

The Mobile Gender Gap Report 2024





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Introduction



Mobile phones and mobile internet can be life changing, enabling people to stay connected to each other and access information and services from anywhere, including health care, education, e-commerce, financial services and income-generating opportunities. In 2023, the world was more connected than ever before with more than 3.7 billion people¹ in low- and middle-income countries (LMICs) accessing the internet on a mobile phone.² Mobile is the primary way people are accessing the internet in LMICs, accounting for 84% of broadband connections in 2023.³ This is especially true for the underserved, including women and those who live in rural areas. In 10 of the 12 countries surveyed for this report, women who use the internet are more likely than men to access it exclusively on a mobile phone.

Across LMICs, 83% of women now own a mobile phone, 60% own a smartphone and 66% use mobile internet. However, mobile access and use remain unequal. Women are still less likely than men to have access to mobile phones, mobile money, mobile internet and other mobile services. Women are also less likely than men to have equal use of these services, particularly the most underserved women, including those who have low literacy levels, low incomes, live in a rural area or have a disability.

In last year's report, we shared the concerning findings that, for a second year in a row, women's digital inclusion in LMICs had slowed and progress in reducing the mobile internet gender gap had stalled. This followed years of progress in which the mobile internet gender gap had narrowed from 25% in 2017 to 15% in 2020. This reduction was the result of factors such as changing market dynamics and lower prices, greater awareness of mobile internet and, during 2020, COVID-19 restrictions and lockdowns that drove up mobile internet use. However, the subsequent stalling of progress in reducing the mobile internet gender gap highlighted that women were disproportionately negatively impacted by the economic crisis that occurred in the wake of the COVID-19 pandemic.

Our latest data shows that the mobile internet gender gap narrowed from 19% in 2022 to 15% in 2023 due to women adopting mobile internet at a faster rate than men. This brings us back to where we were in 2020, but it is not yet clear

whether this trend will continue. It is essential for women, and societies more broadly, that this momentum continues and the mobile gender gap continues to close.

Addressing the mobile gender gap provides significant social and commercial benefits to individuals, societies and economies. Connectivity is vital to achieving the United Nations Sustainable Development Goals (SDGs), including those related to health, education and financial inclusion. GSMA analysis has estimated that closing the gender gap in mobile ownership and use in LMICs over an eight-year period could deliver \$230 billion in additional revenue to the mobile industry. The Global Digital Inclusion Partnership estimates that 32 LMICs are on track to lose more than USD 500 billion in GDP in the next five years due to the digital gender divide.⁴

We know that once women start using mobile phones and mobile internet, they usually see the benefits and it improves their lives to a similar degree as men. In 2022, we found that across the 12 survey countries, most people who use mobile internet believe it has had a positive impact on their lives and use it every day, with little difference by gender.

In this seventh edition of *The Mobile Gender Gap Report*, we share the latest data on women's mobile access and use in LMICs, the barriers they face and how this compares to men. We share recommendations to close the mobile gender gap and reach women with mobile, with suggested actions for mobile network operators (MNOs), policymakers and regulators, the development community and other stakeholders.

Ensuring that women can access and use mobile is essential, especially in our increasingly digital world. Mobile can enable women to be more resilient in the face of economic, climate and political crises and shocks. More attention, effort and investment are needed to close the mobile internet gender gap – a goal we must continue to strive to meet so that women, their communities and society can reap the full, life-changing benefits of mobile.

1. 3.4 billion of whom are adults over the age of 18.

2. GSMA Intelligence, Q4 2023.

3. International Telecommunication Union (ITU) estimates for 2023.

4. Global Digital Inclusion Partnership. (2024). [Connected Resilience: Gendered Experiences of Meaningful Connectivity through a Global Pandemic](#).

The report provides:



Updated figures on gender gaps in mobile ownership, smartphone ownership and mobile internet adoption in LMICs and how these figures have changed over time



Updated insights on the barriers to mobile internet adoption and new data on the barriers to further mobile internet use



New data on women's and men's perceptions of whether mobile internet is equally important for both genders



A spotlight on the online safety and security experiences of male and female mobile internet users

The findings in this report are based on the results of the annual **GSMA Consumer Survey**, which this year had more than

13,600
respondents from
12 LMICs

These face-to-face, nationally representative surveys⁵ were conducted between August and December 2023. Analysis of other research and data from the GSMA, and a range of other organisations that investigate and track the mobile gender gap, also inform the findings of this report.

5. Excluding Ethiopia, which, due to conflict, excluded the Tigray region and six zones in 2022 and the Amhara region and four zones in 2023.




Key findings





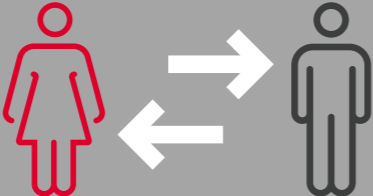
Key findings



1. **Women's rate of mobile internet adoption increased over the past year across low- and middle-income countries. There are now more women using mobile internet in these countries than ever before: 66% (1.5 billion).** By comparison, 78% of men now use mobile internet, but their rate of adoption slowed in 2023.
2. **The gender gap in mobile internet adoption across low- and middle-income countries has narrowed for the first time since 2020 due to women adopting it at a faster rate than men.** This reduction was driven primarily by South Asia and brings the overall mobile internet gender gap back to where it was in 2020. This gender gap also narrowed slightly in Sub-Saharan Africa for the first time in five years.
3. **Women are now 15% less likely than men to use mobile internet across low- and middle-income countries.** This translates to around 265 million fewer women than men.
4. **Of the 785 million women who are still not using mobile internet in low- and middle-income countries, around 60% live in South Asia and Sub-Saharan Africa.** Women in these regions are still the least likely to use mobile internet compared to men, with gender gaps of 31% and 32%, respectively.
5. **The gender gap in smartphone ownership across low- and middle-income countries has narrowed slightly from 15% to 13% over the past year.** This translates to around 200 million fewer women than men who own one. In these countries, 60% of women now own a smartphone compared to 69% of men. Smartphone adoption across these countries continues to grow, but at a slower rate than in previous years, especially for men. Once women own a smartphone, the vast majority use mobile internet and to a similar extent as men.
6. **The underlying gender gap in mobile ownership across low- and middle-income countries has changed very little since 2017. Women across these countries are 8% less likely than men to own a mobile phone.** 405 million women still do not own one and are proving difficult to reach. Our previous research has shown that the top barriers to mobile ownership for women (and men) are affordability (primarily of handsets) and literacy and digital skills.
7. **In most of the survey countries, more than 80% of people are aware of mobile internet and, for the first time, awareness is almost equal between men and women.** However, in some countries, women are around 20% less likely than men to be aware of mobile internet. Awareness does not always lead to adoption, and beyond being aware that it exists, people may not be aware of the different ways in which mobile internet can be used.
8. **For those who are already aware of mobile internet, the top-reported barriers to adopting it are affordability (primarily of handsets) and literacy and digital skills.** Millions more women than men face these barriers because they are offline. Women also tend to experience these barriers more acutely due to social norms and structural inequalities, such as lower education and income.
9. **Once men and women use mobile internet, their top barriers to further use vary by country, but commonly reported barriers are safety and security concerns, affordability (particularly data but also handsets) and connectivity experience.** The barriers to further use vary more by local context and less by gender.
10. **Most mobile internet users access it every day, regardless of gender. However, female mobile internet users tend to use it for a narrower range of use cases than men on a weekly basis.** The most popular mobile internet use cases for men and women in almost every survey country are social media and instant messaging.
11. **In most survey countries, women who use mobile internet are more likely than men to report that they would like to use it more than they currently do.** This was true for more than half of female mobile internet users in Ethiopia, Kenya, Bangladesh, India and Pakistan.
12. **Most people who are aware of mobile internet feel that it is equally important for both men and women to use it. However, among those who do not feel that it is equally important, a greater proportion believe that it is more important for men to use mobile internet.** In 11 of the 12 survey countries, 70% to 92% of those who are aware of mobile internet believe that it is equally important for men and women, with little difference by gender in most cases.

IN LOW- AND MIDDLE-INCOME COUNTRIES

 **66%** of women now use mobile internet   and their **rate of mobile internet adoption increased** over the past year


BUT men's rate of adoption slowed  


THE GENDER GAP IN MOBILE INTERNET NARROWED FOR THE FIRST TIME SINCE 2020 

Women are **15%** less likely than men to use mobile internet  **265M** fewer women than men use mobile internet 


THE GENDER GAP IN MOBILE INTERNET IS BACK TO WHERE IT WAS IN **2020**

This was driven primarily by **South Asia**

785M  women are still not using mobile internet


AROUND 60% LIVE IN South Asia and Sub-Saharan Africa 


Over the past year, the **smartphone gender gap** has narrowed slightly 

Women are **13%**  less likely than men to own a smartphone

200M fewer women than men own a smartphone



IN LOW- AND MIDDLE-INCOME COUNTRIES

 **WOMEN ARE 8%** less likely than men to own a mobile phone

 **405M**  women still do not own a mobile phone


MOBILE INTERNET ADOPTION

The top barriers preventing women who are aware of **mobile internet** from adopting it are:

-  **1. AFFORDABILITY** (PRIMARYLY OF HANDSETS)
-  **2. LITERACY AND DIGITAL SKILLS**

FURTHER MOBILE INTERNET USE


The top barriers preventing women who use **mobile internet** from using it more are:

-  **1. SAFETY AND SECURITY**
-  **2. AFFORDABILITY** (PARTICULARLY OF DATA BUT ALSO HANDSETS)
-  **3. CONNECTIVITY EXPERIENCE**

ACROSS 12 SURVEY COUNTRIES

Across the 12 survey countries **most people** who are aware of mobile internet feel that it is **equally important for men and women** 

  Among those who do not think this, a **greater proportion** believe it is **more important for men** to use mobile internet

Across the 12 survey countries  **Women** who use mobile internet are **more likely than men** to report that  **they would like to use it more than they currently do**



Definitions



GENDER GAP

The gender gap in mobile phone ownership and mobile internet adoption is calculated using the following formula:

$$\text{Gender gap in ownership / adoption (\%)} = \frac{\text{Male owners / users (\% of male population)} - \text{Female owners / users (\% of female population)}}{\text{Male owners / users (\% of male population)}}$$



MOBILE OWNER

“Mobile phone owner” and “mobile owner” are used interchangeably in this report to mean a person who has sole or main use of a SIM card or mobile phone that does not require a SIM and uses it at least once a month. The vast majority of SIM owners also have sole or main use of a handset (a median of 92% across the countries, ranging from 88% to 97%).



FEATURE PHONE OWNER

A mobile owner that has sole or primary use of a feature phone. A feature phone is an internet-enabled mobile phone with a small screen and basic keypad with several letters per button. A feature phone may have some pre-installed apps but does not have the ability to download apps from an online app store, such as Google Play or the App Store. Smart feature phones are a subgroup of feature phones and are not recorded as a separate category in the survey.



SMARTPHONE OWNER

A mobile owner that has sole or primary use of a smartphone. A smartphone is a mobile phone with a touchscreen display, an advanced operating system (Android or iOS) and the ability to download apps from an online app store, such as Google Play or the App Store.



MOBILE INTERNET USER

A person who has used the internet on a mobile phone at least once in the last three months.⁶ Mobile internet users do not have to personally own a mobile phone. Therefore, they can be non-mobile phone owners who use mobile internet by accessing it on someone else’s mobile phone.

6. Respondents were asked the question: “Have you ever used the internet on a mobile phone? Please think about all the different ways of using the internet on a mobile phone. Just to confirm, people are using the internet on their mobile phones when they do any of the following: visit internet websites (e.g. Google or Amazon), visit social networking websites (e.g. Facebook, Twitter, YouTube, Weibo), send emails or instant messages (e.g. WhatsApp, Snapchat, WeChat, LINE) or download apps.” Mobile internet users are those who answered, “Yes, I have used the internet on a mobile phone in the past three months.”

The mobile gender gap in 2023



2023 was a difficult year across LMICs, with climate crises, geopolitical shocks and high inflation affecting entire populations. During this year, women's overall mobile ownership remained relatively unchanged in these countries while smartphone ownership increased slightly. Despite a challenging year, their levels of mobile internet adoption increased in 2023 compared to 2022. The mobile internet and smartphone ownership gender gaps also narrowed for the first time since 2020.

Across LMICs, women are still 8% less likely than men to own a mobile phone, which translates into 145 million fewer women than men. This gender gap has seen little change since 2017 (see Figure 1) and the 405 million women who still do not own a mobile phone are proving difficult to reach. The gender gap in smartphone ownership narrowed slightly from 15% in 2022 to 13% in 2023, but 940 million women (compared to 720 million men) still do not own a smartphone. Addressing these gender gaps is crucial, as owning a mobile phone, particularly a smartphone, significantly increases mobile internet use among both men and women.

Between 2017 and 2020, the mobile internet gender gap narrowed substantially, but in 2021 and 2022 progress stalled (see Figure 1). However, our latest data shows that for the first time in three years, the mobile internet gender gap has narrowed once again, with women now 15% less likely than men to use it. This is due to a higher rate of mobile internet adoption by women in 2023 and a slower rate of adoption by men compared to 2022 (see Figure 2). It is yet to be determined whether women's rate of mobile internet adoption will continue to increase and the mobile internet gender gap will continue to narrow.

More women across LMICs are using mobile internet than ever before, with an additional 120 million women adopting it in 2023 – 50 million more than in 2022. However, there are still 265 million fewer women than men in these countries using and reaping the benefits of mobile internet.

The widest gender gaps in mobile ownership and mobile internet adoption have consistently been in Sub-Saharan Africa and South Asia. However, the mobile internet gender gap in both regions narrowed over the past year, most notably in South Asia from 41% in 2022 to 31% in 2023. While the mobile internet gender gap in Sub-Saharan Africa narrowed slightly from 36% in 2022 to 32% in 2023, it is still not notably different from what it was in 2017 (34%).



Women are

8%

less likely than men to own a mobile phone

Women are

15%

less likely than men to use mobile internet

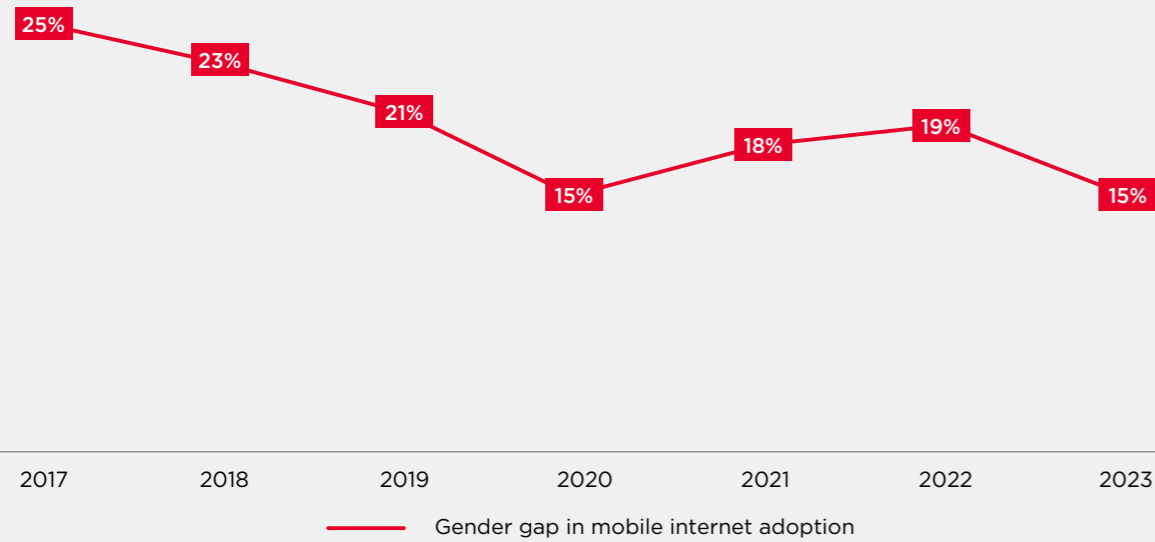


265 million
fewer women than men using it

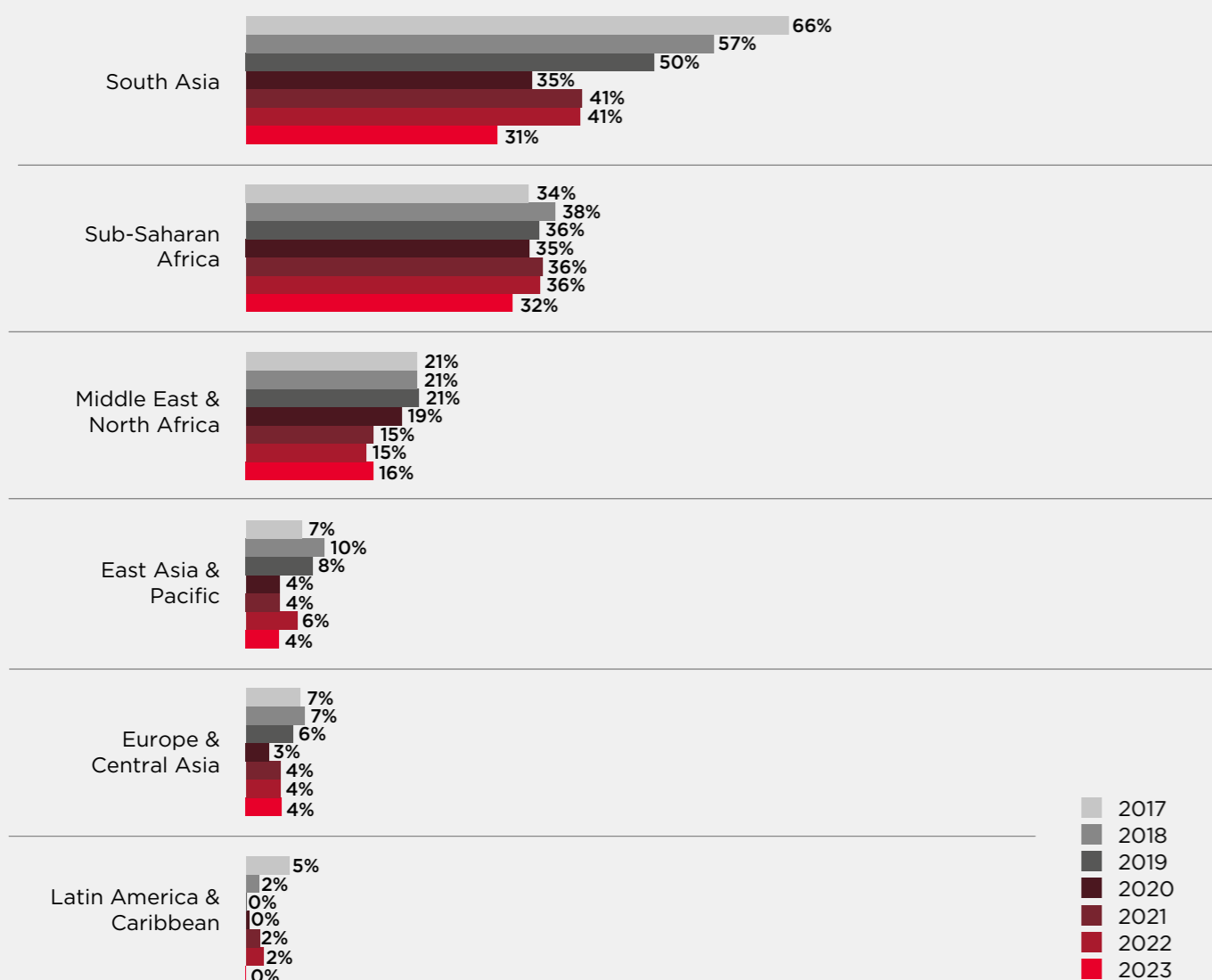
Figure 1
Gender gaps across LMICs and by region, 2017-2023

