AFFORDABILITY OF INTERNET-ENABLED HANDSETS AND DATA

The State of Mobile Internet Connectivity 2025

GSMA Mobile for Development

M4D

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AFFORDABILITY OF INTERNET-ENABLED HANDSETS AND DATA

The majority of the world's population (58%) are now using mobile internet on their own device. Among those who are not yet using mobile internet, only 4% of the global population do not live within the footprint of a mobile broadband network (the coverage gap). A much larger 38% are already covered by mobile broadband networks but do not use it (the usage gap). They face other barriers to mobile internet adoption and then further use once they are online.

A key factor is affordability. Across all the low- and middle-income countries (LMICs) surveyed, affordability (primarily of internet-enabled devices) was the top overall reported barrier to mobile internet adoption. Affordability of data and devices played a significant role in preventing further use of internet among existing users. Affordability was a particularly significant barrier in the countries surveyed in Sub-Saharan Africa – the region with the lowest levels of connectivity.

Affordability of internet-enabled handsets is a significant challenge preventing a substantial proportion of the world's population from being able to use the internet. As highlighted in 'Owning an internet-enabled phone is crucial, yet affordability challenges remain', most of those not using mobile internet do not own a phone. Others own an internet-enabled phone that uses older technology and does not allow for an optimised internet experience, limiting use of the internet. However, once people own an internet-enabled phone, particularly a smartphone, most use mobile internet.

It is important to examine affordability trends closely to understand the scale of the challenge. This report explores how affordability of entry-level, internet-enabled handsets and various data bundles have changed over time, and how affordability impacts different segments of the population. By understanding the challenges that affordability presents, the industry can more effectively drive efforts to overcome this significant barrier to digital inclusion among underserved populations.

1. AFFORDABILITY AND ITS ROLE IN HANDSET OWNERSHIP AND INTERNET USE

Defining affordability

Affordability refers to the ability of consumers to both pay for a handset and cover the cost of a suitable data bundle.

The affordability of mobile data and handsets has two parts:

- the cost (in local currency) of purchasing mobile data and an internet-enabled handset
- a consumer's income.[1,2]

In this context, the lower the cost of a handset and data as a share of monthly GDP per capita, the more affordable a handset and data are. However, cheaper handsets are not the only way to lower the handset cost burden. Making financing more accessible and strengthening the enabling environment, including stimulating demand by increasing awareness and willingness to pay, can also improve affordability.[3]

This report uses the results of the GSMA Consumer Survey and GSMA Intelligence modelling, as well as Counterpoint, ITU and Tarifica data. The survey aims to understand access to – and use of – mobile and mobile internet in LMICs. Over the course of 2017-2024, the GSMA has conducted nationally representative face-to-face surveys in 30 low- and middle-income countries, accounting for 79% of the population in LMICs. This included 15 LMICs in 2024.[4]

More information on the GSMA Consumer Survey can be found in Appendix 1.

1 Income is an important factor to consider. If two consumers with different levels of income face the same handset and data costs, the consumer with the lower income will be less likely to purchase and will remain unconnected.
2 Changes in affordability over time can therefore be the result of changes in the costs of handsets and data, an individual's income, or both.
3 For more details, see Improving handset affordability in low- and middle-income countries, GSMA, 2025.
4 Countries surveyed in 2024 include: Bangladesh, Egypt, Ethiopia, Guatemala, India, Indonesia, Kenya, Mexico, Nigeria, Pakistan, Philippines, Rwanda, Senegal, Tanzania and Uganda.

Owning an internet-enabled phone is crucial, yet affordability challenges remain

More people than ever before are accessing the internet through mobile devices. In LMICs, mobile remains the primary – and often only – means of getting online, accounting for 84% of broadband connections in 2024.[5] By the end of 2024, 4.7 billion people, or 58% of the global population, were using mobile internet on a personal device.

The majority of those not using mobile internet do not own a mobile phone. Of the 3.1 billion people who are covered by mobile broadband but not using mobile internet, around two thirds (68%) do not own a mobile phone.

Certain segments of the population are less likely to own an internet-enabled phone: those who are poorer, less educated, rural, persons with disabilities or women. For example, on average across countries in the GSMA Consumer Survey, rural respondents are 29% less likely to own a smartphone than urban respondents. Across LMICs, women are 14% less likely to own a smartphone than men. They face structural inequalities that underpin the barriers to mobile ownership including differences in income and education, and restrictive social norms.

Even among the 58% of the world's population using mobile internet on their own device, a significant proportion are using internet on feature phones or 3G-enabled smartphones, reaching as high as 60% of those using mobile internet in Sub-Saharan Africa. While beneficial, feature phones and 3G devices are not optimised for the continued rollout of 4G and 5G internet, and limit people's ability to benefit from this expanding coverage and improved internet experience. This will in turn limit further use of the internet once adopted.

In addition to the 58% of the global population who are connected on their own device, 9% of the population are using mobile internet on a shared device or by borrowing someone else's device. Sharing devices allows much needed access to services, particularly for children, but limits the ability of borrowers to gain technical literacy and use life-enhancing services.[6] In countries with substantial levels of phone sharing, those borrowing a mobile use it less frequently and for fewer activities than those who own a phone.

Having an internet-enabled phone is crucial to being able to use mobile internet. Affordability is a key factor preventing people from owning internet-enabled phones. It also influences the type of phones people have, which impacts their use of the internet.

5 International Telecommunication Union (ITU) estimates for 2024
6 Bridging the gender gap: Mobile access and usage in low- and middle-income countries, GSMA, 2015

2. AFFORDABILITY OF INTERNET-ENABLED DEVICES

Affordability of an entry-level, internet-enabled handset remains relatively unchanged across LMICs overall, while cost to consumer has continued to increase

This section highlights key trends in the affordability of the cheapest internet-enabled handset found in LMICs, which can be a feature phone, smart feature phone or smartphone.[7]

Across LMICs, the median cost of an entry-level, internet-enabled handset has continued to increase (from around $50 in 2023 to around $54 in 2024), while median affordability was relatively unchanged at just under 16% of average monthly income. Looking at trends by region, affordability was fairly stable overall (see Figure 1b), but improvements were seen in South Asia – the region with the worst device affordability.

Figure 1c shows the change in device affordability between 2023 and 2024 in LMICs in each region, based on whether there was a significant improvement or worsening in affordability. This analysis is used to assess changes in affordability at a country level that are not necessarily revealed by average regional trends.[8] A significant change is defined as being greater than 10%. Affordability improved in 37% of LMICs, while there was no significant change in 36% and it got worse in 27%. More than 40% of LMICs in Europe & Central Asia and Sub-Saharan Africa saw device affordability significantly improve.[9]

While overall entry-level device affordability was unchanged, the number of new device shipments increased in 2024, reversing two years of decline for the market. Around 1.2 billion smartphones were sold in 2024, an increase of 4% on 2023.[10] This may have been driven in part by macroeconomic improvements. For example, the median inflation rate in LMICs was 4.3% in 2024, compared to 8.5% in 2022 and 6.2% in 2023.[11] This is likely one of the reasons why 2024 saw higher growth in mobile internet users than the previous two years.

Across LMICs,

affordability of entry-level handsets has remained **relatively unchanged** at

16%

of monthly income

7 For further details on the methodology for gathering device prices, see the GSMA Mobile Connectivity Index Methodology.

8 For example, countries at the lower or higher end of the affordability range could see significant changes, but these would not always be reflected in the median if the 'middle' group of countries had stable levels of affordability. To provide an example, the median of [1, 1, 5, 9, 9] is the same as the median of [4, 4, 5, 6, 6], but the latter has very different values outside the median value.

9 While looking at the percentage of countries with a significant change in affordability is a helpful measure, it does not reflect the size of the populations and therefore does not reflect the potential proportion of people benefiting or disadvantaged by these changes.

10 "Smartphone Market Recovers In 2024 After Two Years Of Decline", Counterpoint Research, January 2025

11 Source: IMF

Figure 1a: Median cost and affordability of an internet-enabled handset across LMICs, 2020–2024[12]

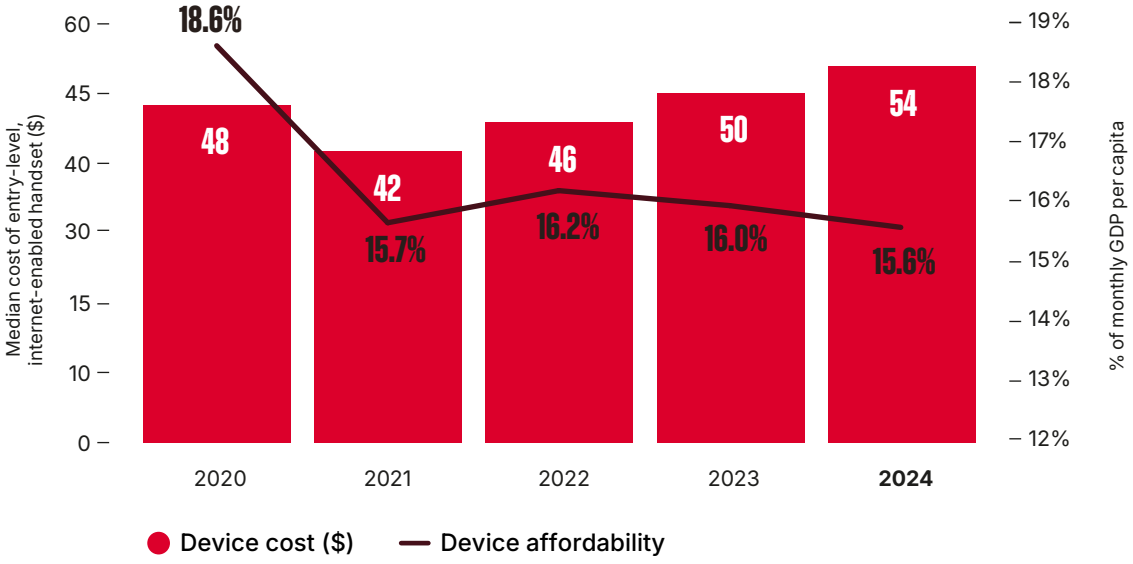


Figure 1b: Median affordability of an internet-enabled handset across LMICs by region, 2020–2024

