingdom	2,618,886	1.8	42,500	1.0
	Ireland	294,054	5.2	69,200	3.1
	Malta	10,949	5.0	39,900	3.8
Africa	Cabo Verde	1,617	3.9	6,700	2.6
	Madagascar	9,991	4.2	1,500	1.4
	Seychelles	1,427	4.5	27,600	3.1
	Mauritius	12,164	3.7	20,400	3.6
	Comoros	617	2.2	1,500	-0.1
	Sao Tome and Principe	351	4.0	3,100	1.7
Oceania	New Zealand	185,017	3.9	37,300	1.8
	Papua New Guinea	16,928 (2014)	8.5 (2014)	3,500	–
	Solomon Islands	1,202	3.0	2,000	0.9
	Vanuatu	774	4.0	2,600	1.8
	Fiji	4,632	2.0	9,300	1.2
	Tonga	395	3.5	5,400	2.8
	Samoa	786	6.6	5,500	5.8
	Nauru	102	10.4	11,600 (2015)	5.5
	Micronesia, Fed. Sts.	322	1.9	3,200	1.4

Continent	Island Country	GDP 2016 in millions of USD (World Bank)	Growth rate of GDP % (World Bank)	GDP per capita 2016 in USD (CIA)	Growth rate of GDP per capita % (World Bank)
	Marshall Islands	183	2.9	3,300	2.8
	Kiribati	166	3.1	1,800	1.3
	Tuvalu	34	2.7	3,500	1.9
	Palau	293	0	15,400	-1
	Cook Islands	–	–	12,300	–
	Niue	–	–	5,800 (2003)	–
Caribbean/	Cuba	87,132.8 (2015)	4.4 (2015)	11,900	–
Americas	Haiti	8,023	1.4	1,800	0.2
	Dominican Republic	71,584	6.6	16,000	5.4
	Jamaica	14,027	1.4	9,000	1.0
	Bahamas, The	9,047	0.3	24,600	-0.9
	St. Kitts and Nevis	917	3.6	26,100	2.6
	Antigua + Barbuda	1,449	4.4	25,200	3.3
	St. Vincent+Grenadines	771	3.0	11,300	2.8
	St. Lucia	1,379	0.7	11,800	0.2
	Grenada	1,016	1.9	14,100	1.4
	Barbados	4,588	1.6	17,100	1.3
	Trinidad and Tobago	20,989	-5.1	31,900	-5.4
	Dominica	525	0.9	11,300	0.4

TABLE 1.5: **Gross National Income (GNI) per Capita, 2016**

Continent	Island Country	Gross National Income per capita, Purchasing Power Parity (international $) (World Bank)
Asia	Japan	42,870
	Singapore	85,050
	Indonesia	11,220
	Timor-Leste	4,340 (2015)
	Brunei Darussalam	83,250 (2015)
	Philippines	9,400
	Sri Lanka	11,970
	Maldives	11,970
	Bahrain	44,690 (2015)
Europe	Cyprus	31,420
	Iceland	52,490
	United Kingdom	42,100
	Ireland	56,870
	Malta	35,720
Africa	Cabo Verde	6,220
	Madagascar	1,440
	Seychelles	28,390
	Mauritius	20,980
	Comoros	1,520
	Sao Tome and Principe	3,240
Oceania	New Zealand	37,860
	Papua New Guinea	2,700 (2014)
	Solomon Islands	2,150
	Vanuatu	3,050 (2014)
	Fiji	9,140
	Tonga	5,760
	Samoa	6,200
	Nauru	17,520
	Micronesia, Fed. Sts.	4,330
	Marshall Islands	5,280
	Kiribati	3,240
	Tuvalu	5,920
	Palau	14,740

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	1,790
	Dominican Republic	14,480
	Jamaica	8,500
	Bahamas, The	22,090
	St. Kitts and Nevis	25,940
	Antigua and Barbuda	21,840
	St. Vincent and the Grenadines	11,530
	St. Lucia	11,370
	Grenada	13,440
	Barbados	16,070
	Trinidad and Tobago	30,810
	Dominica	10,610

