

The Mobile Gender Gap Report 2023

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Introduction

In an increasingly connected world, it is critical that no one is left behind. In low- and middleincome countries (LMICs), mobile phones are the primary and often only way people get online, especially women. More than 3.4 billion people in LMICs now access the internet on a mobile phone,¹ accounting for 85% of broadband connections in 2022.² In all 12 countries surveyed for this report, female internet users were more likely than male users to access the internet exclusively via a mobile phone. A total of 61% of women in LMICs now use mobile internet and 81% own a mobile phone.

While more people are using mobile internet than ever before, access is unequal and there are significant gender gaps. Women are still less likely than men to own a mobile phone and use key services, such as mobile internet and mobile money. This is particularly true for women in LMICs who are the most underserved, including those with low literacy, low incomes, who live in a rural area or have a disability.

Alarmingly, for the second year in a row, women's digital inclusion has slowed across LMICs. In last year's report, we highlighted that the mobile internet gender gap did not narrow and, in some countries, widened. This was the first time this had happened since the GSMA began tracking it, and was the result of women across LMICs adopting mobile internet at a slower rate, in contrast with continued higher growth rates for men in 2022. Our latest data shows that while more women are using mobile internet than ever before, their rate of adoption has slowed even more than last year. Men's rate of adoption has now also slowed. Slower rates of adoption have stalled progress on digital inclusion for all in LMICs, leaving a substantial and relatively unchanged gender gap in mobile internet. More efforts are needed to tackle this slowdown in digital inclusion and the digital gender gap.

Addressing the mobile gender gap provides significant social and commercial benefits. Mobile and mobile internet can be life changing, providing access to critical information, services and opportunities from anywhere, including those related to health care, education, financial services and income generation. Connectivity is also vital to achieving the United Nations Sustainable Development Goals (SDGs), including those related to gender equality, health, education and financial inclusion.

GSMA research has found that closing the gender gap in mobile internet use in LMICs could deliver an additional \$700 billion in GDP growth over five years.³ In 2020 alone, the Alliance for Affordable Internet (A4AI) estimated that the gender gap in internet use resulted in 32 LMICs missing out on \$126 billion in GDP. The commercial opportunity for the private sector is also substantial. For example, the GSMA estimates that closing the gender gap in mobile ownership and use in LMICs by 2030 would generate \$230 billion in additional revenue for the mobile industry.⁴

^{1.} GSMA Intelligence, Q4 2022.

^{2.} International Telecommunication Union (ITU) estimates for 2022.

^{3.} GSMA Intelligence, 2019.

^{4.} This estimate is based on closing the gender gap in mobile ownership and use in LMICs from 2023 to 2030.



Enabling women to access and use mobile phones is crucial. It can also help women across LMICs better cope with the ongoing economic and social disruptions brought about by the pandemic, climate change and other global crises. For those who own a mobile phone, the benefits are clear to them. In nine of the 10 countries surveyed by the GSMA in 2021, between 66% and 97% of female and male mobile owners reported that having a mobile phone helps with their day-to-day activities, makes them feel safer and gives them access to useful information they would not otherwise be able to easily obtain.⁵

In this sixth edition of *The Mobile Gender Gap Report*, we consider the latest data on women's mobile access and use and how it is changing at regional and country levels in LMICs. We draw attention to this important issue and share recommended actions for stakeholders, including mobile network operators (MNOs), internet companies, policymakers and regulators, and the development community.

The findings of this report draw on the annual GSMA Consumer Survey, which this year had more than 13,800 respondents from 12 LMICs, and for the first time included Ethiopia. These face-to-face, nationally representative⁶ surveys were conducted between September and December 2022. Analysis of other research and data from the GSMA, as well as other organisations that investigate and track the mobile gender gap, also inform the findings of this report.

The report provides:



^{5.} The exception was 46% of female mobile phone owners in Pakistan who reported that a mobile provides access to useful information they would not otherwise be able to obtain easily. In contrast, this was reported by 66% of male mobile phone owners in Pakistan.

^{6.} Except for Ethiopia, where no interviews were conducted in the Tigray region and six other zones due to local conflict and security concerns. These areas represent 12% of the population of Ethiopia, therefore, the sample was representative of the 88% of the population who live outside these areas.

Key findings

- More women in low- and middle-income countries are using mobile internet than ever before, but their rate of adoption has slowed for the second year in a row. While 61% of women across these countries now use mobile internet, only 60 million women started using mobile internet in 2022 compared to 75 million in 2021. Men's rate of adoption also slowed in 2022, highlighting that progress on digital inclusion for all has stalled across low- and middle-income countries.
- 2. The gender gap in mobile internet remains relatively unchanged - women in low- and middle-income countries are 19% less likely than men to use it, which translates into around 310 million fewer women than men. This year there have been no significant changes in the mobile internet gender gap in any region, including South Asia where there have been notable changes in the past few years.
- 3. To close the mobile internet gender gap by 2030 across low- and middle-income countries, an estimated 810 million women need to adopt it. This is equivalent to 100 million women a year, on average. However, if the gender gap remains unchanged, forecasts suggest that only 360 million more women will adopt mobile internet by 2030.

- 4. There are 900 million women in low- and middle-income countries who are still not using mobile internet, almost two-thirds of whom live in South Asia and Sub-Saharan Africa. Women in these regions remain the least likely to use mobile internet compared to men, with gender gaps of 41% and 36%, respectively.
- 5. Women were more likely than men to report they had reduced their use of mobile internet in 2022, especially those who live in rural areas and are less educated. Across all survey countries, women also tend to use their mobile phones for a narrower range of activities and use mobile internet less regularly than men.
- 6. The gender gap in smartphone ownership has stalled for the second year in a row, and women in low- and middle-income countries are 17% less likely than men to own a smartphone. This translates into around 250 million fewer women than men. While more men and women own a smartphone than ever before, the rate of adoption for both has slowed down slightly. 55% of women now own a smartphone compared to 67% of men. However, once women own a smartphone, their awareness and use of mobile internet is almost on par with men.



- 7. The underlying gender gap in mobile ownership across low- and middle-income countries has changed very little since 2017. Women across these countries are 7% less likely than men to own a mobile phone. 440 million women still do not own one and are proving difficult to reach. The topreported barriers to mobile phone ownership are affordability, literacy and digital skills and lack of perceived relevance. Women who do not own a phone were more likely than men to report that being able to use someone else's phone made them feel they did not need one of their own.
- 8. Women are still less likely than men to be aware of mobile internet across lowand middle-income countries. Although awareness has grown only marginally since 2019, gender gaps have been narrowing consistently. In most survey countries, awareness is relatively high but does not always translate into adoption.
- 9. For mobile users who are already aware of mobile internet, the top-reported barriers to adopting it are still affordability (primarily of handsets), literacy and digital skills, and safety and security concerns. 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.

- **10.** Most people who use mobile internet believe it has had a positive impact on their lives and use it every day, with little difference between women and men. This suggests that once women use mobile internet, it improves their lives to a similar degree as men. In all survey countries, between 53% and 91% of mobile internet users report a positive overall impact on their lives. Despite concerns associated with the internet, in almost all survey countries less than a fifth of mobile internet users reported a negative overall impact on their life.
- 11. Closing the gender gap in mobile ownership and use in low- and middleincome countries by 2030 would deliver an estimated \$230 billion in additional revenue to the mobile industry. The vast majority of this opportunity would be derived from closing the gender gap in mobile use.



IN LOW- AND MIDDLE-INCOME COUNTRIES: Progress has **stalled** in WOMEN ARE closing the **gender gap** less likely than men to own a mobile phone in **smartphone ownership** Women are **17%** less likely than 01 men to own a smartphone Ø Ø fewer women than men own a smartphone **MOBILE INTERNET ADOPTION** The top 3 barriers preventing women who are mobile users and aware of **mobile internet** from adopting it are: AFFORDABILITY (PRIMARILY OF HANDSETS) **2. LITERACY AND DIGITAL SKILLS 3. SAFETY AND SECURITY** Millions more women than men face these barriers because they are offline Closing the gender gap

in mobile ownership and use by



in additional revenue for the mobile industry



Definitions



GENDER GAP

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

Gender gap in ownership / use (%)





Female owners / users (% of female population)

(% of male population)

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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 93% across the sample countries, ranging from 87% to 98%).



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 sub-group of feature phones and are not recorded as a separate category in the survey.

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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.⁷ 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.

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 last three months.

The mobile gender gap in 2023

During the global economic crisis in 2022, women's levels of mobile ownership and mobile internet adoption stayed the same or increased in most survey countries. However, similar changes in men's levels of adoption meant no progress was made in closing the gender gaps in mobile ownership or mobile internet adoption.

Mobile ownership in LMICs remains unequal. Women are 7% less likely than men to own a mobile phone, which translates into 130 million fewer women than men owning one. This gender gap has seen little change since 2017 (see Figure 1) and the 440 million women who still do not own a mobile phone are proving difficult to reach. The gender gap in smartphone ownership also remained relatively unchanged in 2022. This gender gap had been narrowing, but it widened slightly in 2021 to 18% and now stands at 17% (see Figure 1). Addressing these gender gaps is crucial, as owning a mobile phone, particularly a smartphone, significantly increases mobile internet awareness and use among both men and women.

The mobile internet gender gap narrowed substantially between 2017 and 2020, from 25% to 15%. However, progress stalled in 2021 when the gender gap widened slightly to 18%. Unfortunately, the gender gap remains relatively unchanged, with women now 19% less likely than men to use mobile internet (see Figure 1). Although both women and men continued to adopt mobile internet in 2022, they did so at an even slower rate than in 2021. Across LMICs, an additional 60 million women adopted mobile internet in 2022, but 310 million fewer women than men are using mobile internet and, by extension, benefiting from it. In 2022, there was no notable change in any regional gender gaps in mobile ownership or mobile internet, with the widest gaps still in South Asia and Sub-Saharan Africa. Women are 41% less likely than men to use mobile internet in South Asia and 36% less likely than men to do so in Sub-Saharan Africa. In the wake of the COVID-19 pandemic and the ongoing economic crisis, this further slowdown in digital inclusion is perhaps not surprising. However, it is a stark reminder to focus attention, action and investment on addressing the digital divide, particularly the digital gender divide.





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Figure 1

Gender gaps across LMICs and by region, 2017-2022

GENDER GAPS IN MOBILE OWNERSHIP AND SMARTPHONE OWNERSHIP











2017	2018	2019	2020	2021	2022
	-	Gender gap	in mobile internet		







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

With the exception of mobile ownership in Egypt and Mexico, women were less likely than men to own a mobile phone and to use mobile internet in all survey countries (see Figure 2). Gender gaps in mobile internet use are wider than gender gaps in mobile ownership in all markets. Even in countries with relatively small gender gaps in mobile ownership, such as Ghana, Kenya, Nigeria and India, the gender gap in mobile internet use can be substantial. For example, in Ghana, women are 7% less likely than men to own a mobile phone, but 26% less likely to use mobile internet.

Gender gaps in mobile ownership have not changed over the past year in most LMICs. This is the case for eight of the 10 LMICs for which we have previous data. The two exceptions are Egypt and Senegal. In Egypt, women's mobile ownership increased from 76% to 81% while men's remained at 83%, resulting in a smaller gender gap. The opposite occurred in Senegal where the gender gap widened due to women's mobile ownership remaining at 77% but men's increasing from 83% to 89% (see <u>Spotlight:</u> Mobile gender gaps are widening in Senegal).

Gender gaps in mobile internet use also remained relatively flat in six of the 10 countries surveyed in 2021 and 2022. The other countries had different trends. In Kenya and Bangladesh, the gender gap in mobile internet narrowed slightly, while in Indonesia, mobile internet adoption increased among women but not to the same extent as men. In Senegal, women's mobile internet adoption stalled while men's continued to grow (see <u>Spotlight: Mobile gender gaps are widening</u> <u>in Senegal</u>), resulting in a wider mobile internet gender gap in both markets.

