

ABOUT ECLAC/CDCC

The Economic Commission for Latin America and the Caribbean (ECLAC) is one of five regional commissions of the United Nations Economic and Social Council (ECOSOC). It was established in 1948 to support Latin American governments in the economic and social development of that region. Subsequently, in 1966, the Commission (ECLA, at that time) established the subregional headquarters for the Caribbean in Port of Spain to serve all countries of the insular Caribbean, as well as Belize, Guyana and Suriname, making it the largest United Nations body in the subregion.

At its sixteenth session in 1975, the Commission agreed to create the Caribbean Development and Cooperation Committee (CDCC) as a permanent subsidiary body, which would function within the ECLA structure to promote development cooperation among Caribbean countries. Secretariat services to the CDCC would be provided by the subregional headquarters for the Caribbean. Nine years later, the Commission's widened role was officially acknowledged when the Economic Commission for Latin America (ECLA) modified its title to the Economic Commission for Latin America and the Caribbean (ECLAC).

Key Areas of Activity

The ECLAC subregional headquarters for the Caribbean (ECLAC/CDCC secretariat) functions as a subregional think-tank and facilitates increased contact and cooperation among its membership. Complementing the ECLAC/CDCC work programme framework, are the broader directives issued by the United Nations General Assembly when in session, which constitute the Organisation's mandate. At present, the overarching articulation of this mandate is the United Nations Sustainable Development Goals.

Towards meeting these objectives, the Secretariat conducts research; provides technical advice to governments upon request; organizes intergovernmental and expert group meetings; helps to formulate and articulate a regional perspective within global forums; and introduces global concerns at the regional and subregional levels.

Areas of specialization include trade, statistics, social development, science and technology, and sustainable development, while actual operational activities extend to economic and development planning, demography, economic surveys, assessment of the socio-economic impacts of natural disasters, climate change, data collection and analysis, training, and assistance with the management of national economies.

The ECLAC subregional headquarters for the Caribbean also functions as the Secretariat for coordinating the implementation of the Programme of Action for the Sustainable Development of Small Island Developing States. The scope of ECLAC/CDCC activities is documented in the wide range of publications produced by the subregional headquarters in Port of Spain.

MEMBER COUNTRIES

Antigua and Barbuda	Haiti
The Bahamas	Jamaica
Barbados	Saint Kitts and Nevis
Belize	Saint Lucia
Cuba	Saint Vincent
Dominica	and the Grenadines
Dominican Republic	Suriname
Grenada	Trinidad and Tobago
Guyana	

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Curaçao
Guadeloupe
Martinique
Montserrat
Puerto Rico
Sint Maarten
Turks and Caicos Islands
United States Virgin Islands

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FOCUS: ECLAC in the Caribbean is a publication of the Economic Commission for Latin America and the Caribbean (ECLAC) subregional headquarters for the Caribbean/Caribbean Development and Cooperation Committee (CDCC).

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A DEEP DIVE INTO CARIBBEAN DIGITAL DIVIDES: A CROSS-COUNTRY COMPARISON ON INTERNET AND COMPUTER ACCESS AND USE IN THE CARIBBEAN

