Connected Women

The Mobile Gender Gap Report 2019

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The GSMA Connected Women Programme works with mobile operators and their partners to address the barriers to women accessing and using mobile internet and mobile money services. Connected Women aims to reduce the gender gap in mobile internet and mobile money services and unlock significant commercial opportunities for the mobile industry and socio-economic benefits for women.

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1. Introduction

The importance of addressing the persistent mobile gender gap

Recent growth in the mobile industry has driven an unprecedented increase in digital inclusion in low- and middle-income countries (LMICs).[1] Since 2014, mobile operators have connected 700 million new subscribers and another billion have gained access to the internet through a mobile phone, many for the first time.[2] 1.7 billion women now own a mobile phone in LMICs and over a billion use mobile internet. As the reach of mobile grows, it is becoming an increasingly powerful tool for delivering life-enhancing information, services and opportunities to millions who have not had the opportunity to access them before.

Despite this growth, mobile ownership still remains far from universal. Across LMICs, 15 per cent of adults still do not own a mobile phone and 45 per cent do not use mobile internet. These individuals tend to belong to the most marginalised groups: they are disproportionately rural, illiterate and older. They are also predominantly female.

While mobile phone ownership and mobile internet use have increased significantly among women, there is still a persistent gender gap. Women's lower levels of mobile ownership and use not only reflect existing gender inequalities, but also threaten to compound them. If the mobile gender gap is not addressed, women risk being left behind as societies and economies digitise.

There are several distinct barriers to mobile ownership and use that affect a disproportionate number of women. These impediments to universal mobile connectivity will not be overcome on their own; concerted effort and cooperation will be required to drive digital inclusion for women.

It is important for all stakeholders to take action to deliver the significant benefits of mobile and the internet to women, their families, communities and the economy. Mobile can help empower women, making them more connected, safe and able to access information and services. Closing the mobile gender gap also represents a significant commercial and economic opportunity.

To inform this action, this report presents an update to the findings of previous GSMA research on the mobile gender gap conducted in 2015 and 2018, including:

- Updated estimates of the size of the gender gap in mobile ownership and mobile internet use and whether it is closing;
- The profile of the unconnected and the barriers to mobile ownership and mobile internet use; and
- For the first time, an estimate of the economic impact of closing the mobile internet gender gap in LMICs, as well as an updated estimate of the commercial opportunity of closing the mobile gender gap for the mobile industry.

The findings are sourced primarily from the 2018 GSMA Intelligence Consumer Survey, which has over 20,000 respondents from 18 LMICs.[3] Analysis of other research and data from the GSMA, and from a range of other organisations involved in investigating and tracking the mobile gender gap, was also used to inform the findings of this report.[4]

1. This categorisation is based on the World Bank's country classification and includes countries the World Bank classifies as low-income, lower-middle income and upper-middle income.
2. GSMA Intelligence, Q4 2018
3. For consistency of analysis, Argentina is included in these 18 countries despite having been classified as High Income by the World Bank in 2018. When results from LMICs are discussed throughout this report, Argentina is included.
4. This study drew on reports and data from organisations including After Access, Gallup, Pew Global Attitudes and Trends, Intermedia, Alliance for Affordable Internet, Harvard Kennedy School Evidence for Policy Design and others.

2. Key findings

1. **Women's mobile phone ownership has increased significantly in low- and middle-income countries** since 2014. The number of women who own a mobile has risen by over 250 million, with 80 per cent of women across these markets now owning a mobile phone.

2. **Mobile is the primary means of internet access in low- and middle-income countries, particularly for women.** 48 per cent of women in these countries now use mobile internet.

3. However, there is a persistent mobile gender gap. **Women in low- and middle-income countries are 10 per cent less likely than men to own a mobile**, which translates into 197 million fewer women than men owning a mobile phone. As mobile subscriber growth slows, the gender gap in mobile ownership is not closing.

4. **Across low- and middle-income countries, 313 million fewer women than men use mobile internet, representing a gender gap of 23 per cent.** With uptake of mobile internet growing quickly, there is some evidence that this wide gender gap has narrowed.

5. **The mobile gender gap varies by region and country, but is widest in South Asia** where women are 28 per cent less likely than men to own a mobile and 58 per cent less likely to use mobile internet.

6. **Affordability, literacy and digital skills, a perceived lack of relevance, and safety and security concerns are the most important barriers** to mobile ownership and mobile internet use for women. Affordability, particularly of handsets, is the top barrier to mobile ownership, while literacy and digital skills are the main factors limiting mobile internet use among those who are aware of it.[5]

7. **Although awareness of mobile internet is growing in most markets, it remains consistently lower for women than men.**

8. The mobile gender gap extends beyond ownership and access — even **when women own a mobile phone, they use a smaller range of mobile services.** This is the case across almost all low- and middle-income countries.

9. The usage gap is also reflected in mobile spending. **Across low- and middle-income countries, female mobile owners spend on average 17 per cent less than men on mobile services.**[6] This spending gap is evident even in countries where there is not a gender gap in mobile ownership or mobile internet use. This is an opportunity for operators in all markets to increase ARPU[7] by equalising usage.

10. Closing the gender gaps in mobile ownership and usage represents an important commercial opportunity for the mobile industry. **If mobile operators could close these gender gaps in low- and middle-income countries by 2023, this would provide an estimated additional $140 billion in revenue** to the mobile industry over the next five years.

11. The GSMA estimates that **closing the gender gap in mobile internet use across low- and middle-income countries could add $700 billion in GDP growth** (representing an additional 0.7 per cent of GDP growth) in these countries over the next five years.[8]

5. 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.
6. Refers to spending among female and male mobile owners.
7. Average revenue per user
8. GSMA Intelligence modelled estimates

IN LOW- AND MIDDLE-INCOME COUNTRIES:

80%
of women now own a mobile phone

This represents an increase of
250M
women since 2014

48%
of women now use mobile internet

and mobile is the **primary means** of internet access

There remains a **gender gap** in mobile ownership - women are
10% less likely
than men to own a mobile

197 million
fewer women own a mobile than men

313M
fewer women than men use mobile internet

Women are
23% less likely
than men to use mobile internet

The mobile **gender gap** is widest in **South Asia** where women are
28% less likely
than men to own a mobile

and **57%** less likely
to use mobile internet

Awareness of mobile internet is growing in most markets

but remains **consistently lower** for women

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IN LOW- AND MIDDLE-INCOME COUNTRIES:

Mobile ownership
Key barriers for women:

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

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

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

Even for mobile owners, there is a significant **gender gap in usage:**

Women use a **smaller range** of mobile services

Female mobile owners
spend
17% less
than men on mobile services, presenting an opportunity for operators to increase ARPU by equalising usage

Closing the gender gap in mobile ownership and usage by 2023 would provide an estimated
additional
$140B
in revenue
for the mobile industry
over 5 years

Closing the gender gap in mobile internet usage by 2023 could add an additional
$700B
in GDP growth
in these countries over 5 years

Source: GSMA 2019. Data is the result of primary research and modelling

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 94 per cent across the sample countries).

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.[9] 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.

9. 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."

3. Sizing the mobile gender gap

Mobile access and use has grown dramatically in LMICs in recent years, but not equally. A gender gap in both mobile ownership and mobile internet use persists across these markets, and is significantly wider in certain regions, particularly South Asia and Sub-Saharan Africa. The mobile gender gap can vary significantly even within regions and countries, so it is important for stakeholders to understand it within a local context before taking action to address it.

The gender gap in mobile ownership

More women own mobiles, but there is still a 10 per cent gender gap

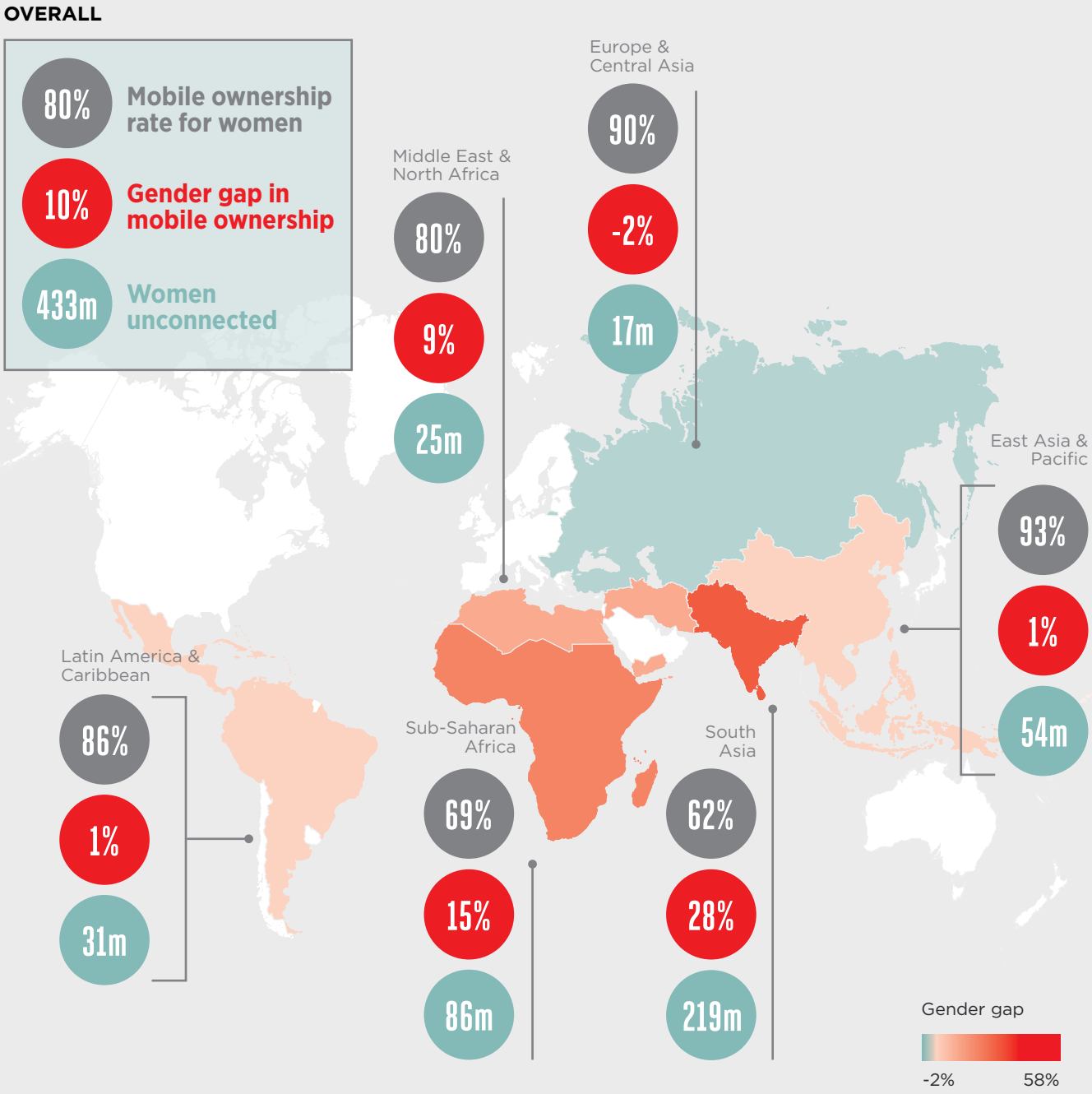
With over 250 million more women now owning a mobile phone in LMICs than in 2014, 80 per cent of women in these markets are now mobile owners. Ownership rates vary between regions, however, with just 62 per cent of women in South Asia owning a mobile (see Figure 1). Across LMICs, women are still 10 per cent less likely than men to own a mobile phone. This means that despite ongoing efforts and interventions by the mobile industry and other stakeholders, which have contributed to significantly increased mobile phone ownership for women,[10] the mobile gender gap persists. Reaching the 433 million women in LMICs who are still unconnected will require concerted stakeholder effort and coordination.

10. 44 million additional women became mobile owners in LMICs between 2017 and 2018, with female unique subscriber penetration increasing from 79 per cent to 80 per cent.