GENDER GAP IN MOBILE INTERNET ADOPTION

Across LMICs overall

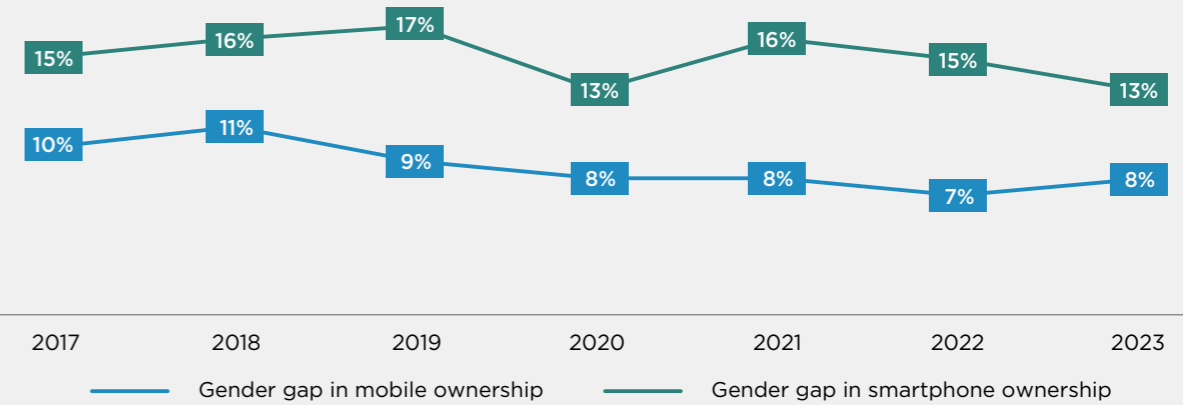


Gender gap in mobile internet adoption

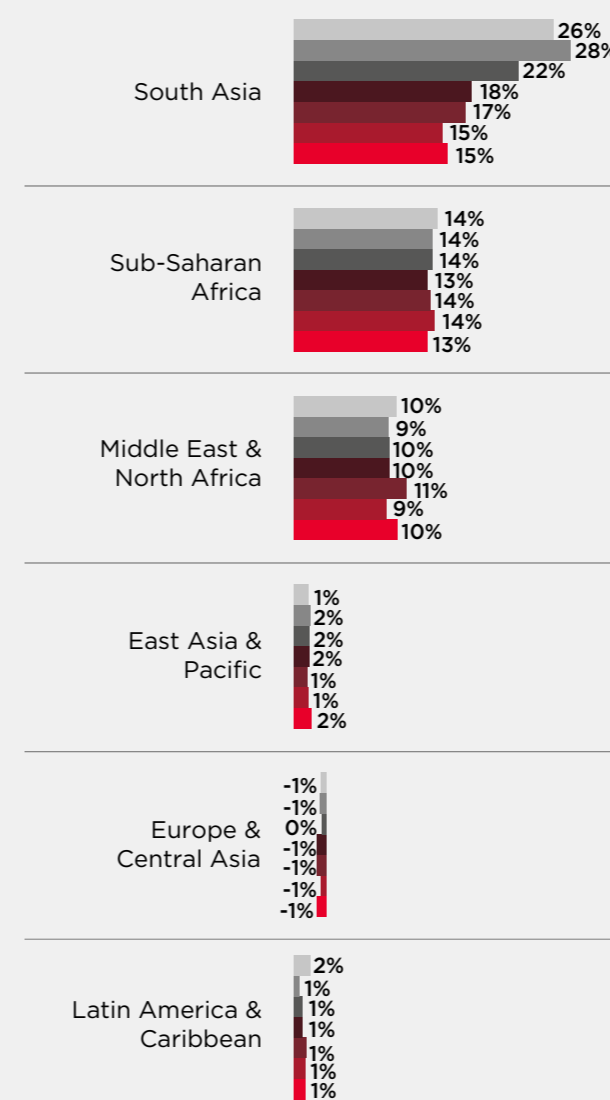


GENDER GAPS IN MOBILE OWNERSHIP AND SMARTPHONE OWNERSHIP

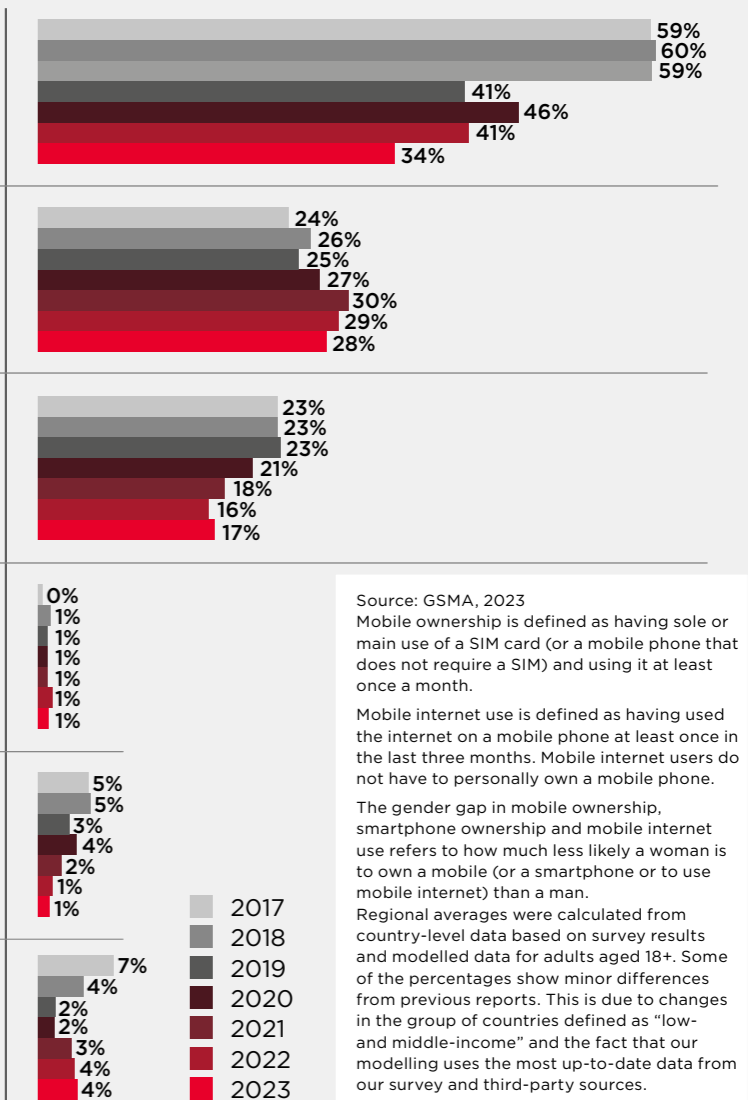
Across LMICs overall



Gender gap in mobile ownership



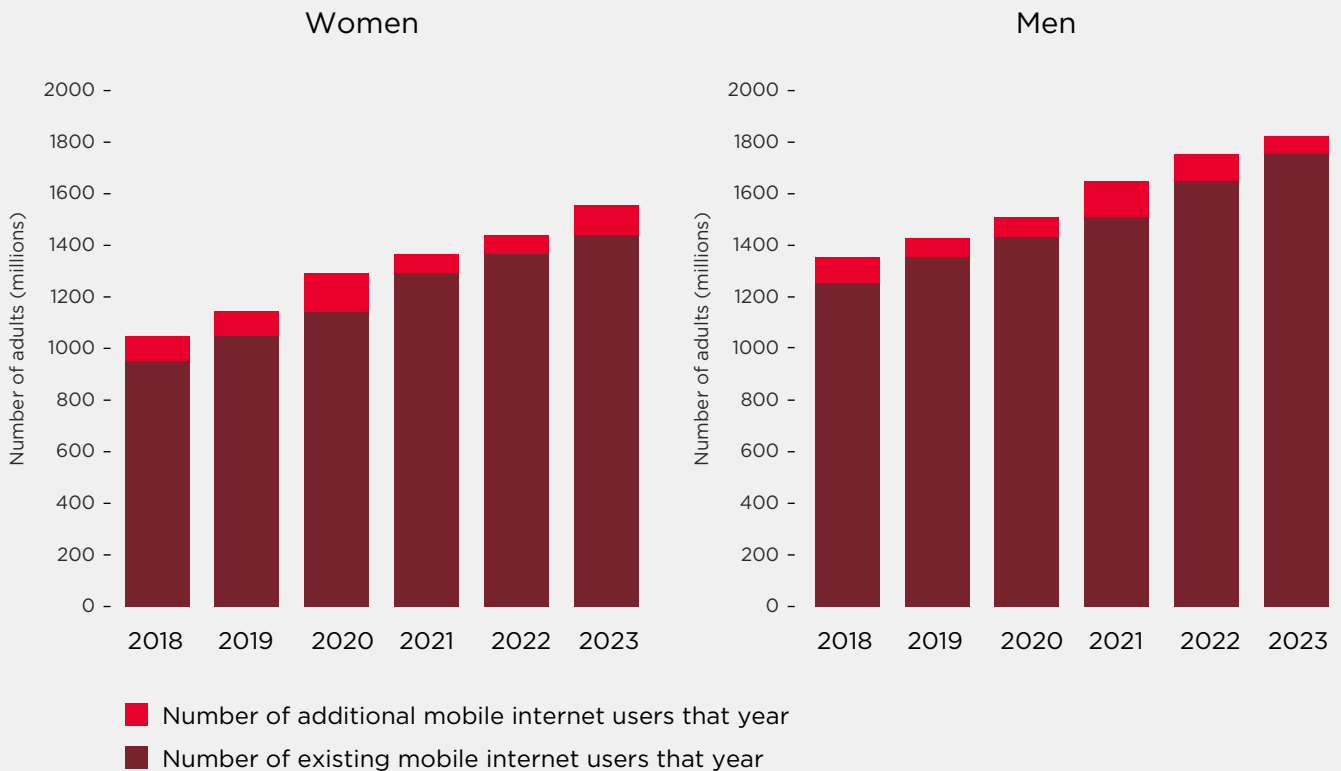
Gender gap in smartphone ownership



Source: GSMA, 2023
Mobile ownership is defined as having sole or main use of a SIM card (or a mobile phone that does not require a SIM) and using it at least once a month.
Mobile internet use is defined as having used the internet on a mobile phone at least once in the last three months. Mobile internet users do not have to personally own a mobile phone.
The gender gap in mobile ownership, smartphone ownership and mobile internet use refers to how much less likely a woman is to own a mobile (or a smartphone or to use mobile internet) than a man.
Regional averages were calculated from country-level data based on survey results and modelled data for adults aged 18+. Some of the percentages show minor differences from previous reports. This is due to changes in the group of countries defined as "low- and middle-income" and the fact that our modelling uses the most up-to-date data from our survey and third-party sources.



Figure 2
Adoption of mobile internet by men and women in LMICs
Total adult population



Source: GSMA, 2023
 Mobile internet use is defined as having used the internet on a mobile phone at least once in the past three months.
 Mobile internet users do not have to personally own a mobile phone.
 Based on survey results and modelled data for adults aged 18+.

Country-level gender gaps in mobile ownership and mobile internet adoption

Women remain less likely than men to own a mobile phone in all survey countries except Kenya and Mexico, where ownership levels are similar (Figure 3). In all survey countries except Mexico, women are also less likely than men to use mobile internet (Figure 3).

Gender gaps in mobile internet adoption are wider than gender gaps in mobile ownership in most markets, except Pakistan, Guatemala and Mexico where they are roughly the same, and in Indonesia where the gender gap in mobile ownership is wider than for mobile internet. Even in countries with small gender gaps in mobile ownership, the gender gap in mobile internet adoption can be wide, such as in Kenya, Nigeria, Senegal, Uganda and India.

Gender gaps in mobile ownership remained relatively flat in all survey countries surveyed in 2022 and 2023 except in Kenya where, for the first time, men and women are now on par at 92% and 91%, respectively, essentially closing this gender gap.

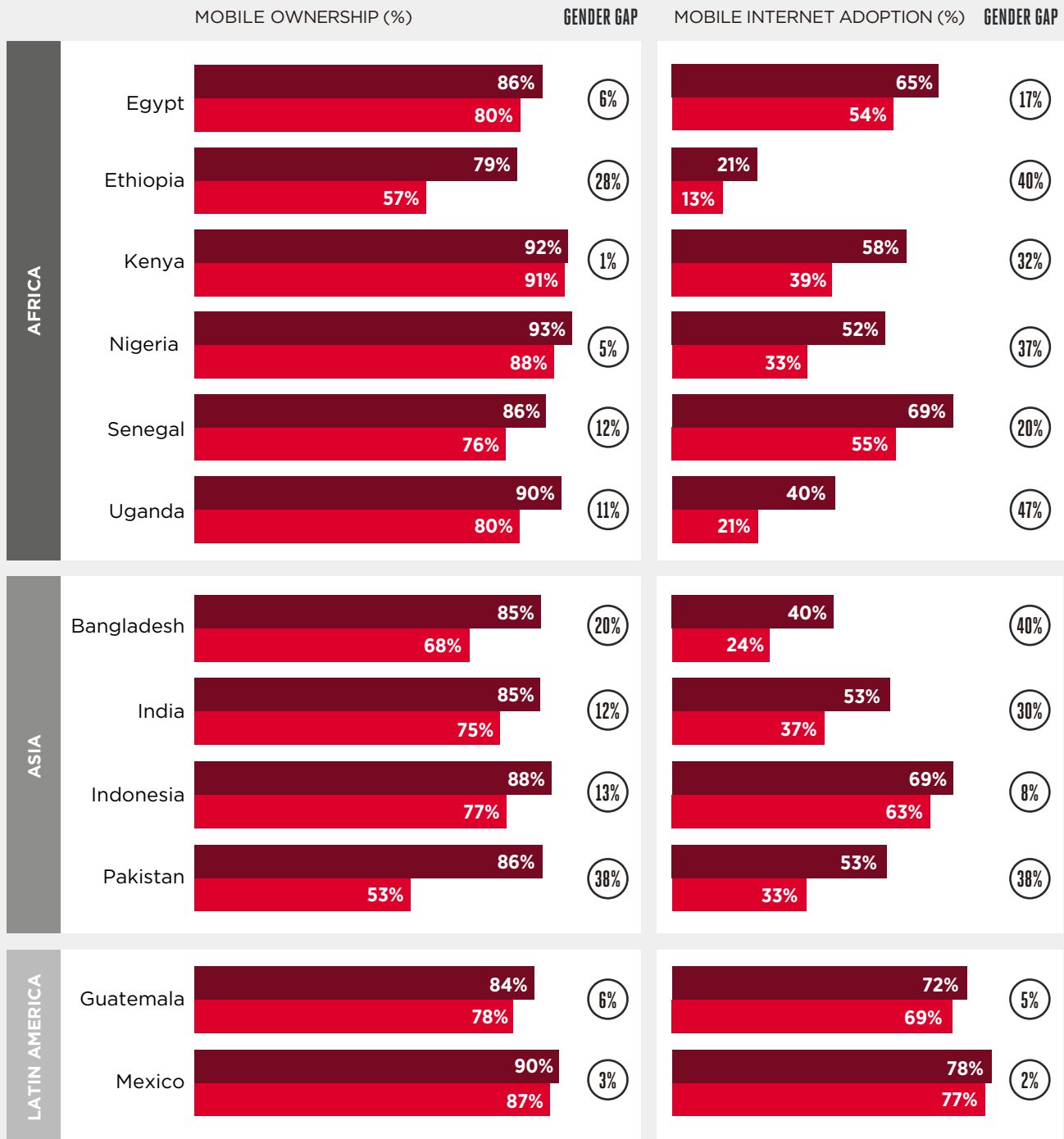
While the mobile internet gender gap narrowed across LMICs overall, at a country level, trends were more mixed. Gender gaps in mobile internet adoption remained relatively flat in six of the 11 markets surveyed in 2022 and 2023. Of the remaining countries, the most notable changes were in Indonesia, where growth in women's adoption was stronger than men's and the gender gap narrowed from 15% to 8%, and in India. In last year's report, we highlighted that India's mobile internet gender gap had stalled for the second year and women's adoption remained around 30% for the third consecutive year. In 2023, this increased to 37% while adoption among men remained relatively unchanged, narrowing the gender gap from 40% to 30% (see Figure 4). This is important given India's size and influence on the mobile gender gap in South Asia and LMICs overall.



Figure 3

Men’s and women’s mobile ownership and mobile internet adoption, by country

Percentage of total adult population



■ Men ■ Women (X%) = Gender Gap

Source: GSMA Consumer Survey, 2023

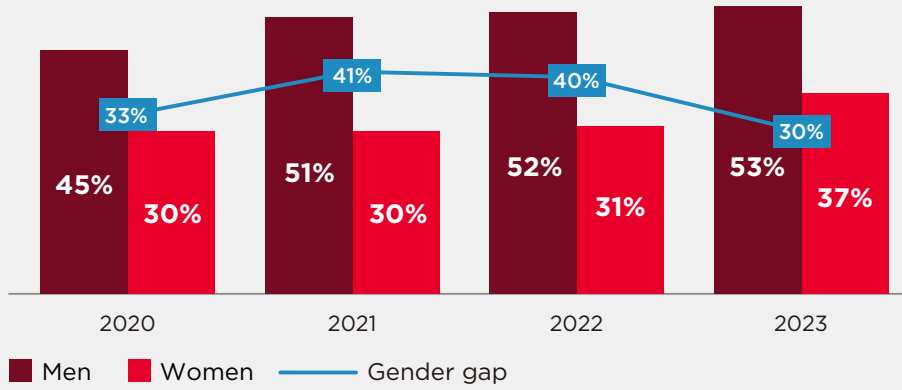
Base: Total population aged 18+

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 a month.

Mobile internet users do not have to personally own a mobile phone. The gender gap in mobile ownership and mobile internet use refers to how much less likely a woman is to own a mobile (or to use mobile internet) than a man.

n= from 491 to 1,024 for women and n= from 457 to 1,181 for men

Figure 4
 Mobile internet adoption in India, 2020–2023
 Percentage of total adult population



Source: GSMA Consumer Survey, 2020–2023
 Base: Total population aged 18+
 Mobile internet users do not have to personally own a mobile phone.
 Mobile internet use is defined as having used the internet on a mobile phone at least once in the past three months. The gender gap in mobile internet use refers to how much less likely a woman is to use mobile internet than a man.
 n= from 983 to 1,024 for women and n= from 1,176 to 1,181 for men



The journey to mobile internet use



Mobile remains the primary – and often only – way people in LMICs access the internet, especially women. In 10 of the 12 survey countries, a higher proportion of women internet users than men accessed it exclusively on a mobile phone. For example, in Bangladesh, 74% of female internet users access it exclusively via mobile, compared to 66% of male users.

While no two people have the same experience acquiring and using mobile technology, there are common milestones and barriers on this journey.

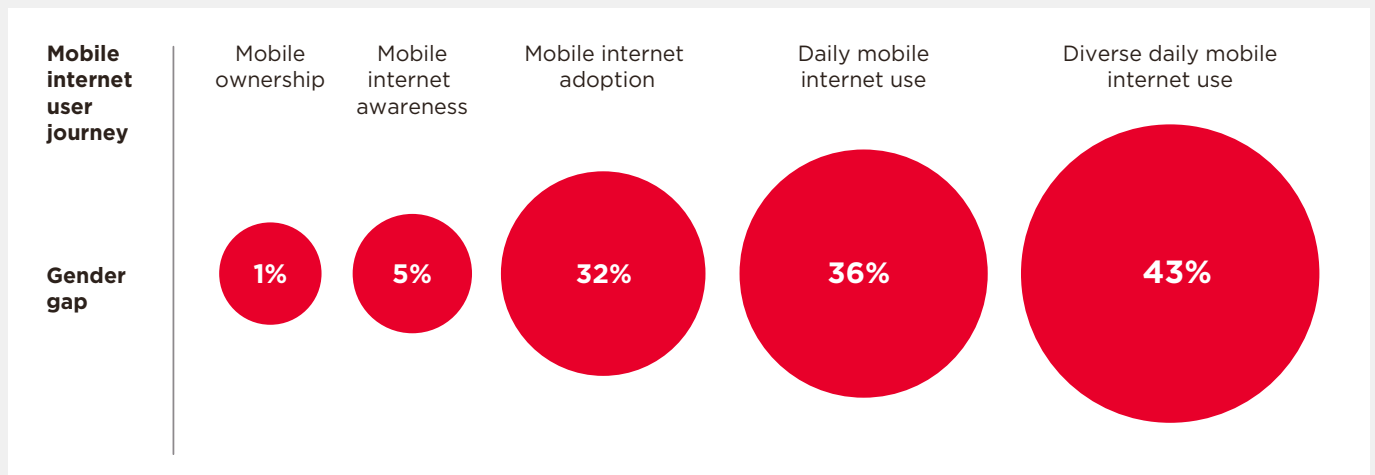
The mobile internet user journey starts with mobile ownership and progresses to mobile internet awareness, mobile internet adoption and, finally, to regular and diverse mobile internet use (see Figure 6). Understanding where men and women tend to get stuck on this user journey is key to targeting action and ensuring equal access and use.

At each stage of the mobile internet user journey, gender gaps tend to widen. For example, Figure 5 shows the gender gaps at each stage in Kenya.

Figure 5

Gender gaps throughout the mobile internet user journey in Kenya

Among the total adult population



Source: GSMA Consumer Survey, 2023

Base: Total adult population aged 18+

The gender gap refers to how much less likely a woman is to own a mobile, be aware of mobile internet or use mobile internet than a man.

Diverse daily mobile internet use is defined as performing at least three mobile internet use cases daily.

n= 544 for women and n= 505 for men

It is interesting to note that once men and women become mobile internet users, the majority tend to use it every day. This is highest in India where, despite relatively low adoption of mobile internet, 95% of male users and 92% of female users access it on a daily basis. This is likely an indication of the value men and women in India place on mobile internet once they start using it, and how more affordable data⁷ enables more regular use.⁸

Many mobile internet users only use it for one or two activities, even those who use mobile

internet every day. This is especially true for women and is the case in all survey countries. For example, 27% of women in Pakistan use mobile internet every day but only 11% use it for three or more daily activities. By comparison, 47% of men use mobile internet every day and 26% use it for three or more daily activities.

The user journey is very different for smartphone owners, with much narrower gender gaps at each stage. In all the survey countries, once women own a smartphone, their awareness and use of mobile internet is almost on par with men.⁹

7. A 5 GB bundle in India is approximately 0.7% of average monthly income, well below the ITU target of 2% that most other LMICs have not yet achieved. Source: Tarifica, 2022.

8. GSMA. (2023). [The State of Mobile Internet Connectivity Report 2023](#).

9. The analysis is not shown here, but for more in-depth information see, for example, Figure 9 in [The Mobile Gender Gap Report 2022](#).

Figure 6

The mobile internet user journey
 Percentage of total adult population



					Daily mobile internet use	Diverse daily mobile internet use
EGYPT	Men	86%	85%	65%	61%	40%
	Women	80%	81%	54%	48%	31%
ETHIOPIA	Men	79%	64%	21%	11%	7%
	Women	57%	52%	13%	7%	3%
KENYA	Men	92%	87%	58%	45%	33%
	Women	91%	82%	39%	29%	19%
NIGERIA	Men	93%	89%	52%	41%	26%
	Women	88%	84%	33%	25%	14%
SENEGAL	Men	86%	96%	69%	56%	34%
	Women	76%	91%	55%	40%	23%
UGANDA	Men	90%	73%	40%	26%	20%
	Women	80%	58%	21%	13%	10%
BANGLADESH	Men	85%	76%	40%	37%	33%
	Women	68%	74%	24%	21%	16%
INDIA	Men	85%	71%	53%	51%	42%
	Women	75%	57%	37%	34%	26%
INDONESIA	Men	88%	84%	69%	64%	54%
	Women	77%	76%	63%	59%	48%
PAKISTAN	Men	86%	86%	53%	47%	26%
	Women	53%	84%	33%	27%	11%
GUATEMALA	Men	84%	91%	72%	65%	55%
	Women	78%	88%	69%	59%	52%
MEXICO	Men	90%	96%	78%	70%	58%
	Women	87%	95%	77%	68%	56%

Source: GSMA Consumer Survey, 2023

Base: Total population aged 18+

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 a month.

