

Connected Women | 2015

EXECUTIVE SUMMARY

Bridging the gender gap:
Mobile access and usage in low-
and middle-income countries





The GSMA represents the interests of mobile operators worldwide, uniting nearly 800 operators with more than 250 companies in the broader mobile ecosystem, including handset and device makers, software companies, equipment providers and Internet companies, as well as organisations in adjacent industry sectors. The GSMA also produces industry-leading events such as Mobile World Congress, Mobile World Congress Shanghai and the Mobile 360 Series conferences.

For more information, please visit the GSMA corporate website: www.gsma.com

Follow the GSMA on Twitter: [@GSMA](https://twitter.com/GSMA)



GSMA Connected Women works with partners to deliver socio-economic benefits to women and the broader mobile ecosystem through greater inclusion of women across the industry. The programme is focused on increasing women's access to and use of mobile phones and life-enhancing mobile services in developing markets, as well as closing the digital skills gender gap, attracting and retaining female talent, and encouraging female leadership in technology on a global basis.

For more information, please visit:
www.gsma.com/connectedwomen

Follow GSMA Connected Women on Twitter:
[@GSMAM4d](https://twitter.com/GSMAM4d) [#ConnectedWomen](https://twitter.com/ConnectedWomen)

The GSMA Connected Women Global Development Alliance is a programme in partnership with:



Altai Consulting provides strategy consulting & research services to private companies, governments and public institutions in developing countries.

Our teams currently operate in more than 45 countries in Africa, the Middle East and Central Asia.

For more information, please visit the Altai Consulting website: www.altaiconsulting.com

Table of Contents

Women and mobile: Still an untapped opportunity	2
Key findings	4
Why does it matter if women own mobile phones?	6
Women are still unconnected	10
There is a persistent gender gap in mobile phone ownership	12
The new gender gap: Mobile phone usage	16
Top barriers to mobile phone ownership and usage for women	20
Women tend to experience certain barriers more acutely than men	24
Systemic barriers	26
Recommendations	29



Women and mobile: Still an untapped opportunity

It has been five years since the report, *Women and Mobile: A Global Opportunity*,¹ highlighted the disparity in mobile phone ownership between men and women in low- and middle-income countries and drew increased attention to the issue of women's access to mobile phones. Since then, access to mobile phones has increased substantially, including for women. Mobile phone penetration rates are accelerating rapidly in the developing world, and new, more affordable handsets are increasingly available. A substantial body of knowledge about access and usage of mobile phones has also improved understanding of how women interact with and benefit from this life-enhancing mobile technology. However, despite progress over the last five years, women remain left behind and there are still significant challenges in ensuring women are included in an increasingly connected and internet-enabled world.

This report aims to build on the findings of the original study and the work of others in the last five years, highlighting the progress that has been made and identifying new challenges and opportunities yet to be overcome. The report examines how many women in low- and middle-income countries own mobile phones,² how intensively they use them, and the barriers to mobile phone adoption and use compared to men.

1. GSMA, Cherie Blair Foundation, and Vital Wave Consulting, 2010, "Women and Mobile: A Global Opportunity", http://www.gsma.com/mobilefordevelopment/wp-content/uploads/2013/01/GSMA_Women_and_Mobile-A_Global_Opportunity.pdf
2. In our study we defined mobile phone owners as those who reported owning a SIM. As the number of respondents who reported owning a SIM but not a handset is minimal, the term 'mobile phone owners' or 'owners' is used in this report instead of 'SIM owners'.



Key findings

Key findings in this report include:

- **Over 1.7 billion females in low- and middle-income countries do not own mobile phones.**
- **Women on average are 14% less likely to own a mobile phone than men,** which translates into **200 million fewer women than men owning mobile phones.**³
- **Women in South Asia are 38% less likely to own a phone than men,** highlighting that the gender gap in mobile phone ownership is wider in certain parts of the world.
- **Even when women own mobile phones, there is a significant gender gap in mobile phone usage preventing them from reaping the full benefits of mobile phone ownership.** Women report using phones less frequently and intensively than men, especially for more sophisticated services such as mobile internet. In most countries, fewer women than men who own phones report using messaging and data services beyond voice.
- **The top 5 barriers to women owning and using mobile phones from a customer perspective are cost, network quality and coverage, security and harassment, operator/agent trust, and technical literacy and confidence.** Social norms and disparities between men and women in terms of education and income influence women's access to and use of mobile technology, and often contribute to women experiencing barriers to mobile phone ownership and use more acutely than men.
- **Addressing the gender gap in mobile phone ownership and usage can deliver substantial socio-economic benefits for women, the mobile industry, and the economy:**
 - **Ensuring women in low- and middle-income countries own and use mobile phones on par with men could unlock an estimated \$170 billion⁴ market opportunity for the mobile industry in the next five years** and contribute to economic growth in these regions.
 - **Mobile phones deliver substantial socio-economic benefits for women.** Mobile phones are valued by women as a tool that enhances their lives, making them feel more autonomous and connected, able to access new education and employment opportunities, and save time and money.

Taken together, these findings indicate the gender gap in mobile ownership and use is driven by a complex set of socio-economic and cultural barriers negatively affecting women. Without targeted intervention from the mobile industry, policy-makers, and other stakeholders, the gender gap in ownership and use is unlikely to close naturally on its own.

Findings from this report were based on primary research as well as secondary sources. Primary field research was conducted in 11⁵ countries and included surveys with 11,000 women and men (both mobile phone owners and non-owners), approximately 80 focus group discussions, and interviews with over 120 experts. The findings from this research, combined with secondary sources, have been used to estimate the gender gap in mobile phone ownership in low- and middle-income countries, and to identify trends and recommendations that will help stakeholders ensure women have access to mobile technology and benefit from using it.

This report provides actionable insights and recommendations for the wider mobile ecosystem, including industry (mobile network operators, handset manufacturers, and content and application developers), policy-makers (national and international), donors, academics, and the international development community, to take action to overcome the key barriers currently keeping women from accessing and using mobile technology.

Without targeted intervention from the mobile industry, policy-makers, and other stakeholders, the gender gap in ownership and use is unlikely to close naturally on its own.

³ Based on current population and unique subscriber penetration.

