The affordability of ICT services 2022

Foreword

I am pleased to present to you the latest instalment of our flagship series on ICT affordability. As a key enabler of universal and meaningful connectivity, affordability has been a longstanding priority for ITU and its partners.

This edition reveals that - taken overall - using the Internet became more affordable globally in 2022. This is an encouraging result, but much work remains to make connectivity affordable for all. Connectivity has become a necessity, but for many it remains a luxury. High costs prevent millions from using the Internet or using it to its full potential. Major affordability gaps across and within countries perpetuate the digital divide. In countries with large income disparities, connectivity can be prohibitively expensive for the poorest segment of the population even if it is affordable for the average earner.

This publication builds on the most comprehensive, established, and granular time series of internationally comparable data on ICT affordability, which represents a treasure trove for policymakers, regulators, and researchers. The ITU ICT prices programme embodies our ongoing commitment to measuring ICTs for better decision-making. Our work on policy and regulation complements this statistical effort by providing guidance on measures to improve affordability and value for money.

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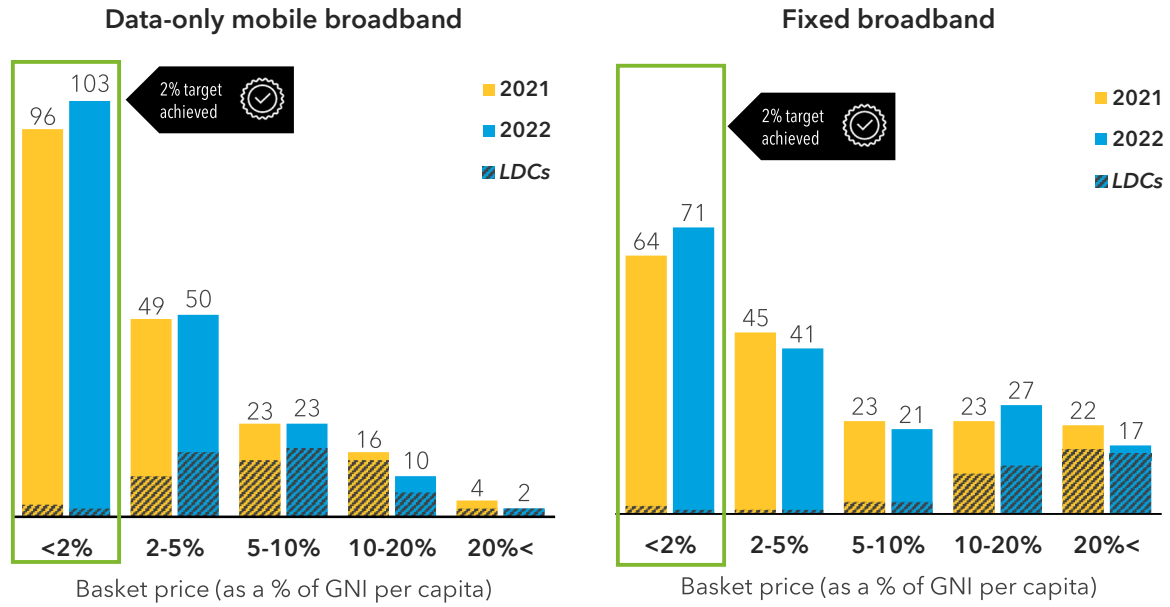
Highlights

- In 2022, ICT services became more affordable globally, resuming a downward trend that was interrupted by the COVID-19 pandemic in 2020 and 2021.
- The global median prices of all four mobile baskets measured as a percentage of gross national income (GNI) per capita reached historical lows in 2022.
- Fixed-broadband prices, by contrast, stagnated over the past five years. A global price and quality gap has persisted, and the basket has remained unaffordable especially in low-income economies and least developed countries (LDCs).
- The Broadband Commission affordability target was met by 103 economies in 2022, up from 96 in 2021.
- Affordability continues to be an important barrier to universal connectivity.
- The share of Internet users is typically less than one third of the global average in countries where broadband access (fixed or mobile) costs more than ten per cent of average monthly income.
- While the affordability gap between low- and high-income economies narrowed for all price baskets, major affordability divides remained between economies at different income levels.
- Affordability divides within countries remained wide in many regions.
- ICT service costs remain unaffordable for the poorest 40 per cent of the population in many parts of the world, which unless addressed, will prevent the achievement of universal connectivity.

Figure 1: Progress towards the Broadband Commission affordability target

Number of economies by basket price



Note: The two charts show the distribution of economies by affordability for 2021 and 2022, defined by the price of mobile-broadband and fixed-broadband as a percentage of GNI per capita. The shaded pattern indicates the number of LDCs. Only those economies that had basket data available for 2021 and 2022 for mobile broadband (188 economies) and fixed broadband (178 economies) are considered.
Source: ITU

Affordable access to broadband services enables individuals to enjoy the benefits of digital connectivity, some of which include the ability to work, learn, connect with others, and access essential services. Affordable access also allows businesses to thrive in the digital economy. The world now understands that connectivity was a lifeline during the COVID-19 pandemic and remains an imperative today.

In 2022, most of the global population (95%) was covered by a mobile-broadband network, yet every third person on the planet was offline, according to ITU estimates. Expensive ICT services have prevented many from using the Internet and from having a safe, satisfying, enriching and productive online experience. Detailed statistical evidence is a starting point for devising policies and creating conditions to achieve universal and meaningful connectivity.

This ITU policy brief presents key findings from the analysis of the ITU 2022 ICT price data collection, focusing on recent high-level trends and shining a light on the affordability divides. This analysis is complemented by the ICT price data visualization tool, which provides maps, country-level tables and historical data.[1]

Assessing progress towards the affordability target

The United Nations Broadband Commission for Sustainable Development aims to make broadband access in developing countries affordable by 2025. Broadband access is considered affordable if it costs less than 2 per cent of the average monthly GNI per capita.

The latest statistics show significant improvement in affordability: in 2022, 103 economies met the target with respect to the data-only mobile-broadband basket and 71 economies met the target with respect to the fixed-broadband basket, in each case seven more economies met the target in 2022 than in 2021 (Figure 1).

Meeting the target presents a particular challenge for low-income economies, especially LDCs. In 2022, only 2 out of the 46 LDCs met the 2 per cent target: Bangladesh (for mobile- and fixed-broadband services) and Bhutan (for mobile broadband services). There are a further 16 LDCs where mobile-broadband services cost less than 5 per cent of monthly GNI per capita. This means that in the vast majority of LDCs, mobile-broadband Internet costs more than 5 per cent of GNI per capita and as much as 24 per cent in one instance. For fixed-broadband Internet, the situation is even worse, costing more than 5 per cent of GNI per capita in all but 2 LDCs, more than 20 per cent in 15 LDCs, and as much as 93 per cent in one case.