Figure 1

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

Base: Total adult population



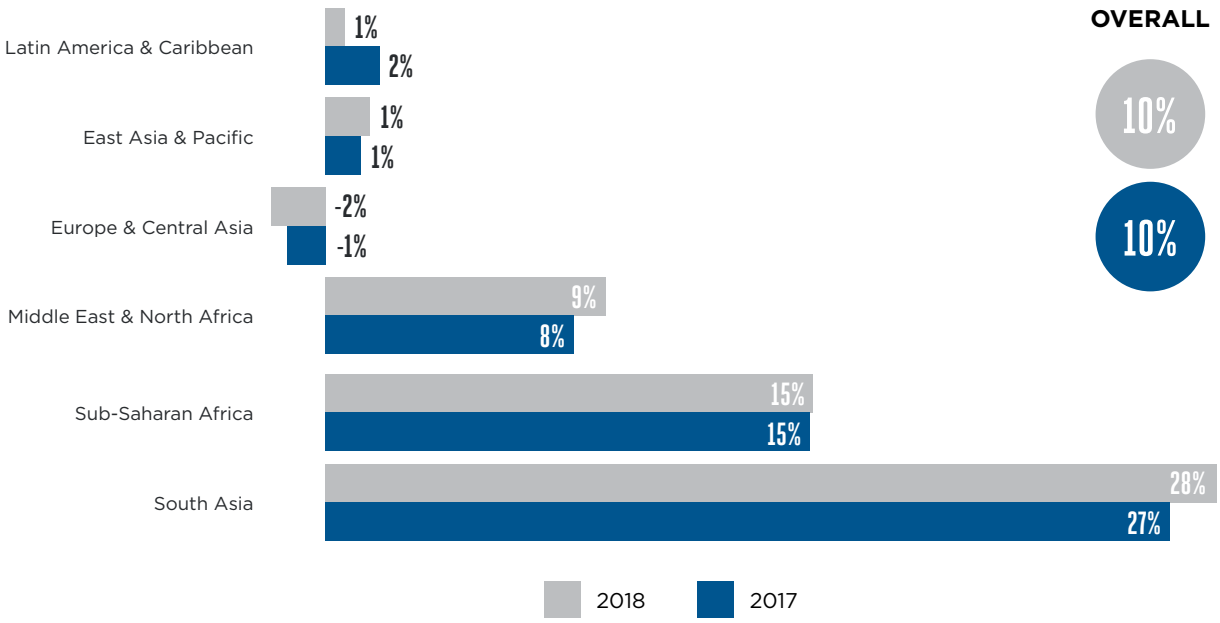
Source: GSMA Intelligence, 2018
The gender gap refers to how much less likely a woman is to own a mobile than a man.
Mobile ownership is defined as having sole or main use of a SIM card (or a mobile phone that does not require a SIM), and using it at least once a month.
Based on survey results and modelled data for adults aged 18+.

Between 2017 and 2018, the overall gender gap in mobile ownership in LMICs remained static, with only minimal changes on a regional level (see Figure 2). While it may not be possible to detect meaningful change over just one year, a review of a range of third-party longitudinal gender-disaggregated datasets on mobile ownership also found little evidence that the gender gap in mobile ownership is shrinking, at either a country or regional level.[11] A variety of sources also showed considerable variation and volatility in country-level mobile gender gaps year on year. Overall, there is little evidence that the mobile ownership gender gap has narrowed significantly in LMICs over the last five years.

Figure 2

Gender gap in mobile ownership by region, 2017 versus 2018

Base: Total population in low- and middle-income countries



Source: GSMA Intelligence, 2018
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.
Regional averages were calculated from country-level data.
Based on survey results and modelled data for adults aged 18+.

11. Data sets reviewed to determine this included After Access, Financial Inclusion Insights (FII) by Intermedia, Gallup World Poll and Pew Global Attitudes and Trends. For more details on the approach we used for this review, see Appendix 1.

Beyond ownership: the mobile internet gender gap

The gender gap in mobile internet use is wider than the ownership gap in all regions

The mobile gender gap extends beyond just ownership. Even among mobile owners, there is a gender gap in the use of mobile services, which widens further for mobile internet-based services (explored further in Section 5).

Access to mobile internet has been growing, with a billion new mobile internet subscribers in LMICs since 2014. However, mobile internet penetration is still much lower than mobile ownership. For instance, 80 per cent of women in LMICs own a mobile phone, compared to 48 per cent who use mobile internet. Also, despite growing uptake of mobile internet in LMICs, women in these markets are 23 per cent less likely than men to use it. This means that across LMICs, 313 million fewer women than men use mobile internet, representing a total of 1.1 billion women who still do not have access to mobile internet (see Figure 3).

The mobile internet gender gap remains high – but appears to have reduced as uptake has grown

Mobile internet is still a relatively new service in comparison to basic voice and SMS, and levels of uptake remain lower and more concentrated in wealthier urban areas. Early adopters of the service have so far been disproportionately male, which has created a substantial gender gap.

However, there is evidence that this gap has reduced. While women are still 23 per cent less likely than men to use mobile internet in LMICs, this represents a reduction in the gender gap from 26 per cent in 2017.[12] This has been driven in large part by a closure in the mobile internet gender gap in India where changing market dynamics have made mobile internet more affordable. The GSMA's Mobile Connectivity Index, which tracks countries' progress on key enablers of mobile internet access and use, shows a 26 percentage point increase in the affordability of mobile internet in India between 2014 and 2017 — the largest increase in any country in this period.[13] This has likely contributed to the reduction in the gender gap in India over the last year. However, without more longitudinal comparative data, it is difficult to say whether this reduction in the mobile internet gender gap will continue on the country or regional level.

Low- and middle-income countries rely on mobile to access the internet

In 18 LMICs where we conducted face-to-face surveys, an average of 57 per cent of respondents who had used the internet in the last three months accessed it exclusively on a mobile phone. For female respondents who had used internet in the last three months, this rose to an average of 61 per cent, with a greater proportion of women relying on mobile to access the internet in almost every country surveyed.[14] This reliance on mobile for internet access demonstrates the importance of addressing the mobile internet gender gap.

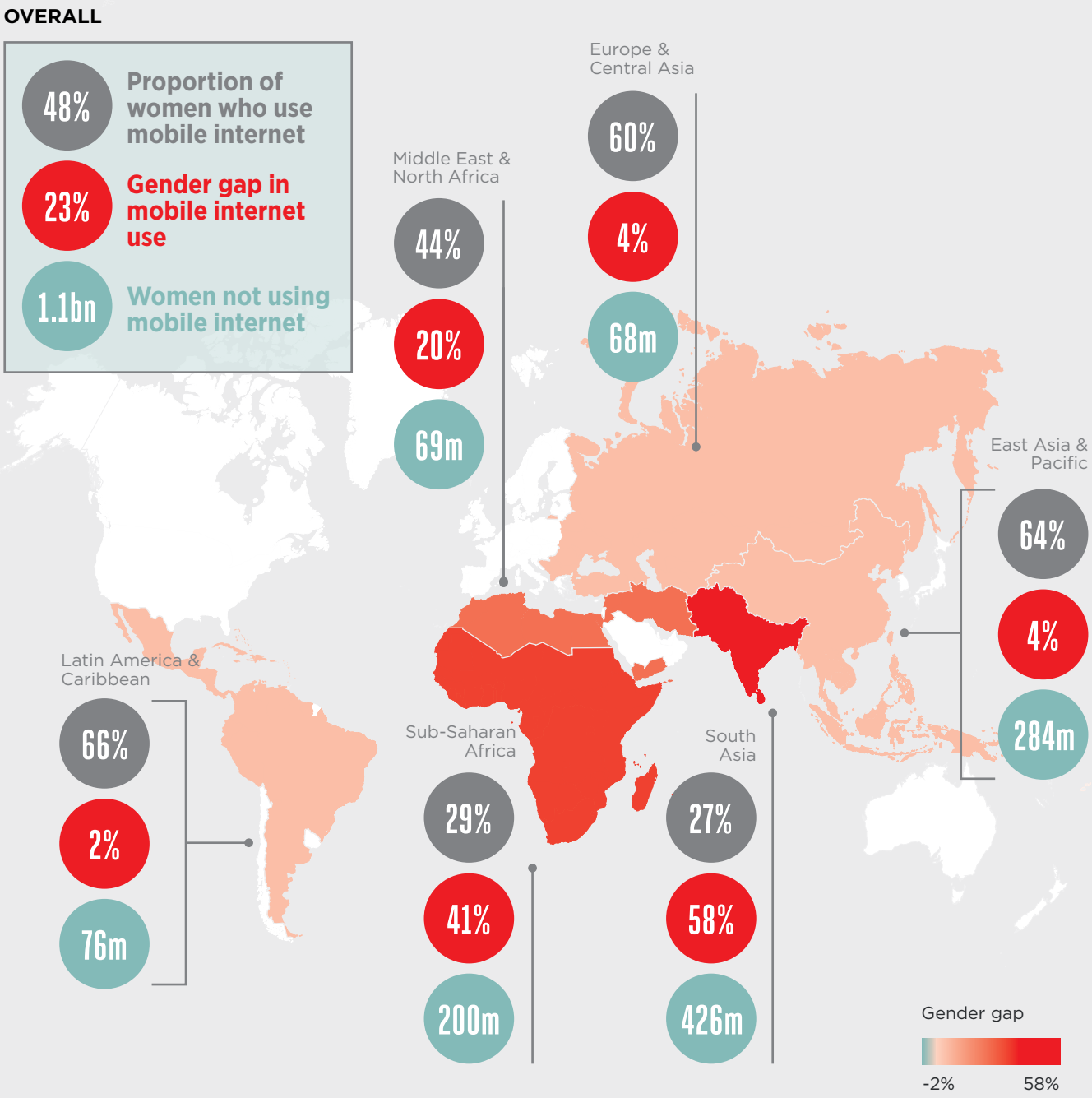
This mobile-led approach to internet access is much more prevalent in countries with lower levels of overall internet penetration. For example, 89 per cent of those who access the internet on a monthly basis in Bangladesh do so only on a mobile phone, compared to 30 per cent in Argentina where internet penetration is higher. Mobile is therefore playing an important role in increasing internet access in the least-developed digital economies.

12. GSMA (2018), The Mobile Gender Gap Report 2018.
13. https://www.mobileconnectivityindex.com; GSMA, 2018, "State of Mobile Internet Connectivity 2018"
14. Respondents were asked, "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" and "Thinking about devices other than a mobile phone, have you ever used the internet on a computer, laptop or tablet?" Responses were compared to determine the range of devices used to access the internet and whether they had used the internet on a mobile phone. The exceptions were Algeria and India. For the latter, 68 per cent of male monthly internet users exclusively accessed it through mobile, compared to 61 per cent of female users.

Figure 3

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

Base: Total adult population



Source: GSMA Intelligence, 2018
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+.

Country-level gender gaps are widest where mobile penetration is lowest

South Asia and Sub-Saharan Africa have the widest gender gaps in mobile ownership and mobile internet use

In LMICs, rates of mobile ownership and mobile internet use are highest in Latin America and more developed Asian markets such as China, while countries in Sub-Saharan Africa and South Asia have the lowest levels of mobile ownership and particularly low levels of mobile internet use.

Gender gaps in mobile ownership and mobile internet use also tend to be wider where mobile penetration is lower, such as in Sub-Saharan African and South Asia. For example, Mozambique has the lowest level of mobile penetration of all markets surveyed at 52 per cent overall, and the third largest mobile ownership gender gap at 24 per cent.[15] This also holds true for rural and urban areas (see Figure 4). Rural areas tend to have lower mobile penetration than urban areas and, as previous GSMA research has found, the rural gender gap is also wider in almost every country surveyed.[16]