The gender gap in mobile internet use in South Asia, and across LMICs overall, is largely driven by India, a country of 1.4 billion people, that has seen significant changes in its mobile internet gender gap over the past few years. Between 2018 and 2020, the gender gap had been narrowing due to changing market dynamics, more affordable handsets and a notable increase in women's adoption during the onset of COVID-19 restrictions and lockdowns. However, in 2021, this trend reversed when men's adoption of mobile internet increased while women's remained unchanged. Our latest data shows that progress has stalled again, with no change in mobile internet use for either men or women (see Spotlight: Progress on digital inclusion has stalled in India). This is likely a result of supply chain disruptions since the onset of the pandemic, a slowing economy and increased inflation, among other factors, which have made accessing the internet less affordable and accessible for people in India in general,⁸ but especially for women.

^{8.} See, for example, The Economist. (2023). "India's rocketing internet user growth has stalled" and BBC News. (2023). "Why internet growth has stalled in India".

Figure 2

Male and female mobile ownership and mobile internet adoption, by country Percentage of total adult population



Source: GSMA Consumer Survey, 2022. 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= 482 to 983 for women and n= 473 to 1,176 for men

The journey to mobile internet use

Mobile phones remain the primary, and often only, way that people in LMICs access the internet, especially women. Most internet users in 11 of the 12 survey countries access it exclusively via mobile⁹ and, in all survey countries, a higher proportion of female internet users access it exclusively via mobile. For example, 75% of female internet users in Ghana only access the internet via a mobile phone compared to 58% of male users.

While no two people will experience the exact same journey to acquiring and using mobile technology, there are common milestones and barriers. 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 3). Understanding where men and women tend to get stuck on this user journey is key to targeting action and driving equal access and use.

In all survey countries, the proportion of the population using mobile internet is relatively low (especially women) compared to the proportion who own a mobile phone or are aware of mobile internet (see Figure 3). For example, in Bangladesh, 84% of men and 67% of women own a mobile phone, and 75% of men and 64% of women are aware of mobile internet but only 37% and 21% are using it. This is true even when there are relatively high levels of mobile ownership and mobile internet awareness, for instance, in Kenya, Ghana and Nigeria.





Beyond mobile internet adoption, it is also important to compare how regularly women and men use mobile internet, and whether it is meeting their life needs to the same extent. Despite the persistent mobile internet gender gap in most survey countries, once men and women become mobile internet users,¹⁰ the vast majority tend to use it every day¹¹ (see Figure 3). For example, in Egypt, 65% of men and 57% of women are mobile internet users and 62% and 51%, respectively, use it at least once a day. In fact, across the survey countries, between 65% and 95% of male mobile internet users and between 59% and 93% of female mobile internet users report accessing it daily.

Still, most of these daily mobile internet users only use it for a limited range of purposes. This is especially true for female mobile internet users. For example, in Senegal, 57% of women are mobile internet users but just 17% perform three or more mobile internet use cases every day (compared to 72% and 27% of men, respectively). However, in a few survey countries, once men and women adopt mobile internet, most use it regularly for multiple use cases. For example, in Indonesia, 55% of women use mobile internet and 40% use it daily for at least three use cases. At each stage of the user journey, gender gaps tend to widen, except in Mexico where women remain on par with men all the way to regular, diverse use. The user journey is very different for smartphone owners, however, with much narrower gender gaps at each stage.¹² In all the survey countries, once women own a smartphone, their awareness and use of mobile internet is almost on par with men.

- 11. Daily mobile internet use is defined as a person who has used at least one mobile internet use case at least once a day.
- 12. 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.} Mobile internet use is defined as a person who has used the internet on a mobile phone at least once in the last three months.

Figure 3

The mobile internet user journey

Percentage of total adult population

		1 Mobile ownership	2 Mobile internet awareness	3 Mobile internet adoption	dive	gular and rse mobile ernet use
		Mobile ownership	Mobile internet awareness	Mobile internet adoption	Regular mobile internet use	Regular and diverse mobile internet use
	Men	83%	93%	65%	62%	50%
EGYPT	Women	81%	87%	57%	51%	36%
	Men	75%	62%	22%	14%	6%
ETHIOPIA	Women	55%	47%	10%	6%	2%
CHANA	Men	92%	92%	61%	54%	32%
GHANA	Women	86%	86%	45%	39%	23%
KENYA	Men	93%	88%	59%	45%	22%
KENTA	Women	88%	81%	39%	32%	14%
	Men	91%	92%	56%	46%	25%
NIGERIA	Women	86%	87%	34%	28%	13%
CENECAL	Men	89%	95%	72%	56%	27%
SENEGAL	Women	77%	92%	57%	40%	17%
	Men	84%	75%	37%	31%	25%
BANGLADESH	Women	67%	64%	21%	17%	14%
	Men	81%	72%	52%	42%	30%
INDIA	Women	72%	58%	31%	25%	18%
INDONESIA	Men	83%	86%	65%	60%	50%
INDONESIA	Women	75%	83%	55%	51%	40%
PAKISTAN	Men	81%	88%	45%	32%	15%
PARISTAN	Women	52%	84%	27%	16%	9%
GUATEMALA	Men	82%	89%	69%	61%	45%
GUATEMALA	Women	75%	84%	59%	50%	37%
MEXICO	Men	90%	96%	82%	74%	49%
MEXICO	Women	88%	96%	79%	73%	51%

Source: GSMA Consumer Survey, 2022 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. Regular mobile internet use is defined as performing at least one mobile internet use case daily. Regular and diverse mobile internet use is defined as performing at least three mobile internet use cases daily. n= 482 to 983 for women and n= 473 to 1,176 for men



The gender gap in mobile ownership

Across LMICs, 81% of women now own a mobile phone compared to 87% of men. Even though 60 million additional women owned one in 2022, 440 million still do not (compared to 290 million men). Growth in mobile ownership for both women and men has remained relatively flat and the gender gap has seen little change as a result. Women are currently 7% less likely than men to own a mobile phone, which translates into 130 million fewer women than men owning one.

This gender gap in mobile ownership varies significantly by region (see Figure 4). For example, the gender gap is 2% in East Asia and Pacific, but 13% in Sub-Saharan Africa. South Asia still has the widest gender gap in mobile ownership at 15%, but this has narrowed significantly over the past five years, down from 28% in 2018 (Figure 1). Of all the survey countries, Pakistan has the widest gap in mobile ownership at 35%, followed by Ethiopia at 27% (Figure 2).

Women are not a homogeneous group, however, and certain women are more likely to be digitally excluded. Women who have low literacy levels, are unemployed, have low incomes, live in a rural area, are older than 55 or have a disability are even less likely to own a mobile phone.¹³



Figure 4

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

OVERALL LMICs



Source: GSMA Intelligence, 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+.



Understanding the barriers to mobile ownership

The persistent gender gap in mobile ownership across LMICs is unlikely to close by itself. It is important to understand what is preventing people from owning a mobile phone in order to address these barriers. To identify the barriers to mobile ownership, people who do not own a mobile phone were asked whether certain barriers were preventing them from doing so and which they considered the most important. Table 1 lists the top-reported barriers to mobile ownership by country (see Appendix 1 for more details).

Across survey countries, the top barriers to mobile ownership are similar for men and women and reflect what has been reported in previous years. Affordability, primarily of handsets, is the top barrier reported by male and female nonmobile owners. In Senegal, 61% of women and 46% of men who do not own a mobile phone reported that the lack of an affordable handset was the top reason why. Literacy and digital skills, specifically basic literacy, was the second mostreported barrier to mobile ownership and was ranked in the top three in all survey markets. In Bangladesh, 22% of women and 18% of men who do not own a mobile phone reported difficulties with reading and writing as the main reason.

Relevance was reported as the third top barrier to mobile ownership overall across the survey countries, but to a much lesser degree than affordability or literacy and digital skills. For this barrier, we asked non-mobile owners if a mobile phone was relevant for them. We also asked, for the first time, whether having access to someone else's mobile phone meant they did not feel the need for one of their own. In seven of the survey countries, a higher proportion of women than men who don't own a phone reported this as the main reason why, which indicates that in several markets women are more likely to feel that accessing someone else's phone is sufficient for their needs. For example, in Nigeria, 12% of female non-mobile owners reported this as the main reason preventing them from owning their own mobile phone compared to just 3% of male non-mobile owners.

While affordability (primarily of handsets), literacy and digital skills and lack of perceived relevance were the top barriers to mobile ownership across the survey countries, there were variations at the country level (see Table 1). For example, in some countries, such as Bangladesh and Pakistan, family disapproval is a major barrier to women's mobile ownership. In both countries, family disapproval was the second most frequently cited barrier to mobile phone ownership among women who did not own one, even more than handset affordability. Safety and security is still the top barrier for both men and women in Guatemala, who had concerns about personal safety and unwanted contact from strangers. Women in Mexico also ranked safety and security as their top barrier, with their concerns relating mainly to information security.

Table 1

Top barriers to mobile ownership for men and women in survey countries Based on the single most important barrier to mobile ownership reported by non-mobile owners

Danking	ALL COUNTRIES						
Ranking	Women	Men					
1	Affordability	Affordability					
2	Literacy and digital skills	Literacy and digital skills					
3	Relevance	Relevance					

	EGYPT		ΕΤΗΙΟΡΙΑ		GH <i>A</i>	ANA NA	A KENYA		NIGERIA		SENE	EGAL
	w	м	w	М	w	М	w	м	w	м	w	м
1	Affordability	-	Affordability	Affordability	Affordability	Affordability						
2	Literacy and digital skills	-	Literacy and digital skills	Literacy and digital skills	Literacy and digital skills	Literacy and digital skills						
3	Relevance	Relevance	Relevance	Relevance	ID	Relevance	Relevance	-	Relevance	Relevance	Relevance	Family does not approve

	BANGL	ADESH	IND	INDIA INDONESIA PAKISTAN		INDIA		STAN
	w	м	w	м	w	м	w	м
1	Literacy and digital skills	Literacy and digital skills	Affordability	Literacy and digital skills	Affordability	Affordability	Literacy and digital skills	Literacy and digital skills
2	Family does not approve	Relevance	Literacy and digital skills	Affordability	Literacy and digital skills	Literacy and digital skills	Family does not approve	Safety and security
3	Relevance	Affordability	Relevance	Safety and security	Relevance	Relevance	Affordability	Affordability

	GUATE	MALA	MEX	lco
	w	м	w	м
1	Safety and security	Safety and security	Safety and security	Affordability
2	Affordability	Literacy and digital skills	Affordability	Safety and security
3	Literacy and digital skills	Affordability	Literacy and digital skills	Literacy and digital skills

Source: GSMA Consumer Survey, 2022

Base: Non-mobile owners aged 18+

The barriers above are composite barriers. These composite barriers are aggregates (not averages) of the responses for two to three 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 non-mobile owners who responded, "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 having a mobile phone or SIM card, connected to a mobile operator's network?"

The 'all countries' barriers were calculated by averaging country-level data for the 12 survey countries where sample sizes allowed.

Data for men in Kenya was excluded due to insufficient sample size (n<30). n= 54 to 239 for women and n= 39 to 132 for men



The gender gap in smartphone ownership

The type of mobile device one owns has an impact on whether and how they use mobile internet. For example, smartphone owners are significantly more likely to be aware of and use mobile internet regularly. Once women own a smartphone, their levels of mobile internet awareness and use are almost on par with men.¹⁴

While more men and women own a smartphone than ever before, the rate of adoption has shown signs of slowing down across LMICs. An additional 85 million women and 85 million men became smartphone owners in 2022. This means that 55% of women across these countries are now smartphone owners compared to 67% of men. Women are 17% less likely than men to own a smartphone, which translates into 250 million fewer women than men who own one. The gender gap in smartphone ownership narrowed significantly between 2019 and 2020 from 21% to 15%, but there has been no notable change since then across LMICs and most regions (see Figure 1). The exception is South Asia, where despite having the largest gender gap in smartphone ownership that widened from 41% in 2020 to 46% in 2021, the gap narrowed to 42% in 2022.

