THE STATE OF MOBILE INTERNET CONNECTIVITY 2025

Overview Report

GSMA
Mobile for Development

M4D

GSMA

The GSMA is a global organisation unifying the mobile ecosystem to discover, develop and deliver innovation foundational to positive business environments and societal change. Our vision is to unlock the full power of connectivity so that people, industry, and society thrive. Representing mobile operators and organisations across the mobile ecosystem and adjacent industries, the GSMA delivers for its members across three broad pillars: Connectivity for Good, Industry Services and Solutions, and Outreach. This activity includes advancing policy, tackling today's biggest societal challenges, underpinning the technology and interoperability that make mobile work, and providing the world's largest platform to convene the mobile ecosystem at the MWC and M360 series of events.

We invite you to find out more at gsma.com

The Connected Society programme works with the mobile industry, technology companies, the development community and governments to increase access to and adoption of mobile internet, focusing on underserved population groups in developing markets.

For more information, please visit
www.gsma.com/connected-society

To get in touch with the Connected Society team, please email connectedsociety@gsma.com

---

GSMA Intelligence is the definitive source of global mobile operator data, analysis and forecasts, and publisher of authoritative industry reports and research. Our data covers every operator group, network and MVNO in every country worldwide – from Afghanistan to Zimbabwe. It is the most accurate and complete set of industry metrics available, comprising tens of millions of individual data points, updated daily.

GSMA Intelligence is relied on by leading operators, vendors, regulators, financial institutions and third-party industry players, to support strategic decision making and long-term investment planning. The data is used as an industry reference point and is frequently cited by the media and by the industry itself.

Our team of analysts and experts produce regular thought-leading research reports across a range of industry topics.

www.gsmaintelligence.com
info@gsmaintelligence.com

Authors: Matthew Shanahan, Kalvin Bahia

Contributors: Abi Gleek, Anne Shannon Baxter, Boralba Kapllani, Claire Sibthorpe, Harry Fernando Aquije Ballon, Madeleine Askham, Rosie Leary, Simran Jena

CONTENTS

WHY MOBILE INTERNET CONNECTIVITY MATTERS

Mobile is connecting more people to the internet than ever before, with 58% of the world's population now accessing the internet through their own device.[1] Mobile remains the primary – in some cases, only – way most people access the internet in low- and middle-income countries (LMICs). Mobile accounted for 84% of broadband connections in 2024.[2]

After two years of relatively slow growth, 2024 saw an increase in the rate of mobile internet adoption globally.[3] However, significant digital divides persist. Those who are digitally excluded are more likely to be poorer, less educated, rural, persons with disabilities or women – groups that stand to gain the most from connectivity.

Addressing the digital divide provides significant socioeconomic benefits to individuals, societies and economies. Mobile internet enables access to essential services such as healthcare, education, e-commerce and financial services, and provides income-generating opportunities. It can help reduce poverty [4,5] and is associated with higher levels of wellbeing.[6,7]

GSMA analysis has estimated that over the eight years from 2023 to 2030, closing the usage gap would provide $3.5 trillion in additional gross domestic product (GDP). Closing the gender gap in mobile internet adoption in LMICs would provide $1.3 trillion in additional GDP.[8]

Of the global population, 38% live within mobile broadband coverage but do not use it, while 4% are still not covered by mobile broadband. In an increasingly digital world, it is more urgent than ever to ensure everyone can access, use and realise the benefits of internet connectivity.

---

1   In this report, the term device generally refers to a mobile phone, given the vast majority of internet users in low- and middle-income countries access the internet through a mobile phone and the vast majority of users in high-income countries do so too (often in addition to other devices such as tablets, laptops and PC.

2   International Telecommunication Union (ITU) estimates for 2024.

3   This is based on information gathered as of Q2 2025.

4   The poverty reduction effects of mobile broadband in Africa: Evidence from Nigeria, World Bank, GSMA, 2020

5   Mobile Broadband Internet, Poverty and Labor Outcomes in Tanzania, Bahia, K. et al., 2021

6   Mobile Internet Use, Well-being and Gender: Understanding the Links, GSMA, 2022; and The Impact of Mobile and Internet Technology on Women's Wellbeing Around the World, GSMA, 2019

7   The Impact of Mobile on People's Happiness and Well-Being, GSMA, 2018

8   The State of Mobile Internet Connectivity Report 2024, GSMA, 2024

ABOUT THIS REPORT SERIES

For the first time, the GSMA is publishing The State of Mobile Internet Connectivity research as a series of six publications. This is the first in the series and summarises the key findings from the other five publications. Each of the remaining reports offers a more in-depth exploration of a specific topic, including regional, country and demographic specific analysis.

The State of Mobile Internet Connectivity 2025 series draws on a range of data to analyse key trends since 2015. It considers the importance of not just mobile broadband coverage but 'meaningful connectivity' – users having a safe, satisfying, enriching and productive online experience that is affordable in their context.[9]

Achieving meaningful connectivity requires an understanding of both the barriers and enablers, including the fundamental enablers, affordability, knowledge and skills, safety and security, and relevant content and services.

The findings of this report series are based on the GSMA Consumer Survey, the GSMA Mobile Connectivity Index[10] (MCI) and a range of other industry reports. The GSMA Consumer Survey is a face-to-face, nationally representative survey carried out each year since 2017 to understand access to – and use of – mobile and mobile internet in LMICs. In 2024, it included more than 17,100 respondents from 15 LMICs.[11]

The MCI measures the key enablers of mobile internet connectivity across 173 countries (representing 99% of the global population) against 32 indicators for 2014–2024. The indicators are grouped into four overarching enablers: infrastructure, affordability, consumer readiness, and content and services. Together, these data sources provide objective, quantitative metrics to track the key enablers of mobile internet adoption and usage, as well as insights into what consumers use mobile internet for or what prevents them from using it.[12]

---

9   Achieving universal and meaningful digital connectivity: Setting a baseline and targets for 2030, United Nations Secretary-General's Roadmap for Digital Cooperation and ITU, 2021

10   The web tool is available at www.mobileconnectivityindex.com

11   Bangladesh, Egypt, Ethiopia, Guatemala, India, Indonesia, Kenya, Mexico, Nigeria, Pakistan, Philippines, Rwanda, Senegal, Tanzania and Uganda.

12   For further details on the methodology of the MCI, see Mobile Connectivity Index Methodology.

THE FIVE DEEP-DIVE REPORTS IN THE SERIES

Trends in Mobile Internet Connectivity
Presents the latest data on mobile internet connectivity globally and split by region and various demographics, highlighting the scale of the coverage and usage gaps, with a focus on LMICs.
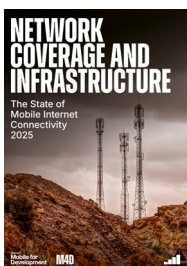
Network Coverage and Infrastructure
Explores updates in mobile broadband coverage and the underlying infrastructure.

Understanding Mobile Internet Use in Low- and Middle-Income Countries
Offers insights into how adults in LMICs are using the internet, exploring diversity of mobile internet usage as well as awareness and use of mobile internet for different types of activity.

Barriers to Mobile Internet Adoption and Use
Investigates the barriers preventing people from adopting mobile internet and from being able to use it more once online.

Affordability of Internet-Enabled Devices and Data
Looks at the affordability of internet-enabled devices and data, which are critical barriers to mobile internet adoption and use.

KEY FINDINGS

KEY FINDINGS

Mobile internet adoption continues to increase, with 58% of the world's population (4.7 billion people) now using mobile internet on their own device. Approximately 200 million people began using mobile internet on their own devices in 2024 – a rate of growth not seen since 2021. A further 9% of the world's population (710 million individuals) used mobile internet in 2024 on a device they do not own or have primary use of.

Globally, 4% of the population (around 300 million people) do not live within coverage of a mobile broadband network. In 2024, this coverage gap reduced by around 40 million,[13] with 75% of the reduction coming from Sub-Saharan Africa – the region with the lowest level of connectivity. Those who remain uncovered are the hardest to reach.

More than 90% of those not using mobile internet live in areas covered by mobile broadband. Some 3.1 billion people (38% of the world's population) live in areas covered by mobile broadband but do not use it – the usage gap. Two thirds of these do not yet own a mobile phone.

Connectivity varies significantly by and within regions and countries, with 93% of those not using mobile internet living in LMICs. In LMICs, adults in rural areas are 25% less likely than those living in urban areas to use mobile internet, while women are 14% less likely than men to use mobile internet.

The number of people using their own smartphone to access the internet increased to 4.4 billion people (54% of the global population) – an increase of 250 million people in 2024. While ownership of 4G and 5G smartphones continues to increase, 16% of mobile internet subscribers still use 3G smartphones or a feature phone to access the internet, reaching 60% in Sub-Saharan Africa.

The majority of network investment has been in 5G deployment, with 5G now covering more than half the world's population (54%). With 4G reaching 93% of the world's population, 4G deployments have slowed.

Data consumption and network quality continue to increase, but large gaps persist. They are lower in LMICs than high-income countries (HICs). Within LMICs, they are lower in least developed countries (LDCs), landlocked developing countries (LLDCs) and small island developing states (SIDS).

While most mobile internet users use it every day, usage is often limited to only one or two activities. The most common activities continue to be communications, social media and entertainment. Awareness levels are significantly lower for less common use cases, particularly among certain segments of the population.

Mobile internet awareness continues to grow but, in some countries, it remains a significant barrier to mobile internet adoption.

For those already aware of mobile internet, the top reported barriers to adoption continue to be affordability (primarily of handsets) and literacy & digital skills.

Across LMICs, the affordability of an entry-level, internet-enabled handset has remained relatively unchanged since 2021 and represents 16% of average monthly income, increasing to 48% for the poorest 20%. A device at $30 could make handsets affordable to up to 1.6 billion people who live within mobile broadband coverage but do not use mobile internet.

For those who have already adopted mobile internet, the top barriers to further use vary by country, but commonly reported barriers are safety and security concerns, affordability (particularly of data but also handsets) and the connectivity experience. Affordability rates of 1 GB and 20 GB are relatively unchanged since 2023, while affordability of 5 GB continues to improve across most regions.

The most valued features in an internet-enabled phone, apart from price, are related to performance, functionality and longevity of the device rather than aesthetics, physical features or brand reputation. These preferences are consistent regardless of gender or location.