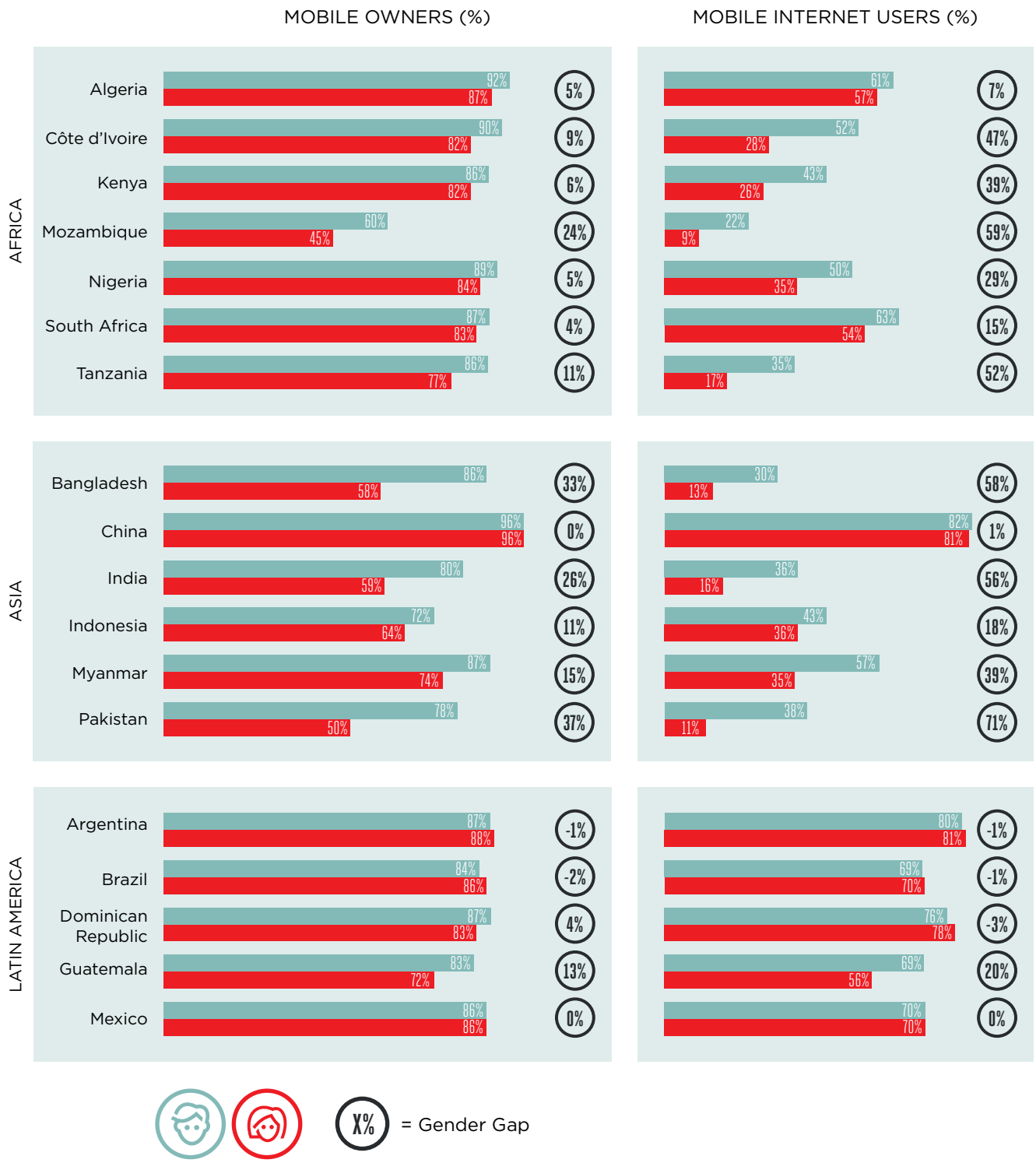
This also extends to differences between mobile ownership and mobile internet use. In most countries, mobile internet use is significantly lower than the rate of mobile ownership, and the mobile internet gender gap is substantially wider. The exceptions are countries where penetration is highest — i.e. in Latin America and China where gender gaps for both ownership and mobile internet use are either negligible or inverse.[17] However, it is important to look beyond just mobile ownership to the level of usage, as gender gaps emerge even in these more developed markets. This will be discussed further in Section 5.

15. Pakistan was found to have the widest mobile ownership gender gap, with women 37 per cent less likely than men to own a mobile phone, and Bangladesh the second widest at 33 per cent.
16. See GSMA (2015), "Bridging the gender gap: Mobile access and usage in low- and middle-income countries", and GSMA 2018, "The Mobile Gender Gap Report 2018"
17. An inverse gender gap implies that ownership or usage is higher among women than among men.

Figure 4

Mobile and mobile internet penetration

% of total adult population, by country and gender



Source: GSMA Intelligence Consumer Survey, 2018
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.
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. 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 508 to 1,118 for women and n= from 438 to 1,228 for men

The mobile gender gap is widest in lower-income countries

The mobile ownership gender gap is strongly correlated with GDP per capita, with the widest gender gaps typically in countries with the lowest income levels (see Figure 5). However, the gap is disproportionately wide in South Asia relative to GDP in these markets, most likely because of the social norms restricting women's mobile ownership.

This supports findings from earlier research on the mobile gender gap, including by After Access,[18] which found that the mobile gender gap broadly aligns with gross national income (GNI) per capita.

Figure 5

GDP per capita versus gender gap in mobile ownership

Base for mobile ownership: Total adult female population

Source: GSMA Intelligence, 2018 and The World Bank Data: World Development Indicators
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+.

18. After Access (2018), "Understanding the gender gap in the Global South"

4. The challenge of connecting the unconnected

Slowing mobile subscriber growth puts women's digital inclusion at risk

Mobile penetration levels have now surpassed two-thirds of the global population, but as previous GSMA research has found,[19] mobile subscriber growth has slowed worldwide. This slowdown is an important reason why the mobile gender gap is not closing.

Since women make up a disproportionate share of the remaining unconnected population, without continued mobile subscriber growth, the gender gap in mobile ownership in LMICs will not be closed.

The demographics of the unconnected

The remaining unconnected population in LMICs consists predominantly of demographic groups that face structural inequalities that make adopting and using mobile technology a particular challenge. The unconnected are significantly more likely than mobile owners to be:

- Rural;
- Unemployed;
- Illiterate or semi-literate; and
- Over the age of 45 (see Figure 6).

Women make up the majority of the unconnected

The unconnected are also disproportionately likely to be female, with women making up 60 per cent of the unconnected population in LMICs. Most non-mobile owners are women for two main reasons:

1. Women make up the majority of the demographic groups listed above, and barriers to mobile ownership for women are amplified by the following factors:

    - They are less likely than men to be in paid employment, which limits their financial autonomy;[20]
    - When they are employed, they earn less than men on average;[21] and
    - They are less likely to be well educated, which translates into lower literacy levels.

2. In many countries, prohibitive social norms can have an impact on women's mobile ownership, for example:

    - Making mobile ownership appear inappropriate for women; or
    - Limiting women's ability to visit retailers to top up their mobile phones.

These restrictive social norms are particularly prevalent in countries where the gender gap is widest, such as in South Asia.[22]

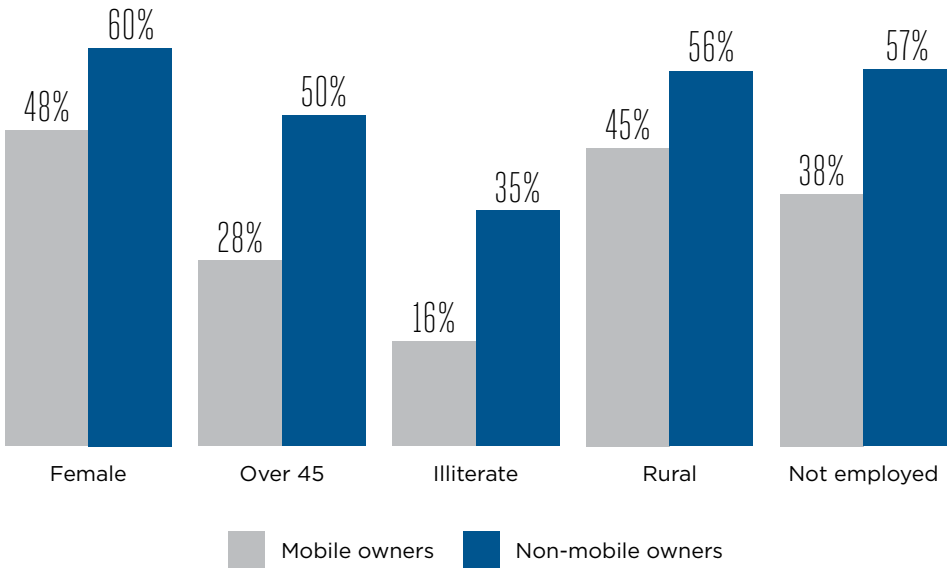
Unless stakeholder actions are grounded in a firm understanding of the barriers women face to owning a mobile, as well as the demographic and cultural factors amplifying these barriers, the mobile gender gap is likely to persist.

19. GSMA (2018), "Unique subscribers and mobile internet users: Understanding the new growth story"
20. GSMA Intelligence Consumer Survey, 2018
21. United Nations Population Fund (2018), "State of the World Population 2018"
22. For a discussion of the effect of social norms in India on women's mobile ownership and use, see Harvard Kennedy School (2018), "A Tough Call: Understanding barriers to the impacts of women's mobile phone adoption in India"

Figure 6

Percentage of mobile owners and non-owners by demographic trait

Base: Mobile owners and non-owners, average across 18 surveyed markets



Source: GSMA Intelligence Consumer Survey, 2018
Base: Mobile owners aged 18+ and non-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.
Data has been averaged across the 18 countries surveyed.

Key barriers to mobile ownership and mobile internet use

Barriers must be understood and addressed to close the mobile gender gap

Understanding what prevents people from owning mobile phones and using mobile internet is crucial to creating strategies to stimulate adoption and use. Respondents in 18 LMICs were asked to identify what barriers were preventing them either from owning a mobile phone or from using the internet on a mobile phone. Strongly related or thematically overlapping barriers were grouped into broader composites, which are discussed throughout this section.[23]

Respondents selected barriers from a pre-defined list during a face-to-face quantitative survey. These 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.

Three sets of questions relating to barriers were asked:

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 that it can be used on a mobile phone.[24]

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 had never used it.

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. This section considers all these levels of responses then looks more closely at the top barrier.

While several of the same barriers to mobile ownership and mobile internet use were identified as the most important in almost all markets (see Figure 7), there are significant country and regional differences. It is therefore essential to consider the local context when identifying the most important barriers to address on a country level. Even within markets, women are not a homogenous group, so no single action can completely address the barriers they face to mobile ownership and use.

23. The composite was calculated on the respondent level: any respondent who reported any barrier within the category as the main barrier was included in that group. The composite value is not an average of the values of all the individual barriers included in the category. See Appendix 2 for the full set of barriers included within each composite, and the complete results by individual barrier.
24. The proportion of adults that are considered aware of mobile internet is calculated by summing those who report ever having used mobile internet, and those who report not having used it, but being aware of the internet and that it can be used on a mobile phone (i.e. it is assumed that those who have used mobile internet are aware of it).

Figure 7

Top overall barriers in low- and middle-income countries surveyed

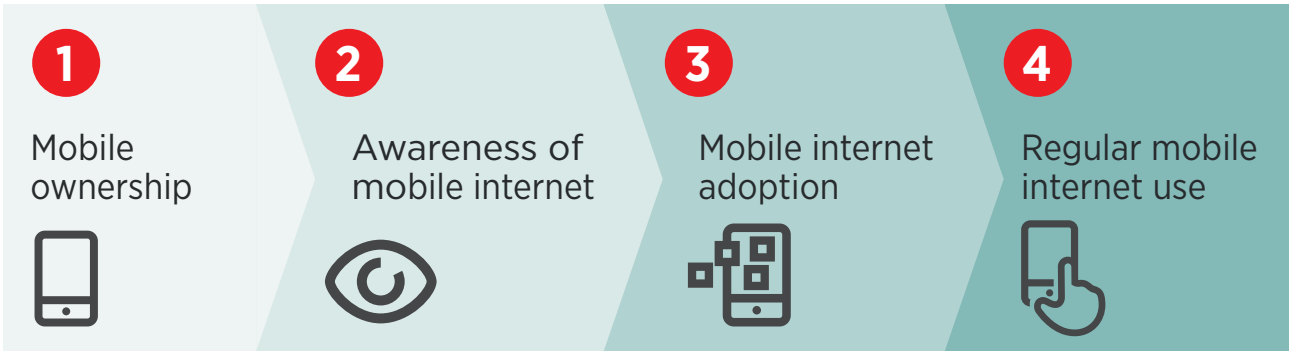
Mobile phone ownership	Mobile internet use among those aware of the internet
1. Affordability	1. Literacy and skills
2. Literacy and skills	2. Affordability
3. Safety and security	3. Relevance
4. Relevance	4. Safety and security

Source: GSMA Intelligence Consumer Survey, 2018

To take targeted action to address the mobile gender gap, it helps to understand how different barriers impact men and women at different stages in the customer journey to mobile internet use (see the high-level framework in Figure 8). At each stage, from mobile ownership to mobile internet awareness, adoption and regular use, the most important barriers to progression vary. For instance, mobile phone ownership is typically a prerequisite to mobile internet adoption, so the distinct barriers to mobile ownership must be addressed to achieve gender equality in mobile internet uptake.[25]

Figure 8

High-level user journey to mobile internet adoption



25. While it is possible to be a mobile internet user without personally owning a mobile phone (e.g. by borrowing one), across all countries surveyed, on average 98 per cent of mobile internet users personally own a mobile phone. Mobile internet use for non-mobile owners is most common in India, where 94 per cent of mobile internet users personally own a mobile phone.

Barriers to owning a mobile phone

Affordability is the top barrier to mobile ownership across most markets, although literacy and digital skills are most important in Asia (See Figure 9).

Figure 9

Top barriers to mobile ownership for men and women in surveyed low- and middle-income countries, by region

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

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

Source: GSMA Intelligence Consumer Survey, 2018
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 18 countries surveyed.

