GSMA

Connected Women

The Mobile Gender Gap Report 2020

GSMA

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On this study, Ipsos worked with the GSMA as a fieldwork partner and as such, is not responsible for the analysis or conclusions outlined in this report.

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Introduction

The evolution of the mobile gender gap

In 2020, connectivity is more important than ever. Internet access is a gateway to critical information, services and opportunities available to many people for the first time. Growth in internet access has been remarkable in low- and middle-income countries (LMICs), where 2.9 billion people now access the internet on their mobile phones.[1] Across developing countries, mobile is the primary way most people access the internet, with mobile broadband connections comprising 87 per cent of total broadband connections.[2]

Despite its importance, mobile access and use remain unequal. Across LMICs, women are still eight per cent less likely than men to own a mobile phone, and 20 per cent less likely to use the internet on a mobile. This means that in these markets 300 million fewer women than men use mobile internet. A key barrier is smartphone ownership, which is also 20 per cent lower for women than for men.

However, there is promising evidence that the widest gender gaps are beginning to close. In South Asia, the mobile internet gender gap has narrowed from 67 per cent in 2017 to 51 per cent in 2019, bringing another 78 million women online. Much work remains, but this suggests mobile gender gaps can be reduced and the benefits of connectivity distributed more equally.

It is critical that the mobile gender gap is understood and overcome, as mobile ownership and use provides life-changing benefits to women, their families, communities and the economy. This research has found that mobile ownership makes the majority of men and women feel safer, provides access to important information for the first time and supports them in work and study. Earlier GSMA research found that, over five years, closing the gender gap in mobile internet use in LMICs could deliver an additional USD 700 billion in GDP growth, while closing the gender gap in mobile ownership and use in LMICs could deliver $140 billion in additional revenue to the mobile industry.[3]

This third edition of *The Mobile Gender Gap Report* will consider how women's mobile access and use are changing, and how efforts to reach women with technology should evolve alongside. This report provides:

- Updated figures on gender gaps in mobile ownership and mobile internet use in LMICs and how these are changing;
- For the first time, figures for the smartphone gender gap across LMICs, and how this is limiting women's internet access and use;
- A review of the barriers to mobile ownership and mobile internet use and how these have changed; and
- Evidence of the impact of mobile access and use on women's and men's lives.

The findings of this report are sourced from the annual GSMA Intelligence Consumer Survey, which in 2019 had over 16,000 respondents from 15 LMICs. Analysis of other research and data from the GSMA, and a range of other organisations that investigate and track the mobile gender gap, also inform the findings of this report.

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1. GSMA Intelligence, Q4 2019
2. ITU (2019), www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx
3. GSMA (2019), *The Mobile Gender Gap Report 2019*

Key findings

1. **54 per cent of women in low- and middle-income countries now use mobile internet and the gender gap is narrowing.** Women are 20 per cent less likely to use mobile internet than men, down from 27 per cent in 2017. This reduction was driven primarily by an improvement in South Asia where the gap narrowed by 16 percentage points.

2. **Despite this progress, the gender gap in mobile internet use in low- and middle-income countries remains substantial, with over 300 million fewer women than men accessing the internet on a mobile.** The gender gap is still widest in South Asia at 51 per cent, and remains fairly consistent in other regions such as Sub-Saharan Africa, which has the second largest gender gap at 37 per cent.

3. **The underlying gender gap in mobile ownership remains largely unchanged, with the remaining unconnected proving difficult to reach.** Women across low- and middle-income countries are eight per cent less likely than men to own a mobile phone, which translates into 165 million fewer women than men owning a mobile.

4. **The relative importance of the factors preventing access to mobile internet are changing rapidly across low- and middle-income countries.** For both men and women, awareness of mobile internet is growing quickly, although it remains unequal, and women and men are increasingly seeing the internet as relevant to their lives.

5. **Handset affordability remains the primary barrier to mobile phone ownership for men and women. Among mobile users who are aware of mobile internet, a lack of literacy and digital skills continues to be the main barrier to use**,[4] followed by affordability. Safety concerns are also a key barrier to mobile internet access, particularly in Latin America. Although relevance has declined in importance as a barrier, it remains a critical factor in several countries.

6. Smartphones drive substantially higher mobile internet use, but **there is a significant gender gap in smartphone ownership, with women in low- and middle-income countries 20 per cent less likely than men to own one.** Women are much less likely than men to purchase their own smartphone, and have less autonomy and agency in smartphone acquisition. However, many women express a strong intention to acquire a smartphone.

7. **Among mobile owners, women on average use a smaller range of services in all 15 countries surveyed** — a gap that remains even among smartphone owners. Bringing women's mobile use in line with men's represents an important commercial opportunity for the mobile industry to drive ARPU[5] growth and extend more of the benefits of mobile ownership to women.

8. **Consumption of video content on mobile is growing remarkably quickly for both men and women, increasing by over 50 percent in two years in half of surveyed countries**.[6] This reflects the growing popularity of applications that facilitate sharing of user-generated video content in low- and middle-income countries, such as YouTube and TikTok.

9. **Both men and women across surveyed markets report that mobile provides important benefits.** In all 15 markets surveyed, the majority of male and female mobile owners state that mobile ownership makes them feel safer and provides access to important information that not only assists them in their daily lives, but that they would not have received otherwise. Benefits are considerably greater for those who use mobile internet, reinforcing the importance of equalising internet access.

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4. Refers to the top barriers to mobile internet for respondents who had used a mobile phone in the last three months and were aware of mobile internet, but had not used it.
5. Average revenue per user
6. Based on results from 12 countries surveyed for the 2018, 2019 and 2020 Mobile Gender Gap Reports.

IN LOW- AND MIDDLE-INCOME COUNTRIES:

54% of women now use mobile internet.

But the gender gap remains substantial.

300M fewer women than men access mobile internet

The mobile internet gender gap is closing. **Women** are now **20%** less likely than men to use mobile internet, down from **27%** in 2017

South Asia has the widest mobile internet gender gap at **51%** but has also seen the **largest reduction,** down by 16% since 2017

Women are **8%** less likely than men to own a mobile

165 million fewer women than men own a mobile

Mobile ownership
Key barriers for women

1. Affordability
2. Literacy and skills
3. Safety and security
4. Family does not approve ↑

Mobile internet use
Key barriers for women who are aware of mobile internet

1. Literacy and skills
2. Affordability
3. Safety and security ↑
4. Relevance ↓

↑ BARRIER IMPORTANCE INCREASED SINCE 2018 | ↓ BARRIER IMPORTANCE DECREASED SINCE 2018
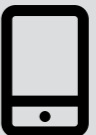
IN LOW- AND MIDDLE-INCOME COUNTRIES:

Awareness of mobile internet is growing quickly for both men and women, although it remains unequal

Women are **20%** less likely than men to own a smartphone and in many countries have less autonomy and agency in smartphone acquisition

Among mobile owners, **women** use a **smaller range** of mobile services

Consumption of **video content** on mobile has increased by over **50%** in 2 years in half of surveyed countries

Across surveyed countries, the majority of male and female owners report that owning a mobile makes them **feel safer** and helps them in their **day-to-day lives**

Addressing the mobile gender gap is an important way to contribute to the **UN Sustainable Development Goals**

5 GENDER EQUALITY

DEFINITIONS FOR THIS REPORT

GENDER GAP

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

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

MOBILE OWNER

"Mobile phone owner" and "mobile owner" are used interchangeably in this report to mean a person who has sole or main use of a SIM card or a 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 (an average of 95 per cent across the sample countries).

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.

UNCONNECTED

"Unconnected" or "unconnected population" refers to people who are not mobile owners, as defined above.

MOBILE INTERNET USER

A "mobile internet user" is 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, and therefore can be non-mobile phone owners who use mobile internet by accessing it on someone else's mobile phone.

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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."

The mobile gender gap in 2020

This report marks the third edition of the GSMA's annual Mobile Gender Gap report series, and also builds on the findings of previous reports published on the subject in 2010 and 2015. Over this time, mobile has played an increasingly vital role in empowering marginalised populations in LMICs, and equal access to mobile has become ever more important to ensuring women and men experience the benefits of mobile equally and that existing inequalities are not exacerbated.

There is still a mobile gender gap, but progress is being made in some regions

Despite the growing importance of connectivity, there is still a considerable mobile gender gap in 2020. Across LMICs, women are eight per cent less likely than men to own a mobile phone. While this is a slight reduction from the 10 per cent gender gap in previous years, it is proving a difficult gap to close.

The gap widens significantly for mobile internet use. Women are still 20 per cent less likely than men to use the internet on a mobile phone. However, some progress has been made. Over the three years studied, the mobile internet gender gap has narrowed from 27 per cent, bringing an additional 236 million women online.

As shown in Figure 1, trends have not been uniform across regions. South Asia, where the mobile gender gap is consistently the widest, has driven most of the reductions in the mobile internet gender gap. Over 78 million more women have come online in South Asia in the last three years, while in other regions, most notably Sub-Saharan Africa, considerably less progress has been made.

| Figure 1 |

Regional gender gaps in mobile ownership and mobile internet use, 2017-2019

REGIONAL GENDER GAPS IN MOBILE OWNERSHIP 2017-2019

REGIONAL GENDER GAPS IN MOBILE INTERNET USE 2017-2019

Region	Ownership 2017	Ownership 2018	Ownership 2019	Internet Use 2017	Internet Use 2018	Internet Use 2019
East Asia & Pacific	1%	2%	1%	5%	4%	3%
Latin America & Caribbean	2%	1%	1%	6%	2%	1%
Europe & Central Asia	-1%	-1%	-1%	6%	6%	5%
Middle East & North Africa	8%	9%	9%	20%	19%	21%
Sub-Saharan Africa	13%	13%	13%	37%	38%	37%
South Asia	27%	28%	23%	67%	58%	51%
LMICs overall	9%	10%	8%	27%	23%	20%

■ 2017   ■ 2018   ■ 2019

Source: GSMA Intelligence, 2019
Mobile ownership is defined as having sole or main use of a SIM card (or a mobile phone that does not require a SIM), and using it at least once a month.
Mobile internet use is defined as having used the internet on a mobile phone at least once in the last three months.
Mobile internet users do not have to personally own a mobile phone. The gender gap in mobile ownership 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.
Regional averages were calculated from country-level data.
Based on survey results and modelled data for adults aged 18+.

Box 1:
Country-level trends in mobile ownership and mobile internet use

There are significant variations within regions in overall mobile ownership, mobile internet use and the magnitude of the gender gap. In general, markets with lower levels of mobile ownership tend to have wider gender gaps in mobile ownership and mobile internet use. Of all surveyed countries, Mozambique has the lowest level of ownership, with only 46 per cent of women owning a mobile phone compared to 56 per cent of men. Of the countries surveyed, the widest gender gap is still in Pakistan, where women are 38 per cent less likely than men to own a mobile and 49 per cent less likely to use mobile internet.

Figure 2

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

Chart data — MOBILE OWNERS (%), GENDER GAP, MOBILE INTERNET USERS (%), GENDER GAP:

AFRICA
Country	Female	Male	Gender Gap (owners)	Internet Female	Internet Male	Gender Gap (internet)
Algeria	86%	92%	6%	55%	68%	19%
Kenya	86%	91%	5%	32%	49%	34%
Mozambique	46%	56%	17%	17%	27%	39%
Nigeria	83%	89%	7%	38%	54%	29%
Senegal	71%	73%	4%	37%	46%	19%
South Africa	83%	89%	7%	58%	67%	13%
Uganda	69%	84%	17%	13%	24%	48%

ASIA
Country	Female	Male	Gender Gap (owners)	Internet Female	Internet Male	Gender Gap (internet)
Bangladesh	61%	86%	29%	16%	33%	52%
India	63%	79%	20%	21%	42%	50%
Indonesia	72%	80%	10%	42%	49%	14%
Myanmar	68%	78%	14%	41%	58%	30%
Pakistan	50%	81%	38%	19%	37%	49%

LATIN AMERICA
Country	Female	Male	Gender Gap (owners)	Internet Female	Internet Male	Gender Gap (internet)
Brazil	85%	84%	-1%	74%	72%	-3%
Guatemala	71%	79%	11%	55%	65%	15%
Mexico	84%	86%	2%	72%	71%	-1%

X% = Gender Gap

Source: GSMA Intelligence Consumer Survey, 2019
Base: Total population aged 18+
A mobile owner is defined as a person who has sole or main use of a SIM card (or a mobile phone that does not require a SIM), and uses it at least once a month.
Mobile internet users do not have to personally own a mobile phone. The gender gap in mobile ownership and mobile internet use refers to how much less likely a woman is to own a mobile (or to use mobile internet) than a man.
n= from 496 to 1,099 for women and n= from 474 to 1,279 for men

Beyond national variations, there are also differences between urban and rural areas. In every country surveyed except Algeria and Brazil, the mobile ownership gender gap is widest in rural areas. For example, in Uganda there is a four per cent urban gender gap in mobile ownership while in rural areas it is over five times that, at 22 per cent. The situation is similar for mobile internet. For example, in Senegal, women in urban areas are 11 per cent less likely than men to use mobile internet, compared to 32 per cent in rural areas.