---

13   This reduction was not large enough to drive a percentage-point change in the global population covered (4%).

1. TRENDS IN MOBILE INTERNET CONNECTIVITY

More people than ever before are now accessing the internet through mobile devices, but significant digital divides persist. It is critical to understand the key trends in mobile internet connectivity and how they vary by geography and demographic. This includes levels of mobile internet adoption, how many people are still living outside mobile broadband coverage (the coverage gap), and how many people live within mobile broadband coverage but are not yet online (the usage gap).

Connected:

58% of the **world's population** are now using **mobile internet** ⊽

4.7 BILLION PEOPLE

200 MILLION PEOPLE began using mobile internet **in 2024** – a rate of growth not seen since 2021

After two years of relatively slow growth, 2024 saw an increase in the rate of mobile internet adoption. Approximately 200 million people began using mobile internet on their own devices in 2024 – a growth rate not seen since 2021. As a result, 4.7 billion people, or 58% of the world's population, now use mobile internet on a personal device. A further 710 million individuals, 9% of the global population, use mobile internet on a device they do not own or have primary use of.

Almost 90% of the growth in 2024 came from low- and middle-income countries (LMICs), where 93% of those not using mobile internet live.

Most of those still not using mobile internet already live in areas with coverage. In total, 3.1 billion people (38% of the world's population) do not use mobile internet despite being covered by a mobile broadband network. This means that more than 90% of those not using mobile internet live in areas covered by mobile broadband.

With mobile internet adoption continuing to outpace network expansion, the usage gap continues to shrink, standing at 38% of the global population at the end of 2024 (down from 40% in 2023). However, it is around 10 times the size of the coverage gap (those living in areas without mobile broadband coverage), which stands at 4% of the global population.

Usage gap:

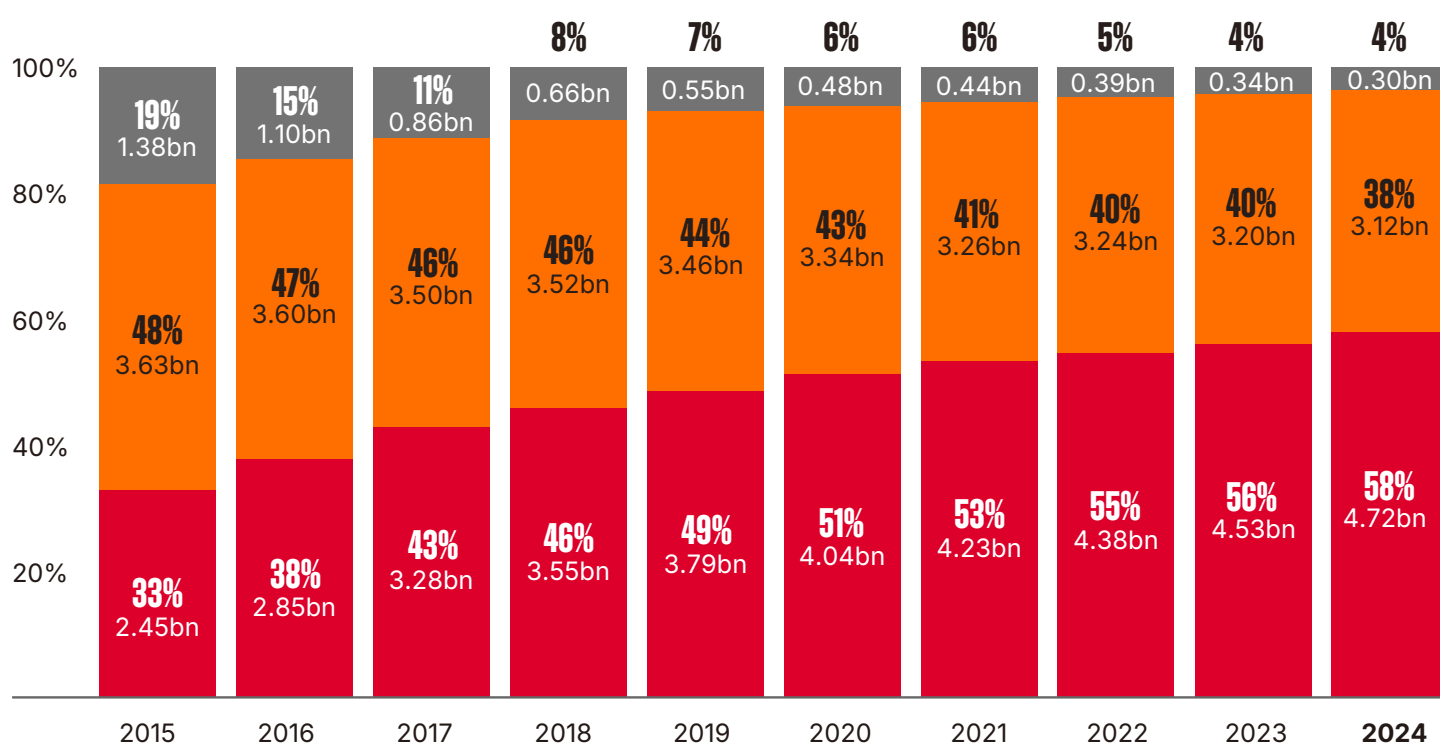**38%** of the **world's population** live within the footprint of a mobile broadband network but are **not using it** ⊽

3.1 BILLION PEOPLE ➔ **2/3**

of which do not own a phone

Figure 1: Global mobile internet connectivity, 2015–2024

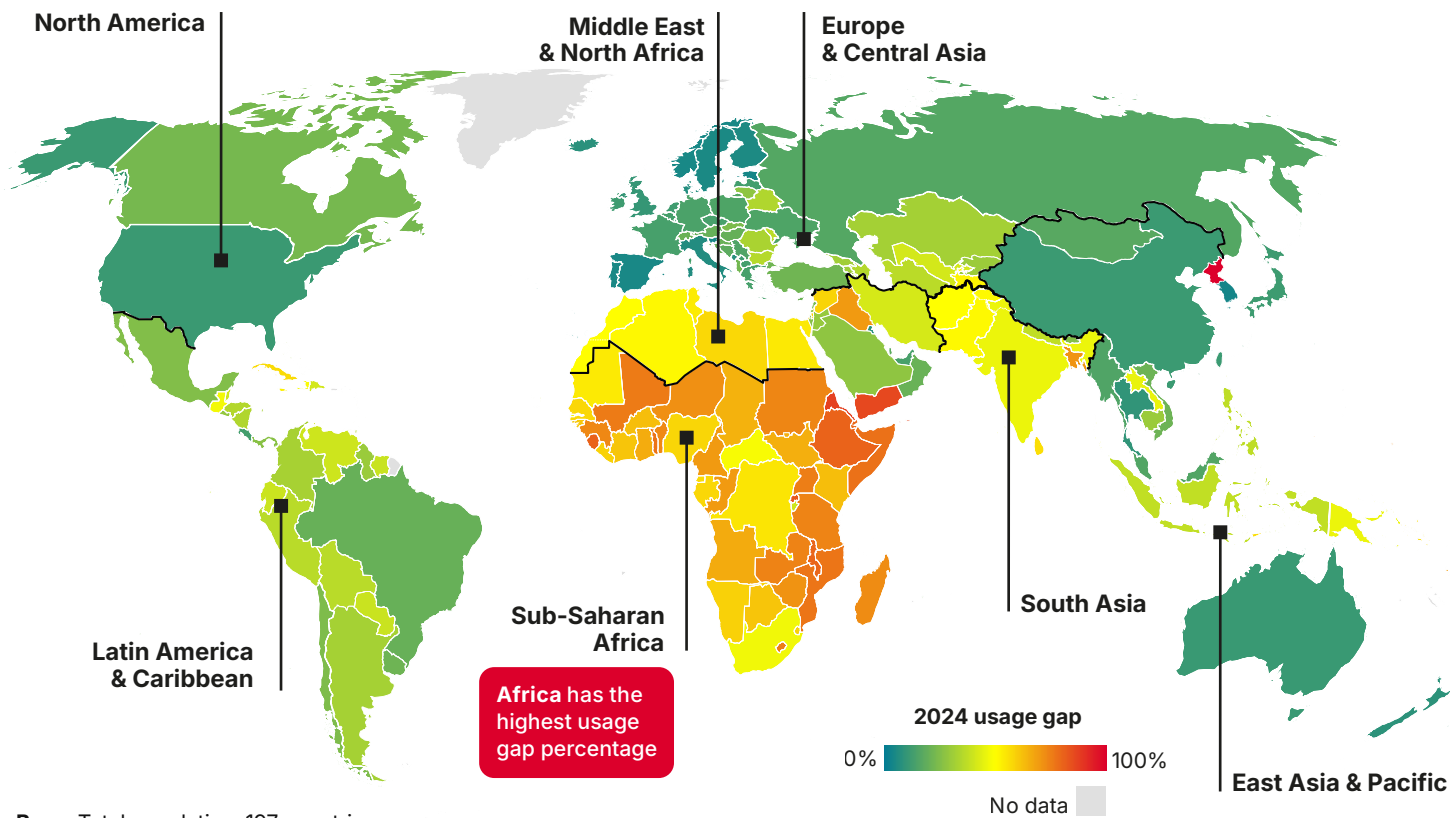|	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Coverage gap	19% 1.38bn	15% 1.10bn	11% 0.86bn	8% 0.66bn	7% 0.55bn	6% 0.48bn	6% 0.44bn	5% 0.39bn	4% 0.34bn	4% 0.30bn
Usage gap	48% 3.63bn	47% 3.60bn	46% 3.50bn	46% 3.52bn	44% 3.46bn	43% 3.34bn	41% 3.26bn	40% 3.24bn	40% 3.20bn	38% 3.12bn
Mobile internet subscribers	33% 2.45bn	38% 2.85bn	43% 3.28bn	46% 3.55bn	49% 3.79bn	51% 4.04bn	53% 4.23bn	55% 4.38bn	56% 4.53bn	58% 4.72bn

● Coverage gap (living outside of mobile broadband coverage)

● Usage gap (living in areas covered by a mobile broadband network but not using mobile internet)