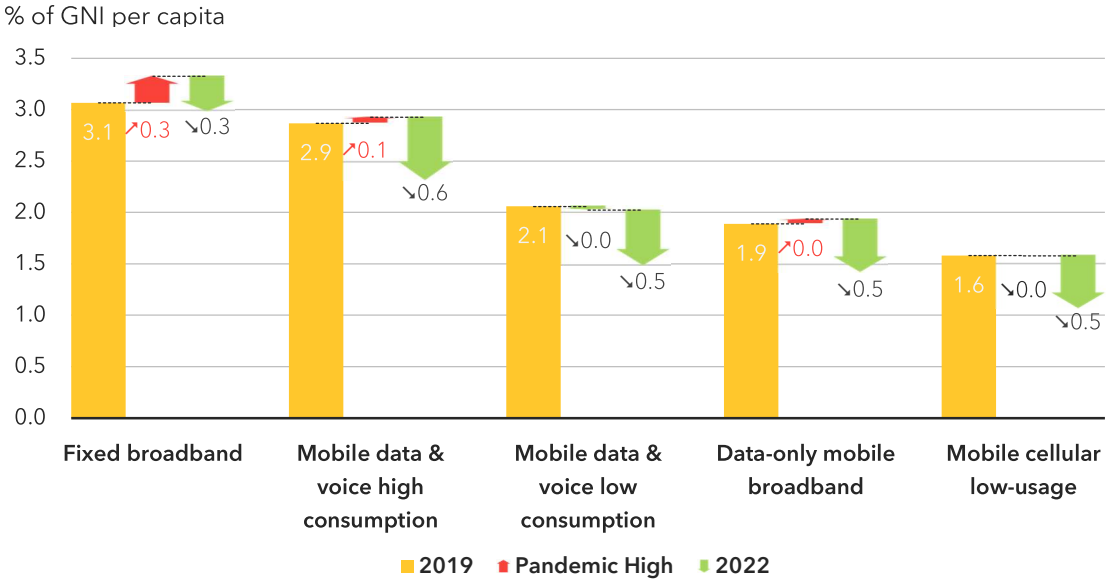
Global price trends

Mobile- and fixed-broadband services became more affordable worldwide in 2022 compared to the previous year. This contrasts sharply with the developments during the COVID-19 pandemic and the ensuing financial and economic crisis of 2020-2021, when fixed-broadband and mobile basket prices expressed as a percentage of GNI per capita typically stagnated or even increased (Figure 2).

Looking back over the 2018 to 2022 data reveals divergent trends for the fixed-broadband and mobile

[1] Follow this link for historical data and detailed methodology.

Figure 2: Affordability changes through the COVID-19 pandemic



Note: Basket prices expressed as a percentage of GNI per capita. Green and red labels (with arrows) indicate the direction of price changes. Pandemic High refers to the least affordable price in the 2020 to 2021 period. Median values are based on the set of economies for which price data are available from 2019 to 2022 to clean the potential effect of changing availability.
Source: ITU

baskets. In contrast to the data-only mobile-broadband basket, which has seen an annual average price decline of around 7 per cent between 2018 and 2022, the price of the fixed-broadband basket was virtually the same in 2022 as it was five years earlier. Over the same period, 1.6 billion active mobile broadband subscriptions, and slightly more than 300 million fixed-broadband subscriptions, were added worldwide according to ITU estimates.

Expressed as a share of GNI per capita, the price of all four mobile baskets reached an historical low in 2022. This includes a variety of services: data-only mobile broadband, a traditional voice and SMS basket, and two mobile data and voice baskets.[2] Compared to the 2019 (pre-COVID) levels, prices decreased by around 0.5 percentage points in all cases. By contrast, the fixed-broadband basket price dropped by only 0.3 percentage points, cancelling out the price increase during the pandemic. However, while in 2019 the mobile data and voice high-consumption basket price was similar to that of the fixed-broadband basket, the former had become more affordable by 2022 (Figure 2).

In most economies, basket prices (measured in local currency) dropped when adjusted for inflation despite increasing consumer price levels across the world at the time of data collection (May 2022).

Global affordability divides and trends

The prices of all baskets expressed as a percentage of GNI per capita varies hugely across economies. For instance, the data-only mobile-broadband basket cost only 0.1 per cent of GNI per capita in Liechtenstein (the lowest in the world), but it amounted to 23.8 per cent of GNI per capita in the Central African Republic (the highest). The gap was even wider for the fixed-broadband basket, for which the price ranged from 0.4 per cent of GNI per capita in Liechtenstein to 92.6 per cent in Madagascar (Table 1).

Prices depend on a complex interaction of many factors, including market size, the development of infrastructure, institutional framework conditions and the degree of competition and taxes. While there are affordability differences across regions, most of the variation in affordability across countries depends on income levels. Notably, when considering the World Bank income level groups, large divides are apparent between low-income economies and the rest of the world (Figure 3). In 2022, fixed-broadband access in a median low-income economy (at 31.1 per cent of GNI p.c.) cost more than ten times the world median of 3 per cent of GNI per capita, while the data-only mobile-broadband basket cost around seven times more in low-income economies than the world median. At the same time, in a typical high-income economy, the basket costs were cheaper by a half to one-third of the typical world price.

To understand the evolution of affordability divides in mobile and fixed broadband, there are three developments that warrant attention: (1) the evolution of the gap between low-income and high-income economies; (2) the evolution of prices in economies where they are the least affordable; and (3) price increases in a few economies.

1) Evolution of the gap between low-income and high-income economies

Data collected since 2018 reveals a reduction in the affordability gap between the poorest and richest economies (Figure 4). The sharpest drop was registered for the mobile data and voice high-consumption basket (from 49 percentage points in 2018 to less than 17 in 2022). This highlights the increasing availability of data

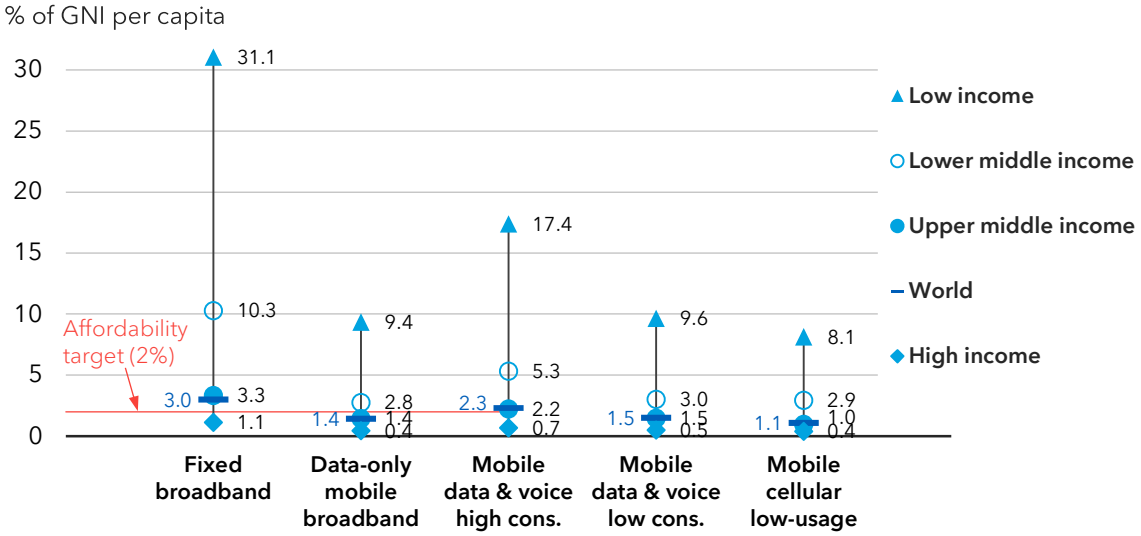
[2] An overview of the baskets monitored by ITU are provided in the Methodology section.