Lika Døhl Diouf^{1*}

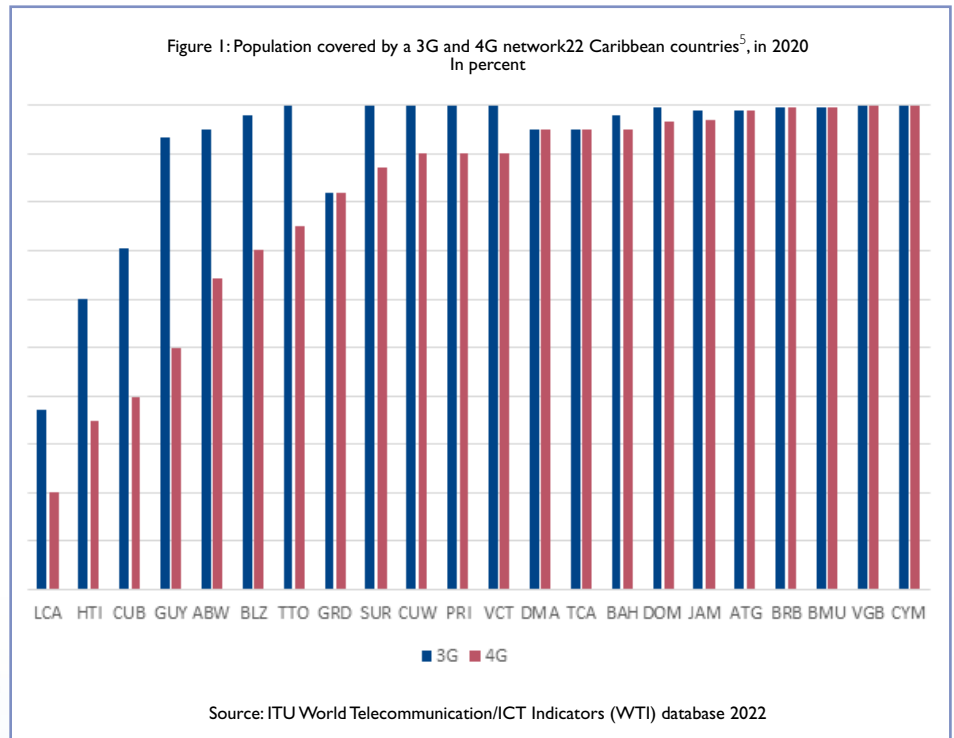
The Caribbean has experienced transformative change in terms of digital technologies in recent years. Broadband penetration has increased, 3G and 4G coverage is nearly universal in several countries², and most countries of the subregion have a higher number of internet users than the global average. However, significant digital divides remain across the Caribbean, as evidenced by several relevant indicators related to information and communications technologies (ICTs).

Many people still lack access to the internet and devices and are, therefore, excluded from the benefits that ICTs can provide. This article explores and analyses some available statistics on ICT access and use in the subregion, and highlights several disparities among countries. It focuses on indicators related to access to the internet, internet usage, access to a household computer and computer usage, and compares between 19 and 24 Caribbean countries for each indicator.

ACCESS TO THE INTERNET

A significant percentage of Caribbean people could access the internet today, given the right circumstances. This is particularly true for mobile internet, as shown in Figure 1. In all except three countries, more than 90 per cent of the population is covered by a third-generation wireless mobile network (3G³). In 13 of the 22 countries for which data is available, more than 90 per cent of the population is also covered by a fourth-generation wireless network (4G) such as LTE or WiMax. Of those 13, nearly half are territories⁴.

While coverage is a prerequisite for connection to the internet, it is not sufficient to determine whether people are connecting to the internet. Data on the number of subscriptions to fixed and mobile broadband, and the number and composition of internet users, can



provide more context on digital divides among Caribbean countries. In 2020, the number of mobile broadband subscribers⁶ was still fairly low in most countries, with less than 60 mobile broadband subscribers per 100 inhabitants in 11 of the 19 countries for which data is available (see Figure 2). However, in 16 of the 19 countries, mobile broadband subscriptions increased within the past five years, in some cases substantially.

In both Haiti and Guyana, for example, mobile broadband subscriptions

increased from less than 1 per cent to around 30 per cent. Furthermore, in the five countries with the highest number of mobile broadband subscribers, all have over 80 subscribers per 100 inhabitants, and all have experienced a minimum 20 percentage point increase between 2015 and 2020. Assuming that most who subscribe to mobile broadband do so to be able to access the internet⁷, it is likely that the percentage of people that use the internet has also increased significantly in most countries across the subregion during that period.

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² The word "countries" here denotes both countries and territories, unless otherwise specified.