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 the remittance of such things as interest and dividends. Table 1.5 shows that there are very high GNI levels per capita in developed economies such as Singapore (85,050 USD), Iceland (52,490 USD), and Ireland (56,870 USD), and very low values in most developing island countries, and especially those in the Oceanic region. For example, the Solomon Islands, Madagascar, and the Comoros have only one-tenth the GNI/capita as in the developed islands. We need to be careful about interpreting these values. 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. GNI also does not account for the distribution across the population. Despite these caveats, two patterns are apparent. On average, the GNI per capita appears to be much higher in islands of the Americas/Caribbean than on islands of Oceania. This may be as a result of the importance of tourism and financial services. Another interesting comparison 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 1,790 USD compared to neighbouring DR with a GNI/capita of 14,480 USD.

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

Continent	Island Country	Labour Force est. (2016)	Labour Force participation rate % (World Bank)	Unemployment Rates % est. (2016)
Asia	Japan	65,930,000	59	3.2
	Singapore	3,661,000	67	2.1
	Indonesia	125,000,000	67	5.6
	Timor-Leste	259,800	41	4.4
	Philippines	43,190,000	65	5.5
	Sri Lanka	9,062,000	52	4.5
	Maldives	195,100 (2014)	68	11.6 (2013)
	Bahrain	809,700	69	4.1 (2014)
Europe	Cyprus	415,100	64	11.8
	Iceland	195,000	74	2.7
	United Kingdom	33,170,000	63	4.8
	Ireland	2,181,000	60	8
	Malta	192,800	52	4.8
Africa	Cabo Verde	196,100 (2007)	69	15
	Madagascar	12,980,000	86	3.6 (2014)
	Seychelles	39,560 (2006)	–	3 (2014)
	Mauritius	624,700	60	7.8
	Comoros	245,200 (2013)	58	6.5 (2014)
	Sao Tome + Principe	70,620	61	13.5 (2014)
Oceania	New Zealand	2,562,000	67	5.1
	Papua New Guinea	4,365,000	70	2.5 (2014)
	Solomon Islands	202,500 (2007)	67	NA
	Vanuatu	115,900 (2007)	71	1.7 (1999)
	Fiji	366,800 (2015)	59 (2015)	6.2 (2015)
	Tonga	33,800 (2011)	63	1.1 (2011)
	Samoa	49,180 (2013)	41	NA
	Cook Islands	5,774 (2011)	75 (2011)	6.3 (2011)
	Niue	663 (2001)	–	12 (2001)
Caribbean/	Cuba	5,117,000	55	2.5
Americas	Haiti	4,594,000 (2014)	67	40.6

Continent	Island Country	Labour Force est. (2016)	Labour Force participation rate % (World Bank)	Unemployment Rates % est. (2016)
	Dominican Republic	5,113,000	65	13.8
	Jamaica	1,312,000	65	13.8
	Bahamas, The	196,900 (2013)	74	15 (2014)
	St. Kitts and Nevis	18,170 (1995)	–	4.5 (1997)
	Antigua and Barbuda	30,000 (1991)	–	11 (2014)
	St. Vincent + Grenadines	57,520 (2007)	67	18.8 (2008)
	St. Lucia	79,700 (2012)	70	20 (2003)
	Grenada	59,900 (2013)	–	33.5 (2013)
	Barbados	142,500	66	11
	Trinidad and Tobago	615,000	63	4
	Dominica	25,000 (2007)	–	23 (2014)

For most islanders, the Gross Domestic Product and the Gross National Income mean very little to their own personal and household "economies." To islanders, as well as other analysts, the more important economic variables relate to the labour force participation and the unemployment rates. Table 1.6 provides these values as well as the overall labour force for the island states included in this review. Not surprisingly, the total labour force mirrors the population figures from Table 1.1. Although still a developing state, Indonesia has a labour force that is twice as large as the next largest island state (Japan). Labour force participation 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 states is the island of Madagascar just off the east coast of Africa. Although it may have other economic and social challenges as suggested from other indicators in this chapter, this unique island has one of the highest LFPR at 86%. The lowest labour force participation rates are in Timor-Leste and Samoa. Based on the unemployment rates, several island countries are almost at full employment (e.g., Singapore, Iceland, Cuba). A major outlier according to this measure is Haiti, with an unemployment rate of 40%. Together with Grenada at 33.5%, these two Caribbean islands have much higher levels of unemployment than any other island country.