● Mobile internet subscribers

Base: Total population, 197 countries

Note: Totals may not add up due to rounding. Each year, GSMA Intelligence updates its estimates of the number of mobile internet subscribers in each country, incorporating new (and/or updated) data from operators, regulators, national statistics agencies and consumer surveys where available. In some countries and regions, estimates of mobile internet adoption may therefore differ from what was presented in previous editions of The State of Mobile Internet Connectivity.
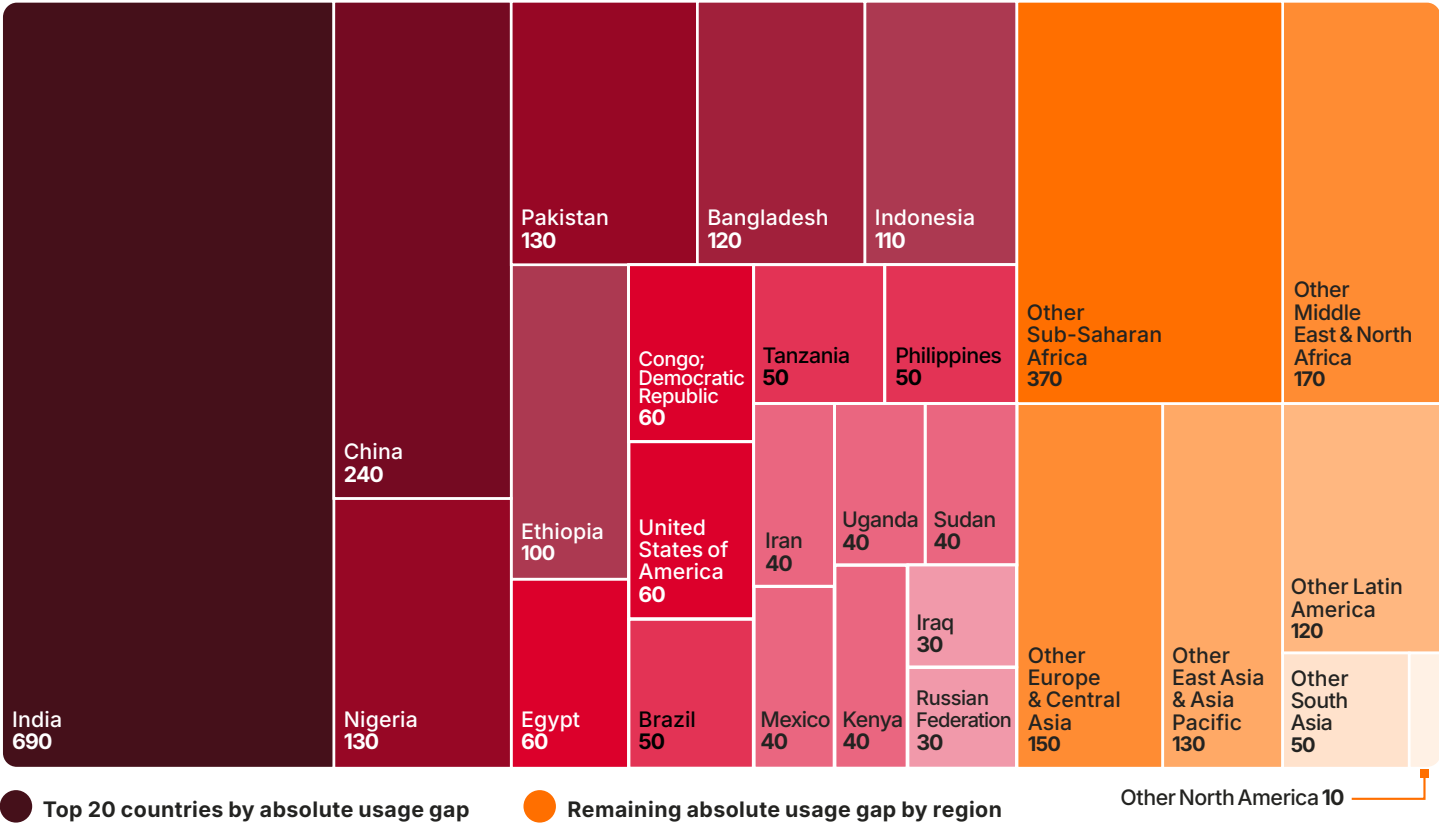
Source: Unique subscriber data is sourced from GSMA Intelligence. Coverage data is sourced from GSMA Intelligence, combining data reported by mobile operators and national regulatory authorities. Population data is sourced from the UN.

Figure 2: Usage gap by country as a percentage of the population

North America

Middle East & North Africa

Europe & Central Asia

Latin America & Caribbean

Sub-Saharan Africa

Africa has the highest usage gap percentage

South Asia

2024 usage gap

0% 100%

No data

East Asia & Pacific

Base: Total population, 197 countries
Source: GSMA Intelligence

Figure 3: Usage gap by country in absolute terms (2024)
In millions of people

India 690

China 240

Pakistan 130

Bangladesh 120

Indonesia 110

Nigeria 130

Ethiopia 100

Egypt 60

Congo; Democratic Republic 60

United States of America 60

Brazil 50

Tanzania 50

Iran 40

Mexico 40

Uganda 40

Kenya 40

Sudan 40

Iraq 30

Russian Federation 30

Philippines 50

Other Sub-Saharan Africa 370

Other Europe & Central Asia 150

Other East Asia & Asia Pacific 130

Other Middle East & North Africa 170

Other Latin America 120

Other South Asia 50

● **Top 20 countries by absolute usage gap**   ● **Remaining absolute usage gap by region**
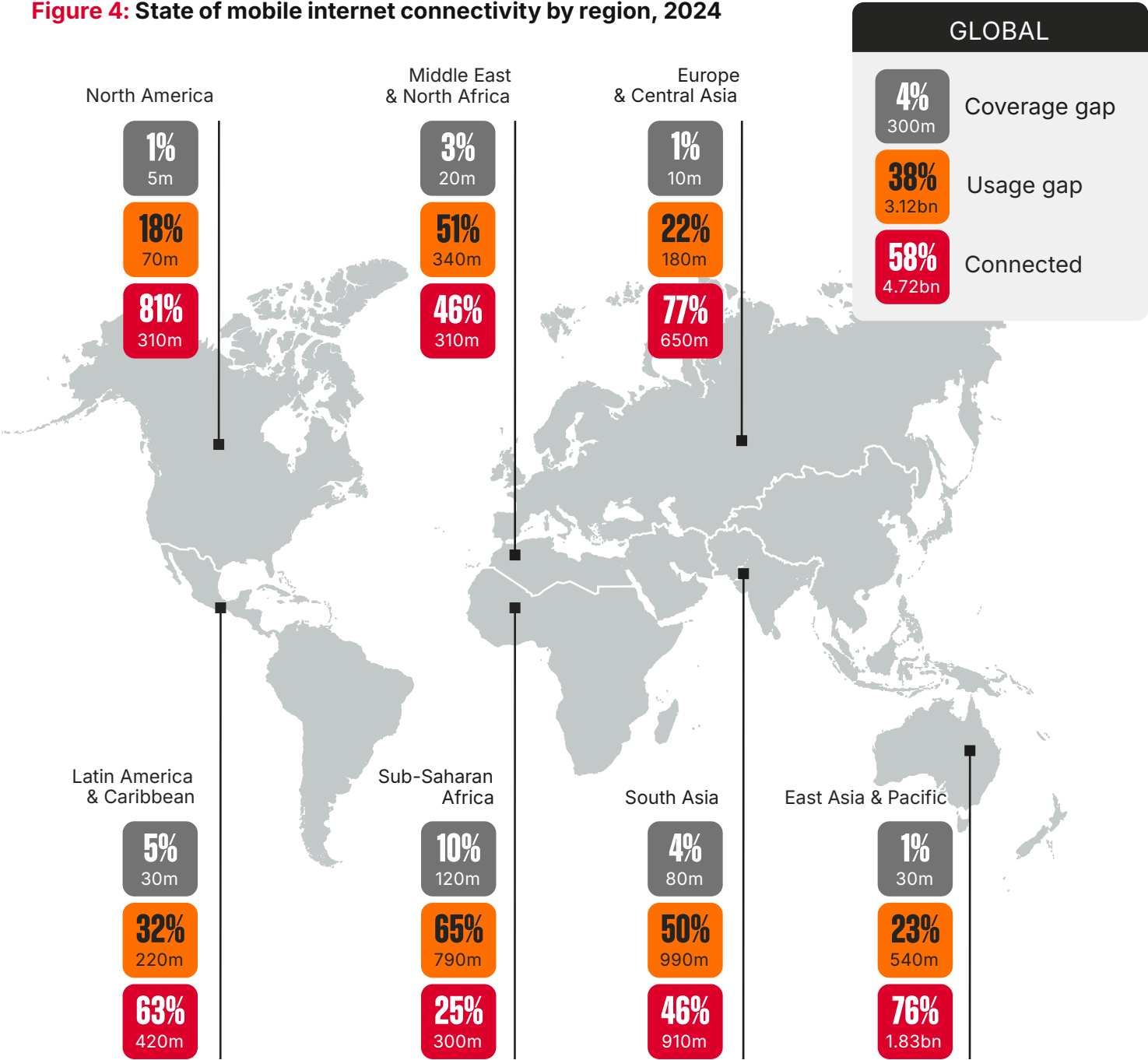
Other North America **10**

Base: Total population, 197 countries
Source: GSMA Intelligence

Connectivity varies significantly by region.
Sub-Saharan Africa remains the region with the lowest mobile internet usage, with only 25% of the population using it[14] and the largest coverage gap at 10%. North America, Europe & Central Asia, and East Asia & Pacific are the regions with the highest proportions of the population using mobile internet, with more than three quarters accessing it on their own devices.

In 2024, rates of mobile internet adoption remained relatively unchanged in all regions except East Asia & Pacific and Latin America & Caribbean, where there were modest increases compared to 2023. Southeast Asia was the sub-region with the highest percentage increase in mobile internet adoption.