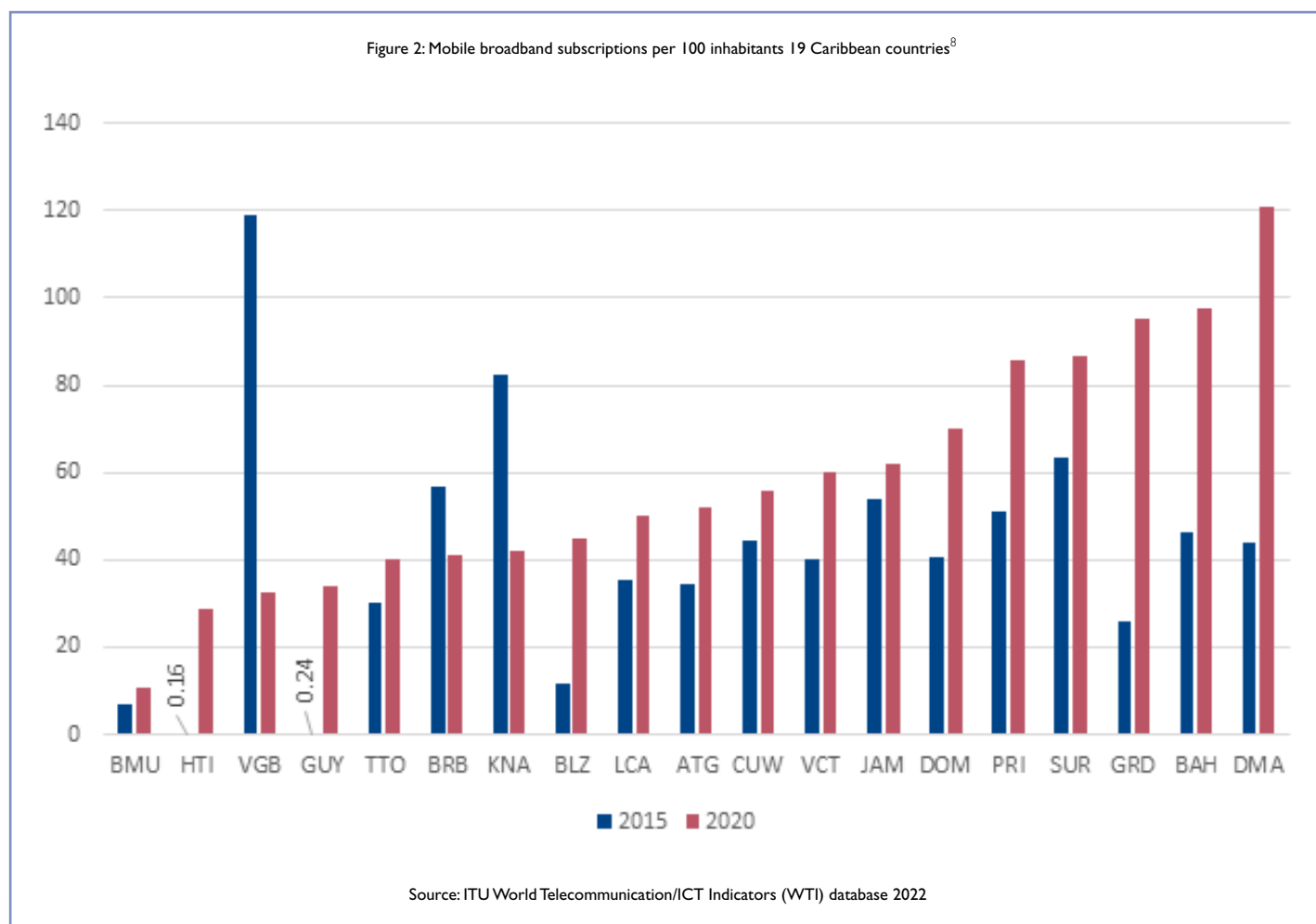
³ A 3G connection typically provides lower-speed broadband connectivity, at around 3 megabits per second (Mbps) on average.

⁴ The word "territories" here refers to the associate members of the Caribbean Development and Cooperation Committee (CDCC), regardless of technical legal status. See <https://www.cepal.org/en/headquarters-and-offices/eclac-caribbean/about-us>

⁵ The figure includes all members and associate members of the CDCC for which data is available for both 3G and 4G coverage.

⁶ A mobile broadband subscription in this context refers to both data-only plans, and plans that include both voice and data, and includes both residential and business subscriptions (See International Telecommunication Union (ITU) (2020), Handbook for the collection of administrative data on telecommunications/ICT, pp. 41, 45-49)

⁷ Some may subscribe to a plan including both voice and data without using the internet frequently, or at all.



Furthermore, although a large majority of countries experienced growth in subscribers, the pace of growth varied significantly, and there appears to be no relationship between the level of mobile network coverage (Figure 1) and the proportion of mobile broadband subscribers (Figure 2).

For example, two of the five countries with the lowest levels of 3G coverage, Haiti and Guyana, are also among the five with the lowest number of mobile broadband subscribers. However, Bermuda and the British Virgin Islands, both of which reported having 100 per cent of their populations covered by 3G and 4G networks, are among the five countries with the lowest relative

number of subscribers. Grenada, which is also among the five countries with the lowest levels of 3G coverage, is among the countries with the highest number of subscribers.