Table 1: Most affordable basket prices and largest price declines

Basket	Most affordable in 2022 (as a % if GNI p.c.)	Largest price decline from 2021 to 2022 (in percentage points)
Fixed-broadband basket	Liechtenstein (0.37), China (0.45), Hong Kong, China (0.49)	Madagascar (-71.6), Togo (-24.2), Haiti (-10.6)
Data-only mobile-broadband basket	Liechtenstein (0.07), Hong Kong, China (0.12), Macao, China (0.12)	Central African Rep. (-17.2), Equatorial Guinea (-13.3), Papua New Guinea (-12.8)
Mobile-cellular low-usage basket	Hong Kong, China (0.05), Austria (0.09), Macao, China (0.11)	Nicaragua (-13.4), Guinea-Bissau (-9.7), Central African Rep. (-6.5)
Mobile data and voice low-consumption basket	Luxembourg (0.13), Liechtenstein (0.15), Hong Kong, China (0.16)	Niger (-26.2), Uganda (-15.6), Dem. Rep. of the Congo (-7.6)
Mobile data and voice high-consumption basket	Liechtenstein (0.15), Luxembourg (0.15), Hong Kong, China (0.22)	Niger (-26.2), Uganda (-14.8), Somalia (-14.0)

Source: ITU

Figure 3: Median basket prices by income level in 2022



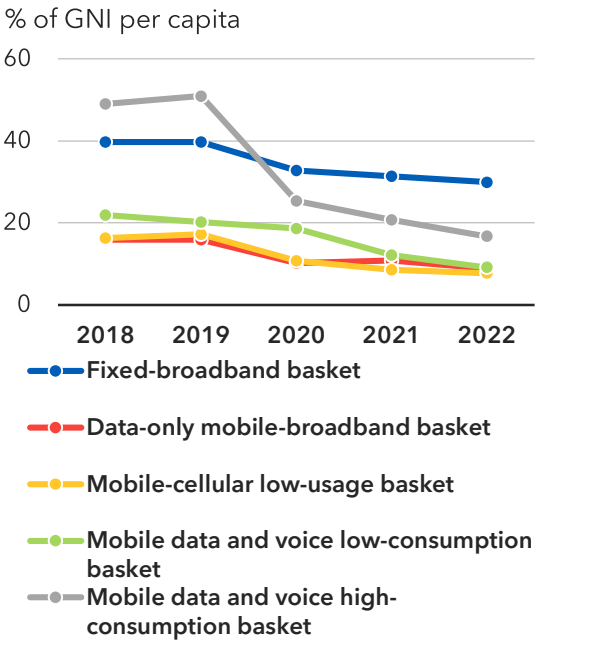
Note: Median values for each basket were calculated for all economies for which data was available for 2022.
Source: ITU

and voice packages (marketed either as a single bundle or allowing consumers to combine base plans and add-ons) in low-income markets. This development is further illustrated by the narrowing of the gap between low-and high-income economies to around 10 percentage points for the mobile data and voice low-consumption basket – a level similar to that of the data-only and voice and SMS-only mobile cellular baskets. At the same time, the fixed-broadband affordability gap became the major source of division between high- and low-income economies as the gap only dropped from 40 to 30 percentage points.

2) Evolution of prices in economies where they are the least affordable

Another positive trend is that in the most expensive countries, prices have been dropping. In 2021, there were only four economies where the data-only mobile-broadband basket cost more than 20 per cent of GNI per capita. GNI per capita basket prices in this group dropped on average by 36 per cent by 2022, most notably in the Central African Republic (from 41.0 to 23.8 per cent of GNI per capita), Equatorial Guinea (from 23.5 to 10.3 per cent of GNI per capita) and Zimbabwe (from 30.0 to 18.4 per cent of GNI per capita), in all cases due to both the plans becoming cheaper as well as growing average income in the country. The price of the data-only mobile-broadband basket in the 14 economies where it cost between 10 and 20 per cent of GNI per capita in 2021 dropped on average by 26 per cent. Similar to the change in countries with the least affordable plans, this decrease was most frequently due to plans becoming cheaper in real terms coupled with favourable macroeconomic conditions.

Figure 4: Affordability gap between low- and high-income economies (% points of GNI per capita)



Note: The chart shows the percentage points difference between the median basket prices in low- and high-income economies expressed as a % of GNI per capita, for the set of economies for which data was available for all the years between 2018 and 2022 for a given basket in order to clean the effect of changing data availability.
Source: ITU

Fixed-broadband prices remain stubbornly high for a group of 22 low- and middle-income economies where the basket cost more than 20 per cent of GNI per capita in 2021. On average, prices only dropped at a rate of 8 per cent for this group. In all but six economies, affordability improved because of a higher GNI per capita rather than broadband plans becoming cheaper (although inflation-adjusted prices did show some improvements). In Benin, Equatorial Guinea, Haiti, Madagascar, Nicaragua, and Togo, the basket prices in local currency became cheaper. Among these, Madagascar saw the biggest percentage point drop in 2022.

3) Economies where prices are increasing

There were only a few cases where data-only mobile-broadband prices became significantly less affordable in 2022 compared to the previous year. A typical reason for this was an increase in the basket price in local currency. Often a price increase was combined with an increase in value for money, such as higher data allowances (as in the case of Barbados, Lebanon, Sudan). There were, however, a few cases where in addition to higher basket prices in local currency (the numerator), GNI per capita (the denominator) dropped, further exacerbating the relative price increase (e.g. Myanmar).

The price of fixed-broadband basket in terms of GNI per capita increased in 24 low- and middle-income economies. But only in seven did the increase exceed one percentage point. In all these cases, the basket price increased in local currency. Although the increases did not come with advertised quality improvement in some countries (e.g. in Botswana or Somalia), in a few cases it was at least partly offset by increased data allowance or advertised speed (e.g., in Armenia, Jamaica, Kyrgyzstan or Malaysia or Nepal).

Regional trends

Despite the diversity within each region, Figure 5 reveals distinct regional trends.