Mobile internet users do not have to personally own a mobile phone. Daily and diverse mobile internet use is defined as performing at least three mobile internet use cases daily. Diverse daily mobile internet use is defined as performing at least three mobile internet use cases daily.

n= from 491 to 1,024 for women and n= from 457 to 1,181 for men



The gender gap in mobile ownership

Growth in mobile ownership across LMICs has remained relatively flat for both men and women, and gender gaps have seen little change: 83% of women in LMICs now own a mobile phone (of any type) compared to 89% of men. As a result, women are 8% less likely to own a mobile phone. A total of 405 million women in LMICs still do not own one, compared to 245 million men.

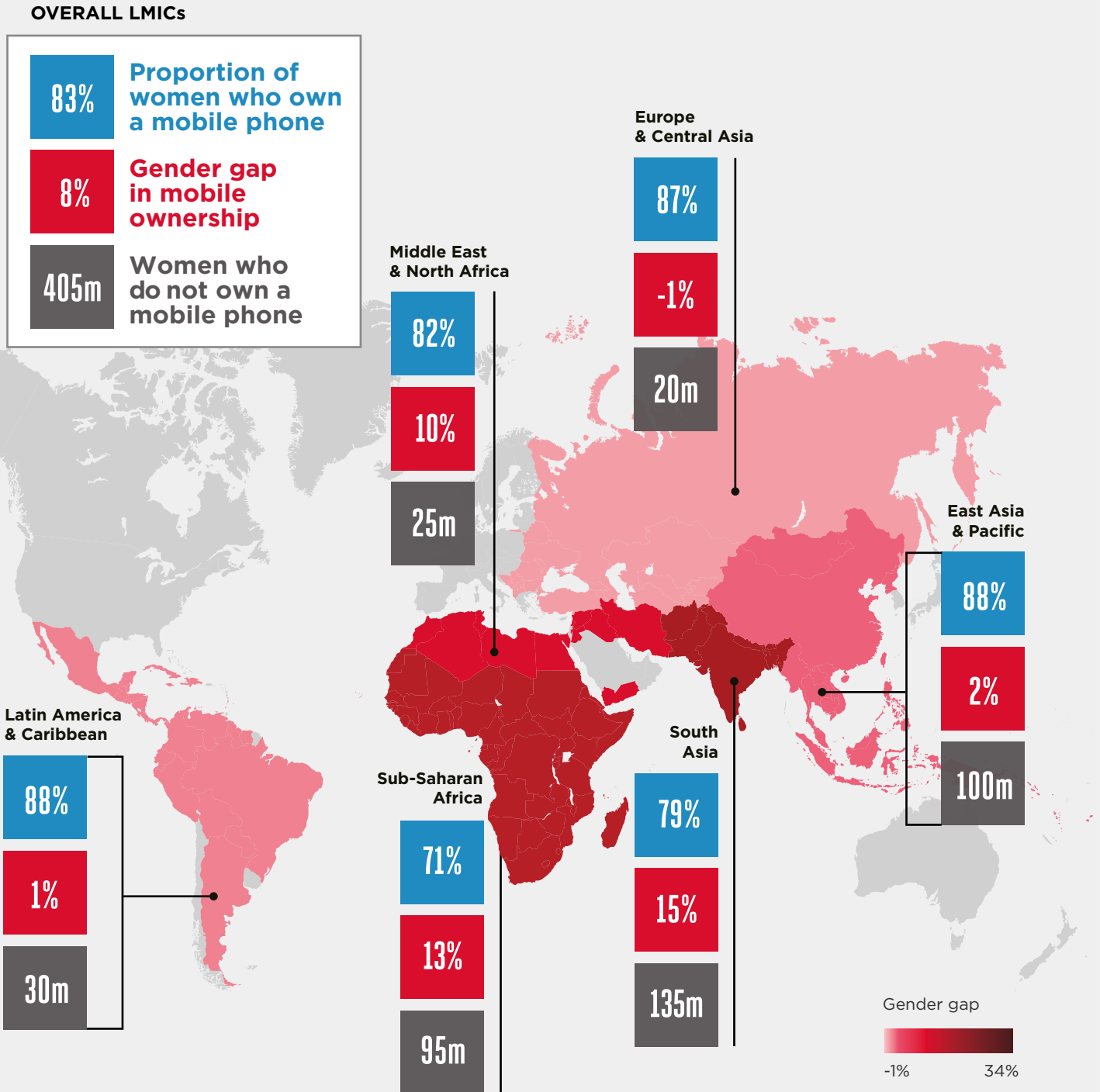
The mobile ownership gender gap varies by region. For example, it is -1% in Europe and Central Asia but 13% in Sub-Saharan Africa (see Figure 7). Regional gender gaps have been relatively unchanged since 2022 in all regions (see Figure 1). The remaining women who do not own a mobile phone are particularly challenging to reach and typically the most underserved, including those who have low literacy levels, are older than 55, are unemployed, have low incomes, live in a rural area or have a disability.

Our previous research has shown that the top barriers to mobile ownership for women (and men) who still do not own a phone are affordability (primarily of handsets) and literacy and digital skills.¹⁰

10. For more details, see Table 1 in *The Mobile Gender Gap Report 2023*.



Figure 7
 Gender gap in mobile ownership in LMICs, by region
 Total adult population



Source: GSMA, 2023
 The gender gap refers to how much less likely a woman is to own a mobile than a man. Mobile ownership is defined as having sole or main use of a SIM card (or a mobile phone that does not require a SIM) and using it at least once a month.
 Based on survey results and modelled data for adults aged 18+.



The gender gap in smartphone ownership

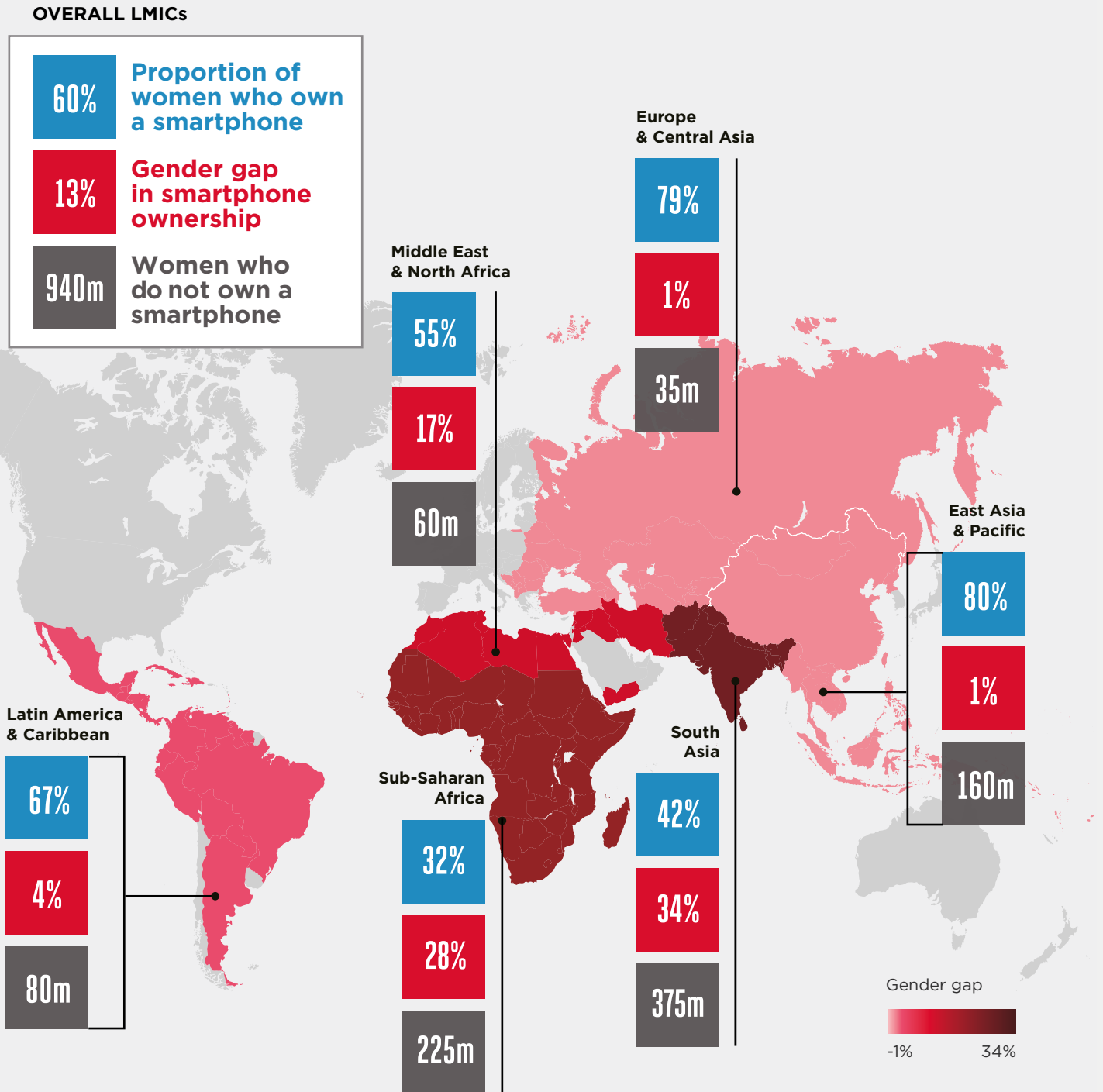
The type of mobile device a person owns matters, and affects whether and how they use the internet. Specifically, once someone owns a smartphone, they are considerably more likely to adopt mobile internet, use it regularly and in many ways. Our research has found that once women own a smartphone, these metrics mirror those of men very closely (i.e. they have similar levels of mobile internet awareness and use).

Over the past year, the smartphone gender gap has narrowed slightly from 15% to 13%. Across LMICs, 60% of women and 69% of men now own a smartphone. This means that while 1.4 billion women own a smartphone, there are still 940 million who do not, with 200 million fewer women owning one than men (see Figure 8). In addition, smartphone adoption

across LMICs continues to grow but at a slower rate than in previous years, especially for men. For example, 90 million women became smartphone owners in 2023 compared to 110 million in 2022. In comparison, only 65 million additional men became smartphone owners in 2023 compared to 115 million in 2022.

There were no notable regional changes in the smartphone gender gap in 2023, except in South Asia. In fact, the narrowing of the overall LMIC smartphone gender gap was driven by South Asia where it shrunk from 41% to 34%. This is impressive progress, especially in the region with the highest number of women who do not own a smartphone (375 million women; equivalent to 40% of the women across LMICs who do not own one).

Figure 8
 Gender gap in smartphone ownership in LMICs, by region
Total adult population



Source: GSMA, 2023
 The gender gap refers to how much less likely a woman is to own a smartphone than a man.
 Based on survey results and modelled data for adults aged 18+.

Gender gaps in smartphone ownership also vary across survey countries and are widest in Pakistan (49%), Bangladesh (43%) and Nigeria (38%). Country-level trends also differ considerably in the 11 markets that were surveyed in both 2022 and 2023. In these countries, the gender gap in smartphone ownership widened in three (Egypt, Nigeria, Mexico), narrowed in four (Indonesia, India, Guatemala, Pakistan) and remained unchanged in the remaining four (Ethiopia, Kenya, Senegal, Bangladesh). The gender gap in smartphone ownership narrowed most notably in India, from 40% to 32% due to a higher growth rate among women than men.

While these year-on-year gender gap trends help to track progress, they can mask underlying smartphone penetration levels for both men and women. For example, although the gender gap narrowed in 2023 in Pakistan, only a quarter of women (compared to half of men) own a smartphone (see Figure 9). Conversely, although the smartphone gender gap in Mexico widened slightly, 73% of men and 66% of women own one, more than in any other survey country.



Most smartphone owners use mobile internet

In most survey countries, there is a strong correlation between smartphone ownership and mobile internet adoption. For example, in Egypt, 65% of men and 54% of women use mobile internet, and 64% of men and 54% of women also own a smartphone. This is because smartphone owners are significantly more likely to be aware of and use mobile internet regularly. Furthermore, once women own a smartphone their awareness and use of mobile internet is almost on par with men.

Some mobile internet users access it from someone else's device, especially women

While owning a smartphone drives mobile internet adoption, it is worth highlighting that in some countries, many people, especially women, are accessing mobile internet on someone else's device, which can limit their opportunities to use mobile internet. In Pakistan, at least 23% of female mobile internet users (compared to 5% of male mobile internet users) use someone else's mobile phone to get online. In fact, 35% of female mobile internet users in Pakistan report they cannot use it more because the phone they use to access the internet is shared (compared to only 14% of male users).

Some owners of smartphones, especially women, are not using mobile internet

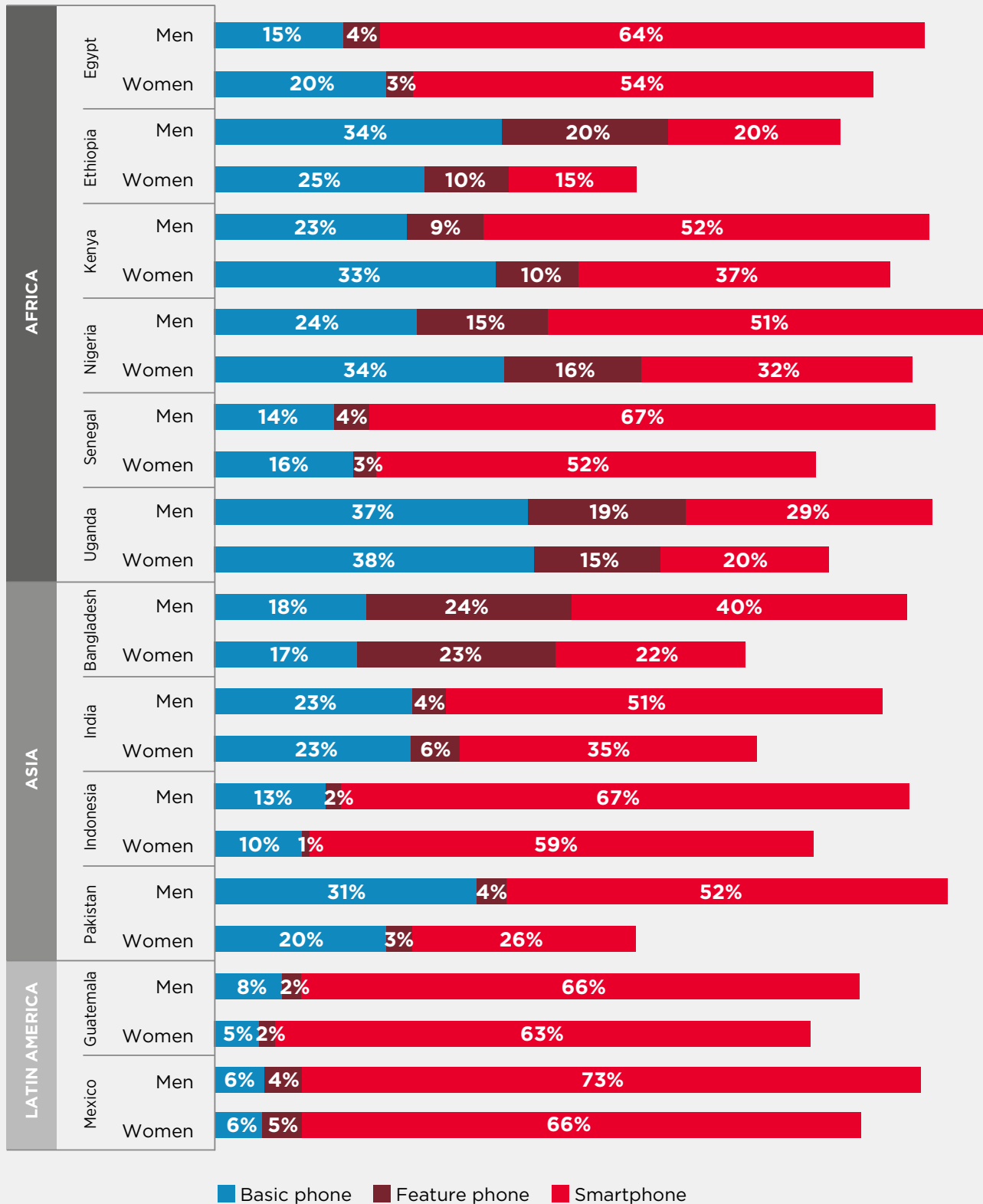
Conversely, in some markets,¹¹ there is also a significant proportion of smartphone owners, especially women, who do not use mobile internet. This indicates that in these countries they face other barriers to using it. For example, in Kenya, 18% of women who own a smartphone do not use mobile internet, compared to 9% of men.

11. Kenya, Nigeria, Bangladesh and India

Figure 9

Total population by handset type

Percentage of total adult population



Source: GSMA Consumer Survey, 2023

Base: Total population aged 18+

The total percentage of handset owners does not exactly match the percentage of mobile owners in Figure 3. Figure 3 captures people who have sole or main use of a SIM card whereas Figure 9 represents people who have sole or main use of a handset.

Respondents are categorised according to the most advanced device they own and can only be included in one category. Smartphone owners that also own a basic or feature phone are counted only as smartphone owners.

n= from 491 to 1,024 for women and n= from 457 to 1,181 for men

The gender gap in mobile internet adoption

In LMICs, 66% of women now use mobile internet compared to 78% of men. This means that while more women in these countries are using mobile internet than ever before – 1.5 billion – a staggering 785 million remain unconnected (compared to 500 million men). Women are now 15% less likely than men to use mobile internet across LMICs (see Figure 10).

Between 2017 and 2020, the mobile internet gender gap narrowed substantially. However, in 2021 and 2022, women's rate of mobile internet adoption slowed, and men's also slowed in 2022, resulting in a slightly wider mobile internet gender gap. In 2023, this gender gap narrowed for the first time since 2020. This was due to an increased rate of adoption among women compared to men – 120 million women across LMICs adopted mobile internet in 2023 compared to 75 million men. Compared to 2022, fewer men started using mobile internet in 2023, but there was an increase in the rate of adoption by women (see Figure 2). While the reduction in the mobile internet gender gap is a promising shift from the previous two years, it is not yet clear whether women's rate of mobile internet adoption will continue to increase at the same rate and whether the mobile internet gender gap will continue to narrow.

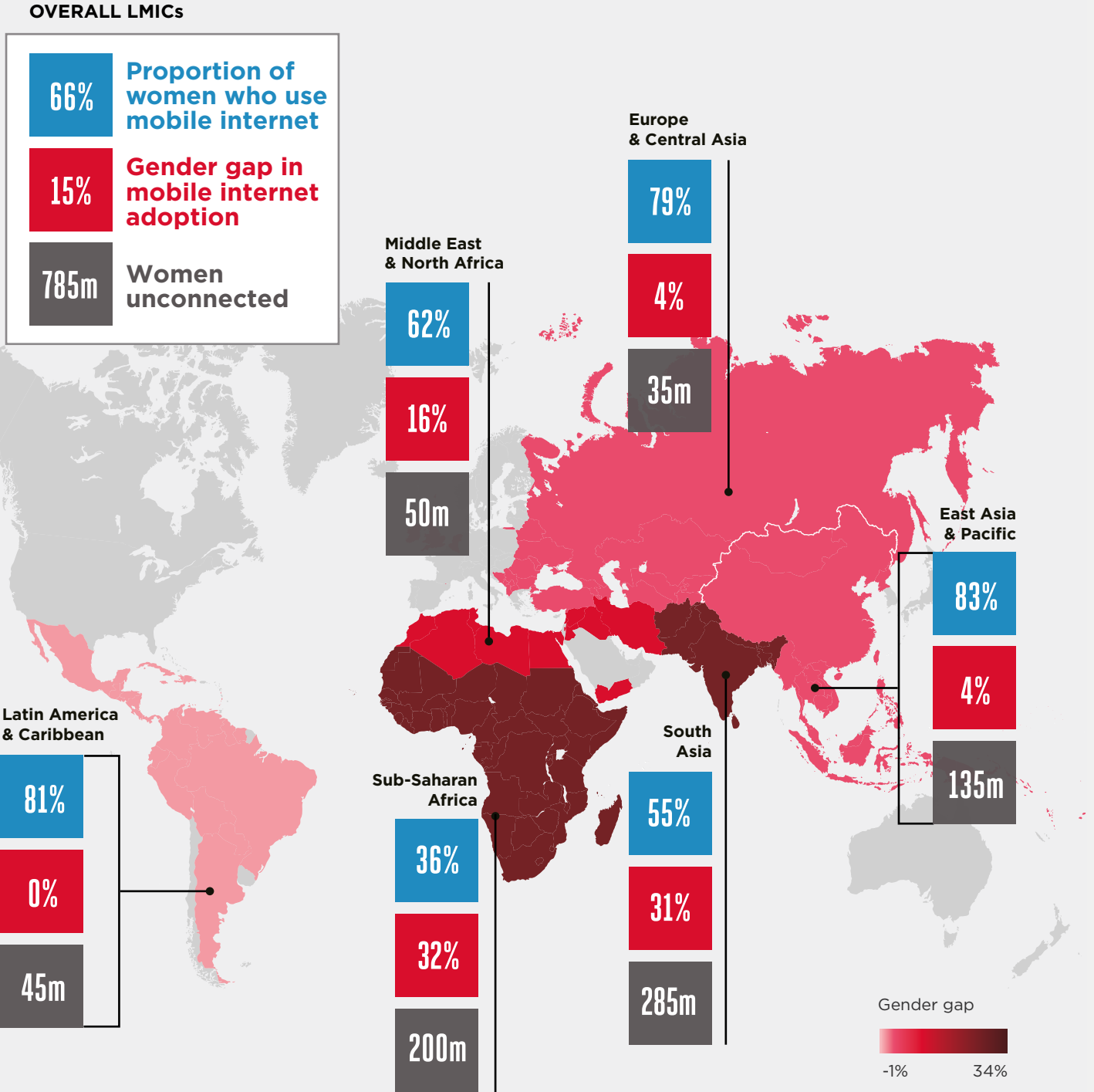
Mobile internet gender gaps are widest in Sub-Saharan Africa and South Asia (see Figure 10), where more than 60% of the 785 million unconnected women in LMICs live. However, these are also the only regions that have seen any progress in the past year. The gender gap narrowed slightly in Sub-Saharan Africa between 2022 and 2023 for the first time in five years, from 36% to 32% (see Figure 1), but this gender gap is similar to what it was in 2017 (34%). South Asia saw the most notable decrease in its gender gap, from 41% to 31%, driven primarily by India where women's adoption increased while men's remained unchanged (see Figure 4).