⁴ Assuming current population growth rates. See Methodology Annex on Connected Women website for more detail.

⁵ These countries are Colombia, Mexico, Niger, the Democratic Republic of Congo (DRC), Kenya, Egypt, Jordan, Turkey, India, China, and Indonesia.





Why does it matter if women own mobile phones?

Mobile phones empower women

Mobile phones are important tools for enhancing the lives of women in low- and middle-income countries. Of the thousands of women interviewed in this report across 11 countries, including both mobile phone owners and non-owners:

- at least **89%** in every country said mobile phones help them (or would help them) stay in touch with friends and family;
- at least **74%** in every country said mobile phones save time (or would save them time);
- at least **68%** in every country reported they feel safer (or would feel safer) with a mobile phone;
- at least **58%** in every country said they felt more (or would feel more) autonomous and independent; and
- at least **60%** of women in 10 out of 11 countries said mobile phone ownership saves (or would save) them money,⁵ and at least **60%** of women in every country claimed that a mobile phone helps (or would help) make running errands either more convenient or less expensive.

5. In Turkey, only 38% of women and 47% of men say mobile phone ownership saves (or would save) them money, which is substantially lower than in all other countries for both men and women.



Image Courtesy of Qualcomm® Wireless Reach™



Expanding access and use of mobile phones to more women will contribute to economic growth and productivity

The mobile industry is a pillar of the global economy. Research shows that the industry both directly and indirectly contributed to 3.6% of the global GDP in 2013—over US\$ 2.4 trillion.⁶ Reaching more women will only increase this contribution. Entrepreneurs and developers will also have more opportunities to develop new mobile products and services, and expand existing ones, that meet the needs of women in the market and help to foster the wider digital ecosystem.

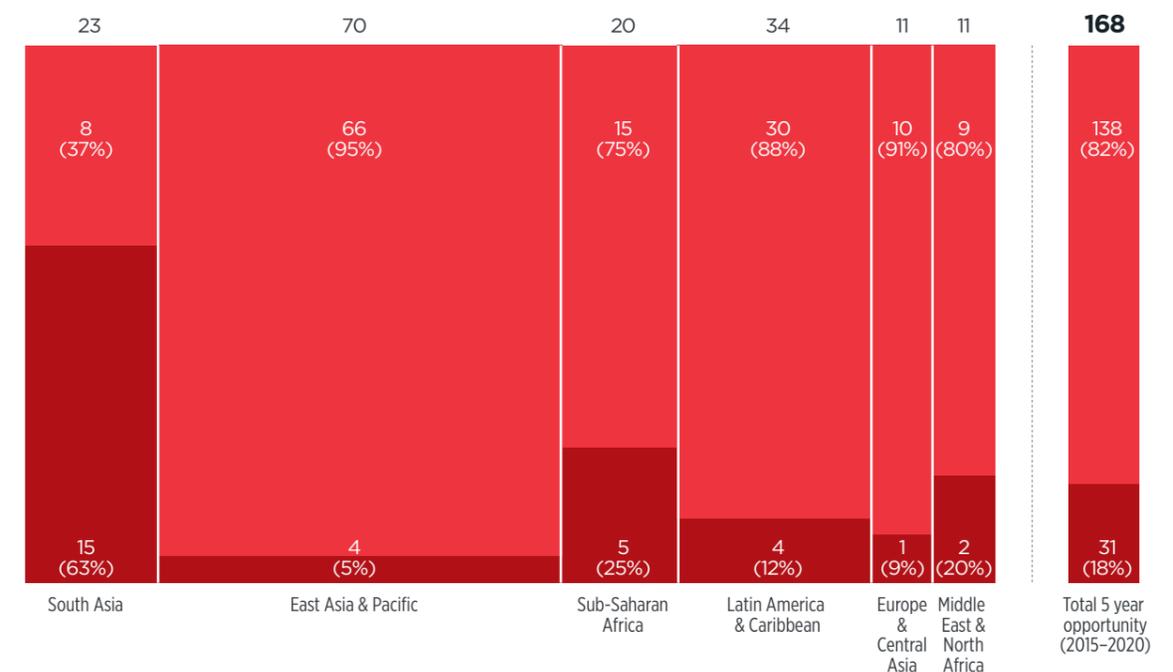
Mobile phones are a cost-effective, large-scale channel for delivering public and private services. Increasing access to mobile phones allows information, government services (e.g., government-to-person payments), and financial services such as mobile money, to be accessed and delivered more efficiently. Using mobile phones to deliver these services is often more cost-effective than traditional delivery channels and makes economies more productive. In fact, a 10% increase in mobile phone ownership is associated with a 4.2 percentage point increase in total factor productivity (TFP).⁷

6. GSMA Intelligence, 2014, "The Mobile Economy 2014", http://www.gsma-mobileeconomy.com/GSMA_ME_Report_2014_R2_WEB.pdf
 7. Deloitte Consulting, GSMA, and Cisco, November 2012, "What is the impact of mobile telephony on economic growth?" <http://www.gsma.com/publicpolicy/wp-content/uploads/2012/11/gsma-deloitte-impact-mobile-telephony-economic-growth.pdf>

Closing the mobile gender gap in ownership and usage is a significant revenue opportunity for the mobile industry

Closing the gender gap in mobile phone ownership and usage could add an additional \$170 billion in revenue to the mobile industry⁸ by 2020 (Fig. 1). These estimated revenues would not be evenly distributed across regions since they vary in population size and maturity of the mobile market. The potential revenues from closing the gender gap in mobile phone ownership versus closing the gender gap in mobile phone usage would also vary by region. For example, in South Asia, closing the gender gap in ownership would represent a larger revenue opportunity than closing the gap in usage.

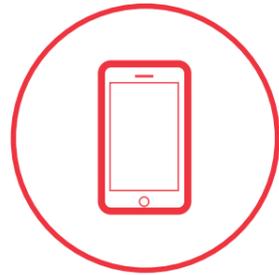
Fig. 1
Distribution of the estimated 5-year revenue opportunity across low- and middle-income countries
 (Billions USD)



BRIDGING THE OWNERSHIP GAP BRIDGING THE USAGE GAP¹

1: "Bridging the usage gap" figures include additional revenues expected from 1) Increasing ARPS from existing female owners to match overall ARPS by 2020 2) Increasing ARPS from new female users bridging the ownership gap.
 Note: Figures do not add up to the total due to rounding.