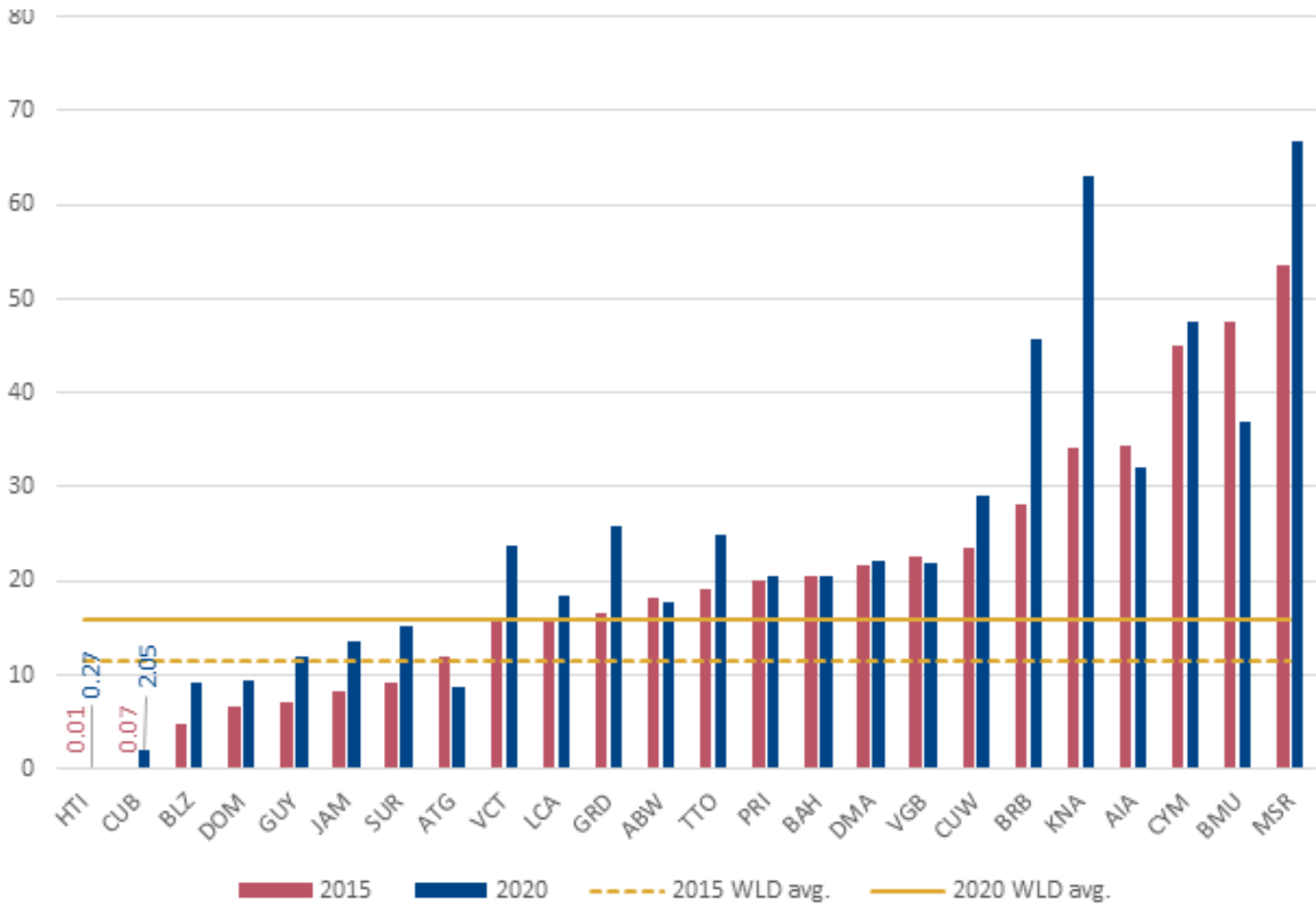
A decline in the number of mobile broadband subscriptions per 100 inhabitants was also observed between 2015 and 2020 in Barbados, the British Virgin Islands, and Saint Kitts and Nevis (Figure 2). The level of decline varies significantly: In Barbados, the decline exceeded 15 percentage points; in Saint Kitts and Nevis, it exceeded 41 percentage points, halving the proportion of subscribers; and in the British Virgin Islands there was a decrease by nearly 87 percentage points between 2015 and 2020.