Figure 10

Gender gap in mobile internet adoption in LMICs, by region

Total adult population



Source: GSMA, 2023

The gender gap refers to how much less likely a woman is to use mobile internet than a man.

Mobile internet adoption is defined as having used the internet on a mobile phone at least once in the past three months.

Mobile internet users do not have to personally own a mobile phone, so the above figures also include those who used mobile internet on someone else's phone.

Based on survey results and modelled data for adults aged 18+.

SPOTLIGHT



Perceptions of whether mobile internet is more important for men or women

Most people who are aware of mobile internet feel that it is equally important for both men and women to use it. However, among those who do not feel that it is equally important, a greater proportion believe that it is more important for men to use mobile internet.

This year, we asked those who were aware of mobile internet whether they thought using mobile internet was more important for men, for women or equally important for both.

The results show that in 11 of the 12 survey countries, between 70% and 92% of those who are aware of mobile internet believe that it is equally important for men and women, with little difference by gender in most cases (Figure 11). It was highest – around 90% – for male and female respondents in Kenya, Indonesia, Guatemala and Mexico.

In almost all survey countries, if respondents (male or female) did not believe mobile internet was equally important for men and women, they were more likely to report that mobile internet was more important for men. Across survey countries, 2% to 8% of respondents said that mobile internet was more important for women, but 3% to 35% reported it was more important for men.

The most notable example is Pakistan, where 42% of men and 28% of women who are aware of mobile internet believe it is more important for men. Only 1% of male respondents and 4% of female respondents felt it is more important for women. These findings do not vary much by urban-rural location or age. Similarly, in Nigeria, 21% of men and 6% of women who are aware of mobile internet also believe it is more important for men.

These findings are concerning especially given that once women start using mobile internet, they tend to see the benefits to a similar extent as male users, with the vast majority of both male and female users in Pakistan and other survey countries reporting it has a positive overall impact on their lives.¹²

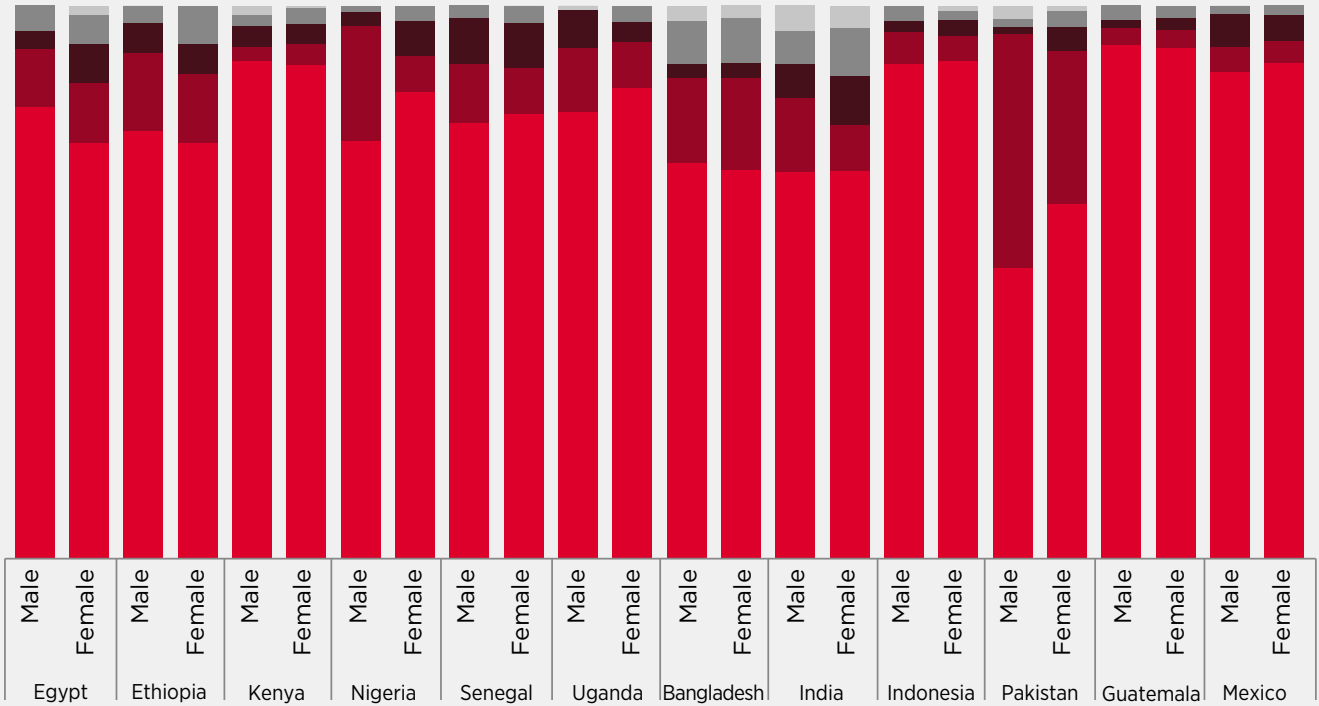
In countries where “gatekeepers”, such as husbands, fathers or other senior family members, may dictate whether and how women use the internet, these findings highlight the need to account for and address such social norms in efforts to advance women’s digital inclusion.

12. See Figure 11 in [The Mobile Gender Gap Report 2023](#).

Figure 11

Perceptions of whether mobile internet is equally important for men and women

Percentage of those who are aware of mobile internet



- Prefer not to say
- Don't know
- More important for women
- More important for men
- Equally important for both men and women

Source: GSMA Consumer Survey, 2023

Base: Adults who are aware of mobile internet aged 18+

A person is considered aware of mobile internet if they have either used mobile internet before or have not used mobile internet but are aware they can access the internet on a mobile phone.

Respondents were asked the question, "In general, do you feel that using the internet on a mobile phone is more important for men or more important for women, or is it equally important for both?"

n= from 290 to 588 for women and n= from 365 to 861 for men





Understanding women's mobile internet use

In an increasingly digital world, it is important to ensure that women and men are not only able to adopt mobile internet, but also use it regularly and for a diverse range of use cases that meet their life needs. Even once women are online, they often face barriers to using mobile internet as frequently or for the same range of use cases as men (see *Barriers to further mobile internet use among existing users*). As a result, there are gender gaps in mobile internet use that mean women are not benefiting from it to the same extent as men.

Once people start using mobile internet, the majority use it every day. Between 54% and 95% of male and 52% to 93% of female mobile internet users in all survey countries are accessing it every day. However, in many survey countries female mobile internet users are less likely than men to access it daily. This is especially true in Senegal where 81% of male mobile internet users access it every day compared to 73% of female users.

Mobile internet users were asked about their use of 16 distinct mobile internet use cases, from

social media and video calls to earning money and supporting one's education (see Appendix 2).

The most common mobile internet use case for men and women tends to be social media and instant messaging. In 10 of the 12 survey countries, both male and female users reported one of these as their top weekly mobile internet use case. This was usually followed by entertainment-related use cases, such as online videos and communication-related use cases, such as video calls or online calls (see Appendix 2, Figure 25). However, it is interesting to note that the use of video calls, a data-intensive use case, is lowest in countries where data costs are least affordable. For instance, in Kenya, where only 48% of male mobile internet users and 37% of female users use video calls on a weekly basis, 5 GB costs 2.1% of monthly income on average, and up to 5.1% for the poorest 40%. It is important to remember that data is often less affordable for women. GSMA analysis in 2022 found that, on average, the cost of 1 GB of data in LMICs is equivalent to 2% of women's monthly income versus 1% of men's.¹³

13. See Figure 26 in [The State of Mobile Internet Connectivity 2023](#).

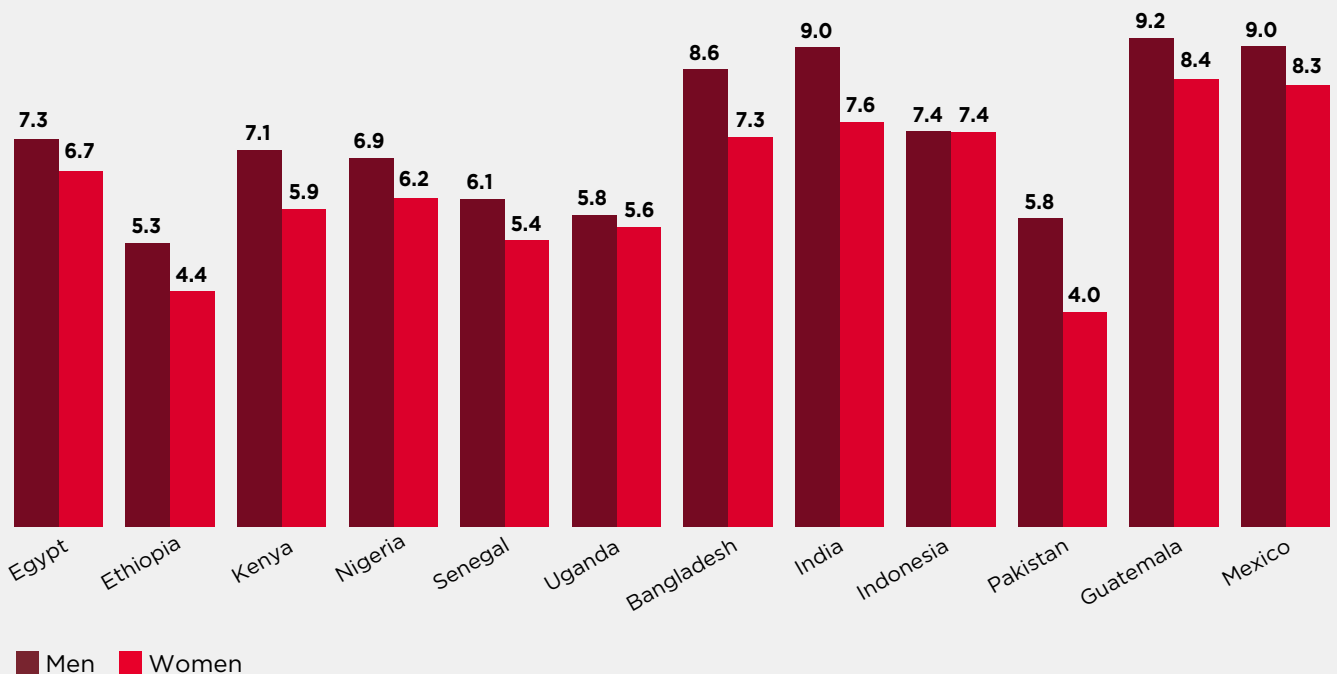
Beyond the six most popular mobile internet use cases (instant messaging, social media, online video, online entertainment, online calls and video calls), usage in all survey countries drops off significantly, but especially for female mobile internet users. Use cases with low levels of adoption include those related to income generation, health, government services and searching for online information (see Appendix 2, Figure 25).

In almost all countries, men still tend to use mobile internet for a wider range of use cases on a weekly basis (see Figure 12). Gender gaps in the diversity of mobile internet use are widest in South Asian survey countries. In India, for instance, men use mobile internet for nine different weekly use cases on average, compared to 7.4 for women.

On average, female mobile internet users in most of the survey countries use it for at least five different weekly use cases, except in Pakistan and Ethiopia (see Figure 12). This is as high as seven to eight weekly mobile internet use cases in Bangladesh, India, Indonesia, Guatemala and Mexico. This means that female users in these countries are going beyond the most common uses of mobile internet listed above. Ensuring that other mobile internet use cases are relevant, and highlighting how they can meet people’s life needs more efficiently, could have a huge impact on digital inclusion, users and service providers alike.

Figure 12

Average number of mobile internet use cases on a weekly basis
Among mobile internet users



Source: GSMA Consumer Survey, 2023
Base: Mobile internet users aged 18+
n= from 71 to 424 for women and n= from 121 to 661 for men

Understanding barriers to mobile internet adoption and use



With substantial gender gaps in mobile internet adoption (see Figure 10) and use (see Figure 12), it is critical to understand the barriers that women face to adopting mobile internet and to using it more, and how these compare to men.

In each survey country, all respondents were asked whether they had heard of mobile internet before. Those who had were then asked whether certain barriers prevented them from adopting it (if they did not use it) or from using it more (if they already used it). They were then asked which barriers they felt were most important and which was the single most important barrier.

Responses revealed that, across survey countries, the top barriers preventing men and women from adopting and using mobile internet are mobile internet awareness, handset affordability, literacy and digital skills and safety and security concerns (see Figure 13).

While awareness has been growing across LMICs, in five of the 12 survey countries, between 20% and 50% of the population have still not heard of mobile internet, especially women (see Figure 14).

Among those who are already aware of mobile internet, a number of barriers prevent mobile internet adoption and use. In terms of overall barriers to both mobile internet adoption and use, the most important reported barrier depends on the local context and, to a lesser extent, the gender of the respondent. For example, for men and women in Kenya, handset affordability is the most important barrier, but in Indonesia it is safety and security concerns. There are also some regional trends. For instance, the top barrier to mobile internet adoption and use for men and women in Sub-Saharan African survey markets tends to be affordability of handsets, except in Senegal where it is connectivity experience.¹⁴ In Indonesia and Latin American countries, safety and security concerns are the top barrier to mobile internet adoption and use for men and women. In South Asian markets, the top barrier tends to be literacy and digital skills, except in India where it is reported to a similar degree as all other barriers and there is a more even spread.

When we look at barriers to mobile internet adoption separately from barriers to further mobile internet use, a clearer picture emerges. Across survey countries, the top barriers to adoption among men and women who are already aware of mobile internet are affordability (specifically of handsets) and literacy and digital skills (see Table 1).

Once men and women use mobile internet, the top barriers to further use vary more by country, and less by gender, but one or more of the following barriers are of greatest concern in each survey country: safety and security concerns, affordability (particularly data but also handsets) and connectivity experience (see Table 2).

While the barriers experienced to mobile adoption and use are most influenced by country context rather than by gender, women are less likely than men to have progressed along the mobile internet user journey, to be aware of mobile internet or to be using it.

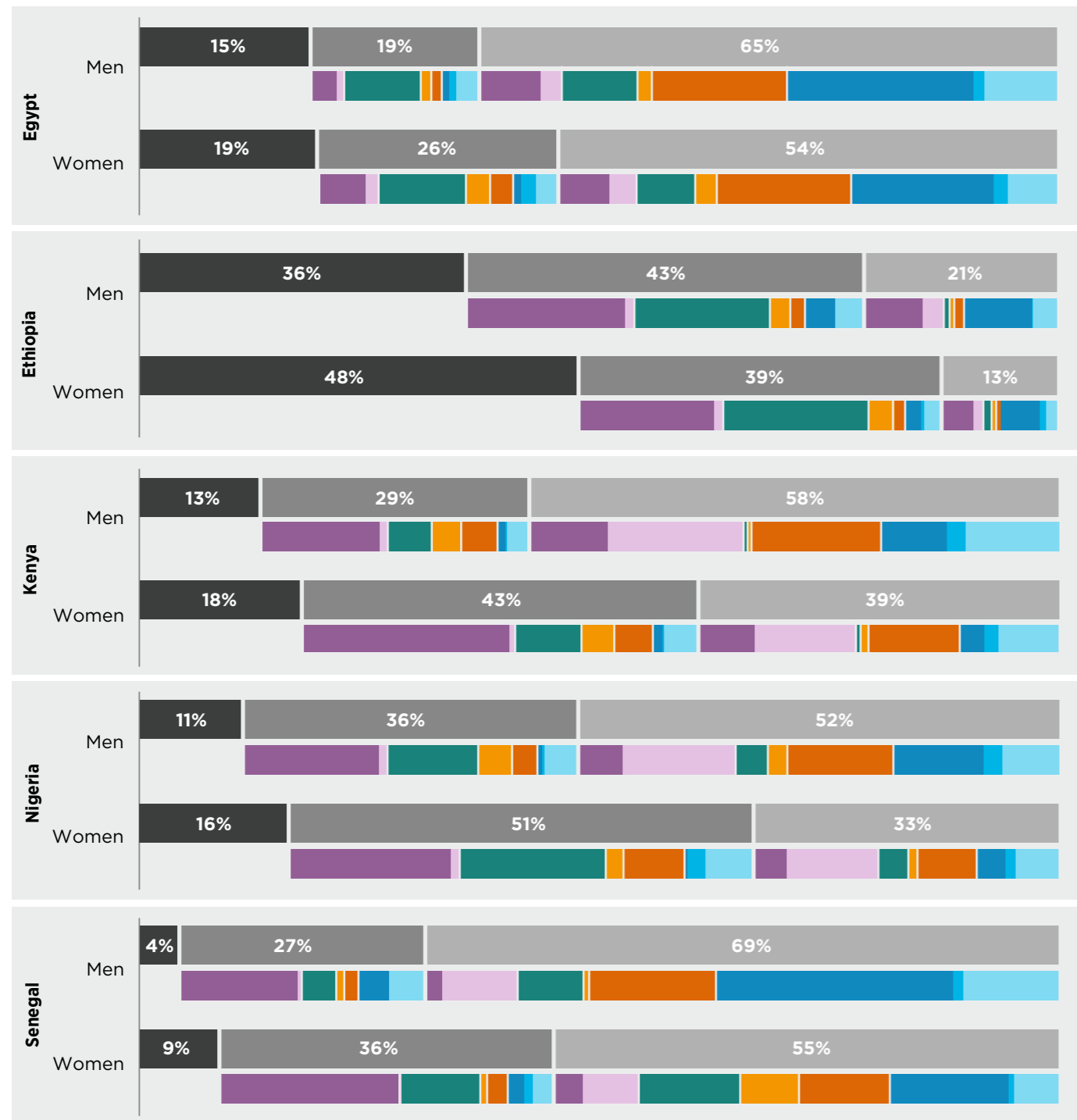
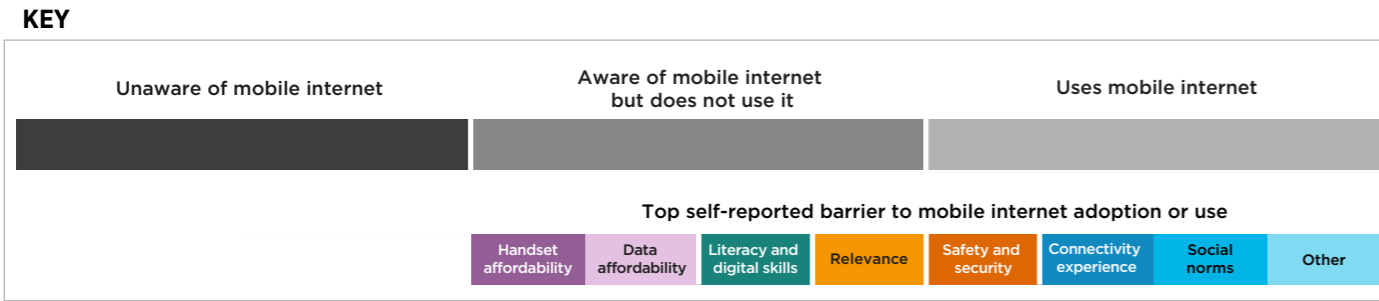
In part, this is because they tend to experience the barriers more acutely due to structural inequalities such as disparities in access to education and income. Analysis also shows that even when women have the same level of education, income, literacy and employment as men, they are still less likely to use mobile internet.¹⁵ This suggests that other issues are at play, such as discrimination and social norms, which can manifest in various ways throughout the mobile internet user journey. In some of the survey countries, gender norms are so influential that they are reported as the top barrier to mobile adoption and use by a notable proportion of women compared to men. In Pakistan, for instance, barriers directly related to social norms¹⁶ are the top barrier to adoption or use for 19% of women compared to just 4% of men.

14. 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".