8. Forecast revenue growth is for mobile network operators only and does not include revenues from other mobile industry players. This model does not forecast the revenue of connecting all women in low- and middle-income countries; only of bringing women's unique subscriber penetration rate to the same unique subscriber penetration rate as men, and increasing usage rates to be on par with men.



Women are still unconnected

Despite the benefits, many women globally still do not own mobile phones. Today, over 3 billion people⁹ in low- and middle-income countries do not own mobile phones, and most of them—1.7 billion—are estimated to be female.¹⁰ Nearly two-thirds of unconnected¹¹ women live in the South Asia and East Asia & Pacific regions (Fig. 2), which is not surprising given that these two regions are the largest in terms of population. A significant number of unconnected women—over 300 million—also live in Sub-Saharan Africa. These high numbers underscore the importance of continuing to focus on improving mobile phone access for the unconnected, especially women who are still left behind.

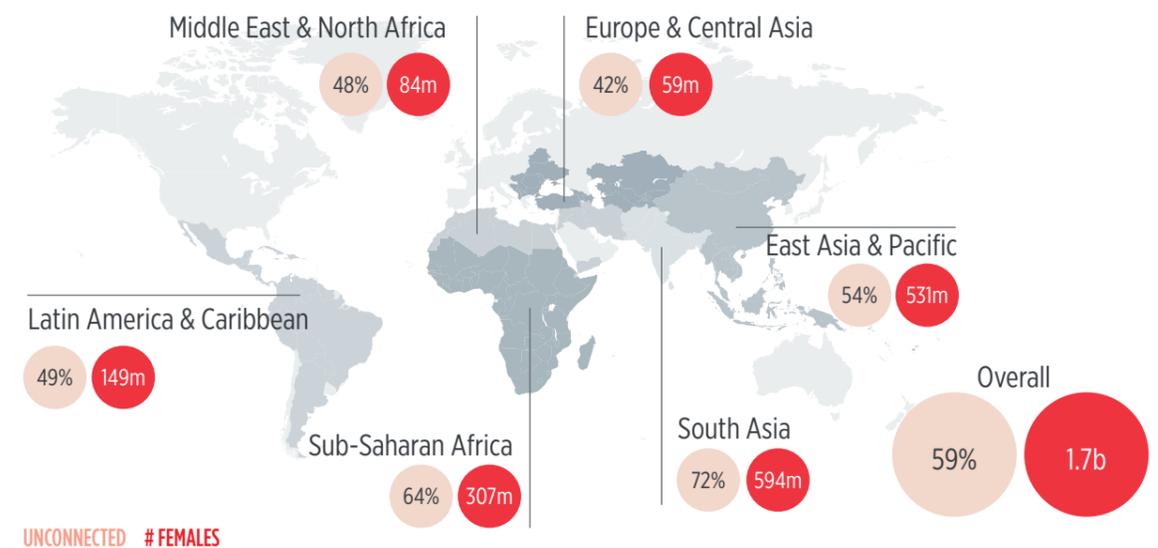
9. Estimated number of unconnected people in low- and middle-income countries is based on GSMA Intelligence unique subscriber data for the total population and analysis conducted by Altai Consulting.

10. The estimated number of unconnected women in the market is calculated using adjusted GSMA Intelligence data on unique subscribers and analysis by Altai Consulting.

11. “Unconnected” refers to individuals who do not own a SIM card.



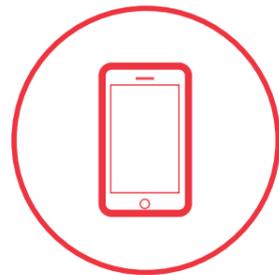
Fig. 2
Population of unconnected women in low- and middle-income countries
 Females who are unconnected by region (% of females, absolute number of females)



UNCONNECTED # FEMALES

Note: Unconnected females include those who do not own a mobile phone, but may borrow one.

Source: GSMA Intelligence and World Bank data, Altai Consulting analysis



There is a persistent gender gap in mobile phone ownership

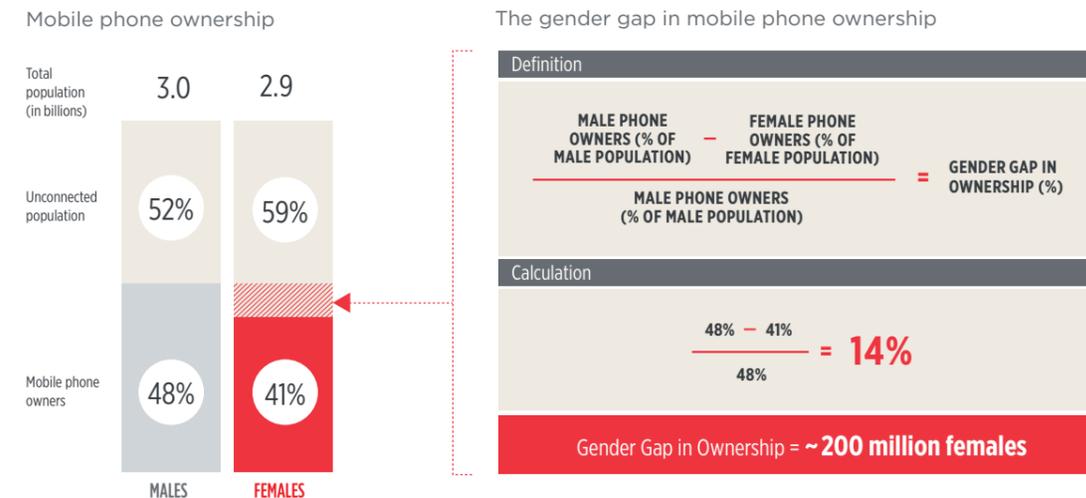
Sceptics might argue that increasing mobile ownership among unconnected populations is a tall order—that the cost of doing so is prohibitive and the limited expected revenues of reaching largely low-income and low-density rural areas insurmountable. What if, as a first step, we could bridge the gender gap in mobile phone ownership so that the same percentage of women owned mobile phones as men?