The journey to mobile internet use

Internet access in LMICs is growing quickly, driven by mobile

A basic mobile phone can be an empowering tool, enabling easier communication and information sharing, and connecting family and friends wherever they live. The proliferation of basic mobile phones in LMICs has been unprecedented, and facilitated the growth of crucial services like mobile money and the dissemination of important government and health-related information via SMS and USSD.

The widespread availability of mobile in LMICs is noteworthy since mobile has become the primary way most people access the internet. According to the International Telecommunication Union (ITU), 87 per cent of broadband connections in developing countries are mobile,[8] and across the 15 countries surveyed in this study, a high proportion of respondents were found to access the internet exclusively on a mobile, particularly in Africa and Asia. The median proportion of internet users accessing it exclusively on mobile is 69 per cent, ranging from 43 per cent in Mexico to 95 per cent in Myanmar. In only two countries do over five per cent of internet users access the internet exclusively on other, non-mobile devices.[9]

Mobile has become increasingly important to internet access as smartphones have become more available and affordable. Indeed, unequal access to smartphones for women is a primary contributor to the gender gap in mobile internet access. Across LMICs, women are 20 per cent less likely to own a smartphone, which closely mirrors the overall mobile internet gender gap.

The gender gap widens at each stage of the mobile internet user journey

Acquiring, using and learning about digital services is not necessarily a linear process. Nevertheless, certain key stages and milestones can pose barriers to regular and diverse mobile use, which delivers the greatest benefits to men and women in LMICs. Typically, the gender gap widens along each stage of the user journey; it is smallest for mobile ownership and increases for mobile internet adoption and regular use.

This report examines each stage of the mobile internet user journey (see Figure 3) and where the greatest barriers to equal mobile access and use emerge for women. It will also consider the importance of handset type and how smartphone acquisition should be understood within this wider journey.

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8.   ITU (2019), www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx
9.   In Algeria, 5.5 per cent of internet users accessed the internet exclusively on devices other than mobile, and this figure was 9.3 per cent in Mozambique.

Figure 3

The mobile internet user journey

1 Mobile ownership

2 Awareness of mobile internet

3 Mobile internet adoption

4 Regular mobile internet use
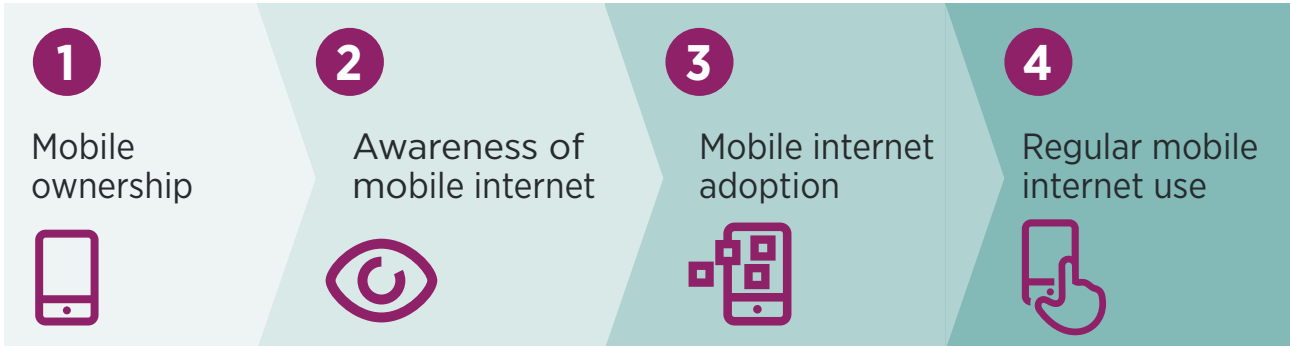
The persistent gender gap in mobile ownership

Growth in women's mobile ownership has slowed considerably, which makes closure of the gender gap unlikely in the near future

The first stage in the mobile internet user journey is mobile ownership. Across LMICs, 82 per cent of women now own a mobile phone. Despite a perception that mobile ownership is near universal, over 390 million women in LMICs remain unconnected, which translates to a gender gap of eight per cent.

Growth in mobile ownership among women has slowed considerably, remaining nearly constant since 2017. As detailed in *The Mobile Gender Gap Report 2019*, the unconnected are disproportionately less educated, rural and female. As we consider how services can be delivered over mobile, it is essential to not overlook these groups.

As shown in Figure 4, the mobile ownership gender gap varies significantly between regions. It remains pronounced in South Asia and Sub-Saharan Africa, but is considerably smaller in the more developed regions of Latin America, Europe and Central Asia, and East Asia and Pacific. In fact, in several countries in these regions, the rate of mobile ownership is slightly higher for women than men.

Figure 4

Gender gap in mobile ownership in low- and middle-income countries, by region

Base: Total adult population

OVERALL

82% Mobile ownership rate for women

8% Gender gap in mobile ownership

393m Women unconnected

Middle East & North Africa
82%
9%
23m

Europe & Central Asia
92%
-1%
14m

East Asia & Pacific
95%
1%
44m

Latin America & Caribbean
86%
1%
30m

Sub-Saharan Africa
74%
13%
74m

South Asia
65%
23%
207m

Gender gap

-1%   51%
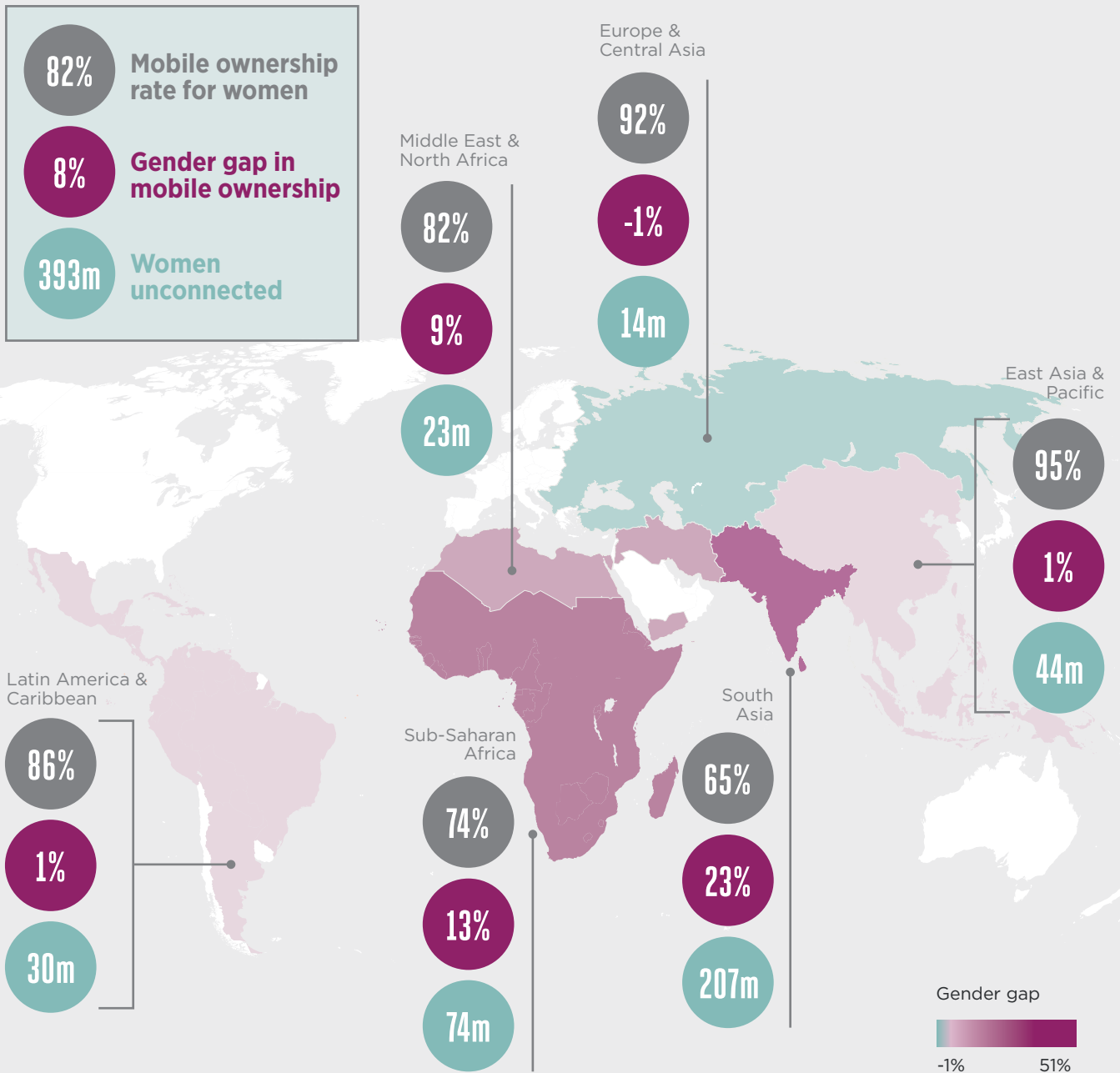
Source: GSMA Intelligence, 2019
The gender gap refers to how less likely a woman is to own a mobile than a man.
Mobile ownership is defined as having sole or main use of a SIM card (or a mobile phone that does not require a SIM), and using it at least once a month.
Based on survey results and modelled data for adults aged 18+.

Barriers to mobile ownership are consistent for men and women, and affordability is the most important consideration

To identify the main factors preventing women and men in LMICs from owning and using a mobile phone, respondents were asked three sets of questions:

- **Barriers to mobile ownership** – asked of those who did not own a mobile phone.
- **Awareness of mobile internet** – asked of those who had never used mobile internet. They were asked if they were aware of the internet and whether it can be used on a mobile phone.[10]
- **Barriers to mobile internet** – asked of those who had used a mobile phone in the last three months and were aware of mobile internet, but have not used it in the last three months.

Across surveyed countries, the main barriers to mobile ownership were fairly consistent between men and women and over time (Table 1). As in 2018, handset affordability was the primary barrier to mobile ownership, followed by literacy and digital skills. However, in many markets, among those who are unconnected, a smaller proportion reported they did not know how to use a mobile phone, while a larger proportion reported that literacy was a key barrier, particularly men in Asian markets.

Safety and security was the third most important barrier and a particular issue in Latin America. Relevance was the fourth most important barrier for men, although it has declined in importance for both men and women in many markets as people increasingly feel that mobile ownership is relevant to their lives, despite not owning a phone. Lack of family approval was a major impediment for women in several markets, including Pakistan, Bangladesh and Algeria.[11]

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10. The proportion of adults considered aware of mobile internet was calculated by summing those who reported ever having used mobile internet, and those who reported not ever using it, but being aware of the internet and that it can be used on a mobile phone (i.e. it is assumed those who have used mobile internet are aware of it).
11. In these countries, 35 per cent, 22 per cent and 11 per cent of unconnected women, respectively, cited family disapproval as the most important barrier preventing them from owning a mobile phone.

Table 1

Top barriers to mobile ownership for men and women in surveyed countries, by region

Based on the single most important barrier to mobile phone ownership identified by non-mobile owners, averaged across surveyed markets

Ranking	Total		Africa		Asia		Latin America	
	Women	Men	Women	Men	Women	Men	Women	Men
1	Affordability	Affordability	Affordability	Affordability	Literacy and skills	Literacy and skills	Affordability	Safety and security ▲
2	Literacy and skills	Literacy and skills	Literacy and skills	Literacy and skills	Affordability	Affordability	Safety and security	Affordability ▼
3	Safety and security	Safety and security	Family does not approve ▲	Safety and security	Relevance	Relevance	Literacy and skills	Literacy and skills
4	Family does not approve ▲	Relevance	Safety and security ▼	Network coverage ▲	Family does not approve ▲	Safety and security	Relevance	Relevance

Key:

▲ Barrier importance has increased since 2018

▼ Barrier importance has decreased since 2018

Source: GSMA Intelligence Consumer Survey, 2019
Base: Non-mobile owners aged 18+
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.
Percentages indicate the 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?"
Regional barriers were calculated by averaging country-level data for the 14 countries surveyed for which sample size for men and women was over 30.

Additional information on country-level barriers to mobile ownership can be found in Appendix 1.

Box 2:
The benefits of mobile ownership

Across the countries surveyed, a large majority of male and female mobile owners agreed that mobile ownership delivered substantial benefits (see Figure 5). In all but three countries, over 60 per cent of mobile owners stated the device made them feel safer, helped them with their day-to-day work and provided access to information they would not have otherwise. Two exceptions were Mexico and Brazil, where the proportion of respondents reporting that mobile ownership made them feel safer were lower than other markets, confirming the importance of mobile-related safety concerns in Latin America.[12] In general, men felt the benefits of mobile somewhat more strongly than women, perhaps a reflection of the differences in usage patterns between male and female mobile owners. This reinforces the importance of reducing this gender gap.