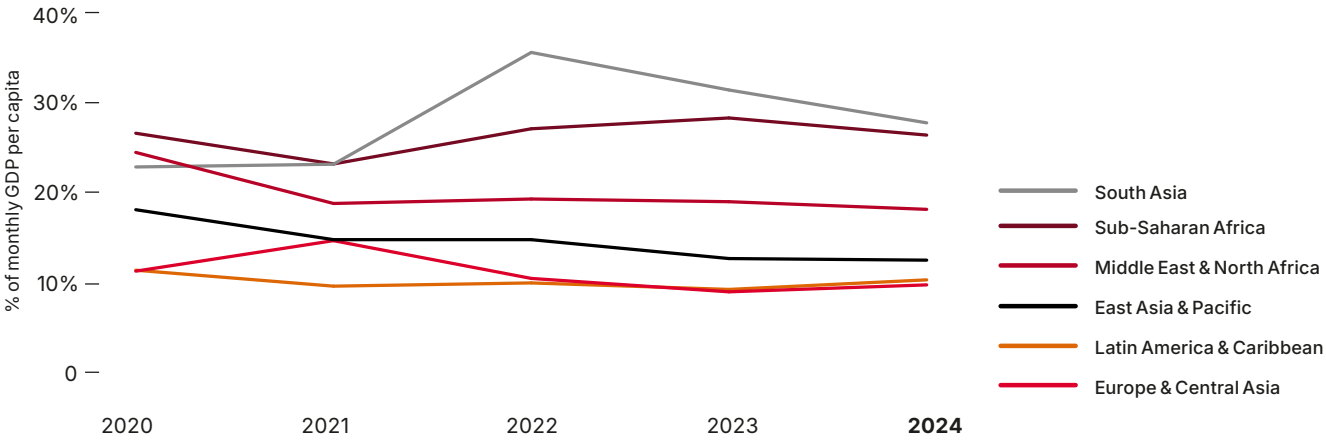
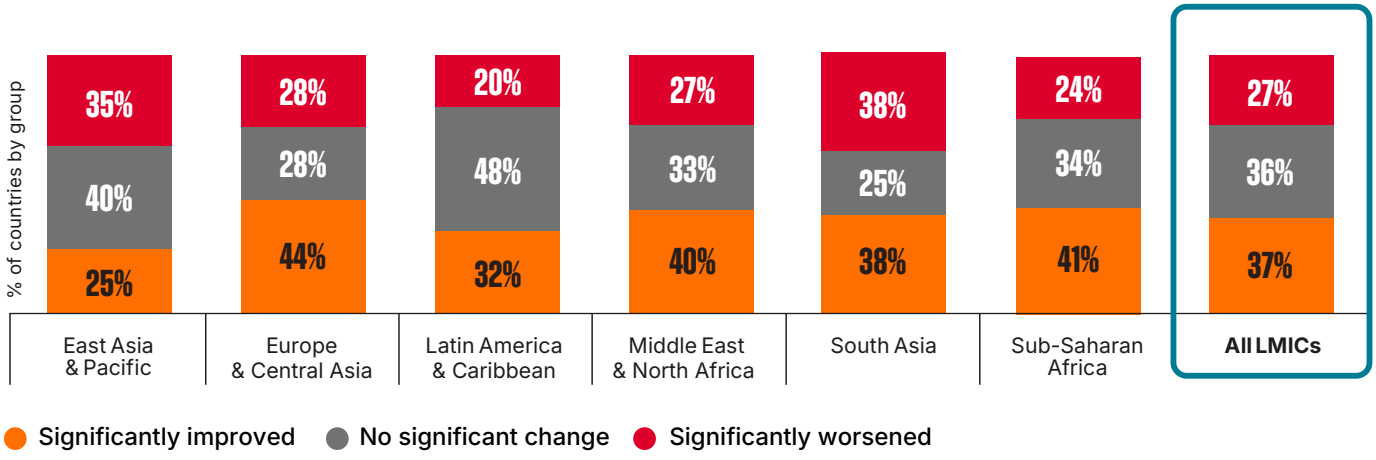


Figure 1c: Change in device affordability between 2023 and 2024



Note: Price of handset is the cheapest internet-enabled feature phone, smart feature phone or smartphone available (at the time of collecting data) sold by mobile operators or mobile phone retailers (it does not reflect prices for second-hand or black-market handsets).

Source: GSMA Intelligence calculations based on pricing data from Tarifica

12 In The State of Mobile Internet Connectivity 2024, device affordability was 17.9% for 2023. The drop to 16% in the 2025 edition is mainly explained by the revision in GDP figures from WEO-IMF 2024 to WEO-IMF 2025.

Analysis by the GSMA has shown that devices are likely to be affordable when they cost 15–20% of monthly GDP per capita.[13] In 2024, 48% of LMICs had an entry-level, internet-enabled device available for less than 15% of average monthly income, and 57% of LMICs had one available for less than 20% of average monthly income. We have analysed the impact of reducing device costs on affordability and the potential impact it could have on the usage gap. Figure 2 shows that a device at $30 could make handsets affordable to 1.6 billion individuals in the usage gap, while a device at $20 could make handsets affordable to 2 billion people who are not connected.[14]

A device of

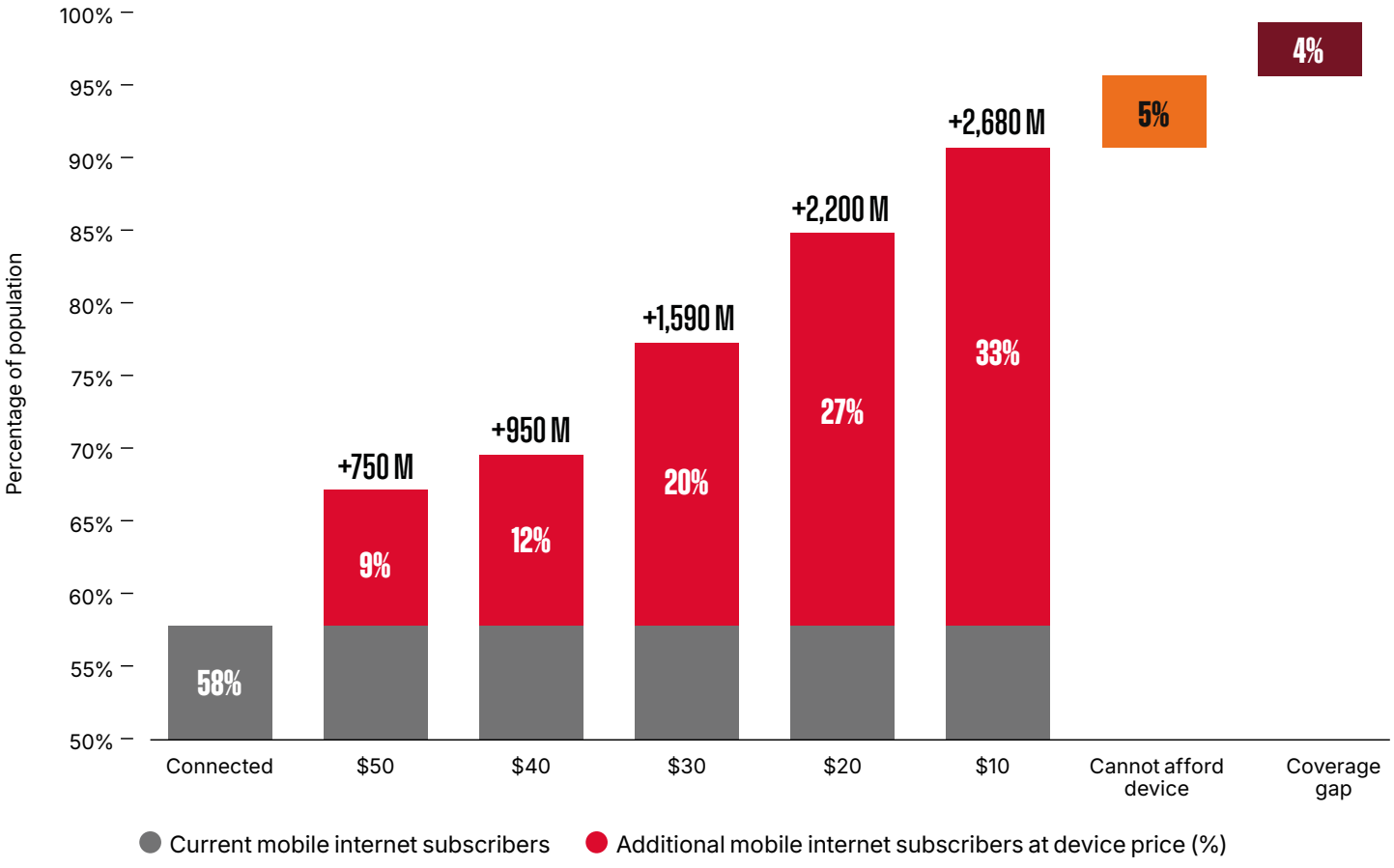
$30

could make handsets affordable to up to

1.6 BILLION PEOPLE

who live within mobile broadband coverage but are not using mobile internet

Figure 2: The potential impact of a reduction in device cost on the usage gap



Base: Total population, 197 countries.

Source: GSMA Intelligence. Further details on data sources and methodology can be found in the research study for which this analysis was first conducted, Analysis to improve handset affordability, GSMA, 2024

13 Analysis to improve handset affordability, GSMA, 2024

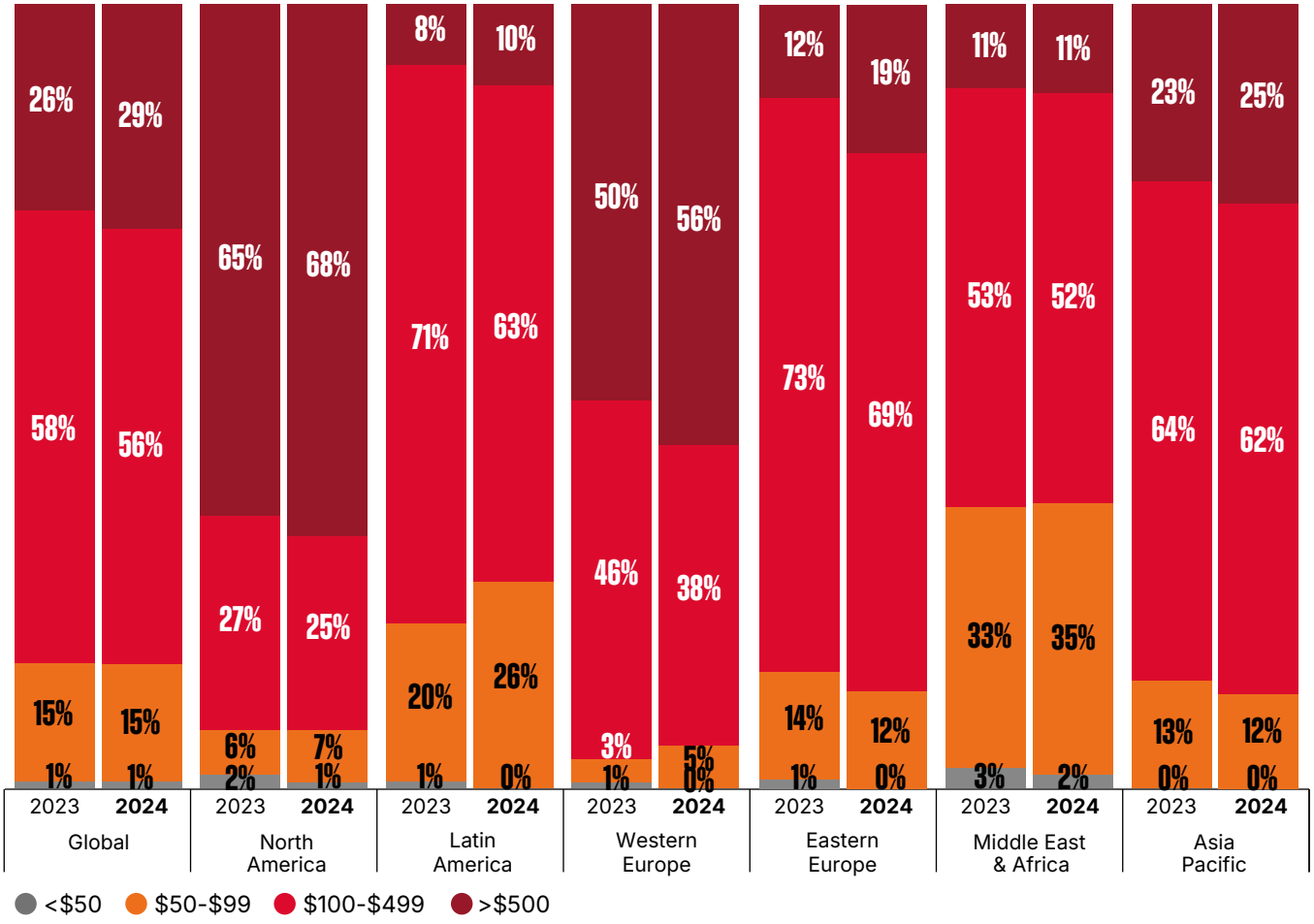
14 In The State of Mobile Internet Connectivity 2024, this analysis showed less of an impact at the $30 price point. This has increased this year due to revisions and improvements in GDP per capita figures from the IMF's World Economic Outlook (2025).

Figure 3 provides data on the distribution of device shipments by region based on wholesale shipment prices for 2023 and 2024 (they do not reflect the retail prices paid by consumers, which will be higher). As this data will include people buying replacement handsets, as well as consumers using mobile internet for the first time, a significant proportion of devices are shipped in higher price bands, particularly in Europe and North America as many individuals continue to access the latest premium smartphones. However, data for the lower-income regions, particularly in the Middle East and Africa, shows that more than a third of devices shipped are below $100, with the vast majority at $50–99.