The implications of these observations are not immediately apparent.

One possible explanation could lie in changing preferences among consumers, from mobile to fixed broadband. For Barbados and Saint Kitts and Nevis, this could serve as a partial explanation, as they experienced the highest relative growth rates of fixed broadband subscribers between 2015 and 2020 (Figure 3). Barbados saw a growth of over 17 percentage points, and Saint Kitts and Nevis of over 28 percentage points. However, the British Virgin Islands also saw a small decline in the proportion of fixed broadband subscribers, so this does not fully explain the decline in mobile broadband subscriptions.

⁸ The figure includes all members and associate members of the CDCC for which data is available for both 2015 and 2020. For Bermuda, the earlier figure is from 2016.

Figure 3: Fixed broadband subscriptions per 100 inhabitants
24 Caribbean countries⁹ and world average In percent



Source: ITU World Telecommunication/ICT Indicators (WTI) database 2022 and World Bank

An examination of the relative changes in fixed broadband subscriptions, as contained in Figure 3, once again illustrates the diverse experiences of Caribbean countries. According to the World Bank, the relative number of fixed broadband subscriptions grew by nearly 38 per cent between 2015 and 2020 (Table 1)¹⁰. During that period, 13 of the 24 countries measured in Figure 3 experienced growth in the number of fixed broadband subscriptions below the world average, with 6 countries recording declines in the

relative number of subscribers.

Of these, Antigua and Barbuda, which also saw a reduction in mobile broadband subscribers between 2015 and 2020, fell below the world average for fixed broadband subscriptions in that same period. Of the 12 remaining countries that experienced above-average growth, seven recorded rates of fixed mobile broadband subscriptions that were lower than the world average in both 2015 and 2020. The above-average growth in this case

could therefore be illustrative of attempts to catch up with the rest of the subregion. Cuba and Haiti are outliers in terms of growth, where the high relative increase is a result of the negligible percentage of fixed broadband subscribers in those countries in 2015.

INTERNET USAGE

The administrative data presented in the table and figures above, paint a picture of the diverse experiences within the

⁹ The figure includes all members and associate members of the CDCC for which data is available for both 2015 and 2020. For Montserrat, the earlier figure is from 2014.

¹⁰ World Bank, "Fixed broadband subscriptions (per 100 people)", IT.NET.BBND.P2

Table 1: Fixed broadband subscriptions per 100 inhabitants, 2015 and 2020 figures, and growth rate
24 Caribbean countries¹¹ and world average In percent

Country/territory	2015	2020	Growth
Antigua and Barbuda	12.05	8.63	-28.38%
Bermuda	47.51	36.92	-22.29%
Anguilla	34.42	32.08	-6.80%
British Virgin Islands	22.68	21.8	-3.88%
Aruba	18.22	17.83	-2.14%
Bahamas	20.63	20.42	-1.02%
Puerto Rico	20.14	20.52	1.89%
Dominica	21.65	22.22	2.63%
Cayman Islands	44.96	47.54	5.74%
Saint Lucia	16.19	18.41	13.71%
Curacao	23.59	29.06	23.19%
Montserrat	53.54	66.67	24.52%
Trinidad and Tobago	19.07	24.82	30.15%
World	11.52	15.89	37.91%
Dominican Republic	6.59	9.38	42.34%
Saint Vincent and the Grenadines	15.93	23.64	48.40%
Grenada	16.61	25.88	55.81%
Barbados	28.15	45.6	61.99%
Suriname	9.16	15.2	65.94%
Jamaica	8.19	13.67	66.91%
Guyana	7.11	11.92	67.65%
Saint Kitts and Nevis	34.27	62.97	83.75%
Belize	4.83	9.12	88.82%
Haiti	0.01	0.27	2600.00%
Cuba	0.07	2.05	2828.57%

Source: Author's elaboration based on ITU World Telecommunication/ICT Indicators (WTI) database 2022 and World Bank

Caribbean as regards potential and actual access to the internet in recent years. Surveys of individuals and households regarding access to digital technologies would help contextualize the administrative data and provide a more vivid depiction of the situation of each country. However, as is well known,

many Caribbean countries experience challenges related to the capture, analysis, and dissemination of individual and household data. The limited availability of International Telecommunication Union (ITU) data on ICT household access and individual use is indicative of this challenge. For example, data on

reasons for not having internet is only available for Jamaica, making cross-country comparison within the subregion impossible. The lack of recent and disaggregated data on internet usage also emerges as a key challenge.