Figure 5

The benefits of mobile ownership, reported by men and women in 15 surveyed countries

Percentage of mobile owners across the 15 surveyed countries who agree mobile ownership helps them with the following:
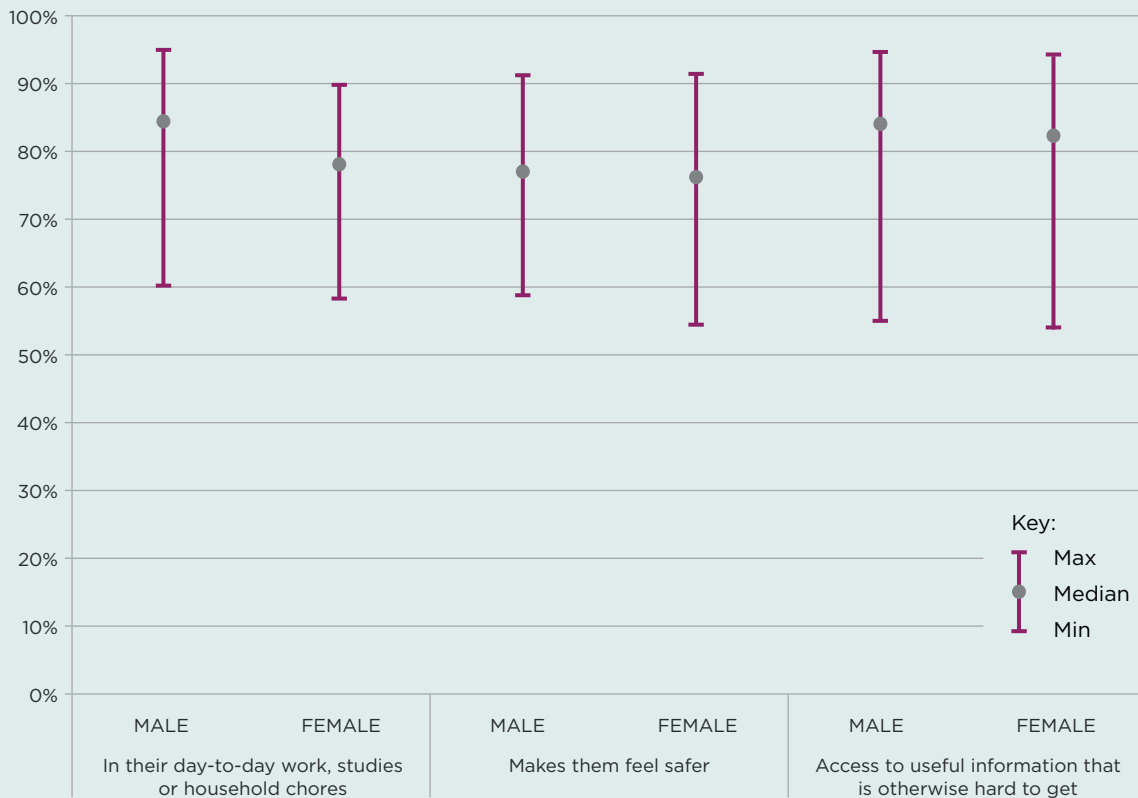
Source: GSMA Intelligence Consumer Survey, 2019
Base: Mobile owners aged 18+
A mobile owner is defined as a person who has sole or main use of a SIM card (or a mobile phone that does not require a SIM), and uses it at least once a month.
Mobile internet use cases were asked of mobile owners who had used the internet before.
n = 253 to 693 for women and n = 284 to 1,006 for men

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12. The third exception is Pakistan, where 55 per cent of male mobile owners and 53 per cent of female mobile owners reported that owning a mobile phone gives them access to useful information they would not otherwise be able to access easily, and 58 per cent of female mobile owners reported that owning a mobile phone helped them with their daily tasks.

Smartphone ownership: sizing the gender gap

The type of mobile device one uses has a major impact on how they use the internet. Although it is possible to access the internet on a feature phone, internet use is typically much richer, more regular and varied on a smartphone. For the first time, the GSMA has evaluated and sized the smartphone gender gap in LMICs, and the findings reveal the critical importance of smartphones in the mobile internet customer journey.

Across LMICs, 1.2 billion women now own a smartphone. This marks a rapid increase in these markets, where female smartphone ownership has grown from 44 per cent to 55 per cent since 2017. Delivering services over a smartphone is a growing

priority for the mobile industry and others, and driving smartphone uptake is critical to future ARPU growth for mobile operators. However, women in LMICs are still 20 per cent less likely than men to own a smartphone, a considerably wider gender gap than for mobile ownership overall.

Indeed, in all Asian and African countries surveyed for this report, women are significantly less likely than men to own a smartphone. Even in markets with a relatively small mobile gender gap, such as Algeria where the mobile ownership gender gap is just six per cent, the gap widens significantly for smartphone ownership, with 55 per cent of women owning a smartphone compared to 68 per cent of men.

Figure 6

Share of population by type of handset owned

Percentage of total population

AFRICA

Algeria
- 68% | 2% | 20%
- 55% | 2% | 26%

Mozambique
- 22% | 6% | 27%
- 18% | 4% | 24%

Nigeria
- 48% | 16% | 24%
- 39% | 15% | 27%

Uganda
- 19% | 27% | 34%
- 13% | 20% | 32%

ASIA

Bangladesh
- 36% | 31% | 19%
- 21% | 26% | 13%

India
- 37% | 9% | 29%
- 14% | 6% | 31%

Myanmar
- 69% | 1% | 6%
- 55% | 1% | 8%

Pakistan
- 37% | 7% | 39%
- 20% | 6% | 23%

LATIN AMERICA

Brazil
- 65% | 4% | 10%
- 65% | 8% | 8%

Guatemala
- 58% | 3% | 15%
- 48% | 3% | 14%

Legend:
- Smartphone
- Feature phone
- Basic phone
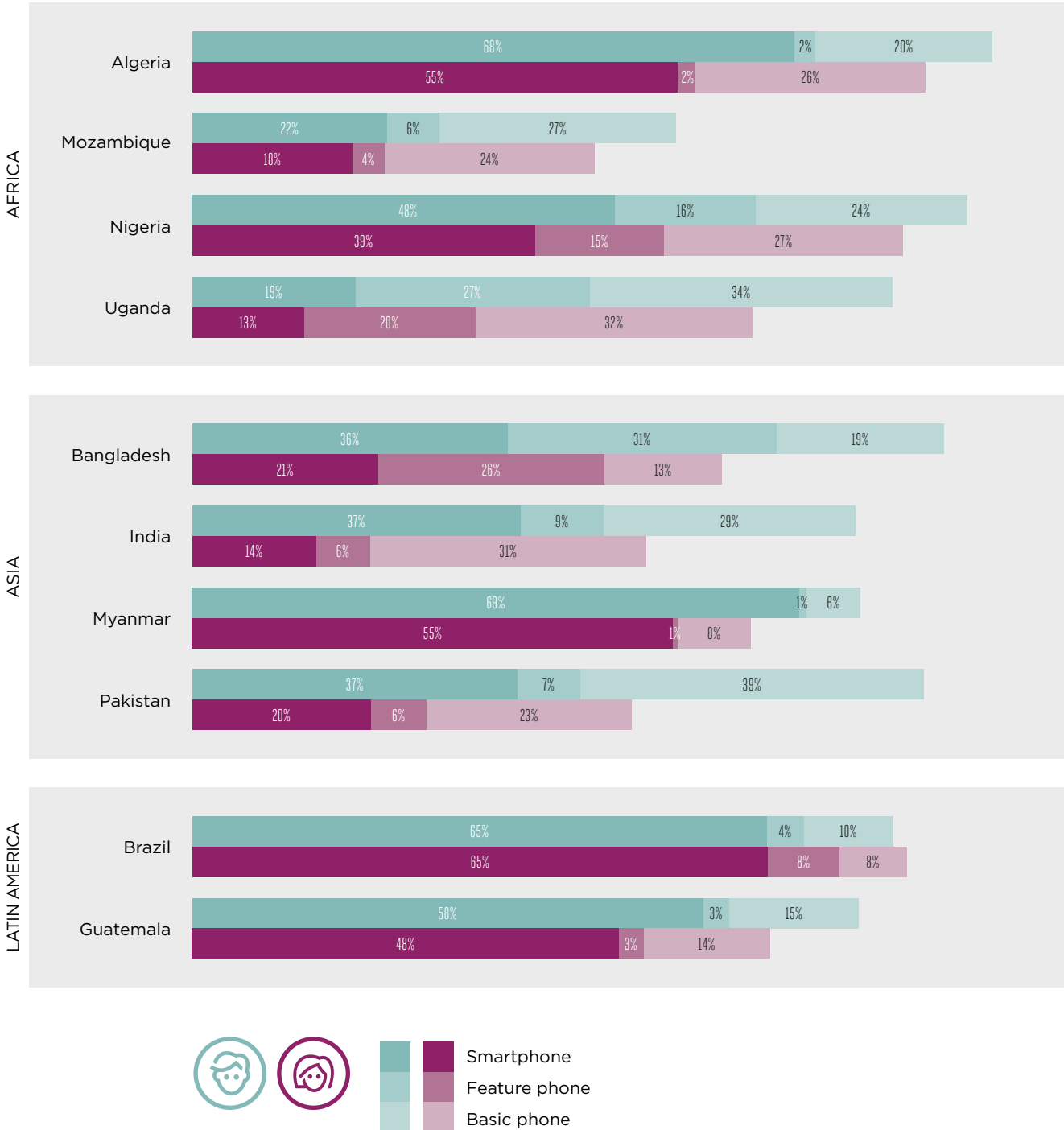
Source: GSMA Intelligence, 2019
Base: Total population aged 18+
Respondents are categorised according to their most advanced device owned, and can only be included in one category. Smartphone owners that also own a basic or feature phone are counted only as smartphone owners.
Device owners included only if they have an active SIM, or a mobile phone that functions without a SIM.
n= from 496 to 1,099 for women and n= from 474 to 1,279 for men

Smartphones are critical to uptake of mobile internet

The gender gap in smartphone ownership is even more significant in the context of the mobile internet user journey. Whereas the first stage of the journey — mobile ownership — can include a more basic device, smartphone owners are much more likely to progress through the other stages (see Figure 7).

In all countries surveyed for this report, over 93 per cent of smartphone owners were aware of mobile internet. However, among those who did not own smartphones,[13] awareness levels ranged from 37 per cent in Indonesia to 82 per cent in Algeria. Moreover, uptake of mobile internet was over 80 per cent among smartphone owners in every market except Bangladesh.[14]

These factors translate into far higher levels of mobile use for smartphone owners. Across the 15 countries surveyed in this study, smartphone owners on average engaged in 8.7 different types of mobile use cases on a weekly basis compared to 2.8 for owners of basic or feature phones. Crucially, once women acquire smartphones, many of the other mobile gender gaps are corrected for: women's mobile internet awareness and use, mobile money adoption and wider mobile use all more closely resemble rates for men. Although it is not necessarily the case that future smartphone owners will change their behaviour accordingly, driving smartphone acquisition and uptake by women should nonetheless be considered as a primary objective for those addressing gender gaps in other areas, including financial inclusion.

13. Includes non-mobile owners and basic and feature phone owners.
14. 73 per cent of smartphone owners in Bangladesh use mobile internet.

Figure 7

Mobile internet user journey by handset type

1 Mobile ownership	**2** Awareness of mobile internet	**3** Mobile internet adoption	**4** Regular mobile internet use
Type of device owned	% of device owners that are aware of mobile internet	% of device owners that use mobile internet	Average number of weekly mobile internet use cases used by device owners

Basic phone
- 35-87% / 33-86%
- 0-33% / 4-30%
- 0-0.7 / 0-0.9

Feature phone
- 54-95% / 66-100%
- 5-89% / 18-75%
- 0.2-4.8 / 0.5-4.3

Smartphone
- 87-99% / 94-100%
- 67-96% / 82-98%
- 3.2-7.3 / 3.8-7.8

KEY

The lowest and highest proportion of male (or female) device type owners reaching this stage of the user journey, across countries

X-Y%

X-Y

The lowest and highest average number of mobile internet use cases, across countries

Distribution of country-level results, lowest to highest

Source: GSMA Intelligence, 2019
Base: Basic phone, feature phone and smartphone owners aged 18+
Respondents are categorised according to their most advanced device owned, and can only be included in one category. Smartphone owners that also own a basic or feature phone are counted only as smartphone owners.
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.
n = from 40 to 345 for female basic phone owners, from 32 to 365 for male basic phone owners, from 33 to 137 for female feature phone owners, from 37 to 159 for male feature phone owners, from 70 to 351 for female smartphone owners, and from 87 to 487 for male smartphone owners.
Results for feature phone owners in eight countries excluded due to unweighted sample sizes below 30. The countries excluded were: Algeria, Brazil, Guatemala, Indonesia, Mozambique, Myanmar, Senegal and South Africa.

The path to smartphone adoption: women are less likely than men to acquire their own devices

Given the strong link between smartphone ownership and digital inclusion, it is critical to understand how women acquire smartphones and why ownership levels are so much lower than for men.

Across the markets surveyed in this report, female smartphone owners are significantly less likely to have controlled their smartphone purchase (see Figure 8). In every country surveyed, a lower proportion of women

purchased their own smartphone and some markets showed a substantial disparity — a sign of women's lack of financial autonomy in this crucial milestone of the user journey. For example, in Bangladesh, 83 per cent of male smartphone owners purchased their own device compared to only 49 per cent of women. In Senegal, this figure is 68 per cent for male smartphone owners and 26 per cent for women.

Figure 8

Share of smartphone owners who purchased their own device, by gender

Percentage of smartphone owners

Source: GSMA Intelligence, 2019
Base: Smartphone owners aged 18+
n= from 70 to 351 for women and n= from 87 to 487 for men

Encouragingly, a relatively equal proportion of men and women intend to acquire a smartphone (see Figure 9). Among those who do not own a smartphone, more men than women intend to purchase a smartphone over the next six months. However, if the men and women surveyed purchase smartphones in line with their reported intentions, the smartphone gender gap would be reduced in 11 of the 15 surveyed markets.

