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Does Size Matter?
Yes, If You are Caribbean!

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Inter-American Development Bank

2013

Abstract

This policy brief reviews whether the size of a country limits economic growth. Diseconomies of scale, indivisible fixed costs and geographic barriers represent intrinsic characteristics of small economies that might hinder economic growth. However, while some small economies have overcome the size hurdle, Caribbean countries have not. There is a widening growth and GDP per capita gap between the Caribbean and other small economies. Further, the Caribbean countries' ability to generate employment for given growth has fallen over time and relative to other small economies. It is not size that is the problem.

Countries come in all shapes and sizes. However, it is often asserted that what matters for economic growth is the country's size (see Kuznets, 1960). Discussions on the Caribbean almost invariably invoke the phrase "small and vulnerable" as a point of departure. Often, this characterization is used to assert an insurmountable problem that makes the Caribbean special (see Demas, 1965).

In this policy brief, we review the discussion on whether low economic growth, a key policy concern in the Caribbean, is caused by the insuperable problems related to the size of the economies.

Small economies do have common intrinsic characteristics that might hinder their economic growth and development. The intrinsic characteristics often emphasized are diseconomies of scale, indivisible fixed costs, and "living in bad neighborhoods."

Diseconomies of scale in the provision of public goods and services lead simultaneously to higher average costs of the public sector and to the underprovision of public goods. The latter includes the quality of regulatory and macroeconomic policy in addition to the provision of traditional public goods that include education, security, and infrastructure. Often, the lower quality of public services originate with government officials being responsible for a wider set of tasks and where they have lower support services than their peers do in larger economies. Smallness might also result in unfavorable access to global financial markets given that the fixed costs of analysis and monitoring of capacity to pay by international lenders of small transactions leads to higher spreads, less competition among international lenders, and an inadequate differentiation and herd effect, among different small states. They might pay a small economy premium.

High indivisible fixed costs hinder the private sector in small economies. Higher fixed costs imply cost disadvantages exacerbated with domestic market structures with extraordinary concentration and inferior competition. High concentration and low domestic competition is often aggravated by policy-driven costs, for example, through selective tax expenditures. Foreign trade, by itself, does not overcome this problem because fixed costs imply higher trade costs accentuated by inadequate trade related infrastructure and weak connectivity (shipping and air).

Vulnerability derives from the assertion that small economies live in bad neighborhoods not only in the traditional geographical sense but also in an economic sense. Small economies are subject to (a) more damaging natural disasters, (b) more closely linked to relatively stagnant countries, (c) receiving larger external economic shocks, or a combination of the three. The latter is due to higher specialization in few sectors and concentrated export markets where the few trading partners' economic growth rates have a high positive covariance.

Chart 1: Size and Economic Growth
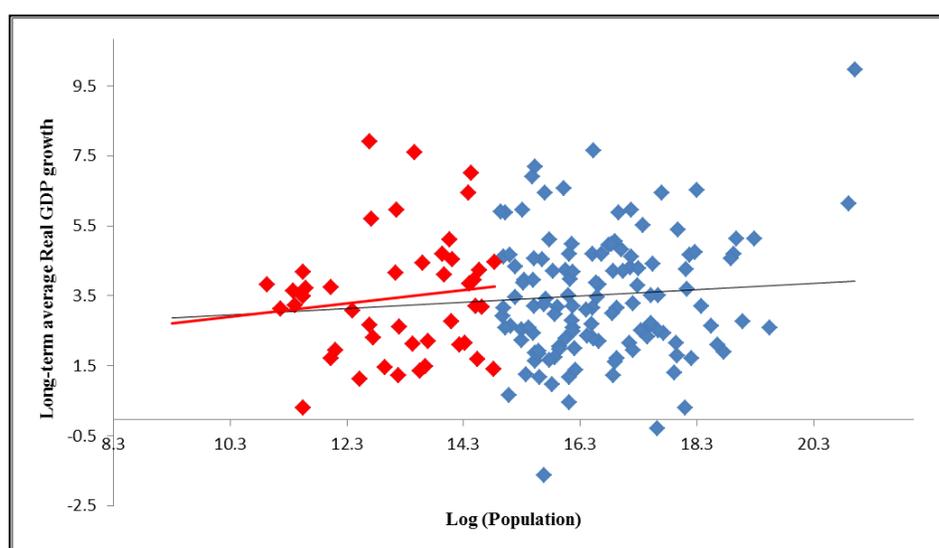
Source: World Economic Outloook database, International Monetary Fund and author's calculations.
Note: RED denotes small countries (SE); BLUE denotes rest of the world (ROW)

