GSMA

Connected Women | 2015

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.

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Connected Women

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.

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Foreword

The ubiquity and affordability of mobile presents us with an unparalleled opportunity to improve social and economic development and positively impact lives. However, to realise these benefits, women must not be left behind in the mobile revolution. This report, "*Bridging the gender gap: Mobile access and usage in low- and middle-income countries*", provides new data, 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.

This research comes at a critical time. Despite efforts, there have been few global resources and data available to quantify the gender gap in access and usage of mobile technology. This report reinforces the GSMA's commitment to delivering robust data and insights to help inform the mobile industry, policy makers, and other stakeholders with the objective of evolving a mobile ecosystem that ensures women are not left out.

Mobile technology is a powerful tool. It transcends geographies, cultures and socio-economic status and offers wide-ranging benefits to women and society. Mobile phones help women feel safer and more connected, save time and enable access to key services such mobile money and health information.

They offer a cost-effective channel for delivering services and have the potential to increase access to education and employment opportunities, an area where women are still disadvantaged in many parts of the world. Increasing women's access to and use of mobile phones is also a significant commercial opportunity for our mobile industry. As such, ensuring that women have access to mobile technology and the life-enhancing services and opportunities that mobile can bring, makes good business sense.

I would like to thank all the partners who have worked with the GSMA's Connected Women programme to-date to improve access and services for women, as well as the thousands of people who contributed to this body of research. I hope the critical insights and recommendations found in this report will help our partners, members, and the wider industry continue to bridge the gender divide.

Sincerely,

Anne Bouverot
Director General, GSMA

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Executive summary

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 this life-enhancing mobile technology. Despite the progress that has been made over the last five years, there are still challenges to be overcome in ensuring women are included in an increasingly connected and internet-enabled world.

Mobile phones are important tools for enhancing the lives of women in low- and middle-income countries. Mobile phones help women feel safer and more connected, save time and money, and access life-enhancing services such as mobile money, or potential education and employment opportunities.

This report aims to build on the findings of the original study and the work of others in the last five years, highlight the progress that has been made, and identify new challenges and opportunities. 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.

Top 10 findings of 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, which prevents 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.
- **Cost remains the greatest barrier** overall to owning and using a mobile phone, particularly for women, who often have less financial independence than men.
- **Security and harassment emerged as one of the top five barriers** to mobile phone ownership and usage, and is a key concern for women.
- **Women also cite service delivery issues (network quality and coverage and agent or operator trust) and technical literacy and confidence as key barriers** to mobile phone ownership and use.
- **Social norms 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.
- **Women understand the inherent value of mobile phones** and a 'lack of perceived value' is no longer a top barrier to mobile phone ownership, indicating a positive shift in attitudes in the last five years.
- **Systemic barriers, including lack of gender-disaggregated data at all levels (e.g., mobile subscribers, national statistics) and unconscious biases within organisations, have kept the focus off women** and sustained the gender gap in ownership and usage.

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. The number of people who own a SIM but not a handset in this study is minimal. So, for the purpose of this report, 'mobile phone ownership' and 'SIM ownership' are used interchangeably.

3. Based on current population and unique subscriber penetration.

4. These countries are Colombia, Mexico, Niger, the Democratic Republic of the Congo (DRC), Kenya, Egypt, Jordan, Turkey, India, China, and Indonesia. Findings for Nigeria are not included in this report even though primary research was conducted there (see Methodology section).

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

Taken together, these findings indicate the gender gap in mobile ownership and usage are 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.

This report is aimed at the wider mobile ecosystem, including industry (MNOs, handset manufacturers, and content and application developers), policy-makers, donors, academics, and the international development community. The report provides actionable insights and recommendations for these groups to overcome the key barriers currently keeping women from accessing and using mobile technology.

Primary field research was conducted in 11[4] countries and included surveys with 11,000 women and men (both mobile phone owners and non-owners), nearly 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. As this report will explore, when women own and use mobile phones, there are significant benefits not only for women themselves, but for their communities and the broader economy as well.

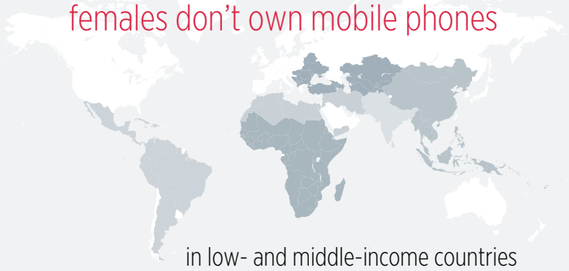
Immediately closing the gender gap in ownership would help an estimated 200 million women gain access to mobile phones today. Ensuring these women own phones, and ensuring all women who own phones in low- and middle-income countries increase their usage of phones, could unlock an estimated $170 billion[5] market opportunity for the mobile industry in the next five years and deliver substantial socio-economic benefits.

1

OVER

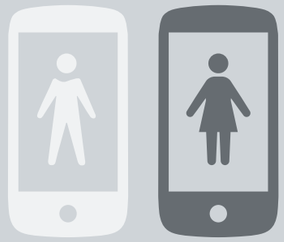
1.7 billion

females don't own mobile phones



in low- and middle-income countries

2



14% LESS LIKELY

Women are on average 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 mobile phone

highlighting that **the gender gap in mobile phone ownership is even wider in certain parts of the world**

4

Women use phones less frequently and intensively than men, especially mobile internet

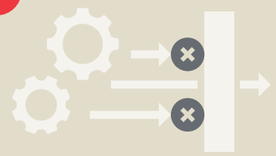
5

Cost remains the greatest barrier to owning and using a mobile phone for women, who typically have less financial independence than men

6

Security and harassment is a key concern and a top barrier to mobile phone ownership and usage for women

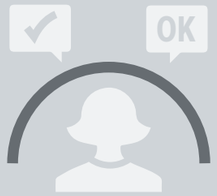
7



Service delivery issues (network quality and coverage and agent or operator trust) and technical literacy and confidence are also key barriers for women

8

Social norms can discourage women's access to and use of mobile technology



9

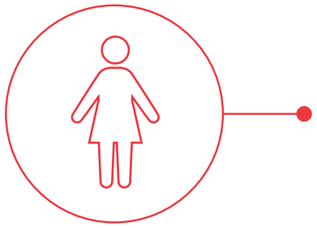
Women see value in mobile phones as a life-enhancing tool

10

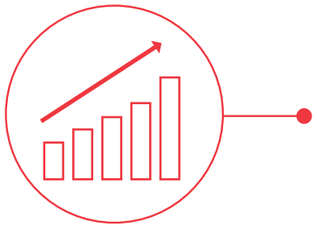
Lack of gender-disaggregated data and lack of focus on women are systemic barriers that negatively impact access to and use of mobile phones by women

Top 10 findings

THE OPPORTUNITY



Ensuring women have access to and can use mobile phones helps women feel safer, more connected, save time and money, and can increase education and employment opportunities.



Ensuring women own phones, and ensuring all women who own phones in low- and middle-income countries increase their usage of phones, could unlock an estimated $170 billion market opportunity for the mobile industry in the next five years.

Introduction

Why does it matter if women own mobile phones?

Today, over 3 billion people6 in low- and middle-income countries do not own mobile phones, and most of them—1.7 billion—are estimated to be female.[7] Women own and use mobile phones[8] at lower rates than men due to barriers such as cost, network quality and coverage, security and harassment, agent and operator trust, and technical literacy and confidence. However, women in our survey cited substantial benefits to mobile phone ownership, regardless of whether they currently owned a phone or not. In this section, we examine both the personal and broader social benefits of women owning and using mobile phones.

Mobile phones empower women

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 it saves time (or would save them time);
- at least **68%** in every country reported that 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,[9] 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.

Working women[10] and students in particular value mobile phones and declare higher levels of phone ownership than non-working women. In all countries, at least 64% of working women say they have (or would have) greater access to business and employment opportunities because of mobile, which is consistently higher than non-working women. In most countries, working women more often declare that mobile phones help (or would help) them save money or better manage their money relative to non-working women. Similarly, female students report that mobile phones give them (or would give them) easy access to mobile internet and better access to educational opportunities at higher rates than both working and non-working women in all countries.

These findings, reinforced by a number of other studies about women and mobile, show that women around the world value mobile phones as a tool that enhances their lives, making them feel more autonomous and connected, able to access new opportunities, and save time and money.

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.[11] 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.

6. 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, which provided consulting for this report.

7. The estimated number of unconnected females in the market is calculated using adjusted GSMA Intelligence data on unique subscribers and Altai analysis.

8. The number of people who own a SIM but not a handset in this study is minimal. So, for the purpose of this report, 'mobile phone ownership' and 'SIM ownership' are used interchangeably.

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

10. 'Working women' excludes homemakers, retired and unemployed individuals, and students.

11. GSMA Intelligence, 2014, "The Mobile Economy 2014", http://www.gsmamobileeconomy.com/GSMA_ME_Report_2014_R2_WEB.pdf

12. 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

13. This is an indicative decrease based on findings from the original 2010 study, where the gender gap in mobile phone ownership in Kenya was estimated to be 22%. GSMA Mobile for Development, 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

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).[12]

CASE STUDY

The impact of mobile on women and economies: M-Pesa improves the lives of women and contributes significantly to the Kenyan economy

While M-Pesa's role in boosting financial inclusion has been well studied, little has been reported on the substantial impact Safaricom's award-winning mobile money solution has had on bridging the gender gap in mobile ownership. It is estimated that the gap has decreased to only 7% today.[13] Most industry observers attribute this impressive performance to M-Pesa. During expert interviews, academics, NGOs, and MNO executives explained that M-Pesa was a catalyst to women owning phones. An extremely relevant and valuable product, M-Pesa allows cheap and efficient money transfers, often from sons or husbands working away from home to their mothers or wives. The cost savings of cutting out middlemen, transport costs and fees, as well as the safety and security of M-Pesa, are beneficial enough to justify the costs of mobile phone ownership.

Women are frequent users of M-Pesa and use it to a similar extent as men, although they are more often receivers than senders. In our research, half of the women in Kenya who owned or borrowed a mobile phone declared they had received money and topped-up credit through mobile money in the past 7 days. Women are largely autonomous M-Pesa users, with more than 80% of women phone owners or borrowers stating they are able to receive and send money and top-up credit through mobile money without any help.

During focus group discussions, several women reported that M-Pesa was one of their favourite uses of the mobile phone:

"I use my mobile phone mostly for communication, to send messages and for M-Pesa: this is the most crucial." – Urban female user, Kenya

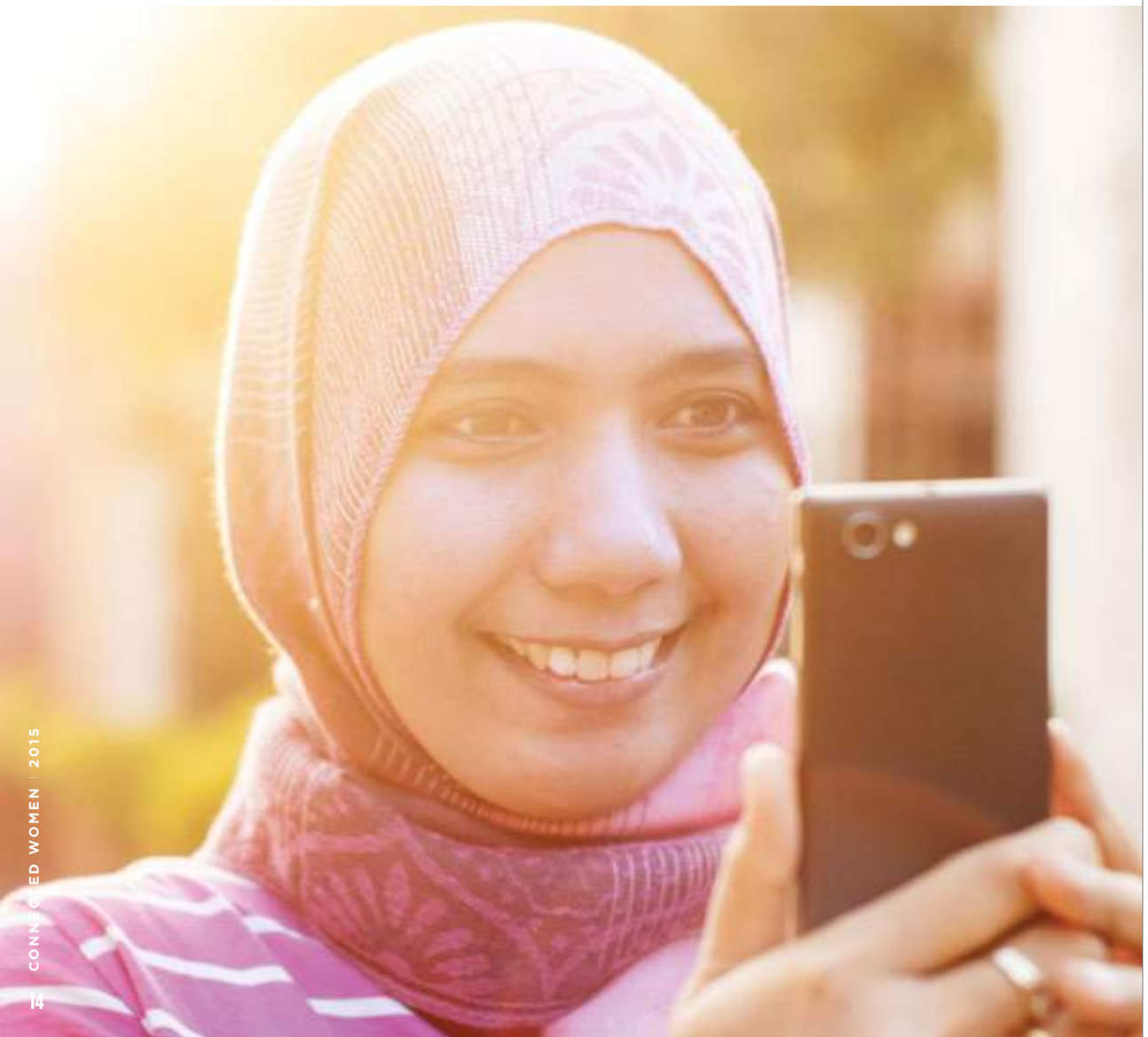
"M-Pesa is now part of the social fabric: it cuts across all cultural barriers which could exist around women and phones….this means it would be ridiculous not to make mobile phones accessible to women." – Safaricom executive

Mobile users in Kenya who performed the following operations in the last 7 days
Users (%)

Note: *Sample sizes for women N= 785 and for men N= 222*

Background to the study

In 2010, the seminal study, *Women and Mobile: A Global Opportunity*[14] by the GSMA, the Cherie Blair Foundation for Women, and Vital Wave Consulting, found that women in low- and middle-income countries were 21% less likely than men to own a mobile phone, resulting in an estimated $13 billion immediate missed market opportunity for mobile operators and on-going annual revenue losses of $29 billion.[15] The high cost of mobile ownership, cultural barriers, low technical literacy among women, and a low perception of the value of mobile were found to be the key barriers hindering women's access to this life-enhancing technology. This study was viewed over 18,000 times on the GSMA website alone and drew worldwide attention to the digital divide between men and women in low- and middle-income countries.



"The causes of this gender divide can stem from disparities between men and women in terms of a lack of education, lack of income, [and] social attitudes towards female usage of technology..."
– United Nations E-Government Survey 2014

From these efforts, the GSMA, in partnership with the United States Agency for International Development (USAID), the Australian Department of Foreign Affairs and Trade (formerly AusAid), and Visa founded the GSMA mWomen programme, which was launched by Hillary Clinton in 2010. Now rebranded under the GSMA Connected Women name, the programme launched 11 innovation grants across 11 countries in Africa and Asia to encourage mobile network operators to develop products and services for resource-poor women, in addition to a Pacific programme to support the mobile ecosystem in the region. The programme has also published over 25 reports that provide valuable insights on women's access to and usage of mobile phones, as well as best practices for industry and international development practitioners to serve women through mobile. Insights and lessons are shared at quarterly Working Group events around the world, which bring together participants from 72 operators in 47 countries, as well as leading NGOs, donors, and other stakeholders who serve over 14 million women globally with mobile products and services.

In the last five years, in addition to the work of the GSMA, several other actors have worked tirelessly to understand and bridge the gaps in women's access to and use of mobile phones in low- and middle-income countries. In particular, 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."[16]

Other research supports these conclusions as well. Research ICT Africa found that income and education have a significant effect on mobile phone ownership in 11 countries in Africa.[17] According to Huyer and Hafkin,[18] 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.

The work of the ITU, UNCTAD, the UN Broadband Commission on Gender, and other groups such as the Alliance for Affordable Internet, have also been critical in advancing issues around gender and affordable mobile and internet access in low- and middle-income countries. Industry players such as Qualcomm, Intel, and GSMA mobile network operator members such as Ooredoo, also play an important role in raising awareness and driving change in the private sector.

This report is designed to refresh and advance the findings from the 2010 *Women and Mobile: A Global Opportunity* study, and contribute more broadly to the substantial existing body of knowledge on gender and ICT. In particular, this study highlights the 'usage gap' between men and women in many countries, and emphasises the importance of focusing on both usage and access to fully close the digital divide between women and men in the next five years. Most studies to date have focused primarily on access, and this paper aims to advance the conversation. This report also highlights the importance of ubiquitous gender-disaggregated statistics on ICT in informing decisions at the individual company, industry, and national and international policy levels.

The UNCTAD Partnership on Measuring ICT for Development recently noted that sources of gender-disaggregated statistics on mobile phone ownership, access, and usage in low- and middle-income countries are still limited. In a recent report,[19] the Partnership noted that aggregated data collection tends to mask gender differences and called for gender-disaggregated measures of mobile ownership, access, and usage at the macro-economic level to inform national policies and set international policy goals.

14. *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*

15. *Ibid.*

16. *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*

17. *Mariama Deen-Swarray, Alison Gillwald, and Ashleigh Morrell, 2012, "Lifting the Veil on ICT Gender Indicators in Africa," Policy Paper 13, Research ICT Africa & University of Cape Town, http://www.researchictafrica.net/publications/Evidence_for_ICT_Policy_Action/Policy_Paper_13_-_Lifting_the_veil_on_ICT_gender_indicators_in_Africa.pdf*

18. *Nancy J. Hafkin and Sophia Huyer, Winter 2007, "Women and Gender in ICT Statistics and Indicators for Development" Information Technologies and International Development, 4 (2), 25-41, http://itidjournal.org/itid/article/viewFile/254/124*

19. *UNCTAD Partnership on Measuring ICT for Development, 2014, "Measuring ICT and Gender: An Assessment", http://unctad.org/en/PublicationsLibrary/webdtlstict2014d1_en.pdf*

Methodology, definitions, and limitations

Methodology, definitions, and limitations

Methodology

This report is based on five main sources of primary and secondary information, namely:

- 11,000 closed-ended, face-to-face interviews with both men and women conducted in 11 countries:[20] Niger, India, the Democratic Republic of the Congo (DRC), Mexico, Indonesia, China, Turkey, Kenya, Colombia, Egypt, and Jordan.
- 77 focus group discussions with both men and women conducted in 11 countries.
- 123 expert interviews conducted at country and global levels.
- Market research and/or usage data from mobile network operators in more than 35 countries. Mobile operators voluntarily shared anonymous, gender-disaggregated data at their disposal.
- Research reports and secondary data sets on gender and ICT from the mobile industry, international development organisations, academics, and other sources.

Countries were chosen in consultation with external stakeholders across the mobile ecosystem to represent a high proportion of the population in low- and middle-income countries, mix of geographic regions, mix of income levels, and the presence of large mobile network operators.

Altai Consulting staff personally trained and oversaw the launch of the fieldwork by local research partners. A strict monitoring process was implemented: an independent researcher called back 15% of survey respondents and tablets were used to track the GPS coordinates and length of each interview.[21] Whenever irregularities were detected, surveys in question were discarded and additional surveys conducted to correct these irregularities. Additionally, female interviews were conducted by female researchers wherever feasible.

The quantitative survey sample of 11,000 people was designed to provide a mix of respondents from rural and urban areas, as well as reflect each country's geographical diversity within the constraints of a limited sample size. Qualitative work with focus groups included a mix of men and women with low and high levels of formal education from both urban and rural areas.

An extrapolation model was developed to estimate the gender gap in mobile ownership across the 139 low- and middle-income countries. This was based on recent[22] mobile ownership data from 22 countries, of which 11 were the primary research countries in this study, 9 were countries where selected mobile operators had agreed to disclose data, and 2 were publicly available data sets. Three independent variables out of 72 were selected based on their ability to predict the mobile ownership gender gap when compared to the actual measured ownership gender gaps in the 22 countries. For more details on the model, please see the Methodology Annex on the Connected Women website.

This report focuses on the differences in self-reported data on mobile phone access and usage between women and men in low- and middle-income countries. For global market data, GSMA Intelligence provides a comprehensive range of subscriber, operational, and financial statistics available at https://gsmaintelligence.com.