Affordability is the top barrier preventing mobile ownership for both men and women across almost all markets surveyed (see Figure 9). The main issue is the price of handsets which, despite coming down, can still be prohibitively expensive for the remaining unconnected population, even for low-cost devices.[26]

Literacy and digital skills are the second most important barrier to mobile ownership across the countries surveyed. Both factors are important considerations in most markets. The remaining unconnected population is disproportionately illiterate or has low levels of literacy, so ensuring that handsets are usable and accessible for less literate users is important. Previous GSMA research has found that women are often less confident in independently acquiring the digital skills required to use a mobile phone, and are more concerned with the consequences of making mistakes.[27] Literacy and digital skills were the most important barrier across Asia where they affect women in particular.

Safety and security concerns are the third most important barrier overall. Safety and security considerations are most significant in Latin America and respondents from that region ranked them the second most important barrier after affordability (see Figure 9). They are also important issues in several Asian and African markets, with 21 per cent of female non-mobile owners in South Africa reporting a safety or security-related barrier as the main factor preventing them from owning a mobile phone.[28]

Relevance is the fourth most important barrier to mobile ownership across LMICs. The perception that mobile would not be relevant or helpful in one's life can prevent non-owners from seeing the value for money in buying a mobile, even if they can afford one.

Accessibility-related barriers, such as mobile coverage, access to phone charging and family approval, are too disparate to accurately group into one category. While accessibility-related barriers were rarely identified as the top barriers to mobile ownership for either men or women, they emerged as important factors in some markets. For example, lack of family approval of mobile ownership is not a top barrier in most countries, but in markets where it is relevant, it tends to disproportionately or exclusively affect women. Thirty-one per cent of women who do not own a mobile phone in Pakistan report that disapproval from their family is the top barrier to owning a mobile phone. Only four per cent of men in Pakistan reported this as a barrier at all, and no men reported it as their top barrier to mobile ownership.

Taking action to address these barriers will disproportionately benefit women

While the top barriers to mobile ownership are similar for men and women, it should be noted that women account for 60 per cent of the unconnected adult population. Therefore, actions that successfully address the top barriers felt by both men and women will typically benefit a disproportionate number of women.

Figure 10 shows the top barriers to mobile ownership across all countries surveyed. Composite groups have been created for affordability, literacy and skills, relevance, and safety and security by grouping related barriers. The full list of disaggregated barriers for men and women can be found in Appendix 2.

26. 2017 research by the GSMA in Tanzania found that even the cheapest internet-enabled handset available represented at least five per cent of annual income for over three-quarters of the population, and on average the cost of a smartphone would represent 16 per cent of annual income. GSMA, 2017, "Accelerating Affordable Smartphone Ownership in Emerging Markets"
27. GSMA, 2015, "Accelerating Digital Literacy: Empowering women to use the mobile internet"
28. GSMA, 2018, "A framework to understand women's mobile-related safety concerns in low-and middle-income countries"

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Figure 10

Barriers to owning a mobile phone

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

	Barriers to mobile ownership	AFFORDABILITY		LITERACY AND SKILLS		RELEVANCE		SAFETY AND SECURITY		ACCESSIBILITY									
										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
AFRICA	Algeria	26%	14%	42%	56%	18%	3%	1%	10%	0%	4%	9%	2%	4%	9%	0%	0%	0%	3%
	Côte d'Ivoire	35%	31%	16%	29%	5%	4%	22%	16%	4%	0%	14%	10%	0%	8%	0%	0%	5%	3%
	Kenya	56%	45%	23%	31%	4%	3%	8%	12%	0%	1%	2%	3%	8%	2%	0%	0%	0%	3%
	Mozambique	33%	37%	21%	31%	0%	2%	9%	7%	7%	9%	14%	6%	2%	3%	6%	4%	6%	2%
	Nigeria	48%	48%	17%	34%	17%	5%	4%	2%	0%	0%	12%	6%	2%	3%	0%	2%	0%	0%
	South Africa	54%	40%	18%	18%	8%	2%	15%	21%	3%	2%	0%	9%	0%	4%	0%	4%	3%	2%
	Tanzania	60%	65%	20%	20%	9%	6%	4%	4%	0%	0%	3%	1%	3%	3%	0%	0%	0%	1%
ASIA	Bangladesh	23%	20%	39%	30%	16%	23%	0%	3%	0%	1%	2%	2%	14%	20%	2%	0%	4%	2%
	India	30%	24%	26%	35%	8%	11%	23%	12%	2%	4%	6%	3%	1%	5%	2%	2%	1%	2%
	Indonesia	37%	28%	24%	36%	11%	12%	16%	10%	2%	0%	8%	9%	0%	4%	2%	0%	0%	1%
	Myanmar	26%	25%	33%	37%	31%	28%	7%	5%	0%	0%	0%	1%	2%	3%	0%	0%	1%	1%
	Pakistan	27%	15%	46%	37%	1%	10%	8%	3%	3%	1%	9%	3%	0%	31%	3%	1%	2%	0%
LATIN AMERICA	Argentina	39%	37%	16%	18%	25%	24%	17%	16%	0%	0%	0%	5%	2%	0%	0%	0%	0%	0%
	Brazil	30%	45%	23%	16%	16%	10%	21%	25%	0%	0%	3%	2%	0%	0%	1%	2%	2%	0%
	Dominican Republic	55%	45%	16%	17%	5%	11%	19%	17%	2%	0%	2%	5%	0%	4%	0%	0%	0%	0%
	Guatemala	28%	30%	23%	23%	8%	3%	33%	33%	0%	1%	3%	2%	2%	2%	2%	2%	0%	1%
	Mexico	23%	26%	11%	19%	16%	14%	40%	32%	2%	2%	4%	3%	0%	0%	2%	5%	2%	0%

M Men W Women

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

Source: GSMA Intelligence Consumer Survey, 2018
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?"
Where applicable, related barriers were combined to create composite barriers. These were calculated from response-level data to ensure that respondents were not double counted within the composites.
China has been excluded as the number of respondents was not statistically significant.
n= from 49 to 313 for women, and n= from 33 to 171 for men

Low awareness limits women's mobile internet use

In LMICs, women are significantly less likely to be aware of mobile internet than men, both the internet itself and the fact that it can be used on a mobile phone (see Figure 11). This was true for all markets surveyed except China and Brazil, and it disproportionately prevents women in all LMICs from progressing along the mobile internet user journey.

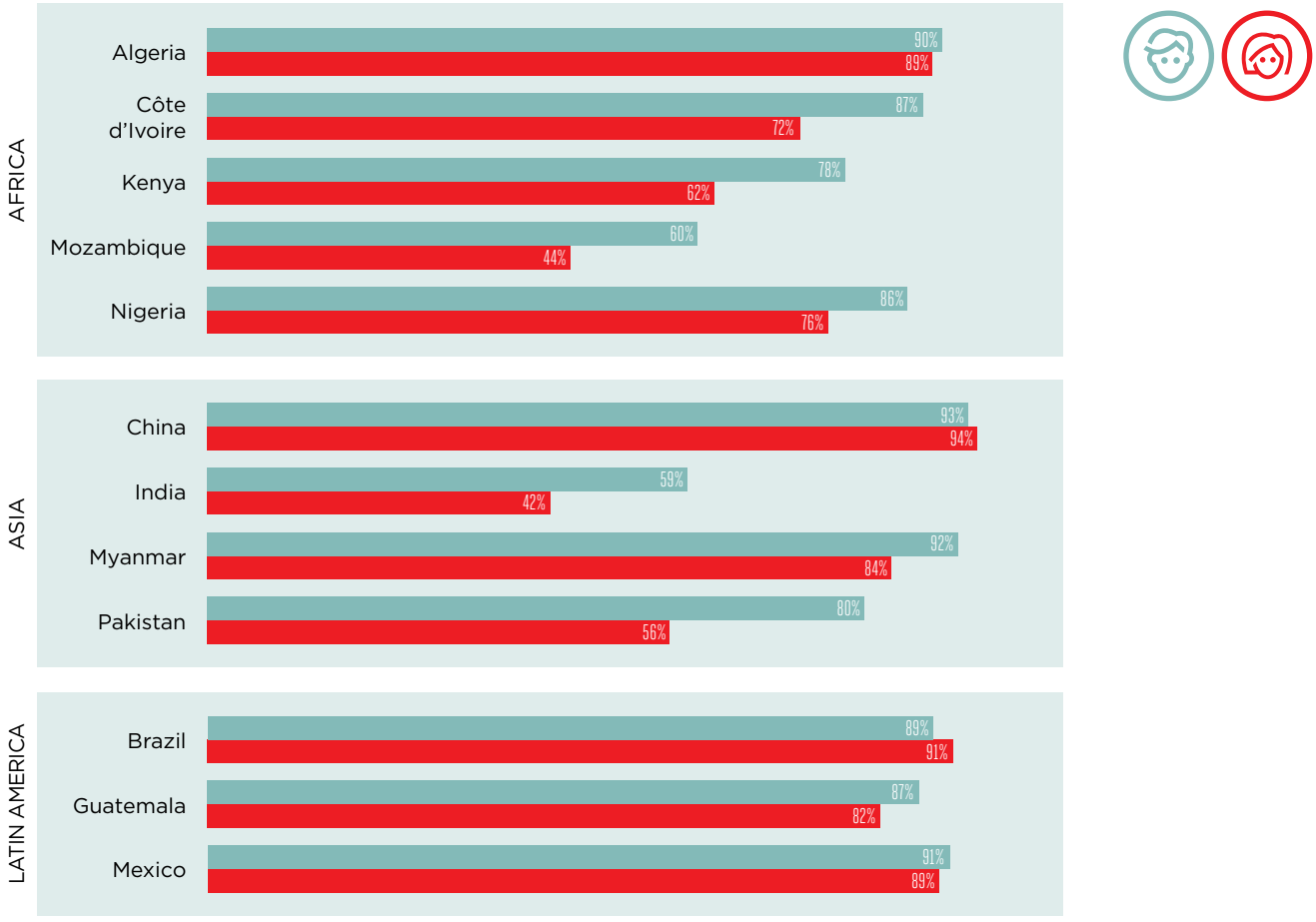
The mobile internet awareness gap is widest in markets that also have a substantial mobile internet gender gap, particularly in South Asia. Encouragingly, mobile internet awareness appears to have grown year on year in all countries, even those with the lowest levels of mobile internet use. For example, while only 19 per cent of women in India were aware of mobile internet in 2018, this increased to 42 per cent in 2019.

Respondents were considered to be aware of mobile internet if they reported having used it in the past, or were aware of the internet and that it could be used on a mobile phone.

Figure 11

Awareness of mobile internet among women and men

Percentage of total population



Source: GSMA Intelligence Consumer Survey, 2018
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 = 508 to 1,118 for women and n = 487 to 1,228 for men

Barriers preventing mobile owners from using mobile internet

Low literacy and lack of digital skills are the top barrier to mobile internet use

For mobile users who are aware of mobile internet but do not use it, the top barriers to use were similar to the barriers to mobile ownership, but with some important differences (see Figure 12).

Figure 12

The top barriers to mobile internet use for men and women in surveyed low- and middle-income countries, by region

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	Literacy and skills	Literacy and skills	Literacy and skills	Safety and security	Literacy and skills
2	Affordability	Affordability	Affordability	Affordability	Relevance	Affordability	Literacy and skills	Affordability
3	Relevance	Relevance	Relevance	Relevance	Affordability	Relevance	Affordability	Safety and security
4	Safety and security	Safety and security	Safety and security	Safety and security	Safety and security	Safety and security	Relevance	Relevance

Source: GSMA Intelligence Consumer Survey, 2018
Base: Adults aged 18+ who have used a mobile phone in the last three months but have never used mobile internet, 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 18 countries surveyed.

Literacy and digital skills were identified as the greatest barrier to mobile internet use overall for men and women across the countries surveyed. A combination of low literacy levels, lack of digital literacy and lack of time and support to learn how to use mobile internet aggregated to be among the top barriers in almost every country surveyed.[29] This is consistent with findings from the International Telecommunication Union (ITU), which identified consistently lower levels of digital skills among women across a sample of developed and developing markets, and that women's lower digital skills correlated with gender inequalities overall.[30]

Affordability was the second greatest barrier to mobile internet use for both men and women. The cost of internet-enabled handsets was the most significant consideration in almost all cases,[31] and in many markets the most significant individual barrier overall. However, data costs are also a top consideration in several countries, and many respondents cited this as a secondary barrier to using mobile internet.[32]

The perceived **relevance** of mobile internet emerged as an important barrier in many markets, although there was considerable variation in terms of how significant respondents thought it was. Overall it was identified as a much greater barrier to mobile internet use than to mobile ownership. Relevance was a particularly important barrier to mobile internet use for women in several markets in Asia: in Bangladesh, 37 per cent of female non-mobile internet users stated that a perception that internet was not relevant to them was the main factor preventing them from using it.[33]

Safety and security concerns are typically a more significant barrier to mobile internet use in Latin America, where it is the top barrier for women but only the third most important for men. 22 per cent of women in Guatemala stated that concerns about being exposed to harmful content on the internet were the main barrier to using it.