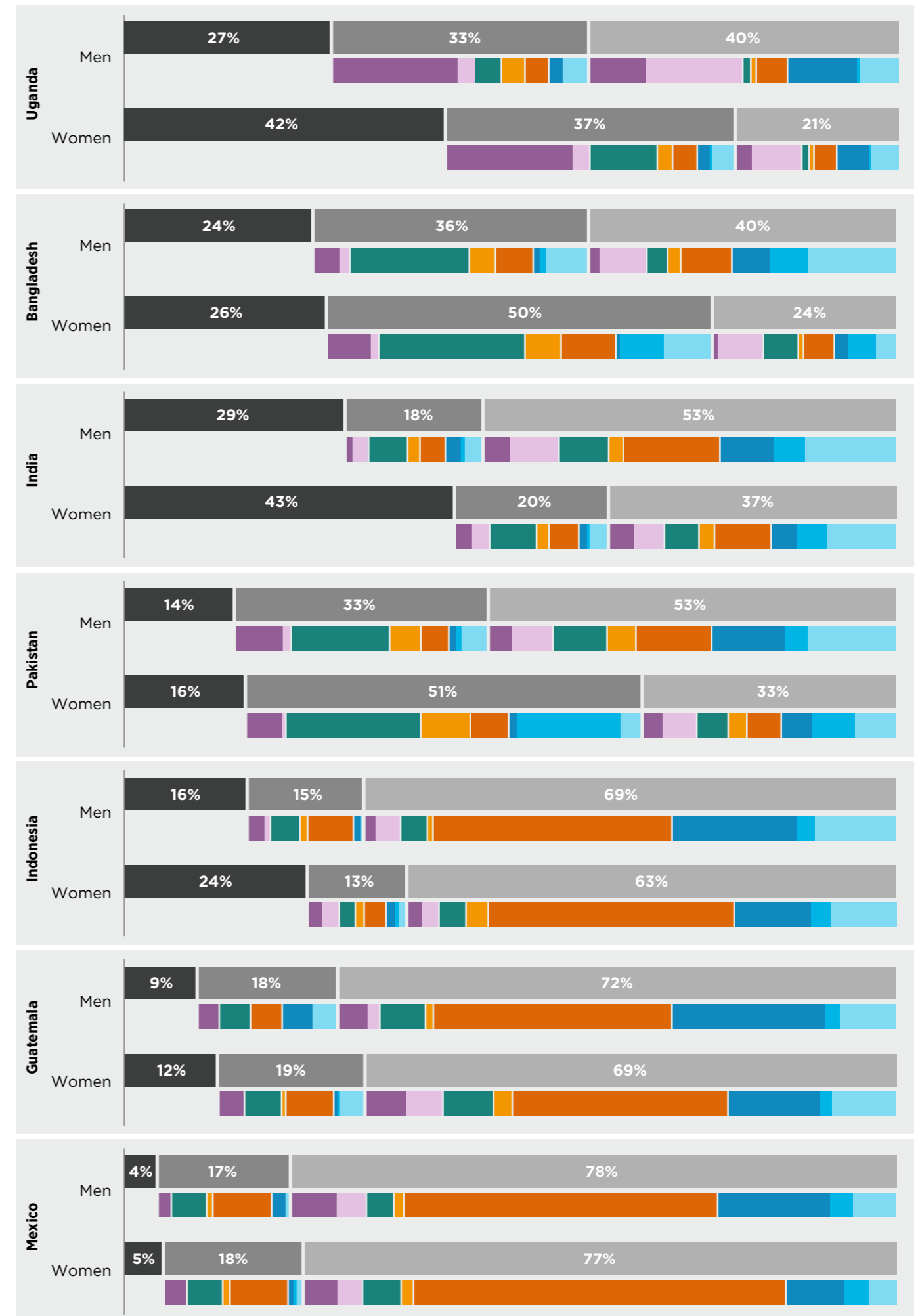
15. Butler, C. and Shanahan, M. (27 August 2020). "[Does just being a woman reduce the likelihood of using mobile?](#)". *GSMA Mobile for Development Blog*.

16. Social norms as a barrier represents an aggregate of those who reported: "My family does not [always] approve of me using the internet on a mobile phone", "I am only allowed to use the internet for a specific amount of time or at certain times of the day" or "I am only allowed to use the internet for specific reasons".

Figure 13
Barriers to mobile internet adoption and use across survey countries
Percentage of total adult population



Source: GSMA Consumer Survey, 2023
Base: Total population aged 18+
n= from 491 to 1,024 for women and n= from 457 to 1,181 for men





Affordability, particularly of handsets, is one of the top three-reported barriers to mobile internet adoption and use in all survey countries for those who are already aware of it. Data affordability is reported as a barrier to adopting or using mobile internet, but to lesser extent in the majority of countries. For example, in Nigeria, 26% of women and 24% of men who are aware of mobile internet said handset affordability was their top barrier to mobile internet adoption or use compared to 14% of women and 15% of men who reported it to be data costs. Although affordability was the top barrier for both male and female respondents, research has shown that issues such as the gender pay gap and women's lower employment rates mean that handsets are already less affordable for women than men. GSMA analysis has found that in 2022, on average, the cost of an entry-level handset represents 24% of women's monthly income in LMICs, compared to 13% of men's.¹⁷



Literacy and digital skills remain one of the top barriers to mobile internet adoption but is reported less frequently as the top barrier to further mobile internet use in survey countries. Even in countries where this was not the most important barrier to adoption or use, it was still reported by a significant proportion of men and women who were aware of mobile internet as a barrier to adoption or use. For example, in Senegal, 40% of men and 56% of women who are aware of mobile internet reported at least one literacy and skills barrier as something that stops them from using or adopting it. In most survey countries, basic literacy is reported more than digital skills as the top barrier to mobile internet use by both male and female respondents.



Safety and security concerns continue to be a barrier to mobile internet use for many men and women who are already aware of it, particularly in Latin America and Indonesia. This includes concerns related to the reliability of information found online, scams or fraud, information security, unwanted contact from strangers and exposure to harmful content. In all survey countries, these barriers are felt more by existing mobile internet users than those who do not yet use it, regardless of gender. New findings this year suggest that the magnitude of these concerns does not always reflect the actual prevalence of negative experiences when using mobile internet (see *Spotlight: Online safety and security concerns*). However, these concerns are still important to address to ensure men and women are not deterred from accessing mobile internet and feel confident they can keep themselves safe while using it.



Relevance is a key barrier to using mobile internet, particularly for those who do not yet use it. This barrier includes perceptions that the internet is not relevant and that there is a lack of content in local languages, which is reported as a barrier to a lesser extent in all survey countries. Even though relevance is not the most important barrier for many, it still prevents men and women from using mobile internet. For example, while only 7% of men and 9% of women in Pakistan reported a lack of perceived relevance as their top barrier, 27% and 37%, respectively, reported it as one of the barriers that stops them using or adopting mobile internet. It is important to recognise that this is perceived relevance and would be dependent on a respondent's awareness of all the various uses of mobile internet.



Access-related barriers cover a wide range of issues, from connectivity experience to social norms, so they are not grouped as a composite. In several countries, but especially for women in Pakistan, lack of family approval is a major barrier to mobile internet adoption, and restrictions on how and when women are allowed to use mobile internet is a barrier to further use. Taking into account the role of gatekeepers is therefore key to women's mobile internet adoption and equal use, especially in countries where gender norms are more restrictive. Connectivity experience is reported as the top barrier to mobile internet use or adoption by a greater proportion of male than female respondents in all survey countries. For example, in Guatemala, 21% of men who are aware of mobile internet reported this as their top barrier to adoption or use compared to 11% of women.

17. See Figure 26 in [The State of Mobile Internet Connectivity 2023](#).

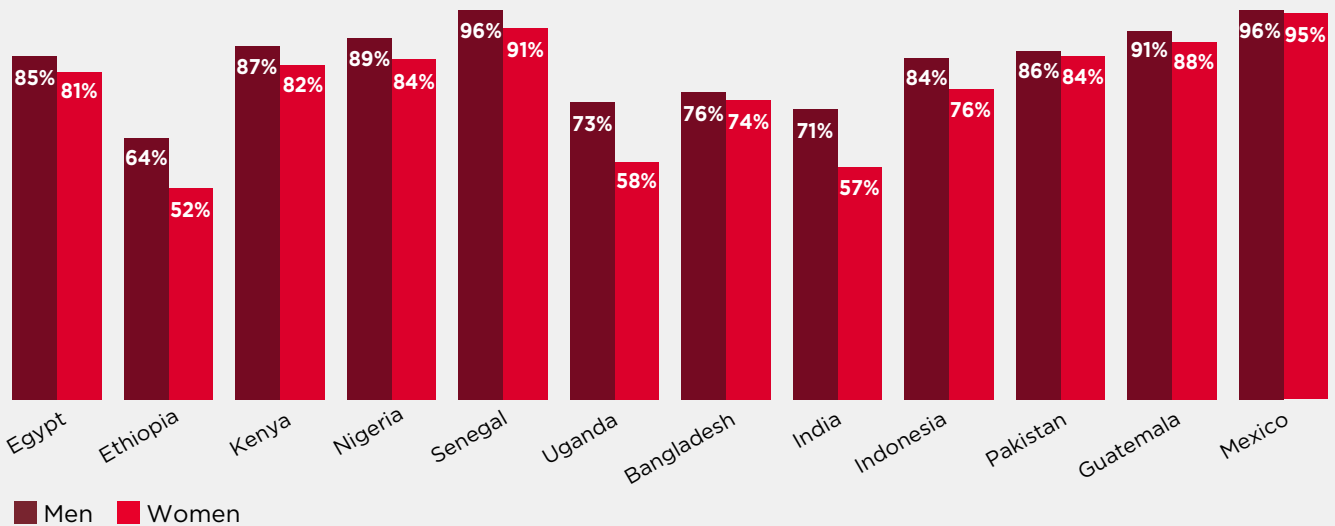
Awareness of mobile internet

Awareness of mobile internet is a critical step to adoption. Between 2020 and 2022, awareness levels were relatively high (more than 80%) in most survey countries, but with some notable gender gaps. In 2023, for the first time, awareness of mobile internet was almost equal among men and women in most of the survey countries (see Figure 14). For example, in Egypt, 85% of men and 81% of women are aware of mobile internet. The most notable exceptions in terms of both awareness levels and the associated gender gap

are Ethiopia, India and Uganda, where less than 60% of women are aware of mobile internet and they are around 20% less likely than men to have heard of it.

Women in Bangladesh have seen the strongest growth in mobile internet awareness since 2022, from 64% to 74%. For the first time since we started tracking it, women’s awareness in Bangladesh is in line with that of men’s (76%), highlighting the progress that has been made.

Figure 14
Mobile internet awareness
Percentage of total adult population



Source: GSMA Consumer Survey, 2023
 Base: Total population aged 18+
 A person is considered aware of mobile internet if they have either used mobile internet before or have not used mobile internet but are aware they can access the internet on a mobile phone.
 n= from 491 to 1,024 for women and n= from 457 to 1,181 for men

It is also important to recognise that this is a binary measure of mobile internet awareness and does not capture awareness of the many different uses and ways mobile internet can benefit people’s lives. Other gender gaps would likely emerge if we tracked awareness of different mobile internet use cases, like GSMA research that found female micro-entrepreneurs are less likely than male micro-entrepreneurs to be aware of mobile use cases for business beyond communication.¹⁸

Nonetheless, in some countries, basic mobile internet awareness remains a barrier for a significant proportion of men and women who do not use it. However, even when men and particularly women become aware of mobile internet, they do not necessarily use it. This suggests other barriers are at play.

18. See Figure 23 in the 2023 GSMA report, [Understanding women micro-entrepreneurs’ use of mobile phones for business](#).

Barriers to mobile internet adoption among those who are aware of it

For those who are aware of mobile internet but do not use it, the top barriers across survey countries for both men and women are affordability and literacy and digital skills for both men and women (see Table 1). This was similar to findings from previous years.

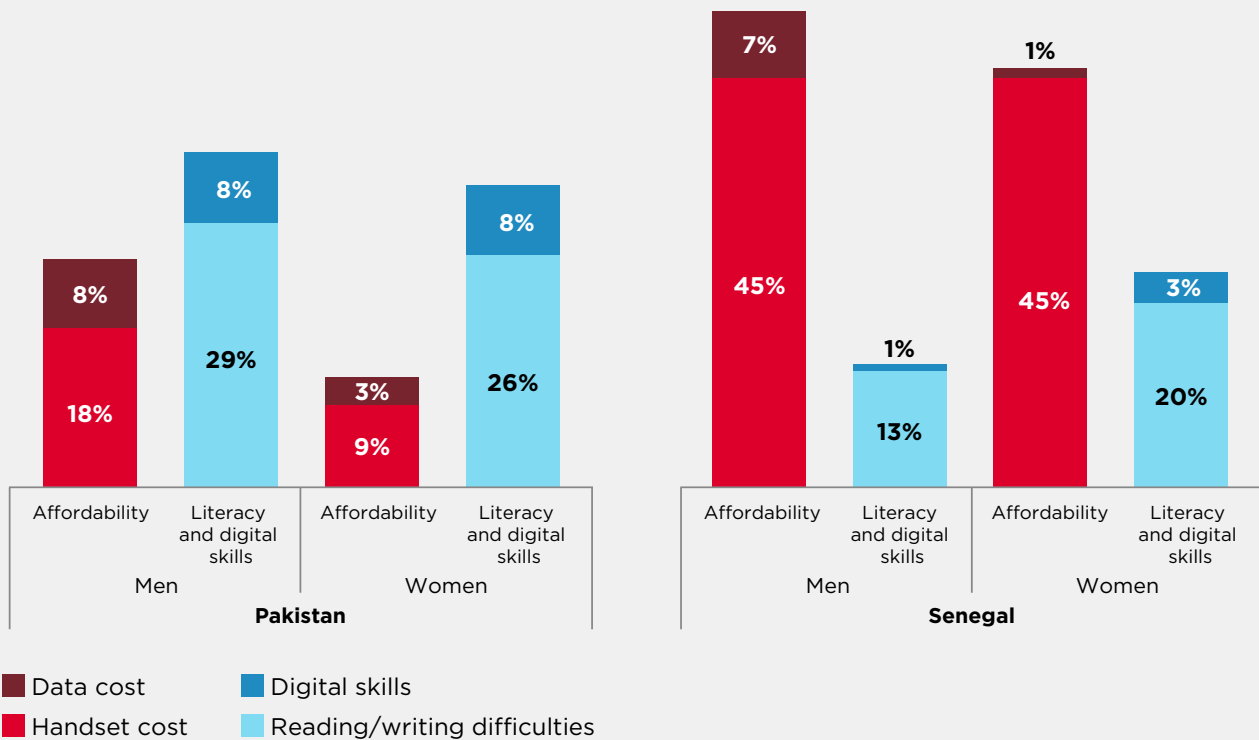
Of those who reported affordability as the top barrier to adoption, the vast majority reported it is the affordability of handsets, not data, that is the greatest obstacle. In fact, handset affordability is the top individual barrier to mobile internet adoption for male and female respondents in half the survey countries (see Figure 21).

Similarly, of those who reported literacy and digital skills as their top barrier to adoption, most reported that reading and writing difficulties are the main obstacle. This is true for both men and women across all survey countries. Figure 15 illustrates these results for Pakistan and Senegal. In Senegal, for example, 45% of women who are aware of mobile internet but do not use it cite handset affordability as their top barrier to adoption (compared to 1% who cite data costs as the top barrier) and 20% of female respondents cite reading and writing difficulties (compared to 3% who cite digital skills).

Figure 15

Proportion of women and men in Pakistan and Senegal who are aware of mobile internet but do not use it, and who reported lack of affordability or literacy and digital skills as the most important barrier to adoption

Percentage of those who are aware of mobile internet but do not use it



Source: GSMA Consumer Survey, 2023

Base: Adults aged 18+ who have not used mobile internet in the past three months, despite being aware of mobile internet (excludes those who are not aware of mobile internet).

Percentages indicate the relative 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?" n= from 221 to 335 for women and n= from 157 to 248 for men

At the country level, there are variations in the top-reported barriers (see Table 1). For example, affordability was the top barrier for female respondents in all African markets surveyed except Egypt, where it was literacy and digital skills. Beyond the top two barriers, safety and security concerns remain an important barrier to adoption for many who are aware of mobile internet but do not use it, but this is reported at a much lower level in most countries outside

Latin America. In several countries, lack of family approval is a major barrier to adoption for women, but especially in Pakistan where it is the second most-reported barrier for female respondents.

It is important to remember that women’s lower rate of mobile internet access means there are millions more women who face these barriers, so addressing them will disproportionately benefit women.

Table 1

Top barriers to mobile internet adoption for those who are aware of mobile internet

Based on the single most important reported barrier to adopting mobile internet

ALL COUNTRIES

Ranking	Women	Men
1	Affordability	Literacy and digital skills
2	Literacy and digital skills	Affordability
3	Safety and security	Safety and security

	EGYPT		ETHIOPIA		KENYA		NIGERIA		SENEGAL		UGANDA	
	W	M	W	M	W	M	W	M	W	M	W	M
1	Literacy and digital skills	Literacy and digital skills	Affordability	Affordability	Affordability	Affordability	Affordability	Affordability	Affordability	Affordability	Affordability	Affordability
2	Affordability	Affordability	Literacy and digital skills	Literacy and digital skills	Literacy and digital skills	Literacy and digital skills	Literacy and digital skills	Literacy and digital skills	Literacy and digital skills	Literacy and digital skills	Literacy and digital skills	Literacy and digital skills
3	Relevance	No time to use mobile internet	Relevance	Family does not approve	Safety and security	Safety and security	Safety and security	Relevance	Safety and security	No time to use mobile internet	Safety and security	Safety and security

	BANGLADESH		INDIA		INDONESIA		PAKISTAN	
	W	M	W	M	W	M	W	M
1	Literacy and digital skills	Literacy and digital skills	Literacy and digital skills	Literacy and digital skills	Affordability	Safety and security	Literacy and digital skills	Literacy and digital skills
2	Affordability	Affordability	Safety and security	Safety and security	Safety and security	Affordability	Family does not approve	Affordability
3	Safety and security	Safety and security	Affordability	Affordability	Literacy and digital skills	Literacy and digital skills	Affordability	Relevance

	GUATEMALA		MEXICO	
	W	M	W	M
1	Safety and security	Safety and security	Safety and security	Safety and security
2	Literacy and digital skills	Literacy and digital skills	Literacy and digital skills	Literacy and digital skills
3	Affordability	Affordability	Affordability	Affordability

Source: GSMA Consumer Survey, 2023
 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 who are not aware of mobile internet).
 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 Appendix 1). Access-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?”
 n= from 127 to 637 for women and n= from 96 to 520 for men

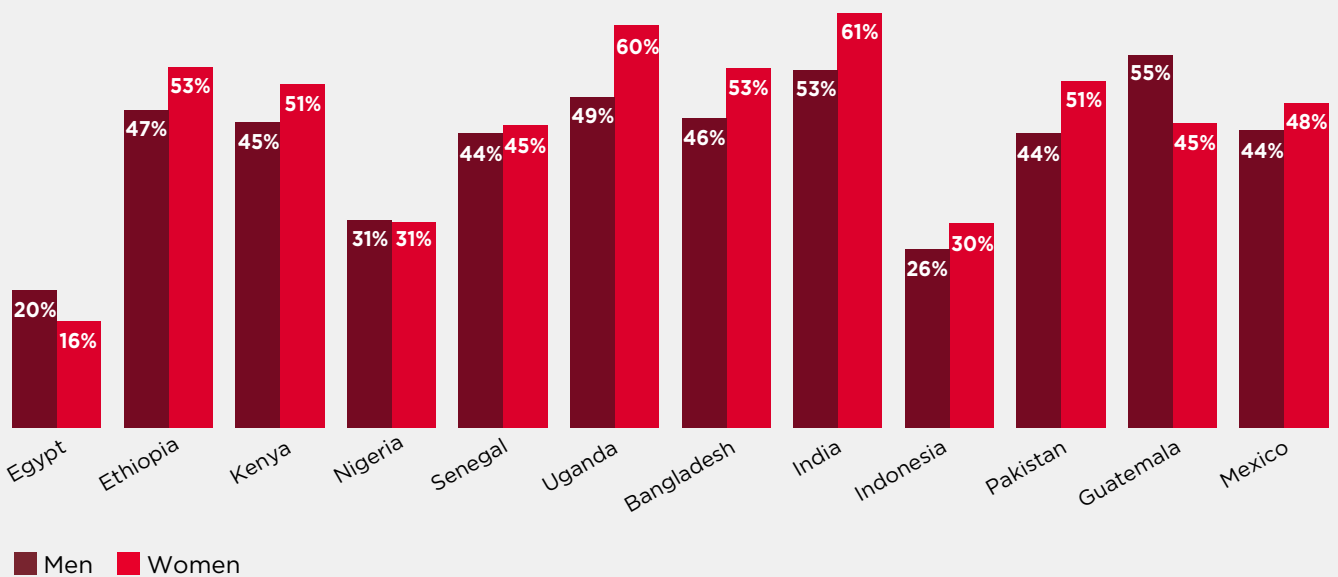


Barriers to further mobile internet use among existing users

Once women start to use mobile internet, they tend to use it less frequently than men and for a narrower range of services. At the same time, in most of the survey countries, female mobile internet users are more likely than men to report that they would like to use mobile internet more than they currently do, especially in Kenya, India, Pakistan, Bangladesh and Ethiopia, where this is

true for more than half of female mobile internet users (see Figure 16). Given this, it is important to understand not only the barriers preventing women from adopting mobile internet, but also the barriers that stop existing mobile internet users from using it more and how this compares to male users.

Figure 16
Mobile internet users who would like to use it more
Percentage of mobile internet users



Source: GSMA Consumer Survey, 2023
 Base: Mobile internet users aged 18+
 Mobile internet users were asked the question, "To what extent do you agree or disagree with the following statement? 'I am not able to use the internet on a mobile phone as much as I would like to'". The figures in the graph represent those who responded either "strongly agree" or "somewhat agree".
 n= from 71 to 424 for women and n= from 121 to 661 for men

Our research found that while there are two clear top barriers to mobile internet adoption for those who are already aware of it – affordability (particularly handsets) and literacy and digital skills – the top barriers to further mobile internet use vary more by country (see Table 2). Some barriers also increased in importance. For example, safety and security concerns were reported as the top barrier in more countries and while handset affordability remains a significant barrier to using mobile internet more, data affordability becomes a greater consideration to further use than for adoption. Connectivity experience is reported significantly more as a barrier to mobile internet use by men and women who use it already, particularly in certain countries, such as Senegal and Egypt. However, literacy and digital skills are reported more as a top barrier to mobile internet adoption than for further use.

In 11 of the 12 survey countries, safety and security concerns are one of the top three reported barriers to further mobile internet use for male and female users. This includes concerns around information security, fraud/scams, harmful content, misinformation and unwanted contact. A particularly high proportion of female and male mobile internet users in Mexico, Guatemala and Indonesia reported these barriers. These countries also have the highest rates of mobile internet adoption among all survey countries.

Affordability is another top barrier to further mobile internet use for both male and female mobile internet users in survey countries. In most countries, affordability of data is more of a barrier than the affordability of handsets. Data costs are a particular issue for mobile internet users in Kenya, Nigeria, Uganda and Bangladesh, where it is the top individual barrier to further use for both men and women. For example, in Bangladesh, 24% of women and 15% of men who use mobile internet reported data costs as their top barrier to further use. Handset affordability is still reported as a barrier to further mobile internet use by a significant proportion of respondents in many countries. This is particularly true in Ethiopia where 30% of men and 26% of women who use mobile internet reported handset affordability as their top barrier to further use.