This may imply that the smartphone gender gap is on the cusp of narrowing, but women's lack of agency in purchasing decisions may be a barrier to achieving this. However, the equality of purchase intentions in markets with traditionally pronounced gender gaps is noteworthy, and presents a clear opportunity for the mobile industry.

Figure 9

Intention to purchase a smartphone, by gender

Percentage of non-smartphone owners that intend to acquire a smartphone in the next six months
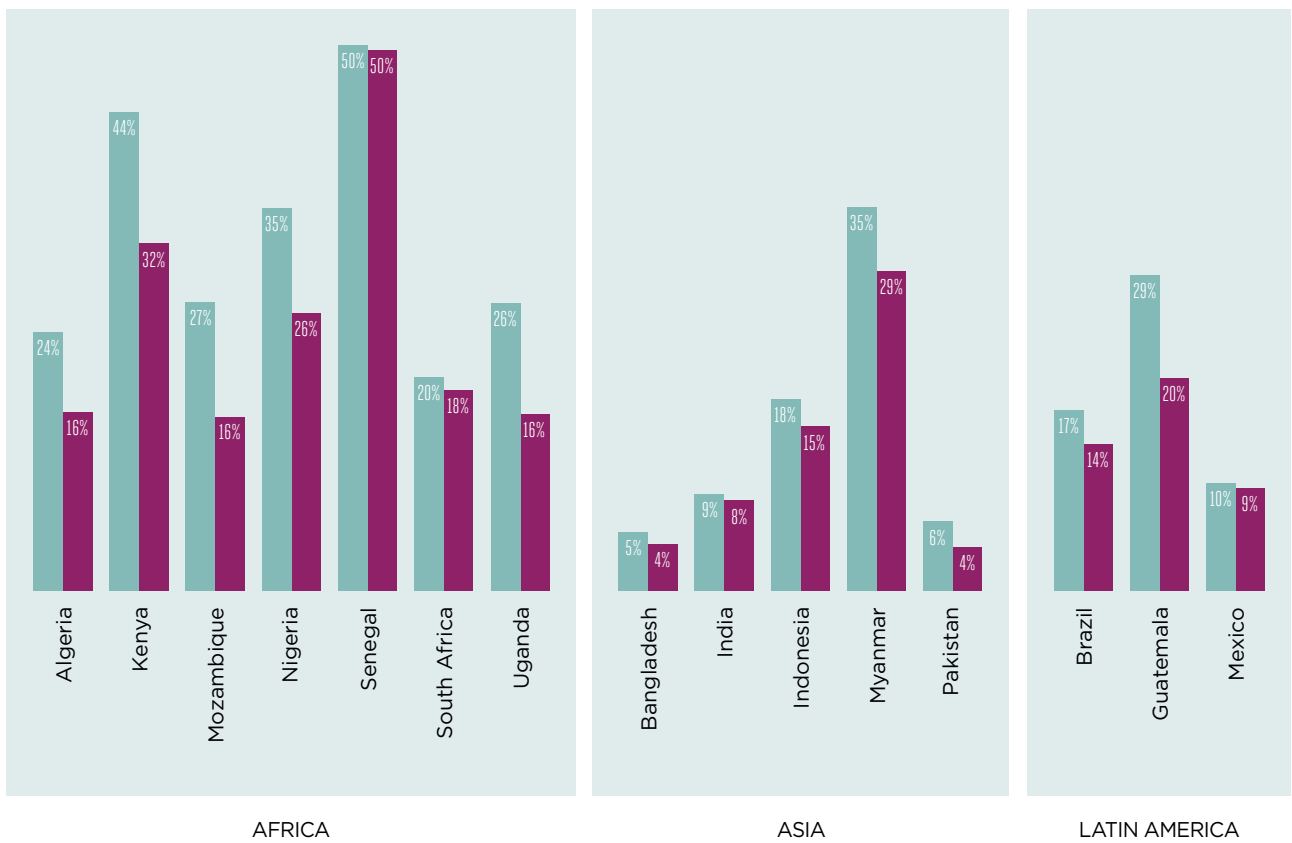
Source: GSMA Intelligence, 2019
Base: Non-smartphone owners aged 18+
n= from 182 to 945 for women and n= from 158 to 792 for men

Box 3:
How the emergence of the smart feature phone is benefitting women

As smartphones become more available, mobile is playing a greater role in providing internet access and supporting wider digital inclusion. Nonetheless, even as prices decline, low-cost smartphones are still an unaffordable luxury for many people in LMICs, especially women whose lower income levels and financial autonomy limit their ability to purchase a smartphone independently. However, an emergent category of devices is helping to bridge the gap. Known as "smart feature phones", because while they do not share the full capabilities of a smartphone and maintain the basic form factor of a feature phone, they typically allow for the installation of popular apps, such as Facebook, YouTube and WhatsApp. Some connect to LTE[15] networks to provide a much faster and more satisfactory browsing experience than traditional feature phones.

Crucially, these devices are far more affordable than smartphones. A prime example is the JioPhone, a smart feature phone launched by leading Indian operator Reliance Jio (in partnership with KaiOS) and sold for under $10. Over 100 million of these devices have been sold since its launch two years ago, providing an affordable entry point for many first-time internet users in India.

While devices such as the JioPhone are not meant to appeal exclusively to women, the low cost helps to address the affordability barrier that disproportionately affects women's access to the internet. There is also evidence that smart feature phones are playing an important role in reducing South Asia's mobile internet gender gap. While the gender gap in smartphone ownership has remained at around 60 per cent in India since 2017, the mobile internet gap has narrowed from 68 per cent to 50 per cent over this time, suggesting that women's increased mobile internet use in these markets is being driven by smart feature phones.

15. LTE = Long Term Evolution, the primary 4G wireless broadband standard used in mobile networks.

Growing awareness of mobile internet

Awareness of mobile internet is growing quickly, but remains lower for women

Awareness of mobile internet[16] is the second stage of the GSMA's mobile internet user journey framework. In markets with the widest gender gaps in mobile internet use, it is a stage in which a large proportion of both men and women end their journey. Lower awareness of mobile internet among women is therefore one of the most important contributors to the gender gap in mobile internet use in LMICs.

However, this is changing quickly. For both men and women, awareness of mobile internet has increased substantially in every country surveyed between 2017 and 2019. Promisingly, awareness of mobile internet has grown disproportionately for women, and the gender gap in awareness has narrowed considerably in most markets (see Figure 10). Most notably, in India, women's awareness of mobile internet increased from 19 per cent to 50 per cent during this period, while in Bangladesh the disparity between male and female awareness has almost entirely disappeared.

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16.   Defined as either those who have used the internet on a mobile phone before or are aware of both the internet and that it can be used on a mobile phone.

Figure 10

Mobile internet awareness by country, 2017 and 2019

Percentage of total population

AFRICA

Algeria	Women 2017: 82%	Women 2019: 94%	Men 2017: 80%	Men 2019: 91%
Kenya	71%	81%	53%	72%
Nigeria	62%	85%	45%	76%
South Africa	83%	89%	76%	85%

ASIA

Bangladesh	50%	73%	34%	71%
India	41%	71%	19%	50%
Indonesia	47%	70%	41%	64%
Myanmar	75%	88%	62%	85%
Pakistan	47%	79%	39%	70%

LATIN AMERICA

Brazil	88%	91%	88%	94%
Guatemala	78%	86%	71%	79%
Mexico	86%	93%	81%	91%
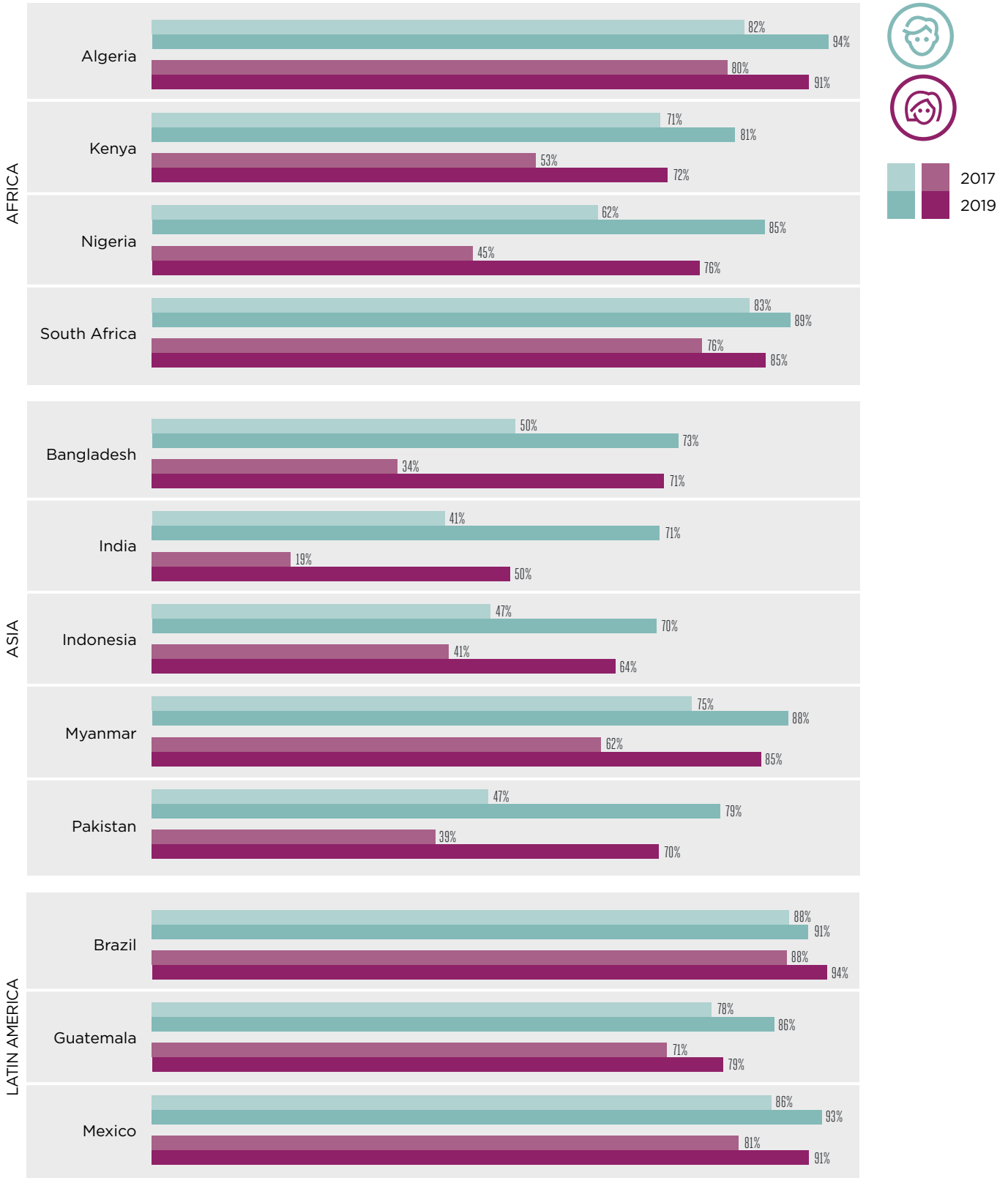
2017
2019

Source: GSMA Intelligence Consumer Survey 2017 and 2019
Base: Total population aged 18+
A person is considered aware of mobile internet if they have either used mobile internet before, or have not used mobile internet but are aware they can access the internet on a mobile phone.
n= from 502 to 1,118 for women and n= from 474 to 1,279 for men

Mobile internet use by women

While access to the internet on mobile phones has grown quickly, it remains unequal. Women across LMICs are 20 per cent less likely than men to use the internet on a mobile phone, which translates to 300 million fewer women than men. In every region except Latin America, the gender gap in mobile internet use is wider than the gender gap in mobile ownership (see Figure 11). As in previous years, the gender gap is widest in South Asia by a substantial margin (51 percent) followed by Sub-Saharan Africa (37 per cent).

While gender inequality in mobile internet use is greatest in South Asia, the region has also made the most progress. Between 2017 and 2019, the mobile internet gender gap narrowed from 67 per cent to 51 per cent. Women's access to mobile internet increased from just 21 per cent in 2017 to 34 per cent in 2019. Women in South Asia access mobile internet at almost the same rate as women in Sub-Saharan Africa (34 per cent versus 35 per cent), whereas in 2017 the rate of mobile internet use among women in South Asia was seven percentage points lower than Sub-Saharan Africa.