Figure 4: State of mobile internet connectivity by region, 2024

GLOBAL

4% 300m	Coverage gap
38% 3.12bn	Usage gap
58% 4.72bn	Connected

North America
- 1% 5m
- 18% 70m
- 81% 310m

Middle East & North Africa
- 3% 20m
- 51% 340m
- 46% 310m

Europe & Central Asia
- 1% 10m
- 22% 180m
- 77% 650m

Latin America & Caribbean
- 5% 30m
- 32% 220m
- 63% 420m

Sub-Saharan Africa
- 10% 120m
- 65% 790m
- 25% 300m

South Asia
- 4% 80m
- 50% 990m
- 46% 910m

East Asia & Pacific
- 1% 30m
- 23% 540m
- 76% 1.83bn

Base: Total population

Note: Totals may not add up to 100% due to rounding. Every year, GSMA Intelligence updates its estimates of the number of mobile internet subscribers in each country, incorporating new (and/or updated) data from operators, regulators, national statistics agencies and consumer surveys where available. In some countries and regions, estimates of mobile internet adoption may therefore differ from what was presented in previous editions of The State of Mobile Internet Connectivity.

Source: GSMA Intelligence

---

14   Sub-Saharan Africa is one of the three regions with the greatest proportions of people under the age of 18. If considering adults aged 18+, the level of mobile internet use in Sub-Saharan Africa increases from 25% to 42%.

Connectivity continues to lag significantly in least developed countries (LDCs), landlocked developing countries (LLDCs) and small island developing states (SIDS), compared to other low- and middle-income countries (LMICs). While 60% of the population in other LMICs are mobile internet subscribers, this drops to 25% in LDCs, 29% in LLDCs and 38% in SIDS. Moreover, none of these three groups saw an increase in their rate of mobile internet adoption in 2024 (or in fact since 2021).

The rural-urban gap in mobile internet adoption continues to shrink across LMICs but remains significant. Progress with closing the gender gap has stalled. In 2024, adults living in rural areas of LMICs were 25% less likely than those in urban areas to use mobile internet. This continues the shrinking of the gap seen since 2021. However, the rural-urban gap is much larger for Sub-Saharan Africa and the Middle East & North Africa, at 48% and 29% respectively. In terms of the gender gap, women are 14% less likely than men to use mobile internet across LMICs, which remains relatively unchanged from 2023. At the regional level, mobile internet gender gaps are widest in South Asia and Sub-Saharan Africa, at 32% and 29% respectively.

Around 250 million people started using a smartphone to access mobile internet in 2024. At the end of 2024, 4.4 billion people were using their own smartphone to access mobile internet, equivalent to 54% of the global population. More than 80% of mobile internet subscribers globally now access the internet on a 4G or 5G smartphone, with 5G smartphone use increasing rapidly. However, globally, 16% of mobile internet subscribers are still using 3G smartphones or a feature phone to access the internet. This reaches 30% in the Middle East & North Africa, 34% in Latin America & Caribbean, and 60% in Sub-Saharan Africa.

The majority of the usage gap comprises those without access to a device. Of the 3.1 billion people who are covered by mobile broadband networks but are not mobile internet subscribers, almost a third (1 billion people) own a device but do not or cannot use it to access the internet. The remaining 2 billion people have no device. In most regions, the proportion of the usage gap without a device remained relatively unchanged in 2024.

In LDCs, only

25% of the population use **mobile internet** compared to

54% across LMICs overall

Across LMICs,
Adults living in **rural areas** are

25% **less likely** to use mobile internet than those living in **urban areas**

Women are

14% **less likely to use mobile internet than men**

54% of the world's population **(4.4 billion people)** own a smartphone. An increase of

250M in 2024

16% **of mobile internet subscribers** are still using **3G smartphones or a feature phone** to access the internet, reaching **60%** in Sub-Saharan Africa
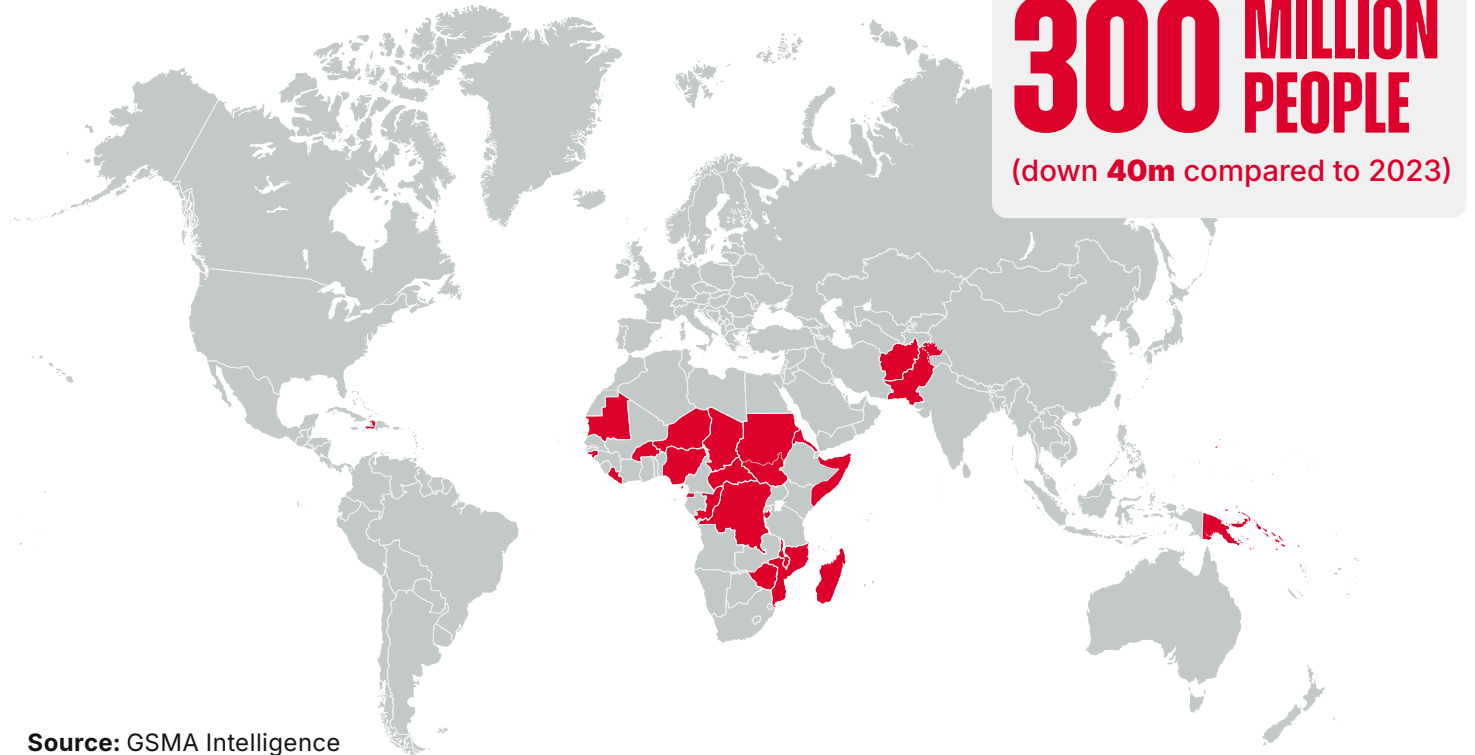
2. NETWORK COVERAGE AND INFRASTRUCTURE

Network coverage and infrastructure continue to expand. Understanding these trends is important as they impact people's ability to access the internet and their experience when doing so.

The vast majority (96%) of the world's population lives within the footprint of a mobile broadband network. Around 300 million people (4% of the world's population) live in areas without mobile broadband coverage (the coverage gap). In 2024, the number of people living in areas without mobile broadband coverage fell by around 40 million, with 75% of the reduction coming from Sub-Saharan Africa. Despite this progress, Sub-Saharan Africa remains the region with the highest coverage gap, at 10%.

Figure 5: Countries with a coverage gap at 10% or above

Source: GSMA Intelligence

Coverage gap:

4%

of the **world's population** are still **not covered** by mobile broadband

Around

300 MILLION PEOPLE

(down **40m** compared to 2023)

The majority of gains in mobile broadband coverage across LMICs continue to be made by upgrading 2G sites. However, more than half of those not covered by a mobile broadband network (around 170 million people) live in areas with no pre-existing mobile infrastructure. Reaching these areas is challenging due to the high costs associated with deploying the necessary physical infrastructure. This is particularly pronounced in LDCs, LLDCs and SIDS, which have lower levels of human and economic development. Many are also vulnerable to economic shocks and natural hazards.

4G deployments have slowed, while 5G now covers more than half the world's population. While almost 150 million additional people were covered by 4G networks for the first time in 2024, the rate of deployment has been slowing over the past few years as operators face diminishing returns on investment. Almost 7.6 billion people worldwide now have 4G coverage, equivalent to 93% of the global population. The majority of network investment continues to be in 5G deployments. 5G coverage has now reached more than half the world's population (54% or 4.4 billion people), with more than 700 million additional people covered in 2024.
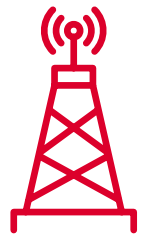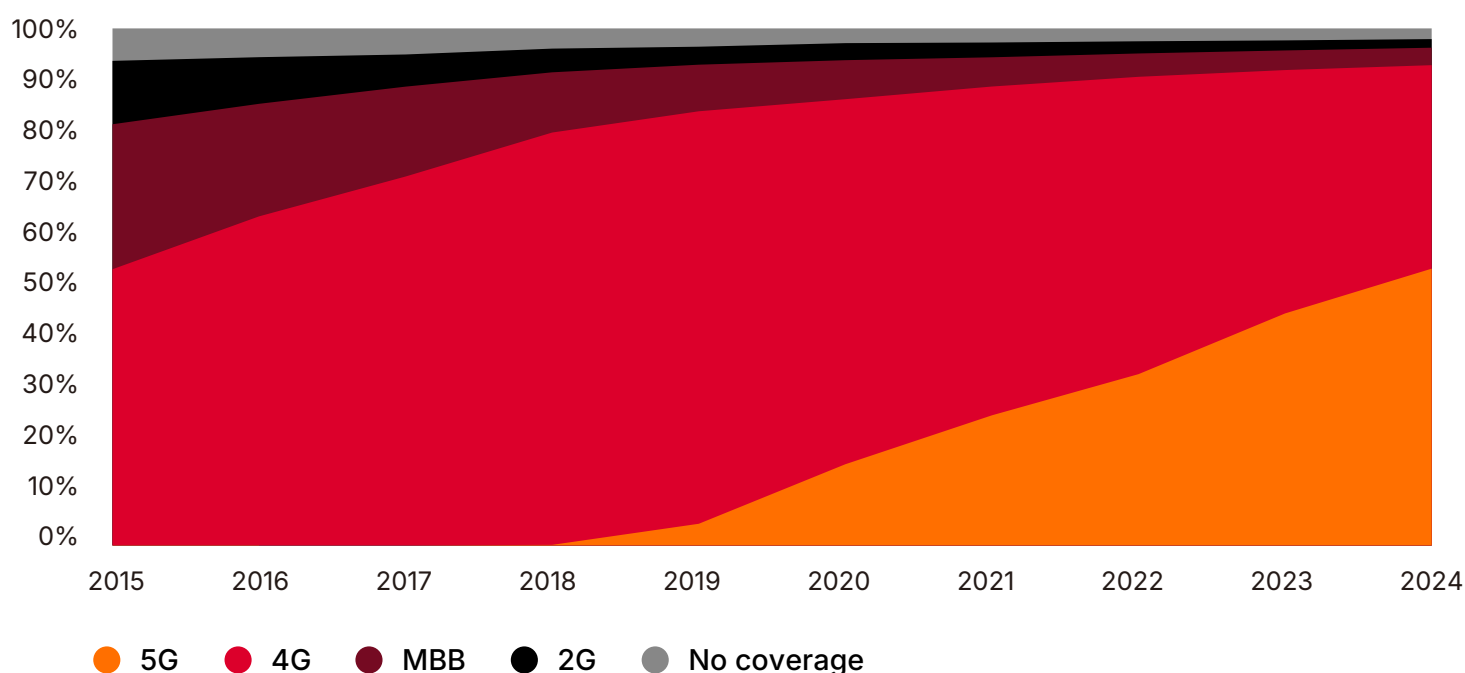
54%