In this regard, while data on individuals using the internet per 100 inhabitants is available for 22 countries, for some countries the most recent data is from 2016 (Figure 4). Data disaggregated by gender is available for only five countries¹², of which three are territories. Data disaggregated by urban-rural location is only available for the Dominican Republic, data disaggregated by age, education level, and labour force status is available only for the Dominican Republic and Puerto Rico, and data disaggregated by occupation (manual vs. non-manual labour) is only available for Puerto Rico. Therefore, it is not possible at present to make a meaningful comparison of internet usage across the Caribbean at a more granular level. Nevertheless, a review of the data that is available still provides some valuable insights into the digital development of the subregion.

For example, 17 of the 22 countries for which data is available have a higher rate of internet users than the global average for 2020 of 60 per cent¹³ (see figure 4). In addition, three countries report a higher rate of internet users than the Organization for Economic Cooperation and Development (OECD) average for 2020. Furthermore, if we compare with the OECD average for 2016 (i.e., just under 80 per cent¹⁴), to account for the fact that a lot of the Caribbean data is older, that figure rises to 7 out of 22, or nearly one-third of the Caribbean countries.

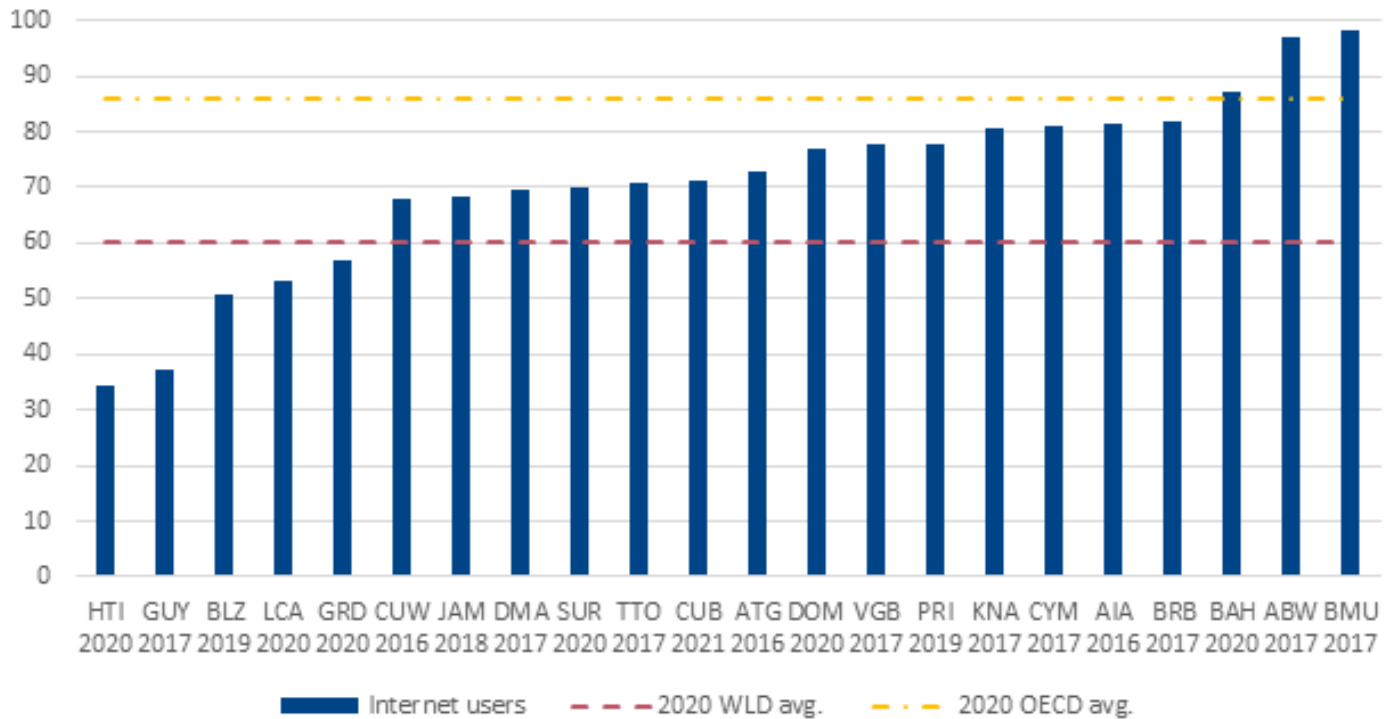
¹¹ The table includes all members and associate members of the CDCC for which data is available for both 2015 and 2020. For Montserrat, the earlier figure is from 2014.