Of the **accessibility-related barriers**, network coverage and quality were significant considerations preventing mobile internet use in many countries. In Indonesia, 12 per cent of men and women who do not use mobile internet both cited it as the main barrier (see Figure 13).

Family disapproval was rarely cited as the primary barrier for mobile internet use, but where it was – in particular in Pakistan, Bangladesh and Nigeria — it was almost exclusively an issue for women.

29. It should be noted that while literacy and skills-related barriers combined to create the most important barrier to mobile internet use, the individual constituent barriers were not top in most markets. See Appendix 2 for a complete list of individual barriers by country.
30. ITU (2018), "Measuring the Information Society Report"
31. For further discussion of handset affordability, see GSMA (2017), "Accelerating affordable smartphone ownership in emerging markets"
32. For further discussion of internet affordability, see the "Alliance for Affordable Internet's 2018 Affordability Report"
33. See GSMA, 2017, "Triggering mobile internet use among men and women in South Asia"

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Figure 13

Barriers to mobile internet use

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

		AFFORDABILITY		LITERACY AND SKILLS		RELEVANCE		SAFETY AND SECURITY		ACCESSIBILITY									
										NETWORK		INTERNET DRAINS MY BATTERY		FAMILY DOES NOT APPROVE		ACCESS TO AGENT SUPPORT		NO ACCESS TO INTERNET ENABLED PHONE	
		M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W
AFRICA	Algeria	14%	15%	41%	41%	26%	19%	2%	10%	8%	3%	1%	1%	5%	10%	0%	1%	1%	0%
	Côte d'Ivoire	14%	13%	58%	61%	11%	12%	4%	5%	7%	4%	3%	1%	2%	3%	1%	0%	1%	2%
	Kenya	41%	46%	28%	24%	12%	14%	8%	8%	6%	5%	4%	1%	1%	1%	1%	0%	0%	1%
	Mozambique	14%	12%	45%	33%	6%	10%	11%	12%	6%	9%	6%	7%	2%	4%	4%	5%	4%	8%
	Nigeria	37%	34%	36%	20%	6%	22%	10%	6%	7%	1%	2%	2%	0%	13%	0%	0%	1%	2%
	South Africa	33%	51%	22%	16%	16%	9%	16%	11%	6%	1%	0%	1%	0%	1%	4%	5%	1%	4%
	Tanzania	43%	48%	26%	27%	12%	13%	4%	2%	12%	7%	1%	1%	1%	2%	0%	0%	2%	0%
ASIA	Bangladesh	13%	8%	40%	27%	32%	40%	4%	5%	4%	5%	2%	1%	2%	11%	1%	1%	1%	2%
	China	12%	10%	49%	59%	16%	14%	17%	10%	3%	1%	2%	3%	1%	2%	0%	0%	0%	1%
	India	21%	20%	31%	36%	13%	16%	14%	5%	10%	9%	3%	4%	3%	1%	2%	4%	2%	4%
	Indonesia	46%	39%	17%	25%	10%	13%	10%	7%	12%	12%	0%	3%	4%	0%	0%	0%	2%	0%
	Myanmar	14%	9%	29%	32%	32%	42%	16%	10%	5%	2%	1%	1%	2%	4%	0%	0%	0%	1%
	Pakistan	16%	13%	49%	40%	18%	17%	7%	5%	6%	6%	1%	0%	0%	19%	1%	1%	2%	0%
LATIN AMERICA	Argentina	29%	32%	31%	20%	21%	25%	15%	17%	0%	2%	0%	0%	0%	0%	0%	0%	4%	2%
	Brazil	21%	12%	23%	48%	14%	10%	29%	17%	4%	4%	0%	4%	2%	0%	0%	0%	0%	2%
	Dominican Republic	39%	35%	27%	20%	13%	7%	15%	32%	5%	4%	0%	0%	0%	0%	0%	0%	1%	0%
	Guatemala	16%	18%	29%	19%	8%	3%	30%	48%	2%	6%	2%	3%	4%	1%	5%	0%	4%	0%
	Mexico	28%	18%	24%	32%	10%	6%	26%	28%	2%	7%	6%	0%	1%	2%	0%	2%	3%	5%

M Men

W Women

Lowest barrier cited in that country

Highest barrier cited in that country

Source: GSMA Intelligence Consumer Survey, 2018
Base: Adults aged 18+ who have used a mobile phone in the last three months but have never used mobile internet, 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?"
Where applicable, related barriers were combined to create composite barriers. These were calculated from response-level data to ensure that respondents were not double counted within the composites.
n= from 47 to 188 for women and n= from 40 to 168 for men

5. Beyond access: The gender gap in mobile usage and spending

This research found that the mobile usage gender gap extends to a range of use cases and is typically wider for internet-based ones. Even among those who own mobile phones and are using mobile internet, women tend to regularly employ a less diverse range of usage types, potentially limiting the impact that mobile can have in their lives.

This also manifests in a gender gap in mobile spending in LMICs, where women mobile owners spend on average 17 per cent less on using their mobile than men. Much of this difference is explained by lower levels of uptake of mobile internet, but it is also apparent that female mobile owners are not using their mobile phones for as wide a variety of uses as men. Equalising mobile usage is therefore an opportunity to both increase the benefits of mobile ownership for women and for operators to drive further ARPU growth.

Women's mobile usage is less diverse than men's

Ownership of a mobile phone, particularly a smartphone, has the potential to enable access to a wide range of use cases, products and services, particularly through use of the internet. The GSMA Consumer Survey 2018 asked respondents to report on their usage of 28 services commonly accessed through mobile, including core mobile services such as voice calling and SMS, and internet-based services such as downloading apps, some of which require higher levels of digital skills and incur higher data costs. Also included was a range of practical and life-enhancing use cases, such as accessing government or educational services on a mobile phone.[34]

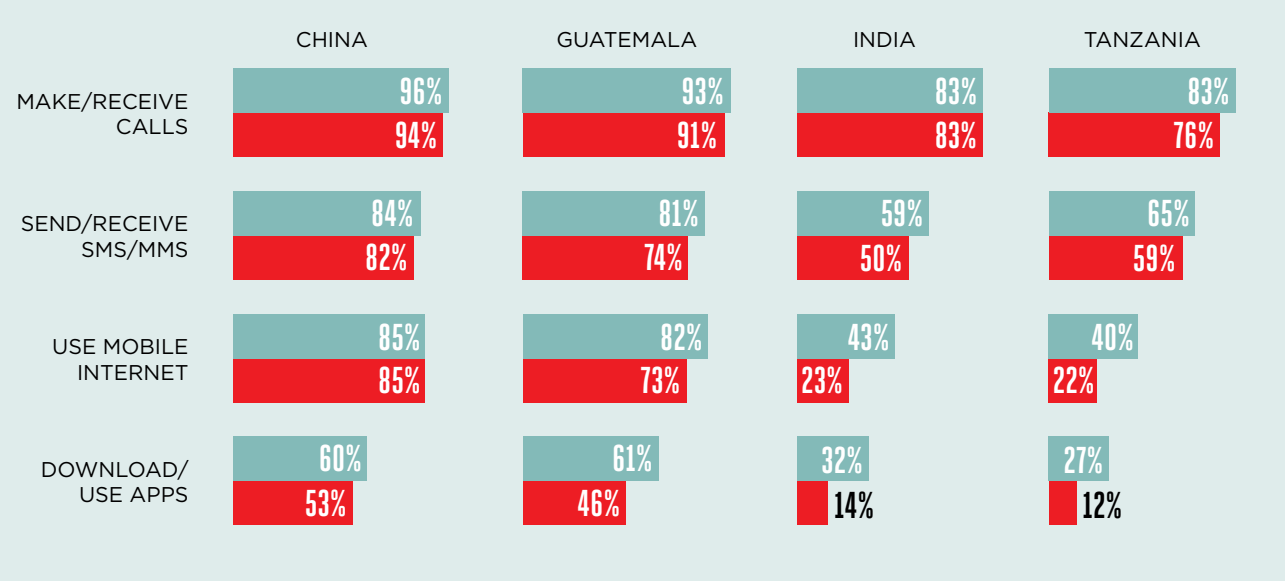
In terms of basic mobile services, there tends to be relative parity between men and women in their overall use of voice calls in most countries, although the gender gap widens somewhat for SMS use. For instance, in India, a similar proportion of male and female mobile phone owners regularly make or receive phone calls, but just 50 per cent of women use SMS at least once a month compared to 59 per cent of men. This could be due to women's lower literacy levels, given the greater difficulty of using SMS with low levels of literacy. For mobile internet use, and many specific internet-based mobile use cases such as downloading apps, the gender gap typically widens further. See Figure 14 for examples from countries in each region where the usage gap is particularly wide.

34. The usage cases identified in the survey are as follows: Network calls/IP calls/SMS & MMS/Video calling/Email/Instant messaging apps/Visiting social networking sites/Browsing the internet/Using maps, timetables, traffic information applications/Finding information about goods and services/Ordering & purchasing goods/Reading the news/Booking transport/Playing games/Downloading apps/Watching free to access online video/Paying for on-demand TV and movies/Listening to free online music/Paying to download or stream music online/Transferring money via online banking/Using mobile money to send or receive money/Paying for goods using contactless payment/Paying utility bills/Accessing services that improve or monitor health/Access government services/Looking or applying for jobs/Accessing information to support education/Accessing information on farming or fishery services

Figure 14

Services used by mobile owners in selected countries

Percentage of mobile owners who:



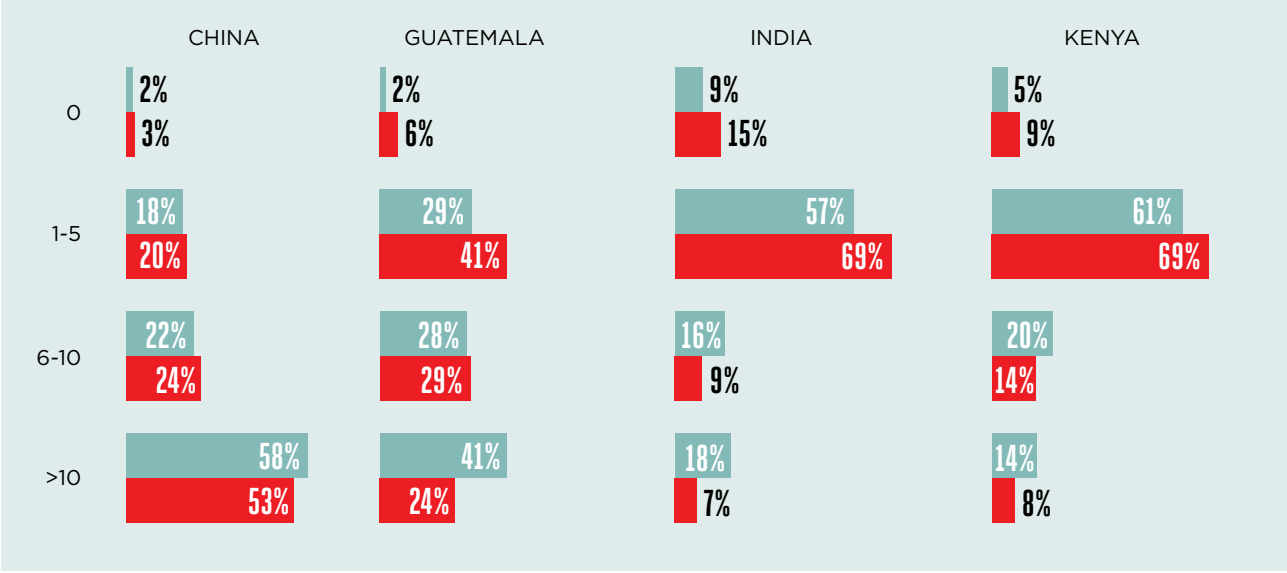
Source: GSMA Intelligence Consumer Survey, 2018
Base: Mobile owners aged 18+
A mobile owner is defined as a person who has sole or main use of a SIM card (or a mobile phone that does not require a SIM), and uses it at least once a month.
Use of SMS, making/receiving calls and downloading/using apps = "at least once a month"; mobile internet use = "at least once in the past three months"
n = 367 to 956 for women and n = 381 to 1,000 for men

If mobile owners are categorised into four groups based on how many types of mobile-based services they use at least once a week, in most countries surveyed, women are substantially more likely than men to fall into the categories with a small range of usage types. For example, in India, 69 per cent of female mobile owners use between one and five types of mobile-based services a week compared to 57 per cent of men, while 18 per cent of male mobile owners use over 10 types of mobile-based services a week versus only seven per cent of women. See Figure 15 for examples from each region of countries where this is particularly evident.