All of these arguments lead to the assertion that small economies will grow at inferior rates relative to larger economies. In defining small economies as those with populations of fewer than 3 million people (indicated by red in Chart 1), it appears that the assertion is valid.[1] As Chart 1 shows, the smaller the country is, the lower the economic growth is, and within small countries sample there is a steeper slope (greater reduction in economic growth for a given

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[1]This number contrasts with that used by the Commonwealth and the World Bank. The Commonwealth uses a threshold of 1.5 million people, but they add larger countries (Jamaica, Lesotho, Namibia, and Papua New Guinea) because they share many of the same characteristics of smallness. The World Bank also uses a threshold of 1.5 million, although Botswana, Jamaica, Lesotho, and Namibia are invited to their Small States Forum. Downes (1988) uses a multidimensional threshold.

reduction in size). The chart shows the average growth rate from 1990 to 2011 and the natural logarithm of population. For the whole sample, the relation indicates that 0.05 percentage points of the growth rate is lost when the population is smaller by 1 percent; for the small economies (SE) sample, the loss in growth is 0.20 percentage points (without excluding outliers, the loss rises up to 0.41 percentage points).

However, we are concerned about the extent to which size is a binding constraint to growth. If size is a binding constraint, then small countries should have growth rates that are tightly distributed around a low mean because size is a sufficient condition for slow growth. Larger countries should have growth rates that are more widely distributed around a higher mean. A wider dispersion in economic growth performance across non-small economies would be driven by other growth determinants whose variations are ineffective in small states.

Chart 2 summarizes the median annual economic growth and the distribution of the growth rates.[2] Although the median growth for SE is lower than the median growth of the rest of the world (ROW), contrary to our expectations, the dispersion is higher. The median annual growth (1990–2011) is 3.23 percent for SE, and 3.8 percent for ROW. Although not shown in the chart, the median growth rate over the same period is 1.78 percent for the Caribbean Six (Bahamas, Barbados, Guyana, Jamaica, Suriname, and Trinidad and Tobago) and 2.41 percent for countries of the Organisation of Eastern Caribbean States.

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[2] Note the boxplots show the quartiles of each group of countries and whiskers with the lowest and highest datum within 1.5 times the interquartile range.

Chart 2: Is Size a Binding Constraint to Economic Growth?
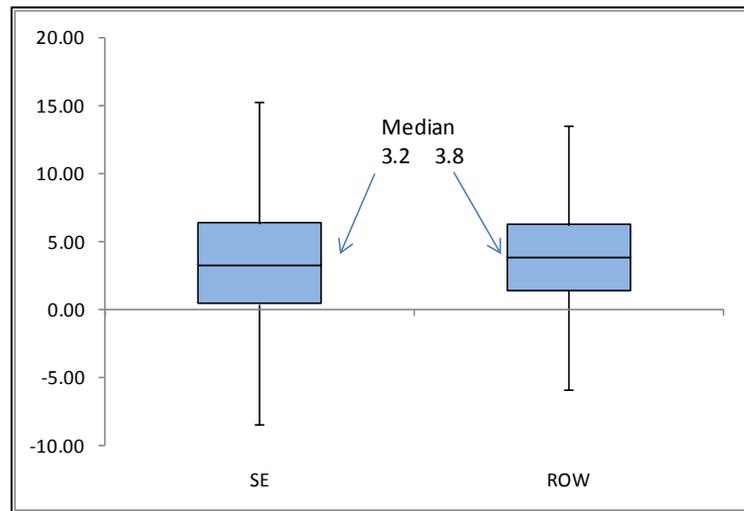
Thus, size is not a binding constraint for economic growth. Countries can escape the size constraint. For example, Alesina, Spolaore, and Wacziarg (2005) found that although a tenfold increase in population is associated with a 0.33 percentage point increase in average growth rates, countries can overcome size-related disadvantages through higher openness, education, and financial development.