Our analysis shows the gender gap in mobile phone ownership in low- and middle-income countries currently stands at an estimated 14% (Fig. 3), but this average masks a greater inequality between male and female mobile phone ownership in many parts of the world. In particular, the findings of this study indicate that the South Asian region has a particularly high gender gap in mobile ownership: 38% (Fig. 4).

Ensuring women own mobile phones on par with men will require deliberate, active efforts by industry and policy-makers, especially in situations where women face particularly high barriers for cultural or socio-economic reasons (e.g., rural, poor).

Though some regions show smaller overall gender gaps in mobile phone ownership, it is important to note there are likely countries within these regions with a wide gender gap in mobile ownership despite an overall positive regional score, and readers should be careful not to assume the regional average is indicative of every country in that region. These gaps are likely to be found in countries with high rates of poverty and low mobile ownership rates, or in certain regions within a country that may have similar characteristics (e.g., rural areas).

Fig. 3
The gender gap in mobile phone ownership in low- and middle-income countries

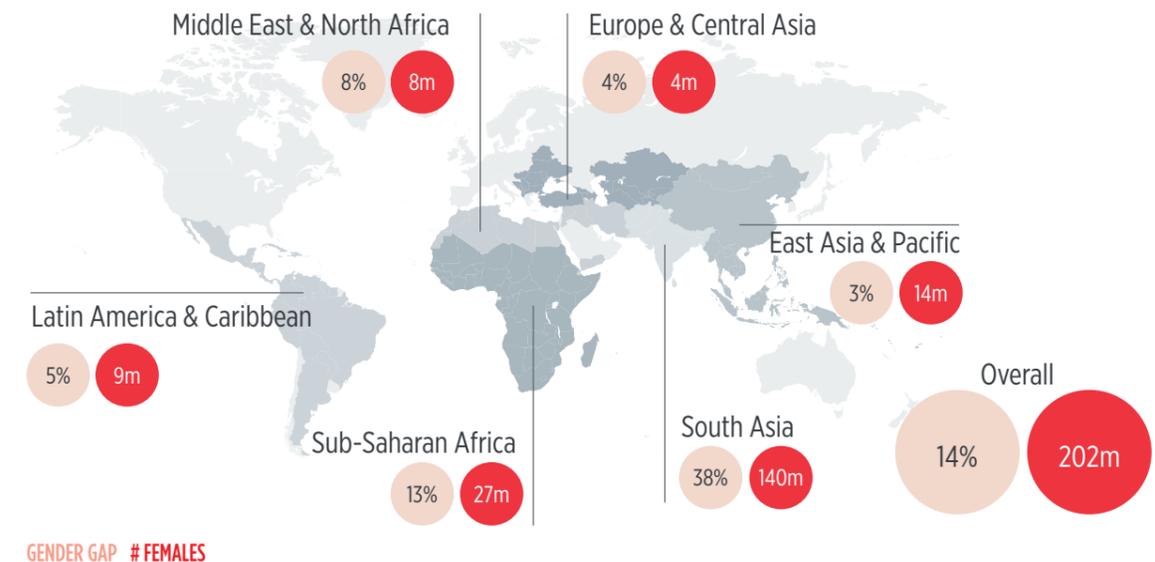


Note: Gender gap has been estimated based on Q3 2014 field research, but applied to unique subscriber penetration in the country and population figures for Q4 2014.

Source: GSMAi and World Bank data, Altai Consulting analysis.

Fig. 4
Gender gap in mobile phone ownership in low- and middle-income countries

Gender gap in ownership by region (% absolute number of females)



Source: GSMA Intelligence and World Bank data, Altai Consulting analysis.

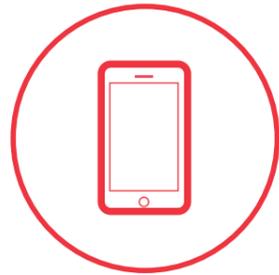
For example, even though Sub-Saharan Africa has an estimated 13% gender gap in mobile phone ownership overall, the primary research we conducted in Niger showed a 45% gender gap in mobile phone ownership and a 33% gender gap in the Democratic Republic of Congo (DRC). There is also often a large difference within countries between urban and rural areas; for example, Mexico has a 26% gender gap in mobile ownership in rural areas compared to only 2% in urban areas.

Another key observation from the in-country research is that wealthier countries (i.e., higher per capita GDP) generally have a smaller gender gap in mobile phone ownership. There are a couple of interesting exceptions to this highlighted in the main report, including Egypt and Kenya, which have smaller gender gaps in mobile phone ownership than expected given their level of wealth, and Jordan, which has a higher than expected gender gap in mobile phone ownership given its level of wealth. The introduction of M-Pesa, a mobile money service, likely contributed to increasing mobile phone ownership for women in Kenya by offering a relevant product that overcame barriers to mobile ownership for women. In contrast, the high gender gap in ownership in Jordan is likely due to the substantial barriers women face in this country relative to their male counterparts.

These countries highlight two important points: 1) countries/markets can close the gender gap in mobile phone ownership more quickly by providing relevant products that customers value, focusing on affordability, and fostering healthy and enabling environments to overcome barriers for women; and 2) the gender gap in mobile phone ownership does not always close automatically, as women can continue to face substantial barriers even though income in a country increases.

Countries can close the gender gap in mobile phone ownership more quickly by providing relevant products that customers value, focusing on affordability, and fostering healthy and enabling environments to overcome barriers for women.





The new gender gap: Mobile phone usage

Mobile phone ownership is a gateway to a world of mobile services that can substantially improve the lives of the unconnected. However, ownership is only the first step in taking advantage of mobile services. Once women own mobile phones, they need to use a range of features and services to reap the full benefits of phone ownership. Mobile phones give individuals access to multiple forms of communication, such as voice, text, mobile internet and entertainment, the ability to access information such as news and media, as well as life-enhancing, value-added services and mobile money.

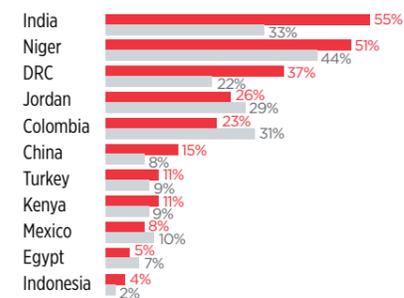
In this study, mobile phone owners were asked how they use their mobile phones for these services. The findings highlight substantial differences in how men and women report using mobile services. Even when women own mobile phones, they often report using mobile services less frequently or less intensively than men. Closing the usage gap between women and men is important to advancing the digital inclusion agenda and ensuring the voices of women and girls are represented in the digital world.