TABLE 1.7: **Human Development Index, 2016**

Island Country	Island Country Ranking	World Ranking	Value
Singapore	1	5	0.925
Ireland	2	8	0.923
Iceland	3	9	0.921
New Zealand	4	13	0.915
United Kingdom	5	16	0.909
Japan	6	17	0.903
Brunei Darussalam	7	30	0.865
Cyprus	8	33	0.856
Malta	8	33	0.856
Bahrain	9	47	0.824
Bahamas	10	58	0.792
Palau	11	60	0.788
Antigua and Barbuda	12	62	0.786
Seychelles	13	63	0.782
Mauritius	14	64	0.781
Trinidad and Tobago	15	65	0.78
Cuba	16	68	0.775
Sri Lanka	17	73	0.766
St. Kitts and Nevis	18	74	0.765
Genada	19	79	0.754
Fiji	20	91	0.736
St. Lucia	21	92	0.735
Jamaica	22	94	0.73
Dominica	23	96	0.726
Dominican Republic	25	99	0.722
St. Vincent and the Grenadines	25	99	0.722
Tonga	26	101	0.721
Samoa	28	104	0.704
Maldives	29	105	0.701
Indonesia	30	113	0.689
Philippines	31	116	0.682
Cabo Verde	32	122	0.648
Micronesia, Fed. States	33	127	0.638

Island Country	Island Country Ranking	World Ranking	Value
Timor-Leste	34	133	0.605
Vanuatu	35	134	0.597
Kiribati	36	137	0.588
Sao Tome and Principe	37	142	0.574
Papua New Guinea	38	154	0.516
Solomon Islands	39	156	0.515
Madagascar	40	158	0.512
Comoros	41	160	0.497
Haiti	42	163	0.493

The Human Development Index is a composite indicator that incorporates variables across three dimensions: the economy (Gross National Income/capita), education (the mean years of schooling), and health (Average Life Expectancy at birth). With a theoretical range of between 0.0 and 1.0, 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, values between 0.700 and 0.799 are considered High, values between 0.550 and 0. 699 are considered Medium, and any value less than 0.550 is considered Low. It is not uncommon for islands to score relatively high when compared to mainland countries, especially in comparison to Gross Domestic Product by itself. As shown in Table 1.7, only five of the islands examined in this analysis fall into the Low category and most of the island countries are in the Very High or High groups. Not surprisingly, the island countries in the developed world are all in the Very High category.

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

Continent	Island Country	2010	2015	2016
Asia	Japan	100	104	104
	Singapore	100	113	113
	Indonesia	100	132	137
	Timor-Leste	100	143	141
	Brunei Darussalam	100	102	102
	Philippines	100	117	120
	Sri Lanka	100	128	134
	Maldives	100	133	135
	Bahrain	100	111	114
Europe	Cyprus	100	102	100
	Iceland	100	118	120
	United Kingdom	100	112	113
	Ireland	100	105	105
	Malta	100	108	109
Africa	Cabo Verde	100	109	
	Madagascar	100	140	149
	Seychelles	100	121	120
	Mauritius	100	120	121
	Comoros	100	98	
	Sao Tome and Principe	100	154	162
Oceania	New Zealand	100	108	109
	Papua New Guinea	100	128	
	Solomon Islands	100	125	
	Vanuatu	100	107	108
	Fiji	100	116	121
	Tonga	100	110	113
	Samoa	100	108	110
Caribbean/	Haiti	100	139	158
Americas	Dominican Republic	100	122	124
	Jamaica	100	141	144
	Bahamas, The	100	109	109
	St. Kitts and Nevis	100	106	105