of the **world's population** are now covered by **5G**

Figure 6: Global population coverage by technology, 2015–2024

Legend: 5G, 4G, MBB, 2G, No coverage

The sunsetting of legacy networks continues but not in all countries. Given declining traffic on 2G and 3G networks, combined with the financial burden of maintaining legacy infrastructure and the need to use spectrum efficiently, many operators have either shut down or are in the process of sunsetting 2G and 3G networks. By the end of 2024, there had been 169 2G and 3G sunsets in 75 countries, nearly three quarters of which were shut down following the launch of 5G. However, the speed of sunsetting differs by region. For example, in Sub-Saharan Africa, 3G is still the dominant technology, with only one country (South Africa) currently planning to sunset both its 2G and 3G networks. Sunsets are conditional on enabling spectrum policies and the ability of operators to migrate consumers and businesses to 4G or 5G devices.

LMICs continue to see increased data usage and improvements in network quality, but large gaps persist. With more consumers migrating to 4G and especially 5G, average data traffic per user continues to increase, reaching almost 16 GB per connection per month in 2024. However, there remain significant differences by region and level of economic development. Traffic per connection reached more than 25 GB in high-income countries, compared to 14 GB in LMICs. In terms of network quality, the consumer experience on mobile networks continued to see significant improvement in 2024, with global average download speeds increasing from 51 to 64 Mbps. While average download speeds in high-income countries reached more than 120 Mbps, they remain below 30 Mbps in LDCs, LLDCs and SIDS, and stand at 44 Mbps in other LMICs.

3. UNDERSTANDING MOBILE INTERNET USE IN LOW- AND MIDDLE-INCOME COUNTRIES

It is important to ensure people are not only able to adopt mobile internet but also use it regularly and for a range of use cases that meet their needs. This requires moving beyond looking at basic mobile internet adoption to consider the frequency and diversity of its usage and the range of activities people in LMICs are engaging in online.
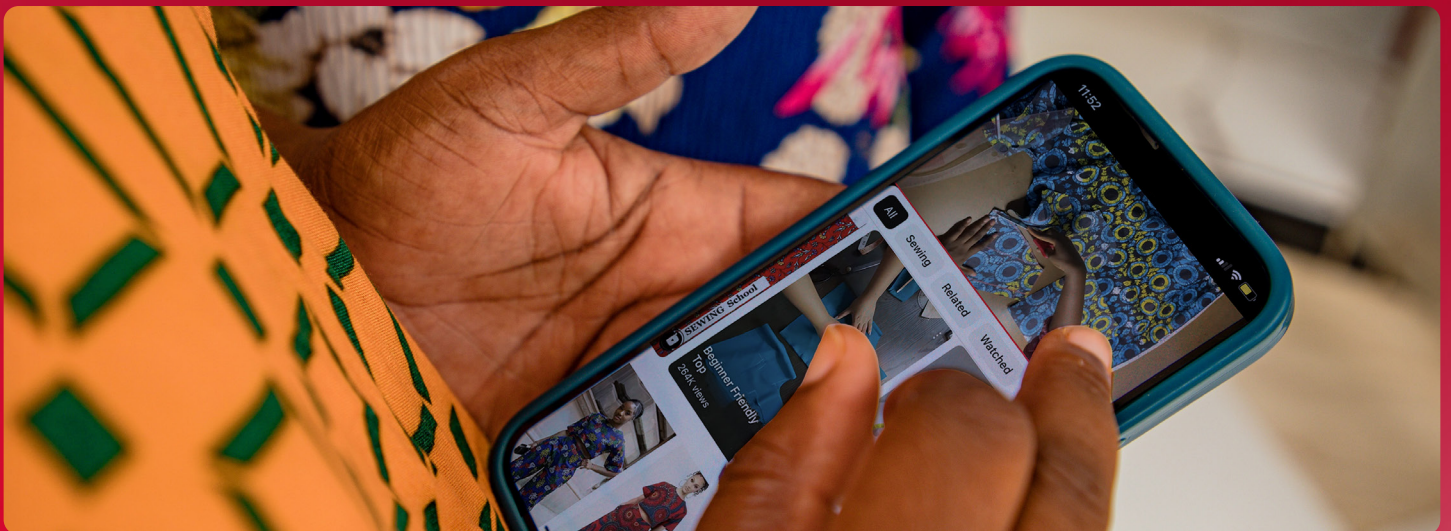
A large proportion of mobile internet users access it daily, but usage is often limited to one or two types of activity. Across the survey countries, an average of 82% of mobile internet users report using it daily. However, even among those who use mobile internet every day, many only use it for one or two activities. Both frequency and diversity of use vary by country and within countries. In almost all the survey countries, rural respondents and women use mobile internet less frequently and for fewer mobile internet activities on a daily basis than their urban counterparts and men.

Mobile internet use is heavily influenced by type of device owned. Levels of mobile internet adoption and use look different for basic, feature and smartphone owners. Across survey countries, there is a strong correlation between smartphone ownership and mobile internet adoption and use. Smartphone owners are significantly more likely than non-smartphone owners to be aware of mobile internet and use it regularly and for a diverse range of activities. Whether a person has their own device or borrows one also makes a difference. Mobile internet users who own an internet-enabled phone perform, on average, a greater variety of mobile internet use cases each day than those who borrow a mobile phone to use the internet.

Communications, social media and entertainment continue to be the most common mobile internet activities. Internet-based communications (instant messaging, calling online, video calls), using mobile internet for social media, watching online videos, and online entertainment are among the most commonly used mobile internet activities and are used most consistently across the survey countries.[15] On average, 83–89% of mobile internet users report engaging in each of these six activities across the countries surveyed. Use of mobile internet for other activities is generally lower and varies significantly by country.

Most mobile internet users are aware of the most common mobile internet use cases, but awareness significantly drops for the less frequent use cases. Across the survey countries, almost all mobile internet users are aware of the most common use cases: online calls, video calls, instant messaging, social media and watching online videos. However, awareness falls for less frequently used use cases. The mobile internet use cases that mobile internet users are least aware of include income generation, ordering goods or services, online banking, and health and government services. In the majority of the countries, among mobile internet users, women, rural populations, those aged 35 and over, and those with low literacy were aware of fewer activities overall. However, the differences did not tend to be substantial.[16] Ensuring people are aware of the different ways they can use and benefit from mobile internet can help increase digital inclusion.

> While most mobile internet users use it every day, usage is often limited to only
>
> ## ONE OR TWO ACTIVITIES

---

15   For further details on the different needs internet can fulfil, see Understanding people's mobile digital skills needs, GSMA, 2021.
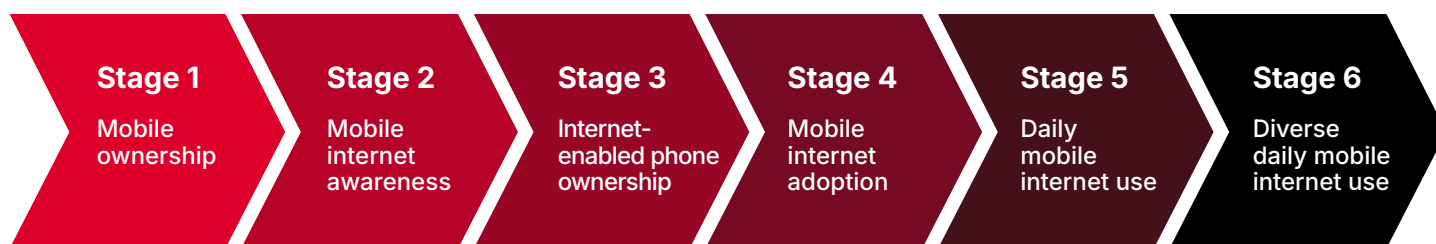16   With the exception of those with low literacy compared to literate counterparts, where more substantial differences were seen in some of the countries analysed.

4. BARRIERS TO MOBILE INTERNET ADOPTION AND USE

More than 90% of those not using mobile internet live in areas covered by mobile broadband but face other barriers to mobile internet adoption and use. These include lack of awareness of mobile internet and its benefits, affordability of internet-enabled handsets and data, safety and security concerns, and lack of relevant content, products and services. Many underserved populations, such as women and persons with disabilities, tend to experience these barriers more acutely due to structural inequalities such as disparities in access to education and income as well as restrictive social norms.

Understanding where people encounter barriers on the journey to being able to use mobile internet and the barriers they face at each stage is essential for targeting action to drive increased digital inclusion.