However, this prediction does not apply to the Caribbean. Caribbean economic growth has continuously lost ground with respect to the rest of small economies (ROSE), where there is increasing economic growth, and hence a real GDP per capita gap.

A way to look at the relative decline is to consider steady-state growth. Estimating steady-state growth is fraught with problems. A proxy (see Blanchard and Simon, 2011) is modeling economic growth as a function of its lagged value and a constant plus an innovation term, from which we can obtain measures of steady-state growth.

Chart 3: Relative Steady-State Growth Gaps
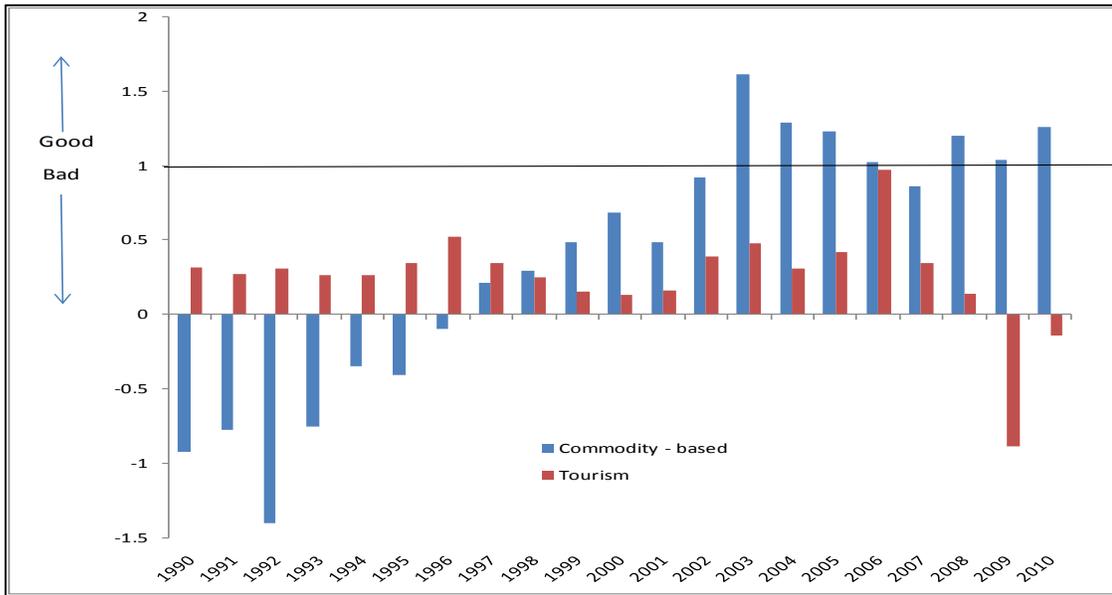
Chart 3 shows Caribbean steady-state growth relative to rest of small economies (ROSE). It reveals that steady-state growth has remained below the average for ROSE for tourist-based economies but has begun to closely approach and surpasses the average for ROSE when referring to commodity-based countries.

Nonetheless, the net result is a growing real-GDP-per-capita growth gap between Caribbean countries and ROSE (see Chart 4). This generally holds for tourism-based economies (Bahamas, Barbados, and Jamaica, as well as Organisation of Eastern Caribbean States countries) and commodity exporters (Guyana, Suriname, and Trinidad and Tobago). However, commodity countries appear to be leaving the pack—they have, since the 2000s, begun to close the real GDP per capita gap.

From the mid-nineties up to 2010, the differential between the Caribbean and ROSE had deteriorated with respect to the differential that existed in 1971. The per capita GDP in 1971, on

the basis of purchasing power parity valuation, was \$2,996 for ROSE[3] and \$9,041 for the Caribbean (i.e., the GDP for ROSE was three times higher than that of the Caribbean). Forty years later, the values and ratio have changed dramatically: \$14,582 for the Caribbean and \$15,154 for ROSE.