For more information on the methodology, please download the Methodology Annex found on the Connected Women website.

20. Nigeria was initially part of the country selection, but results of the quantitative survey and focus group discussions in this country were eventually discarded as data could not be cross-validated with secondary sources of information. However, findings from expert interviews in Nigeria are included in this report.

21. In Turkey, laptops were used and in China, paper-based surveys were conducted.

22. Less than two years old.

23. GSMA Mobile for Development, 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

24. GSMA Intelligence is a unit within the GSMA that houses an extensive database of mobile operator statistics, forecasts, and industry reports.

25. GSMA Intelligence, 2014, "Measuring mobile penetration", https://gsmaintelligence.com/analysis/2014/05/measuring-mobile-penetration/430/

26. GSMA Intelligence, 2014, "Evaluating consumer spending: the need for a revised ARPU metric", https://gsmaintelligence.com/analysis/2014/10/evaluating-consumer-spending-the-need-for-a-revised-arpu-metric/448/

27. Ibid.

Definitions

Unique subscriber: Single individual who has subscribed to a mobile service and may hold multiple mobile connections (i.e., SIM cards) as calculated by GSMA Intelligence.[25]

Unique subscriber penetration: Unique subscribers divided by the total population using GSMA Intelligence data.

ARPU: Average revenue per user. This is calculated based on mobile revenue received by a mobile operator(s) divided by the average number of SIM connections over a certain period of time (often one month).[26]

ARPS: Average revenue per unique subscriber. This is calculated based on mobile revenue received by a mobile operator(s) divided by the average number of subscribers over a certain period of time (often one month).[27]

Gender gap in ownership: Refers to how less likely a female is to own a mobile phone than a male:

$$\text{GENDER GAP IN OWNERSHIP (\%)} = \frac{\text{MALE PHONE OWNERS (\% OF MALE POPULATION)} - \text{FEMALE PHONE OWNERS (\% OF FEMALE POPULATION)}}{\text{MALE PHONE OWNERS (\% OF MALE POPULATION)}}$$

Low- and middle-income countries: Includes all countries classified as low-income (GNI per capita of US$ 1,045 or less in 2013), lower-middle income (GNI per capita between US$ 1,046 and US$ 4,125) or upper-middle income (GNI per capita between US$ 4,126 and US$ 12,745) by the World Bank.

Survey respondents in the 11 countries where primary research was conducted are divided into either mobile 'users' or 'non-users':

Users	Non-users
• Has used a mobile (in the last 3 months)	• Has not used a mobile (in the last 3 months)[1]

Mobile 'users' have been divided into either mobile 'owners' or mobile 'borrowers', based on whether or not they own a SIM:

Users	
Owners	Borrowers
• Own a SIM (that they carry with them most of the day)[2]	• Does not own a SIM (that they carry with them most of the day)
• Vast majority[3] also own a handset,[4] so 'owners' are referred to as 'mobile phone owners' in this report	• Majority[5] of 'borrowers' borrow (or share) a handset and a SIM together, but some borrow a SIM only

1. *Non-users may have used a mobile phone in the past;*
2. *Owners may own more than one SIM;*
3. *Over 96% in all countries except in DRC, where 91% of SIM owners also own a handset;*
4. *That they carry with them most of the day. Owners may own more than one handset;*
5. *79–100% per country.*

Limitations

There are a number of limitations to the use of this data and analysis, and readers are asked to note that:

- Conclusions on the gender gap in mobile ownership across all 139 low- and middle-income countries are difficult to extrapolate from only 22 countries.
- Direct comparisons should not be made between estimates of the gender gap in mobile phone ownership in the GSMA 2010 research[23] and this study, as data and analysis have substantially expanded since then. There are three major differences:
  - » new World Bank classifications of low- and middle-income countries;
  - » availability of new data, especially unique subscriber data estimates that are based on total population from GSMA Intelligence;[24] and
  - » quantitative surveys of both men and women were both included in this study, whereas the 2010 study only included women.
- Care should be taken when making direct country comparisons in multi-country surveys. For example, the cultural understanding and interpretation of questions may differ from one country to another.
- Due to limited resources, certain trade-offs were necessary. Overall sample sizes were limited for all countries, which means the findings for larger countries may be more representative of the particular areas sampled than the country as a whole.

Mobile phone access and usage

Image Courtesy of Qualcomm® Wireless Reach™

In low- and middle-income countries, women's phone ownership is increasing, but many are left behind

Despite rapid growth in mobile ownership in low- and middle-income countries, many are still left behind—especially women. In low- and middle-income countries, over 3 billion people still do not own mobile phones, of which approximately 1.7 billion are female.[28] Nearly 2/3 of unconnected females live in the South Asia and East Asia & Pacific regions (*Figs. 4.1 and 4.2*), which is not surprising given that these two regions are the largest in terms of population. A significant number of unconnected females—over 300 million—also live in Sub-Saharan Africa.

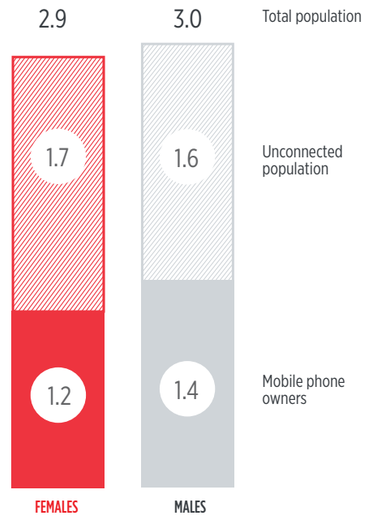
These high numbers underscore the importance of continuing to focus on improving mobile phone access for the unconnected, especially women who are still left behind. It is also important to note that across all regions, less-developed countries typically have lower mobile ownership levels, and many women in these countries are still unconnected (see the example of Papua New Guinea in *Fig. 4.3*).

Given the benefits of mobile phone access and use for women and society overall, reaching the unconnected market should be a key priority for both industry and policy-makers. In fact, since women represent the majority of the unconnected market, it is essential to develop policies and coordinated strategies with the mobile industry.

Fig. 4.1

Mobile phone ownership in low- and middle-income countries

Population (billions)



Note: *There are 80 million fewer females than males in low- and middle-income countries; unconnected population includes individuals who do not own, but may borrow phones.*

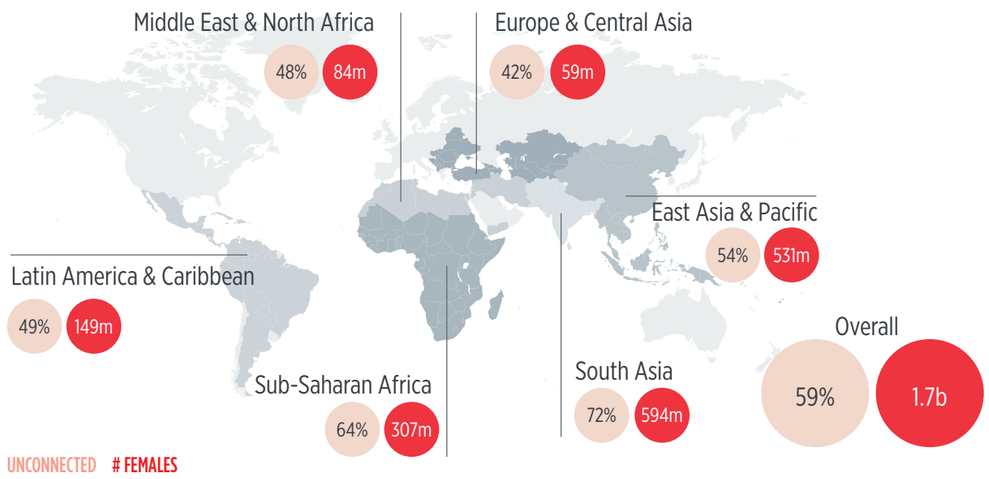
Source: *GSMA Intelligence and World Bank data, Altai Consulting analysis*

28. The estimated percentage of non-owners is based on GSMA Intelligence unique subscriber data for the total population and Altai analysis.

Fig. 4.2

Population of unconnected women in low- and middle-income countries

Females who are unconnected by region (% of females, absolute number of 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*

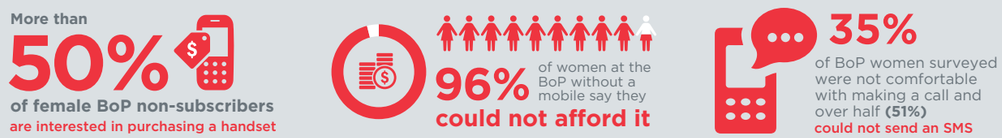
CASE STUDY

Papua New Guinea: The challenge of reaching unconnected, base-of-the-pyramid women in the Pacific

The East Asia and Pacific region has the second highest number of unconnected females across low- and middle-income regions. For example, Papua New Guinea is home to 7.1 million people, nearly 70% of whom have no access to mobile phones. Women at the base of the pyramid are even worse off: with only 16% reporting that they own a mobile phone. Half of women at the base of the pyramid who do not own a mobile phone reported being interested in purchasing one, and 96% of them say the reason they do not own a phone is because they cannot afford it. These unconnected populations offer long-term opportunities for investment for mobile network operators and other mobile industry players.

Not only do women in this market want to own mobile phones, they would also reap significant benefits from ownership. However, reaching them requires focused policy intervention and coordination with the mobile industry to increase coverage, lower costs, and improve the economic status of women in the region.

Fig. 4.3



***Source**: GSMA Connected Women, 2014, "Striving and surviving in Papua New Guinea: Exploring the lives of women at the base of the pyramid", http://www.gsma.com/connectedwomen/wp-content/uploads/2014/11/mWomen_PNG_v3.pdf*

Creating an equitable mobile ecosystem: Bridging the mobile ownership gender gap

Sceptics might argue that increasing mobile ownership among unconnected populations is a tall order—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?

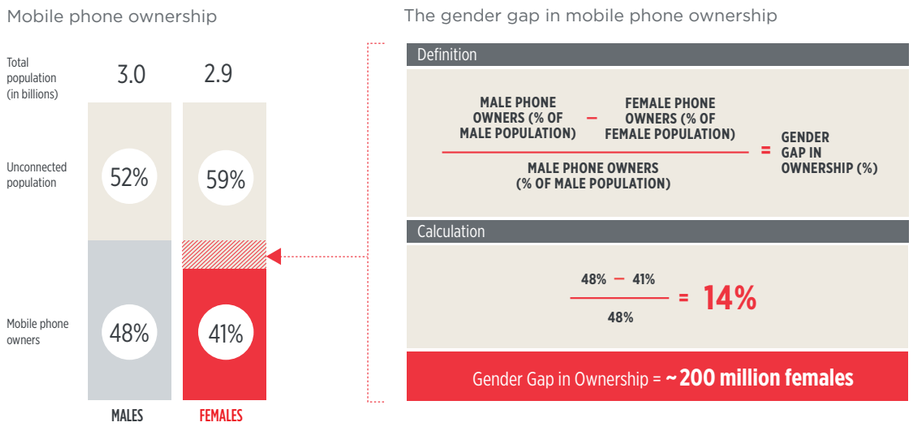
The gender gap in mobile ownership, for the purpose of this report, is defined as:

$$\text{GENDER GAP IN OWNERSHIP (\%)} = \frac{\text{MALE PHONE OWNERS (\% OF MALE POPULATION)} - \text{FEMALE PHONE OWNERS (\% OF FEMALE POPULATION)}}{\text{MALE PHONE OWNERS (\% OF MALE POPULATION)}}$$

Our analysis shows the gender gap in mobile phone ownership in low- and middle-income countries currently stands at an estimated 14% *(Fig. 4.4)*, but this average masks a greater inequality between male and female 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% (*Figs. 4.5 and 4.6*). Though other regions show lower overall gender gaps in ownership, it is important to note there are likely countries within these regions with high gender gaps in mobile ownership despite an overall positive regional score. These gaps are likely to be found in countries with high rates of poverty and low mobile ownership rates. For example, even though this model estimates that Sub-Saharan Africa has a 13% gender gap in mobile phone ownership overall, the primary research we conducted in Niger showed a 45% gender gap in mobile phone ownership. Therefore, readers should be careful not to assume that the regional average is indicative of every country within that region.

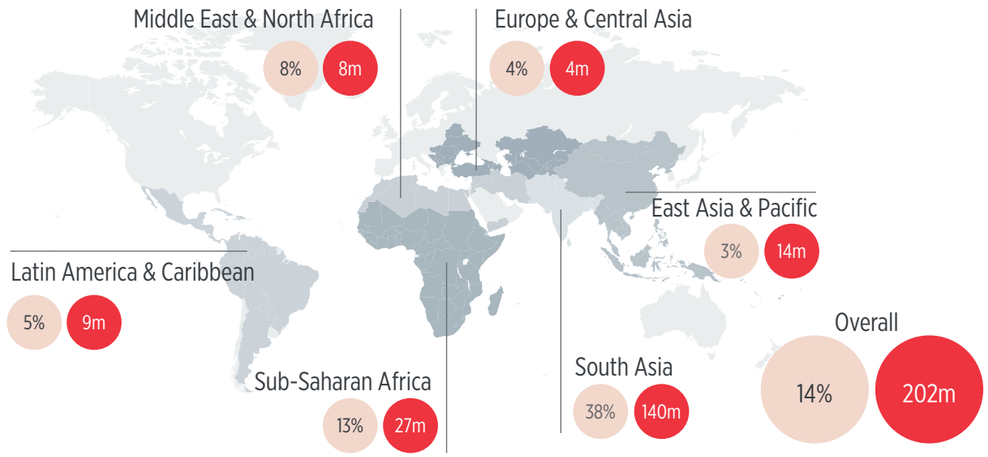
Another key observation from the in-country research we conducted in 11 countries is that wealthier countries (i.e., higher per capita GDP) generally have smaller gender gaps in mobile phone ownership. These countries include China, Turkey, Mexico, and Colombia. This finding is in line with the findings of other studies that show socio-economic factors play a role in mobile phone ownership.

Fig. 4.4
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. 4.5
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*

Fig. 4.6
Distribution of female mobile phone owners across low- and middle-income countries
Female population (millions)

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

However, in Mexico, where the overall gender gap in ownership is relatively low at 6%, there was a notable gender gap in mobile ownership in rural areas. Rural women were estimated to be 26% less likely to own a phone than rural men, compared with urban women who are 2% less likely to own phones than urban men.[29] Other wealthier countries showed no significant difference between male and female phone ownership in rural and urban areas. The Mexico example reveals the importance of understanding the country context to appreciate the different needs of women living there.

There are also two interesting exceptions to the correlation between wealth and mobile phone ownership in this sample: Kenya and Egypt both exhibit very small gender gaps in mobile ownership relative to their income levels (7% and 2% respectively).[30] The introduction of M-Pesa, discussed earlier in this report, likely contributed to increasing mobile phone ownership for women in Kenya. In Egypt, mobile phone ownership is high for both men and women, likely due to a highly competitive mobile market that keeps prices low. However, more research should be conducted to fully understand what drives ownership and usage for women in these countries.

In contrast, Jordan, which is in the mid-range of income relative to other countries in the sample (and wealthier than Kenya), exhibits a wide gender gap in mobile phone ownership: 21%. This is likely due to the substantial barriers women face in this country relative to their male counterparts, which are explored in more detail later in this report.

These exceptions 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; and 2) the gender gap in mobile phone ownership does not always close automatically, as income in a country can increase even as women face substantial barriers, as in the case of Jordan.

Therefore, ensuring women own 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).

The new gender gap: Mobile phone usage

The first study on the gender gap in mobile phone ownership, *Women and Mobile: A Global Opportunity*, was conducted in 2010 and focused primarily on mobile phone access and ownership since the technology was still new in many markets. Five years on, with more women connected, understanding the differences in how men and women use mobile phones is increasingly important.

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 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. Higher-end feature phones and smart phones can also allow individuals to have their voices heard through social media such as Twitter and Facebook. For women in low- and middle-income countries, these services are potentially valuable tools for helping them connect with friends and family, manage their time better, and have access to more opportunities.

However, 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.

In this study, mobile phone owners were asked how they used their mobile phone, including voice, SMS, mobile internet (e.g., social media), and other value-added services (e.g., mobile money, entertainment). The following findings highlight substantial differences in how men and women report using mobile services and reveal an opportunity to increase usage by women in low- and middle-income countries.

29. Altai Consulting analysis.
30. Altai Consulting analysis.

Women's usage patterns often differ from men, even with voice

Women report using mobile services differently than men because their daily patterns and preferences also differ. For example, since women are often in charge of daily household activities, such as cooking and caring for children, their free periods may be at different times of the day, such as during the middle of the day rather than mornings or evenings. Whereas men may make more calls during their free hours in the morning or evening, women's calling patterns often reflect a different schedule. In some markets, mobile operators notice these differences when they take time to identify female customers and analyse usage patterns. One example is a leading mobile network operator in South Asia, whose findings appear in *Fig 4.7*. Similar call patterns were revealed through expert interviews and focus group discussions in Jordan as well.

These differences in usage patterns between men and women are important because they show that a 'one-size-fits-all' approach to mobile services can discourage women from using them. In some cases, women may be more price sensitive than men, but understanding their usage patterns could help mobile network operators design tailored tariff plans for women that meet their needs. For example, the need for fewer, but longer calls. Asiacell implemented one such plan in Iraq.

Asiacell's Almas line is designed to suit women's mobile habits, allowing users to receive a 50% discount after the third minute of each on-net call and during the preferred time slot of their choice (8:00–11:00 am; 2:00–5:00 pm or 10:00 pm–1:00 am).

These examples highlight the importance of gender-disaggregated data for mobile service providers to identify opportunities to provide value to female customers and secure a competitive advantage. It is also worthwhile to note that these affordable pricing plans for women do not necessarily 'cannibalise' higher priced tariff plans for men. In this case, by only discounting after the third minute, most calls made by men were still made at the undiscounted rate.

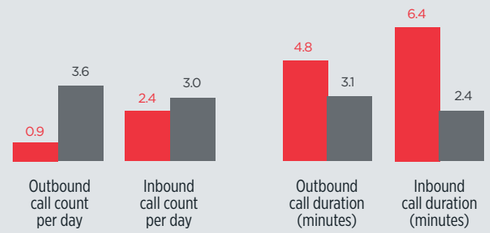
CASE STUDY

Call Detail Record (CDR) analytics conducted by a leading mobile operator in a South Asian country illustrate the differences observed between men and women when using mobile services, including basic services such as voice.

- Women generally appear to make and receive fewer calls than men over the same time period. The difference is particularly striking in the number of calls made (outbound calls), with women making 4 times fewer calls than men.
- Women tend to receive more calls than they make. The ratio of inbound/outbound calls made by women was almost 3:1 compared with less than 1:1 for men.
- Women appear to engage in longer calls than men, particularly when comparing the duration of calls received (inbound calls), which are almost 3 times longer for women than for men.

Note: The gender of the user was pre-identified through a phone-based survey

Fig. 4.7
Key voice metrics
Count and duration of inbound and outbound calls for men and women recorded by leading South Asian operator



Source: *South Asian operator CDR analytics (September 2014)*

Fewer women than men report trying mobile services other than voice

In most countries, fewer women than men phone owners report using mobile services beyond voice. 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).

In 6 of the 11 countries studied in this report, both women and men phone owners try SMS at similar rates (i.e., most have sent an SMS in their lifetime).[31] However, in China, India, DRC and Niger, women lag behind men in sending an SMS (*Fig. 4.8*). In contrast, women in Colombia outpace men in SMS use.

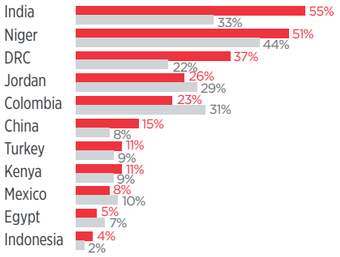
In China, India, DRC, and Niger, women from both poorer and wealthier households lag behind men in SMS usage (*Fig. 4.9 and 4.10*). In India, DRC, and Niger, where women lag behind men in SMS usage, lower levels of literacy among women when compared with men likely play a role in explaining these levels of usage. Indian women from both wealthier and poorer households, as well as women from lower income households in Niger, also cited technical literacy more often than their male counterparts as a barrier to mobile phone ownership and usage. In China, more research is needed to understand the drivers of the usage gap between men and women in SMS.

In these countries, there is an opportunity to bridge the usage gap between men and women both in wealthier and poorer households by increasing technical literacy, as well as by providing more relevant products and services for women. For poorer segments of the population, it is also important to offer affordable mobile products and services.