Africa has remained the region with the least affordable ICT service prices, despite significant improvement for all baskets since 2019. The mobile data and voice high-consumption basket saw the largest price drop from 20 to 10 per cent, narrowing the gap with other mobile baskets. Meanwhile, the median price of fixed-broadband services in the Africa region barely changed, down from 20 per cent to 16 per cent, and it continues to be a barrier to meaningful connectivity in the region.

The **Americas** region witnessed significant price fluctuations over the past five years, with notable hikes due to the pandemic and its aftermath in 2021. Compared to other regions, prices have stagnated and the affordability of ICT services, which were the second highest after Africa, has hardly improved in the Americas region. In 2022, the price of the mobile-broadband baskets, in particular, has remained virtually the same as it was in 2018, above the 2 per cent target.

In the **Arab States** region, prices of mobile-broadband baskets were already low in 2018 and showed a steady decline until 2022, whereas fixed-broadband basket prices increased, especially since 2020.

Despite the diversity of economies in the **Asia-Pacific** region, all basket prices have declined, despite a temporary increase during the pandemic. Fixed-broadband service prices in many economies of the region remain high, keeping the regional median price above the 2 per cent target.

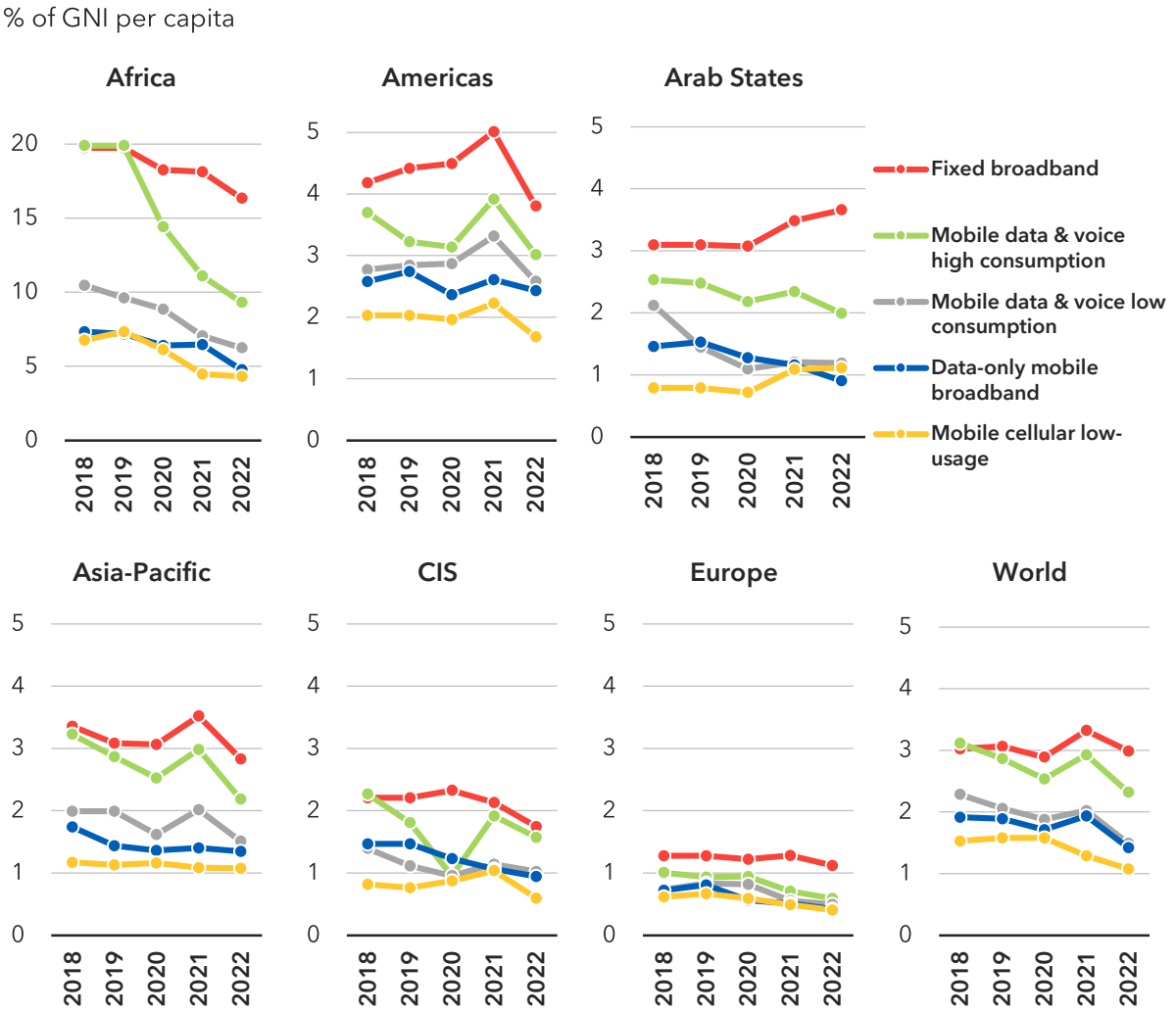
ICT prices in the **CIS** and **Europe** regions have been generally low compared to income. In 2022, the regional median for all mobile as well as fixed-broadband baskets fell below the 2 per cent target for the CIS region, while the Europe region has remained the best performer with gradually improving prices.

Affordability gaps within countries

The average GNI per capita is the standard measure for computing affordability of broadband services. However, a basket affordable for the average earner is not necessarily affordable for the entire population, due to income disparities. A useful indicator for understanding the affordability barriers to universal connectivity is the price of broadband services relative to the income levels of the poorest 40 per cent of the population. While recent inequality data is only available for around one hundred economies[3], inequality-adjusted affordability statistics reveal striking gaps.

[3] See methodology section.

Figure 5: Affordability trends by region



Note: Regions correspond to the regional grouping of the ITU Telecommunication Development Bureau (BDT). Median values shown in the chart were calculated as a percentage of GNI per capita for the set of economies for which data was available for all the years between 2018 and 2022 for a given basket in order to clean the effect of changing data availability.
Source: ITU

In many low- and middle-income economies, the prices of the data-only mobile-broadband basket relative to the income of the bottom 40 per cent can be almost twice as high compared to the average. Figure 6 illustrates the magnitude of intra-country differences in the affordability of the mobile-broadband basket for low- and middle-income economies with available data. In some cases, the poorest 40 per cent of the population are facing prices that are at least three times higher than the country average, and in two cases, the poorest 40 per cent would need to spend 50 to 60 per cent of their income on accessing mobile-broadband basket services.

Fixed-broadband (not charted here), often a necessity for using data-intensive, cloud-based services for remote working, is typically above the 2 per cent threshold in all income groups for the bottom 40 per cent of the population. Even in high-income economies where the basket is generally most affordable, the basket may cost as much as 12.8 per cent considering the income of the poorest 40 per cent. In upper-middle income economies, fixed-broadband costs less than 2 per cent of the inequality adjusted income per capita for four economies and more than 10 per cent in five economies with available data. In the rest of the world, the basket remains a luxury only affordable for a select few.