First, women report moving up the digital ladder more slowly than men. In most countries, fewer female than male phone owners report using sophisticated mobile services beyond voice. SMS use is highly dependent on the country, with some countries showing wide gender gaps in SMS usage while others show little difference between men and women (Fig. 5). However, for more sophisticated mobile services, women usually lag behind men. When it comes to mobile internet usage, for instance, women report using it less than men in most countries we studied (Fig. 6).



Fig. 5
Mobile phone owners who report never sending an SMS

Mobile phone owners (%)

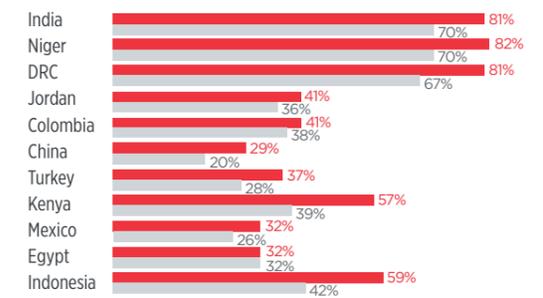


WOMEN MEN

Note: Sample sizes for women N= 330 to 807 and for men N= 133 to 234

Fig. 6
Mobile phone owners who report never using the internet on a mobile phone

Mobile phone owners (%)



WOMEN MEN

Note: Sample sizes for women N= 330 to 807 and for men N= 133 to 234

It is worth noting that in this survey, income and education levels have a large impact on reported mobile internet usage. Often the differences in mobile internet use between women from wealthier households and women from poorer households are greater than between men and women who are both from poor households. Social media is particularly appealing to women, but women usually lag behind men in usage even among feature phone and smartphone owners.



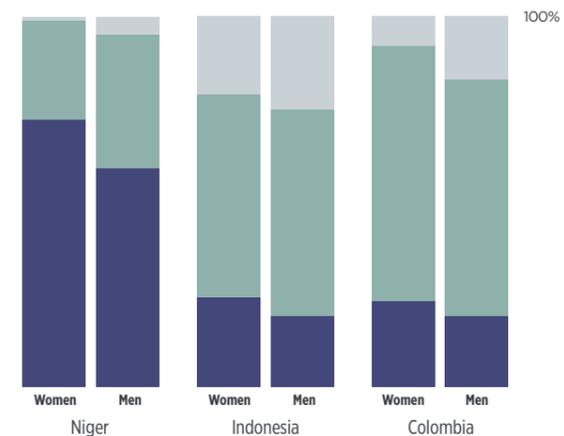
“Men have the latest touchscreen phone whereas women only have basic mobile phones.”
 — Rural female user, India

These findings indicate that women are not using these more sophisticated services because they likely face greater barriers than men (e.g., lower-end handsets that are not internet enabled, lack of technical literacy, lower levels of education/literacy, or more price sensitivity).

Some of this difference is driven by the fact that women own less expensive and more basic mobile phones than men in every sample country except Turkey, Egypt, China and Jordan, where ownership profiles are more similar (Fig. 7 shows three other countries as an example). Therefore, fewer women than men are currently able to access the internet through mobile phones. Given that mobile phones are anticipated to be the mechanism through which people in low- and middle-income countries will access the internet, if women continue to own less sophisticated handsets they will also continue to be less likely than men to have access to the internet for the foreseeable future.

These findings reveal that fewer women than men own mobile phones and they do not use them as intensively. Increasing women’s usage of mobile phones will not only generate socio-economic benefits for women, but create a substantial commercial opportunity for mobile industry players, as well.

Fig. 7
Type of handset owned by women and men¹
 Handset owners (%)

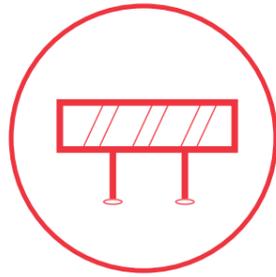


If women continue to own less sophisticated handsets they will also continue to be less likely than men to have access to the internet for the foreseeable future.

BASIC PHONE **FEATURE PHONE** **SMARTPHONE**

¹: ‘Smartphone’ is defined as a handset that has all of the following four features/capabilities: QWERTY/AZERTY keyboard, touchscreen, ability to access the internet, and download apps. ‘Feature’ phone is defined as a handset that has at least one of these four features/capabilities. ‘Basic’ phone is defined as one that does not have any of these four features/capabilities. If a respondent had >1 handset, they were asked which handset they used most often.

Note: Sample sizes for women N= 345 to 807 and for men N= 144 to 225



Top barriers to mobile phone ownership and usage for women

Women face a number of different barriers related to owning a mobile phone, purchasing credit, and using it for basic and value-added services. Women tend to experience barriers more acutely than men due to underlying social norms that influence women's roles, status, empowerment, and access to education and income in society. These social norms also sometimes mean women have less financial independence and autonomy, which consequently means they may have less control when it comes to owning and using mobile phones.

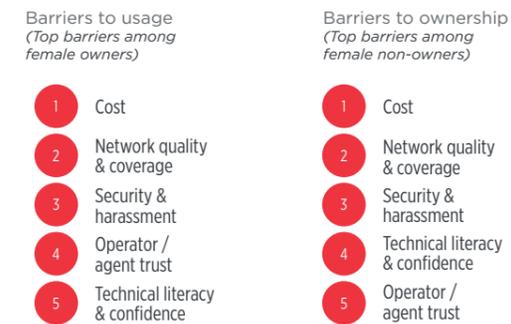
Five key barriers are reported by women and men across countries, among both owners and non-owners¹² (see Fig. 8):

1. Cost (handset and credit)
2. Network quality and coverage
3. Security and harassment
4. Operator/agent trust
5. Technical literacy and confidence

Addressing these top 5 barriers, including making handsets more affordable, would disproportionately benefit women and help to close the gender gap in mobile phone ownership and use.