Continent	Island Country	2010	2015	2016
	Antigua and Barbuda	100	110	110
	St. Vincent and Grenadines	100	105	105
	St. Lucia	100	111	108
	Grenada	100	104	106
	Barbados	100	117	
	Trinidad and Tobago	100	134	138
	Dominica	100	104	104

The Consumer Price Index is a measure of the cost-of-living in a given jurisdiction and how it has changed. Since it is misleading to compare changes in cost-of-living across different countries, it is more useful to show how the cost of living has changed in a particular place relative to a base year. In Table 1.8, the base year is 2010 and the values for 2015 and 2017 suggest how much that cost-of-living has changed over five and seven years respectively. So, for example, the cost-of-living in Japan increased by 4% (104) from 2010 to 2015 and stayed the same from 2015 to 2016. Some island countries have seen very little change over this period (e.g., Cyprus, Ireland, Dominica), while others such as Sao Tome and Principe (62%), Haiti (58%), and Jamaica (44%) have seen a very high level of inflation in the cost of goods and services over that same six-year period.

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

Figure 1.2 shows the island countries listed by their Gini Coefficients (GC). A Gini Coefficient is a measure of the degree of equality in the distribution of income within a jurisdiction. If every household in a country had the same national income, the Gini Coefficient for that country would be 0.0. At the other 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 distribution 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 has 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. A population that is primarily agrarian in nature would be expected to have a more equal distribution of wealth.

TABLE 1.9: **Foreign Direct Investment, Net Current, 2016 (in 100 million USD)**

Continent	Island Country	2016 FDI Inflows	2016 FDI Outflows	Total FDI
Asia	Japan	11,388	145,242	156,630
	Singapore	61,597	23,888	85,485
	Indonesia	16,641	-12,463	4,178
	Timor-Leste	5	13	18
	Philippines	7,912	3,698	11,610
	Sri Lanka	898	237	1,135
	Bahrain	282	170	452
Europe	Cyprus	7,385	5,376	12,761
	Iceland	-484	-1,199	-1,683
	United Kingdom	25,3826	-12,614	241,212
	Ireland	22,304	44,548	66,852
	Malta	3,575	-5,362	-1,787
Africa	Cabo Verde	119	-9	110
	Madagascar	541	1	542
	Seychelles	155	8	163
	Mauritius	349	5	354
	Comoros	8	0	8
	Sao Tome + Principe	22	1	23
Oceania	New Zealand	2,292	-44	2,248
	Papua New Guinea	-40	0	-40
	Solomon Islands	25	1	26
	Vanuatu	32	1	33
	Fiji	270	-23	247
	Tonga	9	1	10
	Samoa	2	15	17
	Micronesia, Fed. Sts.	0	0	0
	Marshall Islands	21	0	21
	Kiribati	3	3	6
	Tuvalu	0.2	0	0.2
	Palau	31	0	31
	Cook Islands	16	1360	1,376
Caribbean/	Haiti	104	0	104
Americas	Dominican Republic	2,205	116	2,321
	Jamaica	856	286	1,142

Continent	Island Country	2016 FDI Inflows	2016 FDI Outflows	Total FDI
	Bahamas, The	522	359	881
	St. Kitts and Nevis	66	0	66
	Antigua + Barbuda	140	0	140
	St. Vincent +Grenadines	104	0	104
	St. Lucia	95	0	95
	Grenada	63	0	63
	Barbados	228	-11	217
	Trinidad + Tobago	-60	-472	-532
	Dominica	34	0	34

Foreign Direct Investment (FDI) is a measure of 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. These can vary considerably. For example, Japanese companies receive about 11.4 billion USD in FDI but they send more than ten times that amount (i.e., 145 billion USD) outside of the country. By contrast, Singapore receives approximately three times more in FDI (61.6 billion USD) than they send elsewhere (23.9 billion USD). Most island states receive more investment than they send. For example, in 2016 the island state of Mauritius in the Indian Ocean received 349 million USD in FDI and sent only 5 million USD outside of the country. The imbalance between FDI inflows and outflows is not the only interesting feature of an island's economy. The total of inflows and outflows combined could be considered an indicator of the openness of an economy. Large developed capitalist economy islands such as Japan, the United Kingdom, and Ireland have large total FDI values. Not surprisingly, even 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. The economies of some island states are so small that the level of FDI shows up as a zero in the Table.