It is likely to be the case that a significant proportion of new mobile internet subscribers are acquiring these sub-$100 devices.[15] The fact that the region with the lowest connectivity also has the highest proportion of low-cost devices shipped further highlights the importance of making devices more affordable. However, the data also shows a limited number of devices shipped in the sub-$50 wholesale price range. Given that the median consumer cost of an entry-level device in LMICs is just over $50,[16] there could be a significant impact if more devices were available that met consumers' needs at $20–30.[17]

Making low-cost devices available is an important step towards closing the usage gap, but two key considerations need to be addressed alongside this. First, many consumers may not be able to afford a device as a one-off cost but could instead repay over a longer period if they had access to device financing or subsidy schemes. Second, efforts should also be focused on increasing perceived value and willingness to pay for consumers, by ensuring devices meet their needs (See *Spotlight – Most valued features in internet-enabled phones*).

Figure 3: Distribution of device shipments by wholesale price, 2023–2024



Source: GSMA Intelligence analysis of data provided by Counterpoint Research. Price bands refer to wholesale shipment prices and not the retail prices paid by consumers. 2023 refers to the period Q4 2022 – Q3 2023. 2024 refers to the period Q4 2023 – Q3 2024.

15 The reason for this is that there were 1.2 billion device shipments in 2024 and around 200 million new mobile internet subscribers. The majority of shipments were therefore replacement handsets. Given higher-income populations are more likely to be already connected, they would also likely account for a majority of more expensive device sales

16 This is the retail price to consumers, so the wholesale price will be slightly lower.

17 The analysis in Figure 3 refers to wholesale prices, which would be lower than retail prices. Therefore, if there are a limited number of sub-$50 devices shipped, this also means adoption of devices with retail prices less than $50 is currently limited.

3. AFFORDABILITY OF DATA

Affordability of 1 GB of data is stable, while affordability of 5 GB continues to improve across most regions. For the first time, the majority of countries in each region have met the 1 GB affordability target.

This section highlights key trends in the affordability of mobile data, based on the cheapest package that allows consumers to use 1, 5 and 20 GB per month.[18] This is the second year we have gathered pricing data for a basket of 20 GB per month, to reflect higher levels of data usage.

Overall, the affordability of 1 GB has remained fairly stable (see Figure 4a). While affordability of 1 GB became slightly worse in Europe & Central Asia and Latin America & Caribbean, it significantly improved on average in Sub-Saharan Africa (see Figure 4b). As highlighted above for devices, while the median affordability has remained stable, this can hide variation and significant changes for countries that are above or below the median. We therefore also look at the proportion of countries experiencing significant changes in affordability. In Sub-Saharan Africa, almost a third of countries saw the affordability of 1 GB improve by more than 10% (see Figure 4c).

Figure 4c shows that, in most countries, the affordability of 1 GB data plans either stayed the same or significantly improved. Meanwhile, overall affordability of 5 GB has improved (see Figure 5a), as operators continue to respond to greater demand for mobile data with cheaper tariffs, enabling consumers to access more data affordably. Overall affordability of 20 GB remains relatively unchanged compared to last year (see Figure 5d). However, in Europe & Central Asia and Latin America & Caribbean, more than 50% of countries saw affordability of 20 GB improve by more than 10% (see Figure 5e).

The ITU has set an aspirational target of ensuring that an entry-level broadband subscription costs less than 2% of income per capita, as well as less than 2% of the average income of the bottom 40% of the population.[19] In total, across the 134 LMICs for which 1 GB pricing data was available in 2024, 45 countries (34%) have yet to meet the affordability target of 1 GB at less than 2% of average monthly income. This is a slight improvement on 2023, when 48 countries (36%) did not meet the affordability target for 1 GB. In all regions, more than half the countries have met the affordability target of 1 GB at less than 2% of average monthly income. This is particularly noteworthy in Sub-Saharan Africa, as 2024 marks the first year when median affordability of 1 GB was below 2% of average monthly income.

Affordability of

1 GB AND **20 GB** are **relatively unchanged since 2023**

But affordability of

5 GB **continues to improve** across most regions

18 For further details on the methodology for gathering mobile data prices, see the GSMA Mobile Connectivity Index Methodology.

19 Aspirational targets for 2030, ITU, 2022. While the ITU's target refers to affordability based on GNI per capita, we use GDP per capita to incorporate more up-to-date data on income per capita.

Considering the second affordability target to make entry-level broadband account for less than 2% of average income for the bottom 40% of the population, 85 LMICs (63%) did not meet the target in 2024 (the same as in 2023). This highlights the remaining challenge to make mobile broadband affordable for everyone.

Across all LMICs, of the 130 countries for which 5 GB pricing data was available, 61 countries (47%) have not yet met the target of 5 GB affordability at less than 2% of monthly income. This compares favourably to 2023, when it was 50%. Sub-Saharan Africa is the only region where more than half the countries have yet to meet the affordability target of 5 GB at less than 2% of average monthly income. However, considering the average income of the bottom 40%, at the end of 2024 there were 95 LMICs (73%) where 5 GB cost more than 2% of monthly income for the poorest population segments.

Figure 4a: Median cost and affordability of 1 GB data across LMICs, 2020–2024

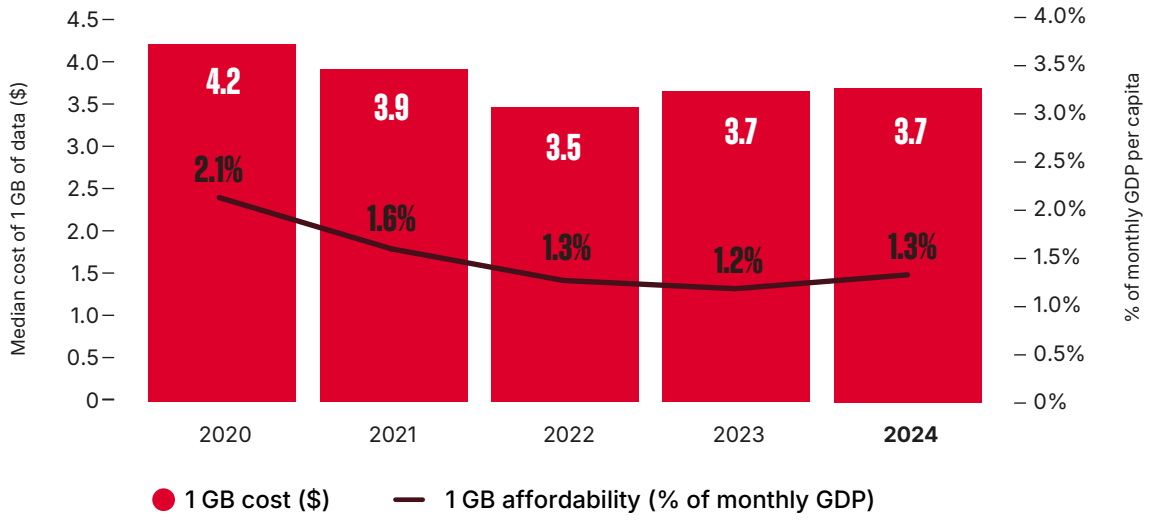


Figure 4b: Median affordability of 1 GB data across LMICs by region, 2020–2024

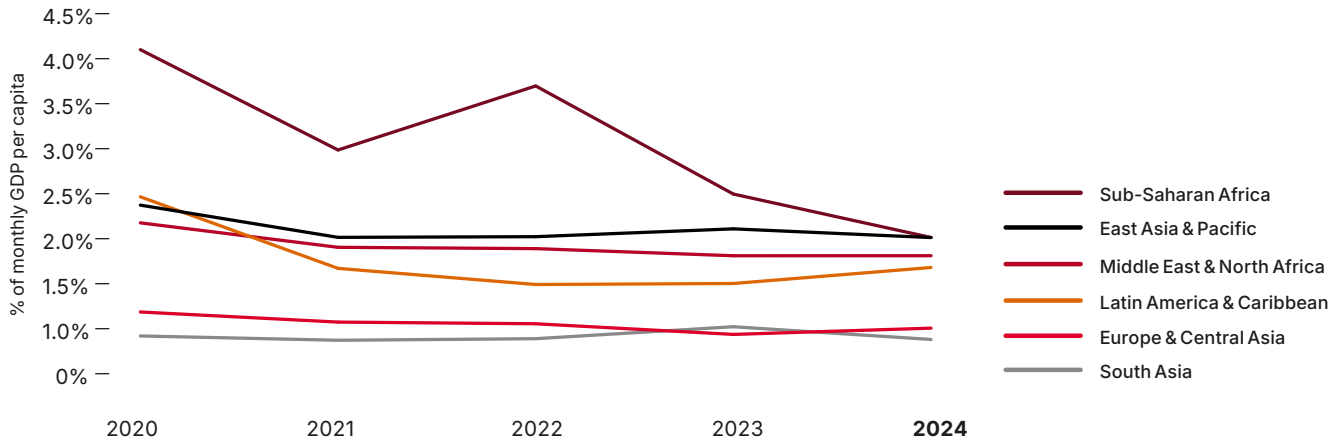
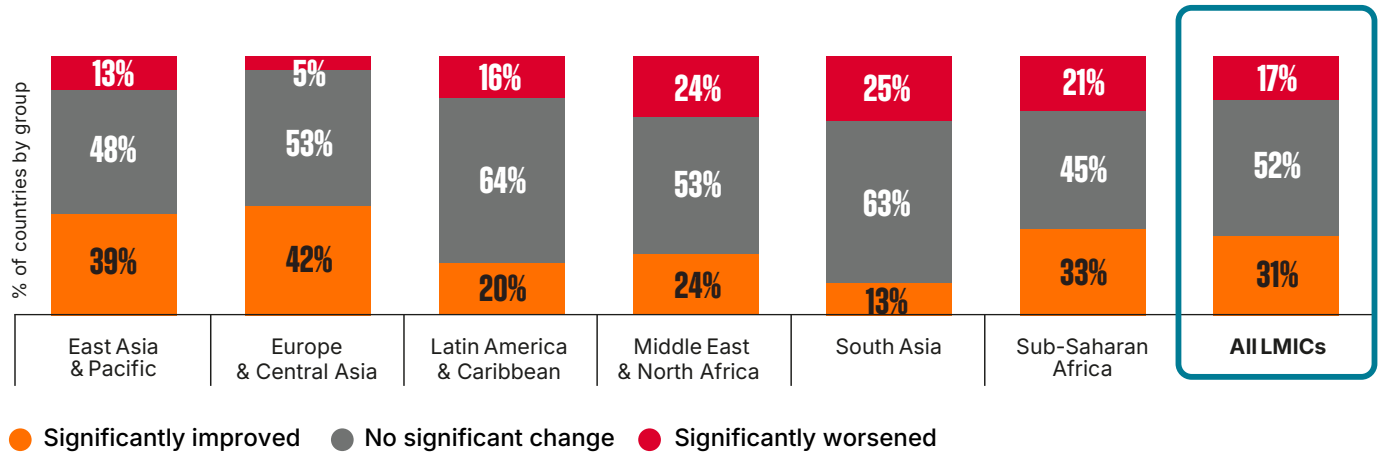


Figure 4c: Change in 1 GB affordability between 2023 and 2024



Note: Price of 1 GB is the price of the cheapest plan available (at the time of collecting data) to purchase at least 1 GB of data per month. Further details on how pricing data is gathered can be found in the Mobile Connectivity Index Methodology. To determine affordability, we divide the price by monthly GDP per capita (sourced from IMF World Economic Outlook).