Fig. 4.8

Mobile phone owners who report never sending an SMS

Mobile phone owners (%)

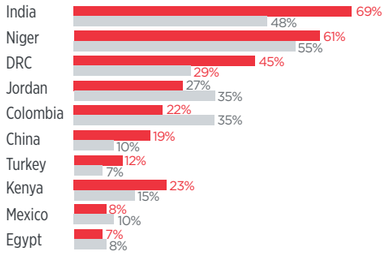


Note: *Sample sizes for women N= 330 to 807 and for men N= 133 to 234*

Fig. 4.9

Mobile phone owners from poorer households who report never sending an SMS

Mobile phone owners (%)

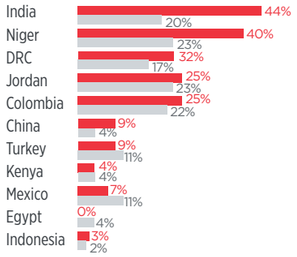


Note: *Household wealth based on TV ownership in DRC, Niger, Kenya; motorbike ownership in India, Colombia; car ownership in China, Egypt, Jordan, Mexico, Turkey. Sample sizes for women N= 139 to 524 and for men N= 52 to 148*

Fig. 4.10

Mobile phone owners from wealthier households who report never sending an SMS

Mobile phone owners (%)



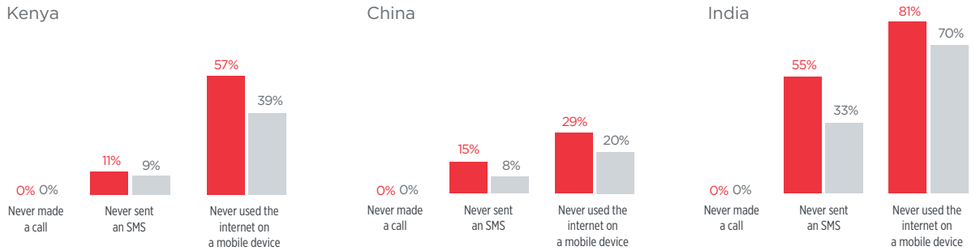
Note: *Household wealth based on TV ownership in DRC, Niger, and Kenya; motorbike ownership in India, Indonesia, and Colombia; car ownership in China, Egypt, Jordan, Mexico, and Turkey.*

Sample sizes for women N= 149 to 598 and for men N= 53 to 171

Fig. 4.11

Mobile phone owners who report never using certain mobile services

Mobile phone owners (%)



Note: *Sample sizes for women N= 472 to 807 and for men N= 193 to 225*

Women are moving up the digital ladder at a slower pace than men

In several countries in the study, the gender gap in usage widens for more sophisticated mobile services (*Fig. 4.11*).

These examples illustrate that women move up the digital ladder more slowly than men. In *Fig. 4.11*, there is no gender gap in self-reported voice calls by male and female survey respondents, but gaps are emerging in SMS usage generally, and even greater gender gaps in mobile internet usage are evident in Kenya and China. In India, the reported usage gap for mobile internet is smaller than for SMS, likely because the women and men who access mobile internet are more highly educated. In contrast, with SMS use, literacy rates between men and women may vary to a greater degree.

Women report using mobile internet less than men

Differences in mobile internet use between women and men were apparent in the 11 countries where we conducted primary field research, indicating that fewer women than men use internet on a mobile phone.

Our study found 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.[32] 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 be less likely than men to have access to the internet for the foreseeable future.

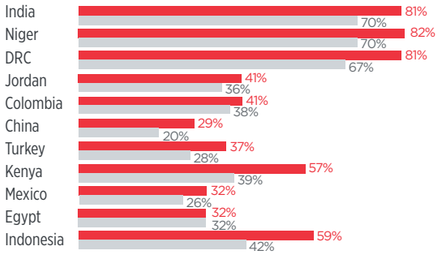
"Men have the latest touchscreen phone whereas women only have basic mobile phones."
– Rural female user, India

In 9 of the 11 countries, more women than men report never trying mobile internet (*Fig. 4.12*). The exceptions are Colombia and Egypt, where men and women access mobile internet at similar rates.

Fig. 4.12

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

Mobile phone owners (%)



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

However, 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 those from poorer households are greater than between men and women who are both from poor households.

31. Note: reported SMS usage excludes IP-based services such as WhatsApp, which are discussed in the social media section of this report. In China, Jordan, and Colombia, both men and women mentioned these services in focus group discussions.

32. For a detailed analysis of handset costs, see the handset cost barrier section of this report and Fig. 5.5.

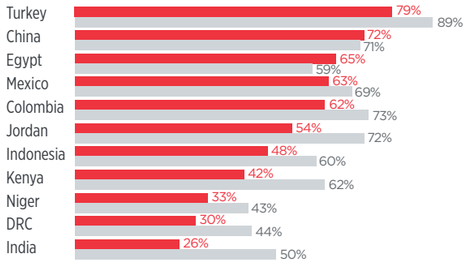
Social media appeals to women

Social media is particularly appealing to women, but women still lag behind men in usage even among feature phone and smartphone owners (*Figs. 4.13 and 4.14*). Three notable exceptions are Egypt, where women report higher levels of Facebook and Twitter usage than men who also own an internet-enabled phone; China, where women and men use WeChat equally; and Jordan, where women and men use Twitter equally (*Figs. 4.13 and 4.14*).

Fig. 4.13

Smartphone and feature phone owners who report using Facebook or WeChat

Smartphone and feature phone owners (%)

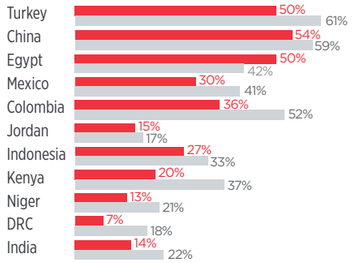


Note: *WeChat is in China only; sample sizes for women N= 99 to 754 and for men N= 60 to 215*

Fig. 4.14

Smartphone and feature phone owners who report using Twitter or Weibo

Smartphone and feature phone owners (%)



Note: *Weibo is in China only; sample sizes for women N= 99 to 754 and for men N= 60 to 215*

There are roughly 3 men for every woman on Facebook in India

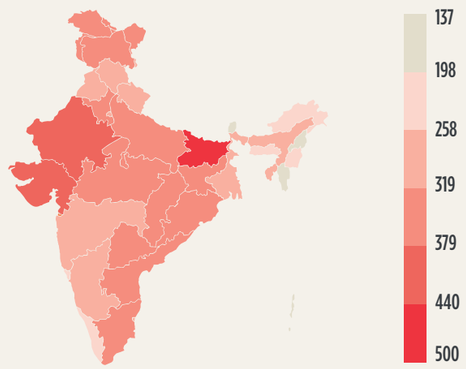
Facebook currently has 111 million users in India, of which 84 million are men and only 27 million are women. This national average hides many regional disparities, however. In states with the lowest Facebook penetration among women, such as Bihar, Gujarat or Rajasthan, there is one female user for every 4 males, whereas in states like Mizoram this gap narrows to one female for every 1.37 males.

With a few exceptions, there seems to be a correlation between overall Facebook penetration and the gender ratio of users. Mizoram and Sikkim, for example, have the highest overall Facebook penetration among their population (above 23%) and the smallest gap between male and female users. Some of the differences observed between men and women may be explained by the types of handsets women use (women generally have access to less sophisticated devices), limited access to the internet, lower levels of technical literacy, and social norms which may limit or control women's access to mobile services in general, and social media in particular.

Source: *Medianama, 2014, http://www.medianama.com/2014/10/223-facebook-india-users/*

Sex ratio on Facebook in India

Men per 100 women



In focus group discussions across countries, men were perceived as having more access to mobile internet than women. However, where men and women both use mobile internet, women were perceived as using it more, but for more social purposes (e.g., social media).

In focus group discussions in Niger, India and DRC, where both men and women have limited access to the internet, mobile internet was seen as a tool for students or urban residents. In Indonesia and Kenya, awareness of mobile internet was high and women expressed a desire to use the internet as a way to connect with family and children, as well as use social media (i.e., Facebook, WhatsApp).

In Jordan, Turkey and Mexico, all groups were aware of mobile internet, and usage is reportedly more frequent among urban dwellers. Mobile internet in Jordan is viewed favourably by both women and men as a way for women to interact with friends and family, as well as for entertainment since they are in the home for most of the day. In fact, in Jordan, women reported highly valuing group chat services and social media channels, as they tend to spend most of their time at home. Accessing social media and communicating via WhatsApp can be a window to the outside world.

"*Women do not go out as much, and they need their mobile phones to connect to the outer world.*"
— Urban male, Jordan

In China, there was a perception among both men and women that women tend to use mobile internet more often than men, specifically for entertainment, such as chatting via WeChat, and for online shopping.

In focus group discussions in all countries except Jordan and China, the higher the level of education, the more likely men and women are to be aware of and report using more sophisticated services such as mobile internet and social networking. In all countries except Jordan and China, very few rural women with low education levels used mobile internet, whereas some rural men in all countries with low education levels used it.

Taken together, the quantitative and qualitative findings for mobile internet and social media suggest that when women are aware of these services they have a strong desire to use them, and social media is particularly appealing. However, women lag behind men in using these services due to a number of barriers discussed later in this report.

These services offer a substantial commercial opportunity for mobile industry players and can benefit women. Overcoming the barriers women face will be essential to encouraging women to move up the digital ladder and use mobile internet and social media in greater numbers.

Closing the gender gap in mobile ownership and usage could add an additional $170 billion to the industry by 2020

Taken together, closing the ownership and usage gender gap could add an additional ~$170 billion in revenue to the mobile industry by 2020 (*Fig. 4.15*). Three scenarios for forecasting revenue are laid out: 1) business as usual or 'status quo', 2) concerted efforts implemented to bridge the ownership gap, and 3) concerted efforts made to bridge ownership and usage gaps (*Fig. 4.16*).

The relative degree of focus on women's mobile phone ownership and usage varies by region and country (*Fig. 4.17*). For example, mobile network operators in South Asia, where there is a large gender gap in mobile ownership, should prioritise closing this gap since it is estimated this would contribute $15 billion in the next 5 years (versus only $8 billion if the usage gap were closed). In East Asia and Pacific, which is dominated by a few large markets (e.g., China, Indonesia), the usage gap offers a greater commercial opportunity.

Fig. 4.16

Revenue opportunity estimates are based on three scenarios

Description of scenarios

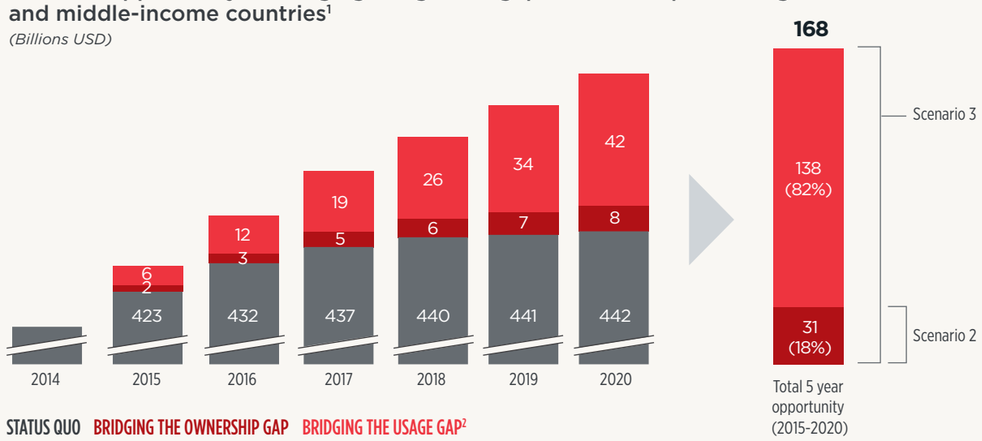
Scenario	Mobile ownership assumptions	Revenue assumptions
1 Status quo	Mobile phone ownership will increase from 44% to 55% by 2020 (GSMA Intelligence figures) Male-to-female ratio identical to existing ratio (by country)	Country ARPS* based on GSMA Intelligence forecasts as of December 2014 Female ARPS = 90% of market ARPS
2 Bridging the ownership gap	Gradually increase the % of female phone owners to match the number of male phone owners by 2020	New female phone owners contribute 50% of existing female users' ARPS
3 Bridging the ownership and usage gaps	Gradually increase the % of female phone owners to match the number of male phone owners by 2020	Existing female ARPS gradually increases to align with overall ARPS by 2020 New female phone owners contribute 50% of existing female users' ARPS

Note: **ARPS stands for average revenue per unique subscriber.*

Fig. 4.15

Revenue opportunity of bridging the gender gap in ownership and usage in low- and middle-income countries[1]

(Billions USD)



1: *Forecast revenue growth is for mobile network operators only and does not include revenues from other mobile industry players.*

2: *"Bridging the usage gap" figures include additional revenues expected from 1) Increasing ARPS from existing female owners to match overall ARPS by 2020 and 2) Increasing ARPS from new female users bridging the ownership gap.*

Note: *Figures do not add up to the total due to rounding.*

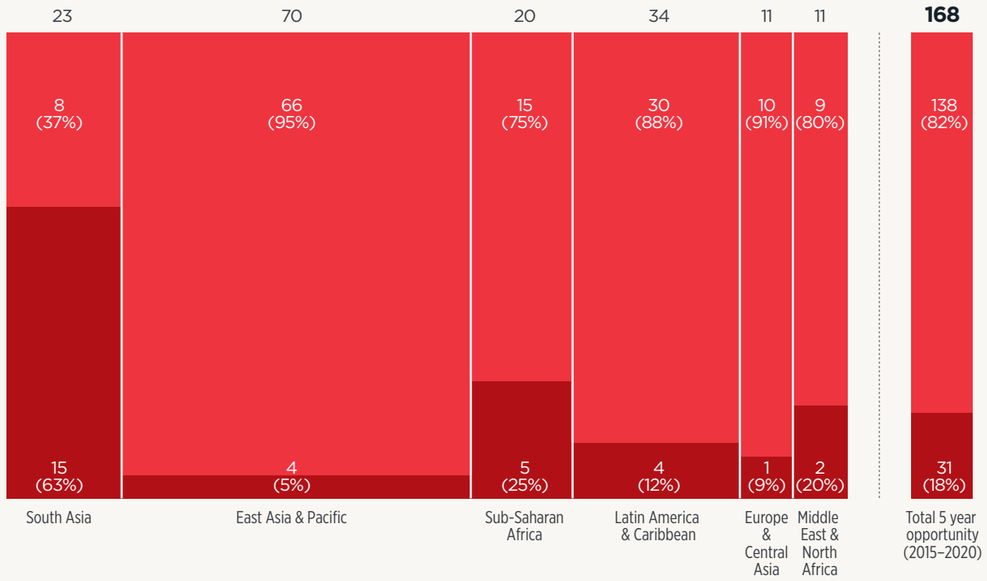
As noted at the beginning of this report, however, it is difficult to generalise regional findings to specific countries. Certain countries or segments of women within a region may have a wider gender gap in mobile phone ownership, in which case access should be the primary focus even if the region, on average, has high rates of mobile phone ownership.

Therefore, the most important takeaway for industry and policy-makers is to first conduct research to understand the magnitude of the gender gap in ownership and usage before launching a product in a specific region or implementing a policy to facilitate mobile access or use for women.

Fig. 4.17

Distribution of the estimated 5-year revenue opportunity across low- and middle-income countries

(Billions USD)

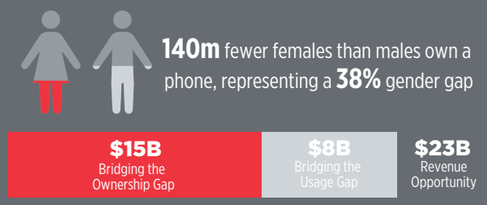


1: *"Bridging the usage gap" figures include additional revenues expected from 1) Increasing ARPS from existing female owners to match overall ARPS by 2020 and 2) Increasing ARPS from new female users bridging the ownership gap.*

Note: *Figures do not add up to the total due to rounding.*

Focus on South Asia

As the region with the widest gender gap in mobile phone ownership, South Asia offers a particularly large opportunity for the mobile industry to expand market share. Over 594m females in South Asia still do not own a mobile phone, and women are 38% less likely than men to own a mobile phone. Closing the gender gaps in ownership and usage in South Asia could potentially add up to $23 billion in revenue over the next 5 years.



Closing the gender gap in mobile ownership and usage: Borrowers and non-users

What about phone sharing? Isn't access good enough?

In regions like South Asia, phone sharing or borrowing is common among women, and access can provide certain benefits for women who do not own a phone.

For many living at the base of the pyramid, a mobile phone purchase and on-going service costs represent a significant portion of their income. A single shared handset in a household or borrowing from friends or others in the community is therefore the reality for the foreseeable future. Given limited resources, families may prioritise other expenditures over individual phone ownership (e.g., healthcare, food).

Phone sharing or borrowing allows much-needed access to voice services, but limits the ability of borrowers to gain technical literacy and use life-enhancing services like mobile money. Also, sharing phones does not provide the privacy required for some mobile services, such as maternal health applications, which female users may not feel comfortable accessing on a shared handset. It also prevents a service provider from accurately providing information to an end user (e.g., for a maternal health application it may be necessary to know the month of pregnancy of a user).

Borrowers are predominantly women

Most borrowers in the countries we studied are women (*Fig. 4.18*). Certain countries exhibit high borrowing rates among women, particularly in India and Niger. In Jordan, where the percentage of women who borrow is lower, the difference between male and female borrowing rates is still dramatic. Since borrowing is not common in China, Egypt and Turkey, a detailed analysis of borrowers in those countries is excluded from this section.

In most countries in this study, women with lower levels of education are more likely to be borrowers except in Niger and Colombia, where borrowing is common among women of all education levels (*Fig. 4.19*). Borrowing is more common among rural women in India, Niger, Indonesia, and Kenya. However, it is equally common among urban and rural women in other countries.

In all countries with substantial levels of borrowing, except Mexico, women who borrow phones do not use other mobile services such as SMS, or more sophisticated services such as mobile internet, with the same intensity as women who own phones (*Fig. 4.20*).

Who do women borrow from?

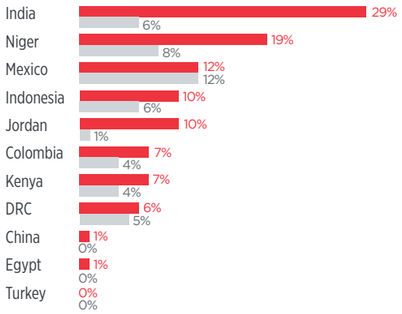
Women in the countries we studied predominantly 'share' a handset with members of their household or borrow from friends and family. Colombia was the only country in the study where 35% of female borrowers borrow from an agent (*Fig. 4.21*).

Sharing a handset in a household or borrowing from friends or family is reported to be 'convenient' by most female borrowers interviewed. However, in focus group discussions in Niger, owning was preferable to borrowing for both men and women. In other countries with lower levels of borrowing overall, both men and women see mobile phones as private, personal objects, which can be an obstacle for borrowers. This was found to be true to different degrees during focus group discussions in Jordan, Colombia, Egypt, Indonesia, Mexico, and Turkey.

Fig. 4.18

Borrowers of mobile phones by country[1]

Respondents (%)



1: *Borrowers are defined as respondents who do not own a SIM but who have used a mobile phone in the last 3 months.*

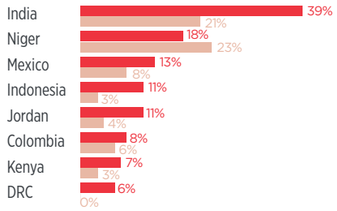
Note: *Sample sizes for women N= 799 to 918 and for men N= 200 to 316*

Fig. 4.19

Profile of female borrowers

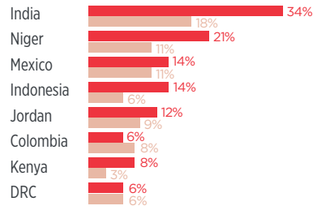
Proportion of lower and higher educated women who are borrowers

Respondents (%)



Proportion of rural and urban women who are borrowers

Respondents (%)



Note: *Sample sizes for lower educated women N= 410 to 755 and for higher educated women N= 54 to 508*
Sample sizes for rural women N= 178 to 661 and for urban women N= 168 to 631

Fig. 4.20

Reported SMS and mobile internet usage among female borrowers and owners

Proportion of female borrowers and owners who report using SMS

Female users (%)

Proportion of female borrowers and owners who report using mobile internet

Female users (%)

Note: *Sample sizes for female borrowers N= 46 to 254 and for female owners N= 330 to 739*

Fig. 4.21

Who did female borrowers last borrow from?

Female borrowers (%)

Question: *The last time you used a mobile phone, who did you borrow the handset and/or SIM from?*

Note: *Sample sizes for women borrowers N= 46 to 254*

If a household shares a handset, the power dynamics within that household can influence access to and use of that handset. For example, BBC Media Action research in Bihar, India, documented[33] that households typically had two mobile phones: one newer phone with airtime that typically accompanied the husband or male head of household, usually a landless labourer; and a second, often older phone without any airtime credit, kept at home as a shared phone for wives and families and used mainly to receive calls. However, despite the mobile phone being 'shared', multiple relatives, often male, tend to take the phones outside the home, leaving women without access during those periods.