Across all 12 survey countries, women were less likely than men to own a smartphone (see Figure 5). For example, in Pakistan, 43% of men own a smartphone compared to just 20% of women. Gender gaps in smartphone ownership were also particularly large in Ethiopia, India and Bangladesh.

Although there was no overall change in the smartphone gender gap across LMICs from 2021 to 2022, there have been changes at the country level, with trends varying considerably in the 10 markets that were surveyed in both years. The smartphone gender gap remained flat in Bangladesh and Mexico, widened in Senegal, Indonesia, Pakistan and Guatemala, and narrowed in Egypt, Kenya, Nigeria and India. The most notable change was women's smartphone ownership in Egypt, which increased at a faster pace than men's, from 51% to 59%, and resulted in the gender gap narrowing from 15% to 10%.

Figure 5

Share of population by type of handset owned

Percentage of total adult population



Source: GSMA Consumer Survey 2022

Base: Total population aged 18+

The total percentage of handset owners does not exactly match the percentage of mobile owners in Figure 2. Figure 2 captures people who have sole or main use of a SIM card whereas Figure 5 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= 482 to 983 for women and n= 473 to 1,176 for men

Some owners of internet-enabled phones, especially women, are not using the internet

In some markets, particularly Ethiopia, Bangladesh, Nigeria and Kenya, a significant proportion of people who own an internetenabled handset,¹⁵ especially women, do not use mobile internet while others are not even aware of it (see Figure 6). For example, in Ethiopia, 10% of men and 16% of women who own an internet-enabled handset do not know what mobile internet is, and a further 40% and 43%, respectively, are aware of mobile internet but do not use it. In these four markets, men and women who own an internet-enabled phone and are already aware of mobile internet report that the cost of a phone that can access the internet was their top barrier to adoption. This suggests that these mobile owners are either unaware that their existing handset can be used to access the internet or they felt they needed a better handset to do so.

This data demonstrates that in many countries there is the opportunity to support men, and especially women, who already own an internetenabled handset to access mobile internet for the first time.

Figure 6



Mobile internet use among internet-enabled handset owners Percentage of adults who own an internet-enabled handset

Source: GSMA Consumer Survey 2022

Base: Feature phone and smartphone owners aged 18+

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= 119 to 414 for women and n= 242 to 649 for men

In some countries, women are more likely than men to access the internet on someone else's mobile phone

While most mobile internet users have their own internet-enabled phone, in some countries, a notable proportion of people who use mobile internet, especially women, do not own a mobile phone or only own a basic phone. This means they are accessing the internet on someone else's device. This was particularly true in Pakistan where 31% of female mobile internet users are only using someone else's phone to get online compared to only 7% of men (see Spotlight: More men and women came online in Pakistan in 2022, but many women still borrow devices). Similarly, in India, 19% of female mobile internet users are only accessing it on someone else's device compared to 8% of men.

SPOTLIGHT Pakistan: More came in 20

More men and women came online in Pakistan in 2022, but many women still borrow devices

Gender gap in mobile ownership	Gender gap in smartphone ownership	Gender gap in mobile internet	Top three individual barriers to mobile internet adoption among mobile users who are aware of mobile internet but do not use it				
) (; ;					
			Reading and writing difficulties	Handset cost			
35%	53%	38%	Family does not approve	Reading and writing difficulties			
			Internet is not relevant for me	Internet is not relevant for me			

From 2018 to 2021, the number of women using mobile internet doubled, while the number of men using it stayed relatively flat (Figure 7). This resulted in the mobile gender gap narrowing each year. Our latest data shows that the proportion of women using mobile internet in

Pakistan continues to grow, increasing from 22% in 2021 to 27% in 2022. Men's mobile internet adoption increased at a similar rate from 36% to 45% and, as a result, there was no change in the gender gap in 2022. Women in Pakistan are still 38% less likely than men to use mobile internet.

Figure 7

Mobile internet adoption in Pakistan, 2017–2022 Percentage of total adult population



Source: GSMA Consumer Survey, 2017-2022

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 last 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= 500 to 516 for women and n= 504 to 516 for men In Pakistan, 31% of women who use mobile internet do not own a mobile or only own a basic mobile phone. This is compared to only 7% of men, which suggests that borrowing someone else's phone to access the internet is much more common among Pakistani women (see Figure 8). Other data also suggests that borrowing a device is prevalent among women in Pakistan: 39% of women and 21% of men who do not own a mobile reported that having access to someone else's phone makes them feel they do not need to have one of their own.

Figure 8

Mobile ownership among mobile internet users in Pakistan, by handset type *Percentage of mobile internet users*



Source: GSMA Consumer Survey, 2022 Base: Mobile internet users 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 last three months.

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= 141 for women and n= 220 for men

The top-reported barriers to mobile ownership for women who do not own one are reading and writing difficulties, lack of family approval and handset affordability. Handset affordability and reading and writing difficulties are also top barriers for men who do not own a mobile phone, but women in Pakistan experience family disapproval much more acutely than men – 22% of women who do not own a phone report it as their top barrier to mobile ownership compared to 4% of men.

Social norms permeate the mobile internet user journey for women in Pakistan. For instance, borrowing a mobile device often precedes mobile ownership for women in Pakistan due to restrictive social norms.¹⁶ Even women who own a mobile phone have less autonomy over handset purchases than men. In 2021, we found that even when female mobile owners paid for their own device, just 75% had a choice over the model (compared to 85% of men) – the lowest proportion of all 10 survey countries.¹⁷ Among women who use a mobile phone and are aware of mobile internet, family approval also ranks in the top three barriers to mobile internet adoption, but not for men. This was the topreported barrier in 2019 for women in Pakistan but now ranks second, suggesting that mobile internet use among women may be becoming more socially acceptable for some women or that other barriers, such as literacy, affordability and relevance, have become relatively more important.

Tackling the structural and cultural barriers that limit women's mobile ownership and adoption of mobile internet is vital to ensure they can use mobile to meet their life needs safely and autonomously.

^{16.} GSMA. (2021). Addressing the Mobile Gender Gap in Pakistan.

^{17.} GSMA. (2022). The Mobile Gender Gap Report 2022.

The gender gap in mobile internet use

61% of women in LMICs now use mobile internet compared to 75% of men (see Figure 9). This means that while 1.4 billion women are using mobile internet (60 million more than in 2021) there are still 310 million fewer women than men doing so. This translates into a 19% mobile internet gender gap.

Despite more people using mobile internet than ever before, the rate of mobile internet adoption for both men and women slowed across LMICs in 2022. As a result, the mobile internet gender gap has remained relatively unchanged.

This is the second year in a row that the rate of women's mobile internet adoption has slowed across LMICs compared to previous years. In 2021, progress in reducing the mobile internet gender gap stalled and, in some countries, reversed. Prior to this, the mobile internet gender gap had been reducing, from 25% in 2017 to 15% in 2020. The slowdown in digital inclusion for women, and now also for men in 2022, as well as the fact that the mobile internet gender gap is not shrinking, are all concerning findings.

South Asia was the only region where there has been any notable shifts in the mobile internet gender gap since 2017, driven primarily by changes in India. However, this year, there has been no notable change in any regions, including South Asia (see Figure 1). Women in South Asia and Sub-Saharan Africa are still the least likely to use mobile internet compared to their male counterparts, with gender gaps of 41% and 36%, respectively (see Figure 9). Overall, there are 900 million women in LMICs who are unconnected, and almost two-thirds live in these two regions.



Figure 9 Gender gap in mobile internet adoption in LMICs, by region *Total adult population*



Source: GSMA Intelligence, 2023

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

Mobile internet use is defined as a person 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, 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+.

Women, especially rural and less-educated women, were more likely than men to have reduced their mobile internet use

This year we asked men and women who had used mobile internet in the past year whether they thought their usage had increased or decreased over that period. These changes may have been in their data use, frequency of use and/or variety of use cases. In nine of the 12 survey countries, most respondents reported a change in how much they used mobile internet. However, their experiences diverged based on their gender. Women respondents were less likely than men to report increasing their mobile internet use and more likely to report decreasing it. This was especially true for women who live in rural areas, are less educated and older. This is demonstrated in Figure 10, which focuses on Kenya. Among those who had used mobile

internet in the past year in Kenya, 26% of rural women reported decreasing their use "a lot" compared to 18% of rural men, while this was reported by just 11% of urban women and 9% of urban men.

The ongoing economic crisis is a likely contributor to this reduced mobile internet use and as well as the slowdown in mobile internet adoption as it has become less affordable, especially for women. Given that this crisis will likely continue to affect women disproportionately,¹⁸ targeted efforts are required to ensure they are not left behind.

Figure 10

Change in mobile internet use in Kenya Percentage of those who have used mobile internet in the past year



Source: GSMA Consumer Survey, 2022

Base: Adults aged 18+ who have used mobile internet in the past year n=246 for women and n=323 for men

Women and men who use mobile internet believe that it has a positive impact on their lives

While mobile internet can deliver substantial benefits to users, such as making them feel safer, more autonomous and providing access to information, there are also negative aspects of the internet, such as unsolicited online contact and concerns related to scams or fraud. We asked mobile internet users whether they thought it had an overall positive or negative impact on their life in the past year.

Despite the concerns sometimes associated with using the internet, less than a fifth of mobile internet users in all countries reported an overall negative impact on their life, except in Ethiopia (see Figure 11). In all survey countries except Pakistan,¹⁹ between 62% and 91% of mobile internet users reported an overall positive impact on their lives, with women in most countries reporting this to a similar degree as men (see Figure 11). For example, in Senegal, 82% of male and female mobile internet users report that it had either a somewhat or very positive impact on their lives. This suggests that when women start using mobile internet, it improves their lives to a similar degree as men. However, in some countries, such as Kenya, Ghana and Indonesia, women were less likely than men to report an overall positive impact from using mobile internet. More research is needed to better understand why women in these countries are less likely than men to feel the positive impact of mobile internet.

Figure 11



How mobile internet users perceive its impact on their lives *Percentage of mobile internet users*

Don't know
Very negative impact
Somewhat negative impact
Neither negative not positive impact
Somewhat positive impact
Very positive impact

Source: GSMA Consumer Survey, 2022

Base: Mobile internet users aged 18+

Mobile internet users were asked the question, "On balance, has using the internet on a mobile phone had a positive or negative impact overall on your life in the last 12 months?" n = 66 to 437 for women and n = 138 to 645 for men



In Senegal, gender gaps in mobile ownership, smartphone ownership and mobile internet widened in 2022 (see Figure 12). Although these gaps narrowed between 2019 and 2021, they have now returned to levels similar to those in 2019. For instance, the mobile internet gender gap was 22% in 2019, narrowed to 16% in 2021 but is now 20%. These widening gender gaps are due to men experiencing growth in mobile internet adoption, but women have not to the same extent or, in the case of smartphones, their ownership levels have dropped.

Figure 12

Mobile ownership, smartphone ownership and mobile internet adoption in Senegal, 2021-2022

Percentage of total adult population



📕 Men 📕 Women 🏼 🖉 📕 📕 Gender Gap

Source: GSMA Consumer Survey, 2021 and 2022 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. Mobile internet use is defined as having used the internet on a mobile phone at least once in the last three months. The gender gap in mobile ownership, smartphone ownership or mobile internet use refers to how much less likely a woman is to own a mobile (or smartphone, or to use mobile internet) than a man.

n= 518 to 568 for women and n= 512 to 520 for men

While women's smartphone ownership decreased from 2021 to 2022, basic phone ownership increased (see Figure 13), particularly among women who live in rural areas. In contrast, men's smartphone ownership increased in both urban and rural areas. This suggests mobile owners may be downgrading their phones, especially rural women, a group that are already most likely to be digitally excluded.

Although progress has stalled in closing mobile gender gaps in Senegal, men and women who were already using mobile and mobile internet reported that their usage had increased. For example, both men and women who already owned a mobile phone reported performing more weekly use cases on average than in 2021 (see Figure 17). Additionally, 74% of women and 79% of men who use mobile internet reported increasing their usage in 2022. These findings suggest a two-tiered experience whereby those who already owned a handset or used mobile internet were able to increase and diversify their use of mobile and mobile services, but those who were already excluded remained so.