12. These same top 5 barriers are reported by both female and male owners and non-owners (except that technical literacy and confidence is more important for female non-owners than agent/operator trust, and the sample size for male non-owners is too small in most countries to comment on overall ranking).

Fig. 8
Top 5 barriers preventing women from owning and using mobile phones across sample countries



More competitively priced handsets and handset packages are likely to disproportionately benefit women.

Cost is a greater barrier for women than men

Cost, more specifically the cost of handset and credit, is the greatest overall barrier reported by both men and women across our sample countries. Over the last few years, declining handset and airtime prices have been recognised as a key driver of mobile adoption among low-income populations.¹³ However, women tend to cite handset and credit cost as a barrier more commonly than men. Unsurprisingly, in most countries, women from rural and poorer households in the survey were more likely to report cost as a barrier.

The reason why women typically report cost as a greater barrier than men is likely because, in most settings, women are less likely to earn an income and, if they do, earn less income.¹⁴ This was echoed in each of our sample countries, where fewer women than men reported contributing to the household income over the last month. Even when women do earn or receive an income, they do not always control how that income is spent, including on mobile-related expenses. In 10 of the 11 countries,¹⁵ fewer women than men reported paying for their handset and credit recharge¹⁶ with their own money. When women do not pay for their handset or credit recharge themselves, their husbands or another male family member usually pay instead.

It is important to recognise that because of these factors, women are usually more price-sensitive than men (i.e., cost is a greater barrier for women). Therefore, more competitively priced handsets and handset packages are likely to disproportionately benefit women.

13. GSMA Intelligence, 2014, "Smartphones in emerging markets", <https://gsmaintelligence.com/analysis/2014/12/smartphones-in-emerging-markets/450/>

14. World Economic Forum, 2014, "The Global Gender Gap Report 2014", http://www3.weforum.org/docs/GGGR14/GGGR_CompleteReport_2014.pdf

15. In China, the remaining country, this is true for credit recharge whereas for handset purchase a similar proportion of female (90%) and male (93%) handset owners reported paying for their handset with their own money.

16. Also refers to monthly bill where applicable.

Network quality and coverage can be a greater barrier for women than men

Network quality and coverage was cited as a key barrier by men and women in our survey countries, regardless of whether they owned a mobile phone. This was a concern in urban as well as rural settings.¹⁷ These findings may seem surprising given the relatively high proportion of the population that live in areas with coverage.¹⁸ The relatively high level of concern expressed by respondents can therefore likely be attributed, in most cases, to poor network quality (e.g., dropped calls) rather than no coverage at all.

In some settings, women may perceive network quality and coverage as a greater barrier than men, due to mobility constraints, more basic handsets, and fewer SIMs to choose from. More research is needed to understand how coverage issues may affect women's access to and use of mobile phones relative to men.

Security and harassment is a key concern for women

One of the most important findings of this study is that a top barrier to women owning and using mobile phones is concern over security or harassment over mobiles. In general, women feel safer owning mobile phones—at least 68% of female respondents in every sample country reported they feel (or would feel) safer with a mobile phone. However, security and harassment issues are still top-of-mind. The security and harassment barrier refers to security concerns related to owning and using mobile phones (e.g., fear of having their mobile phones stolen or fraud issues), harassment from strangers, or spam advertisements via mobile phone.

Overall, women tend to perceive security issues and harassment from strangers as a greater barrier than men. However, the extent to which spam is a barrier for women and men depends on the country where they live (Fig. 9).¹⁹ More awareness around the issue of harassment over mobile phones, and a more concerted effort to stop harassing behaviours and address women's security concerns, are needed in the mobile ecosystem.

Women tend to perceive security issues and harassment from strangers as a greater barrier than men.

Fig. 9
Countries where women report security and harassment barriers more than men
All respondents

	Barrier		
	Security concerns (e.g. handset theft)	Strangers	Spam
Niger	=	=	=
India	=	✓	✗
DRC	=	=	=
Mexico	=	✓	✗
Indonesia	✓	=	=
China	=	=	✗
Turkey	✓	✓	✓
Kenya	✓	✓	✓
Colombia	✓	✓	✗
Egypt	✓	✓	=
Jordan	✓	✓	✗

✓ MORE WOMEN (>3%) THAN MEN AGREE OR STRONGLY AGREE
 = AS MANY WOMEN AS MEN (+/- 3%) AGREE OR STRONGLY AGREE
 ✗ FEWER WOMEN (<3%) THAN MEN AGREE OR STRONGLY AGREE

Note: Sample sizes for women N= 648 to 881 and for men N= 164 to 314



Operator/agent trust is a concern for both men and women

For the purpose of this report, we define 'lack of operator/agent trust' as the perceived unreliability of the mobile operator and/or agent network and the consequent fear of being deceived. Operator/agent trust is a particular concern for both women and men in certain countries, such as Colombia, Mexico, and China. Overall, women and men in the same country report similar levels of trust in mobile operators/agents.

Technical literacy and confidence is still a barrier, especially for non-owners

Technical literacy and confidence is a key concern for women, and tends to be cited as a barrier more commonly by women than men in our study's sample countries.²⁰ This phenomenon is not just restricted to markets where mobile is not yet widely available; it is also apparent in more mature markets. For example, in China, 48% of female respondents versus 41% of male report not knowing how to use a mobile phone or the more complex features on a mobile phone as a barrier.

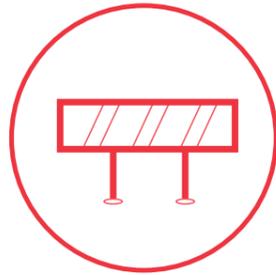
Women report technical literacy and confidence as a barrier more often than men because women are often less educated than men (which contributes to technical literacy challenges), women are often less confident with technology than men, and poorly designed services or handsets in unfamiliar languages can be a challenge for women, especially since they tend to own more basic handsets. In every country in our survey, more men than women reported working out how to use a handset on their own.

17. Depending on the sample country, network quality and coverage was reported as an issue by 19–63% of urban women, 17–54% of urban men, 36–71% of rural women and 26–74% of rural men. Excludes Egypt where a rural-urban split was unavailable.