Among existing mobile internet users, digital skills are much less of a barrier to further use than to adoption, with no more than 10% of male or female respondents citing it as their top barrier to using mobile internet more.

Connectivity experience is more of a barrier to further mobile internet use than to adoption. This was reported as one of the top three barriers for male mobile internet users in all survey countries (except South Asian markets), and for women in Egypt, Senegal, Guatemala, Mexico, Ethiopia and Uganda.

GSMA data shows that in 2023, 95% of the adult population in LMICs were living within the footprint of a mobile broadband network and 89% were covered by 4G. However, even where there is coverage, people can experience connectivity challenges for a variety of reasons. For example, in the countries where connectivity experience is reported as one of the top three barriers, 4G coverage is around 90% but most internet users are still using 3G. In Senegal, 58% of all mobile broadband connections are 3G despite 91% 4G coverage.¹⁹ One likely explanation is that users own or depend on 3G handsets that are not 4G capable, which would affect their connectivity experience. Network performance may also play a role. While network quality has improved in all regions,²⁰ there is still a marked difference in quality between high-income countries (HICs) and LMICs: average download speed in HICs in 2022 was 71 Mbps compared to 17 Mbps in LMICs.²¹

Family disapproval is not reported as much as a top barrier to further mobile internet use as it is to adoption in any of the survey countries. However, there are still some barriers that reveal how social norms are dictating how even existing mobile internet users can use the internet. In Pakistan, 29% of female mobile internet users report only being allowed to use it for specific reasons as a barrier to using it more (compared to 13% of male users). Additionally, 32% of female mobile internet users in Pakistan report only being allowed to use it for a limited amount of time per day as a barrier to further use (compared to 15% of male users).

19. GSMA [Mobile Connectivity Index](#).

20. See Figure 15 in [The State of Mobile Internet Connectivity 2023](#).

21. GSMA Intelligence analysis based on Speedtest Intelligence® data provided by Ookla®.

Table 2

Top barriers to further mobile internet use for existing mobile internet users
 Based on the single most important reported barrier to using mobile internet more

ALL COUNTRIES

Ranking	Women	Men
1	Safety and security	Safety and security
2	Affordability	Affordability
3	Connectivity experience	Connectivity experience

	EGYPT		ETHIOPIA		KENYA		NIGERIA		SENEGAL		UGANDA	
	W	M	W	M	W	M	W	M	W	M	W	M
1	Connectivity experience	Connectivity experience	Affordability	Affordability	Affordability	Affordability	Affordability	Affordability	Connectivity experience	Connectivity experience	Affordability	Affordability
2	Safety and security	Safety and security	Connectivity experience	Connectivity experience	Safety and security	Safety and security	Safety and security	Safety and security	Literacy and digital skills	Safety and security	Connectivity experience	Connectivity experience
3	Affordability	Affordability	Safety and security	Do not have time to use mobile internet	Internet drains my battery	Connectivity experience	Literacy and digital skills	Connectivity experience	Safety and security	Affordability	Safety and security	Safety and security

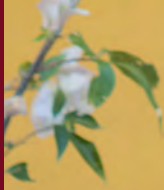
	BANGLADESH		INDIA		INDONESIA		PAKISTAN	
	W	M	W	M	W	M	W	M
1	Affordability	Affordability	Safety and security	Safety and security	Safety and security	Safety and security	Affordability	Safety and security
2	Literacy and digital skills	Safety and security	Affordability	Affordability	Connectivity experience	Connectivity experience	Safety and security	Connectivity experience
3	Safety and security	Connectivity experience	Literacy and digital skills	Connectivity experience	Affordability	Affordability	Literacy and digital skills	Affordability

	GUATEMALA		MEXICO	
	W	M	W	M
1	Safety and security	Safety and security	Safety and security	Safety and security
2	Connectivity experience	Connectivity experience	Affordability	Connectivity experience
3	Affordability	Literacy and digital skills	Connectivity experience	Affordability

Source: GSMA Consumer Survey, 2023
 Base: Mobile internet users aged 18+
 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 Appendix 1). Access-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?".
 n= from 71 to 424 for women and n= from 121 to 661 for men



SPOTLIGHT



Online safety and security concerns

While more men and women are using mobile internet than ever before, access to this life-enhancing technology also opens them to potential risks and harms. These risks include receiving threats or unwanted contact or being victim to scams or fraud while using mobile internet.

Our research has shown that these safety and security concerns are a key reason why existing mobile internet users do not use it more. In most instances, women are more likely than men to report these concerns. For example, 38% of female mobile internet users in Kenya compared to 30% of male users report concerns around scams and fraud as a barrier to using it more. Safety and security concerns can also prevent women and men from using mobile internet for the first time (see Figure 22).

While our research suggests that the magnitude of these concerns does not always reflect the actual prevalence of negative experiences when using mobile internet, they are still important to address. Ensuring that women and men are not deterred from using the internet, and when they do they feel confident they can keep themselves, their families and personal information safe, is essential for them to reap the full benefits. As such, these safety and security concerns must be taken seriously by MNOs, internet companies and governments alike.

Users with lower levels of digital skills, and those in countries where there are weaker legislation and reporting mechanisms to support, prevent and respond to these incidents, are likely most at risk of negative impacts.

More research is required to understand these concerns and experiences among male and female mobile internet users in LMICs. Some research has been conducted in HIC contexts,²² but there is little nationally representative evidence beyond this. There is also limited understanding of the impact these negative experiences have on the lives and well-being of users who have been affected.

To better understand the prevalence of actual, personal experiences with safety and security issues among male and female mobile internet users, we asked whether they had experienced one of the following negative incidents in the past year via mobile internet:

- Received offensive or unwanted content
- Received threats of harm to oneself or someone they know
- Had personal information or photos used or shared without consent
- Been tricked or defrauded of money

The reported prevalence of these negative online incidents among male and female mobile internet users is lower than their level of concern

Across survey countries, one of every five mobile internet users on average reported experiencing at least one of these incidents. This was lowest for mobile internet users in Egypt (one of every eight users) and highest in Uganda (almost one of every two users). Male and female mobile internet users in Uganda and Kenya reported receiving unwanted content and being tricked out of money substantially more than in any other country. The most commonly reported incident across survey countries was receiving offensive or unwanted content (see Figure 17).

22. For example: Amnesty International. (20 November 2017). Press release: "[Amnesty reveals alarming impact of online abuse against women](#)".

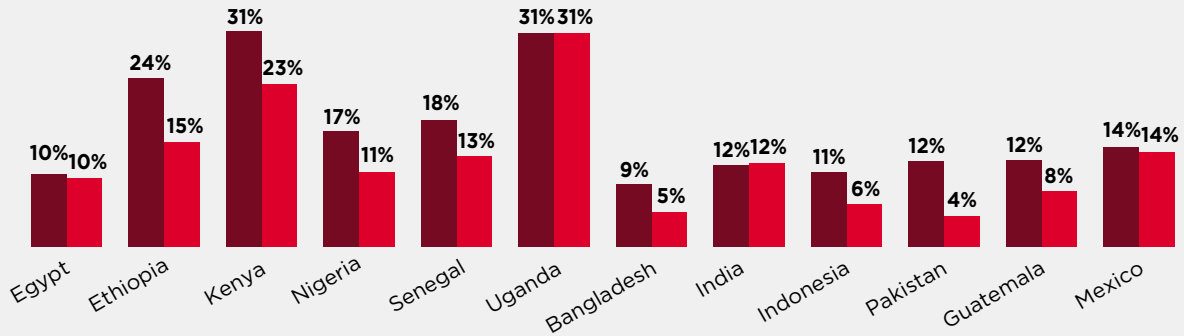
SPOTLIGHT  **Online safety and security concerns**

Figure 17

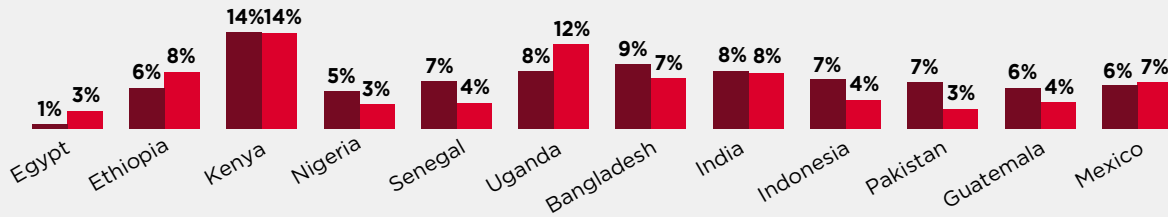
Mobile internet users who have experienced a negative incident via mobile internet in the past year

Percentage of mobile internet users

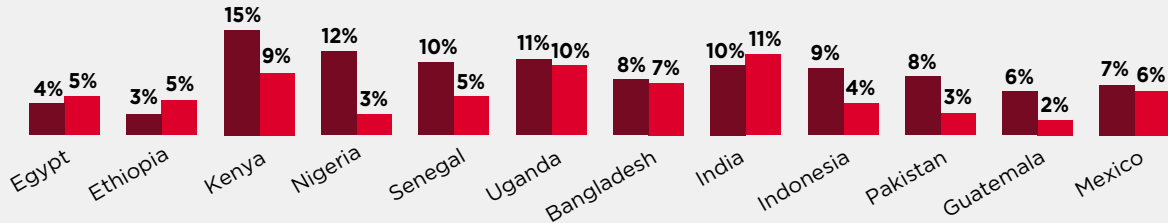
Receiving offensive or unwanted content



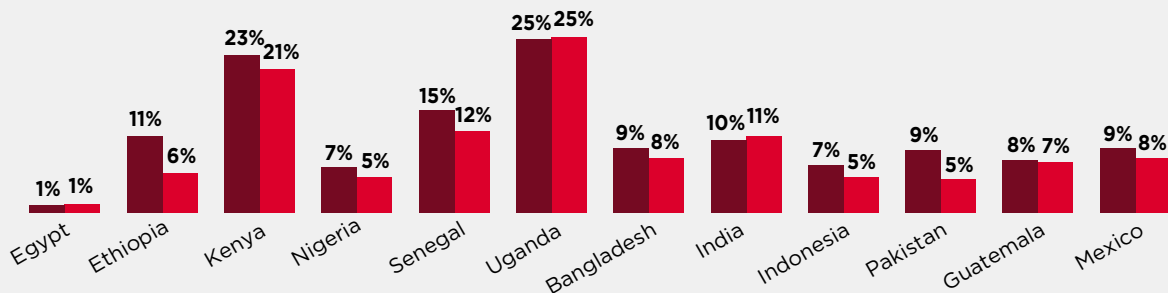
Receiving threats to cause harm to you or someone you know



Having personal information or photos used, taken or shared without your consent



Being tricked or defrauded of money



■ Men ■ Women

Source: GSMA Consumer Survey, 2023

Base: Mobile internet users aged 18+

Percentages shown here reflect the proportion of mobile internet users who have experienced each negative incident in the past year.

n= from 71 to 424 for women and n= from 121 to 661 for men

SPOTLIGHT Online safety and security concerns

Male mobile internet users are more likely than women to experience online negative incidents, but women mobile internet users are more likely to report them

In all countries, male mobile internet users were equally or more likely than women to report experiencing any of the negative incidents listed in our survey (see Figure 17). This was surprising and likely related to the fact that men use mobile internet more frequently than women and for more use cases.²³ In fact, those who had experienced any incident, on average, reported a greater diversity and frequency of mobile internet use than those who had not reported any incident. To better understand this, further research into the correlation between the proportion of time spent online and number of negative incidents experienced would be required.

Respondents who had experienced at least one incident were asked whether they

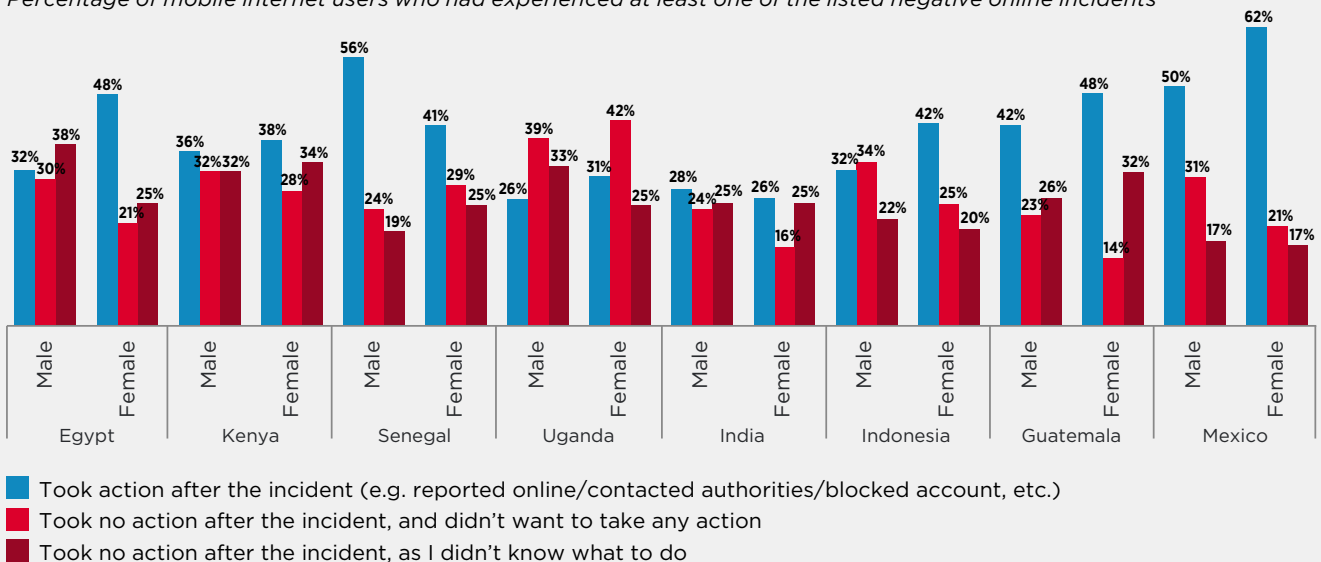
had taken action in response to it. Female respondents in five of the eight survey countries for which there is data²⁴ were more likely than men to have taken action following the negative incident (see Figure 18). This includes (but is not limited to) reporting the incident online, blocking an account and contacting authorities. In six of these eight countries, women respondents were also equally or more likely than men to have wanted to take action, but were unsure what to do (see Figure 18).

Although women mobile internet users were less likely than men to experience any of the negative incidents listed in our survey, they were more likely to want to do something about it. This might be an indication that these incidents had a greater impact on these women than the men. Further research is needed into how these negative experiences impact mobile internet users, specifically women, and their use of mobile.

Figure 18

Action taken following a negative incident by mobile internet users who have experienced at least one

Percentage of mobile internet users who had experienced at least one of the listed negative online incidents



Source: GSMA Consumer Survey, 2023

Base: Mobile internet users who had experienced at least one of the negative incidents listed in the survey

The four negative incidents include: receiving offensive or unwanted content, receiving threats to cause harm to self/someone they know, having personal information/photos used/shared without consent and being tricked or defrauded of money.

Respondents who have experienced at least one of these incidents were asked, "Thinking about the incident(s) you experienced, which of the following best describes what you did?"

n= from 33 to 90 for women and n= from 33 to 136 for men

23. Pew Research Center. (2021). *The State of Online Harassment*.

24. Sample sizes of female mobile internet users who had experienced one of the four listed negative incidents were insufficient for analysis in Ethiopia, Nigeria, Bangladesh and Pakistan.

SPOTLIGHT Online safety and security concerns

Female mobile internet users were more likely than men to feel they were targeted online because of their gender, but most felt that incidents were random

The vast majority of those who had experienced at least one negative incident felt that they were not directly targeted and that it was instead random. For instance, 65% of both male and female respondents in Indonesia either reported that they thought the incident was not targeted or that they did not know why it had happened. However, in six of the eight markets for which there is data, women respondents were more likely than men to report they believe it happened because of their gender. For example, 31% of women respondents in Egypt reported they thought the incident happened because of their gender compared to just 2% of male respondents.

Female mobile internet users are less likely than men to be confident in their ability to keep themselves safe when online

Mobile internet users were asked about their ability to perform various digital tasks to keep themselves safe when online. This included: changing passwords, blocking or unfriending someone, reporting something suspicious,

changing privacy settings and recognising and checking whether information/messages are spam or fake.

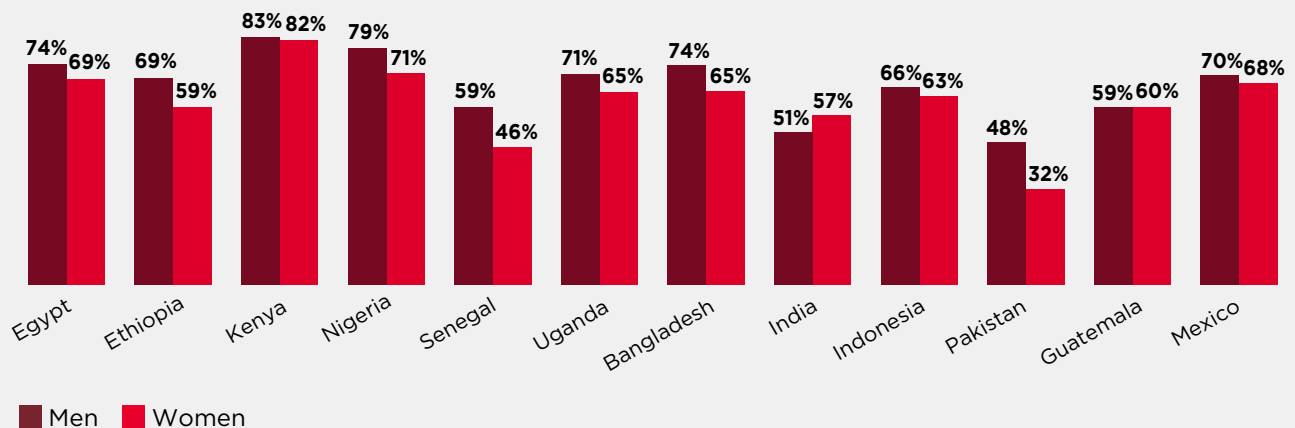
Figure 19 shows the proportion of mobile internet users who reported they were confident in their ability, averaged across each of these digital tasks. In most survey countries, female mobile internet users reported lower levels of confidence in their ability to keep themselves safe online, with similar gender differences seen for each of the digital tasks in the survey. The exceptions are Guatemala, Mexico and Indonesia, where confidence in one's ability to perform the digital skills is very similar by gender, and in India, where female mobile internet users are more likely than male users to feel confident performing these tasks. Men and women who use mobile internet in Senegal and Pakistan had the lowest levels of confidence performing any of the six tasks that would help keep them safe online.

Given that women were more likely than men to want to take action following an experience of online harm but did not know what to do (see Figure 18), addressing this confidence gap is important to ensure they have the skills to keep themselves safe while using mobile internet.

Figure 19

Proportion of mobile internet users who are confident in their ability to perform digital tasks to stay safe online

Percentage of mobile internet users



Source: GSMA Consumer Survey, 2023

Base: Mobile internet users aged 18+

Percentages shown here reflect the proportion of mobile internet users who felt they were either "very confident" or "fairly confident" averaged across the following digital tasks: change your password on a website/app/social media account; block or "unfriend" someone/an account; report something suspicious you see on a web/app to the administrator, developer or provider of that service; change your privacy settings on a social media account; recognise when an online message or information might be "spam" or fake; and check whether an online message or information is "spam" or fake.

n= from 71 to 424 for women and n= from 121 to 661 for men

Recommendations



With mobile gender gaps narrowing for the first time in three years, it is essential to continue working to ensure no one is left behind in an increasingly digital world. The international community has set ambitious targets to reduce the digital gender divide. Under India’s presidency, leaders of the G20 have committed to halving the digital gender gap by 2030.²⁵ UN Member States made similar commitments at the 67th session of the UN Commission on the Status of Women,²⁶ and the mobile industry, development community and other stakeholders have set bold ambitions.

Moving from commitment to action will be critical since the mobile internet gender gap remains substantial and will not close on its own. Targeted action and investment are needed to achieve these aspirations and accelerate progress for the benefit of women and their communities, as well as economies and societies more broadly. Moreover, the mobile gender gap not only reflects existing gender inequalities, but also threatens to exacerbate them. It is only through the concerted action and collaboration of different stakeholders that progress on this issue will truly accelerate.

The GSMA proposes the following recommendations for stakeholders to take informed and targeted action to reduce mobile gender gaps. The recommendations are for four types of organisations: MNOs, internet companies, policymakers and regulators and the development community (see Figure 20). This list is not exhaustive, and actions to address structural barriers such as income gaps, education disparities and restrictive social norms that underpin the mobile gender gap, also need to be tackled.

More detailed recommendations for MNOs and other organisations can be found in the GSMA Connected Women report, *Reaching 50 Million Women with Mobile: A Practical Guide*.²⁷ For governments and policymakers, more detailed recommendations to close the mobile gender gap can be found in the GSMA Connected Women report, *Policy Considerations to Accelerate Digital Inclusion for Women in Low- and Middle-Income Countries*.²⁸

Recommendations for all stakeholders to close the mobile gender gap



Ensure there is a focus on gender equality and reaching women at an organisational and policy level through senior leaders championing the issue and setting specific gender equity targets.



Understand the mobile gender gap by improving the quality and availability of gender-disaggregated data, and understanding women’s needs and the barriers they face to mobile ownership and use.



Explicitly address women’s needs, circumstances and challenges in the design and implementation of mobile-related products, services, interventions and policies. This includes addressing the barriers women face related to affordability, knowledge and digital skills, safety and security, access and the availability of relevant content, products and services.



Collaborate and partner with different stakeholders to address the mobile gender gap. Targeted intervention is needed from industry, policymakers, the development community and other stakeholders to ensure that women are no longer left behind.