Figure 11

Gender gap in mobile internet use in low- and middle-income countries, by region

Base: Total adult population

OVERALL

54% Proportion of women who use mobile internet

20% Gender gap in mobile internet use

1bn Women not using mobile internet

Europe & Central Asia
64%
5%
61m

Middle East & North Africa
47%
21%
66m

East Asia & Pacific
70%
3%
240m

Latin America & Caribbean
69%
1%
70m

Sub-Saharan Africa
35%
37%
186m

South Asia
34%
51%
394m

Gender gap

-1%   51%
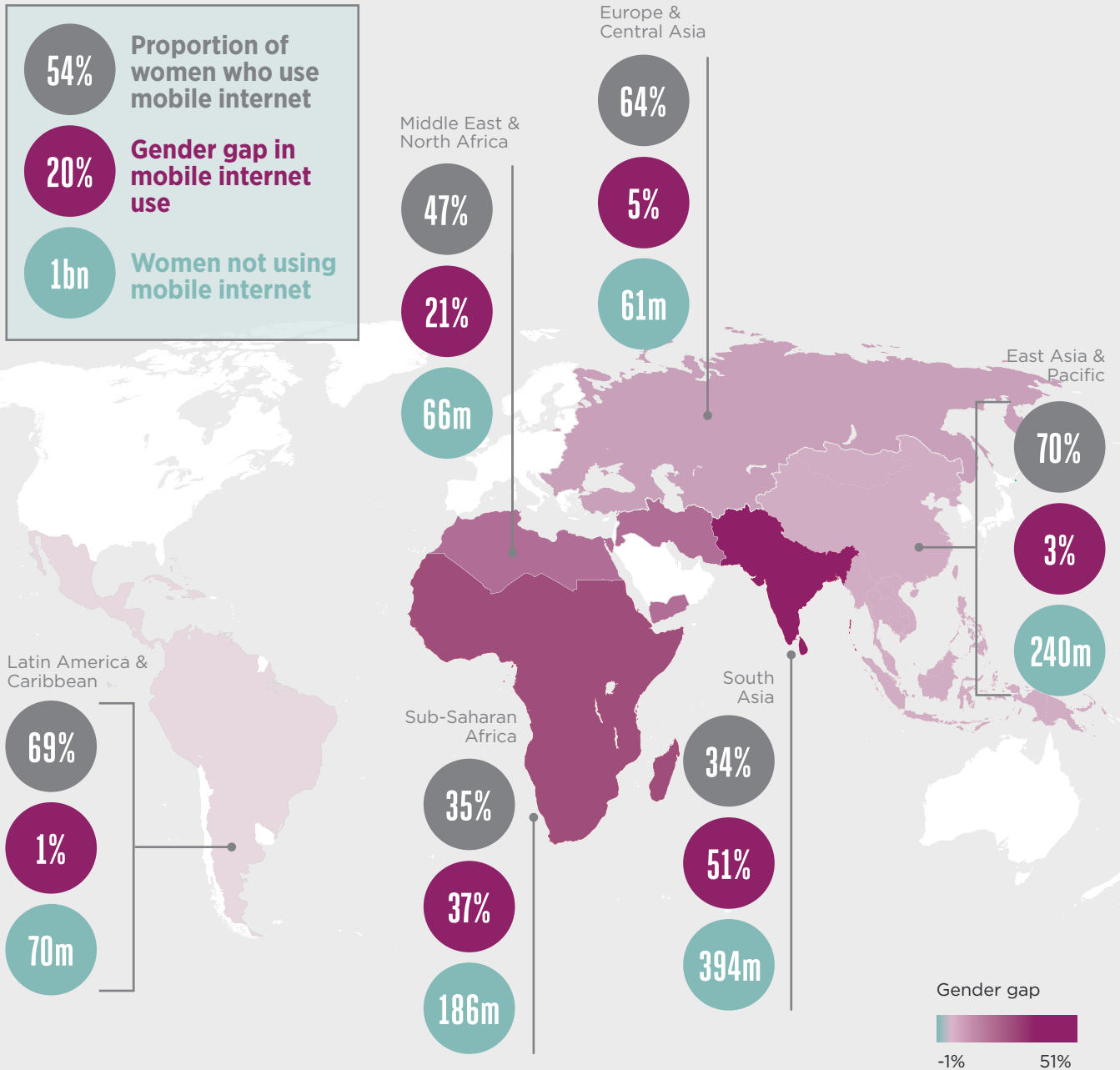
Source: GSMA Intelligence, 2019
The gender gap refers to how much less likely a woman is to use mobile internet than a man.
Mobile internet use is defined as a person having used the internet on a mobile phone at least once in the last three months.
Mobile internet users do not have to personally own 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+.

The changing mobile internet gender gap — driven by South Asia

The gender gap in South Asia undoubtedly still represents great inequality in access, but it also demonstrates impressive progress in just two years. Greater price competition in the region has likely played a role, but operators in the region have made a concerted effort to reach more women (see Box 4).

Greater access to mobile internet among women in

South Asia has reduced the overall mobile internet gender gap across LMICs, which has fallen by seven percentage points since 2017. However, the mobile internet gender gap has remained relatively constant in most other regions over this period. The other exception, interestingly, is Latin America. Although the gender gap was comparatively small in 2017 at six per cent, it has since been almost completely eradicated.

Box 4:
Mobile operators in South Asia are taking action to close the mobile internet gender gap

While changing market dynamics and price erosion have likely contributed to the reduction of the mobile internet gender gap in South Asia, the mobile industry has also taken concerted action to address the gender gap in the region. Ten operators, collectively representing 70 per cent of mobile connections in the region, made formal commitments as part of the GSMA Connected Women Commitment Initiative to reduce the gender gap in their mobile internet customer base between 2015 and 2020. Looking across the largest markets in South Asia, in India, all three leading mobile operators — Airtel India, Reliance Jio and Vodafone Idea India — have made commitments, while Grameenphone and Robi Axiata have committed to reducing the gender gap in Bangladesh, and Telenor Pakistan has done the same.

These operators are addressing the key barriers to mobile use for women in their markets, including the JioPhone discussed in Box 3 of this report, and through launching products and services like Joyeeta — a handset financing service launched by Robi Axiata that aims to make smartphones more affordable with preferential rates for female customers.[17]

Understanding the barriers to mobile internet use

As availability and uptake of mobile internet increases among both men and women, it is important to understand how the barriers facing non-users are evolving. Awareness of mobile internet is growing more quickly than adoption, implying that among those who are aware, other barriers are preventing them from adopting the service.

Those who have used a mobile phone and are aware of the internet face several barriers to using mobile internet, and these have evolved over time. Table 2 highlights the top reported barriers to mobile internet use and how their relative importance has changed since 2018.

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17.   Read more at: https://www.gsma.com/mobilefordevelopment/blog/how-mobile-operators-can-improve-the-affordability-of-their-services-for-women-to-help-close-the-mobile-gender-gap/

Table 2

The top barriers to mobile internet use in surveyed countries among mobile users who are aware of the internet

Based on the single most important barrier to using mobile internet identified by mobile users who are aware of mobile internet but do not use it, averaged across surveyed markets

Ranking	All countries		Africa		Asia		Latin America	
	Women	Men	Women	Men	Women	Men	Women	Men
1	Literacy and skills	Literacy and skills	Literacy and skills	Affordability ▲	Literacy and skills	Literacy and skills	Safety and security	Safety and security ▲
2	Affordability	Affordability	Affordability	Literacy and skills ▼	Affordability ▲	Affordability	Literacy and skills	Literacy and skills ▼
3	Safety and security ▲	Safety and security ▲	Safety and security ▲	Relevance	Relevance ▼	Relevance	Affordability	Affordability ▼
4	Relevance ▼	Relevance ▼	Relevance ▼	Safety and security	Family does not approve	Safety and security	Network ▲	Relevance

Key:

▲ Barrier importance has increased since 2018

▼ Barrier importance has decreased since 2018

Source: GSMA Intelligence Consumer Survey, 2019
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).
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.
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?"
Regional barriers were calculated by averaging country-level data for the 15 countries surveyed.

Literacy and digital skills remain the primary barrier to mobile internet use. This is consistent across the 15 countries surveyed for both men and women who have used a mobile and are aware of mobile internet, but have not used it in the last three months. Affordability, primarily of smartphones, remains the second most important barrier. The most substantial change is the declining importance of relevance as a barrier, which has been replaced by safety and security as the third most important barrier. It should be noted that while safety and security rose in the rankings of barriers, this was driven primarily by the declining importance of relevance as a barrier. Most of the relative increase in importance was for barriers relating to literacy and digital skills and affordability.

Further information on country-level barriers to mobile internet use can be found in Appendix 1.

Literacy and digital skills remain the greatest collective barrier to mobile internet adoption across the 15 markets surveyed, for both men and women. It is the greatest barrier for women in Africa and for both men and women in Asia. Low literacy levels are a key factor in several markets. For example, in Nigeria, 27 per cent of women and 22 per cent of men who are aware of, but do not use the internet, cite it as the most important barrier. Lack of knowledge about how to access the internet and lack of time to learn both emerged as key barriers in several countries, including Mozambique and Myanmar.

36% of sampled women in Senegal cited reading and writing as the main barrier to mobile internet access, compared to only **12%** of men.
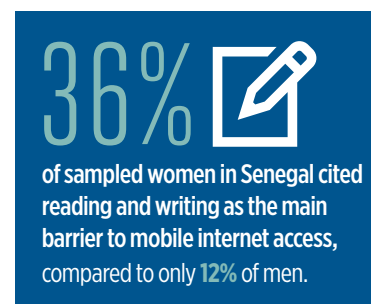
Affordability is a critically important barrier to mobile internet access for men and women alike. Of the 18 individual factors considered in the survey, handset affordability is the single most cited barrier. Affordability is a particular barrier in Sub-Saharan Africa where it has risen to be the top barrier for men and the second most important barrier for women. In Kenya, 38 per cent of men and 33 per cent of women who are aware of mobile internet, but have not used it, cited affordability as the single most important barrier to adoption. Affordability has increased in significance as a barrier to mobile internet use. For example, it was cited as a top barrier by an additional 20 per cent of female respondents in Mozambique.

Safety and security is the third most important barrier across the surveyed markets. It is a particularly important barrier in Latin America, and the most important barrier for both men and women in Guatemala and Mexico. It is also an important factor in South Africa where 22 per cent of women reported safety and security-related issues as the main barriers to internet access, compared to only five per cent of men.

Relevance is the barrier that has shown the most change year on year. While the perceived relevance of the internet — and a sense that there is insufficient content available in local languages — is still an important barrier in many countries, its importance as a top barrier has notably declined. This was clear among men and women in Bangladesh, Pakistan and Algeria, and for women in Mozambique. The decline of relevance as a barrier reflects growth in the use of apps to share video content in many LMICs, particularly through platforms such as YouTube and TikTok, which have driven explosive growth in video consumption on mobile (see the next section on women's mobile use). However, relevance remains a key barrier in many markets, particularly in Myanmar where 34 per cent of men and 30 per cent of women cite it as a primary barrier.

Accessibility-related barriers are not grouped as a composite, as they cover a disparate range of topics. However, there are several accessibility-related barriers that are important considerations in several markets. Network quality emerged as a notable impediment to mobile internet access in many markets, particularly for men in several African countries. Equally, while disapproval by family members is not a top barrier in most markets, for women in Bangladesh and particularly in Pakistan, it is an extremely important factor grounded in conservative social norms that govern many women's choices and behaviour.

In Pakistan, family disapproval is the main factor preventing

29% of sampled female non-users of mobile internet from getting online, compared to only **2%** of men.
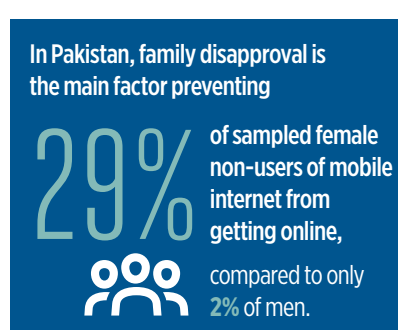
Among those who are aware of mobile internet, the main access barriers have remained fairly consistent between men and women. However, women's lower rate of mobile internet access means there are millions more women who face these barriers, so addressing them will have a disproportionately beneficial impact on women overall.

Understanding women's mobile use

The benefits of mobile are derived from the information, services, content and opportunities it provides access to. Therefore, promoting equal uptake of mobile internet is not sufficient to close the gender gap; equal use is just as important. Here, another gender gap emerges, with female mobile owners using a less diverse range of use cases.

Even among mobile owners, usage differs substantially between men and women

Respondents to the survey were asked about 28 distinct use cases on a mobile phone, including basic mobile services, such as sending SMS messages and making voice calls, through to more complex, internet-based use cases, such as watching video content online. In every country surveyed, women mobile owners used fewer of these applications than men (see Figure 12).

Male and female usage levels are lowest in South Asia and in Uganda — markets with some of the lowest overall levels of mobile ownership and mobile internet use. In Bangladesh, Pakistan and Uganda, men use an average of four use cases on a weekly basis, and women three. India, however, has the widest disparity in usage between men and women, with men on average engaging in seven use cases on a weekly basis, compared to four for women.

Average number of use cases per week among male and female mobile owners

Source: GSMA Intelligence Consumer Survey, 2019
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.
Mobile internet use cases were asked of mobile owners who had used the internet before.
n = 253 to 693 for women and n = 284 to 1,006 for men

The changing nature of mobile use

Since *The Mobile Gender Gap Report 2018*, patterns of mobile use have changed considerably in LMICs for both men and women. As smartphone uptake has grown and data prices — particularly in South Asia — have declined, the consumption of video content has grown substantially. The proportion of mobile internet users who watch videos on their mobile at least once a month has increased by over 50 per cent over two years in half of the eight countries surveyed in both 2017 and 2019, and in many countries this growth has been disproportionate for women. In India, the proportion of female mobile internet users who watch video at least once a month has increased from 42 per cent in 2017 to 74 per cent in 2019. In Kenya, women's monthly consumption of video has increased from 28 per cent to 51 per cent on at least a monthly basis, and 32 per cent to 63 per cent for men. A large share of these monthly video viewers now view on a daily basis, including 57 per cent of male and 44 per cent of female viewers in India. See Figure 13 for rates of monthly video consumption from a selection of example countries across regions.