18. Mobile networks in the 11 countries we studied cover a high proportion of each country's population: 90% or more of the population in 7 countries, 80–87% in 3 countries, and 55% in one country (2014 GSMA estimate based on GSM coverage data).

19. Figure 9 is based on the question: "Now we are going to talk about some possible reasons that might be preventing you from using a mobile phone or using a mobile phone more often or for more varied usages than you are today. Please tell me the extent to which you agree or disagree with the following statements?": "I have security concerns (for example, handset theft)"; "I am / would be contacted by strangers"; "I am / would be bothered by advertising SMS and calls".

20. 'Technical literacy' is understood here as a person's ability to use a mobile handset and the variety of services available on it to full benefit. 'Confidence' is defined here as the level of self-confidence a person has in being able to use a mobile handset and the services on the handset to full benefit. Confidence and technical literacy are considered together as they can be closely related.



Women tend to experience certain barriers more acutely than men

Women own and use mobile phones within households and societies that have certain 'social norms' that influence women's roles, status, empowerment, and access to education and income. These social norms influence women's relationship with mobile technology and, in fact, can accentuate barriers to women owning and using mobile phones.

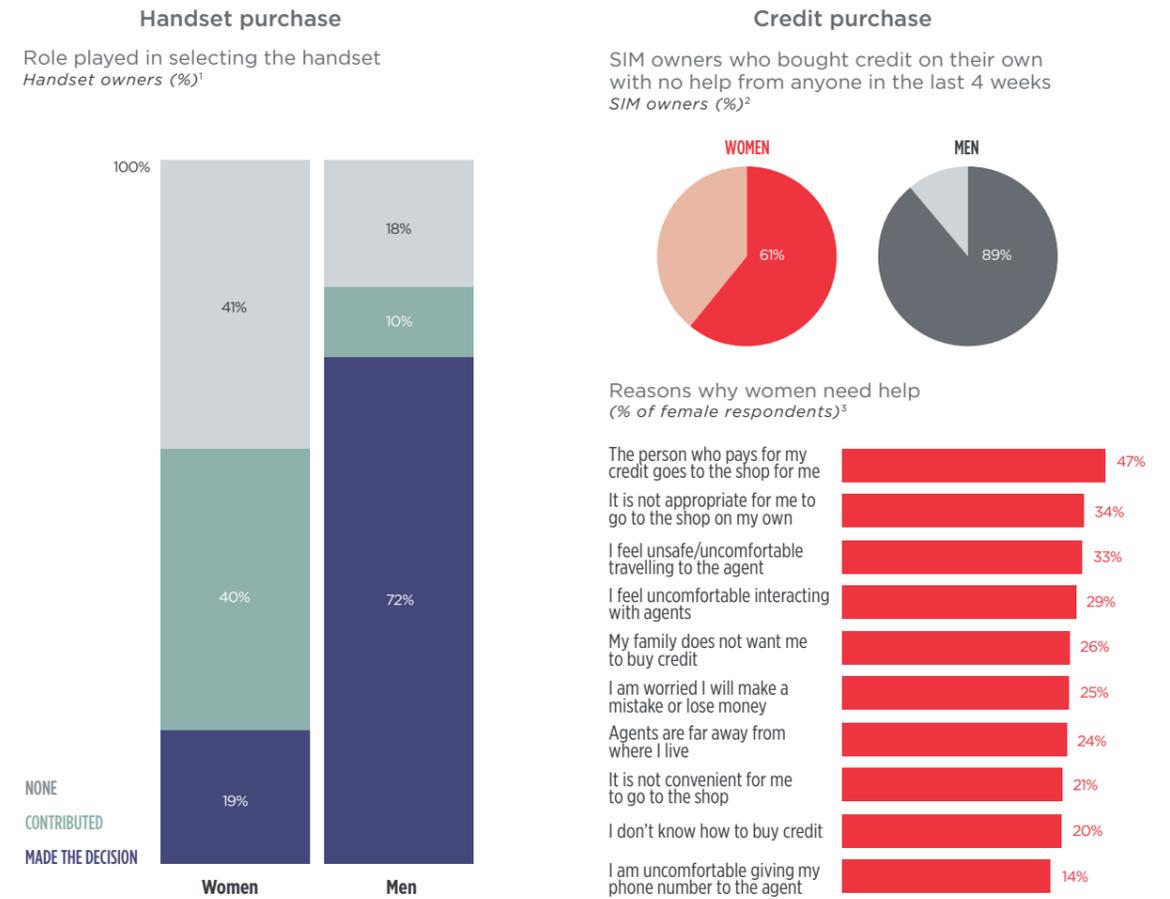
For example, social norms around how women and men make financial decisions in a household, the 'appropriateness' of men and women interacting with sales agents of the opposite sex, and community perceptions of male and female roles, all influence the customer journey for women.

The socio-economic link to mobile phone and internet access has been well documented. According to the United Nations E-Government Survey 2014, "The causes of this gender divide can stem from disparities between men and women in terms of a lack of education, lack of income, social attitudes towards female usage of technology, women having to balance their roles of mother and worker and lack of internet content relative to women's needs."²¹ Other research supports these conclusions as well.²²

The following example from our primary research (*Fig. 10*) highlights how women's experiences can differ significantly from men's—an important lesson for anyone trying to reach women through mobile technology. This example from India reveals how social norms influence women's handset choices and ability to refill credit.

Fig. 10

India: How social norms influence handset and credit purchases



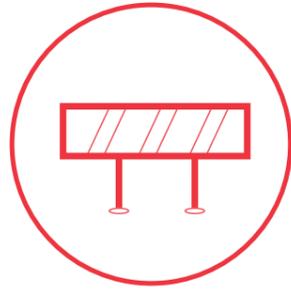
1: Sample sizes for women N= 468 and men N= 191.

2: Among SIM owners who recharged through scratch cards, e-top-up, or mobile money - women: N= 434 and men: N= 174.

3: Only includes Indian female SIM owners who said they need help from a friend, relative, or the agent to recharge - N= 252.