Source: GSMA Intelligence calculations based on pricing data from Tarifica and ITU

Figure 5a: Median cost and affordability of 5 GB data across LMICs, 2020–2024

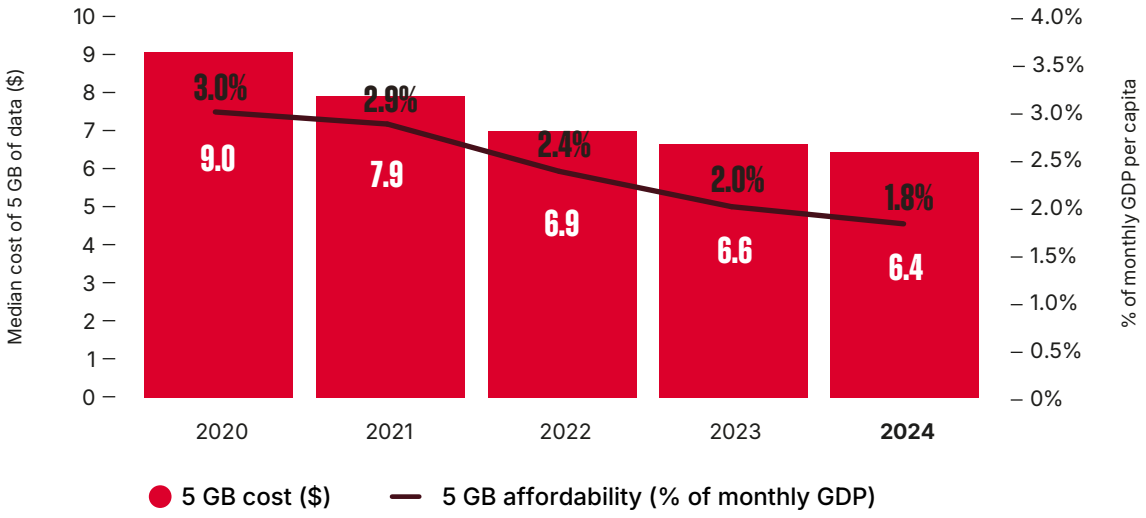


Figure 5b: Median affordability of 5 GB data across LMICs by region, 2020–2024

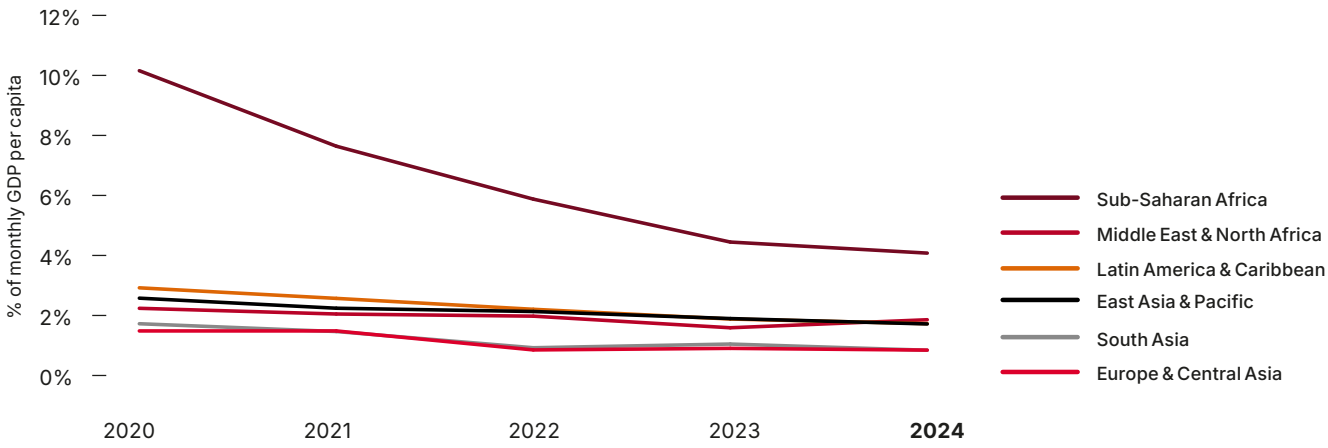
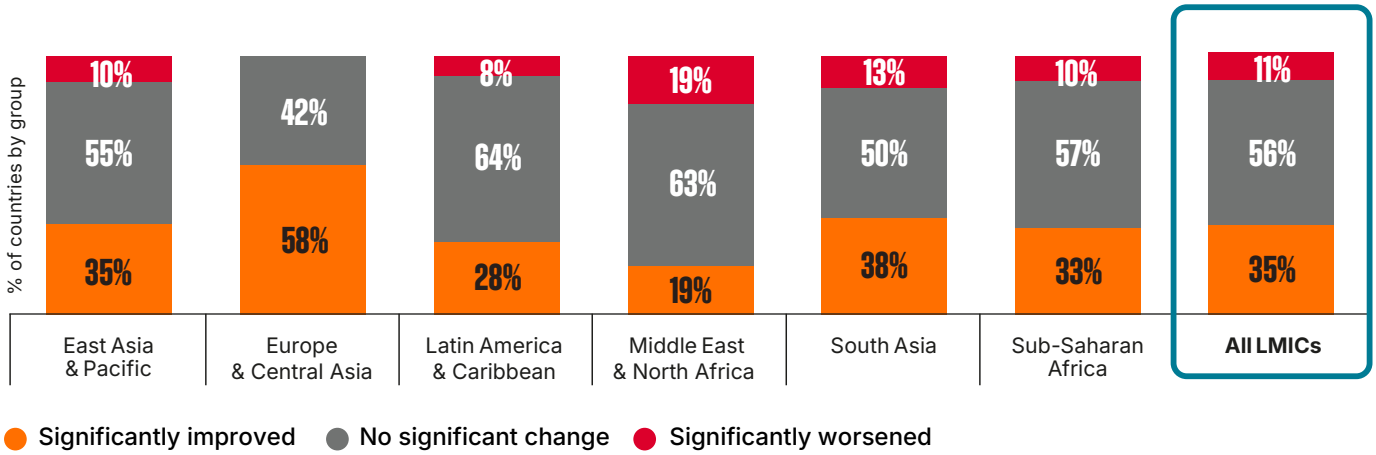


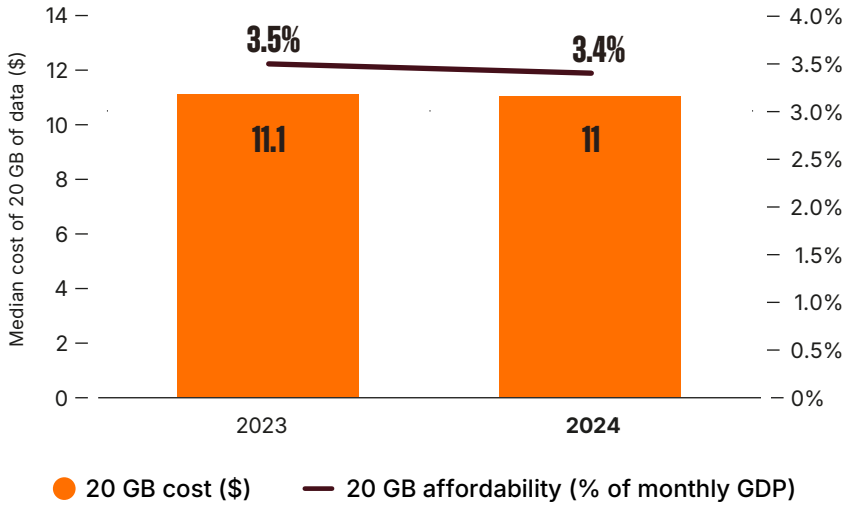
Figure 5c: Change in 5 GB affordability between 2023 and 2024



Note: Price of 5 GB is the price of the cheapest plan available (at the time of collecting data) to purchase at least 5 GB of data per month. Further details on how pricing data is gathered can be found in the Mobile Connectivity Index Methodology. To determine affordability, we divide the price by monthly GDP per capita (sourced from IMF World Economic Outlook).

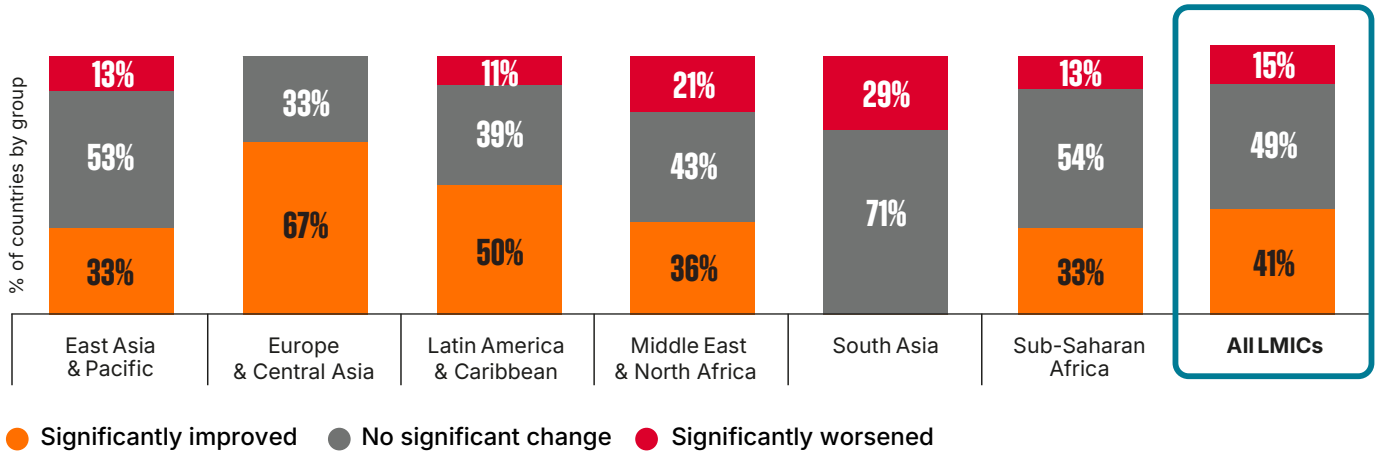
Source: GSMA Intelligence calculations based on pricing data from Tarifica and ITU

Figure 5d: Median cost and affordability of 20 GB data across LMICs, 2023–2024



Source: GSMA Intelligence calculations based on pricing data from Tarifica and ITU

Figure 5e: Change in 20 GB affordability between 2023 and 2024



Note: Price of 20 GB is the price of the cheapest plan available (at the time of collecting data) to purchase at least 20 GB of data per month. Further details on how pricing data is gathered can be found in the Mobile Connectivity Index Methodology. To determine affordability, we divide the price by monthly GDP per capita (sourced from IMF World Economic Outlook).

Source: GSMA Intelligence calculations based on pricing data from Tarifica and ITU

4. EXPLORING VARIATIONS IN AFFORDABILITY

Affordability of

devices and data continues to **disproportionately impact the underserved**

The affordability of devices shows significant variation by population segment (see Figure 6). While the affordability of an entry-level device across LMICs is 16% of average monthly income overall, it is equivalent to 36% of average monthly income for the poorest 40%. For the poorest 20%, it would account for 48% of average monthly income. In Sub-Saharan Africa, home to a quarter of the unconnected population, an entry-level device accounts for 87% of average monthly income for the poorest 20%. Furthermore, in practice, handset affordability is likely to be even more of a barrier for the poorest, as many of the cheaper handsets available in a market may not actually be accessible to all consumers – particularly those living in rural areas. In rural areas, the price of a handset tends to be higher than in large cities due to high transport and logistics costs, the commission taken by intermediaries, and limited presence of handset distributors.[20]

While the overall affordability for 1 GB and 5 GB of data has continued to improve, affordability of mobile data remains a significant barrier to access for underserved populations, particularly the poorest populations and women. In 2024, Europe & Central Asia and South Asia were the only regions where more than half the countries had 1 GB affordability at equal to or less than 2% of average monthly income for the poorest 40%. In the case of 5 GB, Europe & Central Asia and South Asia had a median affordability of less than 2% of average monthly income for the poorest 40%, while no region achieved this for the poorest 20%. In the case of 20 GB, only Europe & Central Asia had a median affordability of less than 2% of average monthly income for the poorest 40%. In Sub-Saharan Africa, the median was 14% of average monthly income for the overall population and 33% for the poorest 40%.