Figure 13

Share of population in Senegal by handset type, 2021–2022 *Percentage of total adult population*



Source: GSMA Consumer Survey, 2021 and 2022 Base: Total population aged 18+

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= 518 to 568 for women and n= 512 to 520 for men

A higher proportion of mobile users who are aware of mobile internet reported handset affordability as the biggest reason preventing adoption in 2022 than in 2021, with more than half of women and men in this group now reporting this.²⁰ This increase was greatest among rural men and women. Based on the most recent data available, Senegal has the second highest proportion of the population living below the national poverty line,²¹ compared to the 11 other survey countries.²² As such, the economic shock in 2022 that slowed GDP growth and increased inflation is likely to have had a greater impact on the affordability of goods and services in Senegal than in most other survey markets, including mobile and mobile services. Women likely felt this impact most acutely as they tend to have less financial autonomy and lower incomes. Those living in rural areas also likely experienced this more acutely, as they are 2.5 times as likely to fall into poverty from a shock than those in urban areas.²³

Since smartphone owners are significantly more likely to adopt mobile internet and use it more regularly and in more diverse ways, more affordable devices will benefit women disproportionately, especially rural women. Making handsets more affordable should be prioritised to ensure gender gaps do not widen further.

- 21. 46.7% of Senegal's population were estimated to be living below the national poverty line. National poverty lines are benchmarks for estimating poverty indicators that are consistent with the country's economic and social circumstances. National poverty lines reflect local perceptions of the level and composition of consumption or income needed to not live in poverty.
- 22. See: World Bank, Poverty and Inequality Platform. Data is compiled from official government sources or calculated by World Bank staff using national (i.e., country-specific) poverty lines.
- 23. World Bank. (2022). Poverty and Equity Brief: Senegal.

^{20.} Since 2021, there has been a 22 and 36 percentage point increase in female and male respondents, respectively, reporting handset affordability as their top barrier to mobile internet adoption - a greater increase than any other survey country.


Understanding barriers to mobile internet adoption

Awareness of mobile internet

Awareness of mobile internet is a critical step in the mobile internet user journey. As such, lower awareness among women is a key contributor to the persistent gender gap in mobile internet adoption in LMICs.

There has only been marginal growth in mobile internet awareness among men and women in most survey countries since 2019. Although the gender gaps in awareness have consistently narrowed, they have been closing more slowly in recent years. For example, in Pakistan, the gender gap was 30% in 2018, this dropped significantly in 2020 to 8% and in 2022 stands at 5%.

Overall, awareness of mobile internet is relatively high among both men and women. In nine of the 12 survey countries, more than 80% of the population is aware of it, and in Mexico it is as high as 96%. However, gender gaps remain. In all survey countries (except Mexico), women are less likely than men to be aware of mobile internet (see Figure 14). Awareness is lowest in Ethiopia where just 62% of men and 47% of women are aware of mobile internet, resulting in the widest gender gap of all survey countries. Mobile internet awareness is also particularly low among women in India (58%) and Bangladesh (62%). This indicates there are significant opportunities to increase awareness of mobile internet and its benefits in these three countries, especially among women.

Awareness of mobile internet among women has grown most significantly in Kenya, India, Indonesia and Pakistan, increasing by at least seven percentage points since 2021. This is important progress, especially in India where awareness levels for women have still not surpassed 60%.

Awareness of mobile internet

Percentage of total adult population



Source: GSMA Consumer Survey, 2022 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= 482 to 983 for women and n= 473 to 1,176 for men

Awareness of mobile internet does not always translate to adoption

There are many people who are mobile users and are aware of mobile internet but do not use it, suggesting there are other barriers preventing them from doing so. This is especially true for women. In half the survey countries, more than 40% of female mobile users who are aware of mobile internet do not use it. This figure is as high as 77% in Ethiopia (see Figure 15). For example, in Kenya, 49% of female mobile users who are aware of mobile internet do not use it compared to 31% of men. This, combined with women's lower uptake of mobile internet, means that addressing barriers beyond awareness will benefit women disproportionately.



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



Source: GSMA Consumer Survey, 2022 Base: Mobile users 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.

n= 239 to 492 for women and n= 354 to 797 for men

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

With progress in driving digital inclusion slowing and a substantial, stubborn gender gap in mobile internet adoption, it is critical to understand the barriers people face once they become aware of mobile internet. In all survey countries, mobile users who were aware of mobile internet but did not use it were asked whether certain barriers were stopping them from doing so (see Appendix 1 for more details). They were then asked which of these barriers they considered important and, finally, which was the single most important barrier to mobile internet adoption.

Across survey countries, the top barrier to mobile internet adoption for male and female respondents was affordability, particularly of internet-enabled handsets. Literacy and digital skills is consistently highly reported as a barrier by men and women, ranking second overall. This tends to be primarily difficulties with reading and writing, although not knowing how to access the internet on a mobile phone was also commonly cited by respondents in several countries, including India and Indonesia. Safety and security concerns remain an important barrier, especially in Mexico where it is ranked as the top barrier for male and female mobile users who are aware of mobile internet but do not use it. At the country level, there are variations in the top-reported barriers (see Table 2). For example, affordability was the top barrier for female respondents in all African markets surveyed except Egypt and Ethiopia, where it was literacy and digital skills.

In general, the barriers preventing female and male mobile users who are aware of mobile internet from adopting it are quite similar. Still, women tend to experience these barriers more acutely than men due to structural inequalities, including disparities in access to education and income. Furthermore, analysis shows that even when women have the same education, income, literacy and employment levels as men, they are still less likely to use mobile internet, suggesting that other issues are at play, such as discrimination and social norms.²⁴

It is important to remember that because of the mobile internet gender gap, millions more women than men experience these barriers. Addressing these barriers is therefore likely to disproportionately enable more women to go online.





Affordability, particularly of handsets, was the top-reported barrier to mobile internet adoption across survey countries for mobile users who are already aware of it. In eight of the 12 survey countries,²⁵ handset cost was the single most important reason preventing both male and female respondents from adopting mobile internet. Even in countries where handset affordability was not the top reason, it was still reported by a significant proportion of respondents as a barrier to adoption. For example, in Pakistan, while not their top reason, 46% of female mobile users and 50% of male users who are already aware of mobile internet said handset affordability was a reason preventing mobile internet adoption. 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, on average, the cost of an entry-level handset represents 25% of women's monthly income in LMICs, compared to 15% of men's.²⁶



Literacy and digital skills remains one of the top barriers to mobile internet adoption in LMICs. In most of the survey countries, women respondents were more likely than men to report this as their top barrier. This barrier is a composite of five sub-barriers, of which reading and writing difficulties was the most frequently reported. Female mobile users in Bangladesh, India, Pakistan and Guatemala who were aware of mobile internet but did not use it reported that reading and writing difficulties was the main reason. Not knowing how to access mobile internet was the second most-reported reason, with 51% of female users and 43% of male users in Egypt who are aware of mobile internet reporting that this was something stopping them from adopting it.



Safety and security continues to be a barrier to adoption for male and female mobile users who are already aware of mobile internet, particularly in Latin America. This includes concerns related to information security, unwanted contact from strangers and exposure to harmful content. In Mexico, safety and security was the top-reported barrier for male and female respondents.



Relevance remains a top barrier to mobile internet adoption for many, ranking in the top three for female respondents in seven of the 12 survey countries (see Table 2). This barrier includes perceptions that the internet is not relevant, which was reported by 14% of female respondents and 20% of male respondents in Bangladesh. It also includes lack of content in local languages, which is reported as a barrier to a lesser extent.



Access-related barriers cover a wide range of issues, from a lack of quality network coverage to family approval, so they are not grouped as a composite. In several countries, but especially Pakistan, lack of family approval is a major barrier to adoption. This was reported primarily by female mobile users who are aware of mobile internet. Understanding the role of gatekeepers is therefore key to facilitating women's mobile internet adoption, especially in markets where social norms are ubiquitous and more restrictive.

^{25.} Egypt, Ethiopia, Ghana, Kenya, Nigeria, Senegal, Indonesia and Mexico.

^{26.} GSMA. (2022). The State of Mobile Internet Connectivity 2022 (see Figure 31).

Table 2

Top barriers to mobile internet adoption for mobile users who are aware of mobile internet but do not use it

Based on the single most important barrier to adopting mobile internet reported by mobile users who are aware of mobile internet but have not used it in the last three months

Danking	ALL COU	JNTRIES
Ranking	Women	Men
1	Affordability	Affordability
2	Literacy and digital skills	Literacy and digital skills
3	Safety and security	Relevance

	EG	YPT	ETHI	ΟΡΙΑ	GHA	ANA NA	KE	NYA	NIGI	ERIA	SENE	GAL
	w	м	w	м	w	м	w	м	w	м	w	М
1	Literacy and digital skills	Literacy and digital skills	Literacy and digital skills	Affordability								
2	Affordability	Affordability	Affordability	Literacy and digital skills	Literacy and digital skills							
3	Safety and security	Relevance	Relevance	No coverage	Relevance	Safety and security						

	BANGL	ADESH	IND	AIG	INDO	NESIA	PAKI	STAN
	w	м	w	м	w	м	w	м
1	Literacy and digital skills	Literacy and digital skills	Literacy and digital skills	Literacy and digital skills	Affordability	Affordability	Literacy and digital skills	Literacy and digital skills
2	Relevance	Relevance	Affordability	Affordability	Literacy and digital skills	Literacy and digital skills	Family does not approve	Affordability
3	Safety and security	Safety and security	Safety and security	Safety and security	Relevance	Relevance	Safety and security	Relevance

	GUATE	MALA	MEX	lico
	w	м	w	м
1	Literacy and digital skills	Literacy and digital skills	Safety and security	Safety and security
2	Safety and security	Safety and security	Affordability	Literacy and digital skills
3	Affordability	Affordability	Literacy and digital skills	Affordability

Source: GSMA Consumer Survey, 2022

Base: Adults aged 18+ who have used a mobile phone in the last three months but have not used mobile internet in the last three months on any device, despite being aware of mobile internet (excludes mobile users who are not aware of mobile internet).

The barriers above are composite barriers. These composite barriers are aggregates (not averages) of the responses for between two and five subbarriers (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= 45 to 204 for women and n= 38 to 205 for men

SPOTLIGHT Image: SpotLight India Image: SpotLight India Progress on digital inclusion has stalled in India



The gender gap in mobile internet adoption in India narrowed significantly between 2017 and 2020 (Figure 16). However, in 2022, mobile internet adoption stalled among women and remains around 30% for the third year

running. This was also the first year since 2017 that men's adoption has stalled. As a result, the gender gap in mobile internet remains relatively unchanged since it widened last year, standing at 40%.

Figure 16



Mobile internet adoption in India, 2017–2022 Percentage of total adult population

Source: GSMA Consumer Survey, 2017-2022

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 last 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= 966 to 983 for women and n= 1,131 to 1,176 for men

To ensure women and men in India have the opportunity to use mobile internet, it is critical to understand the barriers preventing them from adopting it. Mobile internet awareness is particularly low in India and, despite an increase among women from 51% in 2021 to 58% in 2022, it is still lower than almost all other survey countries. In fact, of those who do not use mobile internet, 57% of men and 61% of women do not even know it exists.

Once male and female mobile users are aware of mobile internet, the top barriers preventing them from using it are similar (see Figure 22 in Appendix 1). This includes a lack of basic literacy and not knowing how to access the internet on a mobile phone. Affordability of internet-enabled handsets was the second most-reported barrier for both male and female respondents. This barrier is likely to have been felt more acutely in 2022 as the lasting economic effects of the pandemic and rising unemployment and inflation have made smartphones less affordable in India.²⁷ Handset affordability and literacy and digital skills are also the most frequently reported barriers preventing men and women in India from owning a mobile phone. Women's digital inclusion is also impacted by social norms that limit their access to, and use of, mobile phones.²⁸ Recognising and addressing these norms is also important to increasing women's mobile internet adoption in India.