Chart 4: Relative GDP Per Capita Growth Gap
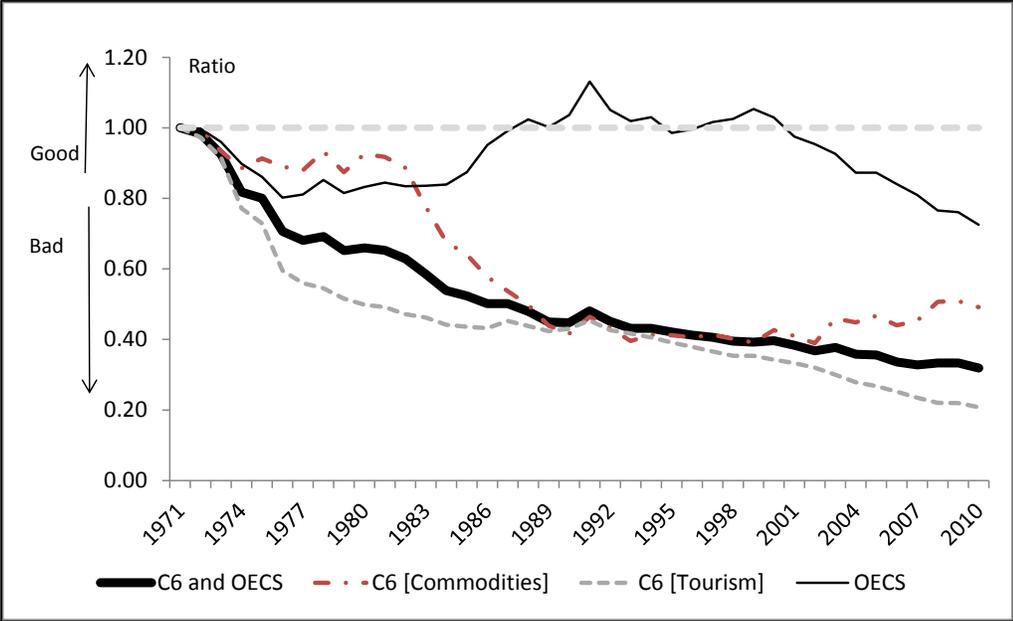
Source: PENN World Tables and author's calculations.
Note: C6 denotes : Bahamas, Barbados, Guyana, Suriname and Trinidad & Tobago.
C6 [Commodities] includes Guyana, Suriname and Trinidad & Tobago.

Another worrisome feature is the deteriorating ability of the Caribbean to generate employment or reduce unemployment for a given growth rate. Chart 5 shows the relation between the unemployment rate and real GDP growth. It shows that once, the Caribbean had an advantage. For the same level of economic growth, the unemployment rate was reduced more than for ROSE. That advantage over ROSE was lost after the late nineties. Recently, it appears that the Caribbean has entered, assuming a constant participation rate, into the zone of jobless growth.

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[3] The per capita GDP for ROSE in 1971 was calculated backwards by using the value in 2010 and growth rates with a weighted average value for 1986, 1990, 1993, and 2000 to correct for the effect of new countries in the sample; without this correction, the value would have been US\$2,576.

Chart 5: Capacity at Reducing Unemployment
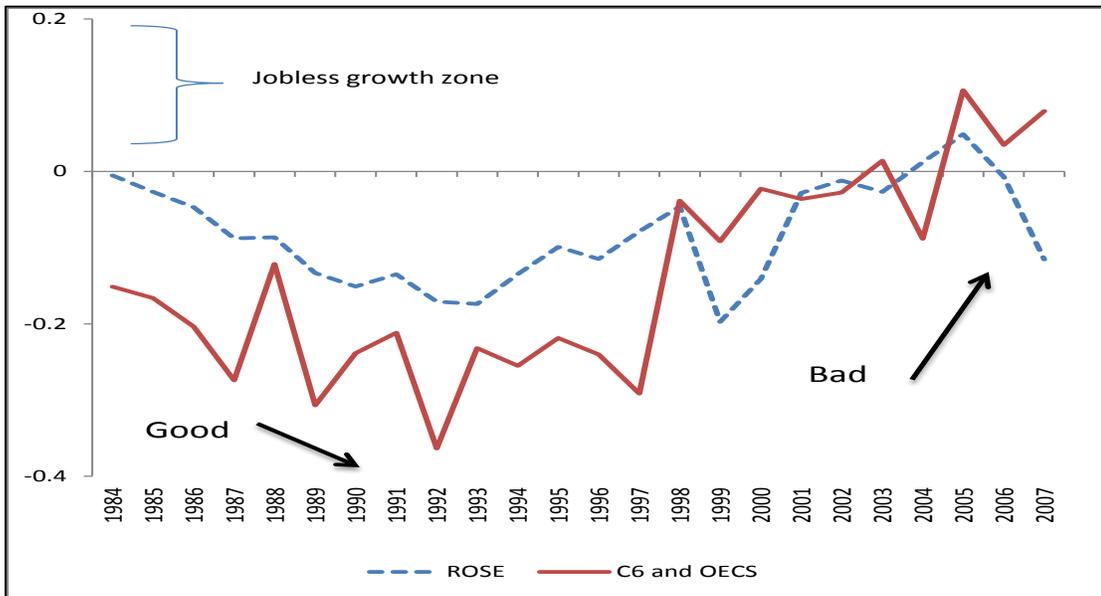
Source: World Economic Outlook database. International Monetary Fund, International Labour Organization databases and author's calculations.
Notes: The chart presents the 5-year rolling estimations of the Okun's law relation between unemployment and growth for each group of countries.