Figure 15

Number of mobile use cases utilised at least weekly in selected countries

Percentage of mobile owners, by country and gender



Source: GSMA Intelligence Consumer Survey, 2018
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 = 367 to 956 for women and n = 409 to 1,000 for men

There is a gender gap in mobile spending in all markets, suggesting a further gender gap in the intensity of mobile use

The gender gap in mobile use is reflected in lower mobile spending levels reported by women in all regions (see country-level examples in Figure 16). It is notable that women's spending on mobile services is lower in every country surveyed, even those where there is not a gender gap in mobile ownership or mobile internet use. For example, in Brazil, female mobile owners spend on average 16 per cent less on mobile services than men. Previous GSMA research found that even among mobile internet users, women in South Asia were often less aware of the various services they could use on mobile internet, which made their mobile usage less diverse and intense.[35]

The lower number of use cases reported by female mobile owners goes some way towards explaining their lower mobile spending than men, but does not account for it fully, suggesting that even amongst those who reported using mobile services weekly, women used them less than men. This may also be because women are more likely to be non-revenue generating recipients of SMS or voice calls. This was found to be the case in Bangladesh, where the GSMA conducted a gender analysis of mobile usage.[36]

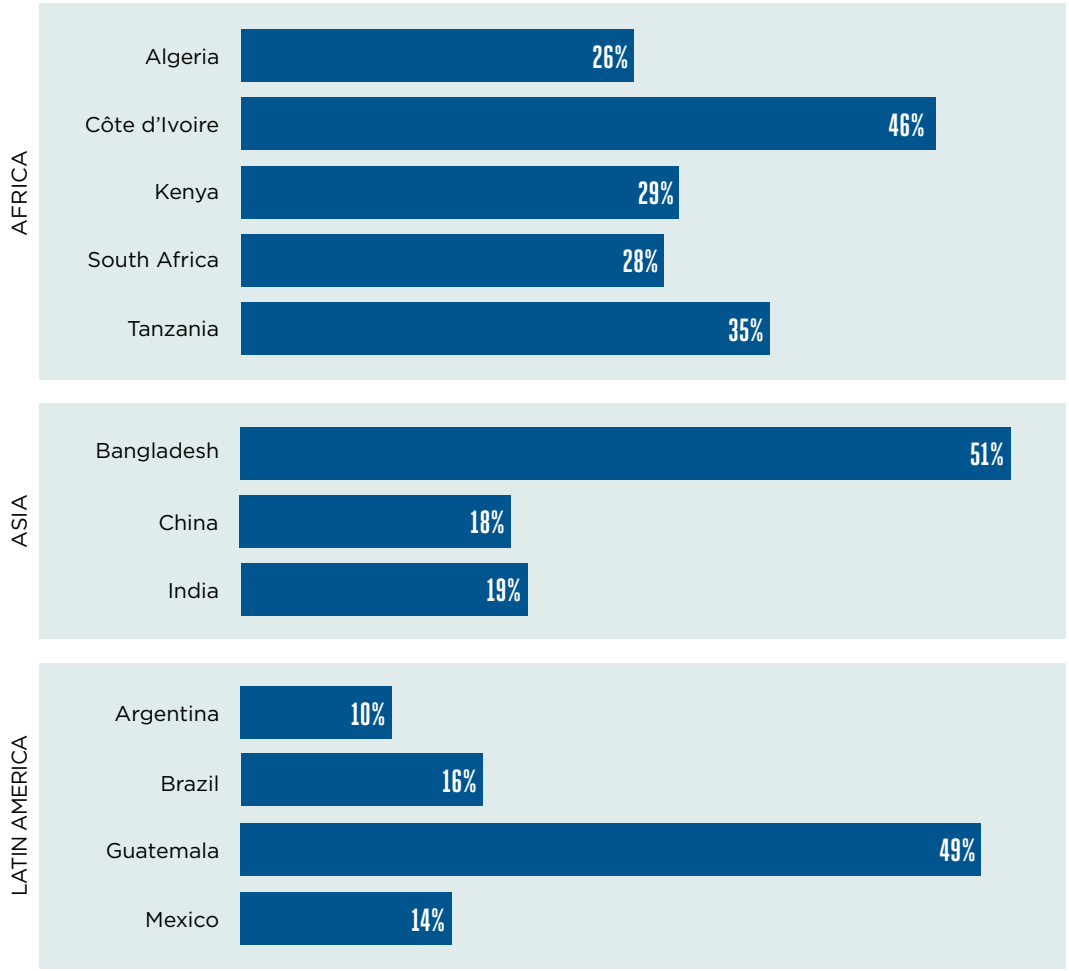
It is therefore important that stakeholders consider the factors preventing women mobile owners' further use of mobile, as this will be essential to women receiving the full benefits of mobile ownership. It is also important for realising the full commercial opportunity of closing the mobile gender gap, and unlocking continued growth opportunities for mobile operators.

35. GSMA, 2017, "Triggering mobile internet use among men and women in South Asia"
36. For more details of this analysis, see GSMA (2018), "The Gender Analysis and Identification Toolkit"

Figure 16

Gender gap in mobile spending

Percentage difference in monthly expenditure on mobile services for men and women, not including devices, by country



Source: GSMA Intelligence Consumer Survey, 2018
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.
n = 299 to 956 for women and n = 381 to 1,000 for men

6. The benefits of closing the mobile gender gap

Closing the mobile gender gap offers significant commercial and economic opportunities

Closing the gender gap in mobile ownership and use is important because of the impact it could have on the lives of women, their families and communities. It also has the potential to deliver significant commercial and economic returns, and help to achieve the UN Sustainable Development Goals (SDGs).[37]

According to Gallup analysis, mobile phone ownership supplemented with internet access is associated with an improvement in peoples' lives.[38] This positive impact on wellbeing is broadly equal for men and women,[39] meaning that closing the gender gap presents an important opportunity to support women's wellbeing at an individual level.

Closing the mobile gender gap is a major commercial opportunity for the mobile industry

There remains a considerable commercial opportunity for the mobile industry in closing the gender gap in mobile ownership and use. Indeed, addressing the mobile gender gap could be a vital catalyst for continued commercial and subscriber growth for many mobile operators in LMICs.

If mobile operators could close the gender gap in mobile ownership and use in LMICs by 2023, this would provide an estimated additional $140 billion in revenue to the mobile industry over the next five years (see Figure 17).

Closing the mobile gender gap has the potential to drive economic growth

Given that mobile is the primary means of accessing the internet in LMICs, closing the mobile gender gap is a critical enabler of future economic growth. The GSMA estimates that closing the gender gap in mobile internet use across LMICs could add $700 billion in additional GDP in these countries over the next five years. This would represent an additional 0.7 per cent of GDP growth in these countries by 2023, with the greatest opportunity in South Asia where the mobile gender gap is widest.[40]

37. The GSMA's 2018 SDG Impact Report identified SDG 5: Gender Equality as one of the SDGs where mobile has the greatest impact.
38. This is true even when controlling for external factors such as income, education and health. See GSMA and Gallup (2018), "The Impact of Mobile on People's Happiness and Well-Being"
39. The Impact of Mobile and Internet Technology on Women's Wellbeing Around the World (forthcoming GSMA and Gallup, 2019).
40. See Appendix 1 for a full description of how the commercial and economic opportunity of closing the mobile gender gap was calculated.

Figure 17

The commercial and economic opportunity of closing the mobile gender gap

Source: GSMA Intelligence modelled estimates

7. Recommendations

This report has illustrated the size of the gender gap in mobile ownership and use in LMICs, as well as some of the significant benefits of closing this gap. As mobile technology continues to be a critical enabler of economic growth, if women are digitally excluded then they will be increasingly economically and socially excluded as well.

Many stakeholders have a role to play in bridging the mobile gender gap. This section provides recommendations for four types of organisations: **mobile network operators, internet companies, policymakers and regulators** and the **development community** (see Figure 18). 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 based on the findings of this report as well as insights from other GSMA research. Although they are not intended to be comprehensive or exhaustive, they highlight some important areas for stakeholders to consider when taking steps to address the mobile gender gap.[41] However, there is no one-size-fits-all solution; a multi-faceted approach will be needed to stimulate mobile adoption and use among women.

The recommendations below set out some practical actions to address the mobile gender gap. However, it is important to recognise that 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 involving women in marketing and distribution.

41. In particular, these consumer-focused recommendations do not address coverage, which is an essential enabler of mobile ownership and use. For recommendations to policymakers on how to improve coverage see GSMA (2018), "Enabling rural coverage: regulatory and policy recommendations to foster mobile broadband coverage in developing countries".

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Figure 18

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

Key: Barrier addressed by the action	Mobile network operators	Internet companies	Policymakers and regulators	Development community
Affordability	**Support industry efforts to lower the cost of mobile handsets,** especially smartphones. e.g. Partnering with a manufacturer to offer entry-level smartphones to customers at a reduced cost.	**Partner with mobile operators to address handset affordability.** e.g. Through subsidies for low-cost smartphones that can help trigger mobile internet adoption.	**Implement initiatives to help reduce the price of devices and services for consumers.** e.g. Partner with financial institutions and local savings groups to provide risk capital for handset loans for women at lower interest rates.	**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.** e.g. Make "data-light" versions of applications to reduce the cost for more price-sensitive users.	**Review sector-specific taxes that may exacerbate the cost barrier to mobile ownership and use,** which has a disproportionate impact on women.	**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 a mobile operator.
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. Clear user menus with fewer steps, simplified content, simple terminology, local language, using icons/symbols/pictures/videos comic-style stories in addition to (or instead of) text.	**Invest in public education 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.	**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 levels of literacy 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 levels of literacy, digital skills 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 picture/icons/videos.	**Understand and incorporate the content, features and services that women in your market find useful and relevant.**	**Encourage the development of an ecosystem of services, 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.	**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).	**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 applications 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 applications, 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 that these reports are responded to quickly and effectively.	**Develop legal and policy frameworks to address harassment over mobile phones and mobile internet.**	
	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.**		

Appendix 1: Methodology

This report is based on an analysis of the results of face-to-face surveys conducted by GSMA Intelligence in 18 LMICs in 2018. This is supplemented by 2017 GSMA Intelligence survey results from five additional countries[42] as well as third-party survey results covering a further 10 countries.

Survey methodology

In all countries surveyed in 2018, a nationally representative sample of c.1,000 male and female adults aged 18+ were surveyed, with the exception of India and China, where the sample was c.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 a representative geographical distribution of interview subjects, particularly urban versus rural, 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.

Extrapolating the mobile gender gap to non-surveyed countries

The 18 countries surveyed in 2018 represent 69 per cent of the total adult population of all LMICs.[43] To estimate the gender gaps in mobile ownership and mobile internet use across all LMICs, as well as the commercial opportunity and economic impact of closing these gender gaps, an extrapolation model was developed. Data from the 2017 and 2018 Consumer Survey countries served as the primary inputs for the model.[44] In addition, we used third-party and publicly available survey data we considered robust, which provided us with gender gap measures for mobile ownership and internet use in 2017 for an additional 10 countries.[45] All country-level figures cited in this study were derived directly from GSMA Intelligence face-to-face survey results.

42. Seventeen countries were surveyed by GSMA Intelligence both in 2017 and in 2018: Algeria, Argentina, Bangladesh, Brazil, China, Côte d'Ivoire, Dominican Republic, Guatemala, India, Indonesia, Kenya, Mexico, Myanmar, Nigeria, Pakistan, South Africa and Tanzania. Five countries were surveyed by GSMA Intelligence only in 2017: Colombia, Chile, Ghana, Nicaragua and Thailand. Mozambique was surveyed only in 2018. Fieldwork was carried out in September and October in both 2017 and 2018.
43. United Nations Department of Economic and Social Affairs, Population Division, 2017, "World Population Prospects 2017".
44. Where 2017 data was the primary input for a country, year-on-year change between 2017 and 2018 was modelled based on changes in the values of the predictor variables between the two years
45. We used data from After Access (Cambodia, Paraguay, Peru, Rwanda), The Financial Inclusion Insights Program (Uganda) and Pew Global Attitudes and Trends (Jordan, Lebanon, Russia, Senegal and Vietnam). To calculate gender gap estimates in these countries for 2018, we applied the growth rate implied from our extrapolation model to the actual 2017 data.