There also remains a significant gap in affordability between men and women for mobile data, especially in the Middle East & North Africa and South Asia, where women face greater affordability barriers due to larger gender gaps in wages and employment. On average, the cost of an entry-level, internet-enabled handset in LMICs accounts for 23% of monthly income for women, compared to 12% for men. Similarly, on average, 1 GB of data in LMICs accounts for 2% of monthly income for women, versus 1% for men.

20 Making internet-enabled phones more affordable in low- and middle-income countries, GSMA, 2022

Figure 6: Affordability of 1, 5 and 20 GB and an entry-level, internet-enabled device for poorest 20% and 40%, and men and women, by region in 2024

Figure 6a: Median device affordability by segment

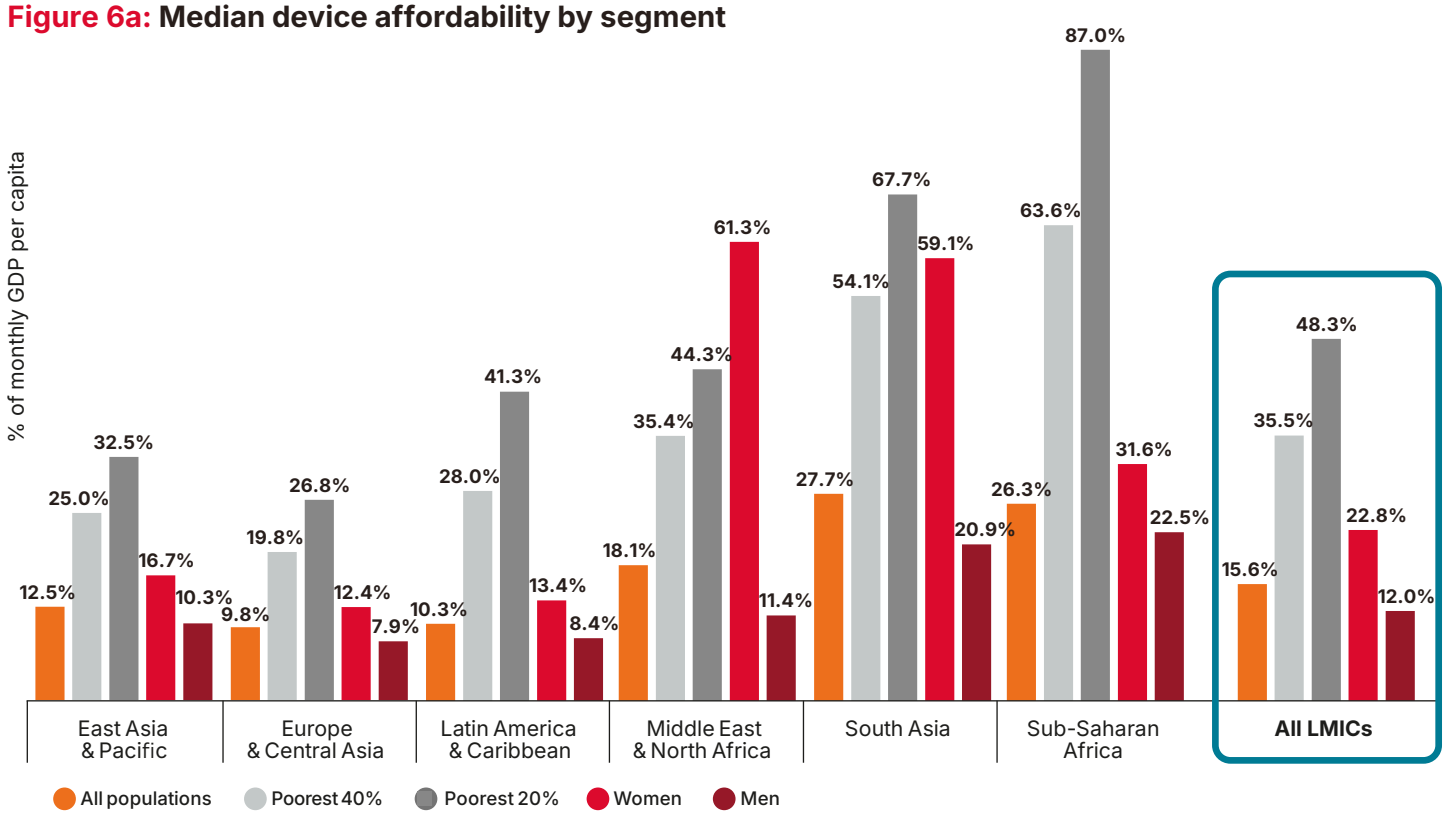
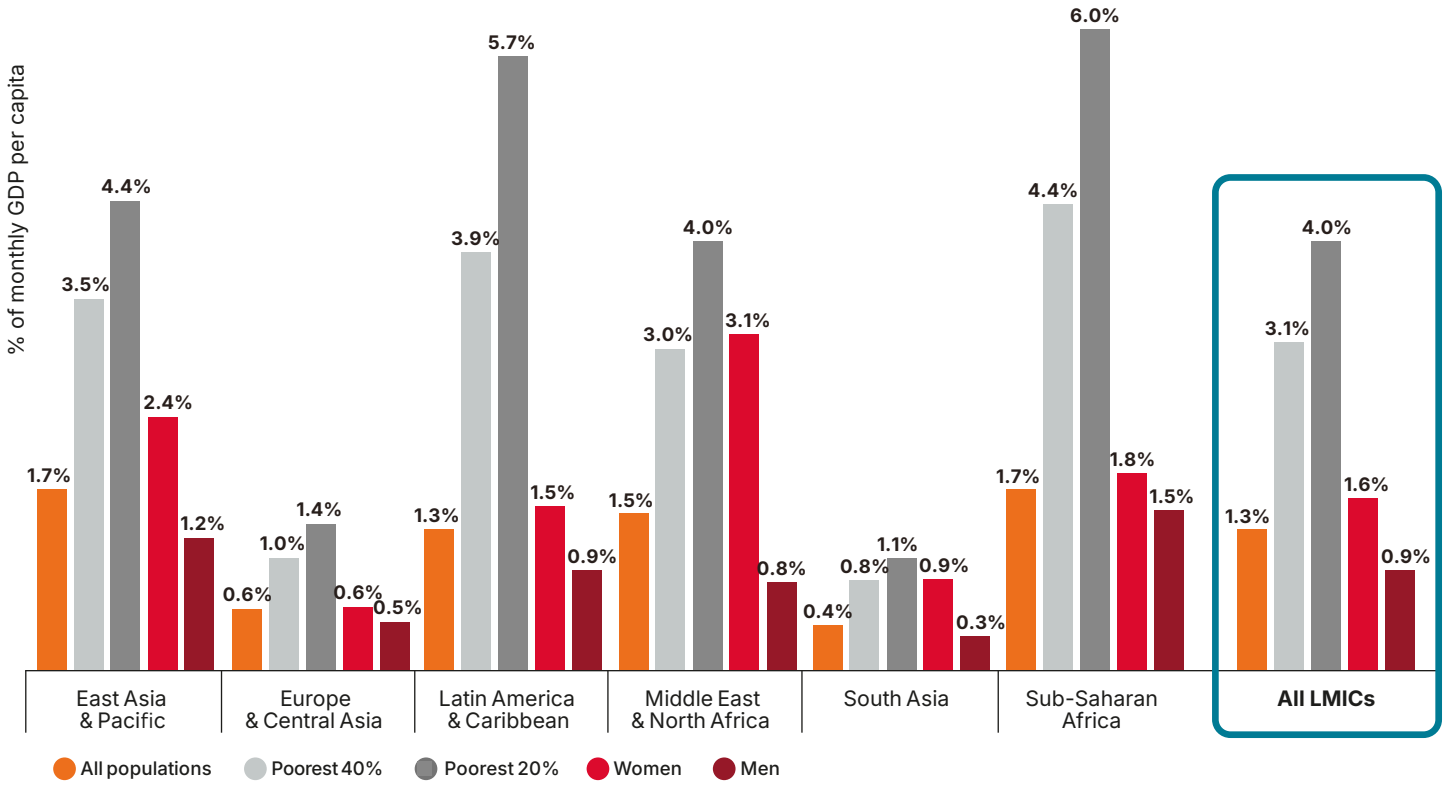


Figure 6b: Median 1 GB affordability by segment



Note: Data on incomes for the poorest 20% and 40% of the population and men and women is based on information sourced from the World Bank, World Inequality Database, UN and the IMF World Economic Outlook.

Source: GSMA Intelligence calculations based on pricing data from Tarifica and ITU

Figure 6: Affordability of 1, 5 and 20 GB and an entry-level, internet-enabled device for poorest 20% and 40%, and men and women, by region in 2024