Borrowing does not allow women the full benefits of mobile

Women who borrow phones use them less frequently than owners, predominantly use voice, and face more technical literacy challenges using mobile services. Across the countries we studied, female borrowers tended to rate the benefits of mobile phone ownership lower than female owners (*Fig. 4.22*).

Borrowing provides access to mobile phones for women in many countries, but they will not be able to access the full benefits of mobile services unless they have phones of their own. Moving women from borrowers to owners will require MNOs to first understand what women users value, and then develop and deliver handsets and services that are relevant and affordable. In countries where borrowing is common, consumer insights research can give industry valuable insights into the female borrowing segment of the market.

Given the economic realities and cultural barriers most women face on a daily basis, borrowing is here for the foreseeable future. Therefore, mobile industry players should explore products and services that are specifically designed for shared handset use. Innovative products that allow for multiple users could help female borrowers move more quickly up the digital ladder and reap the benefits of more active mobile usage.

Fig. 4.22

Benefits of mobile phones for female borrowers versus owners

Female users who agree or strongly agree (%)

Note: *Sample sizes for female owners: N= 303 to 735 and for female borrowers N= 39 to 213*

What about non-users? Why do some women have no access to a mobile phone?

Non-users,[34] both men and women, are more prevalent in some countries than others, with the highest proportion living in DRC and Niger.

In the countries we studied, non-users are usually from poorer households, have lower levels of education, and are predominantly women, especially in markets with low mobile phone penetration. In 5 of these markets, the percentage of men and women who do not use mobile phones is relatively small and very similar, but in the other 6 markets,[35] a higher proportion of non-users were women.

Just as for those who already own a mobile phone, cost—particularly of handsets—is the biggest barrier faced by female non-users in most countries.[36] However, these non-users also identified other important barriers, which vary by country. In Indonesia, for instance, female non-users reported lack of ID documents, along with cost, as the greatest barrier. In Mexico, security concerns, harassment from strangers, and lack of trust in operators and agents are perceived to be even greater barriers than cost.

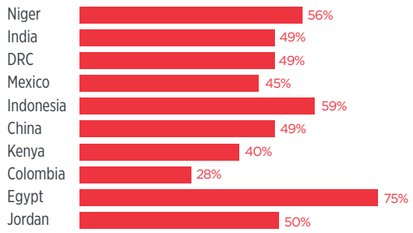
In addition, a surprisingly high number of female non-users say they have never had the opportunity to try a mobile phone (*Fig. 4.23*). However, the majority of them (ranging from 52% in Egypt to 95% in Niger) reported they would be willing to use a mobile phone if they were given one (*Fig. 4.24*).

These findings suggest that socio-economic factors are the primary force preventing non-users from owning phones. There is demand, however, and women who do not currently use a mobile phone would, given the chance.

Fig. 4.23

Female non-users who have never had the opportunity to try a mobile phone

Female non-users[1] (%)



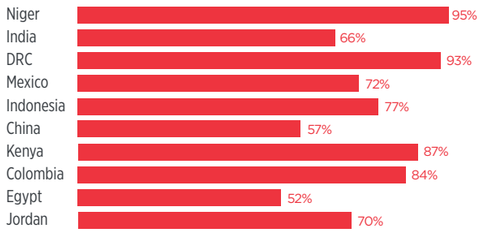
1: *Shows percentage who agree or strongly agree with the question: "Now we are going to talk about some possible reasons that might be preventing you from using a mobile phone. Please tell me the extent to which you agree or disagree with the following statements?": "I never had the opportunity to try a mobile phone."*

Note: *Turkey is not included as the sample size was insufficient. Sample sizes between N= 34 to 368*

Fig. 4.24

Female non-users who would use a mobile phone if they were given one

Female non-users[1] (%)



1: *Shows percentage who answered "Yes, definitely" or "Yes, most probably" to the question: "If tomorrow someone gave you a mobile phone (handset and SIM) for free, would you use it and top it up on a regular basis?."*

Note: *Turkey is not included as the sample size was insufficient. Sample sizes between N= 34 to 368*

33. *Yvonne MacPherson and Sara Chamberlain, BBC Media Action, 2013, "Health on the Move: Can Mobile Phones Save Lives?", http://www.rethink1000days.org/wp-content/uploads/2013/08/BBC-Media-Action-Health-on-the-move.pdf*

34. *'Non-users' are defined as those who have not used a mobile in the last 3 months (i.e., have not even borrowed one).*

35. *DRC, Niger, Mexico, India, Jordan, and Indonesia.*

36. *In 5 of the 9 countries for which sample size is sufficient to comment (insufficient sample size in China and Turkey), including the 2 countries with the largest proportion of non-users (DRC and Niger), cost and handset cost in particular, was reported as the highest barrier. In Indonesia, cost was reported as the greatest and equally important barrier.*

Women still face barriers to mobile phone ownership and usage in spite of the benefits

Overview of barriers

Women face a number of different barriers related to owning a mobile phone, purchasing credit, and using it for basic and value-added services. For the purpose of this paper, we have defined a 'barrier' as a key issue that prevents a customer or potential customer from owning a mobile phone or using it to its full benefit.

Women can experience a variety of barriers at the same time; the importance of which can be difficult to untangle. These barriers are summarised in *Fig. 5.1*.

To the left side of *Fig. 5.1* are barriers from the perspective of the customer, or potential customer, derived from previous research and expert input.[37] Respondents from across our 11 countries were questioned about these barriers to determine the relative importance of each one. These barriers were also listened for during the focus groups and explored in expert interviews. The majority of this section focuses on these barriers, highlighting the relevant supply-side and policy issues associated with the major barriers (where applicable). This approach provides a more detailed and nuanced view than the GSMA mWomen 2010 report,[38] which identified four broad categories of barriers: cost, lack of perceived value, technical literacy, and cultural issues. For example, the various aspects of 'cost' are examined in more detail in this study, 'value' does not emerge as one of the key barriers, and 'cultural issues' have been redefined in this study as an underlying, 'hidden' barrier called 'social norms', rather than a discrete barrier in its own right.

In contrast, on the right side of *Fig. 5.1* are two key barriers independent of the customer that arose during expert interviews. These systemic barriers—lack of gender-disaggregated data and lack of focus on women—relate more specifically to two important ecosystem actors: mobile operators and policy-makers. Whether intentionally or not, the action or inaction of mobile operators and policy-makers can serve to inhibit women—as well as men—from owning and using mobile phones to their full benefit. These systemic barriers are briefly considered at the end of this section.

Fig. 5.1
Barriers influencing women's access and usage of mobile phones

Barriers from the customer perspective				Systemic barriers	
Income and affordability	Incentives to own and use	User capability and design	Infrastructure	Lack of gender-disaggregated data	Lack of focus on women
Handset cost	Value	Technical literacy & confidence	Network quality & coverage		
SIM cost	Family Uncomfortable		Agent service		
Credit cost	Security & harassment		Agent access		
Battery charging cost	Operator/agent trust		ID		
			Battery charging access		

37. For example, the 4-tier framework of 'Income and affordability', 'Incentives to own and use', 'User capability & design', and 'Infrastructure' builds on the framework used in GSMA's "Digital Inclusion Report 2014", http://www.gsma.com/mobilefordevelopment/digital-inclusion-report-2014

38. 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

39. As derived from previous research and expert input.

40. 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. 5.2 shows all respondents (owners and non-owners) combined. Similar detailed results for only owners or only non-owners are not shown separately for the sake of clarity.

Barriers from the customer perspective

In our survey, we asked respondents across 11 countries the extent to which they agreed that certain pre-determined barriers[39] were preventing them from 1) using a mobile phone more often or for a greater variety of purposes (if they already owned a mobile phone), or 2) using a mobile phone altogether (if they did not own a mobile phone). *Fig. 5.2* provides a high-level overview of the responses from all respondents, both mobile owners and non-owners combined. Percentages represent respondents who agree or strongly agree that they perceive it as a barrier.

The extent to which certain barriers are believed to be important varies significantly by country, and to a lesser extent between men and women in the same country. This illustrates the power of context (see the Country Profiles in Appendix 1 and Table 1 in Appendix 2 for a more detailed review of country-specific barriers).

Whereas self-reported data of this sort is strongly influenced by the country and context in which respondents live, some interesting patterns emerge across countries, which this section will examine in more detail:

- **5 key barriers are reported by women and men across countries, among both owners and non-owners[40] (see *Fig. 5.3*):**
  1. Cost (handset and credit)
  2. Network quality and coverage
  3. Security and harassment
  4. Operator/agent trust
  5. Technical literacy and confidence

- **Other barriers also impact women's and men's ownership and use of mobile phones, which are overall less important than the above barriers, but can be very important in certain contexts.** For example, in certain countries, or among certain segments of women in a country, such as those who live in rural areas or poorer households or do not yet own a mobile phone. These barriers include issues relating to agent service and access, not perceiving the value of a mobile phone, lack of ID documents, their family feeling uncomfortable with them using a phone, and poor access to electricity for charging.

Fig. 5.2

Perception of barriers to owning and using a mobile phone

Respondents who agree or strongly agree (%)[1]

	Income and affordability								Incentives to own and use							
	Handset cost		SIM cost		Credit cost		Battery charging cost		Value[2]		Family uncomfortable		Security & harassment[2]		Operator or agent trust	
	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M
Niger	57%	51%	50%	39%	34%	28%	33%	35%	5%	6%	11%	8%	18%	18%	21%	21%
India	50%	45%	29%	25%	39%	36%	16%	17%	15%	17%	16%	14%	34%	33%	21%	17%
DRC	44%	35%	14%	12%	23%	23%	22%	28%	8%	9%	15%	15%	18%	19%	20%	21%
Mexico	66%	65%	36%	41%	51%	54%	31%	30%	47%	53%	31%	37%	69%	68%	67%	68%
Indonesia	40%	37%	19%	16%	32%	28%	14%	16%	16%	17%	15%	12%	32%	30%	20%	25%
China	50%	49%	32%	36%	53%	53%	24%	32%	36%	39%	30%	31%	63%	64%	56%	58%
Turkey	65%	64%	63%	63%	62%	61%	19%	16%	35%	35%	19%	16%	44%	34%	45%	42%
Kenya	50%	45%	31%	31%	45%	39%	31%	27%	12%	9%	8%	5%	27%	17%	21%	17%
Colombia	66%	71%	19%	19%	58%	61%	24%	17%	60%	58%	28%	16%	75%	70%	68%	70%
Egypt	80%	80%	38%	36%	47%	49%	34%	35%	47%	50%	40%	31%	53%	48%	33%	36%
Jordan	76%	42%	56%	21%	69%	63%	17%	5%	21%	12%	21%	3%	57%	37%	40%	21%

User capability and design	Infrastructure									
Technical literacy & confidence[2]	Network quality & coverage		Agent service[2]		Agent access		ID		Battery charging access	
W	M	W	M	W	M	W	M	W	M	W	M
30%	25%	39%	40%	17%	19%	23%	17%	29%	23%	32%	28%
35%	26%	45%	35%	17%	12%	20%	18%	27%	28%	10%	12%
21%	18%	42%	39%	18%	17%	16%	17%	—[3]	—[3]	23%	26%
42%	46%	47%	45%	41%	47%	39%	46%	39%	34%	19%	23%
28%	21%	50%	47%	14%	17%	19%	17%	27%	28%	13%	14%
48%	46%	40%	43%	40%	44%	34%	33%	17%	20%	19%	26%
24%	19%	24%	19%	31%	27%	25%	23%	18%	18%	16%	12%
28%	22%	59%	60%	17%	12%	30%	24%	23%	22%	26%	23%
43%	35%	42%	40%	39%	36%	41%	37%	31%	33%	17%	20%
40%	40%	75%	74%	36%	37%	36%	35%	44%	26%	31%	37%
34%	17%	65%	49%	36%	17%	31%	26%	8%	4%	17%	9%

HIGHEST BARRIER PERCEIVED IN THAT COUNTRY[4]

LOWEST BARRIER PERCEIVED IN THAT COUNTRY[4]

1: *Shows percentage who agree or strongly agree with Q 55: "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?": [Example] "Handset prices are expensive".*

2: *For the purpose of clarity, percentages for the following barriers have been calculated by taking a simple average from across 'sub-barriers': 'Value', 'Security & harassment', 'Technical literacy & confidence' and 'Agent service'; see Appendix 2 for responses to all individual barriers.*

3: *ID barrier question was not asked in DRC because at the time of the research, requirements for registration were unclear and, in practice, ID is rarely required to buy a SIM. Therefore, ID was assumed to not be a barrier in DRC.*

4: *Red-green demarcation includes sub-barriers (not shown; see Appendix 2).*

Note: *For each barrier in each country, N= 648 to 881 for women and N= 164 to 314 for men.*

- **Women tend to experience certain barriers more acutely than men, such as cost, security and harassment, and technical literacy and confidence, which can likely be explained by social norms.** Social norms influence women's role, status, empowerment, and access to education and income in society, and consequently their relationship with mobile technology. Social norms are difficult to directly measure as they are so ingrained in the everyday life of a society that respondents might not notice that what they are experiencing is any different. As a result, women (and men) may report certain barriers around social norms less often than would be expected. This might explain the relatively low proportion of female respondents reporting that their families are (or would be) uncomfortable with them using a mobile (*Fig. 5.2*). Thus, instead of being a discrete, stand-alone barrier, 'social norms' appears to be an underlying barrier that is often hidden within other, more commonly cited barriers that influence women's access to and use of mobile technology. The following sections will highlight the barriers survey respondents overtly stated, but it is important to remember that social norms strongly influence a number of these barriers to women accessing mobile technology.

These cross-country findings are an important call to action, but the importance of understanding the local context cannot be overstated. Barriers to mobile ownership and use vary by country, gender, population segment, as well as the mobile product in question. It is vital for industry and other stakeholders to use consumer insights research to gain a more nuanced understanding of the specific barriers experienced by women in the market in question, or for the particular mobile product or service concerned.

Fig. 5.3

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

Barriers to usage
(Top barriers among female owners)

1. Cost
2. Network quality & coverage
3. Security & harassment
4. Operator / agent trust
5. Technical literacy & confidence

Barriers to ownership
(Top barriers among female non-owners)

1. Cost
2. Network quality & coverage
3. Security & harassment
4. Technical literacy & confidence
5. Operator / agent trust

Cost

Key takeaways

Cost is the most important barrier overall to owning and using a mobile phone, particularly for women, who often have less financial independence.

Lowering costs (e.g., handset prices) will disproportionately benefit women and help to increase both access and usage.

Cost is the most important barrier to mobile phone ownership and use

Cost, more specifically the cost of the handset and credit, is the greatest overall barrier reported by both men and women across our sample countries (*Figs. 5.2 and 5.4*). This is true for both owners, who presumably have the purchase of their next handset in mind, as well as those who do not yet own a mobile phone. The cost of SIM cards and battery charging was reported as less of an issue than the cost of handset and credit in most countries, but it still remains an issue in some markets.[41]

Fig. 5.4

Perception of cost as a barrier

Respondents who agree or strongly agree (%)[1]

	Handset cost		SIM cost		Credit cost		Battery charging cost	
	W	M	W	M	W	M	W	M
Niger	57%	51%	50%	39%	34%	28%	33%	35%
India	50%	45%	29%	25%	39%	36%	16%	17%
DRC	44%	35%	14%	12%	23%	23%	22%	28%
Mexico	66%	65%	36%	41%	51%	54%	31%	30%
Indonesia	40%	37%	19%	16%	32%	28%	14%	16%
China	50%	49%	32%	36%	53%	53%	24%	32%
Turkey	65%	64%	63%	63%	62%	61%	19%	16%
Kenya	50%	45%	31%	31%	45%	39%	31%	27%
Colombia	66%	71%	19%	19%	58%	61%	24%	17%
Egypt	80%	80%	38%	36%	47%	49%	34%	35%
Jordan	76%	42%	56%	21%	69%	63%	17%	5%

HIGHEST BARRIER PERCEIVED IN THAT COUNTRY — LOWEST BARRIER PERCEIVED IN THAT COUNTRY

1: *Shows percentage who agree or strongly agree with Q 55. Actual question asked was: "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?": "Handset prices are expensive"; "SIM cards are expensive"; "Credit/monthly bill is expensive"; "Charging the battery of my handset is/would be expensive".*

Note: *N = 648 to 863 for women and N= 164 to 308 for men*

This was echoed during focus groups, where women and men in 9 of the 11 countries spontaneously raised cost as an issue and were primarily concerned about handset prices, airtime costs (including data charges), or cost more generally. Interestingly, women more often raised concerns related to the overall cost of owning and using a phone—not just the initial cost of the handset, but also airtime, repair charges, and battery charging—whereas men tended to only mention handset cost, airtime, or both.

Cost is a greater barrier for women than men

Women tend to cite handset and credit cost as a barrier more commonly than men. When it comes to handset cost, Colombia is the only country where more men than women cited this as a barrier. In 5 of the remaining countries, handset cost is reported as a similar barrier among men and women, but in India, Kenya, Jordan, Niger and DRC, more women reported handset cost as a barrier than men. In DRC, for example, 44% of female respondents reported handset cost as a barrier versus 35% of men. For credit cost, male and female respondents reported this as a barrier more or less equally in 7 of the 11 countries, but in Indonesia, Jordan, Kenya and Niger, more women than men reported this as a barrier.

In most countries, women from rural and poorer households in the survey were more likely to report cost as a barrier. This was most apparent in Niger, where 63% of rural women cited handset cost as a barrier, compared with 29% of urban women.

Women tend to have more basic phones

Handset cost is usually a greater barrier for women than men, which may contribute in part to women having 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. 5.5* (and Appendix 2) shows 3 other markets as an example.

Cost is a greater barrier for women because they are often less financially independent

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.[42] This was echoed in each of our sample countries, where fewer women than men reported contributing to the household income over the last month.

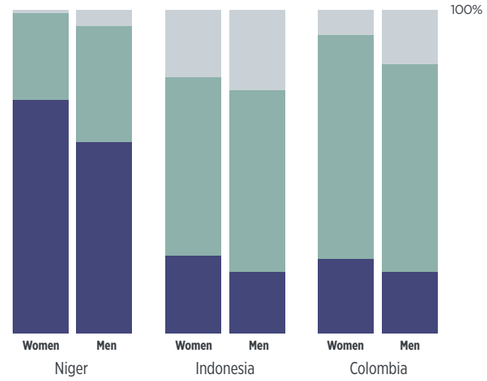
Even when women do earn or receive an income, they do not always control how that income is spent, including on mobile-related expenses. In our survey, the role men and women play in making decisions about general household expenses varies by country, with women playing a larger decision-making role in countries such as Indonesia and Mexico, and men playing a larger decision-making role in countries such as Niger and India.

However, when it comes to mobile-related expenses, the differences between men and women are more pronounced. In 10 of the 11 countries,[43] fewer women than men reported paying for their handset and credit recharge[44] with their own money. *Fig. 5.6* shows credit recharge as an example for all sample countries. When women do not pay for their handset or credit recharge themselves, their husbands or another male family member usually pay instead.

Fig. 5.5

Type of handset owned by women and men[1]

Handset owners (%)



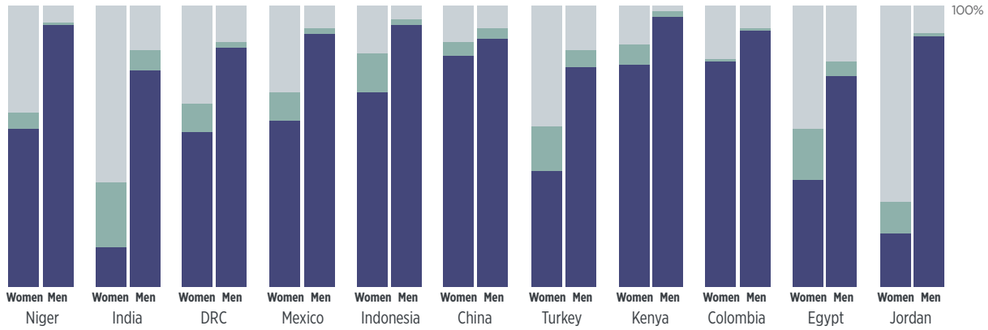
1: *'Smartphone' is defined as a handset that has all of the following four features/capabilities: QWERTY/AZERTY keyboard, touchscreen, ability to access the internet, and download apps. 'Feature' phone is defined as a handset that has at least one of these four features/capabilities. 'Basic' phone is 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*

Fig. 5.6

Most common source of money for credit recharge[1]

Mobile phone owners (%)



1: *Also refers to monthly bill where applicable. Actual question asked was: "Where does the money to refill your credit balance or pay your monthly bill usually come from?"*

Note: *Sample sizes for women N= 330 to 806 and for men N= 133 to 225*

***41**. This is likely because SIM cards are very low cost, or free, in most markets.*

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

***43**. 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 report paying for their handset with their own money.*

***44**. Also refers to monthly bill where applicable.*

Even when women use their own money or the household budget to pay for their handset and credit recharge, in some countries they often require permission to spend the money, and usually more so than men. This is most evident in India, Indonesia, Jordan, Turkey, and Egypt (see Appendix 2 and *Fig. 5.19* where India is discussed in more detail). *Fig. 5.7* shows credit purchase in Egypt as an example.