Growth in monthly video consumption in selected countries, by gender

Percentage of mobile internet users watching free video on mobile at least monthly

Guatemala — MALE: 2017 59%, 2018 67%, 2019 70%; FEMALE: 2018 54%, 2017 51%, 2019 64%
India — MALE: 2017 40%, 2018 69%, 2019 75%; FEMALE: 2017 42%, 2018 64%, 2019 74%
Indonesia — MALE: 2017 51%, 2018 54%, 2019 69%; FEMALE: 2017 39%, 2018 56%, 2019 72%
Kenya — MALE: 2017 32%, 2018 49%, 2019 63%; FEMALE: 2017 28%, 2018 47%, 2019 51%
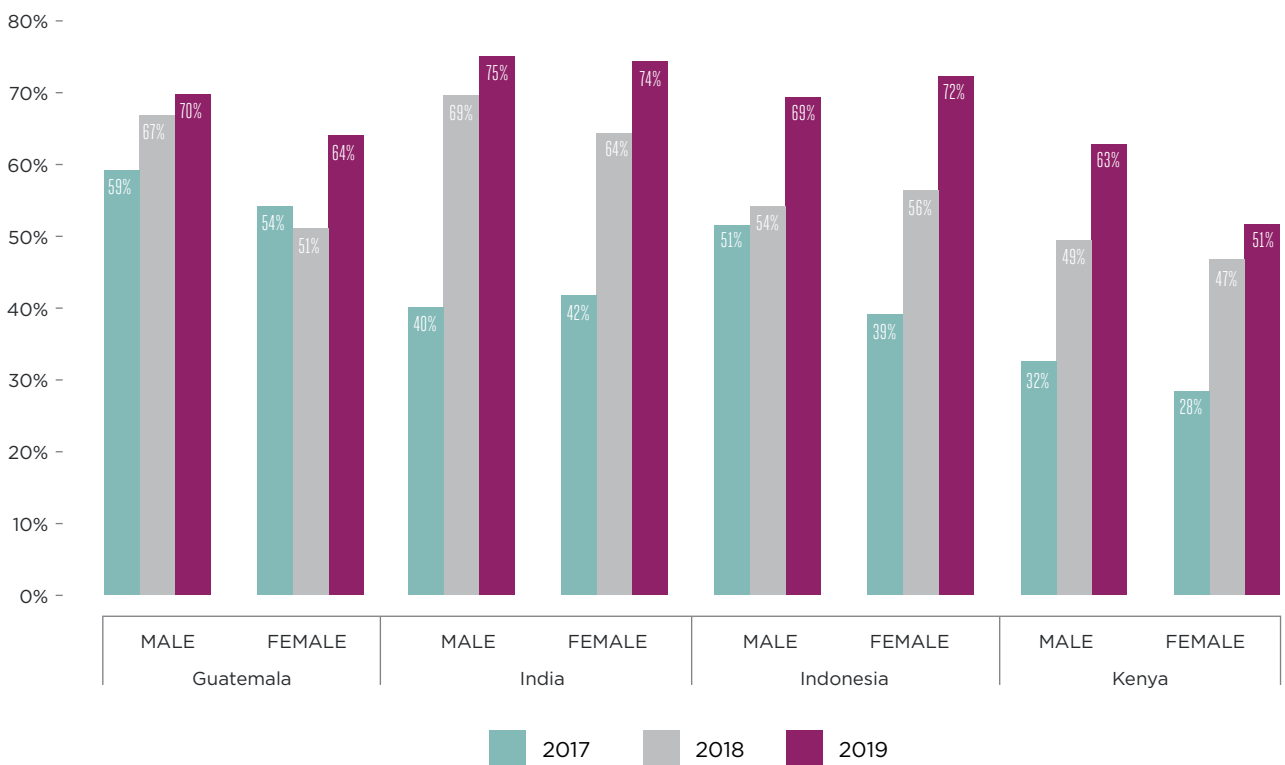
2017   2018   2019

Source: GSMA Intelligence Consumer Survey (2017, 2018 and 2019)
Base: Mobile internet users aged 18+
A mobile internet user is defined as a person who has 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.
Respondents may have engaged in watching video on a phone other than their own. The video use case was asked only of those who reported having ever used the internet on a mobile.
n= from 82 to 345 for women and n= from 159 to 527 for men

As video content becomes more popular and local video content becomes more available on free platforms like YouTube and TikTok, as well as platforms such as Hotstar in India, the perceived relevance of the internet is increasing among men and women in LMICs, which is in turn driving adoption.

Recommendations

As mobile is the primary way most people in LMICs access the internet, closing the mobile gender gap is becoming increasingly urgent as the importance of the internet grows. Promising progress is being made, but continued, concerted action is critical.

However, more needs to be done. As internet access becomes a gateway to new economic opportunities, government services and global information, there is a tremendous risk that the rate of women's access is not keeping pace with new technology. With 5G becoming a reality, it is not sufficient to equalise women's mobile phone ownership; it is important that women also have access to and knowledge of cutting-edge technology to be equal participants in the digital age.

Mobile ownership makes women feel safer, more informed and supports them in their work, education and other tasks. These benefits are much more pronounced for mobile internet users.

Addressing the mobile gender gap is an important way to contribute to the UN Sustainable Development Goals (SDGs), promote equal social and economic participation for women and ensure that gender inequalities are not exacerbated as connectivity becomes an increasingly important part of all our lives.

The recommendations in this section build on and extend those presented in *The Mobile Gender Gap Report 2019.* Recommendations are provided for four types of organisations: mobile network operators (MNOs), internet companies, policymakers and regulators and the development community (see Figure 14). The actions of these stakeholders will be most effective if they are coordinated and grounded in an understanding of the country-level barriers to mobile ownership and internet use affecting a disproportionate number of women in LMICs.

These recommendations are not intended to be comprehensive or exhaustive. Rather, they highlight some important areas for stakeholders to consider when taking steps to address the mobile gender gap. There is no one-size-fits-all solution; a multi-faceted approach will be needed to accelerate mobile adoption and use among women. Actions are also needed to address the structural barriers and inequalities underpinning the mobile gender gap, including disparities between men and women in terms of income and education, as well as restrictive and harmful social norms.

Recommendations for all stakeholders to close the mobile gender gap

Work to understand women's needs and barriers to mobile ownership and use in your market, and design targeted interventions to address these barriers. Consider the effect of social norms on women in the design and implementation of policies, products and services.

Improve the quality and availability of gender-disaggregated data to set targets, create strategies and track progress.

Ensure considerations of women and gender equality are integrated in strategies and plans, including setting specific gender-equity targets for reaching women and tracking their progress.

Consult and involve women users in product, service and policy design and implementation, including testing and piloting with women, and proactively tailoring marketing and distribution approaches to women.

Figure 14

Recommendations for closing the mobile gender gap in low- and middle-income countries, by stakeholder type and barrier addressed

Barrier addressed by the action	Mobile network operators	Internet companies	Policymakers and regulators	Development community
Affordability	**Support industry efforts to lower the cost of internet-enabled mobile phones,** especially smartphones. e.g. Partner with a manufacturer to offer entry-level smartphones, or smart feature phones, to customers at a reduced cost.	**Partner with MNOs to address handset affordability.** e.g. Through subsidies for low-cost smartphones that can help trigger mobile internet adoption.	**Review sector-specific taxes and fees that may exacerbate the cost barrier to mobile ownership and use** and reduce investment, and that have a disproportionate impact on women. These include taxes on airtime, devices and social media usage.	**Partner with, and support, the mobile ecosystem on projects to promote handset affordability.** e.g. Handset financing schemes provided through local NGO networks and local grassroots female-led networks, such as women's savings groups.
Literacy and skills	**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 your product or service to make it more affordable, without compromising on quality.** e.g. Make "data-light" versions of applications to reduce the cost for more price-sensitive users.	**Implement and support initiatives to help reduce the price of devices and services for consumers.** e.g. Support financial institutions and local savings groups to provide risk capital for handset loans for women at lower interest rates, or subsidise handsets for marginalised populations in partnership with the private sector.	**Fund and/or facilitate mobile-based digital literacy training for women.** e.g. Utilise trusted local networks to deliver digital skills training to women, potentially in partnership with an MNO.
Relevance	**Develop clear and transparent pricing for credit and data, and introduce more creative pricing to appeal to the price-sensitive.** e.g. Encourage low-cost or free trial of mobile internet services through promotional deals.	**Ensure mobile apps and operating systems are user friendly for those who are less confident and literate.** e.g. Have clear user menus with fewer steps, simplified content, simple terminology, shortened sign-up process, using icons/symbols/pictures/videos comic-style stories in addition to (or instead of) text.	**Invest in public education and digital literacy initiatives that increase women's and girls' mobile digital literacy and confidence,** including for women and girls across all levels of education, income and familiarity with mobile and the internet. e.g. Mainstream digital skills into school curricula.	**Work to address the negative influence of social norms** that restrict women's access to mobile technology by challenging misconceptions and communicating the positive and relevant use cases of mobile.
Safety and security	**Improve customers' digital skills,** including providing assistance to new users who may need additional support. e.g. Train mobile agents to deliver digital skills training and support to customers, for example, using the GSMA's *Mobile Internet Skills Training Toolkit*.	**Develop and incorporate tools to improve the usability of digital services for those with low literacy levels or who only speak their local language.** e.g. Integrate voice search or text-to-speech.	**Ensure online government services are developed considering the needs and capabilities** of individuals with lower literacy levels and digital skills. e.g. Provide an IVR help line, use simple terminology, local language, icons/symbols/pictures/videos/comic-style stories in addition to (or instead of) text.	**Raise awareness of the threats preventing women from accessing and using the internet and how they can be addressed.** e.g. Awareness campaigns, digital literacy programmes and formal education programmes/curriculum.
Accessibility	**Ensure marketing and services are accessible for those with lower literacy levels, digital skills, and awareness and understanding of the internet.** e.g. Have content and advertising in local languages, use simple, single-minded messages, avoid using technical jargon, consider the use of pictures/icons/videos.	**Understand and incorporate the content, features and services that women in your market find useful and relevant.** e.g. Drive the increased availability and accessibility of relevant local-language video content.	**Encourage the development of an ecosystem of apps and services that meet the needs, preferences and capabilities of women and girls.**	**Develop and support initiatives to increase women's access to and use of mobile and mobile internet** and leverage existing projects to facilitate women's mobile ownership and use and address the barriers they face.
	Communicate the relevance of mobile ownership and mobile internet use for women's day-to-day lives. e.g. Showcase relatable use cases in marketing targeted at women and/or ensure that women are featured in more broadcast advertising campaigns.	**Help women navigate the internet confidently and safely, and feel secure and in control when using internet apps and services.** e.g. Provide training in how to avoid and respond to negative behaviours and threats; develop tools to transparently and easily allow users to control their privacy and security settings and manage data use.	**Facilitate and make available public services online** to showcase the value and relevance of the internet and promote greater efficiency in the delivery of government services.	**Raise awareness of the barriers to women's mobile ownership and use, and advocate for stakeholders to take action** to address the mobile gender gap.
	Develop apps and services that can help increase safety for women. e.g. Develop "safety" services like apps to help women alert contacts in an emergency or call-blocking services.	**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; collaborate with relevant government agencies to ensure these reports are responded to quickly and effectively.	**Increase awareness of the threats preventing women and girls from accessing and using the internet and how they can be addressed or reduced.** e.g. Awareness campaigns, digital literacy programmes and formal education programmes/curriculum (targeting both men and women).	
	Consider the role of the gatekeeper in facilitating women's mobile ownership and use. e.g. Demonstrate through marketing the value of women having access to mobiles and mobile internet.	**Make mobile internet more accessible by providing internet services and operating systems in local languages.**	**Develop appropriate legal and policy frameworks that recognise digital harassment, and make it easy and safe to report online abuse.**	

Appendix 1: Barriers to mobile ownership and mobile internet use

Respondents in 15 LMICs were asked to identify the barriers preventing them from either owning a mobile phone or using the internet on a mobile phone. Strongly related or thematically overlapping barriers were grouped into composites, which were used to calculate the regional rankings of barriers.[18]

Respondents selected barriers from a pre-defined list during a face-to-face quantitative survey. 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 a perceived inappropriateness of spending money on mobile services for themselves.

For mobile ownership and mobile internet use, 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.

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18. Any respondent who reported any barrier in the category as the main barrier was included in that composite. The composite value is not an average of the values of all the individual barriers in the category.