Figure 6c: Median 5 GB affordability by segment

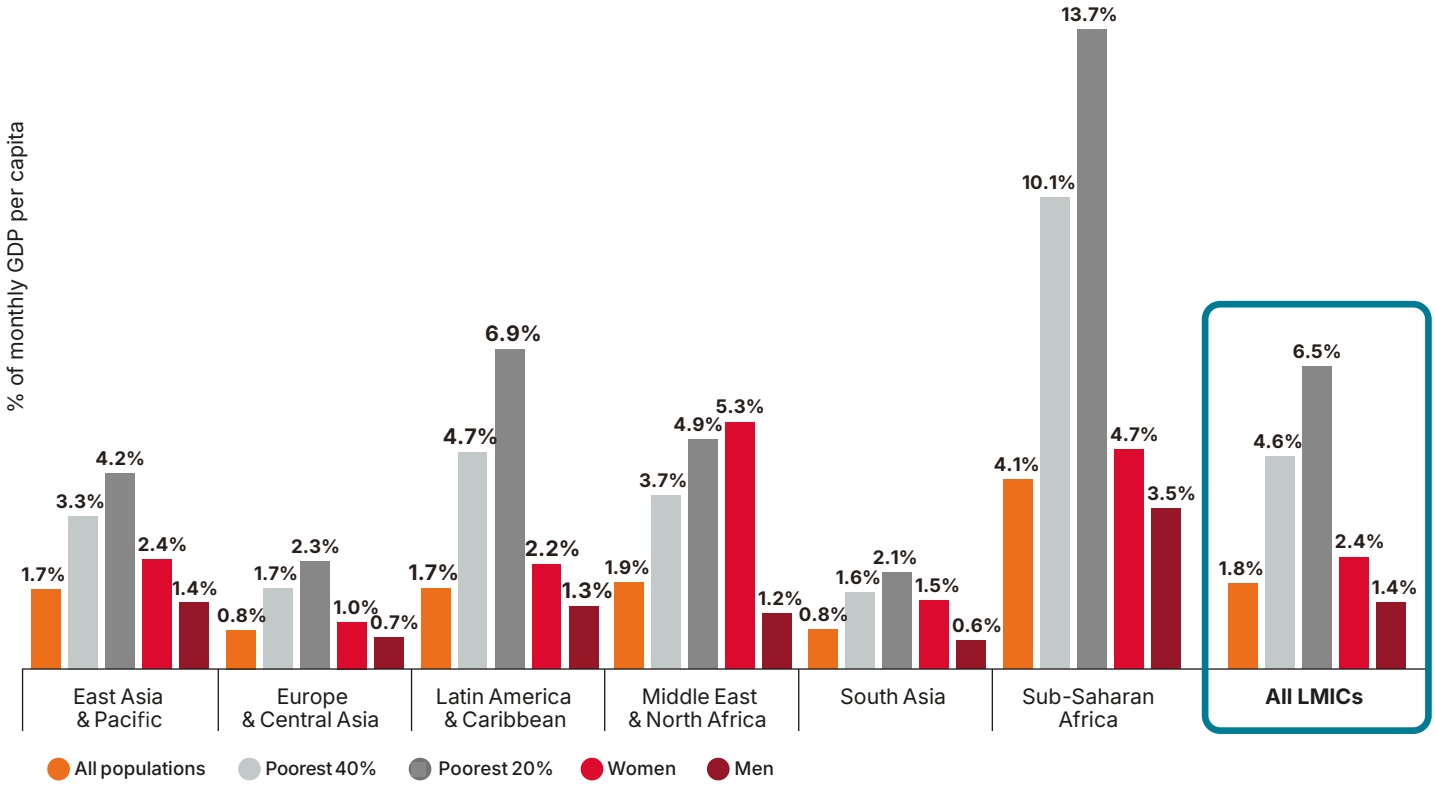
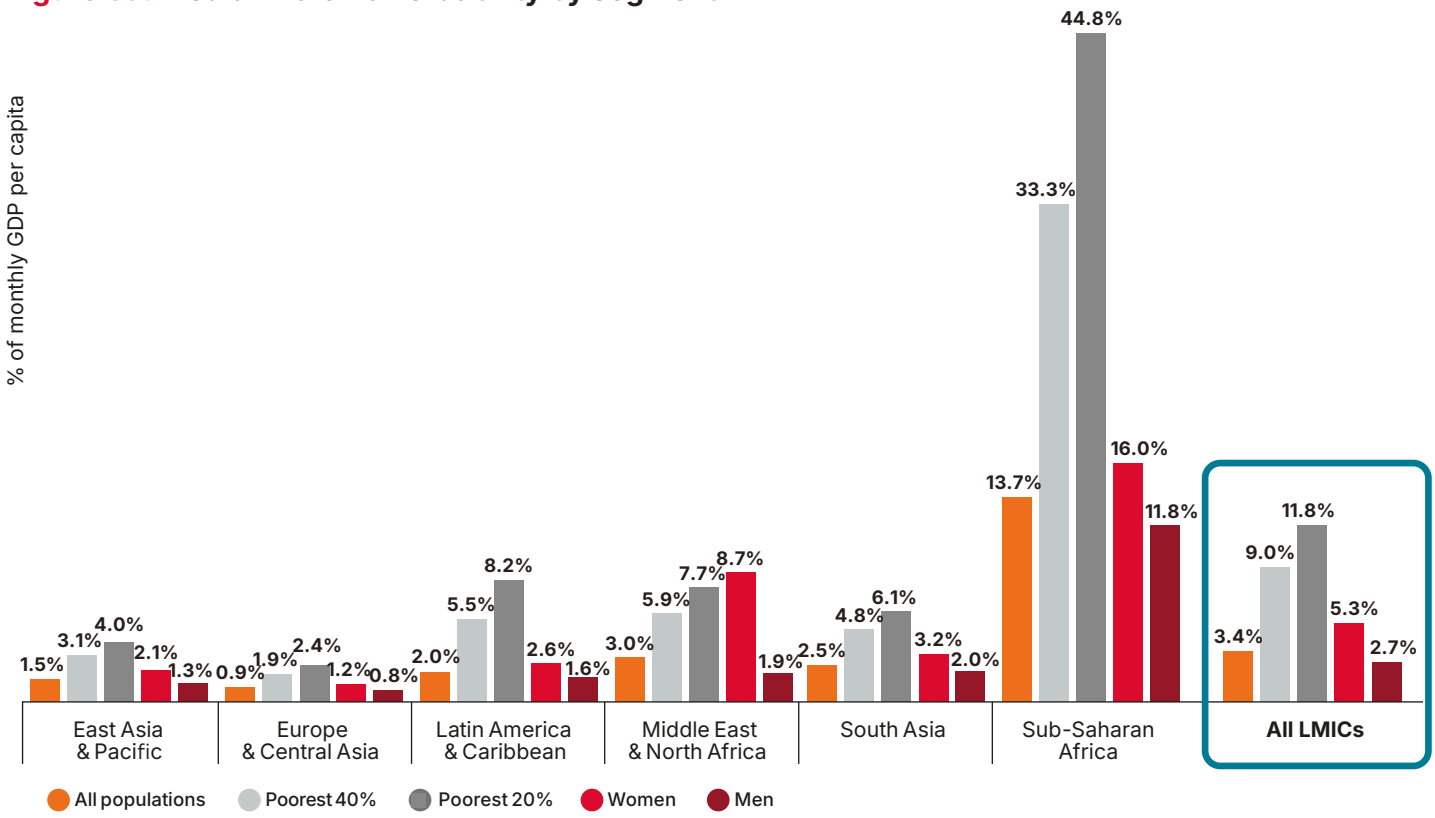


Figure 6d: Median 20 GB affordability by segment



Note: Data on incomes for the poorest 20% and 40% of the population and men and women is based on information sourced from the World Bank, World Inequality Database, UN and the IMF World Economic Outlook.

Source: GSMA Intelligence calculations based on pricing data from Tarifica and ITU

SPOTLIGHT: MOST VALUED FEATURES IN INTERNET-ENABLED PHONES

For the first time, using the GSMA Consumer Survey, we have analysed what features of internet-enabled handsets (feature phones or smartphones) are most important to prospective buyers, apart from price. This was analysed for urban and rural respondents and for men and women. We asked respondents who already owned an internet-enabled phone, or reported they were likely to get one in the next two years, how important they considered 13 different features for their next internet-enabled phone.[21]

Across the countries surveyed, most respondents reported that the majority of the 13 features are important to them in an internet-enabled phone, indicating that a range of factors matter to them when choosing a new device. However, some features stood out as more important. These features were all related to the performance, functionality and longevity of the device.

The most reported features were long battery life, durability, fast internet and processing speeds, large storage capacity and good camera quality. This did not vary much between urban and rural respondents (see Figure 7), neither did it vary much by gender.[22] For example, in Tanzania, 69% of urban respondents and 64% of their rural counterparts reported that good camera quality was a very important feature of an internet-enabled phone. The importance of features also did not vary based on whether someone already owned an internet-enabled phone or not.

The features reported by urban and rural respondents and men and women as less important in an internet-enabled phone were related to aesthetics, physical features or brand perception, such as the phone's design or colour and how expensive or new it looked. This suggests that individuals – regardless of urban/rural location, gender or mobile phone ownership – tend to seek similar features in their next internet-enabled mobile phone beyond price. Designing affordable devices that prioritise performance, functionality and longevity will help increase consumers' willingness to pay.

The most valued features in an internet-enabled phone, apart from price:

- PERFORMANCE
- FUNCTIONALITY
- LONGEVITY OF THE DEVICE

21 Respondents were asked, "Apart from price, how important, if at all, would the following features be to you if you were getting or buying a mobile phone that can access the internet (e.g. feature phone or smartphone)?"

22 The Mobile Gender Gap Report 2025, GSMA, 2025

Figure 7: Features of an internet-enabled phone reported as 'very important' across survey countries

Among those who already own an internet-enabled phone or reported they were likely to get one in the next two years

		Urban			Rural		
		Min	**Median**	Max	Min	**Median**	Max
Performance, functionality and longevity	Long battery life	45%	**77%**	90%	49%	**75%**	90%
	Durability	43%	**74%**	85%	42%	**68%**	89%
	Faster internet speeds (e.g. 4G/5G, instead of 3G/2G)	43%	**69%**	75%	45%	**63%**	75%
	Fast processing speed	44%	**70%**	80%	41%	**61%**	81%
	Large storage capacity	39%	**68%**	81%	43%	**62%**	80%
	Good camera quality	44%	**67%**	80%	45%	**60%**	80%
	Warranty	43%	**58%**	74%	44%	**58%**	76%
	Multi-SIM capabilities	31%	**49%**	68%	29%	**50%**	74%
	Comes pre-loaded with apps	39%	**49%**	60%	38%	**46%**	65%
Aesthetics, physical features and brand perception	Well known/ familiar brand	34%	**48%**	64%	31%	**45%**	68%
	Large screen size	24%	**44%**	56%	32%	**45%**	65%
	Appealing design or colour	23%	**44%**	58%	20%	**42%**	57%
	How new or expensive the phone looks	21%	**47%**	66%	23%	**41%**	63%

Base: Those who own an internet-enabled phone and those who do not own an internet-enabled phone but reported they were likely to get one in the next two years. N = from 163 to 925 for rural and N = from 231 to 739 for urban.

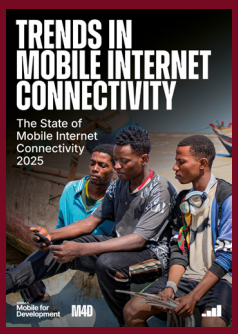
Note: Percentages indicate the proportion of people who answered, "Very important" to the question, "Apart from price, how important, if at all, would the following features be to you if you were getting or buying a mobile phone that can access the internet (e.g. feature phone or smartphone)?" Note that some features may fit into both categories.

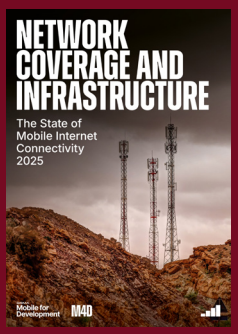
Source: GSMA Consumer Survey, 2024

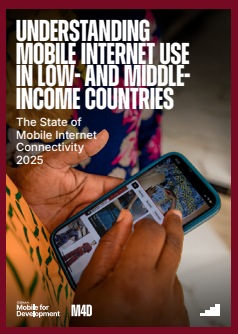
TACKLING AFFORDABILITY IS KEY TO CLOSING THE USAGE GAP

Lack of affordability of both internet-enabled handsets and data remains a significant challenge to universal digital inclusion. Affordability of an entry-level, internet-enabled handset remains relatively unchanged across LMICs overall, as does the affordability of 1 and 20 GB data bundles. Targeted interventions should focus on improving both ability and willingness to pay – for example, by offering financing schemes, communicating the relevance of mobile internet and internet-enabled devices to a diverse range of demographics, and designing affordable handsets that serve the needs and preferences of the unconnected. Tackling this key barrier to digital inclusion can help substantially close the persistent usage gap.

This report is part of The State of Mobile Internet Connectivity 2025 report series. The other reports can be accessed below:







APPENDICES

APPENDIX 1: THE GSMA CONSUMER SURVEY

This report uses the results of the GSMA Consumer Survey. As part of the survey, the GSMA conducted face-to-face interviews in 15 LMICs in 2024, 12 LMICs in 2023, 12 LMICs in 2022, 10 LMICs in 2021, eight LMICs in 2020, 15 LMICs in 2019, 18 LMICs in 2018 and 24 LMICs in 2017.

The 15 LMICs surveyed in 2024 were Bangladesh, Egypt, Ethiopia, Guatemala, India, Indonesia, Kenya, Mexico, Nigeria, Pakistan, Philippines, Rwanda, Senegal, Tanzania and Uganda. The countries included in the survey across all years account for 79% of the population in LMICs.

Survey methodology

In all countries, a nationally representative sample of around 1,000 adults aged 18 and above was surveyed – with the exception of India and China,[23] where the sample was around 2,000, and Ethiopia, where a full, nationally representative sample was not achievable due to local conflict and security concerns.[24] The sampling frame was predominantly based on data from national statistics offices, including census data where possible and a range of other sources. Sampling points where interviews were conducted were distributed proportionately between urban and rural areas in accordance with census data and national statistics offices. To ensure wide geographical coverage and to reduce the effects of clustering, a minimum of 100 sampling points were used in each country (200 in India). However, very remote areas or those with security concerns were excluded.

The research used a mix of purposive and random sampling approaches. Depending on the country, sampling points were either randomly distributed – with an administrative area's probability of selection proportionate to the size of its population (random sampling) – or selected to reflect the linguistic, cultural and economic variations of each country (purposive sampling). Local experts and national statistics offices checked the sampling frames to ensure they were valid and representative.

Survey interviews were conducted under the direction of Ipsos with individuals in their local language(s) by both male and female interviewers. Data was collected using computer-assisted personal interviewing (CAPI). In more remote rural areas in countries such as Bangladesh, India and Pakistan, local teams tried to ensure female interviewers conducted the survey for female respondents, where practical. Interviews were conducted at respondents' homes. Within sampling points, systematic random routes were used for residence selection.