TABLE 1.10: **Rankings and Scores of Globalization Index, 2014**

Island Country	GLOBALIZATION INDEX			Economic globalization	Social globalization	Political globalization
	Island country ranking	World ranking	Score			
Ireland	1	2	92.15	94.65	90.99	90.47
United Kingdom	2	8	87.26	82.99	85.83	94.67
Cyprus	3	14	85.00	86.64	87.17	79.98
Singapore	4	20	83.64	97.77	91.61	54.77
New Zealand	5	30	79.29	80.97	73.99	80.57
Malta	6	36	75.86	91.74	76.59	54.44
Japan	7	39	72.26	63.47	68.89	88.10
Bahrain	8	43	70.80	87.37	71.88	48.01
Iceland	9	50	67.90	76.02	69.85	54.84
Brunei Darussalam	10	52	67.60	78.66	67.08	54.05
Mauritius	11	56	66.61	88.01	61.94	45.32
Dominican Republic	12	59	66.45	61.86	65.74	73.31
Trinidad and Tobago	13	68	62.79	75.94	56.45	54.34
Seychelles	14	80	59.88	81.22	55.00	38.92
Indonesia	15	82	59.65	64.02	35.14	86.83
Jamaica	16	85	58.43	62.83	43.88	72.58
Fiji	17	86	57.56	53.07	52.82	69.68
Philippines	18	88	56.84	53.89	40.27	82.83
Barbados	19	93	55.56	70.67	50.76	42.55
Bahamas	20	96	54.45	46.58	66.30	48.72
Grenada	21	102	53.24	–	52.69	53.98
Sri Lanka	22	110	51.81	45.37	39.42	76.67
Antigua and Barbuda	23	120	49.04	–	59.88	34.53
Cape Verde	24	133	46.25	57.6	41.56	37.92
Cuba	25	134	46.19	–	33.66	62.96
Vanuatu	26	137	45.84	56.67	33.72	48.13
Papua New Guinea	27	138	45.79	61.03	21.08	59.24
Palau	28	140	44.94	–	49.29	39.13
St. Lucia	29	148	43.87	–	47.33	39.23
Samoa	30	149	43.68	–	39.40	49.41
Madagascar	31	153	42.90	47.82	21.60	65.10

Island Country	GLOBALIZATION INDEX			Economic globalization	Social globalization	Political globalization
	Island country ranking	World ranking	Score			
Maldives	32	156	42.03	–	52.08	28.57
Timor-Leste	33	158	41.78	63.09	20.58	42.72
Dominica	34	164	39.68	–	43.21	34.94
Haiti	35	169	38.81	51.59	19.45	48.28
St. Kitts and Nevis	36	171	38.65	–	47.41	26.91
St. Vincent + Grenadines	37	172	38.51	–	44.44	30.57
Kiribati	38	174	38.11	60.17	29.59	21.11
Tonga	39	182	32.66	–	38.09	25.37
Sao Tome and Principe	40	187	31.32	–	30.73	31.12
Comoros	41	189	30.84	–	27.62	35.16
Micronesia	42	190	27.96	–	33.71	20.28
Solomon Islands	43	193	23.98	–	22.49	25.97
Marshall Islands	44	202	–	–	–	19.03
Nauru	–	–	–	–	–	–
Tuvalu	–	–	–	–	–	–
Cook Islands	–	–	–	–	–	–
Niue	–	–	–	–	–	–

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. Most interesting are those places where the value of one of the component scores is much higher or lower than you would expect from the overall score. For example, although Singapore and Bahrain are very open economically and socially, their political globalization scores are much lower. Similarly,

Indonesia and Sri Lanka have much lower social globalization scores than their economic and political scores. At the same time, Cuba, Samoa, and Sri Lanka score relatively higher on the political openness dimension than you would expect based on their overall score.