Addressing the smartphone gender gap is also likely to have a positive impact on the country's wide mobile internet gender gap. This is key given that only 48% of men and 29% of women in India own a smartphone. Once women own a smartphone, they are just as likely as men to be aware of mobile internet and use it to a similar extent.



 See, for example, The Economist. (2023). "India's rocketing internet user growth has stalled" and BBC News. (2023). "Why internet growth has stalled in India".

 For more information, see GSMA. (5 January 2023). "<u>Tackling social norms to reduce the gender digital divide</u>" and GSMA. (2017). <u>Triggering mobile internet use among men and women in South Asia</u>.

Understanding women's mobile use

To ensure women can use mobile internet to meet their needs and reap the full benefits, it is important to look beyond mobile internet adoption. 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. As a result, there are gender gaps in mobile use that mean women are not able to benefit from mobile internet services to the same extent as men.

Most men and women who use mobile internet access it every day

Encouragingly, more than 85% of male and female mobile internet users in all survey countries are using it at least once a week and more than half of mobile internet users also access it daily, suggesting that they find it useful and relevant to their lives. However, in most survey countries, fewer female than male mobile internet users access mobile internet on a daily basis. This gender gap is widest in Senegal where female mobile internet users are 11% less likely than their male counterparts to use it every day.







Women tend to use their mobile phones for a narrower range of activities than men on a weekly basis

There are also gender gaps in the use of mobile services, with female mobile owners using their mobile for a less diverse range of use cases. Mobile owners were asked about 23 distinct mobile use cases, including basic mobile services, such as sending SMS messages and making voice calls, through to more complex, internet-based use cases, such as watching videos online (see Appendix 2). In all 12 survey countries, women mobile owners continue to use fewer of these use cases than men (see Figure 17). For instance, in 2022, male mobile owners in Guatemala were performing 8.8 mobile use cases per week on average, compared to 6.8 per week for female owners.

In several survey countries, there also appears to be a reduction in the number of use cases that male and female mobile owners report using over the last year (see Figure 17). For example, there were large drops in the proportion of male and female mobile owners who used mobile for health, government services, job applications and education. This is likely a result of pandemic restrictions ending and these activities returning to face-toface interactions.

In contrast, male and female mobile owners in Egypt have increased the number of use cases they perform weekly since 2021. This growth is highly correlated with the increase in smartphone ownership and mobile internet adoption in the country, and highlights how these two metrics promote wider mobile use for men and women and enable them to meet more of their needs.



Average number of mobile use cases performed by male and female mobile owners per week, 2021-2022



Source: GSMA Consumer Surveys 2021 and 2022

Base: Mobile owners 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. Respondents may have engaged in some use cases on a phone other than their own. Internet-based use cases were asked only of those who reported having used the internet on a mobile or other device in the past. The numbers in this graph reflect only those use cases performed on a mobile device. n = 269 to 720 for women and n = 385 to 973 for men

Female mobile owners spend less on mobile services than male mobile owners

Across LMICs the gender gap in spending on mobile services is 18%. This means that, on average, female mobile owners spend 18% less on mobile services than male mobile owners (see Figure 18). This gap is widest in Sub-Saharan Africa (32%) where mobile data and services are least affordable.²⁹ The gender gap in mobile services spending is significant in every region even when other mobile gender gaps are relatively low. For example, in Latin America and the Caribbean, the mobile ownership gender gap is 2% (see Figure 1), but the gender gap in spending is 20% (see Figure 18).

Given women's lower levels of employment, income and financial autonomy, this gender gap in spending is perhaps unsurprising. However, it emphasises that even when women own a mobile phone, their usage is not comparable to men. Addressing this gap will require tackling both the structural inequalities that limit women's income and employment, as well as the barriers women face to using mobile services, which would include making mobile services more affordable. It is important to understand this spending gap and ensure that women can use mobile services to the same extent as men. Closing this gap is also an important commercial opportunity for the mobile industry. Of the estimated \$230 billion that the mobile industry would see if the mobile gender gap closed by 2030, approximately 85% (about \$195 billion) would come from closing the gender gap in mobile services spending alone. This indicates that the vast majority would be derived from closing the gender gap in mobile use.

Figure 18

Gender gaps in mobile services spending across LMICs, by region



Source: GSMA Intelligence, 2023

The gender gap in spending refers to how much less a woman, on average, spends than a man on mobile services.

Regional averages were calculated from country-level data. Based on survey results and modelled data for adults aged 18+.

Recommendations

This year's data is a clear call to action to do more to ensure no one is left behind in an increasingly digital world. The unfortunate reality is that with the rate of digital inclusion slowing across LMICs, more effort and focus will be needed to address the digital divide. Women in particular are being left behind – a challenge that must be met head on to ensure that women, their communities and the broader economy reap the significant benefits of being connected.

In 2022, the mobile internet gender gap was substantial and not reducing, indicating that it will not close on its own. If the mobile internet gender gap remains unchanged, forecasts suggest that only 360 million more women in LMICs will adopt it by 2030 (compared to 490 million more men). To close the gap by then, another 450 million women would need to start using it. This means a total of 810 million women would need to adopt mobile internet by 2030, equivalent to 100 million women on average every year.

This stubborn gender gap not only reflects existing gender inequalities, but also threatens to exacerbate them, particularly as economies suffer in the current economic crisis and mobile becomes less affordable. It is only with the concerted action and collaboration of different stakeholders that we can truly accelerate progress on this issue. The following recommendations are for four types of organisations: mobile network operators (MNOs), internet companies, policymakers and regulators and the development community (see Figure 19). This list is not comprehensive, 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.*³⁰ For governments and policymakers, more detailed recommendations for closing 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.*³¹

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

^{30.} 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.

RECOMMENDATIONS FOR ALL STAKEHOLDERS TO CLOSE THE MOBILE GENDER GAP

<u> A</u>

Ensure there is a focus on gender equality and reaching women at an organisational and policy level, with 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, and access and 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.

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

Barrier addressed by the action	Mobile operators	Internet companies	Policymakers and regulators ³³
Affordability	Support industry efforts to lower the cost of internet-enabled mobile phones, especially smartphones. E.g. Create partnerships to offer entry-level smartphones or smart feature phones to customers at a reduced cost.	Partner with MNOs to address handset affordability. E.g. Offer subsidies for low-cost smartphones to encourage mobile internet adoption.	Ensure policies and regulations help to lower the cost of handsets and data for consumers , we disproportionately benefit women. E.g. Review and remove sector-specific taxes and fees for handsets are luxury items, excise duties on data charges and and taxes on social media use.
Knowledge and digital	Design solutions to reduce the burden of the "one-off" cost of smartphones for consumers, making them more affordable. E.g. Provide microloans or instalment repayment plans with third parties.	Consider how to adapt products and services to make them more affordable without compromising quality. E.g. Make "data-light" versions of apps or lightweight operating systems to help reduce costs for more price-	Adopt policies and regulations that help users, especially women, improve their ability to pa data and other services. E.g. Enable innovative financing mechanisms for handsets, such as fac access to credit to enable women to cover the upfront cost of mobile handsets.
skills	Develop clear and transparent pricing for credit and data and	sensitive users.	Consider subsidy programmes to help make handsets and data services more affordable. E.g. Design subsidy programmes targeted at underserved women.
Safety and security	introduce more creative pricing to appeal to price-sensitive customers. E.g. Encourage low-cost or free trials of mobile internet services through promotional deals or extend the length of data packages.	Implement digital skills training, paying attention to women's needs, interests and circumstances. E.g. Through partnerships or via products and services.	Address wider policy and regulatory barriers that are discriminatory to women accessing and impede their ability to afford handsets and data. E.g. Review and revise regulations and inheritance, property, equal pay for work of equal value laws) that affect women's access to ability to secure credit.
Access	Improve customers' digital skills, including assisting new users who may need additional support, and pay attention to women's needs, interests and circumstances. E.g. Train and incentivise mobile agents to provide digital skills training and every provide support of the CEMA Makile laborate	Help women to navigate the internet confidently and safely and to feel secure and in control when using mobile apps and services. E.g. Provide training in how to avoid and respond to negative	Develop and deliver digital skills training programmes that meet women's preferences for w they want to learn. E.g. Identify groups of women to target, understand their needs and goals training includes a focus on mobile given the mobile-first nature of access for many.
Relevance	and support to customers, such as using the GSMA Mobile Internet Skills Training Toolkit (MISTT). ³² Consider providing incentives for women's social networks to teach	behaviours and threats, and develop tools that allow users to easily and transparently control their privacy and security settings and manage data use.	Invest in public education and digital literacy initiatives that improve the confidence and dig women and girls. E.g. Mainstream basic mobile and digital skills in school curricula, with partic to meeting the interests and advancement of women and girls of all ages, levels of education, i familiarity with mobile internet.
	them how to use mobile handsets and services. E.g. Leverage the knowledge and digital skills of existing customers, friends and family, savings groups, community groups, etc.	Develop apps, services and other measures to help women feel safer online. E.g. Make it easy and safe for customers to report online abuse and collaborate with relevant government agencies to ensure these reports are responded to quickly and effectively.	Raise awareness of the threats preventing women and girls from accessing and using the inte these threats can be addressed or reduced. E.g. Public awareness campaigns, investing in digi programmes and formal education programmes/curriculum that target both men and women.
	Develop mobile apps and services that can help increase safety for women. E.g. Develop intuitive safety services like apps to help women alert contacts in an emergency or use call-blocking services.	Ensure mobile apps and operating systems are accessible for women who are less confident and have fewer literacy skills.	Strengthen measures to protect women against internet-related abuse and harassment. E.g. Review existing legal and policy frameworks to ensure they recognise digital harassment a make it easy and safe to report online abuse.
	Consider the role of gatekeepers in facilitating women's mobile ownership and use. E.g. Demonstrate through marketing the value of women having	E.g. Consider local languages, clear user menus with fewer steps, simplified content, simple terminology and a shorter sign-up process. Use icons, symbols, pictures, videos and comic-style stories in addition to (or instead of) text.	Encourage the development and uptake of apps and services that make it safer for women to the internet.
	access to a mobile phone and mobile internet. Ensure agent networks are accessible for women. E.g. Ensure locations and operating hours are accessible for women	Develop and incorporate tools to improve the usability of digital services for women with low literacy levels or who only speak their local language.	Create an enabling policy and regulatory environment to help women purchase and access m E.g. Review Know Your Customer (KYC) requirements, ID registration policy and mobile agent regulation to ensure they do not exclude women.
	and consider recruiting female agents in settings where the roles of men and women are very different and women feel more comfortable	E.g. Integrate voice search, chatbots or text to speech.	Ensure mobile-related sales, access and training facilities are accessible for women as well as E.g. Ensure regulation does not unintentionally exclude women from becoming agents.
	interacting with other women. Ensure marketing and services are accessible for women and those with leave distribution describes and accessible for women and those	Understand and incorporate the content, features, channels and services that women in your market find useful and relevant. E.g. Make relevant video content in local languages more	Ensure digital government services are accessible for those with lower literacy and digital sk E.g. Provide an interactive voice response (IVR) helpline, use simple terminology, local languag symbols, pictures, videos and comic-style stories in addition to (or instead of) text.
	 with lower literacy, digital skills and awareness and understanding of the internet. E.g. Offer content and advertising in local languages through channels that are accessible to women. Use simple messaging, avoid technical jargon and consider the use of pictures, icons and videos. 	available and accessible.	Raise awareness of the benefits of mobile for women to help address social norms that restri mobile access and use. E.g. Challenge misconceptions and help gatekeepers understand the b mobile for women.
	Communicate the relevance of mobile ownership and mobile internet use in women's daily lives.		Raise awareness of mobile internet-enabled content, apps and services and how they can be women's lives. E.g. Promote the life-changing benefits of mobile internet via relevant channels radio stations and local extension workers to support the government in the delivery of basic s
	E.g. Showcase relatable use cases in marketing targeted at women and/or ensure that women are featured in more broadcast advertising campaigns as active users of the service.		Create an enabling environment that supports the development of content, apps and services women's needs. E.g. Support businesses and start-ups to develop inclusive solutions with and for
			Ensure that digital public services are developed to meet the needs of women. E.g. Consult and groups of women when designing and testing government content, apps and services.