Weights were applied to the data using a random iterative method (RIM) whereby several non-interlocking quotas were applied in an iterative sequence and repeated as many times as needed for the quotas to converge. This corrected any imbalances in the profiles, although weightings (and the resulting impact on effective sample sizes) were minimised as much as possible by controlling key quota variables over the course of the fieldwork.

23 China was included in the 2017 and 2018 Consumer Surveys.

24 No interviews were conducted in the Amhara region, Western Tigray, Metekel-Zone (Benishangul Gumz), Zone 2 (Afar) and Guji-Zone (Oromia) due to local conflict and security concerns. These areas represent 27% of the population in Ethiopia, so the sample was representative of the remaining 73% who live outside these areas.

Question on mobile internet use

Survey respondents were asked, **"Have you ever used the internet on a mobile phone?"** and to select from one of the following answers:

- Yes, I have used the internet on a mobile phone in the last three months
- Yes, I have used the internet on a mobile phone longer than three months ago
- No, I have never used the internet on a mobile phone
- Don't know

In this report, a respondent to the GSMA Consumer Survey is considered a mobile internet user if they have used the internet on a mobile phone in the last three months.

To identify regular users of mobile internet, these mobile internet users were then asked, **"How frequently do you use the internet on a mobile phone?"** and to select from one of the following answers:

- At least once a day
- At least once a week
- At least once a month
- Less than once a month

In this report, a respondent to the GSMA Consumer Survey is considered a regular mobile internet user if they use the internet on a mobile phone at least once a day.

Question on smartphone ownership

Survey respondents were asked, **"Do you have a mobile phone that you have the sole or main use of? This may be a handset that you carry with you most days"**.

They were then asked a follow-up question, **"What type of mobile phone is that?"** and to select from one of the following answers:

- A basic mobile phone
- A feature mobile phone
- A smartphone

Prompts were provided to help identify the handset according to these three categories. In this report, a respondent to the GSMA Consumer Survey is considered a smartphone owner if they have a smartphone that they have sole or main use of.

Question on mobile internet awareness

Survey respondents were asked, **"Which of the following best describes your knowledge of accessing the internet on a mobile phone?"** and to select from one of the following answers:

- I was not aware it is possible to access the internet on a mobile phone
- I was aware it is possible to access the internet on a mobile phone

In this report, a respondent to the GSMA Consumer Survey is aware of mobile internet if they have ever used the internet on a mobile phone, or are aware it is possible to access the internet on a mobile phone.

Questions on barriers to mobile internet adoption and further use

Survey respondents who were aware of mobile internet but had not used it in the previous three months were asked what stops them from using the internet on a mobile phone. Survey respondents who had used mobile internet in the previous three months were asked what stops them from using the internet more on a mobile phone.

These questions were asked in three stages:

1. For each of the possible reasons, please indicate whether this is something that stops you at all from using the internet [more (if existing user)] on a mobile phone.

2. Which, if any, of those factors would you say are the most important reasons stopping you from using the internet [more (if existing user)] on a mobile phone?

3. Which one of those factors would you say is the single most important reason stopping you from using the internet [more (if existing user)] on a mobile phone?

For the purposes of analysis in this report, we grouped some of the responses into similar categories. Below are the barriers listed in the survey, along with the relevant categorisation.

Barriers to mobile internet adoption:

Literacy and digital skills
- I don't feel confident or know how to use the internet on a mobile phone
- I have difficulties with reading and writing
- I find it difficult to use a mobile in general (calling, texting or mobile internet)
- There is not always someone available to teach or help me to use the internet on a mobile phone

Relevance
- There is not enough in my own language on the internet
- I do not find the internet relevant enough for me (not useful or not interesting)

Affordability
- The cost of buying a [better quality (if internet-enabled phone owner)] mobile phone that can access the internet is too high for me
- The cost of buying data to use the internet on a mobile phone is too high for me

Safety and security
- I am concerned about receiving unwanted contact from people online (e.g. scam emails or unwanted messages on social media)
- I am concerned that it might expose myself or my family to harmful content
- I am concerned that my identity or other private information will be stolen or misused
- I don't trust information on websites or apps
- I am concerned about falling victim to scams or fraud on the internet

Fundamental enablers
- There is inconsistent coverage (e.g. connection drops) or no coverage to access the internet
- Using the internet on a mobile phone is too slow (e.g. connection speeds)
- My family does not approve of me using the internet on a mobile phone
- It is not always easy for me to find or get to a suitable mobile phone agent or representative to buy mobile internet data from
- Using the internet on a mobile phone uses too much battery
- I do not have time to use the internet on a mobile phone
- The phone that I could use to access the internet is used by other people

Barriers to further mobile internet use:

Literacy and digital skills
- I don't always feel confident or know how to use the internet on a mobile phone
- I have difficulties with reading and writing
- I find it difficult to use a mobile in general (calling, texting or mobile internet)
- There is not always someone available to teach or help me to use the internet more on a mobile phone

Relevance
- There is not enough in my own language on the internet
- I do not find the internet relevant enough to use it more (not useful or not interesting)

Affordability

- The cost of buying a [better quality (if internet-enabled phone owner)] mobile phone that can access the internet is too high for me
- The cost of buying data to use the internet on a mobile phone is too high for me

Safety and security

- I am concerned about receiving unwanted contact from people online (e.g. scam emails or unwanted messages on social media)
- I am concerned that it might expose myself or my family to harmful content
- I am concerned that my identity or other private information will be stolen or misused
- I don't always trust information on websites or apps
- I am concerned about falling victim to scams or fraud on the internet

Fundamental enablers

- There is inconsistent coverage (e.g. connection drops) or no coverage to access the internet
- Using the internet on a mobile phone is too slow (e.g. connection speeds)
- My family does not always approve of me using the internet on a mobile phone
- It is not always easy for me to find or get to a suitable mobile phone agent or representative to buy mobile internet data from
- Using the internet on a mobile phone uses too much battery
- I do not have time to use the internet more on a mobile phone
- I am only allowed to use the internet on a mobile phone for specific reasons
- I am only allowed to use the internet on a mobile phone for a limited amount of time or at certain times of the day
- The phone I use to access the internet is often used by other people

APPENDIX 2: ADDITIONAL FIGURES

In the GSMA Consumer Survey 2024, respondents who were aware of mobile internet were asked to identify the barriers preventing them from using mobile internet. Respondents were first asked to identify all relevant barriers, then to identify those that were most important and, finally, the single most important barrier. Strongly related or thematically overlapping barriers were grouped into composites. Figure 8 shows the top barriers reported by urban and rural respondents in surveyed markets in 2024. This approach was also taken to identify the barriers to further use of mobile internet for respondents using mobile internet. Figure 9 shows the top barriers reported by urban and rural respondents.

Figure 8: Top barriers to mobile internet use

Percentage of mobile users who are aware of mobile internet but do not use it, and who identified the following as the single most important barrier to using mobile internet

		AFFORDABILITY				LITERACY AND DIGITAL SKILLS						RELEVANCE				SAFETY AND SECURITY										FUNDAMENTAL ENABLERS									
		Handset cost		Data cost		Reading/ writing difficulties		Difficulties using a mobile in general		Not confident using mobile internet		Not sufficient support in learning to use the internet		Internet is not relevant for me		Insufficient content in local language		Strangers contacting me		Harmful content (self/family)		Information security		Do not trust information on websites or apps		Scams or fraud		Inconsistent/ no coverage		Slow connection speeds		Internet drains my battery		Access to agent support		Do not have time to use mobile internet		Shared phone access		Family does not approve	
		U	R	U	R	U	R	U	R	U	R	U	R	U	R	U	R	U	R	U	R	U	R	U	R	U	R	U	R	U	R	U	R	U	R	U	R
AFRICA	Egypt	26%	29%	6%	4%	26%	28%	13%	9%	4%	3%	2%	5%	3%	5%	3%	3%	2%	1%	3%	1%	2%	1%	0%	0%	0%	3%	3%	3%	0%	1%	0%	1%	0%	0%	5%	1%	0%	1%	3%	3%
	Ethiopia	42%	41%	5%	4%	3%	22%	3%	5%	15%	8%	0%	1%	11%	3%	0%	1%	4%	0%	0%	0%	0%	0%	1%	0%	0%	0%	2%	5%	3%	2%	1%	2%	1%	1%	9%	3%	0%	0%	0%	1%
	Kenya	58%	55%	5%	3%	5%	8%	0%	2%	5%	6%	2%	1%	3%	3%	2%	0%	5%	2%	2%	2%	2%	3%	0%	1%	2%	7%	1%	2%	0%	0%	2%	0%	3%	0%	2%	2%	2%	0%	0%	0%
	Nigeria	41%	29%	2%	6%	24%	27%	2%	3%	3%	5%	2%	2%	3%	3%	0%	1%	0%	3%	3%	2%	1%	2%	1%	2%	1%	4%	2%	2%	0%	0%	0%	2%	1%	0%	7%	2%	2%	2%	4%	3%
	Rwanda	50%	56%	1%	1%	12%	8%	0%	1%	1%	1%	0%	3%	1%	1%	4%	3%	0%	2%	9%	4%	1%	2%	4%	0%	4%	8%	3%	4%	3%	1%	0%	1%	0%	1%	4%	2%	4%	1%	1%	0%
	Senegal	28%	57%	7%	5%	17%	13%	4%	1%	1%	2%	0%	0%	11%	2%	1%	0%	2%	2%	1%	1%	1%	2%	5%	2%	4%	5%	2%	3%	3%	1%	4%	1%	0%	0%	5%	4%	3%	0%	0%	1%
	Tanzania	58%	54%	7%	8%	5%	3%	3%	2%	5%	3%	2%	6%	0%	1%	1%	1%	0%	1%	4%	1%	0%	2%	0%	2%	6%	5%	0%	2%	1%	4%	3%	2%	0%	0%	3%	3%	1%	1%	0%	0%
	Uganda	46%	54%	12%	5%	8%	8%	1%	2%	3%	5%	1%	3%	2%	4%	1%	0%	2%	2%	2%	1%	1%	0%	0%	0%	4%	2%	5%	4%	1%	1%	1%	0%	1%	2%	4%	5%	5%	2%	0%	0%
ASIA	Bangladesh	9%	8%	12%	7%	23%	24%	3%	6%	1%	4%	3%	3%	14%	7%	1%	2%	2%	3%	3%	5%	0%	3%	1%	2%	3%	1%	1%	4%	2%	1%	2%	5%	5%	4%	2%	3%	8%	3%	4%	5%
	India	7%	7%	13%	10%	11%	20%	7%	3%	5%	2%	3%	3%	7%	4%	1%	3%	0%	4%	4%	2%	3%	5%	0%	2%	4%	8%	6%	5%	4%	5%	8%	3%	2%	2%	3%	2%	9%	4%	2%	3%
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	Pakistan	15%	9%	6%	6%	31%	31%	5%	2%	2%	3%	2%	4%	10%	5%	2%	1%	0%	1%	6%	5%	2%	5%	1%	0%	0%	0%	0%	2%	2%	5%	1%	0%	0%	1%	2%	3%	2%	2%	9%	14%
	Philippines	8%	5%	3%	3%	5%	4%	3%	3%	5%	6%	1%	4%	0%	6%	0%	1%	7%	7%	3%	1%	14%	18%	12%	0%	21%	25%	5%	5%	3%	4%	1%	1%	1%	0%	6%	3%	1%	1%	0%	1%
LATIN AMERICA	Guatemala	44%	35%	2%	11%	12%	24%	6%	5%	2%	2%	5%	0%	0%	1%	0%	0%	2%	5%	0%	1%	6%	3%	3%	0%	10%	6%	2%	4%	0%	0%	1%	0%	0%	0%	2%	2%	2%	0%	2%	1%
	Mexico	10%	9%	5%	3%	6%	18%	5%	12%	13%	11%	10%	6%	3%	3%	0%	0%	4%	12%	4%	0%	14%	0%	0%	8%	8%	3%	3%	3%	0%	3%	2%	0%	0%	0%	7%	3%	3%	3%	1%	3%