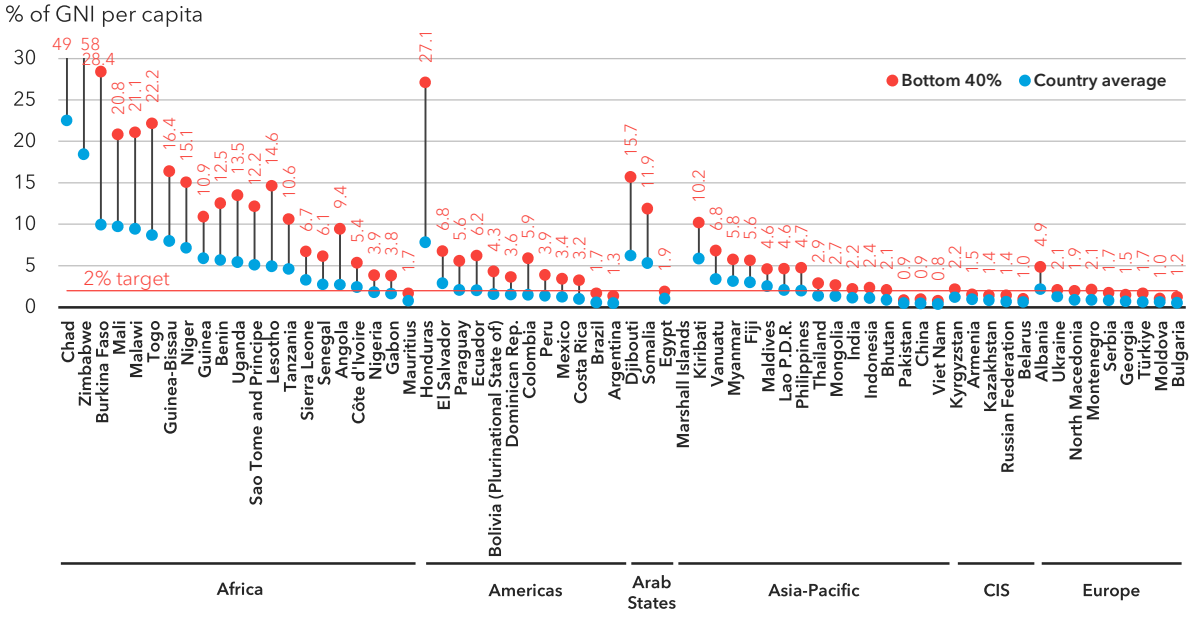
Latest trends for selected price baskets

Data-only mobile broadband

The current ITU standard for benchmarking affordability of mobile-broadband services is the price of a data-only basket with a 2 GB monthly allowance.[4] While at 1.5 per cent of GNI per capita the worldwide price for the basket reached an all-time low, significant differences remain across economies. Even after improvement compared to previous years, the basket still costs consumers in low-income economies more than six times the global median, while in LDCs almost four times the global median, whereas high-income economy consumers are offered

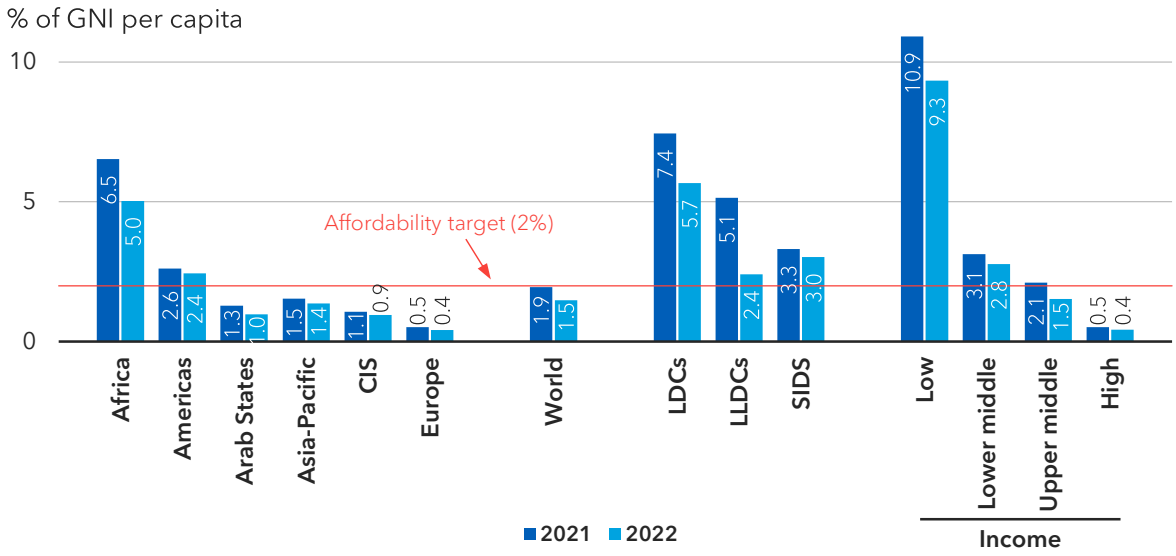
[4] See Methodology.

Figure 6: The affordability of mobile broadband basket prices for the average earners and poorest 40 per cent



Note: Price for the data-only mobile-broadband basket with 2GB in low- and middle-income economies as a percentage of GNI per capita in 2022 are expressed as a share of average GNI per capita (country average) as well as GNI per capita adjusted to the income level (or consumption level, as available) of the 40 per cent of the population based on World Bank PIP inequality statistics (see methodology below).
Source: ITU and World Bank Poverty and Inequality Platform (PIP)

Figure 7: Data-only mobile-broadband basket prices



Note: By world region and level of development, expressed as a percentage of monthly GNI per capita, 2021-2022. Medians based on the 188 economies for which data were available for both years. Economies are benchmarked according to the price of an entry-level data-only basket, defined as the cheapest data-only mobile-broadband subscription available domestically, with a 3G technology or above and a minimum monthly data allowance of 2 GB.
Source: ITU