The Global Innovation Index in Table 1.11 is constructed by the World Intellectual Property Organization (WIPO). It measures the innovation performance of many 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 year's figures. It shows a greater divide between the island countries in the developed world, and especially in the North Atlantic/Mediterranean, with much higher values than the scores for 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, and represents a surrogate measure of how effective those jurisdictions use their inputs. On this measure, island countries such as Ireland, Iceland, and Malta are more efficient than places that have more innovative capacities.

TABLE 1.11: **Global Innovation Index, 2017**

Island Country	Global Innovation Index			Innovation Output Sub-Index		Innovation Input Sub-Index		Efficiency Ratio	
	Island country ranking	World ranking	Score	World ranking	Score	World ranking	Score	World ranking	Score
United Kingdom	1	5	60.89	7	68.25	6	53.52	20	0.78
Singapore	2	7	58.7	1	72.25	17	45.14	63	0.62
Ireland	3	10	58.13	19	62.86	8	53.41	6	0.85
Iceland	4	13	55.76	21	60.1	10	51.42	5	0.86
Japan	5	14	54.72	11	65.45	20	43.99	49	0.67
New Zealand	6	21	52.87	13	64.14	24	41.59	56	0.65
Malta	7	26	50.6	28	54.91	15	46.29	8	0.84
Cyprus	8	30	46.84	32	53.92	28	39.75	28	0.74
Mauritius	9	64	34.82	47	47.13	82	22.51	109	0.52
Bahrain	10	66	34.67	55	44.41	67	24.92	88	0.56
Brunei Darussalam	11	71	32.89	40	49.27	110	16.51	124	0.34
Philippines	12	73	32.48	83	39.4	65	25.57	55	0.65
Dominican Republic	13	79	31.17	88	37.8	72	24.54	54	0.65
Jamaica	14	84	30.36	84	38.69	84	22.03	86	0.57
Indonesia	15	87	30.1	99	35.68	73	24.52	42	0.69
Sri Lanka	16	90	29.85	94	36.28	77	23.42	86	0.57
Madagascar	17	111	24.15	120	28.78	95	19.53	45	0.68

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 semi-autonomous 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.

TABLE 1.12 **Area of island, in sq. km (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

The largest island in the world at almost 2.2 million square kilometres, and thus the largest SNIJ, is Greenland (Table 1.12), an "autonomous constituent country" of the Kingdom of Denmark. However, as was the case with island states, the areal 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 just 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. At the other extreme, the tourist-dependent island province of Phuket, in the Thailand archipelago, is only 576 square kilometres in size but contains almost seven times the population of Greenland. These land areas also do not include the marine Exclusive Economic Zones (EEZ) that surrounding the islands. As we have seen with island states, these EEZs are often many times larger than the islands' land areas. However, the difference between these SNIJs and island states is that control over management and decision-making of the resources within these marine waters may also be ambiguous and shared at least partly with the larger federal or national government.

TABLE 1.13 **Population Characteristics (Subnational)**

	Year	Population	Population Density people/sq.km	Population Growth Rate % over 1 year
Bali, Indonesia	2014	4,225,000	730	2.15
Gotland, Sweden	2016	58,003	18.5	1.10
Greenland, Denmark	2016	56,190	0.14	0.10
Hainan Island, China	2016	9,171,300	260	1.07
Hawai'i, USA	2016	1,428,557	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	2016	148,649	25.1	1.30
Taiwan, China	2016	23,556,706	665	3.00
Tasmania, Australia	2016	517,588	7.24	0.43

Although the population of several of these SNIJs was alluded to above, Tables 1.13 to 1.15 provide a more complete description of the population and demographic characteristics of these 13 SNIJs. In Table 1.13, the populations of islands such as Java, Indonesia (141 million), Luzon, Philippines (53 million), Taiwan (23.5 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 square kilometre 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 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 1.14 **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	2015	15.00	9.00	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	6.30	2.00	(Indonesia)
Jeju, South Korea	2013	9.10	5.70	1.43	
Luzon, Philippines	2015	21.30	5.50	2.60	
Okinawa, Japan	2010	–	1.90	1.94	
Phuket, Thailand	2012	25.18	4.70	–	
Prince Edward Island, Canada	2015	8.90	9.00	1.63	
Taiwan, China	2016	–	–	1.13	
Tasmania, Australia	2016	12.00	8.90	1.90	

Populations can increase when in-migration exceeds out-migration and when birth rates exceed death rates. Although the data are not available for all of these subnational island jurisdictions, Table 1.14 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 other islands such as Prince Edward Island, Canada, are almost identical, suggesting that the population is not increasing or decreasing as a result of natural demographic change.