Regression analysis identified the independent variables that were key to predicting each individual mobile gender gap. For each of these gender gaps, an equation was generated to estimate the gender gap in LMICs that were not included in this 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.

Figure 19 presents the predictor variables used to estimate the gender gaps in mobile ownership and mobile internet use, as well as the gender gap in mobile spend. Some of the predictors are different compared to the extrapolation models used in the Mobile Gender Gap Report 2018, as the addition of new data allowed us to improve the accuracy of the models.[46] Due to these improvements in modelling and changes in underlying data, some of the reported gender gaps in this report differ slightly compared to those that were presented in the 2018 Gender Gap report.[47]

Figure 19

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 mobile spending 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) Mean years of schooling for women (Source: UNDP)	Composite "income-education" indicator, capturing GNI per capita, mean years of schooling and expected years of schooling for women (Source: UNDP)
Mobile phone ownership among adult women (Source: Gallup World Poll)	Facebook Gender Gap (Source: Facebook Audience Insights)	Average revenue per user or ARPU[48] (Source: GSMA Intelligence)
South Asia "dummy" variable[49]	South Asia "dummy" variable	South Asia "dummy" variable

46. 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.
47. For example, the estimated gender gap in mobile internet use in Europe and Central Asia in 2017 is now five per cent instead of four per cent, as estimated in the Mobile Gender Gap Report 2018
48. Calculated as recurring revenues divided by total unique subscribers
49. This dummy variable takes a value of 1 if a country is in South Asia. It is included to capture the disproportionately high gender gap in South Asian countries.

Estimating the commercial opportunity for mobile operators of closing the mobile gender gap

The potential commercial opportunity of closing the gender gap in mobile ownership and use was generated using the country-level results of face-to-face surveys and the extrapolation models described above, as well as operator data drawn from GSMA Intelligence.

Two scenarios were modelled which together accounted for the estimated additional revenue generated from closing the mobile ownership and usage gender gap between 2019-23, compared to if it remained at the same level as in 2018 over the period.

Scenario 1: The additional revenue if mobile penetration among women grew to equal mobile penetration among men by 2023

Scenario 2: The additional revenue if mobile spending among women grew to equal mobile spending among men by 2023[50]

These two figures sum to equal the total revenue opportunity from closing the mobile ownership and usage gap in LMICs.[51] Note that this calculation differs from that used in the Mobile Gender Gap Report 2018 as it includes the revenue from equalising all mobile spending, not just mobile internet uptake, so estimates are commensurately higher.

Estimating the economic impact of closing the gender gap in mobile internet use

The economic impact of closing the gender gap in mobile internet use draws on an ITU study[52] which found that, during the 2010–2017 period, a one per cent increase in mobile broadband penetration yielded a 0.2 per cent increase in GDP in low-income countries[53] and a 0.18 per cent increase in GDP in middle-income countries.[54]

The economic impact was therefore calculated using a similar approach to Scenario 1 of the revenue opportunity. The additional internet penetration that would be attained by closing the gender gap in mobile internet 2019–2023 in each country was multiplied by the GDP and the relevant "impact co-efficient" (0.2 for low-income countries and 0.18 for middle-income countries).

For a full description of the survey and extrapolation model, see the accompanying methodology document.

50. For both Scenario 1 and 2, the gender gap is assumed to close in a "straight-line glide path". For example, if the gender gap in 2018 is 25 per cent then we assume it closes by five percentage point increments until 2023 (i.e. 20 per cent in 2019, 15 per cent in 2020, 10 per cent in 2021, 5 per cent in 2022 and 0 per cent in 2023).
51. There is a small additional contribution when both Scenario 1 and 2 are achieved simultaneously. That is, the added revenue from the additional women added in Scenario 1 increasing their spending to equal men's spending, as in Scenario 2.
52. Katz and Callorda (2018), "The economic contribution of broadband, digitization and ICT regulation", ITU.
53. These were defined as countries with a GDP per capita less than $12,000 (PPP).
54. These were defined as countries with a GDP per capita between $12,000 and $22,000 (PPP).

Longitudinal analysis of the mobile ownership gender gap

In addition to analysing results from the 2017 and 2018 Consumer Surveys, a comprehensive analysis of third party gender disaggregated mobile ownership data was undertaken with the aim of determining the trend in the mobile ownership gender gap.[55]

Gallup World Poll[56] and Pew Global Attitudes and Trends[57] surveys were found to cover the greatest range of countries for the longest periods. The findings from these surveys were aggregated on a regional basis to filter out country-level volatility year on year. The findings indicated that on a regional level, in terms of statistical significance, gender gaps in mobile ownership have remained largely unchanged with the average change across most regions for 2015–2017 remaining within two per cent.[58]

55. Surveys and statistics consulted include: After Access, The Financial Inclusion Insights Program, Gallup World Poll, Research ICT Africa, LIRNEAsia and Pew Global Attitudes and Trends
56. Results from 2015–2017
57. Results from 2010–2017
58. South Asia was the exception, with both data sets showing growth in the mobile ownership gender gap over the period covered, driven primarily by India. However, examination of India-specific data, in particular Financial Inclusion Insights by Intermedia (FII), does not corroborate this. Between 2013 and 2017, FII shows a 10 per cent reduction in the mobile ownership gender gap in India. For further discussion of the various results for gender-disaggregated mobile ownership in India, see Harvard Kennedy School (2018), "A Tough Call: Understanding barriers to the impacts of women's mobile phone adoption in India", p. 26

Appendix 2: Full data tables

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Figure 20

Top barriers to owning a mobile phone

Percentage of non-mobile owners who identified barriers within the following categories as the single most important barrier to owning a mobile[59]

		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
AFRICA	Algeria	23%	12%	3%	2%	14%	35%	28%	21%	18%	3%	0%	1%	0%	5%	1%	4%	0%	4%	9%	2%	4%	9%	0%	0%	0%	3%
	Côte d'Ivoire	35%	31%	0%	0%	0%	5%	16%	24%	5%	4%	7%	7%	2%	4%	13%	4%	4%	0%	14%	10%	0%	8%	0%	0%	5%	3%
	Kenya	40%	37%	16%	8%	7%	9%	17%	22%	4%	3%	2%	4%	5%	6%	1%	1%	0%	1%	2%	3%	8%	2%	0%	0%	0%	3%
	Mozambique	29%	31%	5%	6%	8%	12%	12%	19%	0%	2%	3%	1%	3%	2%	3%	3%	7%	9%	14%	6%	2%	3%	6%	4%	6%	2%
	Nigeria	38%	43%	10%	5%	7%	5%	10%	29%	17%	5%	0%	0%	2%	0%	2%	2%	0%	0%	12%	6%	2%	3%	0%	2%	0%	0%
	South Africa	36%	25%	18%	14%	10%	7%	8%	10%	8%	2%	3%	9%	5%	5%	8%	7%	3%	2%	0%	9%	0%	4%	0%	4%	3%	2%
	Tanzania	53%	64%	7%	2%	2%	6%	19%	15%	9%	6%	2%	3%	2%	1%	0%	0%	0%	0%	3%	1%	3%	3%	0%	0%	0%	1%
ASIA	Bangladesh	19%	19%	4%	1%	14%	16%	24%	14%	16%	23%	0%	1%	0%	1%	0%	1%	0%	1%	2%	2%	14%	20%	2%	0%	4%	2%
	India	25%	21%	5%	3%	11%	14%	14%	20%	8%	11%	6%	2%	6%	6%	11%	5%	2%	4%	6%	3%	1%	5%	2%	2%	1%	2%
	Indonesia	27%	21%	10%	7%	15%	22%	9%	14%	11%	12%	2%	2%	6%	2%	8%	5%	2%	0%	8%	9%	0%	4%	2%	0%	0%	1%
	Myanmar	26%	23%	0%	2%	24%	30%	9%	8%	31%	28%	0%	3%	7%	2%	0%	1%	0%	0%	0%	1%	2%	3%	0%	0%	1%	1%
	Pakistan	22%	13%	5%	3%	12%	10%	34%	27%	1%	10%	7%	1%	1%	2%	0%	0%	3%	1%	9%	3%	0%	31%	3%	1%	2%	0%
LATIN AMERICA	Argentina	33%	37%	6%	0%	16%	14%	0%	4%	25%	24%	11%	9%	3%	2%	3%	6%	0%	0%	0%	5%	2%	0%	0%	0%	0%	0%
	Brazil	28%	33%	3%	12%	6%	11%	18%	5%	16%	10%	11%	10%	6%	5%	4%	10%	0%	0%	3%	2%	0%	0%	1%	2%	2%	0%
	Dominican Republic	43%	38%	12%	7%	9%	9%	8%	8%	5%	11%	8%	7%	7%	4%	5%	6%	2%	0%	2%	5%	0%	4%	0%	0%	0%	0%
	Guatemala	26%	27%	1%	3%	9%	5%	14%	18%	8%	3%	7%	14%	16%	7%	11%	12%	0%	1%	3%	2%	2%	2%	2%	2%	0%	1%
	Mexico	16%	16%	8%	11%	4%	12%	7%	7%	16%	14%	15%	3%	11%	12%	13%	17%	2%	2%	4%	3%	0%	0%	2%	5%	2%	0%

Source: GSMA Intelligence Consumer Survey, 2018
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?"
China has been excluded as the number of respondents was not statistically significant.
n= from 49 to 313 for women, and n= from 33 to 171 for men

59. Note that the categories of barriers included in Figures 20 and 21 correspond to the composite barriers shown in Figure 10

M Men W Women

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

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Figure 21

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	
		HANDSET / SIM COST		CREDIT COST		DO NOT KNOW HOW TO USE A MOBILE		READING/ WRITING DIFFICULTIES		MOBILE IS NOT RELEVANT FOR ME	
		M	W	M	W	M	W	M	W	M	W
AFRICA	Algeria	31%	19%	8%	10%	29%	36%	28%	27%	24%	12%
	Côte d'Ivoire	38%	37%	9%	15%	3%	21%	22%	43%	8%	7%
	Kenya	48%	44%	31%	19%	10%	24%	22%	39%	6%	8%
	Mozambique	35%	45%	14%	21%	13%	24%	20%	33%	4%	9%
	Nigeria	41%	54%	19%	17%	15%	15%	19%	43%	18%	12%
	South Africa	35%	31%	21%	22%	15%	13%	13%	15%	9%	10%
	Tanzania	66%	71%	14%	9%	10%	17%	25%	23%	11%	8%
ASIA	Bangladesh	25%	25%	10%	4%	25%	25%	39%	24%	25%	30%
	India	26%	27%	10%	8%	15%	20%	17%	23%	11%	14%
	Indonesia	43%	38%	26%	25%	25%	32%	14%	27%	18%	23%
	Myanmar	29%	33%	2%	9%	34%	47%	13%	20%	39%	44%
	Pakistan	31%	20%	11%	7%	15%	21%	42%	37%	6%	17%
LATIN AMERICA	Argentina	38%	43%	11%	3%	17%	21%	1%	4%	25%	25%
	Brazil	37%	56%	17%	36%	12%	19%	27%	22%	26%	20%
	Dominican Republic	46%	46%	20%	14%	10%	11%	16%	20%	5%	11%
	Guatemala	29%	37%	12%	14%	20%	18%	22%	26%	7%	9%
	Mexico	21%	27%	14%	16%	7%	17%	13%	15%	21%	15%

		SAFETY AND SECURITY						ACCESSIBILITY									
		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
AFRICA	Algeria	6%	9%	6%	11%	9%	14%	9%	9%	16%	5%	9%	13%	3%	6%	3%	6%
	Côte d'Ivoire	9%	9%	2%	8%	16%	7%	6%	4%	15%	15%	0%	8%	4%	8%	10%	6%
	Kenya	6%	6%	10%	10%	1%	4%	7%	7%	8%	4%	10%	3%	2%	2%	2%	5%
	Mozambique	4%	6%	6%	8%	6%	6%	20%	24%	21%	17%	4%	5%	18%	21%	14%	14%
	Nigeria	0%	2%	2%	0%	2%	8%	2%	4%	14%	9%	6%	3%	0%	3%	0%	1%
	South Africa	7%	11%	4%	8%	8%	10%	11%	3%	2%	8%	0%	7%	2%	3%	2%	2%
	Tanzania	3%	4%	6%	3%	2%	0%	3%	3%	8%	3%	3%	5%	0%	1%	4%	4%
ASIA	Bangladesh	2%	3%	2%	5%	10%	3%	10%	6%	10%	6%	19%	23%	6%	2%	10%	4%
	India	7%	4%	10%	11%	12%	7%	4%	8%	9%	5%	4%	8%	4%	4%	2%	3%
	Indonesia	6%	9%	7%	7%	10%	8%	2%	5%	13%	15%	4%	9%	3%	3%	1%	3%
	Myanmar	4%	10%	11%	8%	3%	6%	2%	5%	2%	2%	4%	4%	0%	4%	1%	3%
	Pakistan	8%	2%	5%	6%	1%	4%	7%	1%	16%	9%	0%	34%	6%	2%	4%	1%
LATIN AMERICA	Argentina	10%	10%	5%	1%	3%	7%	0%	3%	3%	6%	1%	0%	0%	1%	1%	0%
	Brazil	23%	28%	14%	20%	17%	23%	3%	9%	4%	12%	5%	3%	3%	6%	3%	2%
	Dominican Republic	13%	14%	10%	17%	11%	19%	4%	0%	6%	10%	0%	4%	2%	3%	0%	0%
	Guatemala	20%	28%	24%	22%	26%	24%	7%	10%	11%	7%	5%	8%	10%	7%	8%	3%
	Mexico	21%	20%	19%	23%	16%	32%	4%	3%	5%	10%	4%	4%	7%	9%	5%	0%