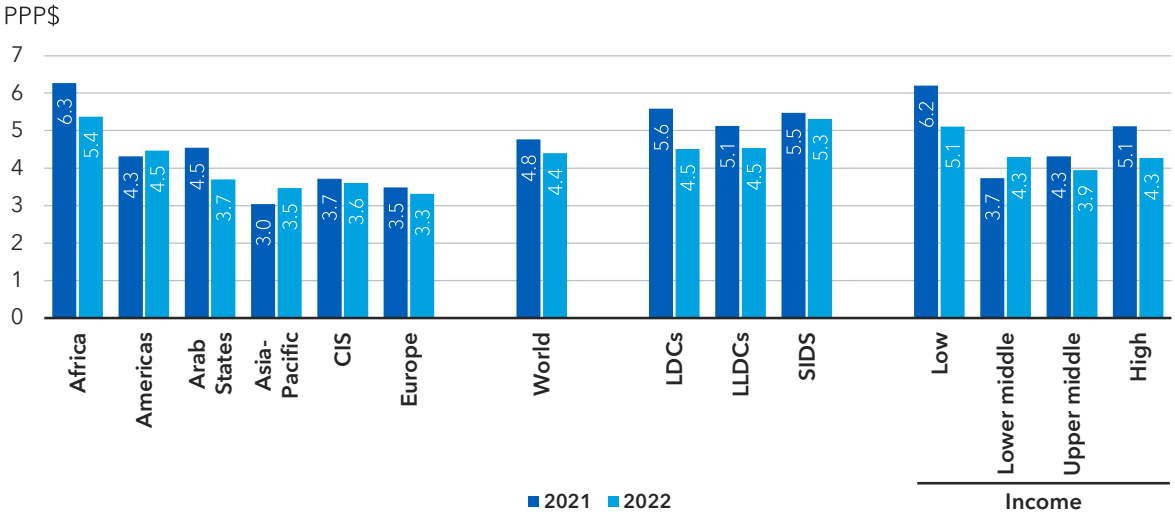
mobile-broadband services at close to a quarter of the global price (Figure 7).

In landlocked developing countries (LLDCs), the price of the basket was 2.4 per cent of GNI per capita in 2022, a drop of more than 50 per cent from the previous year. In most African economies, the basket cost 5 per cent of GNI per capita or less, a threshold around which subscription levels usually start to increase more rapidly as affordability becomes less of a barrier to market expansion, which in turn can further drive down prices.[5]

Alongside the price decline, value for money is improving in many parts of the world. ITU data collection rules call for the cheapest plan that includes at least 2 GB monthly data allowance to be selected, but more and more the actual amount available exceeds this minimum. Based on the actual data allowance, the price of 1 GB can be computed.

[5] See ITU, *Global Connectivity Report 2022*.

Figure 8: The price of 1 GB of data



Note: By world, region, and level of development, the median price per GB is indicated in international dollars (PPP$), based on the actual allowance for a basket of at least 2 GB data. For example, in 2021 the cheapest 2 GB data plan in Bangladesh cost 6.0 PPP$ while in 2022 the cheapest suitable plan included 2.5 GB and cost 5.4 PPP$, meaning that the price per GB fell from 3 to 2.16 PPP$. Differences in connection speed are not taken into consideration.
Source: ITU

The results in Figure 8 show an overall improvement in value for money (even if that is not part of the selection criteria for plans). Worldwide, the price of 1 GB dropped to 4.4 PPP$ (international dollars)[6]. The difference across income groups in this case ranged between 3.9 PPP$ in upper-middle-income economies and 5.1 PPP$ in low-income economies. Interestingly, the trend is not always declining as can be seen in the increase in the Asia-Pacific region and the Americas region.

Mobile data and voice baskets

A typical mobile-broadband consumer uses three services: voice, SMS messaging and data. Telecommunication operators may market such services in many shapes: as bundles (where a single subscription plan contains a certain amount of each service), as add-ons to base plans, or on a pay-as-you go basis. ITU monitors the prices of such combined data and voice services with two distinct allowance compositions. Adjusted for differences in consumption practices between economies at different income levels, a low-consumption basket and a high-consumption basket have been defined. The low-consumption basket is based on the entry-level mobile-cellular basket allowance, 70 minutes of calls, 20 SMS messages, and 500 MB of data usage. The high-consumption basket includes 140 minutes of calls, 70 SMS messages, and a 2 GB data allowance (at the same level as for the data-only mobile-broadband basket).

In mature markets, even entry-level bundles or combined packages come with high allowances. Consequently, there is little difference between the price of low- and high-consumption baskets. In half of the high-income economies, the plan that was used for the low-consumption basket fulfilled the requirement of the high-consumption basket, and the prices were identical. The difference was also negligible in the other half of the countries of this group – the median prices were 0.5 and 0.7 per cent of GNI per capita for the two baskets respectively (Figure 9). By contrast, in low-income economies, there was a substantial gap between the price of the two baskets: in 2022, the median low-consumption basket price was 9.4 per cent of GNI per capita, while the median high-consumption basket was 17 per cent. Looking at trends, it is noteworthy that the price of the low-consumption basket dropped at a higher rate from 2021 to 2022 in low- and lower-middle-income economies than that of the other basket.

There is regional variation in the price of the two baskets as well as in the size of the gap. The prices for both data and voice baskets were the highest in Africa, but due to the sharp decline of the high-consumption basket price (from 14.7 to 10.9 per cent of GNI per capita), the gap narrowed from 7.6 to 4.2 from 2021 to 2022. The median basket price for the high-consumption basket was less than 3 per cent for the first time in the other five regions, and less than 2 per cent in the CIS and Europe regions (Figure 9).

The low-consumption data and voice basket reached historically low values in all regions, virtually closing the gap with respect to the mobile cellular low-usage basket, which only includes 70 minutes and 20 SMS messages but no data. In 2022, the global difference dropped to 0.5 percentage points (not shown in Figure 9).