Figure 7: The mobile internet user journey

Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6
Mobile ownership	Mobile internet awareness	Internet-enabled phone ownership	Mobile internet adoption	Daily mobile internet use	Diverse daily mobile internet use

Users drop off at each stage of the journey to mobile internet use, with larger drop-offs seen in certain countries and among specific demographics. People tend to experience common milestones on the journey to adopting and using mobile internet. This journey typically starts with owning a handset (stage 1), progresses to being aware of mobile internet (stage 2) and then owning an internet-enabled phone (stage 3).[17] See Figure 7. Phone ownership is typically followed by mobile internet adoption (stage 4), and regular (stage 5) and diverse (stage 6) mobile internet use.[18]

At each stage, users encounter barriers that hinder progression. Even in countries with high rates of mobile internet adoption, levels of regular and diverse use of mobile internet can be much lower. Progress along this journey also varies by demographic group, with rural populations and women dropping off more than urban and male counterparts.

In the majority of survey countries, the largest drop-off tends to take place between mobile internet awareness (stage 2) and internet-enabled phone ownership (stage 3), particularly for rural respondents and women. For example, in Nigeria, 78% of rural respondents are aware of mobile internet (stage 2), but only 39% own an internet-enabled phone (stage 3) – a drop-off of 39 percentage points (see Figure 8). This drop-off is also significant for urban respondents but smaller, at 24 percentage points. Similarly, women who are aware of mobile internet are less likely to own an internet-enabled phone than their male counterparts.[19] However, once people own an internet-enabled phone (stage 3), most use mobile internet (stage 4).[20] Therefore, focussing efforts on improving internet-enabled phone ownership among rural populations and women who are already aware of it (at stage 2) can help close the mobile internet urban-rural and gender gaps in countries where there is a similar trend.
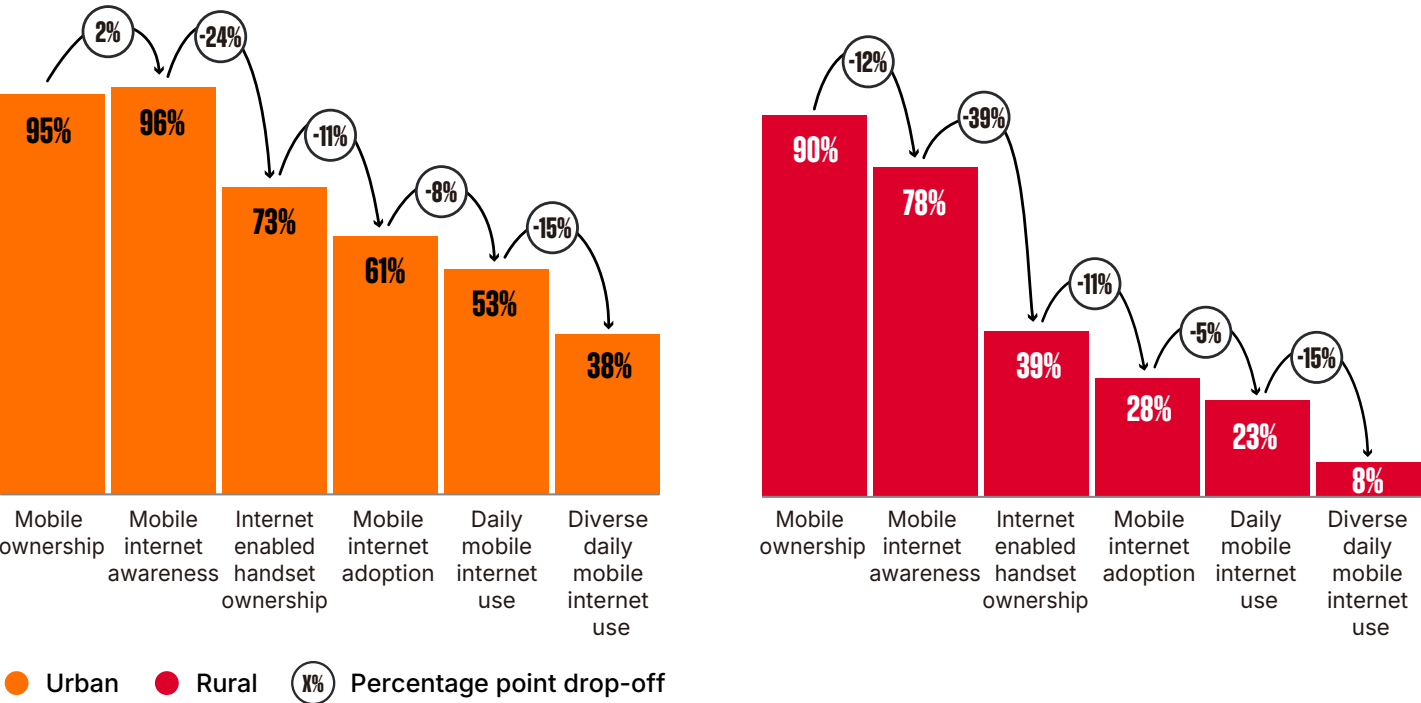
---

17 Either a feature phone or a smartphone.
18 Diverse daily mobile internet use is defined as performing at least three mobile internet use cases daily.
19 The Mobile Gender Gap Report 2025, GSMA, 2025
20 Mobile internet use (stage 4) is not device specific. Someone may therefore reach this stage of the journey by using mobile internet through a shared device or borrowing someone else's.

Figure 8: The mobile internet user journey in Nigeria
Percentage of total adult population at each stage

Urban ●   Rural ●   (X%) Percentage point drop-off

Base: Total population aged 18+. N = 523 for rural and N = 480 for urban.

Note: A mobile owner is defined as a person who has sole or main use of a SIM card (or a mobile phone that does not require a SIM) and uses it at least once per month. Mobile internet users do not have to personally own a mobile phone. Diverse daily mobile internet use is defined as performing at least three mobile internet use cases daily.

Source: GSMA Consumer Survey, 2024

While overall awareness of mobile internet is relatively high, it remains a critical initial barrier to adoption in many contexts. Between 2017 and 2019, mobile internet awareness rose sharply across the surveyed LMICs. Since then, however, the rate of growth has slowed markedly. In many cases, awareness levels tend to stall once they reach 70–80%; reaching the final segment of the population is considerably more challenging. Awareness of mobile internet is generally high, with more than 80% of the population in 11 of the 15 surveyed countries aware of mobile internet. In the remaining four countries, 25–41% of the population have yet to hear of mobile internet – a significant proportion of the population. Awareness levels also vary significantly within countries.

Handset affordability and literacy & digital skills remain the top barriers to mobile internet adoption among those aware of it. Among individuals who are aware of mobile internet but have not yet started using it, two key barriers consistently emerge: affordability (particularly of internet-enabled handsets) and literacy & digital skills.[21] While mentioned less often, concerns about safety and security also remain a significant deterrent, ranking as the third most commonly reported barrier overall.

There are distinct regional trends. The extent to which these barriers are reported varies by region. Some other barriers are particularly prominent in certain countries, such as family disapproval in Pakistan.

In most surveyed countries, more than

80%

of the population are **aware of mobile internet,** but **lack of awareness remains a significant barrier** for some

The top barriers to mobile internet adoption are:

AFFORDABILITY, particularly of **HANDSETS**

LITERACY AND DIGITAL SKILLS

---

21 Tools such as the GSMA Mobile Internet Skills Training Toolkit (MISTT) can help teach people the basic digital skills needed to access and use mobile internet.

Table 1: Top barriers to mobile internet adoption for those aware of mobile internet.[22]
Based on the single most important reported barrier to adopting mobile internet

	Urban			Rural		
	1	**2**	**3**	**1**	**2**	**3**
ALL COUNTRIES	**Affordability**	**Literacy and digital skills**	**Safety and security**	**Affordability**	**Literacy and digital skills**	**Safety and security**
Egypt	Literacy and digital skills	Affordability	Relevance	Literacy and digital skills	Affordability	Relevance
Ethiopia	Affordability	Literacy and digital skills	Relevance	Affordability	Literacy and digital skills	Connectivity experience
Kenya	Affordability	Literacy and digital skills	Safety and security	Affordability	Literacy and digital skills	Safety and security
Nigeria	Affordability	Literacy and digital skills	Do not have time to use mobile internet	Literacy and digital skills	Affordability	Safety and security
Rwanda	Affordability	Safety and security	Literacy and digital skills	Affordability	Safety and security	Literacy and digital skills
Senegal	Affordability	Literacy and digital skills	Safety and security	Affordability	Literacy and digital skills	Safety and security
Tanzania	Affordability	Literacy and digital skills	Safety and security	Affordability	Literacy and digital skills	Safety and security
Uganda	Affordability	Literacy and digital skills	Safety and security	Affordability	Literacy and digital skills	Do not have time to use mobile internet
Bangladesh	Literacy and digital skills	Affordability	Relevance	Literacy and digital skills	Affordability	Safety and security
India	Literacy and digital skills	Affordability	Connectivity experience	Literacy and digital skills	Safety and security	Affordability
Indonesia	Safety and security	Literacy and digital skills	Affordability	Literacy and digital skills	Affordability	Safety and security
Pakistan	Literacy and digital skills	Affordability	Relevance	Literacy and digital skills	Affordability	Social norms
Philippines	Safety and security	Literacy and digital skills	Affordability	Safety and security	Literacy and digital skills	Connectivity experience
Guatemala	Affordability	Literacy and digital skills	Safety and security	Affordability	Literacy and digital skills	Safety and security
Mexico	Literacy and digital skills	Safety and security	Affordability	Literacy and digital skills	Safety and security	Affordability

Base: Adults aged 18+ who have not used mobile internet in the past three months on any device, despite being aware of mobile internet (excludes those not aware of mobile internet). N = from 35 to 366 for rural and from 51 to 171 for urban.

Note: The barriers in the above table are composite barriers. These composite barriers are aggregates (not averages) of the responses for between two and five sub-barriers (see 'Barriers to Mobile Internet Adoption and Use' for a full breakdown). Fundamental enabler-related barriers are not grouped as a composite since they cover a disparate range of topics. Rankings indicate the relative aggregated 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

22 See The Mobile Gender Gap Report 2025, GSMA, 2025 for a gender disaggregated table.

Barriers to further mobile internet use among existing users vary significantly by country. Previous GSMA research found that a significant proportion of mobile internet users want to use it more.[23] However, even after starting to use mobile internet, many people face barriers to using it more. These barriers vary more by country than the barriers to mobile internet adoption.

Among existing users, safety and security concerns become more prominent as a barrier to further use. These tend to be related to scams/fraud and information security, followed by harmful content, unwanted contact and the reliability of information online. High levels of reported safety and security concerns tend to correlate with high levels of mobile internet adoption. They are the most frequently cited top barrier to further use among urban users across all surveyed countries and are the second most reported among rural users.