Lower priced handsets will disproportionately benefit women

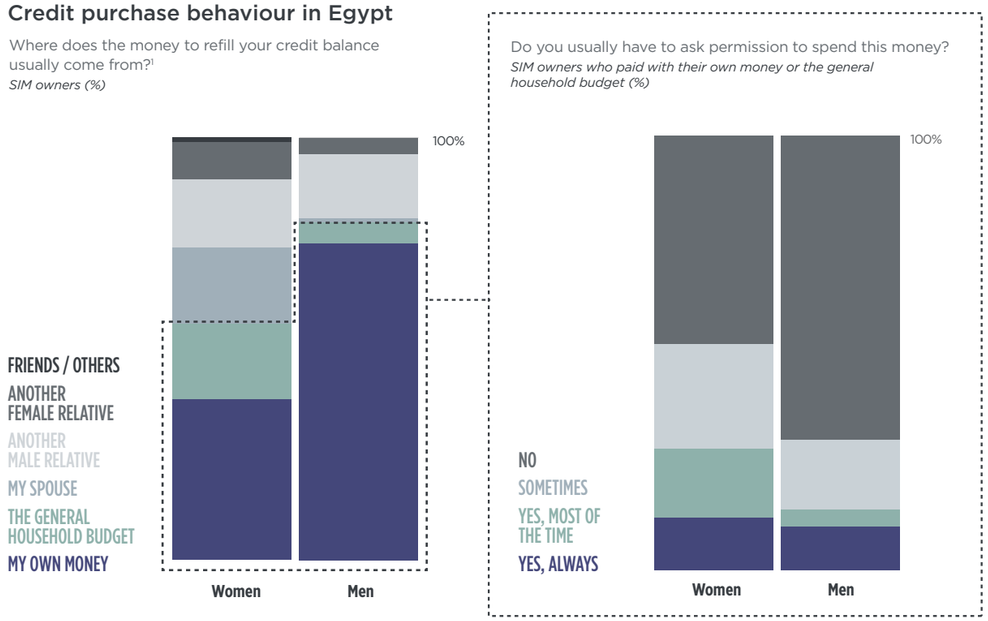
Over the past few years, declining handset and airtime prices have been recognised as a key driver of mobile adoption among low-income populations.[45] In particular, significant efforts have been made to improve smartphone affordability to reach the underserved with mobile internet. Increasingly cheaper smartphone models continue to be launched.

In all of our sample markets except Niger,[46] only a relatively small proportion of female and male handset owners (about 20–40% in most markets) report their handset had been previously owned by someone else, indicating that new handsets tend to be more common than secondhand ones.

It is important to recognise that because women are usually more price sensitive than men (i.e., cost is a greater barrier for women), more competitively priced handsets and handset packages are likely to disproportionately benefit women (see Smart case study). However, for someone living on $2 a day, even the purchase of a 'cheaper' handset will likely be a burden. Other interventions, such as subsidised handsets or credit mechanisms for handset purchases, also need to be considered.

Fig. 5.7

Credit purchase behaviour in Egypt



1: *Also refers to monthly bill, where applicable.*
Note: *Sample sizes for women N= 421 to 775 and for men N= 218 to 166*

45. GSMA Intelligence, 2014, "Smartphones in Emerging Markets", https://gsmaintelligence.com/analysis/2014/12/smartphones-in-emerging-markets/450/

46. In Niger, roughly half of respondents (49% of women and 58% of men) report their handset had been previously owned by someone else.

CASE STUDY

Low-cost handset and SIM packages: The example of Smart, Philippines

Smart in the Philippines aims to increase mobile adoption among the poorest through a handset and SIM package supported by a specific distribution strategy. The Panalo Talk 'N Text phone pre-loaded with the Talk 'N Text pre-paid SIM costs as little as US$ 11.[47] The basic handset package is distributed by sales agents going door-to-door in the poorest districts of the country, as well as by provincial distributors. In addition, Smart offers very small credit top-up—as low as 11 cents—to meet the needs of users with limited purchasing power.

Image courtesty of Smart Philippines

47. Panalo Phone with pre-paid SIM: http://store.smart.com.ph/handset/plan/list?optionId=13&page=2; Pinoy Tech Blog, "Php499 Panalo Phone now madeavailable nationwide," http://www.pinoytechblog.com/archives/php499-panalo-phone-now-made-available-nationwide

Network quality and coverage

Key takeaways

Network quality and coverage is the second most important barrier overall to owning and using a mobile phone, and is an issue in both rural and urban areas.

Network quality and coverage does not always affect women and men equally. Women may perceive it as a greater barrier in some settings due to mobility constraints, more basic handsets, and fewer SIMs to choose from.

Network quality and coverage is the second most important barrier overall, and is an issue in both rural and urban areas

The 'network quality and coverage' barrier encompasses issues related to either the complete absence of network coverage or poor network quality where network coverage exists.[48] This is cited as the second most important barrier overall for both men and women in the surveys (*Figs. 5.2 and 5.8*), regardless of whether they own a mobile phone, and was raised spontaneously as a concern in focus groups in 10 of the 11 countries.

This finding may seem surprising given that the formal, documented reach of mobile networks in the 11 countries we studied covers 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.[49] 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. Indeed, although it was not always clear whether focus group respondents were referring to a complete lack of coverage or poor network quality, there are mainly explicit references to the latter.

"The signal is very poor. Sometimes when you are calling, the connection is so bad that the call drops."
– Rural female, Colombia

Furthermore, poor network quality and coverage is not just a rural phenomenon. Whereas concerns are usually more acute in rural areas, there are issues in urban areas too. In the survey, with few exceptions,[50] network quality and coverage is reported as a relatively more important barrier by rural women and men, but 19–63% of urban women (depending on the sample country) and 17–54% of urban men still cite it as an issue.[51] Concerns with network quality and coverage were also spontaneously raised in urban focus group discussions in most countries.

"Poor network quality is another problem. Sometimes when you want to call someone, you have to wait 10 minutes before getting through even though the phone you're calling is switched on."
– Urban female, DRC

Fig. 5.8

Perception of network quality and coverage as a barrier

Respondents who agree or strongly agree (%)[1]

	Network quality & coverage	
	W	M
Niger	39%	40%
India	45%	35%
DRC	42%	39%
Mexico	47%	45%
Indonesia	50%	47%
China	40%	43%
Turkey	24%	19%
Kenya	59%	60%
Colombia	42%	40%
Egypt	75%	74%
Jordan	65%	49%

HIGHEST BARRIER PERCEIVED IN THAT COUNTRY — LOWEST BARRIER PERCEIVED IN THAT COUNTRY

1: *Shows percentage who agree or strongly agree with Q 55. Actual question asked was: "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?": "There is no coverage or poor coverage where I live."*
Note: *Sample sizes for women N= 770 to 870 and for men N= 199 to 304*

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

In some settings, network quality and coverage can be a greater barrier for women. Among survey respondents, network quality and coverage was perceived as a similar barrier by women and men in 8 countries and a greater barrier for women than men in the other 3 countries (*Fig. 5.8*).

In urban areas, responses are mixed as to whether network quality and coverage is a greater barrier for women than men,[52] but in rural areas the differences are more apparent. In 5 countries it was perceived to be an equally important barrier by rural women and men, and in the remaining 5 countries (Colombia, Mexico, DRC, India, and Turkey), rural women reported it as a more important barrier (*Fig. 5.9*).[53]

Women may perceive network quality and coverage as a greater barrier than men because of mobility constraints, more basic handsets, and fewer SIMs to choose from

Women may perceive network quality and coverage to be a higher barrier than men in certain contexts due to the mobility constraints they often face compared to men. In many settings, particularly conservative ones, women typically spend more time than men at home looking after the household, children, and the elderly,[54] and indoor signals can be weaker. Women in rural areas can also be less likely than their male counterparts to travel to more urban areas for work or other reasons, where network coverage is usually better.

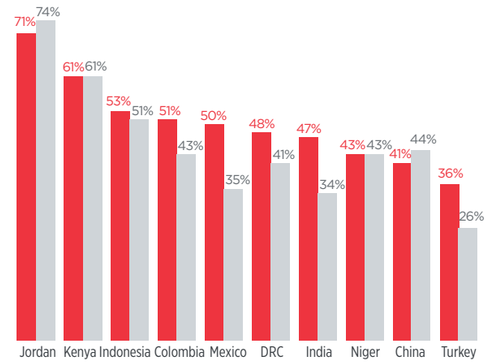
Focus groups in Jordan, for instance, revealed that women are more likely than men to face constraints to their mobility because they spend more time at home looking after the household and children. Men, on the other hand, are more likely to go out to socialise and spend time working to provide for their families.

Women may also perceive network quality and coverage to be a greater issue than men because they usually have a lower number of SIMs to choose from[55] and more basic phones, which usually have inferior radio frequency capability (*Fig. 5.5*).

Fig. 5.9

Perception of network quality and coverage as a barrier in rural areas

Rural respondents (users and non-users) who agree or strongly agree that network quality and coverage is a barrier (%)



Note: *Excludes Egypt where rural-urban split unavailable. Sample sizes for women N= 158 to 617 and for men N= 46 to 158*

***48**. It is important to note that perceptions are specific to the user and could be related to, for example, voice, data or both, and are likely to relate to their own operator rather than more generally.*

***49**. 2014 GSMA estimate based on GSM coverage data.*

***50**. Exceptions include: Mexico, where urban men cited it as a more important barrier than rural men and it was very similar for women; China, where the barrier was perceived similarly by rural and urban women, and by rural and urban men; India, where the barrier was perceived similarly by rural and urban men; and Egypt, where a rural-urban split was unavailable.*

***51**. Compared with 36–71% of rural women and 26–74% of rural men. Excludes Egypt where a rural-urban split was unavailable.*

***52**. In 5 countries, the barrier is similarly reported by urban women and men; in 2 countries, urban males report it more often; and in 3 countries—Jordan, India and Indonesia—urban women report it more often.*

***53**. Excludes Egypt where a rural-urban split was unavailable.*

***54**. The World Bank, 2012, "World Development Report 2012: Gender Equality and Development", http://econ.worldbank.org/WBSITE/EXTERNAL/EXTDEC/EXTRESEARCH/EXTWDRS/EXTWDR2012/0,,contentMDK:22999750~menuPK:8154981~pagePK:64167689~piPK:64167673~theSitePK:7778063,00.html*

***55**. In each sample country, the average number of SIMs owned by female owners was lower or the same as male owners.*

Security and harassment

Key takeaways

Security and harassment issues are top-of-mind for women and need to be on the mobile industry's agenda. It is the third most important barrier overall for women and men, with more women perceiving security concerns (e.g., fear of handset theft) and harassment from strangers as an issue.

Innovative mobile safety services can help elevate mobile as a safety tool for women.

Security and harassment is the third most important overall barrier

For the purpose of this report, the 'security and harassment' barrier refers to security concerns related to owning and using mobile phones, harassment from strangers, or spam advertisements via mobile phone.

At least 68% of female respondents in every sample country report that they feel (or would feel) safer with a mobile phone. However, security and harassment issues are still top-of-mind and were identified as the third most important barrier faced by both men and women (*Fig. 5.2*), regardless of whether they owned a mobile phone or not.

Overall, women tend to perceive security issues and harassment from strangers as an even greater barrier than men, although the extent to which spam is a barrier for women and men depends on the country where they live (*Figs. 5.10 and 5.11*).

Security is usually a greater barrier for women

Women reported security as an equal or greater barrier than men in all countries, but it is a particularly big barrier for women (compared to men) in Turkey, Kenya, Colombia, and Jordan (*Figs. 5.10, 5.11, 5.12*).

In focus group discussions in these countries, as well as in Mexico, Egypt and DRC, most security concerns raised by women were the fear of having their mobile phone stolen or fraud issues. In Colombia, safety issues were a particular concern for women.

Fig. 5.10

Perception of security and harassment as a barrier

Respondents who agree or strongly agree (%)[1]

	Security & harassment					
	Security concerns (e.g. handset theft)		Strangers		Spam	
	W	M	W	M	W	M
Niger	11%	11%	21%	21%	22%	22%
India	37%	35%	33%	27%	32%	36%
DRC	15%	17%	19%	17%	21%	23%
Mexico	78%	79%	76%	67%	54%	58%
Indonesia	34%	28%	28%	27%	33%	36%
China	63%	60%	69%	66%	56%	66%
Turkey	36%	25%	40%	35%	57%	41%
Kenya	36%	23%	22%	11%	24%	17%
Colombia	87%	78%	74%	65%	63%	67%
Egypt	49%	44%	55%	42%	54%	57%
Jordan	53%	22%	58%	23%	59%	65%

HIGHEST BARRIER PERCEIVED IN THAT COUNTRY LOWEST BARRIER PERCEIVED IN THAT COUNTRY

1: *Shows percentage who agree or strongly agree with Q 55. Actual question asked was: "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".*
Note: *Sample sizes for women N= 749 to 862 and for men N= 187 to 314*

Harassment from strangers is usually a greater barrier for women

While women reported harassment from strangers as an equal or greater barrier than men in all survey countries, differences were most apparent in Jordan, Egypt, and Kenya (*Figs. 5.2, 5.11, 5.13*). Focus group discussions in these countries as well as in Niger and Turkey, revealed that, compared with other sample countries, it was not uncommon for men to harass women via mobile. In Egypt and Jordan, for instance, men and women reported the practice of men randomly dialling numbers in the hope of reaching a woman:

"There is this offer for very cheap calls between 12am and 6am: men have been using it to just try out different numbers and harassing whoever it turns out to be especially if it's a woman."
– Urban female, Egypt

Fig. 5.11

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	✓	✓	✗

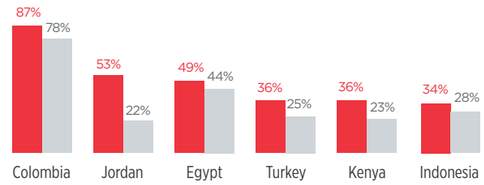
✓ MORE WOMEN (>3%) THAN MEN AGREE OR STRONGLY AGREE
= AS MANY WOMEN AS MEN (+/- 3%) AGREE OR STRONGLY AGREE
✗ FEWER WOMEN (<3%) THAN MEN AGREE OR STRONGLY AGREE

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

Fig. 5.12

Countries where women report security as a greater barrier

Respondents who agree or strongly agree that security concerns (e.g. handset theft) are a barrier to owning or using a mobile (%)[1]



1: *Actual question asked was: "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)".*
Note: *Only shows countries where >3% of women than men agree or strongly agree. Sample sizes for women N= 787 to 862 and for men N= 202 to 238*

Security concerns among women in Colombia

In Colombia, security is a major issue that hinders women from using mobile to its full potential. Women tend to experience lack of security even more acutely than men: 78% of men and 87% of women interviewed reported security concerns as a barrier to mobile ownership and use.

Focus group discussions revealed that women and men were concerned about being a victim of fraud and were scared of being mugged because of their mobile phone. As a result, some reported using their mobile in public only with the hands-free functionality so their mobile can remain hidden.

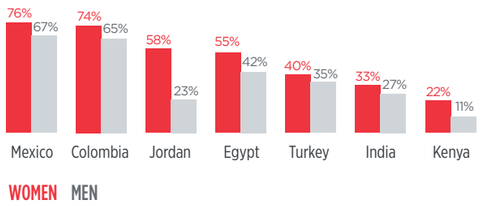
"We women are more afraid of getting mugged because of a cell phone. We don't want to walk around with an expensive phone, because we are afraid someone will rob us."
– Urban female user, Colombia

"If you don't have a hands-free device, it is dangerous to use a phone on the street."
– Urban female user, Colombia

Fig. 5.13

Countries where women report harassment from strangers as a greater barrier

Respondents who agree or strongly agree that harassment from strangers is a barrier to owning or using a mobile (%)[1]



1: *Actual question asked was: "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 am/would be contacted by strangers".*

Note: *Only shows countries where >3% of women than men agree or strongly agree. Sample sizes for women N= 789 to 862 and for men N= 213 to 312*

Harassment is not limited to mobile calls; it can also occur over mobile internet. For example, focus group discussions in Jordan and Turkey revealed that women can also experience harassment from men over Facebook and WhatsApp, with some women reporting subsequent constraints on their use of social media, such as being forbidden to post photos or not being allowed to have a Facebook account at all.

"I am not even allowed to put my own picture on WhatsApp as some people can save that image."
– Rural female, Jordan

Evidence from focus groups in Egypt and Jordan also reveal that harassment via mobile can even create tensions in the household if women are suspected of being willing victims.

CASE STUDY

Mobile services help women feel safe and avoid harassment: The case of FightBack in India, Banglalink Emergency in Bangladesh, and Mobinil's Call Block service in Egypt

Innovative mobile services can help women perceive mobile phones as a tool for improving safety and peace of mind.[56]

In India, the app 'FightBack' enables users to instantly send an alert in an emergency. By pressing a simple button (and then confirming), SOS SMS and emails, GPS coordinates, and location maps are automatically sent to pre-selected contacts. The app has had more than 100,000 downloads and is now available in 22 Indian states and 81 countries worldwide.[57]

Similar services for feature phone or basic phone owners also exist, such as 'Banglalink Emergency', which automatically sends an SMS alert to 3 pre-registered contacts when the user dials a short code. The user's location is also sent to those contacts thanks to GSM technology.[58]

For more everyday use, services that automatically block unwanted callers have been launched by mobile operators in several markets and can be particularly appealing to female users. In Egypt, for example, where mobile phone harassment is one of the main reasons for churn among mobile operators, Mobinil (Orange) launched its Call Block service in 2012. The service now has over 600,000 users representing some 2% of the customer base, and Mobinil's experience suggests that over 90% of customers are women.

***56**. At least 68% of female respondents in every sample country report that they feel (or would feel) safer with a mobile phone.*
***57**. TM Forum Digital Humanitarian Award, Tech Mahindra: http://www.tmforum.org/DigitalHumanitarian/16091/home.html*
***58**. Banglalink Emergency: http://www.banglalink.com.bd/en/services/services/information-based-services/banglalink-emergency/*

Operator or agent trust

Key takeaways

Operator/agent trust is the fourth most important barrier overall for women and men.

Women and men usually report similar levels of trust in operators/agents.

Understanding and addressing trust issues can help increase both ownership and usage.

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 the fourth most important barrier overall, and is a particular concern for both women and men in certain countries, such as Colombia, Mexico, and China (*Figs. 5.2 and 5.14*).

In Colombia, for instance, focus group discussions suggested that the lack of trust among women and men may be driven by a perception that mobile operators could be more transparent about airtime charges.

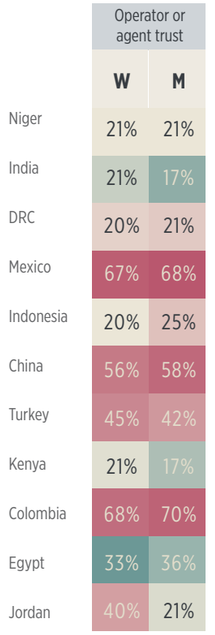
There is variation between countries in the segments of women or men that most perceive operator/agent trust as an issue. For instance, in some countries, lack of trust appears to be more of a concern for women and men who do not yet own a mobile phone, such as Kenya, but in other countries like Indonesia, owning a mobile does not appear to make much difference.

Overall, women and men in the same country report similar levels of trust in operators/agents. Jordan is an exception, where 40% of female versus 21% of male respondents reported it as a barrier, and concerns were more acute among women who had low levels of education and live in rural areas.

Fig. 5.14

Perception of agent or operator trust as a barrier

Respondents who agree or strongly agree (%)[1]



1: *Shows percentage who agree or strongly agree with Q 55. Actual question asked was: "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?": "Agents or operators sometimes would cheat me".*

Note: *Sample sizes for women N= 703 to 855 and N= 187 to 306 for men*

Technical literacy and confidence

Key takeaways

Technical literacy and confidence is the fifth most important barrier overall for women and men, and a particular concern for women, who are typically less educated, less confident with technology, and have more basic handsets.

Handsets and services that are poorly designed or use an unfamiliar language can be challenging for women.

Addressing technical literacy and confidence challenges can help increase both ownership and usage among women.

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

'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 in this section as they can be closely related.

Technical literacy and confidence is the fifth most important barrier overall for women and men in the surveys (*Figs. 5.2 and 5.15*), and was raised spontaneously as an issue in focus group discussions in all countries.