25. G20. (2023). [G20 New Delhi’s Leaders’ Declaration](#).

26. Commission on the Status of Women. (2023). [CSW67 Agreed Conclusions](#). UN Women.

27. GSMA Connected Women. (2020). “[Top 10 recommendations for reaching women with mobile across low- and middle-income countries](#)”, in *Reaching 50 Million Women with Mobile: A Practical Guide*.

28. GSMA Connected Women. (2022). [Policy considerations to accelerate digital inclusion for women in low- and middle-income countries](#).

Figure 20
Recommendations for closing the mobile gender gap in LMICs, by stakeholder type and barrier addressed

Barrier addressed by the action	MNOs	Internet companies	Policymakers and regulators ²⁹	Development community
Affordability	Support industry efforts to lower the cost of internet-enabled mobile phones.	Partner with MNOs to address handset affordability.	Ensure policies and regulations help lower the cost of handsets and data for consumers, which is likely to disproportionately benefit women.	Partner with and support the mobile ecosystem on projects that promote affordable handsets.
	Design solutions to reduce the burden of the “one-off” cost of internet-enabled phones for consumers, making them more affordable, especially smartphones.	Consider how to adapt products and services to make them more affordable without compromising quality.	Adopt policies and regulations that help users improve their ability to pay for handsets, data and other services, especially women.	Fund and/or facilitate mobile-based digital literacy training for women.
Knowledge and digital skills	Develop clear and transparent pricing for credit and data and introduce more creative pricing to appeal to price-sensitive customers.	Implement digital skills training, paying attention to women’s needs, interests and circumstances.	Consider subsidy programmes to help make handsets and data services more affordable.	Raise awareness of the threats preventing women from accessing and using the internet and how they can be addressed.
	Improve customers’ digital skills, including providing assistance to new users who may need additional support and paying attention to women’s needs, interests and circumstances.	Help women to navigate the internet confidently and safely and to feel secure and in control when using internet apps and services.	Address wider policy and regulatory barriers that are discriminatory to women accessing financing and can impede their ability to afford handsets and data.	Develop and support initiatives to increase women’s access to and use of mobile and mobile internet.
Safety and security	Consider incentivising women’s social networks to help teach them how to use mobile handsets and services.	Develop apps, services and other measures to help women feel safer online.	Develop and deliver digital skills training programmes that meet women’s preferences for what and how they want to learn.	Raise awareness of the barriers to women’s mobile ownership and use, and advocate for stakeholders to take action to address the mobile gender gap.
	Develop apps and services that can help increase safety for women.	Ensure mobile apps and operating systems are accessible for women who are less confident and have lower literacy levels.	Invest in public education and digital literacy initiatives that improve the confidence and digital skills of women and girls.	Work to address the negative influence of social norms.
Access	Consider the role of gatekeepers in facilitating women’s mobile ownership and use.	Develop and incorporate tools to improve the usability of digital services for women with low literacy levels or who only speak their local language.	Raise awareness of the threats preventing women and girls from accessing and using the internet and how these threats can be addressed or reduced.	
	Ensure agent networks are accessible for women.	Understand and incorporate the content, features, channels and services that women in your market find useful and relevant.	Strengthen measures to protect women against internet-related abuse and harassment.	
Relevance	Ensure marketing and services are accessible for women and those with lower levels of literacy, digital skills and awareness and understanding of the internet.		Encourage the development and uptake of apps and services that make it safer for women to access and use the internet.	
	Communicate the relevance of mobile ownership and mobile internet use in women’s daily lives.		Create an enabling policy and regulatory environment to help women purchase and access mobile services.	
			Ensure mobile-related sales, access and training facilities are accessible for women as well as men.	
			Ensure digital government services are accessible for those with lower literacy and digital skills.	
		Raise awareness of the benefits of mobile for women to help address social norms that restrict women’s access and use of mobile.		
		Raise awareness of mobile internet-enabled content, apps and services and how they can be relevant to women’s lives.		
		Create an enabling environment that supports the development of content, apps and services that meet women’s needs.		
		Ensure that digital public services are developed to meet the needs of women.		

29. More detailed recommendations on how policymakers can increase mobile adoption more broadly among the underserved can be found here: <https://www.gsma.com/mobilefordevelopment/resources/accelerating-mobile-internet-adoption-policy-considerations>.

Appendices



Appendix 1:

Barriers to mobile internet adoption and use

In each of the 12 survey countries:

- Respondents who were aware of mobile internet but had not used it (in the past three months) were asked to identify the barriers preventing them from adopting it³⁰
- Respondents who had used mobile internet (in the past three months) were asked to identify the barriers preventing them from using it more

Respondents selected from a list of 22 barriers during a face-to-face survey. For barriers to mobile internet adoption and further mobile internet use, respondents were first asked to identify all relevant barriers from this list (see Figure 22 and Figure 24), then to identify those that were most important and, finally, to identify the single most important barrier (see Figure 21 and Figure 23).

Strongly related or thematically overlapping barriers were grouped into composites that were used to calculate country-level and overall rankings of barriers.³¹ The results may not fully reflect the importance of subtle, underlying structural impediments, particularly those grounded in social norms that disproportionately affect women and might not be reported directly by respondents, such as the perceived inappropriateness of spending money on mobile services for themselves.



30. Respondents who were not aware of mobile internet were not asked to identify the barriers preventing them from using it as it was not deemed appropriate.

31. These composite barriers are aggregates (not averages) of responses for between two and five sub-barriers. Access-related barriers are not grouped as a composite as they cover a disparate range of topics. "All countries" barriers (top of Table 1 and Table 2) were calculated by averaging country-level data for the 12 countries surveyed.

Figure 21
Top barrier to mobile internet adoption

Percentage of those who are aware of mobile internet but do not use it who reported the following as the single most important barrier to adopting mobile internet

			AFFORDABILITY		LITERACY AND DIGITAL SKILLS				RELEVANCE		SAFETY AND SECURITY					ACCESS							
			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	Internet Drains My Battery	Access to Agent Support	Inconsistent/No Coverage	Slow Connection Speeds	Do Not Have Time to Use Mobile Internet	Shared Phone Access	Family Does Not Approve	
AFRICA	Egypt	M	14%	5%	27%	11%	3%	4%	5%	2%	2%	0%	2%	0%	2%	0%	2%	4%	1%	12%	0%	4%	
		W	18%	7%	20%	13%	1%	1%	9%	1%	4%	2%	1%	0%	1%	0%	1%	3%	0%	5%	5%	6%	
	Ethiopia	M	41%	3%	19%	3%	8%	3%	3%	2%	1%	1%	1%	0%	0%	2%	0%	6%	1%	5%	0%	0%	
		W	37%	2%	28%	2%	8%	3%	6%	0%	1%	0%	1%	0%	0%	0%	0%	3%	2%	4%	0%	1%	
	Kenya	M	42%	7%	10%	1%	1%	3%	6%	4%	1%	3%	3%	1%	5%	1%	1%	2%	1%	5%	1%	1%	
		W	51%	4%	8%	2%	6%	1%	7%	1%	1%	3%	1%	0%	4%	1%	0%	2%	0%	5%	2%	0%	
	Nigeria	M	38%	8%	21%	2%	1%	1%	9%	1%	1%	0%	2%	1%	3%	1%	0%	1%	1%	5%	4%	1%	
		W	33%	6%	22%	4%	3%	1%	3%	1%	2%	3%	2%	2%	4%	0%	1%	0%	0%	6%	3%	4%	
	Senegal	M	45%	7%	13%	0%	1%	0%	2%	1%	0%	2%	2%	1%	1%	3%	0%	10%	2%	10%	1%	0%	
		W	54%	1%	20%	1%	1%	1%	1%	0%	1%	2%	1%	1%	2%	1%	1%	5%	0%	4%	1%	3%	
	Uganda	M	49%	7%	5%	1%	3%	1%	7%	2%	2%	1%	3%	1%	3%	2%	1%	4%	1%	6%	2%	0%	
		W	44%	6%	13%	3%	3%	4%	4%	2%	1%	3%	1%	1%	3%	1%	1%	2%	2%	4%	2%	1%	
ASIA	Bangladesh	M	9%	6%	20%	12%	10%	1%	7%	2%	2%	5%	0%	4%	1%	2%	1%	0%	2%	11%	1%	2%	
		W	11%	4%	23%	7%	5%	3%	5%	5%	3%	5%	1%	2%	3%	1%	1%	0%	1%	9%	1%	11%	
	India	M	6%	7%	14%	10%	4%	2%	6%	3%	2%	2%	2%	4%	10%	5%	2%	3%	8%	5%	2%	3%	
		W	12%	5%	13%	6%	7%	4%	7%	1%	3%	4%	3%	4%	7%	4%	2%	2%	3%	4%	3%	2%	
	Indonesia	M	15%	5%	5%	10%	6%	5%	6%	0%	8%	6%	11%	2%	12%	2%	0%	3%	3%	0%	2%	0%	
		W	16%	10%	4%	8%	2%	4%	10%	0%	2%	4%	4%	0%	14%	2%	0%	8%	2%	2%	4%	4%	
	Pakistan	M	18%	8%	29%	2%	4%	2%	11%	1%	2%	2%	4%	1%	1%	3%	2%	1%	2%	5%	0%	2%	
		W	9%	3%	26%	4%	2%	1%	11%	1%	0%	4%	1%	2%	2%	1%	1%	1%	1%	3%	0%	26%	
	LATIN AMERICA	Guatemala	M	14%	2%	18%	3%	0%	1%	0%	0%	9%	1%	7%	3%	3%	10%	2%	13%	7%	3%	3%	0%
			W	15%	4%	16%	4%	1%	4%	2%	0%	6%	7%	9%	2%	8%	5%	2%	3%	0%	5%	6%	1%
Mexico		M	9%	1%	10%	3%	10%	3%	3%	1%	2%	16%	11%	5%	10%	1%	0%	8%	2%	3%	0%	0%	
		W	15%	3%	7%	5%	10%	3%	5%	0%	6%	10%	9%	7%	7%	0%	0%	1%	2%	2%	2%	2%	

Source: GSMA Consumer Survey, 2023
 Base: Adults aged 18+ who have not used mobile internet in the past three months, despite being aware of mobile internet (excludes those who are not aware of mobile internet).
 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?"
 n= from 50 to 271 for women and n= from 63 to 290 for men



Figure 22
A barrier to mobile internet adoption
 Percentage of those who are aware of mobile internet but do not use it who reported the following as a barrier to adopting mobile internet

			AFFORDABILITY		LITERACY AND DIGITAL SKILLS				RELEVANCE		SAFETY AND SECURITY					ACCESS							
			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	INTERNET DRAINS MY BATTERY	ACCESS TO AGENT SUPPORT	INCONSISTENT/NO COVERAGE	SLOW CONNECTION SPEEDS	DO NOT HAVE TIME TO USE MOBILE INTERNET	SHARED PHONE ACCESS	FAMILY DOES NOT APPROVE	
AFRICA	Egypt	M	65%	63%	64%	53%	53%	50%	48%	29%	35%	39%	40%	37%	38%	29%	33%	44%	34%	52%	33%	21%	
		W	63%	59%	64%	55%	51%	50%	46%	26%	40%	43%	33%	29%	32%	32%	33%	37%	27%	44%	36%	26%	
	Ethiopia	M	68%	45%	42%	33%	50%	35%	25%	20%	22%	20%	20%	22%	24%	22%	21%	37%	29%	31%	9%	5%	
		W	66%	37%	46%	42%	55%	30%	27%	21%	16%	13%	14%	15%	15%	18%	16%	28%	23%	23%	7%	10%	
	Kenya	M	65%	47%	32%	14%	29%	15%	25%	21%	22%	26%	21%	18%	22%	21%	7%	19%	9%	26%	10%	1%	
		W	70%	48%	31%	20%	35%	25%	36%	17%	26%	28%	26%	17%	28%	20%	15%	17%	13%	30%	15%	7%	
	Nigeria	M	54%	44%	42%	19%	32%	12%	27%	13%	15%	12%	15%	12%	21%	10%	3%	9%	8%	22%	16%	6%	
		W	62%	52%	51%	26%	34%	19%	26%	15%	23%	19%	22%	19%	25%	15%	9%	12%	9%	23%	15%	11%	
	Senegal	M	63%	38%	34%	16%	16%	12%	21%	12%	14%	19%	20%	15%	21%	18%	9%	37%	29%	34%	14%	3%	
		W	73%	34%	57%	29%	21%	14%	18%	11%	15%	19%	21%	16%	23%	22%	11%	29%	23%	21%	15%	7%	
	Uganda	M	73%	56%	30%	20%	34%	29%	22%	32%	28%	25%	27%	25%	29%	35%	25%	35%	27%	32%	20%	6%	
		W	77%	55%	40%	22%	37%	39%	29%	34%	24%	22%	23%	21%	37%	30%	24%	30%	23%	25%	21%	7%	
ASIA	Bangladesh	M	20%	23%	29%	26%	24%	13%	16%	16%	8%	15%	13%	13%	8%	10%	9%	7%	13%	23%	7%	6%	
		W	27%	22%	32%	22%	18%	17%	23%	18%	11%	16%	12%	13%	15%	13%	11%	8%	13%	22%	15%	20%	
	India	M	37%	42%	32%	35%	23%	25%	29%	26%	26%	26%	30%	31%	35%	36%	23%	28%	32%	27%	28%	22%	
		W	43%	41%	35%	34%	31%	33%	32%	23%	28%	28%	31%	27%	33%	36%	30%	32%	32%	31%	28%	24%	
	Indonesia	M	49%	51%	19%	32%	41%	40%	39%	23%	42%	39%	37%	31%	46%	26%	22%	31%	20%	27%	24%	16%	
		W	51%	48%	10%	32%	42%	28%	44%	15%	41%	42%	43%	26%	49%	16%	20%	25%	10%	32%	17%	12%	
	Pakistan	M	62%	58%	57%	43%	37%	29%	46%	40%	28%	30%	33%	35%	31%	21%	25%	22%	23%	34%	25%	13%	
		W	50%	47%	60%	40%	40%	27%	48%	32%	23%	29%	25%	25%	25%	19%	22%	23%	22%	34%	28%	41%	
	LATIN AMERICA	Guatemala	M	37%	37%	29%	18%	20%	22%	14%	13%	27%	30%	32%	20%	33%	34%	12%	37%	25%	24%	16%	10%
			W	41%	39%	30%	24%	18%	14%	17%	8%	33%	31%	36%	21%	39%	25%	18%	23%	20%	14%	18%	8%
Mexico		M	40%	43%	26%	29%	40%	28%	25%	21%	50%	49%	45%	36%	45%	20%	27%	33%	24%	23%	27%	20%	
		W	59%	60%	29%	38%	38%	42%	30%	18%	49%	49%	55%	40%	51%	33%	27%	40%	36%	35%	27%	19%	

Source: GSMA Consumer Survey, 2023
 Base: Adults aged 18+ who have not used mobile internet in the past three months despite being aware of it (excludes those who are not aware of mobile internet).
 Percentages indicate the proportion of respondents who answered, "Yes - this is something that stops me" to the question, "For each of the possible reasons that I read out, please indicate whether this is something that stops you at all from using the internet on a mobile phone."
 n= from 69 to 280 for women and n= from 78 to 296 for men



Figure 23
Top barrier 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					ACCESS								
			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	INTERNET DRAINS MY BATTERY	ACCESS TO AGENT SUPPORT	INCONSISTENT/NO COVERAGE	SLOW CONNECTION SPEEDS	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
AFRICA	Egypt	M	11%	4%	6%	4%	3%	1%	1%	1%	5%	5%	5%	3%	6%	4%	2%	30%	3%	6%	0%	1%	1%	0%
		W	10%	5%	6%	2%	2%	2%	4%	0%	4%	10%	8%	0%	4%	4%	1%	25%	4%	5%	1%	2%	1%	1%
	Ethiopia	M	30%	11%	2%	0%	1%	0%	0%	2%	1%	1%	1%	0%	3%	3%	1%	26%	9%	7%	1%	0%	1%	0%
		W	26%	8%	4%	0%	0%	3%	2%	2%	4%	3%	2%	0%	0%	4%	0%	18%	14%	5%	0%	3%	2%	0%
	Kenya	M	15%	26%	0%	0%	0%	1%	0%	0%	7%	3%	6%	2%	6%	6%	1%	10%	2%	8%	3%	0%	0%	3%
		W	16%	28%	1%	0%	0%	1%	2%	1%	4%	4%	4%	4%	9%	7%	1%	6%	1%	5%	4%	1%	0%	3%
	Nigeria	M	9%	24%	4%	0%	2%	1%	3%	1%	6%	2%	4%	1%	8%	7%	0%	12%	6%	5%	1%	1%	3%	0%
		W	11%	30%	9%	1%	0%	0%	2%	1%	3%	1%	2%	4%	10%	4%	1%	8%	1%	6%	3%	0%	2%	2%
	Senegal	M	3%	12%	9%	0%	2%	0%	0%	1%	3%	4%	5%	3%	6%	6%	1%	28%	9%	8%	1%	0%	1%	1%
		W	7%	13%	18%	1%	1%	2%	0%	0%	3%	2%	6%	3%	7%	4%	0%	19%	7%	4%	2%	1%	0%	0%
	Uganda	M	18%	31%	1%	1%	1%	0%	0%	1%	1%	2%	3%	1%	3%	6%	1%	15%	7%	2%	4%	0%	0%	0%
		W	10%	30%	2%	0%	2%	1%	0%	2%	1%	2%	4%	3%	5%	7%	2%	12%	8%	4%	4%	0%	0%	1%
ASIA	Bangladesh	M	3%	15%	1%	3%	1%	2%	3%	1%	3%	3%	2%	2%	6%	9%	5%	3%	9%	13%	1%	3%	3%	7%
		W	3%	24%	9%	4%	4%	1%	3%	0%	6%	2%	4%	3%	3%	6%	0%	2%	5%	5%	0%	3%	5%	7%
	India	M	6%	12%	4%	2%	2%	5%	2%	2%	2%	3%	4%	2%	12%	7%	3%	5%	8%	9%	3%	2%	1%	4%
		W	9%	10%	4%	2%	4%	1%	3%	2%	2%	3%	4%	3%	7%	8%	3%	3%	6%	9%	4%	5%	2%	3%
	Indonesia	M	2%	5%	0%	1%	0%	4%	0%	1%	7%	9%	16%	2%	12%	6%	2%	16%	7%	6%	2%	1%	1%	2%
		W	3%	3%	1%	0%	2%	2%	1%	3%	6%	6%	20%	2%	16%	3%	1%	11%	4%	5%	5%	0%	0%	3%
	Pakistan	M	5%	10%	8%	2%	2%	2%	4%	3%	4%	4%	3%	3%	5%	11%	0%	5%	13%	11%	0%	0%	2%	4%
		W	8%	14%	7%	2%	2%	1%	5%	2%	3%	4%	3%	1%	4%	2%	0%	3%	9%	11%	4%	4%	9%	4%
LATIN AMERICA	Guatemala	M	5%	2%	3%	2%	2%	1%	0%	1%	10%	8%	9%	5%	10%	4%	1%	23%	4%	3%	3%	0%	1%	1%
		W	8%	7%	4%	1%	2%	1%	2%	1%	9%	7%	7%	4%	13%	5%	0%	13%	4%	5%	2%	0%	0%	1%
	Mexico	M	8%	5%	2%	1%	1%	0%	2%	0%	9%	9%	15%	6%	14%	2%	1%	14%	5%	4%	1%	0%	3%	1%
		W	6%	4%	0%	1%	3%	1%	2%	1%	11%	11%	18%	6%	17%	1%	1%	9%	1%	2%	0%	1%	2%	1%

Source: GSMA Consumer Survey, 2023
 Base: Mobile internet users aged 18+
 Percentages indicate the proportion of respondents who answered, "Yes - this is something that stops me" to the question, "And 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?"
 n= from 67 to 320 for women and n= from 97 to 520 for men



Figure 24
A barrier to further mobile internet use
Percentage of mobile internet users who reported the following as a barrier to using mobile internet more