33. More detailed recommendations on how policymakers can increase mobile adoption more broadly among the undeserved can be found here: <u>Accelerating mobile internet adoption: Policy considerations to bridge the digital divide in low- and middle-income countries.</u>



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Work to address the negative influence of social norms.

This includes those that restrict women's access to mobile technology by challenging misconceptions and demonstrating the positive and relevant use cases of mobile.

Appendix 1: Barriers to mobile ownership and mobile internet adoption

In each of the 12 survey countries:

- 1. Respondents who did not own a mobile phone were asked to identify the barriers preventing them from owning one.
- 2. Respondents who used a mobile phone and 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 mobile internet.

Respondents selected barriers from a pre-defined list during a face-to-face quantitative survey. For both mobile ownership (see Figure 20 and Figure 21) and mobile internet adoption (see Figure 22 and Figure 23), respondents were first asked to identify all relevant barriers, then to identify those that were most important and, finally, to identify the single most important barrier.

Strongly related or thematically overlapping barriers were grouped into composites that were used to calculate country-level and overall rankings of barriers.³⁴ 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.



34. 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.



Top barrier to owning a mobile phone Percentage of non-mobile owners who reported the following as the single most important barrier to owning a mobile phone.

			AFFORD	ABILITY	,	LITERA	CY AND	DIGITAL	SKILLS		RELEV	ANCE			SAI	ETY AN	D SECUR	ITY						ACC	ESS				
		HANDSI	ET COST	CREDI	IT COST	DO NOT KI TO USE A		READING/ DIFFICI		HAVE AC SOMEON PHC	E ELSE'S	MOBILE RELEVAN		PERSONA	L SAFETY	STRAN CONTAC			MATION JRITY	BATTERY	CHARGING		VORK RAGE	Family C Appi	OOES NOT ROVE	ACCESS T SUPP		11	D
		м	W	м	w	м	w	м	w	м	w	м	W	м	w	м	w	м	w	м	w	м	w	м	w	м	w	М	w
	Egypt	36%	25%	5%	21%	12%	6%	12%	14%	6%	11%	7%	7%	1%	1%	1%	1%	5%	5%	0%	0%	9%	4%	1%	5%	3%	0%	2%	0%
	Ethiopia	56%	44%	1%	0%	10%	10%	19%	30%	4%	8%	3%	3%	0%	0%	0%	0%	0%	0%	1%	1%	2%	3%	2%	1%	1%	0%	1%	1%
AFRICA	Ghana	37%	43%	0%	3%	2%	9%	17%	16%	7%	2%	17%	8%	0%	0%	0%	0%	2%	1%	1%	0%	0%	3%	4%	4%	1%	0%	12%	12%
AFRICA	Kenya	-	46%	-	2%	-	9%		9%		14%		3%	-	0%		2%		2%	-	0%		0%		6%	-	0%		9%
	Nigeria	42%	37%	4%	2%	0%	2%	28%	21%	3%	12%	10%	3%	0%	2%	3%	0%	2%	2%	0%	0%	2%	5%	0%	4%	0%	0%	5%	11%
	Senegal	46%	61%	6%	6%	0%	5%	28%	13%	2%	4%	0%	2%	0%	1%	2%	1%	2%	1%	0%	0%	6%	1%	10%	2%	0%	3%	0%	1%
	Bangladesh	9%	9%	6%	0%	11%	17%	25%	23%	6%	7%	21%	12%	4%	3%	0%	3%	2%	6%	2%	1%	4%	4%	0%	14%	2%	2%	5%	1%
ASIA	India	16%	18%	6%	7%	12%	8%	19%	14%	6%	13%	5%	4%	7%	4%	7%	2%	6%	3%	6%	7%	4%	2%	4%	9%	2%	3%	1%	3%
ASIA	Indonesia	23%	19%	7%	12%	21%	19%	7%	4%	9%	12%	8%	9%	3%	3%	6%	4%	7%	7%	0%	1%	6%	3%	0%	3%	0%	1%	0%	1%
	Pakistan	11%	14%	4%	5%	6%	7%	25%	26%	7%	8%	7%	8%	9%	1%	3%	3%	5%	2%	3%	1%	9%	1%	4%	22%	1%	2%	5%	0%
LATIN	Guatemala	12%	25%	0%	3%	6%	10%	22%	14%	0%	5%	7%	0%	17%	13%	16%	12%	2%	9%	4%	1%	7%	3%	2%	0%	0%	3%	1%	2%
AMERICA	Mexico	26%	19%	5%	5%	9%	8%	7%	14%	0%	5%	14%	8%	9%	9%	5%	7%	10%	17%	0%	0%	11%	6%	0%	0%	0%	0%	0%	0%

Source: GSMA Consumer Survey, 2022

Base: Non-mobile owners aged 18+

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 having a mobile phone or SIM card, connected to a mobile operator's network?" Cells in grey reflect where sample sizes were below 30 and therefore insufficient. n= 54 to 239 for women and n= 39 to 132 for men



Least frequently cited barrier in that country

Most frequently cited barrier in that country

A barrier to owning a mobile phone Percentage of non-mobile owners who reported the following as a barrier to owning a mobile.

			AFFORD	DABILITY		LITERA	ACY AND	DIGITAL	SKILLS		RELEV	ANCE			SAI	ETY AN	D SECUR	ITY						ACC	ESS				
		HANDSE	ET COST	CREDI	t cost		NOW HOW A MOBILE	READING DIFFIC	/WRITING ULTIES	SOMEON	CESS TO IE ELSE'S DNE		IS NOT T FOR ME	PERSONA	L SAFETY		NGERS TING ME		MATION JRITY	BATTERY	CHARGING		WORK ERAGE	FAMILY I APP	DOES NOT ROVE	ACCESS 1 SUPI	TO AGENT PORT	II	D
		м	w	м	w	м	w	м	w	м	w	м	w	м	w	м	w	м	w	м	w	М	w	м	w	м	w	М	w
	Egypt	68%	76%	55%	68%	52%	55%	47%	66%	36%	40%	41%	46%	19%	32%	32%	37%	35%	39%	22%	30%	25%	22%	15%	19%	17%	12%	8%	10%
	Ethiopia	78%	70%	40%	37%	47%	57%	53%	66%	16%	22%	9%	17%	12%	8%	10%	4%	9%	6%	29%	21%	19%	20%	4%	7%	15%	15%	10%	10%
AFRICA	Ghana	48%	44%	11%	21%	12%	18%	28%	44%	9%	10%	17%	9%	4%	3%	2%	1%	2%	3%	1%	1%	2%	6%	7%	7%	5%	2%	27%	19%
	Kenya	67%	70%	36%	50%	21%	30%	18%	44%	9%	35%	21%	23%	12%	18%	9%	15%	12%	21%	12%	23%	6%	9%	0%	16%	9%	8%	13%	23%
	Nigeria	59%	53%	29%	37%	15%	27%	32%	36%	16%	23%	16%	18%	10%	12%	9%	13%	16%	15%	7%	5%	14%	10%	0%	11%	2%	8%	20%	23%
	Senegal	54%	66%	27%	36%	3%	25%	35%	34%	5%	6%	6%	7%	8%	6%	6%	4%	7%	5%	13%	12%	13%	12%	11%	7%	10%	10%	3%	7%
	Bangladesh	38%	36%	32%	14%	32%	40%	36%	46%	34%	27%	34%	34%	33%	18%	29%	22%	26%	22%	11%	14%	20%	13%	11%	26%	13%	9%	10%	7%
ASIA	India	31%	34%	28%	30%	23%	26%	30%	26%	22%	30%	18%	23%	18%	18%	22%	22%	19%	19%	22%	23%	17%	13%	14%	20%	16%	19%	16%	17%
	Indonesia	52%	51%	37%	38%	39%	38%	13%	12%	36%	40%	38%	40%	18%	29%	20%	35%	26%	32%	14%	14%	18%	22%	21%	26%	13%	17%	11%	14%
	Pakistan	34%	50%	28%	41%	26%	37%	43%	48%	21%	39%	25%	40%	26%	26%	21%	34%	19%	25%	25%	19%	26%	25%	18%	39%	28%	23%	27%	15%
LATIN AMERICA	Guatemala	42%	59%	30%	40%	29%	31%	39%	41%	22%	23%	21%	20%	45%	44%	43%	51%	42%	44%	22%	16%	22%	26%	15%	19%	27%	22%	21%	12%
	Mexico	55%	55%	44%	40%	39%	36%	31%	29%	22%	19%	38%	27%	47%	48%	53%	50%	47%	53%	26%	19%	40%	27%	18%	13%	30%	22%	16%	15%

Source: GSMA Consumer Survey, 2022 Base: Non-mobile owners 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 having a mobile phone or SIM card, connected to a mobile operator's network." n= 62 to 263 for women and n= 33 to 203 for men

Men

Women

Least frequently cited barrier in that country

Most frequently cited barrier in that country

Top barrier to mobile internet adoption Percentage of mobile users who are aware of mobile internet but do not use it, and who reported the following as the top barrier to using mobile internet.

		A	FFORD	ABILIT	ΓY			LI	TERAC	Y AND	DIGITA	L SKIL	LS				RELEV	ANCE			SAFE	ΤΥ ΑΝΙ	D SECL	JRITY								ACC	ESS						
		HANDS	ET COST	DATA	COST	WR	DING/ ITING CULTIES	HO\ ACC INTERN	T KNOW W TO CESS IET ON A BILE	DO NOT HOW TO MOE	O USE A	DO NOT TIME TO HOW ACCI INTERNE MOB	LEARN / TO ESS ET ON A	NC SUFFI SUPPO LEARNI USE INT	CIENT ORT IN ING TO	INTER NOT REI FOR	LEVANT	INSUFF CONT IN LO LANG	CAL	HARN CONT (SELF/F	ENT	STRAN CONTA M	CTING	INFORM SECU		INTEF DRAIN BATT	IS MY	NETV COVE		FAMILY NOT AP	OOES PROVE	ACC TO AC SUPF	GENT	SLC CONNE CANNO WHAT I	CTION/ DT DO	NO AC TO INTI ENAE PHO	ERNET BLED	HARD TO WHER BUY INT ENAB PHO	E TO ERNET SLED
		м		м		м		м		м	w	м	w	м		м	w	м	w	м		м		м		м		м	w	м		м	w	м	w	м	w	м	w
	Egypt	22%	23%	5%	5%	20%	16%	3%	2%	3%	4%	3%	5%	3%	2%	19%	6%	5%	0%	4%	3%	0%	8%	5%	7%	2%	1%	5%	2%	0%	12%	0%	1%	1%	1%	0%	2%	0%	0%
	Ethiopia	33%	32%	3%	2%	17%	25%	10%	12%	2%	2%	3%	5%	1%	1%	7%	7%	1%	0%	1%	1%	2%	1%	1%	0%	2%	1%	10%	3%	1%	1%	0%	0%	2%	2%	0%	1%	5%	3%
AFRICA	Ghana	37%		7%	7%	11%	17%	7%	4%	3%	1%	6%	2%	2%	1%	17%	5%	0%	1%	1%	0%	1%	1%	1%	0%	2%	1%	0%	1%	2%	1%	0%	0%	0%	1%	1%	1%	2%	0%
AFRICA	Kenya	51%	53%	5%	5%	5%	6%	3%	3%	1%	1%	2%	4%	3%	2%	12%	13%	0%	1%	8%	3%	2%	1%	3%	1%	2%	4%	0%	1%	0%	0%	1%	1%	0%	1%	1%	0%	3%	1%
	Nigeria	38%	34%	4%	6%	25%	26%	1%	5%	4%	3%	1%	2%	2%	1%	10%	8%	1%	1%	1%	2%	2%	2%	2%	2%	0%	0%	2%	1%	2%	3%	0%	0%	3%	1%	2%	1%	0%	1%
	Senegal	55%	54%	2%	4%	6%	14%	2%	6%	3%	0%	6%	5%	0%	1%	5%	6%	0%	0%	1%	1%	2%	0%	6%	1%	2%	0%	4%	2%	0%	0%	1%	0%	1%	1%	2%	3%	2%	0%
	Bangla- desh	8%	10%	4%	3%	22%	18%	3%	5%	4%	5%	4%	2%	0%	3%	20%	14%	4%	3%	6%	7%	4%	8%	4%	1%	0%	0%	6%	2%	3%	12%	0%	0%	4%	2%	2%	1%	1%	2%
ASIA	India	14%	15%	7%	4%	12%	20%	17%	13%	5%	0%	6%	5%	1%	4%	4%	6%	1%	4%	4%	2%	0%	1%	6%	9%	6%	4%	7%	3%	1%	5%	2%	0%	2%	3%	3%	2%	1%	0%
	Indonesia	21%	28%	17%	13%	6%	7%	11%	17%	2%	0%	8%	6%	0%	3%	15%	9%	0%	2%	0%	3%	2%	5%	6%	0%	0%	0%	7%	0%	2%	0%	0%	3%	2%	2%	1%	2%	0%	0%
	Pakistan	23%	7%	6%	1%	20%	25%	3%	3%	6%	9%	4%	2%	3%	1%	11%	13%	5%	5%	2%	2%	2%	3%	1%	4%	1%	0%	3%	1%	1%	18%	1%	1%	2%	2%	2%	2%	2%	0%
LATIN	Guatemala	2%	13%	12%	7%	18%	18%	11%	6%	2%	0%	6%	5%	3%	2%	0%	2%	0%	0%	8%	8%	10%	8%	15%	5%	5%	8%	3%	5%	0%	0%	0%	0%	3%	7%	3%	0%	0%	4%
AMERICA	Mexico	21%	24%	6%	5%	8%	2%	5%	2%	5%	4%	9%	2%	0%	5%	2%	5%	0%	0%	10%	8%	13%	10%	13%	14%	0%	3%	2%	10%	0%	2%	0%	2%	3%	0%	3%	0%	0%	0%