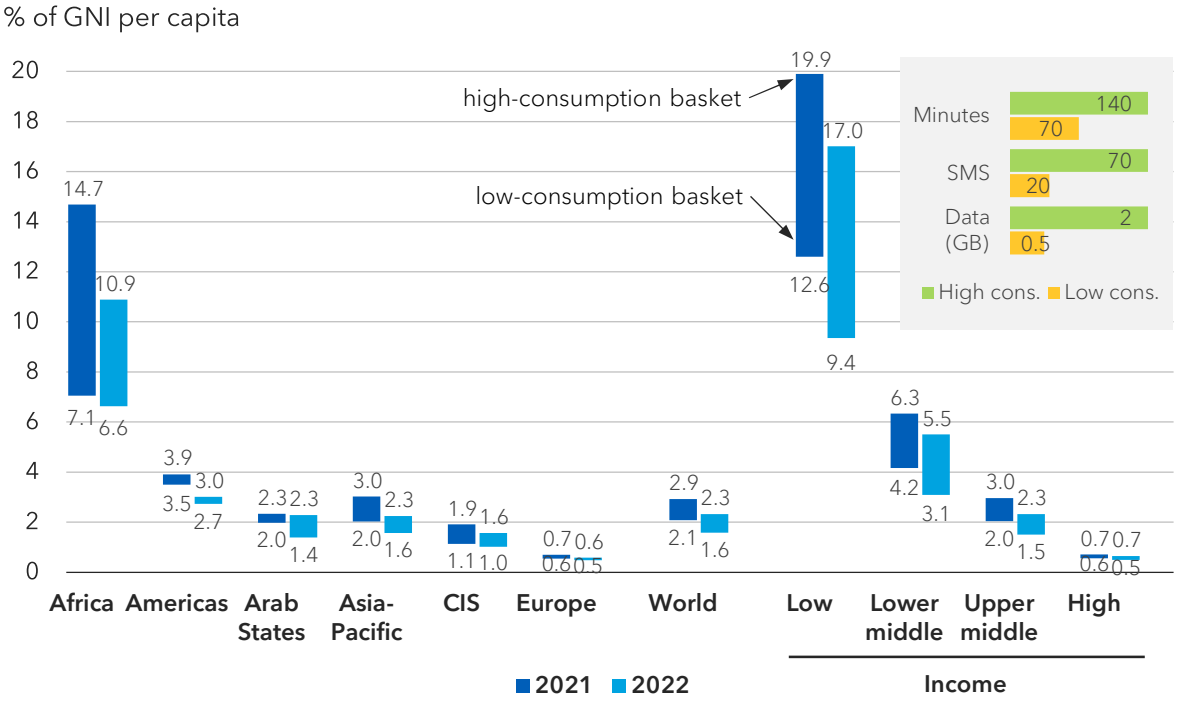
Fixed broadband

Fixed broadband prices expressed as a percentage of GNI per capita dropped from 2021 to 2022 across all country groups (Figure 10). As shown earlier, this is merely a return to pre-COVID levels, indicating a virtual stagnation of fixed-broadband prices.

Two main issues prevail with respect to the affordability of fixed-broadband services. Firstly, significant affordability

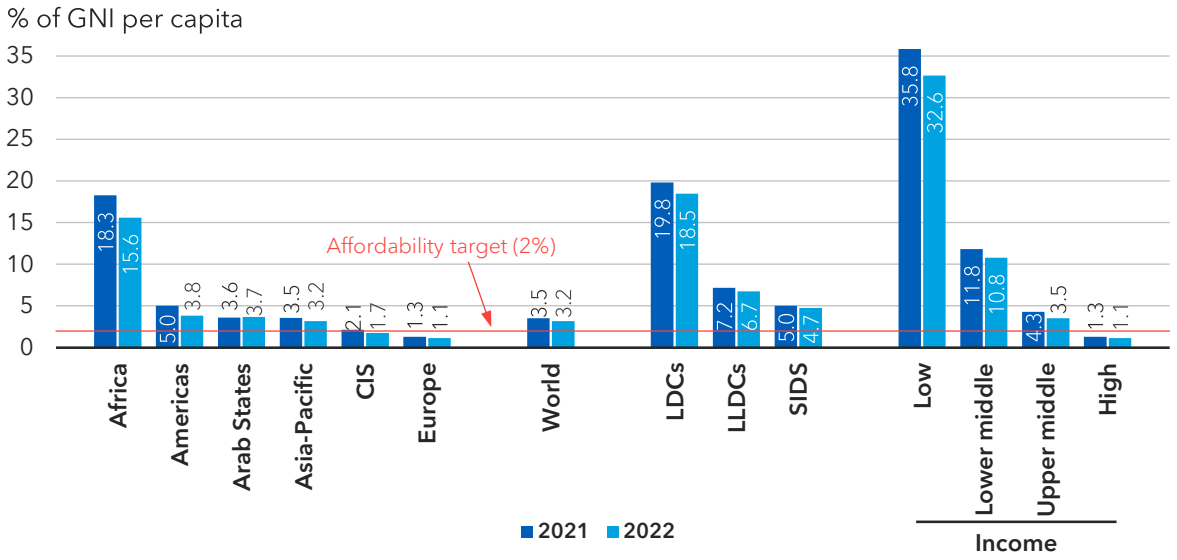
[6] Purchasing power parity (PPP) conversion factor is a spatial price deflator and currency converter that controls for price level differences between countries. An international dollar would buy in the cited country a comparable amount of goods and services a U.S. dollar would buy in the United States.

Figure 9: The affordability gap between the mobile data and voice low- and high-consumption baskets



Note: Medians based on the 188 economies for which data were available for both baskets from 2021 to 2022 as a percentage of GNI per capita. Bars show the difference between the price of the mobile data- and voice low- and high-consumption baskets. The low- (and high-) consumption baskets are defined as the cheapest data and voice subscription available domestically, with a minimum of 70 (140) minutes, 20 (70) SMS messages, and 500 MB (2 GB) monthly data allowance with a 3G technology or above.
Source: ITU

Figure 10: Fixed-broadband basket prices



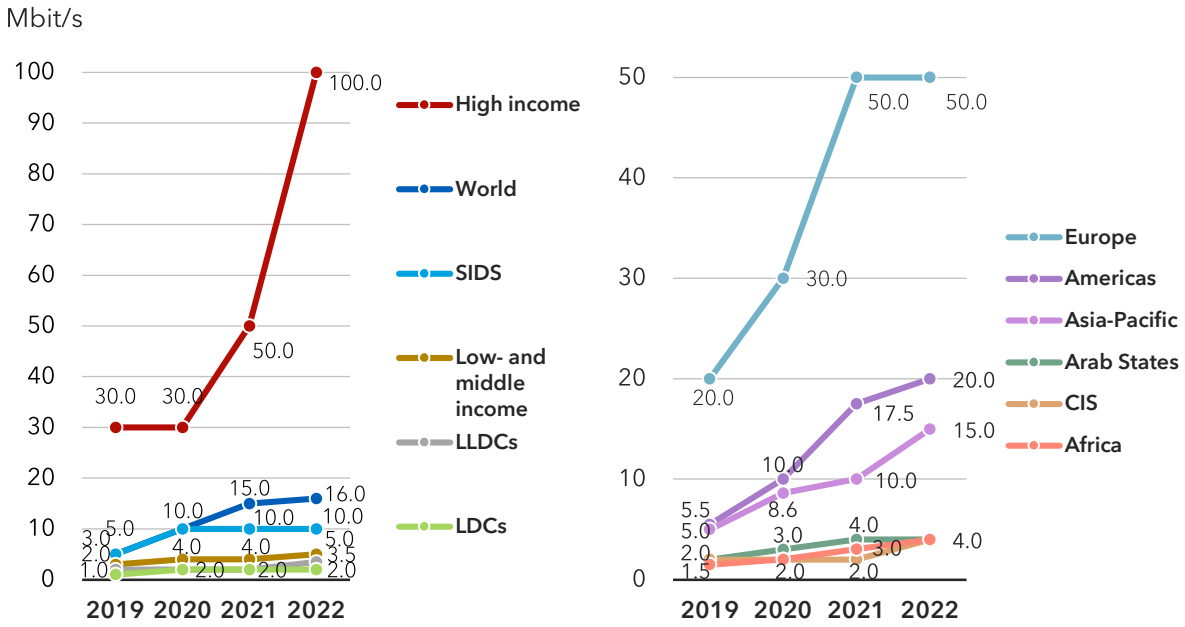
Note: Regional and other country group medians are based on the 177 economies for which data were available as a percentage of GNI per capita from 2021 to 2022. Economies are benchmarked according to the price of an entry-level fixed-broadband basket, defined as the cheapest fixed Internet subscription available domestically, with a minimum of 5 GB monthly data allowance and an advertised download speed of at least 256 kbit/s.
Source: ITU

gaps between countries remain. Compared to high-income economies, fixed broadband costs ten times more in lower-middle-income economy, and as much as thirty times more in low-income economies.[7] Even if fixed-broadband subscriptions are shared, the high price is a significant connectivity barrier in 44 economies where it costs more than 10 per cent of GNI per capita (typically in Africa and LDCs).