Women who do not yet own a mobile phone are usually more likely to report technical literacy and confidence as a barrier than women who do own a phone. More female borrowers and non-users reported technical literacy and confidence as a barrier than female owners in all countries, except DRC, where there was not much difference; Turkey, where the sample size was too small to comment; and Niger and Egypt, where there was no difference in confidence as a barrier. This difference is most apparent in Indonesia, where 23% of female owners report not knowing how to use a mobile phone/the more complex features of their mobile phone as a barrier compared with 48% of female respondents who do not yet own a mobile phone. Similarly, 20% of female owners report trouble reading/understanding handsets/content as a barrier compared with 50% of non-owners.

Technical literacy and confidence also appears to be more of a barrier for men who do not yet own a mobile phone than for those who do.[59]

Fig. 5.15

Perception of technical literacy and confidence as a barrier

Respondents who agree or strongly agree (%)[1]

	Technical literacy				Lack confidence	
	Don't know how to use a mobile/ the more complex features		Trouble reading content/language		Worried about making a mistake and losing money	
	W	M	W	M	W	M
Niger	33%	28%	43%	35%	14%	12%
India	34%	23%	32%	24%	38%	31%
DRC	20%	21%	27%	23%	17%	11%
Mexico	35%	36%	33%	40%	57%	62%
Indonesia	28%	21%	26%	20%	29%	21%
China	48%	41%	34%	31%	63%	66%
Turkey	24%	22%	22%	17%	25%	19%
Kenya	27%	24%	30%	21%	28%	20%
Colombia	37%	31%	32%	27%	59%	46%
Egypt	38%	41%	33%	35%	49%	44%
Jordan	29%	19%	30%	14%	42%	19%

HIGHEST BARRIER PERCEIVED IN THAT COUNTRY — LOWEST BARRIER PERCEIVED IN THAT COUNTRY

1: *Shows percentage who agree or strongly agree with Q 55. Actual question asked was: "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 don't know how to use a mobile phone/how to use the more complex features of my mobile phone"; "I have trouble reading and/or understanding handsets and/or content language"; "I am worried that I would make a mistake with my mobile phone and lose money".*

Note: *Sample sizes for women N= 756 to 863 and for men N= 192 to 312*

Technical literacy and confidence is usually a greater barrier for women

Technical literacy and confidence tends to be cited as a barrier more commonly by women than men in our study's sample countries (*Fig. 5.16*). 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 in our sample countries more commonly reported requiring assistance when using a mobile phone than male respondents. Whilst most female and male mobile owners claim knowing how to make a call without any help, when it comes to being able to send an SMS, there are some countries where more women require help than men[60] (see Appendix 2). For mobile internet, more female than male owners reported needing help in every country except Colombia, Mexico and Turkey, where women and men both say they would need similar levels of support (*Fig. 5.17*).

The reason women typically report technical literacy and confidence as a greater barrier than men appears to be a combination of issues related to both the customer and the design of the mobile and services, which are difficult to untangle. This is discussed in more detail below.

Fig. 5.16

Countries where women report technical literacy and confidence barriers more than men

	Barrier		
	Don't know how to use a mobile/the more complex features	Trouble reading content/language	Worried about making a mistake and losing money
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*

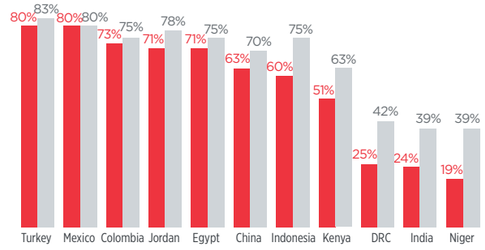
Women are often less educated than men, which contributes to technical literacy challenges

From the customer perspective, it is widely recognised that women are likely to be less literate and educated than their male counterparts across many low- and middle-income countries.[61] This was also observed in our surveys[62] and there appears to be a link between literacy/education and mobile technical literacy. In our survey, less educated women were more likely to report not knowing how to use a mobile phone/ the more complex features of their mobile phone as a barrier more than highly educated women in 7 of the 11 countries. Less educated women were also more likely to report trouble reading/understanding handsets/ content as a barrier in 10 of the 11 countries.

Fig. 5.17

Mobile phone owners who report they can use mobile internet without any help

Mobile phone owners (%)



Note: *Sample sizes for women N= 250 to 779 and for men N= 110 to 219*

***59**. This occurred in 4 of the 5 countries for which sufficient sample size was available.*

***60**. In 5 countries (India, Niger, DRC, China, and Egypt), more women than men reported needing help to send an SMS; in 2 countries (Mexico and Colombia), more men than women reported needing help; and in the 4 remaining countries results were similar among women and men.*

***61**. UNESCO, 2012, "World Atlas of Gender Equality in Education", http://www.uis.unesco.org/Education/Documents/unesco-world-atlas-gender-education-2012.pdf*

***62**. In all sample countries (except China, Mexico and Indonesia, where the results were similar), female survey respondents were less likely than men to be able to read and verbally answer a simple question correctly in at least one of the official national languages.*

There was evidence of this link in the focus group discussions too, where a common theme across most countries was that focus groups with lower levels of education tended not to use higher-end services or all the functions of their mobile phone because they did not know how to use them.[63] In India, DRC, Niger and Egypt, for instance, people with lower education levels, particularly women, often only used their mobile for calls and some SMS:

"Village women only know that the green button is for picking up phone calls and the red one for disconnecting the phone."
– Rural male, India

Women are often less confident with technology than men

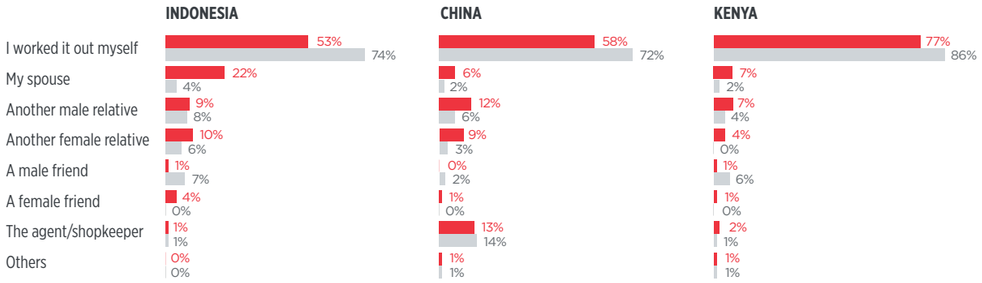
Another demand-side issue is that women tend to be less confident and more risk-averse than men when it comes to trying technology, including mobile phones.[64] In every country in our survey, for example, more men than women reported working out how to use a handset on their own (Appendix 2). In Indonesia and Egypt, for instance, just over half of female handset owners reported working it out for themselves, with their husbands as the most popular alternative, whereas approximately 3/4 of male handset owners reported working it out for themselves, with a male relative or male friend being the most common alternatives. Even among literate[65] male and female handset owners, more men than women in every country except DRC reported working out how to use a handset on their own. *Fig. 5.18* shows the responses for a few sample countries.

Poorly designed services or handsets in unfamiliar languages can be a challenge for women

From a supply perspective, mobile services and content are not always designed to meet the needs of rural, less educated and less literate users, many of whom are women, and this can constrain adoption. Women often have more basic handsets than men (*Fig. 5.5*), and it might be more challenging for developers to design intuitive, user-friendly services for the interface of these handsets compared to smartphones and more sophisticated handsets. Research by Grameen Foundation in India, for instance, shows that multi-step mobile phone menus and the use of unfamiliar syntax are confusing for rural women. For example, women in the study were pressing '*' instead of '#' as they could not differentiate between them, and were not able to correlate 'answer', 'send', and 'back' with the associated soft key on their handset and press the call connect button below it.[66]

The language of handset menus and services also plays a role in determining uptake and usage, especially among low-educated women. For instance, during focus group discussions in India and Indonesia, some rural, low-educated women reported that smartphones and apps tend to be in Hindi or even English; languages with which they were unfamiliar.

Fig. 5.18
Who first taught you to use your handset?
Literate handset owners (%)



Note: *Sample sizes for women N= 568 to 800 and for men N= 174 to 223*

CASE STUDY

Improving women's mobile technical literacy: Swadhaar in India and Connected Women's Mobile Skills toolkit in Papua New Guinea

Mobile operators can partner with organisations such as NGOs and MFIs (microfinance institutions) to help women overcome technical literacy issues. Here are two examples:[67]

- In India, Airtel Money has partnered with Accion and Swadhaar, which have a large microfinance client base and expertise in training end users in finance and mobile money. Accion and Swadhaar have designed bespoke training material to educate clients on how to manage their finances and use mobile money, including Airtel money. These include posters, flip charts with cartoon images and stories that women can relate to. Clients are trained at various stages along the customer journey—to reinforce messages through repetition whilst not overwhelming the customers—and through a special 'peer leader' programme, in which selected end users are employed to support other end users to be able to use Airtel Money services independently.

- In Papua New Guinea, Connected Women has developed a 'Mobile Skills' toolkit that mobile operators and other stakeholders can use to help their female customers overcome technical literacy issues. The toolkit explains key mobile functions such as SMS, mobile money, and bill payment in a contextually appropriate manner. Given women's low literacy levels in PNG (around 60%), the toolkit draws heavily on visual and audio resources, and Connected Women partnered with trusted local development and media organisations. This collaborative toolkit includes a training guide for mobile operators, NGOs, and other organisations looking to improve women's mobile functionality, and stories and guides for radio/audio content illustrating the value of different mobile functions in the PNG context.

1. Swadhaar customer education materials illustrate the different functionalities of mobile money

2. Poster from the Mobile Skills toolkit, illustrating the value and functionality of mobile money in Papua New Guinea

***63**. Although it is sometimes because of cost and not having these features on their mobile.*
***64**. GSMA mWomen, 2013, "Unlocking the Potential: Women and Mobile Financial Services in Emerging Markets", http://www.gsma.com/mobilefordevelopment/unlocking-the-potential*
***65**. As tested/defined during our survey.*
***66**. Grameen Foundation, 2014, "Women & Usability of Mobile Financial Services", http://www.slideshare.net/grameenfoundation/gf-mm-usabilityresearchindia*
***67**. Both examples are projects funded by GSMA Connected Women Innovation Fund grants.*

Additional barriers from the customer perspective

Agent service and access, value, and ID

Three other barriers emerged from our research, which overall were reported by women and men as less important than the 5 major barriers detailed above (*Fig. 5.2 and Appendix 2*), but they can be of particular concern in certain contexts, such as in specific countries or among certain segments of women:

Agent service and agent access: Issues with agent service and access are felt relatively more acutely among certain segments of women and men (e.g., rural versus urban; less educated versus highly educated), and this varies by country. In some countries, such as Jordan and Kenya, agent service and access is more of a barrier for women than men. Expert interviews and previous research suggest this may be due to the fact that women in many settings are more likely than men to feel uncomfortable interacting with an agent, who in most cases is male, or intimidated by the shop environment.[68] Additionally, women are often more time-poor than men and/or spend more time in the home,[69] which can make visiting an agent challenging.

Value: Although lack of value—such as not believing that service or content delivered through mobile is relevant, or already having alternative means of communication— was not reported as one of the most significant barriers overall, it was perceived as a relatively more important issue by women and men in certain countries, such as Colombia. While women and men tend to report value as a similar barrier, the surveys, focus groups, or expert interviews revealed there are a few exceptions where women (or men) perceive it as a greater barrier. In Egypt, for instance, focus groups revealed that some less educated and rural women saw the benefit of a mobile to those who are employed or attend college, but did not see what benefit they would personally derive. Interestingly, lack of perceived value was one of the important barriers highlighted in the GSMA 2010 report,[70] but appears to be less of a concern in this current study. It is likely that as mobile has become more ubiquitous, its value is now more broadly recognised.

ID: Not having the correct registration and identification documents to purchase a SIM or use mobile services was reported as a more important issue by women and men in certain countries, and usually among respondents who do not yet own a mobile phone. In some countries, notably Egypt,[71] more women report ID as a barrier than men. Field observations suggest this may be because they have less access to the necessary documentation than their male counterparts, such as a national identity card or driving licence, or are less likely to be registered as a homeowner or bill payer. In these circumstances, 'strict' ID regulation can disproportionately affect women.

Social norms often discourage women from accessing and using mobile phones

Social norms are an underlying, 'hidden' barrier to women accessing and using mobile phones

As illustrated above, social norms are an underlying, 'hidden', and often subtle barrier that have a powerful influence on women's access to and use of mobile technology, and can explain why women experience some more commonly cited barriers—such as cost and security and harassment—more acutely than men.

What are social norms?

Every day around the world, many women face a variety of discriminatory practices, both conscious and unconscious, that create preferential treatment for men and boys in accessing and using mobile technology. These practices or 'social norms'—considered here as the everyday behaviour, or expected behaviour, of a specific group—can vary across countries, and also within countries, such as between rural and urban areas and across different ages and ethnic groups. Social norms influence a person's role, status, empowerment, and access to education and income in a society, and consequently, their relationship with mobile technology.

Social norms act as hidden barriers that often influence the more obvious barriers identified by female respondents in this study. It is widely acknowledged that in many different settings across the world, women tend to have a different role and status than men, less access to education, and earn lower incomes.[72]

For example, the social norms in many countries of girls receiving less education than boys, marrying early, and becoming predominantly homemakers contributes to women having less individual income than their male counterparts and cost being a greater barrier to mobile phone ownership for women than men.

Social norms are difficult to quantitatively 'measure', as they are so ingrained in the everyday life of a society that respondents may not notice what they are experiencing is any different. As a result, women (and men) may report certain barriers around social norms less often than would be expected. This might explain the relatively low proportion of female respondents reporting that their families are (or would be) uncomfortable with them using a mobile (*Fig. 5.2*).

Social norms influence women's mobile purchasing decisions

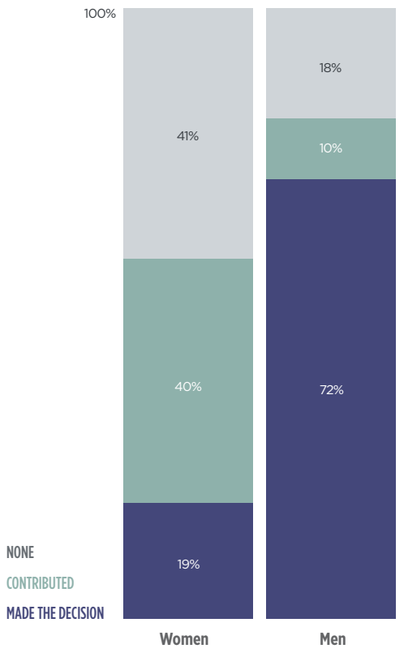
The social norms around how women and men make financial decisions in a household, the 'appropriateness' of men and women interacting with sales agents of the opposite sex, and community perceptions of male and female roles, all influence mobile phone ownership and usage. The following example from India highlights how social norms influence women's handset choices and their ability to refill credit (*Fig. 5.19*).

Fig. 5.19

India: How social norms influence handset and credit purchases

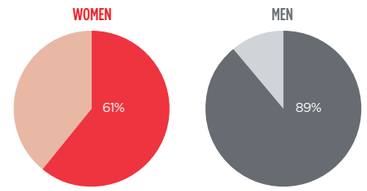
Handset purchase

Role played in selecting the handset
Handset owners (%)[1]



Credit purchase

SIM owners who bought credit on their own with no help from anyone in the last 4 weeks
SIM owners (%)[2]



Reasons why women need help
(% of female respondents)[3]

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.*

68. GSMA Connected Women, 2014, "Case study: Dialog's 5 Star Partner Programme: Integrating Women into the Rural Retail Chain"; GSMA Connected Women and MMU, 2014, "Reaching Half of the Market: Women and Mobile Money"; Cherie Blair Foundation for Women, 2011, "Women Entrepreneurs in Mobile Retail Channels: Empowering Women, Driving Growth".

69. The World Bank, 2012, "World Development Report 2012: Gender Equality and Development"; Aslihan Kes and Hema Swaminathan, 2006, "Gender and Time Poverty in Sub-Saharan Africa", in C.M. Blackden and Q. Woden (Eds.), Gender, Time Use and Poverty in Sub-Saharan Africa, World Bank Working Paper No. 73.

70. GSMA, 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

71. In Egypt, 44% of women and 26% of men report that ID is a barrier. Field observations suggest this might be because one form of ID is required to purchase a SIM and a second is needed to change a tariff plan, and women are less likely than men to possess two different forms of identification.

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

In India, gender disparities in financial autonomy affect the way women obtain a SIM and handset. Only 19% of female mobile phone owners in India reported making the handset purchasing decision themselves compared with 72% of men, and 41% of women had no role at all in choosing a handset (versus 18% of men). Moreover, of the 44% of female handset owners who used their own money or the household budget to pay for their handset (versus 83% of male handset owners), 61% had to ask for permission to spend this money on a handset.

Beyond the handset purchasing decision, social norms around women interacting with agents also affect the ability of women to buy credit. Female mobile owners in India are less likely than men to refill credit on their own (61% of women versus 89% of men) for a number of reasons, such as feeling that it is inappropriate to go to the shop alone.

To overcome these social norm barriers in India, Uninor is using a creative combo-SIM pack and involving men in reaching women through mobile. As the case study explains, by targeting male 'gatekeepers' in the marketing, Uninor is helping men see the value of their wives having a mobile phone.

Social norms can influence and control women's mobile ownership and usage

There was also strong evidence from the focus group discussions in almost all countries to illustrate how social norms influence and control women's and girls' ownership and use of their phones (and to a lesser extent, men as well).

One of the key reasons for this exertion of 'control', cited across many countries, was the perception among both women and men that mobile can be used to pursue romantic liaisons outside of marriage, thereby threatening traditional social norms. This is manifested in different ways in different countries.

In DRC, Niger and Colombia, for instance, focus group discussions revealed that some men, as well as women, check on their partner's mobile usage and sometimes try to regulate it, as they fear it would result in extra-marital affairs. This dynamic was also apparent in survey findings from most countries (Appendix 2), especially in Niger (*Fig. 5.20*), where men, and sometimes women too, feel it is more acceptable for a husband to check the phone numbers on his wife's phone than for a wife to check the numbers on her husband's phone.

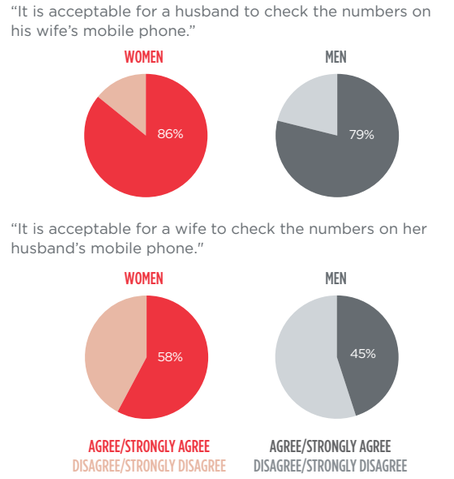
Notably, during focus group discussions in Niger, some women reported that because of jealousy and fear of adultery, men sometimes change their wife's SIM card after they get married or do not to allow their wives to have a phone at all. Male respondents in an urban group echoed these sentiments:

"The main reason for women to get a phone is to get men." "For men, the main reason is work."
– Urban males, Niger

In some other countries, notably Egypt, India and Jordan, the primary concern is about young women rather than married women. Indeed, it was reported as common for young women (but not young men), particularly in more rural areas, to have their access and use of mobile monitored and controlled by their families, who want to protect them from harassment from untoward admirers or otherwise control their communication with men outside the immediate family.

Fig. 5.20

Opinions on partners checking each other's mobile phone in Niger
Respondents who agree or strongly agree (%)



Note: *Sample sizes for women N= 703 to 742 and for men N= 188 to 195*

CASE STUDY

Targeting men to reach women with mobile: The case of Uninor[73]

In India, Uninor is piloting a combo-SIM plan product that aims to increase SIM ownership among rural women. Initial research in the target area revealed that 76% of men, but only 29% of women, use mobile phones. Two paired SIMs are sold together and its marketing campaign promotes the idea that one of the SIMs will be used by a woman, while the other is to be used by their husband or another male household member. This combo SIM plan ensures that, out of every two subscribers acquired, at least one is a woman. Uninor provides various talktime benefits for the paired SIM owners; for example, if the 'male' SIM is refilled then the 'female' SIM automatically receives an equivalent free refill (and vice versa).

A key element of Uninor's strategy is to market the product to men as well as women. Uninor has recruited a network of local female 'promoters' as retailers to market and sell this product, as it is believed that these women are trusted community members who have existing relationships with households and can provide helpful post-sales support.

Early evidence suggests that the SIM combo and marketing and distribution approach can be a powerful way to challenge the social norms preventing women from using a mobile phone, and provides an incentive for men to see the value of female household members having a SIM of their own. Just five months after launch, sales already represent over 30% of total new Uninor subscribers, with usage (minutes of use) among SIM owners similar to other subscribers in the target area. Uninor reports that the project is self-sustaining and is looking to scale up.