TABLE 1.15 **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	2015	78	72.00	(Thailand)
Prince Edward Island, Canada	2015	83.2	78.60	
Taiwan, China	2016	83.5	77.00	
Tasmania, Australia	2015	82.5	78.80	

Not only is life expectancy a characteristic of the demographics of a jurisdiction, it is also a reflection of the health system and infrastructure of that place. Table 1.15 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 are in Luzon, Philippines, followed closely by Greenland.

TABLE 1.16 **Rural and Urban (Subnational)**

	Year	Rural Population %	Urban Population %	
Bali, Indonesia	2013	5.7	94.3	
Gotland, Sweden	2016	59	41	
Greenland, Denmark	2016	13	87	
Hainan Island, China	2010	50.3	49.7	
Hawai'i, USA	2014	8.1	91.9	
Java, Indonesia	2010	48.7	60.8	
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	2016	23	77	
Tasmania, Australia	2008	20	80	

The percentages of the SNIJ populations living in rural and urban areas (Table 1.16) 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% live in cities.

TABLE 1.17 **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	2.30
Hawai'i, USA	2016	685,400	97.00	3.00
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	2016	80,200	66.00	10.70
Taiwan, China	2017	11,366,000	59.00	3.70
Tasmania, Australia	2011	232,120	58.00	6.40

The total labour force (Table 1.17) is usually a surrogate indicator for population. Labour force participation rates may be defined differently in different jurisdictions, but they are normally defined as 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 are 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, where everyone who is looking for a job has one. Phuket is reporting an unemployment rate of only 0.5% and several others (e.g., Hainan at 2.3% and Hawai'i at 3.0%) are also close to full employment status.

TABLE 1.18 **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	1,913,030,700	5,695
Prince Edward Island, Canada	2016	4,155,604,920	22,358
Taiwan, China	2016	529,580,000,000	24,227
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 islands (i.e., the Gross Domestic Product) is considerable and highly variable. For example, Taiwan had a GDP of 529 billion USD in 2016. 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 output (Table 1.12) and Ireland is the second 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 the United Kingdom 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 development 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 are outdated and questionable. This is even more problematic with composite indictors 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 co-ordinated approach at a global scale to compile the data that at least rivals that available for island states.

NOTES

1 In this chapter the words "country" and "state" are used interchangeably.

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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.worldbank.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. Value listed may not necessarily correspond to the data from these sources because the latter are updated when new information is available.
Data for Fiji is from the International Labour Organization (www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/---ilo-suva/documents/publication/wcms_465248.pdf).
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)
(hdr.undp.org/sites/default/files/2016_human_development_report.pdf).

Table 1.8:
From The World Bank. Blank cells are places where 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 2016, United Nations Conference on Trade and Development (UNCTAD) (http://unctad.org/en/pages/PublicationWebflyer.aspx?publicationid=1555).

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).

Table 1.12:
From individual pages in Wikipedia.

Table 1.13:
Population data for Bali and Jeju are from www.knoema.com. Other 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; Taiwan: www.worldometers.info/world-population/taiwan-population/; Tasmania: stat.abs.gov.au/itt/r.jsp?databyregion and www.population.net.au/population-of-tasmania/.

Table 1.14:
Data on this table for Bali, Jeju, Hainan, Luzon, Okinawa, and Phuket are from ww.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 1.15:
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.