Figure 15

Top barrier to owning a mobile phone

Percentage of non-mobile owners who identified the following as the single most important barrier to owning a mobile

| | AFFORDABILITY | | | | LITERACY AND SKILLS | | | | RELEVANCE | | SAFETY AND SECURITY | | | | | | ACCESSIBILITY | | | | | | | | | |
| | HANDSET / SIM COST | | CREDIT COST | | DO NOT KNOW HOW TO USE A MOBILE | | READING/ WRITING DIFFICULTIES | | MOBILE IS NOT RELEVANT FOR ME | | PERSONAL SAFETY | | STRANGERS CONTACTING ME | | INFORMATION SECURITY | | BATTERY CHARGING | | NETWORK COVERAGE | | FAMILY DOES NOT APPROVE | | ACCESS TO AGENT SUPPORT | | ID | |
	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W
Algeria	13%	11%	0%	3%	22%	23%	23%	24%	15%	8%	0%	3%	3%	1%	12%	3%	0%	0%	5%	2%	3%	22%	3%	0%	0%	0%
Kenya	57%	40%	3%	2%	0%	4%	15%	23%	3%	9%	0%	0%	3%	4%	3%	4%	0%	0%	3%	3%	0%	2%	0%	2%	12%	9%
Mozambique	40%	36%	1%	3%	3%	16%	8%	15%	4%	3%	5%	3%	1%	2%	3%	2%	8%	4%	11%	3%	1%	5%	5%	1%	9%	5%
Nigeria	47%	35%	10%	8%	3%	7%	26%	30%	0%	2%	4%	0%	0%	1%	2%	0%	0%	3%	2%	1%	4%	10%	2%	0%	0%	1%
Senegal	30%	31%	2%	7%	3%	3%	17%	27%	4%	0%	2%	1%	4%	6%	7%	9%	2%	1%	13%	7%	5%	3%	7%	3%	2%	2%
Uganda	48%	41%	4%	5%	5%	12%	15%	13%	8%	1%	2%	1%	1%	3%	0%	1%	1%	2%	3%	2%	2%	9%	2%	2%	10%	8%
Bangladesh	9%	7%	2%	0%	19%	31%	44%	17%	17%	15%	0%	4%	0%	1%	2%	3%	0%	1%	0%	5%	0%	11%	0%	1%	6%	2%
India	23%	34%	10%	5%	7%	9%	11%	16%	10%	11%	4%	2%	5%	3%	3%	3%	4%	3%	12%	6%	2%	3%	4%	2%	0%	0%
Indonesia	30%	28%	3%	5%	8%	6%	28%	22%	3%	9%	4%	6%	4%	3%	7%	8%	0%	0%	13%	11%	0%	1%	0%	1%	0%	0%
Myanmar	26%	21%	2%	3%	18%	20%	7%	6%	35%	35%	0%	3%	2%	2%	3%	1%	0%	2%	1%	1%	0%	4%	0%	0%	1%	2%
Pakistan	11%	15%	5%	2%	8%	7%	49%	25%	6%	3%	6%	2%	3%	5%	0%	2%	3%	0%	4%	2%	6%	35%	0%	0%	1%	1%
Brazil	26%	33%	7%	5%	12%	23%	22%	15%	10%	3%	10%	10%	2%	0%	7%	7%	0%	0%	3%	0%	2%	2%	0%	2%	0%	0%
Guatemala	16%	23%	4%	7%	5%	6%	10%	14%	4%	3%	26%	16%	10%	10%	12%	12%	4%	2%	3%	2%	1%	2%	1%	1%	1%	2%
Mexico	33%	24%	4%	8%	3%	10%	15%	7%	4%	4%	4%	11%	6%	8%	15%	16%	0%	2%	9%	4%	2%	2%	0%	3%	2%	2%

AFRICA: Algeria, Kenya, Mozambique, Nigeria, Senegal, Uganda
ASIA: Bangladesh, India, Indonesia, Myanmar, Pakistan
LATIN AMERICA: Brazil, Guatemala, Mexico

Source: GSMA Intelligence Consumer Survey, 2019
Base: Non-mobile owners aged 18+
Mobile ownership is defined as a person 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.
Percentages indicate the 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?"
n= from 55 to 236 for women, and n= from 30 to 158 for men

M Men W Women Lowest barrier cited in that country Highest barrier cited in that country

Figure 16

Important barriers to owning a mobile phone

Percentage of non-mobile owners who identified the following as a main barrier to mobile ownership

| | AFFORDABILITY | | | | LITERACY AND SKILLS | | | | RELEVANCE | | SAFETY AND SECURITY | | | | | | ACCESSIBILITY | | | | | | | | | |
| | HANDSET / SIM COST | | CREDIT COST | | DO NOT KNOW HOW TO USE A MOBILE | | READING/ WRITING DIFFICULTIES | | MOBILE IS NOT RELEVANT FOR ME | | PERSONAL SAFETY | | STRANGERS CONTACTING ME | | INFORMATION SECURITY | | BATTERY CHARGING | | NETWORK COVERAGE | | FAMILY DOES NOT APPROVE | | ACCESS TO AGENT SUPPORT | | ID | |
	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W
Algeria	15%	15%	3%	8%	22%	27%	21%	30%	13%	12%	0%	6%	5%	5%	11%	9%	3%	0%	7%	3%	3%	21%	5%	0%	0%	0%
Kenya	63%	44%	9%	4%	0%	7%	15%	26%	6%	9%	0%	3%	6%	5%	6%	7%	3%	2%	3%	3%	0%	3%	0%	2%	12%	9%
Mozambique	40%	41%	7%	12%	6%	24%	16%	28%	3%	4%	5%	4%	2%	6%	5%	4%	14%	10%	12%	8%	2%	9%	13%	9%	12%	14%
Nigeria	59%	50%	21%	20%	9%	16%	45%	49%	0%	6%	8%	3%	4%	6%	4%	1%	2%	4%	2%	3%	6%	22%	2%	1%	0%	3%
Senegal	35%	35%	6%	10%	7%	7%	28%	30%	4%	1%	5%	3%	6%	18%	11%	12%	2%	5%	14%	9%	6%	4%	9%	6%	5%	2%
South Africa	39%	16%	14%	24%	3%	10%	10%	16%	3%	10%	7%	11%	0%	12%	14%	9%	0%	6%	17%	4%	3%	6%	0%	2%	0%	2%
Uganda	55%	49%	16%	12%	12%	15%	23%	21%	7%	2%	4%	3%	3%	4%	3%	2%	6%	7%	8%	7%	4%	10%	5%	3%	14%	11%
Bangladesh	12%	8%	2%	1%	19%	31%	46%	21%	24%	16%	2%	4%	0%	1%	4%	2%	4%	2%	0%	5%	6%	11%	2%	2%	6%	3%
India	31%	42%	17%	12%	11%	16%	18%	24%	14%	17%	11%	5%	12%	7%	11%	6%	7%	7%	16%	8%	3%	9%	9%	5%	1%	4%
Indonesia	50%	49%	33%	27%	21%	27%	36%	32%	20%	20%	11%	11%	4%	11%	14%	15%	4%	12%	22%	18%	1%	7%	4%	11%	1%	1%
Myanmar	40%	37%	11%	16%	40%	43%	22%	20%	53%	46%	9%	14%	13%	12%	10%	9%	6%	11%	4%	7%	2%	9%	5%	7%	13%	12%
Pakistan	16%	24%	6%	6%	10%	13%	56%	38%	6%	15%	7%	7%	5%	13%	1%	10%	5%	1%	8%	4%	7%	38%	1%	1%	3%	3%
Brazil	29%	45%	14%	16%	14%	36%	26%	25%	15%	9%	12%	14%	2%	5%	10%	16%	6%	3%	6%	2%	6%	2%	0%	2%	1%	2%
Guatemala	27%	41%	14%	17%	10%	16%	17%	25%	7%	9%	43%	34%	31%	29%	27%	26%	9%	11%	13%	9%	8%	8%	12%	6%	4%	8%
Mexico	42%	32%	18%	16%	9%	14%	20%	14%	7%	8%	14%	15%	17%	14%	23%	23%	9%	4%	15%	8%	2%	3%	4%	6%	6%	1%

AFRICA — Algeria, Kenya, Mozambique, Nigeria, Senegal, South Africa, Uganda
ASIA — Bangladesh, India, Indonesia, Myanmar, Pakistan
LATIN AMERICA — Brazil, Guatemala, Mexico

Source: GSMA Intelligence Consumer Survey, 2019
Base: Non-mobile owners aged 18+
Mobile ownership is defined as a person 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.
Percentages indicate the proportion of non-mobile owners who responded, "This is one of the most important reasons stopping me" to the question, "Which, if any, of those factors would you say are the most important reasons stopping you from having a mobile phone or SIM card, connected to a mobile operator's network?"
n= from 49 to 317 for women, and n= from 30 to 225 for men

M W
Men Women

Lowest barrier cited in that country   Highest barrier cited in that country

Figure 17

Top barrier to mobile internet use

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

		AFFORDABILITY			LITERACY AND SKILLS					RELEVANCE
		HANDSET COST	DATA COST	DO NOT KNOW HOW TO ACCESS INTERNET ON A MOBILE	DO NOT KNOW HOW TO USE A MOBILE	READING/ WRITING DIFFICULTIES	DO NOT HAVE TIME TO LEARN HOW TO ACCESS INTERNET ON A MOBILE	NOT SUFFICIENT SUPPORT IN LEARNING TO USE INTERNET	INTERNET IS NOT RELEVANT FOR ME
		M / W	M / W	M / W	M / W	M / W	M / W	M / W	M / W
AFRICA	Algeria	23% / 24%	1% / 0%	1% / 2%	3% / 4%	21% / 21%	10% / 8%	1% / 3%	7% / 9%
	Kenya	34% / 30%	4% / 3%	6% / 9%	0% / 1%	7% / 8%	7% / 9%	6% / 5%	11% / 11%
	Mozambique	22% / 28%	2% / 4%	13% / 17%	0% / 1%	8% / 14%	12% / 3%	2% / 5%	3% / 1%
	Nigeria	27% / 23%	4% / 5%	9% / 5%	1% / 2%	22% / 27%	2% / 6%	1% / 1%	11% / 11%
	Senegal	27% / 18%	2% / 1%	7% / 3%	7% / 1%	12% / 36%	8% / 13%	1% / 1%	2% / 0%
	South Africa	26% / 15%	13% / 17%	2% / 5%	2% / 1%	2% / 1%	7% / 11%	2% / 0%	19% / 16%
	Uganda	29% / 42%	6% / 7%	8% / 2%	2% / 1%	16% / 9%	4% / 5%	6% / 7%	7% / 3%
ASIA	Bangladesh	17% / 8%	6% / 3%	12% / 6%	4% / 3%	16% / 12%	8% / 2%	2% / 1%	12% / 14%
	India	23% / 26%	8% / 6%	10% / 14%	1% / 4%	8% / 11%	7% / 3%	3% / 4%	9% / 10%
	Indonesia	23% / 26%	25% / 11%	8% / 4%	0% / 0%	6% / 7%	6% / 10%	0% / 0%	8% / 15%
	Myanmar	7% / 5%	4% / 6%	7% / 10%	1% / 1%	7% / 8%	11% / 12%	5% / 2%	31% / 28%
	Pakistan	12% / 7%	10% / 6%	4% / 2%	3% / 2%	38% / 17%	10% / 7%	1% / 4%	6% / 8%
LATIN AMERICA	Brazil	19% / 19%	5% / 4%	16% / 15%	0% / 8%	11% / 10%	3% / 6%	3% / 4%	13% / 4%
	Guatemala	9% / 9%	8% / 3%	8% / 7%	6% / 0%	7% / 11%	6% / 6%	2% / 1%	4% / 3%
	Mexico	19% / 16%	8% / 4%	4% / 5%	4% / 6%	12% / 6%	2% / 2%	0% / 6%	0% / 6%

	RELEVANCE	SAFETY AND SECURITY			ACCESSIBILITY					
	INSUFFICIENT CONTENT IN LOCAL LANGUAGE	HARMFUL CONTENT (SELF/ FAMILY)	STRANGERS CONTACTING ME	INFORMATION SECURITY	INTERNET DRAINS MY BATTERY	NETWORK COVERAGE	FAMILY DOES NOT APPROVE	ACCESS TO AGENT SUPPORT	SLOW CONNECTION/ CANNOT DO WHAT I WANT	NO ACCESS TO INTERNET-ENABLED PHONE
	M / W	M / W	M / W	M / W	M / W	M / W	M / W	M / W	M / W	M / W
Algeria	2% / 1%	3% / 3%	4% / 1%	3% / 8%	2% / 2%	9% / 4%	1% / 6%	1% / 0%	2% / 1%	5% / 2%
Kenya	1% / 3%	2% / 5%	4% / 6%	2% / 1%	4% / 3%	3% / 4%	1% / 1%	1% / 1%	5% / 0%	2% / 1%
Mozambique	2% / 0%	4% / 4%	2% / 2%	5% / 3%	12% / 5%	3% / 0%	0% / 0%	2% / 3%	6% / 4%	2% / 7%
Nigeria	2% / 1%	6% / 2%	5% / 2%	3% / 4%	2% / 2%	2% / 1%	0% / 3%	0% / 0%	3% / 4%	2% / 2%
Senegal	2% / 2%	0% / 5%	5% / 4%	8% / 3%	3% / 1%	6% / 7%	0% / 1%	1% / 0%	2% / 1%	7% / 4%
South Africa	5% / 1%	0% / 7%	0% / 5%	5% / 11%	5% / 2%	2% / 4%	6% / 1%	0% / 0%	2% / 1%	3% / 0%
Uganda	5% / 3%	3% / 2%	0% / 4%	2% / 2%	3% / 4%	6% / 2%	0% / 1%	2% / 1%	1% / 3%	2% / 2%
Bangladesh	3% / 6%	7% / 5%	1% / 6%	1% / 4%	1% / 2%	5% / 10%	3% / 12%	1% / 1%	1% / 0%	1% / 3%
India	4% / 5%	2% / 2%	2% / 1%	3% / 1%	3% / 2%	4% / 2%	1% / 2%	1% / 1%	4% / 2%	0% / 1%
Indonesia	0% / 0%	0% / 3%	2% / 2%	4% / 5%	0% / 2%	7% / 3%	0% / 6%	6% / 0%	4% / 5%	0% / 0%
Myanmar	3% / 3%	5% / 7%	1% / 2%	7% / 1%	2% / 5%	1% / 2%	1% / 3%	1% / 1%	5% / 1%	1% / 3%
Pakistan	4% / 4%	1% / 8%	3% / 2%	0% / 1%	1% / 0%	4% / 1%	2% / 29%	1% / 0%	0% / 0%	0% / 1%
Brazil	0% / 0%	3% / 4%	3% / 2%	8% / 11%	6% / 4%	5% / 6%	0% / 0%	0% / 0%	3% / 2%	2% / 0%
Guatemala	0% / 0%	12% / 21%	14% / 7%	9% / 21%	3% / 2%	0% / 3%	0% / 0%	3% / 0%	0% / 0%	5% / 2%
Mexico	4% / 0%	6% / 5%	12% / 6%	19% / 24%	2% / 2%	6% / 4%	4% / 2%	0% / 0%	0% / 4%	0% / 2%