CASE STUDY

Addressing gender-based violence: The case of HNI Madagascar[74]

While the constitution of Madagascar protects women, there is a lack of awareness among Malagasy women of their rights. 3-2-1 is a free on-demand mobile information service provided by HNI and Airtel in Madagascar which provides gender-based violence (GBV) information to listeners, such as what the law says is unacceptable behaviour, and where to seek help.

Fieldwork[75] has revealed the positive impact of the 3-2-1 service. Men in focus groups reported learning about the different types of actions they did not previously realise constituted violence (e.g., emotional, verbal violence), and also reported behaviour change: they have "toned it down". The story of one female interviewee in particular illustrates how the service can have a powerful impact on social norms. When Georgette, a victim of domestic violence who was unaware of her rights or GBV resources, discovered the 3-2-1 gender empowerment content, she borrowed her sister-in-law's mobile handset (her husband had previously destroyed hers in a jealous rage) and made her husband listen to it. She now feels there has been a change in his behaviour towards her. The violence has not resumed, and he now gives her more freedom to go out by herself—a change she attributes to the 3-2-1 service they have both listened to. Even her son has remembered the information: Georgette recounted a time when her son told his father, "*If you beat Mom, we'll go to Grandma's, because the phone lady said we can go.*"

***73**. GSMA Connected Women Innovation Fund grant project.*
***74**. GSMA Connected Women Innovation Fund grant project.*
***75**. Conducted by the GSMA Connected Women team, 2014.*

Image courtesy of Garth Cripps / Blue Ventures

Systemic barriers: A lack of gender-disaggregated data and focus on women

In addition to the barriers experienced by the customer discussed previously, there are also two key barriers independent of the customer that arose during expert interviews (see the right hand side of *Fig. 5.1*). These systemic barriers relate more specifically to two important ecosystem actors: mobile operators and policy-makers.

1. A lack of gender-disaggregated data: Data on female 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.

2. A lack of focus on women: 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.

Many mobile operators still lack access to gender-disaggregated data and a focus on the female market

For mobile network operators, it can be difficult to track gender successfully at the point of sale, especially in markets where men commonly register for their wives and daughters, in low-income settings where agents often operate in very basic facilities and track registration on paper only, and in unbranded distribution networks (e.g., mom and pop stores) where quality control is difficult.

Compounding these issues, legacy systems that do not allow customer registration and usage information to be harmonised are expensive and difficult to upgrade. Registration requirements for ownership may also discourage operators from tracking their customers better due to burdensome penalties for inaccurate records. Furthermore, with limited budget, lack of in-house expertise and short project timelines, operators rarely place sufficient focus on consumer insights research. This research is not just helpful for tracking gender, but also for understanding women's wants and needs for mobile products and services.

Interest has certainly escalated in the last few years, but many mobile operators still do not understand the market value of serving female customers. A lack of focus and interest is perhaps not surprising given the absence of quality consumer insights research and gender-disaggregated data to size the market opportunity for serving women.

A mobile operator's gender data can be inaccurate

Comparing the gender of customers recorded on the database of a Sub-Saharan African operator with the actual gender of users collected during fieldwork in this study revealed that 1/3 of its female mobile customers were inaccurately recorded as male in its system.

Many policy-makers lack access to gender-disaggregated data and do not prioritise gender relative to other priorities

Policy-makers often misunderstand or are unaware of the extent to which women do not have access to or use mobile phones, and the benefits that mobile ownership can bring to women and society as a whole. For example, mobile phone penetration statistics are often presented using 'connections' and do not account for multi-SIM use, often causing confusion around the actual number of unique subscribers in a country. Although some countries are increasingly integrating ICT statistics into their national surveys and then into policy, most low- and middle-income countries do not. And, with little to no data on gender composition, many people assume most women and men have mobile phones, so there is low awareness and prioritisation of this issue. 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.[76]

Integrating gender statistics on mobile phone access and usage at the international level is essential. However, while recent efforts by international institutions like the ITU show global leadership in bringing gender issues to the forefront, the lack of data at the local and national level results in limited data at the international level as well.

This report has aimed to provide information on women's mobile phone ownership and usage in a limited set of countries, as well as a model for estimating the gender gap in mobile phone ownership in low- and middle-income countries. However, only by integrating gender at all three levels—industry, national government, and international—will we be able to accurately track progress, develop policies, and launch mobile services that accelerate women's access to and use of mobile technology in low- and middle-income countries over the long term.

76. 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

Recommendations

Recommendations

Closing the gender gap in mobile ownership and usage in low- and middle-income countries can have substantial benefits to women and society. Increasing mobile phone access and use can positively impact economies and provide a valuable tool through which both public and private services can be delivered (e.g., G2P payments, mHealth services, and mobile money). For women, access to mobile phones and services offers the benefits of feeling connected, autonomous and safer, the ability to access critical information and services, and the potential to access increased employment and education opportunities. Bridging the gender gap in ownership today would help an estimated 200 million women gain access to mobile phones. Ensuring these women own phones, and that all women in low- and middle-income countries increase their usage of phones could unlock an estimated $170 billion market opportunity for the mobile industry in the next 5 years. However, several barriers continue to inhibit women's access to and use of mobile technology.

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 start today that, taken 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.

The following tables summarise the most important recommendations by stakeholder to address the key barriers.

The recommendations set out in this 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.

The GSMA is committed to continuing to support mobile operators and other ecosystem stakeholders to bridge this digital divide by: working with government and regulators to achieve a regulatory environment that encourages mobile acceleration for all and prioritises spectrum for service delivery; collaborating on programmes to address digital literacy and the availability of local and relevant content; providing key research and standardised data; and working with our donors to further mobile's contribution to the following areas: mobile agriculture, mobile money, disaster response, mobile health, and mobile utilities.

Image Courtesy of Qualcomm® Wireless Reach™

MOBILE OPERATORS

BARRIERS FROM THE CUSTOMER PERSPECTIVE					SYSTEMIC BARRIERS	
INCOME AND AFFORDABILITY	INCENTIVES TO OWN AND USE		USER CAPABILITY AND DEISGN	INFRASTRUCTURE		
COST	SECURITY & HARASSMENT	OPERATOR/AGENT TRUST	TECHNICAL LITERACY & CONFIDENCE	NETWORK QUALITY & COVERAGE	LACK OF GENDER-DISAGGREGATED DATA	LACK OF FOCUS ON WOMEN
Analyse the dynamics of handsets in your market (e.g., popular models, basic phone versus smartphones, new versus secondhand phones). **Design solutions based on this to bring lower-cost handsets to customers** (e.g., microloans, repair services, mobile marketplace, partnerships with low-priced handset manufacturers). **Introduce more creative 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). **Develop clear and transparent pricing**, including warning reminders, especially for data charges. **Target men in marketing campaigns to reach women** in settings where men commonly make decisions around women's access to mobile.	**Build on the perception of mobile phones as a tool to increase safety for women, by developing 'safety' services** (e.g., to help women alert contacts in an emergency), and call-blocking services. **Provide services that enable women to privately recharge their credit** to minimise risk of harassment (e.g., emergency credit, private credit refill).	**Research sources of mistrust by conducting consumer insights research**, or add to existing surveys (e.g., brand trackers). **Develop a helpful and trustworthy agent network**, including training agents and recruiting female agents. **When expanding the agent network, consider partnering with NGOs and other organisations** that have strong and trusted local networks. **Develop clear and transparent pricing**, especially for data charges.	**Integrate user-centric design principles** into mobile services, including consumer insights research, user-testing, and product iteration. **Integrate features into 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). **Ensure pilots and user testing of products and services include women** and those with lower literacy levels. **Train and incentivise agents** to better help women navigate handsets and mobile services, including mobile internet and the credit refill process. **Consider partnering with NGOs and other organisations** that have expertise in technical literacy training.	**Strive to increase network coverage and the quality of the network.** **Consider solutions to improve networks in rural areas** (e.g., energy-efficient and renewable energy networks in off-grid regions, and active and passive infrastructure sharing). **Conduct consumer surveys to understand whether and why network quality and coverage is a greater barrier for women** in your market.	**Analyse existing data but with a gender lens** (e.g., customer call data, brand tracker data, customer satisfaction surveys). **Track the gender composition of the customer base and the differences in usage** between men and women. **Invest in consumer insights research**—directly or through experienced partners—to better understand the wants and needs of women versus men, and the different types of women in your market.	**Empower an employee/team to incubate female-market oriented initiatives**, until they are ready to be brought into the mainstream organisation. **Consider using tried and tested content** for women from other markets. **Invest in consumer insights research**—directly or through experienced partners—to better understand the wants and needs of women versus men, and the different types of women in your market. **Encourage an ecosystem of local content, products, and services** relevant to women to drive adoption and usage.

V

OTHER MOBILE INDUSTRY PLAYERS (HANDSET, VAS, APP CONTENT DEVELOPERS)

BARRIERS FROM THE CUSTOMER PERSPECTIVE					SYSTEMIC BARRIERS	
INCOME AND AFFORDABILITY	INCENTIVES TO OWN AND USE		USER CAPABILITY AND DEISGN	INFRASTRUCTURE		
COST	SECURITY & HARASSMENT	OPERATOR/AGENT TRUST	TECHNICAL LITERACY & CONFIDENCE	NETWORK QUALITY & COVERAGE	LACK OF GENDER-DISAGGREGATED DATA	LACK OF FOCUS ON WOMEN
Continue to design competitively priced and more durable handsets (e.g., more power efficient). **Develop innovative financing mechanisms to lower the cost of handsets** (e.g., microloans, monthly instalments). **Develop relevant services for women** (e.g., mobile money) so they perceive value for money in a mobile phone and mobile services. **Investigate solutions to improve borrowers' user experience** and autonomy for those who will still not be able to afford a handset. **Design apps that update efficiently** to lower data costs.	**Build on the perception of mobile phones as a tool to increase safety for women, by developing 'safety' services** (e.g., to help women alert contacts in an emergency).	Not applicable	**Integrate user-centric design** principles into handsets and services, including consumer insights research, user-testing, and product iteration. **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). **Ensure pilots and user testing of products and services include women** and those with lower literacy levels. **Offer better user-experience and features on phones that help female users transition to mobile internet.** **Develop interactive services that engage women and help them learn** to use a handset and services, including mobile internet. **Consider partnering with NGOs and other organisations** who have expertise in technical literacy training.	Not applicable	**Track women's uptake, usage and experience of services versus men's** (e.g., integrate gender questions into in-app surveys). **Consider sharing customer data with other stakeholders** (e.g., mobile network operators, policy-makers). **Invest in consumer insights research**—directly or through partners—to better understand the wants and needs of women versus men, and the different types of female customers in your market.	**Consider using tried and tested content** for women from other markets. **Invest in consumer insights research**—directly or through partners—to better understand the wants and needs of women versus men, and the different types of female customers in your market. **Specifically integrate women in pilots and user testing.**

POLICY-MAKERS

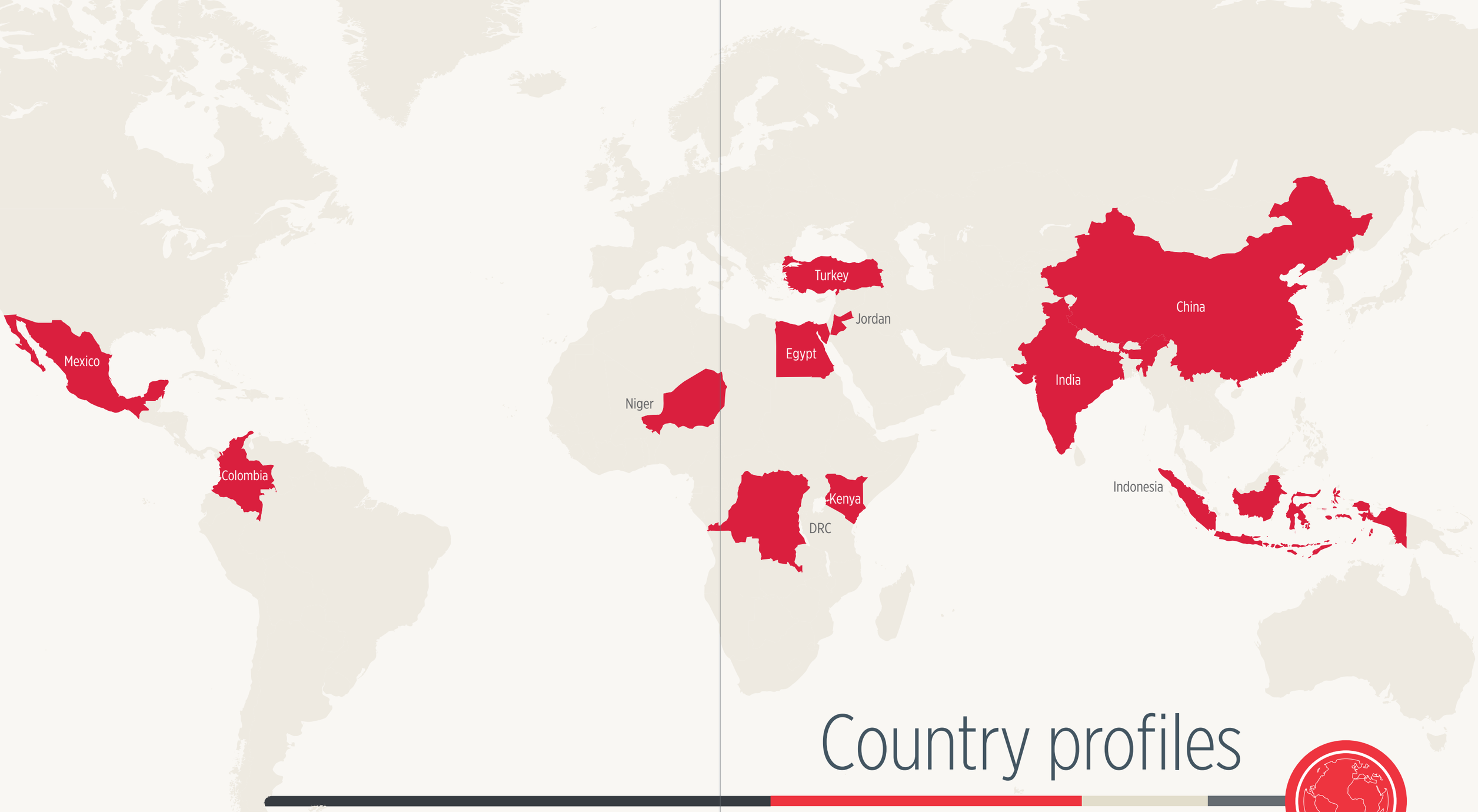
BARRIERS FROM THE CUSTOMER PERSPECTIVE					SYSTEMIC BARRIERS	
INCOME AND AFFORDABILITY	INCENTIVES TO OWN AND USE		USER CAPABILITY AND DEISGN	INFRASTRUCTURE		
COST	SECURITY & HARASSMENT	OPERATOR/AGENT TRUST	TECHNICAL LITERACY & CONFIDENCE	NETWORK QUALITY & COVERAGE	LACK OF GENDER-DISAGGREGATED DATA	LACK OF FOCUS ON WOMEN
Consider targeted, subsidised programmes for women to get access to mobile (e.g., subsidising handsets). **Reduce or remove mobile-specific taxes** that exacerbate the cost barrier.	**Launch awareness campaigns** in public forums and in schools to draw attention to harassment of women via the mobile phone. **Develop legal and policy frameworks to address harassment** over mobile phones and mobile internet.	**Ensure policies do not undermine trust** in agents or mobile operators (e.g., gender-sensitive registration and ID requirements).	**Include mobile and digital skills in school curricula**, including primary schools, to ensure girls are reached. **Integrate mobile and digital skills training for women participating in government aid programmes.** **Fund technical literacy training** by NGOs. **Consider which services can be provided to women via mobile** (e.g., G2P) to help women become comfortable and confident using mobile technology.	**Provide public subsidies to mobile operators to facilitate network expansion** in rural areas. **Allow active and voluntary infrastructure sharing** among mobile operators. **Release sufficient spectrum** (in particular low frequencies) to mobile operators at an affordable cost. **Consult with industry** on regulation and policy-making to give operators the necessary confidence to plan investment.	**Integrate gender into national broadband plans.** **Track mobile access and use by gender**, along with other ICTs, in national statistics databases.	**Foster entrepreneurial ecosystems for mobile products and services** (e.g., accelerators, incubators).

DONORS AND THE DEVELOPMENT COMMUNITY

Support affordability efforts to increase access (e.g., Alliance for Affordable Internet). **Consider targeted, subsidised programmes for women to get access** to mobile (e.g., subsidising handsets, microloans).	**Launch public awareness campaigns** to draw attention to harassment of women via the mobile phone. **Provide research and additional insights into issues around security and harassment** on mobile for women in low- and middle-income countries.	**NGOs should consider whether beneficiaries or trusted local NGO staff would benefit from becoming agents** for mobile operators.	**Fund mobile technical literacy training for women** across multiple country programmes. **Encourage national governments to include technical literacy training for women** on their ICT agenda.	**Advocate and support efforts to increase network quality and coverage for women** in low- and middle-income countries.	**Support international efforts to standardise gender statistics** in ICT. **Encourage the collection of gender data at the national and international level** by funding, providing technical assistance, and facilitating partnerships. **NGOs should consider partnering with mobile network operators and governments to provide data and insights** into women and mobile.	**Foster entrepreneurial ecosystems for mobile products and services** (e.g., accelerators, incubators). **Facilitate content sharing** across different regions and between the social sector and private sector. **Provide funding for programmes to address ownership and usage gaps.**

ACADEMICS AND RESEARCH ORGANISATIONS

Continue to research and document the income and expenditure patterns of women in low- and middle-income countries, and share findings with industry stakeholders.	**Assess women's key concerns about security and harassment** on mobile and share findings with policy-makers and industry stakeholders.	**Research how women and men perceive and interact with agents and mobile operators** in low- and middle-income countries, and share findings with mobile operators.	**Expand research on the technical literacy barriers** to using mobile internet and other important value-added services for women in low- and middle-income countries, and share findings with policy-makers and industry stakeholders.	**Conduct research to better understand why women can perceive network quality and coverage to be a greater barrier than men** and share findings with policy-makers and industry stakeholders.	**Continue to advise and support efforts to generate gender-disaggregated statistics.** **Expand research in low- and middle-income countries on women's mobile use versus men**, in addition to mobile access, and share findings with policy-makers and industry stakeholders.	**Continue to assess the impact of mobile (including mobile internet) on women** in low- and middle-income countries, and share findings with policy-makers and industry stakeholders. **Conduct research on the most effective content-localisation methodologies and the most relevant content for local women** in particular markets, and share findings with industry stakeholders.



Country profiles

The following section provides a more in-depth look at the countries in which primary field research was conducted for this report. These country profiles provide an overview of the opportunities and barriers to mobile ownership and usage by women as well as actionable recommendations for stakeholders.

Country profile information sources

GENDER GAP IN OWNERSHIP

Based on reported SIM ownership data from fieldwork

GENDER GAP VS. AVERAGE

Low: under 10%
Medium: 10% to 20%
High: over 20%

UNIQUE SUBSCRIBER PENETRATION

- Graph shows proportion of the population who are unique subscribers.
- Unique subscribers are defined as "Total unique users who have subscribed to mobile services at the end of the period, excluding M2M." (source: GSMA Intelligence)
- Male-female split of unique subscribers was estimated from primary research on reported SIM ownership.
- Population data source is the World Bank Health Nutrition and Population Statistics: Population Estimates and Projections, 2014.

5 YEAR REVENUE OPPORTUNITY

- Incremental, cumulative 5-year (2015-2020) revenue opportunity in USD above current (GSMA Intelligence) forecast of bridging the gender gap in ownership and usage.
- Revenue opportunity estimate by Altai Consulting is based on GSMA Intelligence ARPS[1] data and field research. Refer to the Methodology Annex on the Connected Women website for a more detailed description of the methodology.
- Bridging the ownership gap: figure includes estimated revenues from gradually increasing the percentage of female phone owners to match the number of male phone owners by 2020.
- Bridging the usage gap: figure includes estimated revenues from 1) Gradually increasing female ARPS to align with overall ARPS by 2020; 2) Increasing ARPS from new female users bridging the ownership gap.
- Assumption is that new female mobile phone owners contribute 50% of existing female users' ARPS.

1. Average revenue per subscriber.
2. Compound annual growth rate.

Mobile market

Refers to information sourced elsewhere on this page or previous page.

Social norms around mobile

Based on findings from fieldwork and information sourced elsewhere on this page or previous page.