Affordability also continues to be a major challenge. While handset cost is a major obstacle to initial adoption, data affordability emerges as a more pressing concern for those already using mobile internet. The connectivity experience also becomes a much more significant barrier and is the third most significant barrier to further use overall.[24] The types of devices people own are not keeping up with network expansion, which limits their ability to take full advantage of higher-quality internet services. In addition to device limitations, network performance may impact user experience. Although network quality has improved across LMICs, it still lags behind that of high-income countries.

> # The top barriers to further use of mobile internet are:
>
> ## SAFETY AND SECURITY
>
> ## AFFORDABILITY
>
> ## CONNECTIVITY EXPERIENCE

---

23 The State of Mobile Internet Connectivity Report 2024, GSMA, 2024
24 Connectivity experience as a barrier represents an aggregate of those who reported: "Using the internet on a mobile phone is too slow (e.g. connection speeds)" or "There is inconsistent coverage (e.g. connection drops) or no coverage to access the internet in my area".

Table 2: Top barriers to further mobile internet use for existing mobile internet users[25]
Based on the single most important reported barrier to using mobile internet more

	Urban			Rural		
	1	2	3	1	2	3
ALL COUNTRIES	Safety and security	Affordability	Connectivity experience	Affordability	Safety and security	Connectivity experience
Egypt	Safety and security	Connectivity experience	Affordability	Connectivity experience	Affordability	Safety and security
Ethiopia	Affordability	Connectivity experience	Do not have time to use mobile internet	Connectivity experience	Affordability	Internet drains my battery
Kenya	Affordability	Safety and security	Connectivity experience	Affordability	Safety and security	Connectivity experience
Nigeria	Affordability	Safety and security	Connectivity experience	Affordability	Safety and security	Do not have time to use mobile internet
Rwanda	Affordability	Safety and security	Connectivity experience	Affordability	Safety and security	Connectivity experience
Senegal	Safety and security	Affordability	Literacy and digital skills	Affordability	Connectivity experience	Safety and security
Tanzania	Affordability	Safety and security	Connectivity experience	Affordability	Safety and security	Connectivity experience
Uganda	Affordability	Connectivity experience	Safety and security	Affordability	Connectivity experience	Safety and security
Bangladesh	Safety and security	Affordability	Connectivity experience	Affordability	Connectivity experience	Safety and security
India	Safety and security	Affordability	Literacy and digital skills	Safety and security	Affordability	Connectivity experience
Indonesia	Safety and security	Connectivity experience	Affordability	Safety and security	Connectivity experience	Affordability
Pakistan	Affordability	Literacy and digital skills	Safety and security	Connectivity experience	Safety and security	Literacy and digital skills
Philippines	Safety and security	Connectivity experience	Affordability	Safety and security	Connectivity experience	Affordability
Guatemala	Safety and security	Connectivity experience	Affordability	Safety and security	Affordability	Connectivity experience
Mexico	Safety and security	Affordability	Connectivity experience	Safety and security	Connectivity experience	Affordability

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

Note: The barriers in the table above are composite barriers. These composite barriers are aggregates (not averages) of the responses for between two and five sub-barriers (see 'Barriers to Mobile Internet Adoption and Use' for a full breakdown). Fundamental enabler-related barriers are not grouped as a composite since they cover a disparate range of topics. Rankings indicate the relative aggregated 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

---

25 See The Mobile Gender Gap Report 2025, GSMA, 2025 for a gender disaggregated table.

Perceived lack of relevance is not a top reported barrier but does play an important role in preventing people from adopting and using mobile internet. While not among the top reported barriers, relevance is commonly reported as a barrier more generally among survey respondents. The availability and awareness[26] of online content and services that are accessible and relevant to people locally in a broad range of languages is a key enabler of mobile internet adoption and usage. Furthermore, relevance intersects with other major barriers. For example, it influences perceived value and willingness to pay, both of which directly impact affordability.[27]

---

26 Being aware of mobile internet does not necessarily translate into being aware of services that may be relevant to people's lives.
27 Making internet-enabled phones more affordable in low- and middle-income countries, GSMA, 2022

5. AFFORDABILITY OF INTERNET-ENABLED HANDSETS AND DATA

Of the 3.1 billion people not using mobile internet despite living in areas of mobile broadband coverage, around two thirds (68%) do not own a mobile phone. Among those who do use mobile internet, some own a phone that uses older technology and does not allow for an optimised internet experience, or use a shared device, limiting their use of the internet. Certain segments of the population are significantly less likely to own an internet-enabled phone: those who are poorer, less educated, rural, persons with disabilities or women. Affordability plays a significant role in device ownership and is the top reported barrier to mobile internet adoption across LMICs. Once people start to use mobile internet, data affordability emerges as a key barrier to further use in the surveyed LMICs. It is important to examine affordability trends closely to understand the scale of the challenge.

DEFINING AFFORDABILITY

Affordability refers to the ability of consumers to both pay for a handset and 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[28,29]

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.[30]

Affordability of an entry-level, internet-enabled handset remains relatively unchanged across LMICs overall, while costs have continued to increase. 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 in 2024 at just under 16% of average monthly income.

Analysis by the GSMA shows that devices are likely to be affordable when they cost between 15% and 20% of monthly GDP per capita.[31] 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.

GSMA analysis also shows that a device costing $30 could make handsets affordable to up to 1.6 billion people who currently do not use mobile internet but live in areas where there is coverage, addressing a key barrier to reducing the usage gap.

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

---

28 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.
30 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.
32 For more details, see Improving handset affordability in low- and middle-income countries, GSMA, 2025.
31 Analysis to improve handset affordability, GSMA, 2024.

Affordability of 1 GB is stable, while affordability of 5 GB continues to improve across most regions. The overall median affordability of 1 GB of mobile data remained largely stable in 2024, improving significantly in Sub-Saharan Africa but worsening slightly in Europe & Central Asia and Latin America & Caribbean. Affordability of 5 GB improved overall, as operators continue to respond to greater demand for mobile data with cheaper tariffs, while affordability of 20 GB remained stable.

For the first time, more than half the countries in all regions met the ITU affordability target of 1 GB costing less than 2% of GDP per capita.[32] However, affordability remains a challenge for the poorest populations: 63% of LMICs failed the 1 GB target for the poorest 40% (unchanged from 2023).

For 5 GB, 47% of LMICs failed to meet the target of costing less than 2% of income per capita, down from 50% in 2023, and 73% failed to meet it for the average income of the poorest 40%, showing persistent inequality.

Affordability continues to disproportionately affect underserved populations. The affordability of devices also varies significantly by population segment. While across LMICs the affordability of an entry-level device 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 cost 48% of average monthly income. In Sub-Saharan Africa, which accounts for a quarter of those not using mobile internet, an entry-level device costs 87% of average monthly income for the poorest 20%.

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 is 23% of monthly income for women, compared to 12% for men.

Affordability of 1 GB AND 20 GB are relatively unchanged since 2023

But affordability of 5 GB continues to improve across most regions

**Across LMICs,** affordability of entry-level handsets has remained relatively unchanged at **16%** of monthly income

Affordability of devices and data continues to disproportionately impact the underserved

---

32 Aspirational targets for 2030, ITU, 2022. The ITU has set an aspirational target of ensuring that an entry-level broadband subscription costs less than 2% of gross national income (GNI) per capita, as well as 2% of the GNI per capita of the bottom 40% of the population. 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. As GDP and GNI per capita are very highly correlated, our results do not materially change based on the income metric used.

Figure 9: Affordability of entry-level, internet-enabled devices for the poorest 20% and 40%, and men and women, by region in 2024

Percentage of monthly GDP per capita

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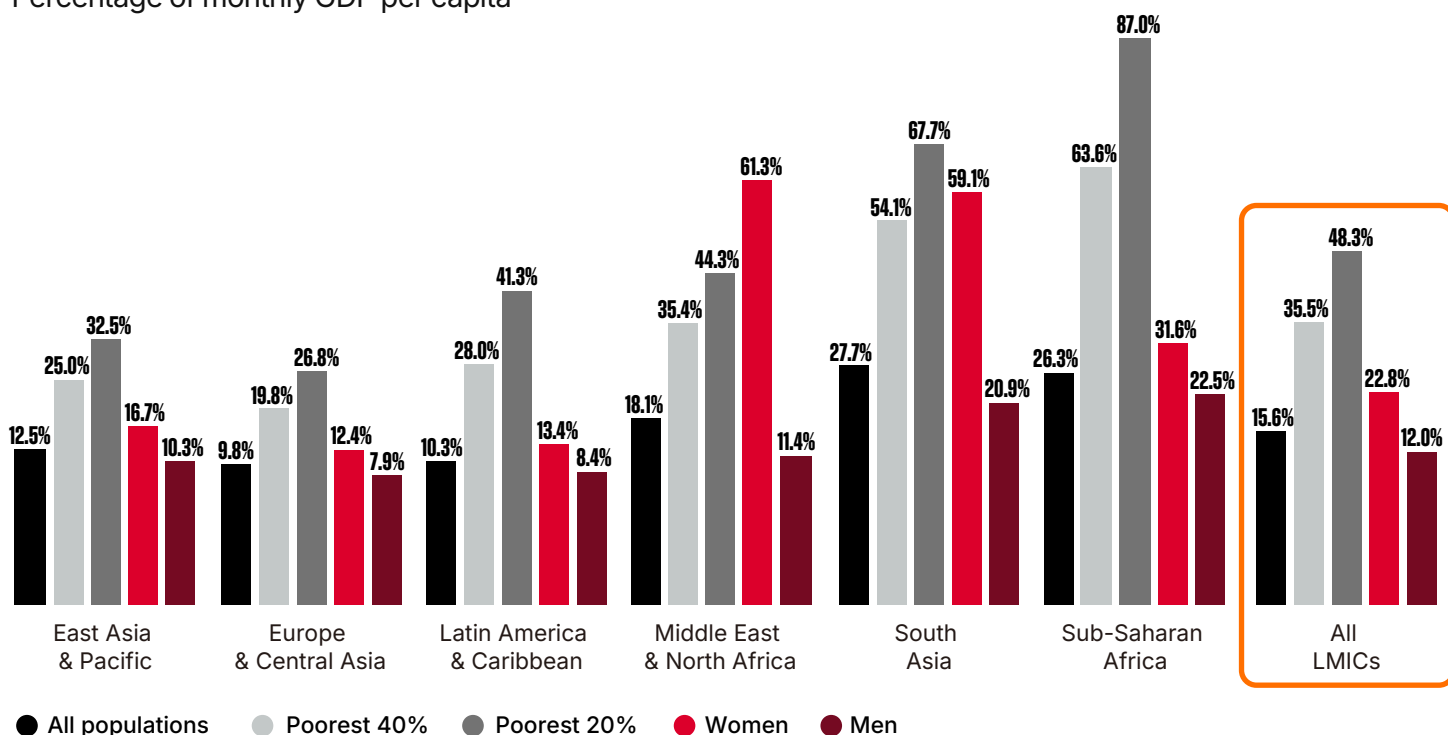
Note: Data on incomes for the poorest 20% and 40% of the population and men and women is based on information sourced from the World Bank, World Inequality Database, UN and the IMF World Economic Outlook.