Source: GSMA Consumer Survey, 2022 Base: Adults aged 18+ who have used a mobile phone in the last three months but have not used mobile internet in the last three months, despite being aware of mobile internet (excludes mobile users who are not aware of mobile internet).

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= 45 to 204 for women and n= 38 to 205 for men



Men Women Least frequently cited barrier in that country

A barrier to mobile internet adoption Percentage of mobile users who are aware of mobile internet but do not use it, and who reported the following as a barrier to using mobile internet.

		А	FFOR	DABILI	ГΥ			LII	[ERAC]	Y AND	DIGITA	L SKIL	LS				RELEV	ANCE/			SAFE	ΤΥ ΑΝΙ	D SECU	JRITY								ACC	ESS						
		HANDS	ET COST	DATA	COST	WR	DING/ ITING SULTIES	ACC INTERN	T KNOW V TO ESS ET ON A BILE	DO NOT HOW TO MOE	USE A	DO NOT TIME TO HOW ACC INTERNE MOE	LEARN / TO ESS ET ON A	NC SUFFIC SUPPO LEARNI USE INT	CIENT ORT IN ING TO	INTER NOT REI FOR	LEVANT	INSUFF CON IN LC LANG	CAL	HARM CONT (SELF/F	ENT	STRAN CONTA M	CTING	INFORM SECU		INTEI DRAIN BATT	NS MY	NETW COVE	VORK RAGE	FAMIL NOT AI	Y DOES PROVE		CESS GENT PORT	SLC CONNE CANN WHAT	CTION/ OT DO	NO AO TO INT ENAI PHO	ERNET BLED	BUY INT	RE TO
		м		м		м		м		м	w	м		м	w	м		м		м	w	м		м		м		м		м		м		м		м	w	м	w
	Egypt	58%	66%	54%	75%	38%	51%	43%	51%	44%	51%	42%	51%	39%	42%	50%	57%	23%	22%	41%	50%	30%	59%	43%	43%	21%	22%	32%	26%	11%	34%	6%	24%	22%	27%	46%	58%	15%	24%
	Ethiopia	59%	61%	36%	43%	31%	37%	45%	50%	23%	26%	27%	33%	26%	36%	22%	31%	18%	12%	10%	14%	18%	14%	13%	10%	21%	12%	29%	15%	3%	5%	13%	8%	22%	14%	28%	29%	22%	19%
	Ghana	46%	55%	29%	36%	31%	34%	23%	27%	8%	16%	17%	15%	15%	16%	26%	22%	7%	8%	6%	7%	11%	6%	9%	6%	5%	6%	5%	6%	4%	2%	3%	3%	5%	5%	16%	23%	7%	6%
AFRICA	Kenya	59%	67%	32%	44%	24%	24%	28%	34%	15%	13%	19%	23%	13%	16%	31%	31%	13%	16%	21%	20%	15%	20%	16%	19%	16%	19%	14%	14%	2%	4%	7%	6%	10%	16%	20%	28%	11%	7%
	Nigeria	52%	58%	36%	51%	43%	46%	30%	41%	19%	26%	24%	27%	15%	14%	30%	25%	13%	15%	13%	15%	17%	19%	16%	17%	10%	18%	12%	10%	5%	16%	4%	6%	13%	13%	25%	27%	6%	8%
	Senegal	61%	67%	39%	34%	34%	43%	21%	26%	14%	20%	24%	26%	9%	13%	20%	16%	3%	14%	12%	10%	13%	9%	13%	7%	7%	4%	15%	19%	0%	5%	12%	8%	8%	11%	18%	28%	12%	10%
	Bangladesh	27%	32%	24%	29%	29%	36%	22%	31%	23%	20%	22%	18%	11%	17%	31%	38%	16%	20%	20%	26%	24%	30%	16%	26%	10%	10%	12%	9%	13%	20%	5%	6%	14%	17%	16%	12%	6%	10%
ASIA	India		34%	41%	35%	29%	29%	28%	24%	30%	23%	25%	19%	20%	22%	26%	21%	17%	17%	19%	21%	20%	18%	25%	25%	25%	15%	24%	15%	9%	15%	20%	15%	18%	17%	35%	24%	13%	13%
	Indonesia	50%	46%	48%	38%	11%	7%	39%	34%	23%	20%	28%	27%	18%	22%	42%	32%	9%	9%	23%	19%	27%	28%	31%	20%	10%	10%	21%	17%	8%	7%	5%	4%	16%	14%	24%	21%	4%	0%
	Pakistan	48%	46%	42%	40%	45%	52%	21%	29%	42%	44%	42%	36%	22%	28%	45%	52%	42%	43%	14%	34%	19%	37%	16%	31%	19%	14%	15%	17%	12%	41%	15%	20%	22%	22%	36%	37%	19%	18%
LATIN	Guatemala	53%	50%	39%	39%	41%	34%	34%	30%	32%	30%	18%	21%	21%	21%	18%	13%	16%	16%	51%	38%	42%	37%	60%	38%	32%	33%	21%	31%	8%	20%	12%	15%	26%	35%	20%	18%	25%	20%
AMERICA	Mexico	45%	57%	44%	51%	25%	20%	46%	42%	36%	26%	33%	32%	29%	26%	29%	35%	15%	10%	49%	40%	52%	44%	49%	53%	25%	38%	27%	34%	17%	9%	22%	16%	26%	30%	35%	43%	25%	13%

Source: GSMA Consumer Survey, 2022 Base: Adults aged 18+ who have used a mobile phone in the last three months but have not used mobile internet in the last three months, despite being aware of mobile

internet (excludes mobile users who are not aware of mobile internet). 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= 55 to 228 for women and n= 43 to 216 for men



Men

Women

Least frequently cited barrier in that country

Appendix 2: Mobile use cases

Figure 24

Weekly mobile use among mobile owners

Percentage of mobile owners who perform each use case at least once a week

			CALL ON NETWORK	CALL ONLINE	VIDEO CALLS	SMS/MMS	ім	SOCIAL NETWORK- ING	FREE GAMES	FREE VIDEO	FREE MUSIC	PAID ENTERTAIN- MENT	MOBILE MONEY: SEND/ RECEIVE MONEY	GET INFORMA- TION	ORDER GOODS/ SERVICES	BANKING APP	MANAGE BILLS	HEALTH SERVICES	GOVERN- MENT SERVICES	JOB APPLICATION	EDUCATION SUPPORT	AGRICUL- TURAL INFORMATION	READ NEWS	USE MAP	RIDE HAIL
	Egypt	м	96%	68%	65%	86%	75%	74%	55%	63%	46%	26%		24%	15%	14%	16%	16%	12%	13%	16%	4%	49%	22%	13%
	Едург	w	96%	61%	56%	80%	66%	64%	48%	54%	40%	18%	-	19%	13%	10%	13%	14%	11%	15%	17%	1%	46%	16%	14%
	Ethiopia	м	92%	15%	11%	53%	18%	23%	41%	17%	11%	3%	2%	5%	3%	3%	1%	5%	2%	6%	10%	4%	21%	4%	1%
	Ethiopia	w	85%	8%	7%	37%	9%	10%	29%	6%	5%	2%	-	3%	1%	1%	1%	4%	2%	2%	7%	0%	7%	1%	1%
	Ghana	м	88%	50%	42%	79%	60%	56%	34%	40%	30%	17%	53%	26%	11%	8%	14%	11%	8%	7%	23%	5%	47%	18%	10%
AFRICA	Glialia	w	91%	39%	31%	75%	47%	40%	36%	35%	23%	15%	41%	18%	6%	4%	8%	7%	5%	5%	14%	2%	31%	9%	7%
AFRICA	Kenya	м	90%	30%	24%	89%	49%	47%	33%	35%	30%	16%	59%	24%	9%	11%	30%	10%	5%	12%	19%	12%	31%	13%	5%
	Kellya	w	88%	22%	16%	85%	37%	31%	26%	25%	20%	9%	49%	12%	4%	3%	21%	4%	3%	7%	13%	7%	16%	4%	3%
	Nigoria	м	89%	47%	38%	79%	53%	50%	36%	29%	23%	14%	9%	24%	9%	28%	18%	14%	9%	10%	21%	9%	41%	15%	10%
	Nigeria	w	89%	30%	25%	77%	33%	32%	33%	19%	13%	9%	4%	13%	6%	18%	9%	9%	3%	3%	14%	6%	21%	8%	5%
	Concerci	м	96%	61%	48%	62%	66%	54%	35%	52%	37%	12%	46%	17%	9%	3%	11%	10%	11%	9%	19%	5%	46%	12%	3%
	Senegal	w	95%	54%	43%	54%	55%	35%	29%	46%	30%	8%	27%	12%	6%	2%	4%	6%	8%	5%	16%	0%	33%	6%	2%
	Described	м	93%	34%	35%	62%	33%	34%	25%	26%	14%	21%	16%	6%	6%	7%	10%	9%	13%	9%	13%	6%	14%	7%	4%
	Bangladesh		92%	25%	25%	65%	25%	23%	17%	17%	9%	18%	7%	4%	1%	3%	4%	8%	17%	6%	9%	3%	8%	4%	3%
		м	73%	47%	49%	53%	46%	42%	26%	50%	36%	27%	7%	16%	11%	13%	12%	13%	11%	13%	22%	6%	28%	19%	10%
	India	w	79%	32%	33%	42%	34%	27%	17%	36%	23%	17%	2%	8%	6%	5%	5%	8%	5%	6%	17%	3%	16%	9%	4%
ASIA		м	68%	72%	66%	48%	73%	63%	28%	59%	24%	13%	5%	15%	9%	10%	5%	6%	7%	3%	14%	3%	39%	19%	5%
	Indonesia	w	69%	68%	65%	51%	68%	57%	23%	50%	22%	8%	2%	18%	9%	9%	6%	6%	4%	4%	22%	2%	30%	12%	6%
		м	85%	40%	36%	62%	36%	33%	27%	30%	13%	15%	7%	8%	3%	5%	8%	13%	7%	7%	12%	4%	14%	8%	4%
	Pakistan	w	82%	29%	38%	62%	30%	23%	21%	25%	14%	8%	-	4%	2%	1%	2%	4%	2%	1%	4%	0%	10%	2%	1%
		м	82%	72%	61%	65%	73%	69%	41%	60%	44%	31%		29%	13%	17%	12%	21%	15%	13%	42%	10%	58%	31%	13%
LATIN	Guatemala	w	75%	63%	53%	55%	65%	62%	21%	44%	35%	21%		18%	8%	6%	5%	16%	9%	8%	37%	4%	48%	18%	10%
AMERICA		м	87%	72%	45%	69%	83%	77%	37%	64%	56%	30%		32%	19%	32%	25%	23%	17%	13%	45%	-	56%	49%	31%
	Mexico	w	88%	72%	61%	70%	84%	75%	33%	67%	55%	28%		31%	16%	29%	23%	21%	14%	15%	51%	-	50%	37%	33%

Source: GSMA Consumer Survey 2022

Base: Mobile owners 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. Mobile internet use cases were only asked of mobile owners who have used the internet before. However, the percentages still represent the proportion of mobile owners overall who use that mobile internet use case.