U URBAN R RURAL

Least frequently cited barrier in that count ry — Most frequently cited barrier in that country

Base: Adults aged 18+ who have used a mobile phone in the last three months but have not used mobile internet in the last three months, despite being aware of mobile internet (excludes mobile users who are not aware of mobile internet). N = from 35 to 366 for rural and from 51 to 171 for urban.
Note: Percentages indicate the proportion of respondents who answered, "This is the most important reason stopping me" to the question, "Which one of those factors would you say is the single most important reason stopping you from using the internet on a mobile phone?"
Source: GSMA Consumer Survey, 2024

Figure 9: Top barriers to further mobile internet use

Percentage of mobile internet users who reported the following as the single most important barrier to using mobile internet more

		AFFORDABILITY				LITERACY AND DIGITAL SKILLS								RELEVANCE				SAFETY AND SECURITY										FUNDAMENTAL ENABLERS															
		Handset cost		Data cost		Reading/ writing difficulties		Difficulties using a mobile in general		Not confident using mobile internet		Not sufficient support in learning to use the internet		Internet is not relevant for me		Insufficient content in local language		Strangers contacting me		Harmful content (self/family)		Information security		Do not trust information on websites or apps		Scams or fraud		Inconsistent/ no coverage		Slow connection speeds		Internet drains my battery		Access to agent support		Do not have time to use mobile internet		Shared phone access		Family does not approve		Only allowed to use mobile internet for specific reasons		Only allowed to use mobile internet for a limited amount of time or at certain times of the day	
		U	R	U	R	U	R	U	R	U	R	U	R	U	R	U	R	U	R	U	R	U	R	U	R	U	R	U	R	U	R	U	R	U	R	U	R	U	R	U	R	U	R
AFRICA	Egypt	2%	5%	12%	23%	5%	4%	0%	1%	2%	0%	1%	1%	4%	1%	1%	0%	4%	5%	5%	3%	8%	3%	2%	2%	6%	6%	16%	32%	7%	4%	10%	2%	1%	0%	10%	8%	0%	0%	1%	1%	0%	2%	2%	0%
	Ethiopia	22%	14%	12%	10%	0%	4%	0%	1%	1%	2%	0%	0%	2%	2%	4%	1%	2%	1%	1%	2%	0%	1%	1%	0%	2%	1%	23%	22%	11%	16%	3%	9%	0%	0%	13%	6%	1%	5%	1%	3%	0%	0%	3%	1%
	Kenya	13%	11%	29%	26%	1%	0%	0%	0%	1%	0%	1%	2%	1%	0%	0%	1%	8%	4%	4%	4%	3%	7%	3%	2%	10%	8%	7%	10%	4%	7%	5%	7%	1%	1%	4%	5%	3%	3%	0%	0%	2%	1%	2%	1%
	Nigeria	10%	14%	19%	17%	9%	3%	0%	1%	3%	1%	0%	0%	2%	2%	1%	2%	6%	5%	2%	1%	0%	3%	3%	1%	9%	10%	12%	7%	2%	3%	9%	9%	1%	1%	6%	11%	1%	2%	1%	0%	1%	2%	3%	2%
	Rwanda	27%	30%	15%	13%	2%	1%	0%	1%	0%	1%	0%	4%	1%	1%	1%	1%	3%	1%	6%	7%	13%	9%	3%	3%	5%	6%	10%	12%	4%	6%	0%	1%	0%	0%	3%	1%	4%	1%	0%	2%	0%	0%	2%	0%
	Senegal	9%	7%	17%	30%	11%	5%	1%	0%	1%	0%	0%	0%	1%	0%	1%	0%	6%	3%	3%	2%	5%	5%	3%	1%	12%	9%	9%	17%	4%	5%	8%	3%	1%	0%	7%	9%	1%	2%	0%	1%	0%	0%	0%	1%
	Tanzania	14%	15%	32%	31%	1%	1%	2%	2%	0%	0%	1%	2%	2%	3%	1%	2%	3%	5%	3%	4%	2%	3%	1%	2%	8%	3%	11%	5%	2%	8%	6%	6%	1%	0%	4%	3%	0%	1%	2%	2%	2%	1%	1%	1%
	Uganda	19%	28%	30%	26%	2%	2%	0%	0%	2%	1%	0%	1%	2%	0%	0%	1%	4%	1%	1%	1%	1%	2%	1%	0%	6%	3%	12%	19%	4%	3%	8%	3%	0%	1%	5%	3%	4%	3%	0%	1%	0%	0%	0%	0%
ASIA	Bangladesh	5%	4%	17%	19%	1%	3%	5%	1%	3%	6%	2%	3%	4%	1%	0%	0%	2%	2%	8%	4%	7%	4%	2%	4%	4%	4%	1%	1%	12%	18%	7%	8%	0%	0%	4%	4%	1%	1%	7%	5%	3%	2%	3%	5%
	India	4%	3%	10%	12%	3%	4%	4%	2%	3%	3%	2%	2%	3%	3%	2%	2%	5%	5%	3%	4%	4%	7%	2%	3%	11%	14%	4%	5%	5%	8%	10%	7%	3%	2%	6%	5%	3%	3%	1%	3%	6%	2%	5%	3%
	Indonesia	4%	4%	5%	7%	2%	1%	2%	1%	0%	0%	0%	1%	0%	0%	1%	1%	7%	7%	8%	8%	15%	10%	2%	2%	24%	12%	12%	19%	4%	6%	4%	2%	1%	1%	2%	7%	3%	4%	0%	0%	1%	3%	1%	3%
	Pakistan	5%	4%	16%	8%	15%	10%	1%	1%	1%	1%	0%	3%	2%	3%	2%	2%	3%	2%	2%	4%	6%	6%	1%	2%	4%	4%	3%	9%	7%	23%	6%	4%	0%	1%	11%	4%	6%	1%	1%	2%	3%	3%	4%	3%
	Philippines	3%	6%	4%	6%	0%	1%	0%	0%	0%	1%	0%	1%	0%	1%	1%	0%	11%	9%	8%	6%	12%	10%	7%	4%	32%	28%	6%	9%	6%	8%	2%	3%	0%	1%	2%	3%	3%	2%	1%	1%	1%	1%	1%	1%
LATIN AMERICA	Guatemala	7%	11%	3%	9%	5%	7%	0%	2%	2%	2%	2%	0%	1%	2%	1%	2%	5%	6%	7%	5%	14%	8%	2%	2%	20%	15%	14%	14%	3%	4%	3%	1%	1%	1%	4%	4%	2%	1%	0%	0%	1%	1%	2%	3%
	Mexico	5%	9%	5%	4%	1%	0%	1%	1%	1%	0%	1%	0%	1%	0%	1%	0%	10%	8%	15%	16%	20%	15%	3%	5%	18%	21%	4%	13%	2%	1%	2%	0%	2%	1%	2%	1%	1%	2%	0%	0%	2%	1%	2%	3%

U URBAN R RURAL

Least frequently cited barrier in that country — Most frequently cited barrier in that country

Base: Mobile internet users aged 18+. N = from 88 to 524 for rural and from 74 to 427 for urban.

Note: Percentages indicate the proportion of respondents who answered, "This is the most important reason stopping me" to the question, "Which one of those factors would you say is the single most important reason stopping you from using the internet more on a mobile phone?"

Source: GSMA Consumer Survey, 2024

APPENDIX 3: METHODOLOGY FOR MEASURING HANDSET AND DATA AFFORDABILITY

Mobile data cost

Estimating the cost (or price) of mobile internet services is a complex task, given the wide range of available tariffs. This is particularly the case in LMICs, where more than 80% of SIMs in 2023 used prepaid plans. A single operator in a given country will often have a large number of tariffs that consumers can choose from, with different data allowances and validity periods (e.g. daily, weekly or monthly allowances). Tariffs can also vary based on the service available (e.g. 3G, 4G or 5G), customer segments (e.g. discounts for younger or older users) and additional 'value-add' services (e.g. reduced prices for roaming or certain content). Furthermore, such tariffs can change regularly over time. To compare prices on a comparable basis across countries, we use a 'basket' approach: we look at the cheapest way a consumer can access 1, 5 and 20 GB of data per month from any national operator in each market.[25]

Handset cost

In each country, consumers have a range of choices when deciding which handset to purchase. For this report, as we are primarily focused on affordability for those who are not connected, we look at the price of the cheapest internet-enabled smartphone or feature phone available in each market.[26] This represents the minimum cost required for a consumer to access a device that allows them to use mobile internet services. However, it may not reflect the phones that the majority of consumers have purchased historically (for example, premium handsets).

Income

With regard to income, we source data from the IMF World Economic Outlook on each country's GDP per capita. This allows us to express affordability as the cost of data/handset relative to monthly GDP per capita and to compare each country with the ITU aspirational affordability target, which aims to make entry-level, broadband services account for less than 2% of monthly income per capita by 2030.[27] One issue with this indicator is that average incomes do not reflect variations in income inequality, which can be significant in many LMICs. While mobile broadband may account for less than 2% of average monthly income per capita in a given country, it could be much higher than this threshold for a large segment of the population. We therefore also look at affordability in each country for the poorest 20% and 40% of the population, using income distribution data sourced from the World Bank and the World Inequality Database.

25 This is similar to the approach taken by others (for example, the ITU, OECD and A4AI) to measuring mobile prices. Data on mobile pricing is sourced from Tarifica. For further details on the methodology, see Mobile Connectivity Index Methodology.

26 Data on handset prices is sourced from Tarifica. For further details on the methodology, see Mobile Connectivity Index Methodology.

27 See Aspirational targets for 2030, ITU, 2022. While the ITU's target refers to affordability based on GNI per capita, we use GDP per capita in the index to incorporate more up-to-date data on income per capita. In any case, GDP and GNI per capita are very highly correlated, so our results do not materially change based on the income metric used.

APPENDIX 4: GLOSSARY

Connected	'The connected' or 'connected population' refers to people who use mobile internet. 'The unconnected' refers to those who do not use mobile internet.
Coverage	'Population coverage' is the share of the population that lives in an area where the signal provided by a mobile network is strong enough to use telecoms services (voice, SMS, data).[28] The coverage levels provided by 2G, 3G or 4G networks are independent from each other.
Coverage gap	Populations who do not live within the footprint of a mobile broadband network.
Feature phone	A mobile handset that allows basic access to internet-based services but on a closed platform that does not support a broad range of applications. The handset supports additional features such as a camera and the ability to play multimedia files such as music and video.
Low- and middle-income country (LMIC)	A country classified as low income, lower-middle income and upper-middle income by the World Bank Country and Lending Groups.
Mobile broadband	3G, 4G or 5G technologies.
Mobile internet user	A person who uses internet services on a mobile device. Mobile internet services are defined as any activities that use mobile data.
Mobile internet subscriber	Individuals who use mobile internet on a device they own or have primary use of. This is distinct from connections, as an individual or a 'unique subscriber' can have multiple connections or SIM cards. To estimate the number of unique subscribers by country, we leverage mobile connections data reported by mobile operators and national regulators along with the annual GSMA Consumer Survey as well as other third-party ICT surveys. These are analysed to calculate mobile subscriber, mobile internet and smartphone penetration. We then use the GSMA Consumer Survey as a benchmark for different regions around the world, taking into account macroeconomic indicators and growth potential, and current mobile use cases.
Mobile (phone) owner/ subscriber	A person who subscribes to a mobile service. They do not necessarily use mobile internet.

28 For further details on different technologies, see ITU-R FAQ on International Telecommunications (IMT), ITU, 2022.

Smart feature phone	A feature phone that has an operating system that supports a range of applications created by third-party developers and that is formatted to work on a smaller screen and accessed via a nine-key layout, not a touch screen.
Smartphone	A mobile handset enabling advanced access to internet-based services and other digital functions. Smartphone platforms, such as Android and iOS, support a broad range of applications created by third-party developers.
Usage gap	Populations who live within the footprint of a mobile broadband network but do not use mobile internet.

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