Table1.16:
Data on this table are from the following sources: Bali: www.knoema.com; Gotland: www.citypopulation.de/php/sweden-gotland.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; Java: www.tandfonline.com; 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/thailand-prov-admin.php?adm2id=83; Prince Edward Island:www.princeedwardisland.ca/sites/default/files/publications/web_asr.pdf; Taiwan: www.worldometers.info; Tasmania: www.tasmaniatopten.com/lists/population_centres.php. Values for Luzon are for the Philippines as a whole.

Table 1.17:
Data on this table are from the following sources: Gotland: www.gotland.se/86116; Greenland: /www.indexmundi.com/greenland/labor_force.html; Hainan: www.stats.hainan.gov.cn/2017nj/indexeh.htm and www.knoema.com; Hawai'i:: health.hawaii.gov/vitalstatistics/preliminary-2016/; Jeju: www.hiwi.org/gsipub/index.asp?docid=417; Okinawa: stats-japan.com/t/tdfk/Okinawa; Phuket: www.knoema.com; Prince Edward Island: www.princeedwardisland.ca/sites/default/files/publications/web_asr.pdf; Taiwan: tradingeconomics.com/taiwan/unemployment-rate; Tasmania: stat.abs.gov.au/.

Table 1.18
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.

PART II

Issues and perspectives on island economies

The first section of this Annual Report provided an overview and summary of the 2017 Boao Islands Economic Cooperation Forum. It allowed us to see what we have already achieved so that we have a better picture of what still needs to be accomplished. One of the most important outcomes at last year's Forum was the signing of a Memorandum of Understanding (MOU) to establish a Research Network on Island Economies. We have already seen the value of this MOU in the form of the 1st International Conference on Island Economies held in Haikou in November 2017. This conference brought together many of the leading international and Chinese experts on island economic change and development to present and share the most current island economy research. It also established and strengthened professional relationships and disseminated knowledge to a large number of Chinese researchers, government staff, and students in the audience.

Chapters 2 to 8 in this Annual Report are the papers based on the presentations by many of the international speakers at that conference. When the analysis and conclusions from this scholarship are combined with the foundational island statistics from Chapter 1 (Randall), a comprehensive picture of the structure, challenges, and successes of island economies emerges. We see how islands interact economically and politically with other jurisdictions around the world. For example, Bertram (Chapter 2) shows us that the geographical and political proximity of islands to other jurisdictions is related to their patterns of trade and investment. We see that some small island states such as Malta, Iceland, Mauritius, and Singapore are not only highly vulnerable to external factors but are also among the most resilient and capable of adapting to these circumstances (Briguglio). We see that subnational island jurisdictions (or SNIJs) can be highly adaptable and successful in negotiating "win-win" relationships with their metropoles and that the policy capacities of SNIJs and "sovereign" small island states are becoming increasingly blurred (Baldacchino). Greenwood (Chapter 5) suggests that island jurisdictions appear to be most successful in achieving their economic development goals when their assets and capacities match closely with the authority and the resources they have to carry out these functions. Prinsen (Chapter 6) adds to this discussion of subnational island jurisdictions by introducing us to the concept of "Islandian" sovereignty. This concept describes

the ongoing and increasingly successful relationships that non-self-governing islands maintain with their former colonial empires.

Economic success is not limited to islands that are in semi-autonomous relationships with metropoles or former colonial powers. As Overton and Murray show us in Chapter 7, many small independent island states have also become strategic and adept at negotiating terms of aid with donor organizations and countries to benefit their island economies. Finally, Barker (Chapter 8) uses a framework he calls "double exposure" to describe and explain the challenges facing island agriculture when exposed to the dual forces of economic globalization and climate change. The impacts of these forces on community sustainability can vary considerably at local, regional, and national scales.

Perhaps one of the most compelling narratives from this second section of the Annual Report is the realization that there is just so much more research that needs to be undertaken. Our understanding of island economies would benefit by more intensive case study research on specific islands and the relationships these islands have with the rest of the world economy. Knowledge and economic development policy on island economies would also benefit by having more accurate, complete, and comparable data on all islands — not just on the independent island states as defined by the United Nations, but also for the many island territories, states, provinces, and municipalities that do not have the same international voice.