Men

Women L

Least reported weekly use case in that country

Cells in grey reflect where sample sizes were below 30 and therefore insufficient. n= 269 to 720 for women and n= 385 to 973 for men

Most reported weekly use case in that country

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 2022. This is supplemented by 2017, 2018,

2019, 2020 and 2021 GSMA survey results from 17 additional countries,³⁵ as well as third-party survey results that cover another 11 countries.³⁶

Survey methodology

In all countries surveyed in 2022, 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 Tigray region and six other zones³⁷ due to local conflict and security concerns. These areas represent 12% of the population in Ethiopia, thus the sample was representative of the remaining 88% of the Ethiopian population who live outside these areas. 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 intervieweradministered using handheld devices. Both female and male interviewers conducted the surveys. Data was weighted to known population profiles to correct any imbalances in the distributions achieved during fieldwork.

^{35.} Six countries were surveyed by the GSMA in 2017, 2018, 2019, 2020, 2021 and 2022: Kenya, Nigeria, Bangladesh, India, Pakistan and Guatemala. Two countries were surveyed by the GSMA in 2017, 2018, 2019, 2021 and 2022: Mexico and Indonesia. One country was surveyed by the GSMA in 2019, 2021 and 2022: Senegal. One country was surveyed in 2017, 2021 and 2022: Egypt. One country was surveyed in 2017 and 2022: Ghana. One country was surveyed by the GSMA in 2017, 2021 and 2022: Egypt. One country was surveyed in 2017 and 2022: Ghana. One country was surveyed by the GSMA in 2022: Ethiopia. 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. One country was surveyed by the GSMA in 2019: Uganda. 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.

^{36.} Data was sourced from <u>After Access</u> (Cambodia, Paraguay, Peru, Rwanda for mobile and mobile internet for 2017), <u>Pew Global Attitudes and Trends</u> (mobile and mobile internet for Jordan and Lebanon for 2017, and Philippines for 2018 and 2019), <u>ITU</u> (Iran for mobile and mobile internet for 2017 to 2019), <u>RLMS-HES</u> (Russia for mobile, mobile internet and smartphone for 2018 and 2019); <u>CNNIC</u> (China mobile internet for 2017 to 2022) and <u>ZimStat</u> (Zimbabwe for mobile, mobile internet and smartphone for 2020).

^{37.} Metekel-Zone (Benishangul Gumz), Zone 2 (Afar), West Wellega-Zone (Oromia), Guji-Zone (Oromia), Kelem Wellega Zone (Oromia) and Horo Gudru Wellega-Zone (Oromia).

Extrapolating the mobile gender gap to non-surveyed countries

This report estimates the gender gaps in LMICs for four key metrics:



The estimates of gender gaps for countries covered by the 2017-2022 GSMA Consumer Surveys are derived from the survey results. The group of surveyed countries depends on the year and covers 29 countries representing up to 75% of the adult population in all LMICs.³⁸ We rely on third-party and publicly available survey data when we considered it robust. This provided us with gender gap proxy measures for selected years for: mobile ownership for additional 10 countries; mobile internet (11 countries) and smartphone ownership (two countries). All country-level figures cited in this study were derived directly from the results of GSMA face-to-face surveys.

To estimate the size of gender gaps in the remaining LMICs, the report relies on machine learning classifiers, which are trained using data on countries where observations of gender gaps in mobile technology are available. Using this data, classifiers learn what patterns of technology adoption and socio-economic conditions are associated with larger or smaller gender gaps. The trained classifiers then use these recognised patterns to make predictions about the mobile gender gaps for countries where it is not observed. We use separate classifiers to estimate each type of mobile gender gap (mobile ownership, internet use, smartphone ownership, spending on mobile services). We selected classifiers on the basis of their performance, measured by the mean absolute error of prediction estimated using a cross-validation procedure.

The dataset used includes variables that are potential predictors of mobile gender gaps, such as indicators of technology adoption and socio-economic conditions. We gathered data on potential predictors of gender gaps, including indicators sourced from the UN Human Development Index, the World Bank, Gallup World Poll and others (Table 3). Some data for the predictors were missing for certain countryyear combinations, so a multiple imputation technique was used to fill in these gaps.

Table 3

Variables used as predictors of gender gaps in extrapolation models

Variable(s)	Source
Mean schooling years – females and males and gender ratio ³⁹	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 per capita – female and male absolute income and gender ratio	UN Human Development reports
Gross domestic product per capita, purchasing power parity	IMF World Economic Outlook
Percentage of persons with access to internet – overall and females only	Gallup World Poll
Gender gap in access to internet	Gallup World Poll
Percentage of persons owning a mobile phone for personal calls – overall and females only	Gallup World Poll
Gender gap in owning a mobile phone for personal calls	Gallup World Poll
Facebook gender gap	GSMA Intelligence analysis of Facebook Audience Insights
World region dummy variables	World Bank regional groups
Income group dummy variables	World Bank Analytical Classifications
Measure of gender equality under law – overall index score and individual area scores	World Bank Women, Business and the Law Indicators
Average revenue per subscriber	GSMA Intelligence database

Source: GSMA Intelligence analysis

To derive estimates of the absolute number of adult subscribers or average spending per user, we relied on the GSMA Intelligence database. Given the forward-looking time frames used to estimate the commercial opportunity offered by closing the gender gaps, our estimates rely on GSMA Intelligence forecasts for main input variables, such as the projected number of subscribers and the projected average revenue per subscriber. Additional revenues are expressed in terms of current USD.

39. 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.



- 1. GSMA Intelligence, Q4 2022.
- 2. International Telecommunication Union (ITU) estimates for 2022.
- 3. GSMA Intelligence, 2019.
- 4. This estimate is based on closing the gender gap in mobile ownership and use in LMICs from 2023 to 2030.
- 5. The exception was 46% of female mobile phone owners in Pakistan who reported that a mobile provides access to useful information they would not otherwise be able to obtain easily. In contrast, this was reported by 66% of male mobile phone owners in Pakistan.
- 6. Except for Ethiopia, where no interviews were conducted in the Tigray region and six other zones due to local conflict and security concerns. These areas represent 12% of the population of Ethiopia, therefore, the sample was representative of the 88% of the population who live outside these areas.
- 7. 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 last three months."
- 8. See, for example, The Economist. (2023). "India's rocketing internet user growth has stalled" and BBC News. (2023). "Why internet growth has stalled in India".
- 9. The exception was Mexico.
- 10. Mobile internet use is defined as a person who has used the internet on a mobile phone at least once in the last three months.
- 11. Daily mobile internet use is defined as a person who has used at least one mobile internet use case at least once a day.
- 12. The analysis is not shown here, but for more in-depth information see, for example, Figure 9 in The Mobile Gender Gap Report 2022.
- 13. For more in-depth information on this topic, see *The Mobile Gender Gap Report 2021*.
- 14. For more in-depth information, see Figure 9 in *<u>The Mobile Gender Gap Report 2022</u>*.
- 15. Either a feature phone or smartphone
- 16. GSMA. (2021). Addressing the Mobile Gender Gap in Pakistan.
- 17. GSMA. (2022). The Mobile Gender Gap Report 2022.
- 18. World Economic Forum. (2022). Global Gender Gap Report 2022.

19. 54% of mobile internet users in Pakistan reported an overall positive impact on their lives.

- 20. Since 2021, there has been a 22 and 36 percentage point increase in female and male respondents, respectively, reporting handset affordability as their top barrier to mobile internet adoption a greater increase than any other survey country.
- 21. 46.7% of Senegal's population were estimated to be living below the national poverty line. National poverty lines are benchmarks for estimating poverty indicators that are consistent with the country's economic and social circumstances. National poverty lines reflect local perceptions of the level and composition of consumption or income needed to not live in poverty.
- 22. See: World Bank, Poverty and Inequality Platform. Data is compiled from official government sources or calculated by World Bank staff using national (i.e., country-specific) poverty lines.
- 23. World Bank. (2022). Poverty and Equity Brief: Senegal.
- 24. Butler, C. and Shanahan, M. (27 August 2020). "Does just being a woman reduce the likelihood of using mobile?", GSMA Mobile for Development Blog.
- 25. Egypt, Ethiopia, Ghana, Kenya, Nigeria, Senegal, Indonesia and Mexico.
- 26. GSMA. (2022). The State of Mobile Internet Connectivity 2022 (see Figure 31)
- See, for example, The Economist. (2023). "India's rocketing internet user growth has stalled" and BBC News. (2023). "Why internet growth has stalled in India".
- 28. For more information, see GSMA. (5 January 2023). "<u>Tackling social norms to reduce the gender digital divide</u>" and GSMA. (2017). <u>Triggering mobile internet use among men and women in South Asia</u>.
- 30. 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.
- 31. GSMA Connected Women. (2022). Policy Considerations to Accelerate Digital Inclusion for Women in Low- and Middle-income Countries.
- 32. GSMA Mobile Internet Skills Training Toolkit (MISTT).
- 33. More detailed recommendations on how policymakers can increase mobile adoption more broadly among the undeserved can be found here: Accelerating mobile internet adoption: Policy considerations to bridge the digital divide in low- and middle-income countries.
- 34. 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.
- 35. Six countries were surveyed by the GSMA in 2017, 2018, 2019, 2020, 2021 and 2022: Kenya, Nigeria, Bangladesh, India, Pakistan and Guatemala. Two countries were surveyed by the GSMA in 2017, 2018, 2019, 2021 and 2022: Mexico and Indonesia. One country was surveyed by the GSMA in 2017, 2021 and 2022: Egypt. One country was surveyed in 2017, 2018 and 2022: Ghana. One country was surveyed by the GSMA in 2022: Ethiopia. Two countries were surveyed by the GSMA in 2017, 2018, 2019 and 2022: Ethiopia. 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. One country was surveyed by the GSMA in 2019: Uganda. 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.
- 36. Data was sourced from <u>After Access</u> (Cambodia, Paraguay, Peru, Rwanda for mobile and mobile internet for 2017), <u>Pew Global Attitudes</u> <u>and Trends</u> (mobile and mobile internet for Jordan and Lebanon for 2017, and Philippines for 2018 and 2019), <u>ITU</u> (Iran for mobile and mobile internet for 2017 to 2019), <u>RLMS-HES</u> (Russia for mobile, mobile internet and smartphone for 2018 and 2019); <u>CNNIC</u> (China mobile internet for 2017 to 2022) and <u>ZimStat</u> (Zimbabwe for mobile, mobile internet and smartphone for 2020).
- Metekel-Zone (Benishangul Gumz), Zone 2 (Afar), West Wellega-Zone (Oromia), Guji-Zone (Oromia), Kelem Wellega Zone (Oromia) and Horo Gudru Wellega-Zone (Oromia).
- 38. United Nations Department of Economic and Social Affairs, Population Division. (2022). World Population Prospects 2022.
- 39. 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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