The second issue is the gradual improvement of technology and the quality offered at a given price. The 5 GB monthly data usage threshold (applied since the basket is considered as entry-level) is by far exceeded in

[7] Fixed-broadband prices reported refer to gross recurrent monthly charges. One additional cost added to it is the initial non-promotional connectivity charge typically amounts to 67 per cent of the monthly fee.

Figure 11: Median advertised download speeds for entry-level fixed-broadband baskets for income groups and regions



Note: Medians based on available data for 2019-2022 on advertised speed for the plans used for the basket.
Source: ITU

most markets. In 2022, unlimited data was included in the representative plans in as many as 143 economies.[8] Another important development is the network technology upgrade and resulting change in advertised connection speed. ITU has reported in previous years that the pace of progress differs across regions. Considering the countries where data was available from 2019 to 2022, the global advertised median speed increased from 5 to 16 Mbit/s. At the same time, the gap between high-income economies and other economies grew exponentially: even entry-level plans came with 100 Mbit/s advertised speeds in high-income economies (up from 50 Mbit/s in 2021), which is equivalent to 20 times the value for low- and middle-income economies (that grew from 4 to 5 Mbit/s in the same period). Significant speed improvements were recorded in the Asia-Pacific and the Americas regions in 2022 (Figure 11). The deployment of fibre-to-the-home connections is a key driver behind faster speeds. In 2022, most high-income economies with available data (67 %) had fibre-optic technology advertised in the plan used for the basket, while optical-fibre was advertised with the reference plans in 45 per cent of low- and middles income economies.[9]

[8] Already in 2018, the actual allowance was unlimited in 132 economies.

[9] In 2019, the share of optical-fibre in the reference plans in high-income economies was 55 per cent, compared to 29 per cent in the rest of the world.

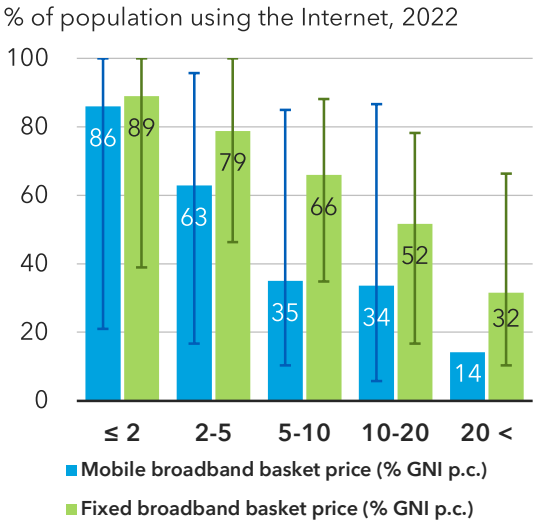
Conclusion

Affordability of ICT services improved in 2022 but remains for many countries an important barrier to universal and meaningful connectivity. In countries where mobile and fixed-broadband prices are low compared to the average national income, the share of Internet users is typically high. By contrast, the share of Internet users is the lowest in countries where broadband access is unaffordable (Figure 12). ITU estimated that 66 per cent of the world's population used the Internet in 2022. This rate was typically exceeded in countries where a data-only mobile-broadband basket cost less than 2 per cent, and the fixed-broadband basket cost less than 5 per cent of the average gross national income (GNI) per capita. In contrast, the rate remained well below the world average in countries where any of the broadband baskets cost more than 10 per cent of GNI per capita.

Affordability is not the only barrier to connectivity (Figure 12). Even in countries where mobile-broadband basket costs less than 2 per cent, the share of Internet users can be as low as 21 per cent and as high as 100 per cent.

Achieving affordable access to the Internet is a key policy priority defined, among others, in the UN Secretary-General's Roadmap for Digital Cooperation towards facilitating sustainable digital transformation and reaching universal and meaningful connectivity across the world. High-quality, globally comparable statistics on ICT prices are one of the prerequisites for policies related to affordability. ITU work on ICT price data collection, dissemination and analysis continues to contribute to these efforts.

Figure 12: Share of Internet users by broadband basket price ranges



Note: The fixed-broadband basket is defined as the cheapest fixed Internet subscription available domestically, with a minimum of 5 GB monthly data allowance and an advertised download speed of at least 256 kbit/s. The mobile-broadband basket is defined as the cheapest data-only mobile-broadband subscription available domestically, with a minimum of 2 GB monthly data allowance using 3G technology or above. Internet users refer to the share of the population that used the Internet at least once in the last 3 months. Bars indicate the median share of internet users by price broadband basket price as a percentage of GNI per capita, confidence intervals range between the minimum and the maximum values.
Source: ITU.

Methodology: The five ICT price baskets covered in this brief

The ITU Expert Group on Telecommunication/ICT Indicators (EGTI) has defined five ICT price baskets to benchmark the cheapest price plans in five categories of ICT services and across economies. The main objective is to make an international comparison despite the heterogeneity of markets in low- and high-income economies.

The basket of ICT services unit used for global comparison covers the base plan and add-ons or pay-as-you go tariffs that reflect the cheapest non-promotional options from the largest operator in a country and meet a defined set of criteria including minimum monthly allowance, validity period, technology, non-promotional, etc. Figure 13 provides a simplified overview of the allowances for the baskets used in the 2022 data collection. For international comparison, basket prices collected in a local currency are divided by GNI per capita (or purchasing power parity ratios) available from the World Bank World Development Indicators. Further details on the data collection and price conversion methodology are available on the ITU website.

Figure 13: Overview of the ITU price baskets and allowances

ICT price baskets		Minimum monthly allowance: Voice (min)	SMS (#)	Data
1 Data-only mobile-broadband basket		-	-	2 GB
2 Mobile data and voice low-consumption basket		70	20	500 MB
3 Mobile data and voice high-consumption basket		140	70	2 GB
4 Mobile-cellular low-usage basket		70	20	-
5 Fixed-broadband basket		-	-	5 GB

Source: ITU

Inequality data

Affordability figures for the bottom 40 per cent were calculated using the income or consumption shares from the World Bank PIP database, which offers income- or consumption-based wealth distribution values for each percentile of the population. Timeliness of the data is limited, as only 22 economies have data from 2020 or later. To increase coverage to 111 economies, those with data available from 2017 or more recent years were included under the assumption that inequality patterns are structural and slow to change.

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For further information, visit www.itu.int/ictprices or write to indicators@itu.int

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