Source: GSMA Intelligence Consumer Survey, 2018
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 56 to 345 for women, and n= from 37 to 187 for men

M Men
W Women

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

Figure 22

Top barriers to mobile internet use

Percentage of mobile users aware of mobile internet who identified the following as the single most important barrier to using mobile internet[60]

		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	10%	14%	4%	1%	4%	7%	6%	7%	14%	14%	12%	8%	5%	6%	21%	13%
	Côte d'Ivoire	12%	13%	2%	1%	8%	10%	1%	7%	28%	30%	12%	8%	9%	7%	11%	11%
	Kenya	35%	38%	6%	7%	6%	7%	3%	2%	9%	8%	7%	5%	4%	3%	10%	14%
	Mozambique	11%	10%	3%	2%	12%	8%	1%	3%	12%	14%	12%	1%	9%	7%	5%	7%
	Nigeria	33%	30%	5%	4%	9%	5%	1%	1%	18%	8%	8%	4%	1%	2%	6%	22%
	South Africa	23%	34%	10%	17%	1%	6%	4%	1%	7%	4%	4%	5%	5%	0%	16%	6%
	Tanzania	36%	45%	7%	3%	11%	19%	2%	1%	7%	3%	3%	3%	3%	0%	10%	12%
ASIA	Bangladesh	9%	4%	5%	4%	9%	4%	4%	2%	18%	12%	2%	5%	6%	4%	31%	37%
	China	8%	5%	4%	5%	10%	14%	4%	6%	15%	22%	9%	5%	11%	11%	16%	11%
	India	15%	14%	6%	6%	5%	13%	5%	4%	12%	11%	3%	5%	5%	2%	8%	11%
	Indonesia	28%	22%	18%	17%	6%	15%	4%	0%	5%	4%	2%	7%	0%	0%	10%	13%
	Myanmar	8%	6%	6%	3%	9%	8%	0%	3%	8%	9%	8%	9%	4%	4%	30%	41%
	Pakistan	11%	11%	5%	2%	4%	3%	3%	3%	24%	21%	12%	9%	6%	4%	13%	15%
LATIN AMERICA	Argentina	22%	25%	7%	7%	8%	0%	20%	9%	0%	2%	2%	2%	0%	7%	21%	25%
	Brazil	16%	11%	5%	2%	12%	19%	0%	8%	3%	12%	5%	4%	2%	4%	14%	10%
	Dominican Republic	31%	30%	8%	5%	9%	5%	3%	8%	7%	0%	6%	7%	1%	0%	13%	7%
	Guatemala	12%	15%	4%	3%	14%	4%	4%	1%	7%	9%	2%	3%	2%	2%	8%	3%
	Mexico	22%	13%	6%	5%	6%	5%	5%	8%	9%	12%	1%	2%	3%	5%	10%	4%

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
6%	6%	1%	6%	0%	4%	1%	0%	1%	1%	5%	1%	5%	10%	0%	1%	3%	2%	1%	0%
0%	1%	1%	1%	1%	3%	1%	1%	3%	1%	5%	2%	2%	3%	1%	0%	2%	2%	4%	2%
1%	0%	3%	2%	3%	4%	2%	2%	4%	1%	5%	1%	1%	1%	1%	0%	1%	3%	1%	2%
1%	3%	7%	8%	3%	2%	1%	2%	6%	7%	3%	7%	2%	4%	4%	5%	3%	2%	0%	2%
0%	0%	4%	2%	3%	2%	4%	1%	2%	2%	4%	1%	0%	13%	0%	0%	3%	1%	0%	1%
0%	3%	3%	2%	4%	6%	9%	2%	0%	1%	3%	1%	0%	1%	4%	5%	3%	0%	1%	0%
2%	1%	1%	0%	2%	1%	1%	1%	1%	1%	7%	6%	1%	2%	0%	0%	5%	1%	4%	0%
1%	3%	1%	3%	2%	1%	2%	1%	2%	1%	2%	2%	2%	11%	1%	1%	2%	2%	2%	4%
0%	3%	1%	1%	4%	3%	12%	6%	2%	3%	1%	0%	1%	2%	0%	0%	1%	1%	2%	0%
4%	5%	3%	3%	5%	1%	6%	1%	3%	4%	5%	3%	3%	1%	2%	4%	5%	7%	1%	2%
0%	0%	3%	1%	3%	3%	4%	3%	0%	3%	10%	10%	4%	0%	0%	0%	1%	2%	0%	1%
3%	1%	11%	5%	3%	3%	3%	2%	1%	1%	2%	1%	2%	4%	0%	0%	4%	1%	3%	5%
5%	2%	3%	2%	2%	2%	2%	1%	1%	0%	6%	6%	0%	19%	1%	1%	1%	0%	0%	1%
0%	0%	2%	6%	4%	2%	9%	9%	0%	0%	0%	0%	0%	0%	0%	0%	0%	2%	1%	2%
0%	0%	5%	0%	2%	7%	22%	9%	0%	4%	2%	3%	2%	0%	0%	0%	2%	1%	2%	0%
0%	0%	3%	17%	5%	4%	7%	11%	0%	0%	3%	0%	0%	0%	0%	0%	2%	4%	1%	4%
0%	0%	11%	22%	5%	10%	14%	16%	2%	3%	2%	3%	4%	1%	5%	0%	0%	3%	2%	0%
0%	2%	5%	16%	6%	5%	15%	7%	6%	0%	2%	5%	1%	2%	0%	2%	0%	2%	4%	8%

Source: GSMA Intelligence Consumer Survey, 2018
Base: Adults aged 18+ who have used a mobile phone in the last three months but have never used mobile internet, 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 47 to 188 for women and n = from 40 to 168 for men

60. Note that the categories of barriers included in Figures 22 and 23 correspond to the composite barriers shown in Figure 13. Additionally the "network coverage" and "slow connection / cannot do what I want" barriers in Figures 22 and 23 were combined in Figure 13 as "network".

M Men W Women

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

GSMA CONNECTED WOMEN – THE MOBILE GENDER GAP REPORT 2019

Figure 23

Important barriers to mobile internet use

Percentage of mobile users who have not used mobile internet, who identified the following as a main barrier

		AFFORDABILITY				LITERACY AND SKILLS										RELEVANCE		RELEVANCE		SAFETY AND SECURITY				ACCESSIBILITY											
		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		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	M	W	M	W	M	W	M	W	M	W	M	W	M	W
AFRICA	Algeria	19%	23%	9%	11%	17%	17%	12%	17%	20%	22%	19%	19%	13%	12%	25%	17%	11%	10%	14%	13%	4%	8%	2%	6%	8%	5%	8%	4%	6%	19%	2%	5%	7%	8%	6%	8%
	Côte d'Ivoire	18%	18%	12%	9%	18%	29%	7%	17%	34%	43%	22%	18%	21%	22%	16%	14%	1%	2%	3%	5%	7%	7%	5%	4%	8%	4%	11%	7%	2%	3%	1%	0%	6%	3%	7%	5%
	Kenya	43%	43%	19%	14%	14%	10%	6%	5%	13%	13%	12%	8%	11%	10%	15%	18%	6%	2%	8%	4%	7%	7%	8%	4%	11%	3%	11%	5%	2%	2%	4%	1%	6%	8%	9%	4%
	Mozambique	21%	19%	8%	8%	19%	17%	3%	7%	14%	14%	15%	6%	12%	11%	10%	10%	9%	7%	9%	11%	8%	5%	4%	8%	15%	13%	12%	10%	3%	6%	10%	8%	6%	12%	12%	13%
	Nigeria	39%	36%	17%	16%	18%	16%	4%	2%	28%	14%	14%	11%	4%	6%	15%	25%	4%	5%	11%	3%	7%	5%	11%	6%	6%	6%	5%	2%	0%	13%	0%	1%	5%	4%	6%	9%
	South Africa	30%	44%	22%	31%	7%	16%	6%	4%	10%	7%	12%	11%	9%	4%	21%	11%	4%	8%	10%	10%	13%	16%	18%	10%	3%	3%	6%	4%	1%	1%	6%	5%	10%	4%	7%	7%
	Tanzania	45%	50%	18%	10%	20%	32%	6%	4%	8%	4%	10%	10%	5%	7%	15%	16%	6%	6%	2%	1%	5%	2%	2%	1%	6%	3%	17%	9%	1%	3%	2%	1%	11%	2%	5%	1%
ASIA	Bangladesh	16%	15%	13%	8%	19%	8%	12%	9%	25%	16%	9%	9%	8%	7%	41%	41%	10%	8%	2%	9%	5%	7%	4%	6%	6%	2%	6%	5%	4%	16%	1%	2%	6%	6%	5%	4%
	China	20%	14%	17%	15%	27%	27%	9%	16%	16%	34%	15%	25%	26%	29%	27%	22%	5%	7%	10%	13%	12%	20%	23%	16%	8%	10%	1%	7%	6%	7%	1%	3%	7%	11%	8%	6%
	India	26%	20%	20%	14%	15%	22%	11%	10%	16%	16%	11%	11%	10%	8%	21%	14%	12%	11%	9%	6%	9%	7%	10%	9%	10%	8%	13%	6%	6%	3%	7%	7%	14%	10%	10%	11%
	Indonesia	44%	39%	43%	42%	12%	25%	15%	6%	6%	14%	9%	15%	7%	11%	19%	25%	1%	3%	6%	1%	9%	5%	10%	3%	3%	6%	17%	23%	5%	1%	4%	0%	6%	10%	6%	9%
	Myanmar	14%	12%	12%	12%	16%	28%	6%	12%	16%	18%	17%	22%	12%	12%	40%	53%	9%	7%	19%	14%	13%	7%	10%	6%	8%	8%	5%	5%	7%	8%	4%	5%	11%	5%	3%	5%
	Pakistan	22%	14%	22%	12%	7%	8%	8%	16%	30%	33%	23%	16%	14%	15%	22%	27%	12%	12%	7%	9%	4%	5%	5%	4%	3%	1%	11%	8%	1%	23%	4%	1%	7%	1%	8%	2%
LATIN AMERICA	Argentina	25%	31%	14%	14%	12%	2%	21%	17%	0%	2%	2%	4%	3%	8%	26%	26%	0%	0%	9%	8%	9%	9%	13%	15%	3%	3%	0%	0%	0%	0%	0%	2%	0%	2%	3%	2%
	Brazil	39%	26%	29%	16%	27%	27%	20%	17%	10%	17%	10%	10%	10%	10%	28%	20%	9%	4%	26%	10%	19%	15%	38%	22%	19%	14%	16%	7%	5%	6%	5%	3%	14%	8%	16%	4%
	Dominican Republic	34%	46%	21%	22%	30%	21%	10%	23%	19%	11%	18%	12%	5%	2%	19%	11%	4%	2%	18%	30%	16%	18%	18%	30%	9%	14%	8%	8%	0%	0%	1%	2%	3%	11%	8%	7%
	Guatemala	25%	34%	12%	22%	16%	12%	19%	8%	16%	14%	4%	9%	11%	8%	9%	9%	2%	3%	26%	39%	14%	37%	28%	35%	8%	17%	4%	6%	8%	4%	6%	3%	2%	12%	10%	17%
	Mexico	28%	22%	18%	13%	16%	15%	11%	11%	11%	13%	10%	6%	8%	15%	17%	6%	3%	2%	18%	23%	17%	12%	24%	12%	12%	3%	7%	7%	3%	6%	6%	3%	4%	6%	17%	6%

Source: GSMA Intelligence Consumer Survey, 2018
Base: Adults aged 18+ who have used a mobile phone in the last three months but have never used mobile internet, 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 47 to 190 for women and n= from 44 to 185 for men

M W
Men Women

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

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