Size does matter for economic growth. Smaller economies, on average, grow less. However, size is not a binding constraint because countries can escape from size-related disadvantages. Recently, this has not been so for the Caribbean. The Caribbean's problem is not only size, as evidenced by the growth gap with respect to ROSE. The Caribbean's own history also argues against the postulation that size is a binding constraint. In the seventies, facing the dismantling of trade preferences and subject to serial external shocks, the countries changed their development model from one based on agriculture to one based on service (tourism and international business); a change that set the basis of high economic growth. Today, once again, the Caribbean faces the need to rethink its development model.

Policymakers and analysts should focus on the Caribbean's specific problems that could account for the growth gap; size cannot be the reason.

8

References

Alesina, A., E. Spolaore, and R. Wacziarg. 2005. "Trade, Growth, and the Size of Countries." In: P. Aghion and S. Durlauf, editors. *Handbook of Economic Growth.* Stanford, CA, United States: Stanford University.

Blanchard, O., and J. Simon. 2001. "The Long and Large Decline in US Volatility", MIT Department of Economics Working Paper No. 01-29. Cambridge, MA, United States: MIT.

Commonwealth Advisory Group. 1997. *A Future for Small States: Overcoming Vulnerability.* London, England: Commonwealth Secretariat.

Demas, W. 1965. *The Economics of Development in Small Countries: with Special Reference to the Caribbean.* Montreal, Quebec, Canada: McGill University Press.

Downes, A. S. 1988. "On the Statistical Measurement of Smallness: A Principal Component Measure of Size." *Social and Economic Studies, 37*(3): 75-96.

Kuznets, S. 1960. "Economic Growth of Small Nations". In: E. A. G. Robinson, editor. *The Economic Consequences of the Size of Nations.* Proceedings of a conference held by the International Economic Association, St. Martin's Press.