			AFFORDABILITY		LITERACY AND DIGITAL SKILLS				RELEVANCE		SAFETY AND SECURITY					ACCESS								
			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	INTERNET DRAINS MY BATTERY	ACCESS TO AGENT SUPPORT	INCONSISTENT/NO COVERAGE	SLOW CONNECTION SPEEDS	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
AFRICA	Egypt	M	27%	20%	11%	17%	16%	11%	12%	9%	18%	19%	21%	20%	20%	27%	13%	43%	28%	22%	7%	9%	6%	8%
		W	31%	26%	13%	19%	15%	16%	15%	8%	25%	30%	30%	23%	25%	34%	14%	42%	37%	23%	7%	8%	10%	11%
	Ethiopia	M	45%	43%	9%	6%	10%	15%	10%	23%	18%	17%	14%	16%	25%	40%	17%	64%	58%	31%	17%	9%	7%	12%
		W	60%	54%	7%	7%	11%	16%	9%	12%	23%	26%	19%	29%	20%	35%	22%	63%	61%	36%	22%	14%	18%	14%
	Kenya	M	37%	51%	6%	7%	7%	7%	13%	9%	27%	25%	26%	25%	30%	38%	9%	33%	24%	28%	11%	6%	16%	21%
		W	41%	57%	5%	3%	6%	5%	16%	5%	28%	30%	28%	27%	38%	41%	9%	34%	25%	27%	15%	7%	16%	16%
	Nigeria	M	17%	28%	9%	2%	6%	2%	5%	5%	15%	8%	8%	12%	17%	20%	3%	15%	12%	8%	2%	3%	7%	3%
		W	20%	37%	13%	6%	7%	6%	6%	6%	14%	8%	13%	13%	19%	18%	6%	16%	6%	9%	4%	1%	9%	5%
	Senegal	M	21%	34%	19%	12%	13%	9%	10%	17%	22%	20%	25%	25%	29%	38%	10%	55%	47%	28%	8%	5%	8%	13%
		W	28%	42%	34%	17%	18%	15%	8%	18%	27%	26%	30%	23%	30%	37%	11%	58%	47%	24%	12%	5%	8%	13%
	Uganda	M	56%	65%	16%	8%	11%	17%	12%	23%	22%	25%	26%	23%	26%	47%	19%	54%	50%	26%	20%	6%	14%	19%
		W	51%	66%	20%	6%	16%	12%	11%	27%	22%	22%	26%	22%	40%	44%	8%	52%	51%	30%	15%	4%	11%	11%
ASIA	Bangladesh	M	14%	18%	7%	8%	5%	5%	11%	7%	8%	9%	7%	10%	8%	20%	7%	9%	14%	16%	8%	8%	11%	11%
		W	22%	26%	14%	17%	16%	13%	12%	12%	13%	13%	13%	17%	14%	24%	12%	12%	24%	20%	11%	13%	18%	20%
	India	M	44%	50%	28%	27%	34%	29%	31%	25%	37%	38%	39%	34%	43%	52%	31%	39%	43%	42%	29%	25%	35%	35%
		W	40%	46%	24%	29%	33%	34%	37%	30%	40%	32%	35%	39%	41%	50%	32%	40%	42%	41%	28%	34%	38%	38%
	Indonesia	M	26%	23%	7%	10%	10%	16%	15%	13%	31%	32%	34%	25%	33%	29%	14%	35%	29%	24%	14%	10%	16%	17%
		W	28%	28%	8%	12%	13%	16%	14%	13%	34%	36%	39%	28%	40%	26%	14%	32%	29%	24%	16%	11%	16%	18%
	Pakistan	M	31%	34%	19%	14%	20%	16%	15%	20%	20%	16%	22%	22%	23%	31%	14%	21%	31%	27%	14%	8%	13%	15%
		W	46%	44%	27%	26%	27%	22%	20%	25%	27%	28%	32%	29%	29%	40%	22%	30%	39%	46%	35%	22%	29%	32%
LATIN AMERICA	Guatemala	M	19%	12%	7%	6%	10%	8%	8%	6%	31%	30%	37%	20%	30%	18%	8%	36%	23%	8%	7%	4%	9%	12%
		W	26%	25%	9%	8%	13%	10%	10%	8%	29%	31%	32%	18%	33%	21%	6%	29%	20%	12%	9%	3%	8%	14%
	Mexico	M	31%	26%	7%	10%	14%	15%	16%	9%	35%	43%	48%	30%	44%	24%	14%	28%	25%	16%	13%	8%	17%	17%
		W	40%	35%	7%	14%	22%	18%	16%	14%	44%	47%	53%	39%	53%	29%	17%	35%	27%	19%	16%	10%	19%	25%

Source: GSMA Consumer Survey, 2023
Base: Mobile internet users aged 18+
Percentages indicate the proportion of respondents who answered, "Yes - this is something that stops me" to the question, "For each of the possible reasons that I read out, please indicate whether this is something that stops you at all from using the internet more on a mobile phone."
n= from 71 to 424 for women and n= from 121 to 661 for men



Appendix 2: Mobile internet use cases

Figure 25
Weekly mobile internet use cases among mobile internet users
Percentage of mobile internet users who perform each use case at least once a week

			CALL ONLINE	VIDEO CALLS	IM	SOCIAL MEDIA	ONLINE VIDEO	ONLINE ENTERTAINMENT	READ NEWS	SEARCH FOR ONLINE INFORMATION	EDUCATION/ LEARNING SUPPORT	SEARCH FOR ONLINE JOB/ BUSINESS INFORMATION	ORDER GOODS/ SERVICES	INCOME GENERATION	ONLINE BANKING / MOBILE MONEY	HEALTH SERVICES	GOVERNMENT SERVICES	AGRICULTURE INFORMATION
AFRICA	Egypt	M	79%	72%	90%	91%	82%	77%	46%	36%	25%	28%	18%	19%	17%	23%	21%	4%
		W	78%	66%	84%	90%	82%	69%	41%	32%	25%	11%	14%	19%	15%	18%	22%	1%
	Ethiopia	M	47%	35%	67%	77%	58%	64%	55%	11%	23%	17%	6%	7%	21%	13%	24%	8%
		W	51%	35%	61%	80%	43%	54%	33%	18%	25%	4%	1%	2%	14%	11%	11%	0%
	Kenya	M	58%	48%	81%	81%	71%	71%	60%	37%	37%	30%	10%	22%	35%	21%	24%	19%
		W	56%	37%	79%	77%	68%	63%	40%	34%	34%	19%	12%	18%	28%	12%	12%	7%
	Nigeria	M	72%	60%	84%	86%	51%	55%	54%	35%	26%	28%	11%	23%	51%	16%	27%	12%
		W	64%	57%	72%	76%	52%	52%	47%	26%	23%	25%	12%	21%	47%	13%	19%	10%
	Senegal	M	74%	53%	84%	77%	66%	56%	55%	26%	23%	25%	9%	18%	15%	13%	13%	9%
		W	70%	51%	75%	72%	66%	60%	37%	18%	18%	15%	12%	13%	9%	11%	8%	1%
Uganda	M	55%	40%	74%	66%	64%	59%	47%	35%	27%	36%	7%	14%	10%	19%	18%	13%	
	W	58%	46%	77%	70%	66%	59%	37%	32%	24%	25%	7%	13%	12%	14%	15%	9%	
ASIA	Bangladesh	M	83%	87%	83%	83%	88%	79%	55%	40%	36%	23%	40%	39%	41%	33%	39%	11%
		W	75%	83%	81%	77%	80%	76%	45%	35%	29%	12%	27%	29%	29%	22%	28%	3%
	India	M	79%	80%	78%	77%	86%	82%	60%	49%	51%	36%	37%	37%	39%	43%	44%	21%
		W	72%	75%	69%	70%	76%	74%	45%	47%	43%	20%	31%	30%	28%	36%	35%	10%
	Indonesia	M	92%	86%	94%	81%	89%	72%	52%	31%	25%	29%	16%	14%	21%	12%	18%	8%
		W	91%	91%	96%	82%	86%	68%	49%	37%	31%	19%	22%	16%	19%	18%	13%	4%
	Pakistan	M	73%	72%	77%	73%	70%	60%	22%	17%	17%	17%	11%	16%	19%	12%	16%	8%
		W	63%	64%	56%	50%	51%	38%	16%	12%	8%	1%	8%	8%	7%	8%	10%	2%
LATIN AMERICA	Guatemala	M	85%	71%	83%	83%	77%	74%	64%	58%	65%	52%	34%	43%	33%	44%	38%	11%
		W	82%	77%	81%	83%	76%	72%	62%	53%	61%	28%	28%	32%	29%	39%	30%	7%
	Mexico	M	78%	60%	85%	79%	78%	75%	73%	63%	62%	50%	36%	31%	48%	36%	41%	7%
		W	76%	63%	81%	78%	82%	76%	64%	59%	57%	33%	25%	24%	34%	36%	37%	2%

Source: GSMA Consumer Survey, 2023
Base: Mobile internet users aged 18+
Percentages indicate the proportion of respondents who answered that they perform each use case at least once a day or at least once a week using mobile internet.
n= from 71 to 424 for women and n= from 121 to 661 for men



Appendix 3: Methodology

This report is based on an analysis of the results of face-to-face surveys conducted by the GSMA in 12 LMICs in 2023. This is supplemented by 2017, 2018, 2019, 2020, 2021 and 2022 GSMA survey results from 17 additional countries,³² as well as third-party survey results that cover another 13 countries.³³

Survey methodology

In all countries surveyed in 2023, a sample of approximately 1,000 male and female adults aged 18 and over were surveyed, with the exception of India where the sample was approximately 2,000. The samples were nationally representative, except for Ethiopia where no interviews were conducted in the Amhara region and four other zones³⁴ due to local conflict and security concerns. These areas represent 27% of the population in Ethiopia, thus the sample was representative of the remaining 73% who live outside these areas.

In all countries, the sampling frame was based predominantly on data from national statistics offices, including census data where possible, and a range of other sources. To ensure a geographically representative distribution of interview subjects, particularly in urban and rural areas, around 100 sampling points were used per country. However, very remote areas or areas with security concerns were excluded.

Interviews were conducted with individuals in their local language. All surveys were interviewer-administered using handheld devices. Both female and male interviewers conducted the surveys and, 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. Data was weighted to known population profiles to correct any imbalances in the distributions achieved during fieldwork.

32. Six countries were surveyed by the GSMA in 2017, 2018, 2019, 2020, 2021, 2022 and 2023: Kenya, Nigeria, Bangladesh, India, Pakistan and Guatemala. Two countries were surveyed by the GSMA in 2017, 2018, 2019, 2021, 2022 and 2023: Mexico and Indonesia. One country was surveyed by the GSMA in 2019, 2021, 2022 and 2023: Senegal. One country was surveyed in 2017, 2021, 2022 and 2023: Egypt. One country was surveyed by the GSMA in 2022 and 2023: Ethiopia. One country was surveyed by the GSMA in 2019 and 2023: Uganda. One country was surveyed in 2017, 2021 and 2022: Ghana. Two countries were surveyed by the GSMA in 2017, 2018, 2019 and 2020: Algeria and Mozambique. Three countries were surveyed by the GSMA in 2017, 2018 and 2019: Brazil, Myanmar and South Africa. Five countries were surveyed by the GSMA in 2017 and 2018: Argentina, Dominican Republic, China, Côte d'Ivoire and Tanzania. Six countries were surveyed by the GSMA in 2017: Chile, Colombia, Nicaragua, Philippines, Thailand and Vietnam. However, since Chile is now defined as a high-income country, it is not included in this analysis. Fieldwork was conducted from September to January in 2017, 2018, 2019, 2020, 2021 and 2022.

33. Data was sourced from [After Access](#) (Cambodia, Paraguay, Peru and Rwanda for mobile and mobile internet for 2017 and Uganda and South Africa for mobile internet for 2018 and 2022); from [Pew Global Attitudes and Trends](#) (mobile and mobile internet for Jordan and Lebanon for 2017 and Philippines for 2018 and 2019); [ITU](#) (Iran for mobile and mobile internet for 2017 to 2019); [RLMS-HES](#) (Russia for mobile, mobile internet and smartphone for 2018 and 2019); [CNNIC](#) (China for mobile internet for 2017 to 2022); and [ZimStat](#) (Zimbabwe for mobile, mobile internet and smartphone for 2020).

34. Western Tigray, Metekel-Zone (Benishangul Gumz), Zone 2 Zone (Afar) and Guji-Zone (Oromia).

Extrapolating the mobile gender gap to non-surveyed countries

This report provides estimates of the gender gaps in LMICs for three key metrics:



The estimates of gender gaps for countries covered by the 2017–2023 GSMA Consumer Surveys are derived from the survey results. The group of survey countries depends on the year and covers 29 countries representing up to 75% of the adult population in all LMICs.³⁵ In addition, we relied on third-party and publicly available survey data when we considered it robust. This provided gender gap proxy measures for selected years for mobile ownership for another 10 countries, mobile internet adoption (13 countries) and smartphone ownership (two countries).³⁶

To estimate the size of the mobile gender gaps in the remaining LMICs, we relied on machine learning classifiers, which are trained using data from countries where observations of gender gaps in mobile technology are available. We combined these observations into a dataset that included other variables that are potential predictors of mobile gender gaps, such as indicators of technology adoption and socio-economic conditions.

We used this dataset as training data to teach the classifiers what patterns of technology adoption and socio-economic conditions are associated with higher or lower mobile gender gaps. The trained classifiers then used these recognised patterns to make predictions about gender gaps in countries where it was not directly surveyed. We used separate classifiers to estimate each type of mobile gender gap (mobile ownership, mobile internet adoption and smartphone ownership).

We gathered data on potential predictors of mobile gender gaps. This data, which was not uniformly available for every country and year, included indicators sourced from the United Nations Human Development Index (HDI), the World Bank, Gallup World Poll and others (Table 3). Given that some data was missing for certain country-year combinations, we relied on a multiple imputation technique. This created several estimates for each missing value based on the patterns observed in other variables of the dataset.

35. United Nations Department of Economic and Social Affairs, Population Division. (2022). *World Population Prospects 2022*.

36. Data was sourced from [After Access](#) (Cambodia, Paraguay, Peru and Rwanda for mobile and mobile internet for 2017 and Uganda and South Africa for mobile internet for 2018 and 2022); from [Pew Global Attitudes and Trends](#) (mobile and mobile internet for Jordan and Lebanon for 2017 and Philippines for 2018 and 2019); [ITU](#) (Iran for mobile and mobile internet for 2017 to 2019); [RLMS-HES](#) (Russia for mobile, mobile internet and smartphone for 2018 and 2019); [CNNIC](#) (China for mobile internet for 2017 to 2022); and [ZimStat](#) (Zimbabwe for mobile, mobile internet and smartphone for 2020).

Table 3
Variables used as predictors of mobile gender gaps

Variable(s)	Source
Mean schooling years – females and males and gender ratio ³⁷	UN Human Development Reports
Expected schooling years for a child entering education – females and males and gender ratio	UN Human Development Reports
Human Development Index – overall and females only	UN Human Development Reports
Gender Inequality Index	UN Human Development Reports
Gender Development Index	UN Human Development Reports
Gross national income (GNI) per capita – female and male absolute income and gender ratio	UN Human Development Reports
Gross domestic product (GDP) per capita, purchasing power parity (PPP)	IMF World Economic Outlook
Percentage of persons with access to internet – overall and females only	Gallup World Poll
Gender gap in internet use	Gallup World Poll
Percentage of persons owning a mobile phone for personal calls – overall and females only	Gallup World Poll
Gender gap in mobile ownership for personal calls	Gallup World Poll
Facebook gender gap	GSMA Intelligence analysis of Facebook Audience Insights
World region dummy variables	World Bank regional groupings
Income group dummy variables	World Bank analytical classifications
Measure of gender equality under law – overall index score and individual area scores	World Bank’s Women, Business and the Law indicators
Average revenue per subscriber	GSMA Intelligence database

Source: GSMA Intelligence analysis

Adult male and female mobile subscribers

This was calculated using the estimated gender gap in mobile ownership, GSMA Intelligence estimates and forecasts of the adult mobile penetration rate and UN estimates and forecasts of the adult population by gender.

Adult male and female mobile internet users

This was calculated using the estimated gender gap in mobile internet use, GSMA Intelligence

estimates and forecasts of the adult mobile internet penetration rate and UN estimates and forecasts of the adult population by gender.

Adult male and female smartphone users

This was calculated using the estimated gender gap in smartphone ownership, GSMA Intelligence estimates and forecasts of the adult smartphone penetration rate and UN estimates and forecasts of the adult population by gender.

37. The gender ratio for a variable is calculated by taking the female value and dividing it by the male value. For example, the gender ratio for mean schooling years is equal to mean female schooling years divided by mean male schooling years.

Endnotes



1. 3.4 billion of whom are adults over the age of 18.
2. GSMA Intelligence, Q4 2023.
3. International Telecommunication Union (ITU) estimates for 2023.
4. Global Digital Inclusion Partnership. (2024). [Connected Resilience: Gendered Experiences of Meaningful Connectivity through a Global Pandemic](#).
5. Excluding Ethiopia, which, due to conflict, excluded the Tigray region and six zones in 2022 and the Amhara region and four zones in 2023.
6. Respondents were asked the question: “Have you ever used the internet on a mobile phone? Please think about all the different ways of using the internet on a mobile phone. Just to confirm, people are using the internet on their mobile phones when they do any of the following: visit internet websites (e.g. Google or Amazon), visit social networking websites (e.g. Facebook, Twitter, YouTube, Weibo), send emails or instant messages (e.g. WhatsApp, Snapchat, WeChat, LINE) or download apps.” Mobile internet users are those who answered, “Yes, I have used the internet on a mobile phone in the past three months.”
7. A 5 GB bundle in India is approximately 0.7% of average monthly income, well below the ITU target of 2% that most other LMICs have not yet achieved. Source: Tarifica, 2022.
8. GSMA. (2023). [The State of Mobile Internet Connectivity Report 2023](#).
9. The analysis is not shown here, but for more in-depth information see, for example, Figure 9 in [The Mobile Gender Gap Report 2022](#).
10. For more details, see Table 1 in [The Mobile Gender Gap Report 2023](#).
11. Kenya, Nigeria, Bangladesh and India
12. See Figure 11 in [The Mobile Gender Gap Report 2023](#).
13. See Figure 26 in [The State of Mobile Internet Connectivity 2023](#).
14. 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”.
15. Butler, C. and Shanahan, M. (27 August 2020). “[Does just being a woman reduce the likelihood of using mobile?](#)”. *GSMA Mobile for Development Blog*.
16. Social norms as a barrier represents an aggregate of those who reported: “My family does not [always] approve of me using the internet on a mobile phone”, “I am only allowed to use the internet for a specific amount of time or at certain times of the day” or “I am only allowed to use the internet for specific reasons”.
17. See Figure 26 in [The State of Mobile Internet Connectivity 2023](#).
18. See Figure 23 in the 2023 GSMA report, [Understanding women micro-entrepreneurs’ use of mobile phones for business](#).

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19. GSMA [Mobile Connectivity Index](#).
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20. See Figure 15 in [The State of Mobile Internet Connectivity 2023](#).
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21. GSMA Intelligence analysis based on Speedtest Intelligence® data provided by Ookla®.
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22. For example: Amnesty International. (20 November 2017). Press release: "[Amnesty reveals alarming impact of online abuse against women](#)".
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23. Pew Research Center. (2021). [The State of Online Harassment](#).
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24. Sample sizes of female mobile internet users who had experienced one of the four listed negative incidents were insufficient for analysis in Ethiopia, Nigeria, Bangladesh and Pakistan.
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25. G20. (2023). [G20 New Delhi's Leaders' Declaration](#).
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26. Commission on the Status of Women. (2023). [CSW67 Agreed Conclusions](#). UN Women.
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27. GSMA Connected Women. (2020). "[Top 10 recommendations for reaching women with mobile across low- and middle-income countries](#)", in Reaching 50 Million Women with Mobile: A Practical Guide.
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28. GSMA Connected Women. (2022). [Policy considerations to accelerate digital inclusion for women in low- and middle-income countries](#).
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29. More detailed recommendations on how policymakers can increase mobile adoption more broadly among the underserved can be found here: <https://www.gsma.com/mobilefordevelopment/resources/accelerating-mobile-internet-adoption-policy-considerations>.
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30. Respondents who were not aware of mobile internet were not asked to identify the barriers preventing them from using it as it was not deemed appropriate.
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31. These composite barriers are aggregates (not averages) of responses for between two and five sub-barriers. Access-related barriers are not grouped as a composite as they cover a disparate range of topics. "All countries" barriers (top of Table 1 and Table 2) were calculated by averaging country-level data for the 12 countries surveyed.
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32. Six countries were surveyed by the GSMA in 2017, 2018, 2019, 2020, 2021, 2022 and 2023: Kenya, Nigeria, Bangladesh, India, Pakistan and Guatemala. Two countries were surveyed by the GSMA in 2017, 2018, 2019, 2021, 2022 and 2023: Mexico and Indonesia. One country was surveyed by the GSMA in 2019, 2021, 2022 and 2023: Senegal. One country was surveyed in 2017, 2021, 2022 and 2023: Egypt. One country was surveyed by the GSMA in 2022 and 2023: Ethiopia. One country was surveyed by the GSMA in 2019 and 2023: Uganda. One country was surveyed in 2017, 2021 and 2022: Ghana. Two countries were surveyed by the GSMA in 2017, 2018, 2019 and 2020: Algeria and Mozambique. Three countries were surveyed by the GSMA in 2017, 2018 and 2019: Brazil, Myanmar and South Africa. Five countries were surveyed by the GSMA in 2017 and 2018: Argentina, Dominican Republic, China, Côte d'Ivoire and Tanzania. Six countries were surveyed by the GSMA in 2017: Chile, Colombia, Nicaragua, Philippines, Thailand and Vietnam. However, since Chile is now defined as a high-income country, it is not included in this analysis. Fieldwork was conducted from September to January in 2017, 2018, 2019, 2020, 2021 and 2022.
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33. Data was sourced from [After Access](#) (Cambodia, Paraguay, Peru and Rwanda for mobile and mobile internet for 2017 and Uganda and South Africa for mobile internet for 2018 and 2022); from [Pew Global Attitudes and Trends](#) (mobile and mobile internet for Jordan and Lebanon for 2017 and Philippines for 2018 and 2019); [ITU](#) (Iran for mobile and mobile internet for 2017 to 2019); [RLMS-HES](#) (Russia for mobile, mobile internet and smartphone for 2018 and 2019); [CNNIC](#) (China for mobile internet for 2017 to 2022); and [ZimStat](#) (Zimbabwe for mobile, mobile internet and smartphone for 2020).
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34. Western Tigray, Metekel-Zone (Benishangul Gumz), Zone 2 Zone (Afar) and Guji-Zone (Oromia).
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35. United Nations Department of Economic and Social Affairs, Population Division. (2022). [World Population Prospects 2022](#).
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36. Data was sourced from [After Access](#) (Cambodia, Paraguay, Peru and Rwanda for mobile and mobile internet for 2017 and Uganda and South Africa for mobile internet for 2018 and 2022); from [Pew Global Attitudes and Trends](#) (mobile and mobile internet for Jordan and Lebanon for 2017 and Philippines for 2018 and 2019); [ITU](#) (Iran for mobile and mobile internet for 2017 to 2019); [RLMS-HES](#) (Russia for mobile, mobile internet and smartphone for 2018 and 2019); [CNNIC](#) (China for mobile internet for 2017 to 2022); and [ZimStat](#) (Zimbabwe for mobile, mobile internet and smartphone for 2020).
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37. The gender ratio for a variable is calculated by taking the female value and dividing it by the male value. For example, the gender ratio for mean schooling years is equal to mean female schooling years divided by mean male schooling years.

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