21. United Nations Department of Economic and Social Affairs, 2014, "United Nations E-Government Survey 2014: E-Government for the Future We Want", http://unpan3.un.org/egovkb/Portals/egovkb/Documents/un/2014-Survey/E-Gov_Complete_Survey-2014.pdf

22. Research ICT Africa found that income and education have a significant effect on mobile phone ownership in 11 countries in Africa. According to Huyer and Hafkin, the gender divide is primarily influenced and framed by socio-economic and political factors, including social and cultural barriers to technology use, education and skill levels, employment and income trends, access to media and relevant content, privacy and security, and location or mode of access for women.



Systemic barriers also prevent policy-makers and the mobile industry from serving women

In addition to the barriers experienced by female customers above, two other key systemic barriers arose during expert interviews that prevent mobile network operators and policy-makers from focusing on issues related to women's access and use of mobile technology. The first is a pervasive lack of gender-disaggregated data. Data on women's mobile phone access and usage, and on ICT more broadly, is not widely available or tracked in many low- and middle-income countries. This data gap occurs at three levels: individual mobile operator databases, national government statistics, and international institutional data and statistics. Without data, policy-makers and the mobile industry cannot appreciate the extent to which women lack access to mobile phones or how little they are using them, nor can they make informed decisions or interventions to reverse this trend.

The second barrier is a more subtle, but generally unconscious bias. Mobile operators often do not focus on female customers and potential female customers, and policy-makers typically place a low focus on gender relative to other priorities. There is, for instance, a lack of focus on gender by policy-makers in the ICT sector: of the 119 national broadband plans in place in 2012, only 30 countries included a gender component.²³

These two systemic barriers—lack of data and focus on women's access to and use of technology—need to be tackled to accelerate the adoption of mobile technology by women in low- and middle-income countries in the next five years.

²³. Broadband Commission Working Group on Broadband and Gender, Broadband Commission for Digital Development, 2013, "Doubling Digital Opportunities: Enhancing the Inclusion of Women & Girls in the Information Society", <http://www.broadbandcommission.org/Documents/working-groups/bb-doubling-digital-2013.pdf>





Image Courtesy of Qualcomm® Wireless Reach™



Recommendations

Taken together, these findings indicate the gender gap in mobile ownership and usage is driven by a complex set of socio-economic and cultural barriers negatively affecting women. Without targeted intervention from the mobile industry, policy-makers and other stakeholders, the gender gap in ownership and usage is unlikely to close naturally on its own.

It is important to recognise that although there is no 'silver bullet' to overcoming barriers, there are a number of actions that stakeholders in the mobile ecosystem could take today, which together could substantially increase women's mobile access and usage. In some markets, increasing women's mobile phone ownership and usage could be the difference between stable and growing revenues and shrinking or stagnant revenue growth.

Recommendations for stakeholders are summarised below and highlight opportunities to overcome the top barriers cited by women, as well as the systemic barriers to women's mobile phone ownership and use. Please see the main report for more detailed recommendations.

Mobile operators

- **Bring lower-cost handsets to customers**, designing solutions based on local market handset dynamics (e.g., microloans, repair services, mobile marketplace, partnerships with low-priced handset manufacturers).
- **Introduce more creative and transparent pricing** to appeal to women's price sensitivity, call patterns, and daily routines (e.g., creative tariff plans, innovative data packages, low-denomination scratch-cards, data pricing that is bite-sized or on-demand, emergency credit services).

- **Improve network quality and coverage** to reduce dropped calls and expand into rural areas.
- **Build on the perception of mobile phones as a tool for increasing women's safety** by introducing 'safety' services (e.g., to help women alert contacts in an emergency), call-blocking services, and tools to refill credit privately and remotely.
- **Invest in consumer insights research** to better deliver services that meet the needs of women.
- **Integrate user-centric design principles** into handsets and services, user testing, pilot testing, and product iteration with women.
- **Target men in marketing campaigns to reach women** in settings where men commonly make decisions about women's access to mobile.
- **Track mobile access and usage by gender** systematically in the subscriber base or through improved market research.
- **Consider partnering with NGOs and other organisations** that have expertise in technical literacy training.

Other mobile industry players (handset, VAS, app content developers)

- **Continue to develop lower-cost and more durable handsets**, including low-cost smartphones and feature phones with desirable product attributes (e.g., waterproof, longer battery life).
- **Transition women to mobile internet by** offering better user experience and features on phones.
- **Track women's uptake versus men's**, as well as usage and experience of services (e.g., integrate gender questions into in-app surveys).
- **Integrate features into handset and service design that meet the needs of women** who are less literate, less familiar with mobile, and use more basic handsets (e.g., consider IVR, icons, pictures, comic-style stories, comprehensible terminology, and clear user menus with fewer steps).
- **Integrate user-centric design principles** into handsets and services, including consumer insights research, user testing, pilot testing, and product iteration with women.



Policy-makers

- **Integrate gender into national broadband plans and track mobile access and usage by gender**, along with other ICTs, in national statistics databases.
- **Ensure women are protected on mobiles and online** by launching awareness campaigns and developing legal and policy frameworks to address harassment over mobile phones and mobile internet.
- **Ensure efficient regulation to lower costs for women and expand coverage** [e.g., reduce or remove mobile-specific taxes that exacerbate the cost barrier, allow active and voluntary infrastructure-sharing among mobile operators, release sufficient spectrum (low frequencies in particular) to mobile operators at an affordable cost].
- **Build technical literacy, confidence, and digital skills of women and girls** through integrating mobile and digital skills training for women participating in government aid programmes and in primary and secondary school curricula.

Donors and the development community

- **Provide funding for programmes to address the gender gap** in ownership and usage in low- and middle-income countries.
- **Encourage the collection of gender data** at the national and international level by funding, providing technical assistance, and facilitating partnerships.
- **Fund research in low- and middle-income countries on women's mobile use versus men's**, in addition to mobile access, and share findings to lead global advocacy efforts.

Academics and research organisations

- **Expand research in low- and middle-income countries on women's mobile use versus men's**, in addition to mobile access, and share findings with policy-makers and industry stakeholders, especially for mobile internet, security and harassment, network quality and coverage, technical literacy and confidence, and most-valued products and services.

The recommendations set out in this key report provide both a clear direction and actionable opportunities for stakeholders across the mobile ecosystem to accelerate the uptake of mobile technology by women in low- and middle-income countries. In particular, the GSMA will continue to focus on increasing women's access to and use of mobile phones, addressing the highest priority regions identified through this report.