¹² British Virgin Islands, Curaçao, Dominican Republic, Jamaica and Puerto Rico

¹³ World Bank, Individuals using the Internet (% of population) <https://data.worldbank.org/indicator/IT.NET.USER.ZS>

¹⁴ World Bank, Individuals using the Internet (% of population) - OECD members <https://data.worldbank.org/indicator/IT.NET.USER.ZS?locations=OE>

Figure 4: Individuals using the internet per 100 inhabitants
 22 Caribbean countries¹⁵, world average for 2020, and OECD averages for 2016 and 2020
 In percent



Source: Author's elaboration based on ITU World Telecommunication/ICT Indicators (WTI) database 2022, World Bank and OECD¹⁶

Furthermore, given that the Caribbean data largely does not account for the effects of the COVID-19 pandemic, during which the number of internet users surged globally¹⁷, it is possible that there are other countries that should be added to this list.

ACCESS TO A COMPUTER

Another dimension across which Caribbean countries can be compared is access to a computer at home (Figure 5). Data on household access to a computer is available for 12 Caribbean countries in

the ITU World Telecommunication/ICT Indicators database 2022. In addition, the ITU DataHub contains data for another nine countries. Unfortunately, no world average appears to be available for comparison for this indicator. Interestingly, the rate of access to a household computer is significantly higher in Bermuda than the OECD average for 2017 at 79 per cent, and seven Caribbean countries are within a few percentage points of the OECD average.

However, the disparities within the subregion are also glaring, as simultaneously, in four countries, less

than one third of households have access to a computer at home.

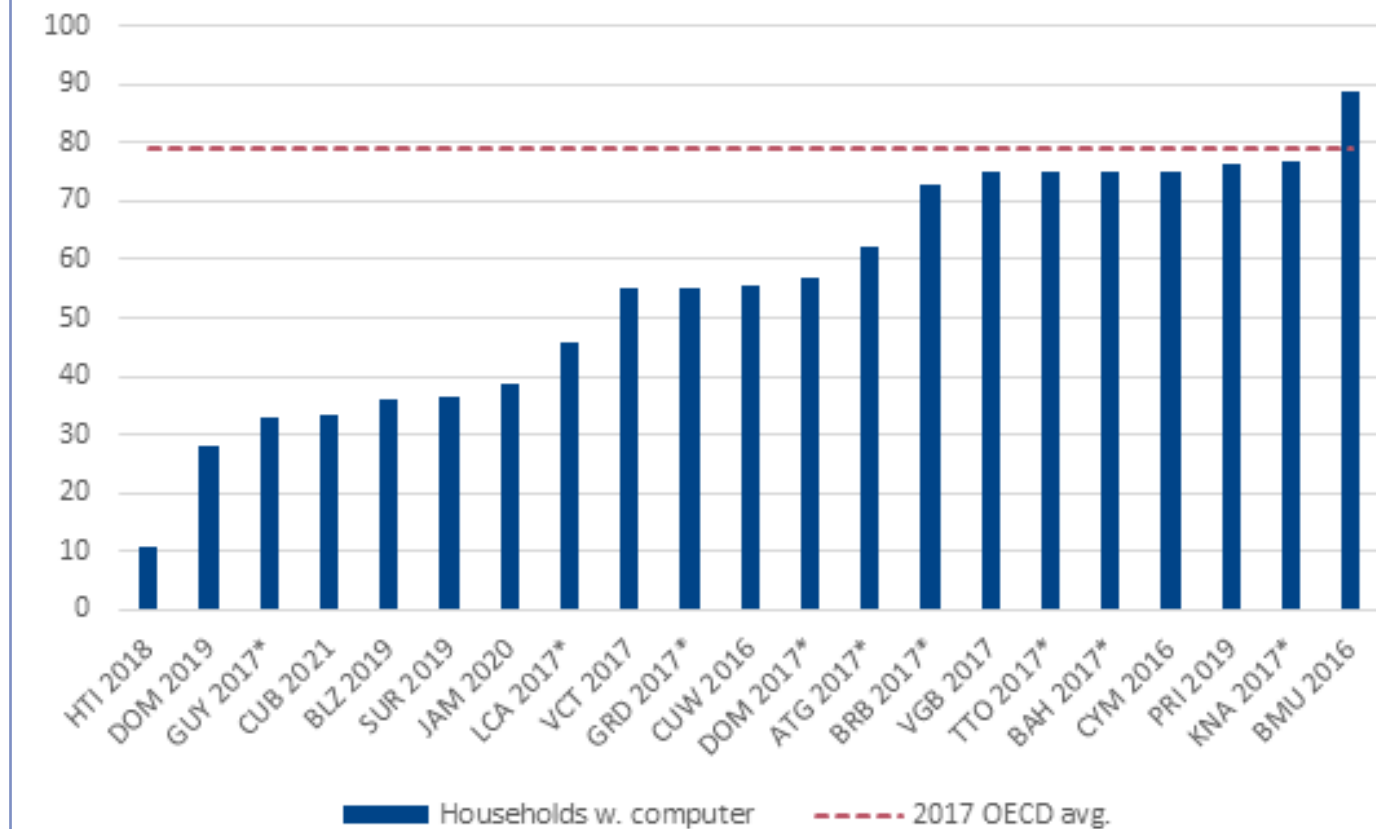
As with internet access, household access to a computer does not necessarily imply that an individual is using the computer. Unfortunately, statistics on individuals using a computer are only available for three Caribbean countries, namely Cuba, the Dominican Republic and Jamaica. Given the limited number of countries, and the fact that these large, populous countries are not representative of the diversity of the Caribbean, the data does not facilitate a subregional analysis.