Annex. List of Small Economies and Key Characteristics

Country	GDP per capita	Humam development	Island?	Tour/Comm	Income group (WB)	Region
The Bahamas	27,542.43	0.79	Island	Tourist	High income: nonOECD	Latin America & Caribbean
Bahrain	23,893.30	0.80	Island	Commodity	High income: nonOECD	Middle East & North Africa
Barbados	26,386.01	0.83	Island	Tourist	High income: nonOECD	Latin America & Caribbean
Brunei Darussalam	55,079.63	0.86	Non-island	Commodity	High income: nonOECD	East Asia & Pacific
Cyprus	18,958.00	0.85	Island	Tourist	High income: nonOECD	East Asia & Pacific
Equatorial Guinea	9,885.71	0.55	Non-island	Commodity	High income: nonOECD	Sub-Saharan Africa
Malta	21,666.13	0.85	Island	Tourist	High income: nonOECD	Middle East & North Africa
Qatar	127,089.61	0.83	Non-island	Commodity	High income: nonOECD	Middle East & North Africa
St. Kitts and Nevis	9,807.11	0.75	Island	Tourist	High income: nonOECD	Latin America & Caribbean
Trinidad and Tobago	22,679.38	0.76	Island	Commodity	High income: nonOECD	Latin America & Caribbean
Estonia	16,967.84	0.85	Non-island	Commodity	High income: OECD	Europe & Central Asia
Iceland	35,628.21	0.91	Island	Commodity	High income: OECD	Europe & Central Asia
Luxembourg	83,071.50	0.88	Non-island	Tourist	High income: OECD	Europe & Central Asia
Slovenia	24,843.57	0.89	Non-island	Commodity	High income: OECD	Europe & Central Asia
Comoros	868.00	0.43	Island	Commodity	Low income	Sub-Saharan Africa
The Gambia	1,270.54	0.44	Non-island	Commodity	Low income	Sub-Saharan Africa
Guinea-Bissau	804.96	0.36	Non-island	Commodity	Low income	Sub-Saharan Africa
Belize	9,262.13	0.70	Non-island	Commodity	Lower middle income	Latin America & Caribbean
Bhutan	3,954.99	0.54	Non-island	Commodity	Lower middle income	South Asia
Cape Verde	3,666.80	0.59	Island	Tourist	Lower middle income	Sub-Saharan Africa
Djibouti	2,493.15	0.45	Non-island	Commodity	Lower middle income	Middle East & North Africa
Fiji	4,321.45	0.70	Island	Tourist	Lower middle income	East Asia & Pacific
Guyana	4,502.74	0.64	Non-island	Commodity	Lower middle income	Latin America & Caribbean
Kiribati	3,722.01	0.63	Island	Commodity	Lower middle income	East Asia & Pacific
Lesotho	1,488.84	0.46	Non-island	Commodity	Lower middle income	Sub-Saharan Africa
Mongolia	4,217.29	0.68	Non-island	Commodity	Lower middle income	East Asia & Pacific
Samoa	6,492.56	0.70	Island	Tourist	Lower middle income	East Asia & Pacific
São Tomé and Príncipe	1,617.04	0.53	Island	Tourist	Lower middle income	Sub-Saharan Africa
Solomon Islands	1,948.39	0.53	Island	Commodity	Lower middle income	East Asia & Pacific
Swaziland	3,830.07	0.54	Non-island	Commodity	Lower middle income	Sub-Saharan Africa
Democratic Republic of	1,142.54	0.58	Island	Commodity	Lower middle income	East Asia & Pacific
Tonga	7,631.29	0.71	Island	Tourist	Lower middle income	East Asia & Pacific
Vanuatu	6,796.42	0.63	Island	Tourist	Lower middle income	East Asia & Pacific
Antigua and Barbuda	14,786.21	0.76	Island	Tourist	Upper middle income	Latin America & Caribbean
Botswana	9,265.74	0.63	Non-island	Commodity	Upper middle income	Sub-Saharan Africa
Dominica	7,389.93	0.75	Island	Tourist	Upper middle income	Latin America & Caribbean
Gabon	13,350.60	0.68	Non-island	Commodity	Upper middle income	Sub-Saharan Africa
Grenada	14,805.52	0.77	Island	Tourist	Upper middle income	Latin America & Caribbean
Jamaica	8,601.59	0.73	Island	Tourist	Upper middle income	Latin America & Caribbean
Latvia	12,591.30	0.81	Non-island	Commodity	Upper middle income	Europe & Central Asia
FYR Macedonia	7,665.42	0.74	Non-island	Commodity	Upper middle income	Europe & Central Asia
Maldives	4,238.51	0.69	Island	Tourist	Upper middle income	South Asia
Mauritius	9,229.94	0.74	Island	Tourist	Upper middle income	Sub-Saharan Africa
Montenegro	7,865.44	0.79	Non-island	Tourist	Upper middle income	Europe & Central Asia
Namibia	5,385.68	0.61	Non-island	Commodity	Upper middle income	Sub-Saharan Africa
Seychelles	30,862.90	0.81	Island	Tourist	Upper middle income	Sub-Saharan Africa
St. Lucia	10,718.91	0.73	Island	Tourist	Upper middle income	Latin America & Caribbean
St. Vincent and the Gren	7,033.25	0.73	Island	Tourist	Upper middle income	Latin America & Caribbean
Suriname	10,701.15	0.68	Non-island	Commodity	Upper middle income	Latin America & Caribbean
Tuvalu	0.00	..	Island	Commodity	Upper middle income	East Asia & Pacific