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

Designing handsets with performance, functionality and longevity in mind can help influence willingness to pay. For the first time, using the GSMA Consumer Survey, we have analysed which features of internet-enabled handsets (feature phones or smartphones) are most important to prospective buyers, apart from price. The most valued features in an internet-enabled phone relate to performance, functionality and longevity of device rather than aesthetics, physical features or brand perception. This did not vary significantly based on whether the respondent lived in urban or rural areas, by gender or whether they already owned an internet-enabled phone. The most valued features included long battery life, durability, fast internet and processing speeds, large storage capacity and good camera quality.

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

PERFORMANCE

FUNCTIONALITY

LONGEVITY OF THE DEVICE

6. CALL TO ACTION

Mobile operators, governments and other stakeholders globally have been working to improve digital inclusion, acknowledging its transformative impact on societies. After two years of relatively slow growth, 2024 saw an increase in rates of mobile internet adoption, but significant digital divides persist. Coordinated, targeted action by all stakeholders involved is vital to ensure progress is inclusive for all.

Many remain unconnected – often those who are already disadvantaged, including people living in poverty, rural communities, women and persons with disabilities. Without access to mobile internet, these groups miss out on life-enhancing opportunities and are less equipped to handle ongoing economic and social challenges, such as cost-of-living crises, climate change and other shocks. This highlights the critical need to accelerate efforts to ensure digital inclusion for all.

Globally, 4% of the population do not live within a mobile broadband network. The investment required to close the remaining coverage gap is a significant hurdle to universal coverage. The remaining uncovered communities, which are predominantly rural, poor and sparsely populated, are the most challenging to reach. Closing the gap will require a combination of alternative technologies, alternative financing models and policy reforms to stimulate investment.

In total, 3.1 billion people (38% of the world's population) are not using mobile internet despite being covered by a mobile broadband network. Most of those still not using mobile internet already live in areas with coverage but face other barriers to adoption. Closing the usage gap is critical to accelerating digital inclusion.

Most of those not using mobile internet do not own a mobile phone, highlighting that tackling barriers such as affordability of handsets is critical. However, it is also important to ensure people are aware of mobile internet and how it can support their needs, and to address other barriers such as lack of digital skills, safety and security concerns, and lack of relevant content and services.

Closing the digital divide requires deliberate, focused efforts to address these barriers to digital inclusion. Greater action by all stakeholders is needed to ensure people can access and effectively use mobile internet and that the underserved are not left behind.

Figure 10 provides high-level recommendations for addressing the key barriers to digital inclusion.[33] However, these do not exist in isolation; they are interconnected and must be addressed through collaborative, holistic approaches. Structural barriers such as income gaps, educational disparities and restrictive social norms that underpin the digital divide also need to be tackled. To create lasting change, these efforts must be sustained and scaled to ensure no one is left behind in the digital age.

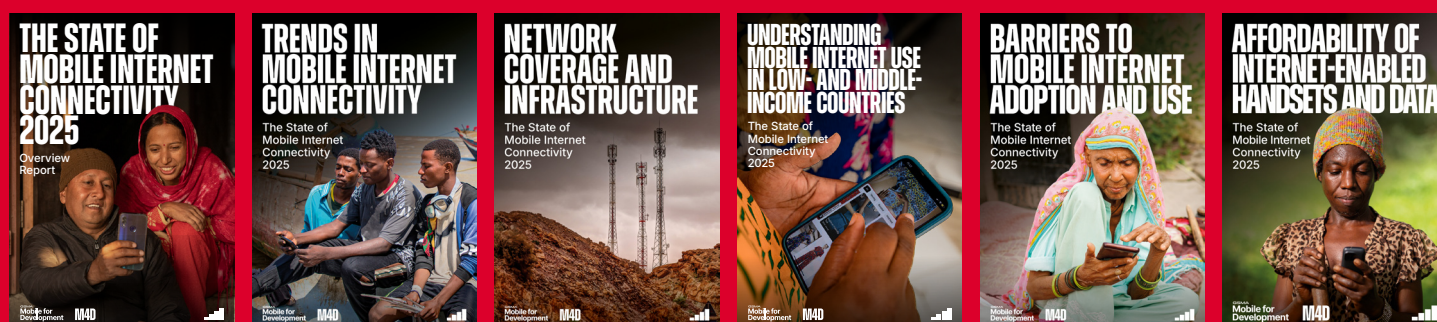33 Additional recommendations for policymakers can be found in Accelerating mobile internet adoption: Policy considerations to bridge the digital divide in low- and middle-income countries, GSMA, 2021 and Enabling Rural Coverage: Regulatory and policy recommendations to foster mobile broadband coverage in developing countries, GSMA, 2018

Figure 10: Addressing key barriers to digital inclusion

Affordability	Knowledge and skills	Safety and security	Relevance	Fundamental enablers
Affordability – especially of handsets – remains a key challenge. Approaches to improve affordability should include efforts to lower the cost of internet-enabled handsets and data, innovative data pricing strategies, and expanding handset financing options. Additionally, efforts to improve affordability should include adopting tax policies and providing targeted subsidies that promote the uptake of internet-enabled devices and data services.[34]	Improving literacy, digital skills and confidence, as well as driving awareness and understanding of mobile internet, its benefits and uses, is essential to address the usage gap and expand digital inclusion. Digital skills initiatives should focus on the life needs and circumstances of users.[35]	Concerns about the negative aspects and risks of the internet, including issues such as harassment, identify theft, harmful content and information security, are preventing some from going online and having a positive internet experience. Appropriate mechanisms and frameworks that recognise and address these online risks should be established to help build consumer trust. Stakeholders should provide users, including women, with the tools to increase their knowledge and skills to mitigate online risks.	Supporting the creation of relevant content, products and services that meet user preferences and needs, including those that are accessible, easy to use and in local languages, is important to driving internet adoption and use. This includes supporting local digital ecosystems to accelerate growth in local content, services and applications that meet the needs and priorities of people in their communities, in their own language.	Increasing access to mobile broadband networks and enablers, such as electricity, formal ID, devices, customer-service touchpoints (e.g. agents), as well as overcoming restrictive social norms, is important for connectivity. Stakeholders can increase mobile internet adoption by focusing on, for example, facilitating inclusive and transparent mobile registration processes, and making services, sales channels and training facilities accessible to underserved groups, such as women and persons with disabilities, and expanding/upgrading networks.

It is important to ensure that commitments to advance digital inclusion become sustained action. With the vast majority of those not using mobile internet covered by mobile broadband networks but facing other barriers to use, more is needed to address the usage gap and bridge the digital divide. By focusing on the barriers and needs of those not able to adopt and use the internet and taking targeted, informed action, it is possible to accelerate digital inclusion and ensure no one is left behind in an increasingly digital world.

This report is part of The State of Mobile Internet Connectivity 2025 Report series.
The full report series can be accessed here:

THE STATE OF MOBILE INTERNET CONNECTIVITY 2025 — Overview Report

TRENDS IN MOBILE INTERNET CONNECTIVITY — The State of Mobile Internet Connectivity 2025

NETWORK COVERAGE AND INFRASTRUCTURE — The State of Mobile Internet Connectivity 2025

UNDERSTANDING MOBILE INTERNET USE IN LOW- AND MIDDLE-INCOME COUNTRIES — The State of Mobile Internet Connectivity 2025

BARRIERS TO MOBILE INTERNET ADOPTION AND USE — The State of Mobile Internet Connectivity 2025

AFFORDABILITY OF INTERNET-ENABLED HANDSETS AND DATA — The State of Mobile Internet Connectivity 2025

---

34 Making internet-enabled handsets more affordable in low- and middle-income countries, GSMA, 2022
35 See Developing mobile digital skills in low- and middle-income countries, GSMA, 2021, and GSMA Mobile Internet Skills Training Toolkit.

GLOSSARY

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).[36] 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.
Device	A device that is used to access the internet. In this report, the term device generally refers to a mobile phone, given the vast majority of internet users in LMICs are accessing the internet through a mobile phone and the vast majority of users in high-income countries also do so on a mobile phone (often in addition to other devices such as tablets, laptops and PCs).
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.
Least developed country (LDC)	A country classified as low-income that faces severe structural impediments to sustainable development. It is highly vulnerable to economic and environmental shocks and has low levels of human assets.
Landlocked developing country (LLDC)	A country classified as landlocked and developing by the UN.[37]
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 connection	A unique SIM card (or phone number, where SIM cards are not used) that has been registered on a mobile network. Connections differ from subscribers in that a unique subscriber can have multiple connections.

---

36 For further details on different technologies, see ITU-R FAQ on International Telecommunications (IMT), ITU, 2022.
37 https://www.un.org/ohrlls/content/list-lldcs

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 internet user** | A person who uses internet services on a mobile device. Mobile internet services are defined as any activities that use mobile data.

Additional mobile internet user refers to individuals who use mobile internet on a device they do not own or have primary use of. |
Mobile (phone) owner/ subscriber	A person who subscribes to a mobile service. They do not necessarily use mobile internet.
Small island developing state (SIDS)	A country classified as a small island and developing state by the UN.[38]
Smartphone	A mobile handset enabling advanced access to internet-based services and other digital functions. Smartphone platforms, such as Android and iOS, support a 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.

---

38   https://www.un.org/ohrlls/content/list-sids

GSMA
Mobile for Development

M4D