¹⁵ The figure includes all members and associate members of the CDCC for which data is available after 2015. Red bars indicate countries where the number of internet users is higher than the 2020 global average of 60 per cent.

¹⁶ Access to computers from home <https://data.oecd.org/ict/access-to-computers-from-home.htm>

¹⁷ In 2020 alone, the number of internet users globally grew by 10.2 per cent, according to ITU (2021) Facts and Figures 2021, <https://www.itu.int/en/ITU-D/Statistics/Documents/facts/FactsFigures2021.pdf>

Figure 5: Households with a computer
21 Caribbean countries¹⁸ and OECD average for 2017¹⁹
In percent



Source: Author's elaboration based on ITU World Telecommunication/ICT Indicators (WTI) database 2022, data from ITU DataHub²⁰, and OECD

KEY INSIGHTS

Another dimension across which the Caribbean is increasingly connected. Since 2015, the number of people who have actual or potential access to the internet has increased significantly across the subregion, with some countries having developed infrastructure to support access to the internet for their entire population. Most countries have seen growth in both fixed broadband and mobile broadband subscriptions, with mobile broadband appearing to be of greater importance to the subregion at

present. The number of individuals using the internet outstrips the global average in more than three quarters of Caribbean countries. Also, in nearly two thirds of Caribbean countries, more than half the population has access to a computer.

This data paints a picture of the digital transformation of the Caribbean in recent years and illustrates the potential of the subregion to further develop its digital capacity. However, the data also highlights the disparities across the subregion, and suggests that many people across the Caribbean lack access to ICTs. The lack of data on various indicators

on household access and individual use, in particular disaggregated data, makes a more in-depth comparison difficult. Notwithstanding, as comparisons are rarely conducted across such a broad set of Caribbean countries, the available data still provides some new and useful insights with respect to the digital development of the subregion. ■

¹⁸ The figure includes all members and associate members of the CDCC for which data is available after 2015.

¹⁹ 2017 is the latest year for which data is available for a majority of OECD countries. The average excludes Australia, Colombia, New Zealand, Switzerland and the United States of America, as no data is available for 2017 for those countries.

²⁰ Data from ITU DataHub is marked with an asterisk (*). Source: ITU DataHub, Households with a computer, <https://datahub.itu.int/data/?i=12046>