Source: GSMA Intelligence Consumer Survey, 2019
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 = from 45 to 163 for women and n = from 37 to 173 for men

M Men   W Women

Lowest barrier cited in that country — Highest barrier cited in that country

Figure 18

Important barriers to mobile internet use

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

| | | AFFORDABILITY | | | | LITERACY AND SKILLS | | | | | | | | | | RELEVANCE | |
| | | HANDSET COST | | DATA COST | | DO NOT KNOW HOW TO ACCESS INTERNET ON A MOBILE | | DO NOT KNOW HOW TO USE A MOBILE | | READING/ WRITING DIFFICULTIES | | DO NOT HAVE TIME TO LEARN HOW TO ACCESS INTERNET ON A MOBILE | | NOT SUFFICIENT SUPPORT IN LEARNING TO USE INTERNET | | INTERNET IS NOT RELEVANT FOR ME | |
		M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W
AFRICA	Algeria	26%	27%	8%	8%	5%	5%	10%	10%	22%	25%	14%	14%	2%	8%	12%	14%
	Kenya	39%	35%	12%	8%	13%	13%	2%	5%	10%	15%	14%	14%	13%	8%	15%	14%
	Mozambique	28%	25%	10%	5%	26%	19%	5%	1%	10%	12%	14%	2%	11%	4%	6%	1%
	Nigeria	36%	28%	16%	14%	21%	12%	3%	5%	33%	35%	9%	10%	4%	3%	16%	17%
	Senegal	39%	34%	6%	11%	13%	8%	11%	3%	35%	36%	10%	18%	3%	9%	2%	8%
	South Africa	34%	26%	30%	27%	4%	8%	2%	4%	3%	4%	12%	20%	2%	5%	24%	23%
	Uganda	37%	55%	23%	31%	20%	22%	7%	10%	23%	20%	12%	11%	15%	18%	12%	14%
ASIA	Bangladesh	21%	11%	9%	7%	14%	10%	6%	4%	20%	12%	12%	4%	5%	4%	16%	16%
	India	28%	33%	21%	19%	19%	22%	5%	7%	10%	16%	15%	13%	10%	8%	12%	17%
	Indonesia	39%	38%	45%	29%	19%	16%	5%	0%	9%	10%	11%	12%	5%	3%	11%	19%
	Myanmar	28%	18%	26%	17%	36%	30%	25%	18%	19%	21%	35%	25%	23%	18%	49%	46%
	Pakistan	20%	25%	18%	15%	9%	11%	9%	13%	44%	31%	17%	17%	5%	12%	13%	20%
LATIN AMERICA	Brazil	35%	28%	28%	16%	40%	30%	20%	22%	15%	14%	15%	12%	10%	12%	25%	10%
	Guatemala	22%	41%	16%	32%	12%	21%	13%	16%	16%	23%	10%	21%	2%	18%	6%	17%
	Mexico	26%	27%	17%	18%	9%	17%	7%	11%	13%	7%	7%	4%	5%	9%	0%	5%

| | RELEVANCE | | SAFETY AND SECURITY | | | | | | ACCESSIBILITY | | | | | | | | | | | |
| | INSUFFICIENT CONTENT IN LOCAL LANGUAGE | | HARMFUL CONTENT (SELF/ FAMILY) | | STRANGERS CONTACTING ME | | INFORMATION SECURITY | | INTERNET DRAINS MY BATTERY | | NETWORK COVERAGE | | FAMILY DOES NOT APPROVE | | ACCESS TO AGENT SUPPORT | | SLOW CONNECTION/ CANNOT DO WHAT I WANT | | NO ACCESS TO INTERNET-ENABLED PHONE | |
	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W
Algeria	5%	3%	6%	8%	4%	2%	4%	11%	4%	4%	10%	10%	1%	9%	4%	0%	5%	5%	5%	5%
Kenya	5%	3%	6%	9%	8%	10%	7%	3%	10%	7%	5%	5%	2%	1%	3%	3%	6%	1%	6%	4%
Mozambique	4%	0%	6%	3%	3%	2%	7%	2%	14%	4%	13%	0%	3%	0%	11%	2%	9%	4%	3%	8%
Nigeria	2%	6%	9%	4%	7%	4%	7%	5%	4%	3%	5%	2%	0%	7%	1%	0%	5%	4%	5%	7%
Senegal	17%	7%	6%	11%	11%	11%	18%	10%	3%	2%	9%	6%	0%	1%	1%	0%	5%	2%	11%	9%
South Africa	9%	5%	9%	14%	7%	11%	13%	15%	10%	8%	2%	6%	5%	2%	3%	1%	2%	3%	11%	4%
Uganda	11%	16%	4%	11%	4%	12%	3%	8%	12%	17%	17%	13%	1%	4%	6%	8%	6%	8%	9%	9%
Bangladesh	6%	7%	7%	9%	4%	7%	3%	5%	6%	6%	7%	13%	4%	13%	1%	1%	3%	4%	4%	2%
India	11%	13%	8%	6%	7%	3%	8%	4%	8%	5%	13%	6%	4%	5%	4%	6%	7%	2%	8%	10%
Indonesia	5%	3%	2%	8%	9%	2%	12%	9%	7%	4%	10%	6%	0%	8%	8%	0%	6%	7%	0%	2%
Myanmar	26%	13%	27%	14%	22%	13%	21%	12%	18%	16%	9%	9%	9%	6%	18%	10%	20%	6%	12%	7%
Pakistan	10%	9%	3%	17%	5%	13%	2%	12%	4%	5%	9%	3%	4%	33%	5%	4%	3%	3%	5%	12%
Brazil	2%	4%	8%	8%	13%	8%	20%	12%	8%	8%	10%	11%	0%	2%	5%	4%	10%	8%	10%	6%
Guatemala	2%	8%	29%	50%	32%	42%	26%	51%	17%	27%	0%	20%	1%	9%	5%	8%	13%	17%	14%	25%
Mexico	3%	2%	20%	14%	21%	11%	28%	26%	7%	4%	7%	11%	5%	2%	2%	3%	2%	5%	5%	4%

Source: GSMA Intelligence Consumer Survey, 2019
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 one of the most important reasons stopping me" to the question, "Which, if any, of those factors would you say are the most important reasons stopping you from using the internet on a mobile phone?"
n= from 45 to 173 for women and n= from 40 to 197 for men

M Men　W Women　Lowest barrier cited in that country　　　　Highest barrier cited in that country

Appendix 2: Methodology

This report is based on an analysis of the results of face-to-face surveys conducted by GSMA Intelligence in 15 LMICs in 2019. This is supplemented by 2017 and 2018 GSMA Intelligence survey results from 13 additional countries,[19] as well as third-party survey results that cover another 10 countries.[20]

Survey methodology

In all countries surveyed in 2019, a nationally representative 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 sampling frame was predominantly based on data from national statistics offices, including census data where possible, and a range of other sources. To ensure representative geographical 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 the local language and typically within the home. All surveys were interviewer-administered 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.[21]

Extrapolating the mobile gender gap to non-surveyed countries

To estimate the gender gaps in mobile ownership, smartphone ownership and mobile internet use across all LMICs, an extrapolation model was developed. The 28 countries included in the GSMA Intelligence Consumer Surveys represent 75 per cent of the total adult population of all LMICs.[22] Data from the 2017, 2018 and 2019 Consumer Survey countries served as the primary inputs for the model.[23] Third-party and publicly available survey data was used when it was considered robust, which provided gender gap measures for mobile ownership and internet use for an additional 10 countries and smartphone ownership for an additional two countries.[24] All country-level figures cited in this study were derived directly from GSMA Intelligence face-to-face survey results.

Regression analysis identified the independent variables that were key to predicting each mobile gender gap. An equation was generated for each gender gap to estimate the gender gap in LMICs not included in the survey. Each equation was tested using several different measures of model fit and accuracy (including adjusted R-squared, RMSE, MAE, AIC/BIC, as well as out-of-sample testing). The selected models demonstrated the highest level of fit when comparing predicted results with the actual results derived from the survey.

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19. Twelve countries were surveyed by GSMA Intelligence in 2017, 2018 and 2019: Algeria, Bangladesh, Brazil, Guatemala, India, Indonesia, Kenya, Mexico, Myanmar, Nigeria, Pakistan and South Africa. Four countries were surveyed by GSMA Intelligence in 2017 and 2018: Argentina, Dominican Republic, Côte d'Ivoire and Tanzania. One country was surveyed by GSMA Intelligence in 2018 and 2019: Mozambique. Eight countries were surveyed by GSMA Intelligence only in 2017: Chile, Colombia, Egypt, Ghana, Nicaragua, Philippines, Thailand and Vietnam, however as Chile is defined as an upper-middle income country, it is not included in this analysis. Two countries were surveyed by GSMA Intelligence only in 2019: Senegal and Uganda. Fieldwork was carried out in September, October and November in 2017, 2018 and 2019.
20. These external sources include Pew, After Access, ITU, the Russia Longitudinal Monitoring Survey (HSE) and China Internet Network Information Center.
21. Uganda was not weighted by SEC.
22. United Nations Department of Economic and Social Affairs, Population Division (2020), "World Population Prospects 2019".
23. Where 2017 or 2018 data was the primary input for a country, year-on-year change between 2017, 2018 and 2019 was modelled based on changes in the values of the predictor variables between the three years.
24. We used data from After Access (Cambodia, Paraguay, Peru, Rwanda), the Financial Inclusion Insights Program (Uganda) and Pew Global Attitudes and Trends (Jordan, Lebanon, Philippines, Senegal, Vietnam), RLMS-HES (Russia) and CNNIC 2019 (China). To calculate gender gap estimates in these countries, we applied the growth rate implied from our extrapolation model to the years where actual data was available.

Table 3 presents the predictor variables used to estimate the gender gaps in mobile ownership, smartphone ownership and mobile internet use. Some of the predictors are different from the extrapolation models used in *The Mobile Gender Gap Report 2018*, as new data allowed us to improve the accuracy of the models.[25] Due to these improvements in modelling and changes in underlying data, some of the reported gender gaps in this report differ slightly from those presented in *The Mobile Gender Gap Report 2018 and 2019*.[26]

Table 3

Predictor variables used in extrapolation models

Predictor variables for mobile ownership gender gap model	Predictor variables for mobile internet gender gap model	Predictor variables for smartphone gender gap model
Composite "income-education" indicator, capturing GNI per capita and mean years of schooling for women (Source: UNDP)	GDP per capita (Source: IMF)	GDP per capita (Source: IMF)
Mobile phone ownership among adult women (Source: Gallup World Poll)	Facebook Gender Gap (Source: Facebook Audience Insights)	Facebook Gender Gap (Source: Facebook Audience Insights)
South Asia "dummy" variable[27]	South Asia "dummy" variable	South Asia "dummy" variable
	Mean years of schooling for women (Source: UNDP)	Mean years of schooling for women (Source: UNDP)

25. For example, in the 2018 Mobile Gender Gap Report, we used the female Human Development Index (HDI) as a predictor variable for both the SIM and mobile internet gender gaps. However, with the availability of more data, our analysis found that both gender gaps are much more strongly predicted by income and education than health (which is a component of the HDI). Therefore, our models no longer incorporate a health dimension. In addition, updates to external data inputs, which include revisions to previous data points and the inclusion of the 2019 Consumer Survey (both of which are used to estimate the prediction models) have slightly adjusted some gender gap estimates for previous years.
26. For example, the estimated gender gap in mobile internet use in Europe and Central Asia in 2017 is now six per cent instead of four per cent, as estimated in *The Mobile Gender Gap Report 2018*.
27. This dummy variable takes a value of 1 if a country is in South Asia. It is included to capture the disproportionately wide gender gap in South Asian countries.

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