Population: total population (source: World Bank, 2013)
Rural: percentage of total population that is rural (source: World Bank, 2013)

GDP/capita: data is in current US$ (source: World Bank, 2013)
Growth: CAGR[2] of GDP from 2010-2013 (source: World Bank). Data in constant 2005 US$

Unique subscriber penetration: number of unique subscribers (source: GSMA Intelligence, Q4 2014) divided by the total population (source: World Bank Health Nutrition and Population Statistics: Population Estimates and Projections, 2014)
Growth: CAGR[2] of unique subscribers from Q4 2009 to Q4 2014 (source: GSMA Intelligence forecasts)

3G penetration: percentage of connections that are 3G (source: GSMA Intelligence, Q3 2014)

Current ARPS[1]: source: GSMA Intelligence, Q3 2014
Growth: CAGR[2] of average revenue per user from Q2 2009 to Q2 2014 (source: GSMA Intelligence ARPU by subscriber forecasts)

Market share of top 3 mobile operators: source: GSMA Intelligence, Q3 2014

Gender equality ranking: ranking on the World Economic Forum's Gender Gap Index, 2014

Formal labour participation: labour force participation of population over age 15 who are economically active (source: World Bank, 2012)

Stages of mobile access and usage

Obtain a SIM & handset

Role that handset owners played in selecting their handset (%)

- Base population: handset owners
- Actual question asked was: "What role, if any, did you play in selecting your handset?"
- N= 345 to 807 for women and N= 124 to 234 for men, depending on the country

Obtain credit

SIM owners who bought credit on their own with no help from anyone in last 4 weeks (%)

- Base population: SIM owners who have refilled credit in the past 4 weeks using scratch card(s), electronic top-up, or mobile money
- Actual question asked was: "In the past 4 weeks, who refilled your credit balance on all the SIMs that you own?"
- Includes those who answered: "I have refilled my credit at an agent(s) on my own (without any help from anyone)" or "I have refilled my credit through mobile money on my own (without help any from anyone)." For China, 'online' replaced 'mobile money'.
- N= 316 to 725 for women and N= 107 to 213 for men, depending on the country

Use

Mobile owners who report sending an SMS/using mobile internet (%)

- Base population: SIM owners
- Actual questions asked were: "When did you last use a mobile to send an SMS?" and "When did you last use the internet on a mobile?"
- Includes those who answered "yesterday", "in the past 7 days", "in the past 30 days" or "more than 30 days ago". Excludes those who answered 'never'.
- For SMS, N= 330 to 807 for women and N= 133 to 234 for men, depending on the country
- For mobile internet, N= 330 to 807 for women and N= 133 to 234 for men, depending on the country

Please refer to the Methodology Annex on the Connected Women website for a more detailed description of the methodology used in this study.

India

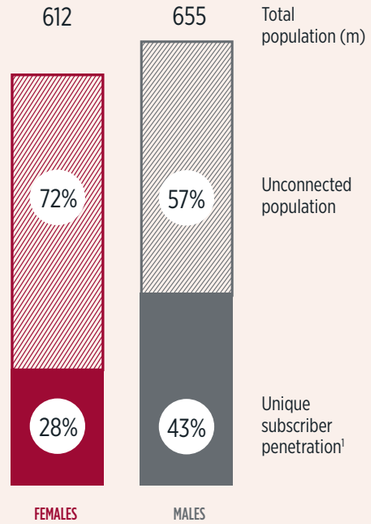
With a population of over 1.3 billion and a gender gap of 36%, the second highest of our focus countries, India has an estimated 114 million fewer women than men owning a mobile phone. Bridging the ownership gap should therefore be made a priority and represents a significant revenue opportunity. With India's large population, reaching the remaining unconnected women should also be a focus for mobile stakeholders.

GENDER GAP IN OWNERSHIP

36%

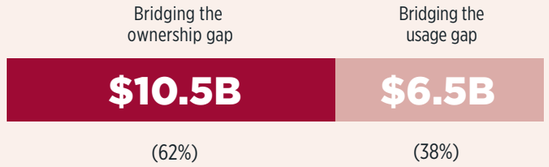
GENDER GAP VS. AVERAGE

HIGH



5 YEAR REVENUE OPPORTUNITY

$17B



1. GSMA intelligence data. Male-female split of unique subscribers was estimated from primary research in-country.
2. Average revenue per subscriber.
3. Compound annual growth rate.

Mobile market

India is the second largest telecom market globally and growing rapidly. Yet, with a unique subscriber penetration of 36%, the market is still largely unconnected. The gender gap in ownership is high: an estimated 28% of women versus 43% of men own a mobile. Mobile usage is basic, and only 9% of all connections are 3G. India's ARPS[2] is one of the lowest in the world. With 13 mobile operators, India is an incredibly competitive market.

Social norms around mobile

Gender disparities in India are relatively strong and pervasive and affect women's access and use of mobile. Limited resources compounded with social norms often mean that the men of the household are the first to get a mobile phone. Many women also only borrow mobile phones. Lower access levels, monitoring of usage, and lower literacy levels all affect women's ability to use mobile.

Population: 1,252m
Rural: 68%

GDP/capita: $1,499
Growth: 6% CAGR[3]

Unique subscriber penetration: 36%
Growth: 18% CAGR[3]

3G penetration:
9% of connections are 3G

Market share of top 3 mobile operators:
23% Airtel
19% Vodafone
15% Idea Cellular

Current ARPS[2]: $5
Growth: –9% CAGR[3]

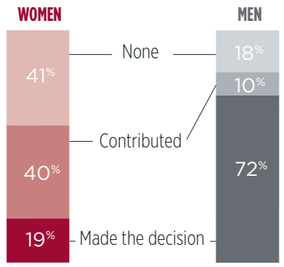
Gender equality ranking: 114 out of **142** countries

Formal labour participation:
81% for men,
29% for women

Stages of mobile access and usage

Obtain a SIM & handset

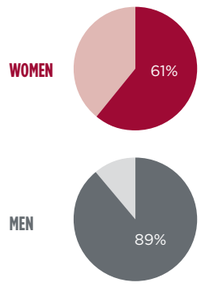
Role that handset owners played in selecting their handset (%)



- When making mobile purchases, Indian women have low levels of financial autonomy and decision- making power: only 19% of female handset owners reported choosing their own handset, and only 44% used their own money or the household budget to pay for it. Of those, 61% had to first ask permission.

Obtain credit

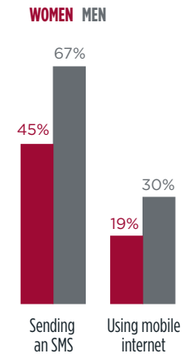
SIM owners who bought credit on their own with no help from anyone in last four weeks (%)



- The main reasons why women don't buy credit on their own include feeling unsafe or inappropriate, not being in control of finances, and feeling uncomfortable interacting with agents.

Use

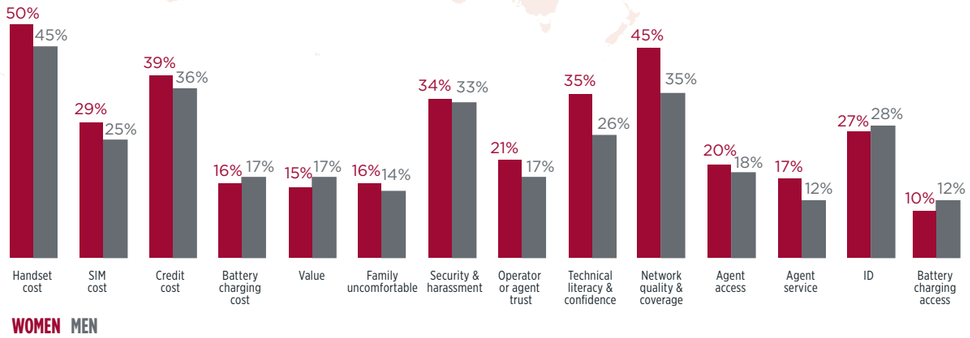
Mobile owners who report: (%)



- Gender disparities in mobile internet use are highest in urban areas: 35% of urban male SIM owners said they used mobile internet in the last 7 days versus just 11% of urban female SIM owners.

Barriers to mobile access and usage

Respondents who agree or strongly agree that this barrier prevents them from owning or using a mobile phone (%)[4]



Barriers to mobile access and usage

CREDIT COST & HANDSET COST

Handset cost is the main barrier for both Indian men and women, but especially women:

"Men have the latest touchscreen phone whereas women only have basic mobile phones."
– Rural female, India

Handset cost is an equally important barrier for men and women from poorer households, whereas 46% of women and 36% of men from wealthier households report it as a barrier.

Credit cost is also an important barrier, particularly for women from poorer households, where 47% rate it as a barrier compared with 40% of men.

TECHNICAL LITERACY & CONFIDENCE

Technical literacy is a greater barrier for Indian women than men, with 34% of female respondents (vs 23% of men) reporting that not knowing how to use a mobile properly is a barrier.

Low literacy can also limit usage, with 38% of low-educated women (vs 25% of men) reporting trouble reading and understanding their mobiles as a barrier.

A lack of confidence can also often prevent women from trying to use a phone:

"We are not educated so we don't know how to use it and are afraid of using the wrong button."
– Rural female user, India

NETWORK QUALITY & COVERAGE

Network quality and coverage impacts Indian women in both urban and rural areas more than Indian men. 47% of rural women and 40% of urban women report this as a barrier.

"In some places, there is no network."
- Urban female user, India

"When there is no network and we can't leave the place, we have to find another connection with another SIM card."
- Urban female user, India

4. For the purpose of clarity, percentages for the following barriers have been calculated by taking a simple average from across "sub-barriers": "Value", "Security & harassment", "Technical literacy & confidence" and "Agent service"; see Appendix 2 for responses to all individual barriers.

Image Courtesy of Qualcomm® Wireless Reach™

Opportunities and recommendations

- Mobile stakeholders in India should focus primarily on bridging the country's wide gender gap in mobile ownership and reaching the remaining unconnected women, and secondarily on the usage gap. This will involve addressing barrier including cost, network quality and coverage, technical literacy and confidence, and the strong influence India's social norms have on women's access to mobile.
- Initiatives to overcome the cost barrier include introducing more competitively priced and subsidised handsets, handset credit models, and lowering taxes on handsets and servicesthat have a tangible socio-economic benefit. For those still unable to afford a handset,industry should investigate solutions to improve a borrower's experience.
- Men should also be involved when targeting marketing or technical literacy training programmes to women as they often influence women's mobile access and purchasing decisions.
- Designers of mobile services should include local languages where possible (and not only Hindi or English), and consider icons, pictures, apps that require only numeric inputs, and IVR to better serve illiterate women.
- Solutions to serve India's large rural population (68%) with a quality network should be considered (e.g., active or passive infrastructure-sharing among mobile operators, energy-efficient and renewable energy networks in off-grid regions), and operators should focus on improving network quality more generally.

China

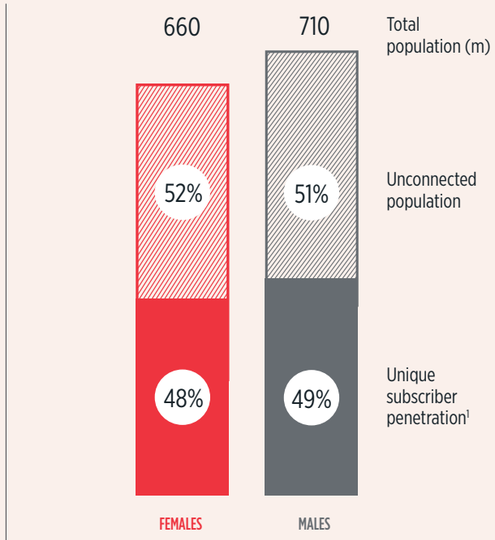
China's huge population (1.4 billion) but small gender gap in mobile ownership means that mobile operators should focus on the remaining unconnected female market, as well as equalising usage among existing female and male users, particularly for mobile internet and other more sophisticated services. The revenue opportunity of bridging the usage gap is considerable.

GENDER GAP IN OWNERSHIP

1%

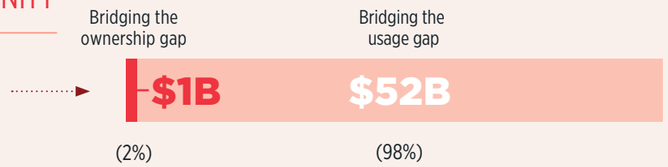
GENDER GAP VS. AVERAGE

LOW



5 YEAR REVENUE OPPORTUNITY

$53B



1. GSMA intelligence data. Male-female split of unique subscribers was estimated from primary research in-country.
2. Average revenue per subscriber.
3. Compound annual growth rate.

Mobile market

China is the world's largest mobile market in terms of unique subscribers. The gender gap is small in percentage terms – around 1% – yet bridging it represents a substantial opportunity, as it means connecting an additional 3 million women. The market is maturing with a high ARPS[2], 37% of all new connections 3G, and 3% 4G. Although there are three operators, China Mobile controls 63% of the market.

Social norms around mobile

Compared to other countries studied, differences in the way men and women use mobile are small. Women typically have a high level of autonomy in obtaining a SIM, handset, and airtime. However, women are more likely to be inhibited by a lack of technical literacy and are less likely to use mobile internet or download an app than men.

Population: 1,357m
Rural: 47%

GDP/capita: $6,807
Growth: 8% CAGR[3]

Unique subscriber penetration: 49%
Growth: 9% CAGR[3]

3G penetration:
37% of connections are 3G

Market share of top 3 mobile operators:
63% China Mobile
23% China Unicom
14% China Telecom

Current ARPS[2]: $19
Growth: 1% CAGR[3]

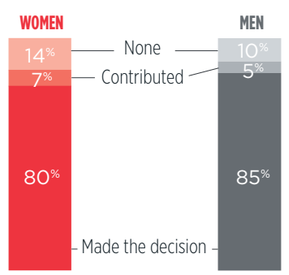
Gender equality ranking: 87 out of **142** countries

Formal labour participation:
78% for men,
64% for women

Stages of mobile access and usage

Obtain a SIM & handset

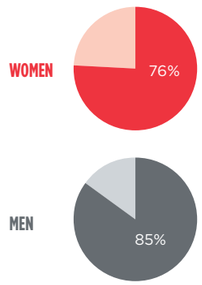
Role that handset owners played in selecting their handset (%)



- Women have a high level of financial independence with mobile: 90% of female handset owners paid for it with their own money.
- Women are more likely to have their SIM registered in someone else's name (21%) than men (15%).

Obtain credit

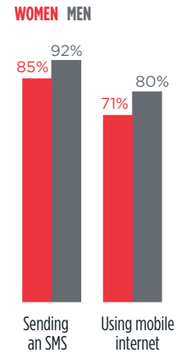
SIM owners who bought credit on their own with no help from anyone in last four weeks (%)



- Primary reasons why women do not buy credit on their own include being worried about making a mistake and losing money or the inconvenience of going to the shop (e.g., inconvenient opening hours, too far away).

Use

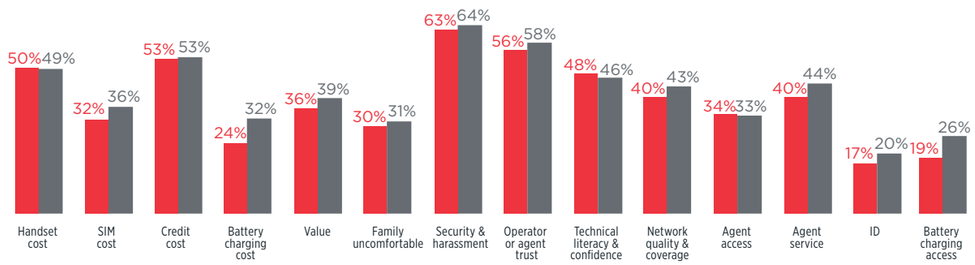
Mobile owners who report: (%)



- Male and female voice and SMS usage are similar across segments.
- Gender gaps exist in more sophisticated levels of usage: 54% of female mobile owners reported having downloaded an app versus 70% of males. This gap exists even among higher-income urban segments.

Barriers to mobile access and usage

Respondents who agree or strongly agree that this barrier prevents them from owning or using a mobile phone (%)[4]



Barriers to mobile access and usage

CREDIT COST

Credit cost is an issue for both men and women, with 53% citing it as a barrier.

Interestingly, this is a particular concern for women who are from wealthier households or more educated. This may be due to the cost of data associated with smartphone use.

In focus groups, many women and men complain specifically about a lack of value for money or fairness in the way they are charged for data usage.

SECURITY & HARASSMENT

Security and harassment is a major concern for Chinese respondents, with 63% of women and 64% of men citing it as a barrier.

In focus groups, many complain about being contacted repeatedly by salespersons:

"There are too many harassing calls, or sales calls to be exact."
– Rural female user, China

Fraud is also often raised as a concern, with fears of outsiders accessing personal information stored on mobiles or hacking online payment accounts:

"What if my money disappears? Should I call the police? Could I get my money back?"
– Rural female user, China

OPERATOR OR AGENT TRUST

Both women and men report a lack of operator or agent trust as an important barrier.

Women who are more educated or from wealthier households are more likely to voice this concern. For example, 71% of highly educated women report fears over operators or agents cheating them as a barrier, compared with 64% of men, and 50% of less educated women.

4. For the purpose of clarity, percentages for the following barriers have been calculated by taking a simple average from across "sub-barriers": "Value", "Security & harassment", "Technical literacy & confidence" and "Agent service"; see Appendix 2 for responses to all individual barriers.

Opportunities and recommendations

- Mobile stakeholders in China should focus on targeting the unconnected female market, and bridging the gender gap in usage - particularly for mobile internet and other more sophisticated services - by addressing key barriers such as cost, fears related to harassment, fraud, and being cheated, and technical literacy for more sophisticated services.
- Mobile operators should create innovative data bundle packages to appeal to those who are more price-sensitive, incorporating the latest apps and services that women find appealing, and ensure that pricing is clear and transparent.
- Chinese women's use of more sophisticated services could also be encouraged through making training modules available through mobile internet.
- Designers and providers of mobile services should ensure the potential for fraudulent activity is minimised, and reinforce customer trust through the agent network or other sales channels.
- Mobile operators should offer services that block/deter unwanted calls, SMS, and spam received over mobile. Operators should also consider tracking and suppressing phone numbers used by aggressive sales services or fraudsters.

Indonesia

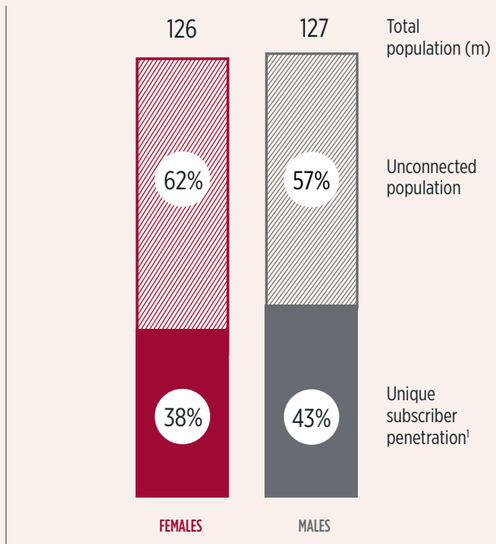
With a population of 250 million and a gender gap of 10%, Indonesia has an estimated 5 million fewer women than men owning a mobile phone. Opportunities exist to bridge this gender gap, reach the remaining unconnected women, and bridge the usage gap in more sophisticated mobile services.

GENDER GAP IN OWNERSHIP

10%

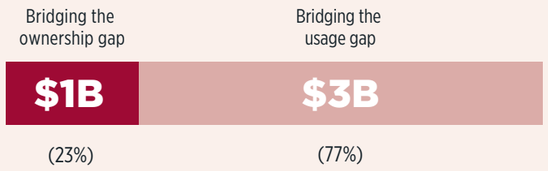
GENDER GAP VS. AVERAGE

MEDIUM



5 YEAR REVENUE OPPORTUNITY

$4B



1. GSMA intelligence data. Male-female split of unique subscribers was estimated from primary research in-country.
2. Average revenue per subscriber.
3. Compound annual growth rate.

Mobile market

Indonesia has one of the largest mobile markets in the world, and unique subscriber penetration of 40%. The gender gap in mobile ownership is 10%, which translates into 5 million fewer women than men without a mobile phone. The mobile market is maturing, with 32% of all connections 3G. ARPS[2] has declined in recent years, partly due to cheaper tariffs in a competitive market of eight operators.

Social norms around mobile

While gender disparities are not as pronounced as is in some countries studied, Indonesian women still face issues around lower economic participation and lower education. These factors can affect their ability to obtain and use a mobile, especially for more sophisticated services.

Population: 250m
Rural: 48%

GDP/capita: $3,475
Growth: 6% CAGR[3]

Unique subscriber penetration: 40%
Growth: 11% CAGR[3]

3G penetration:
31% of connections are 3G

Market share of top 3 mobile operators:
46% Telkomsel
19% XL Axiata
18% Indosat

Current ARPS[2]: $8
Growth: -2% CAGR[3]

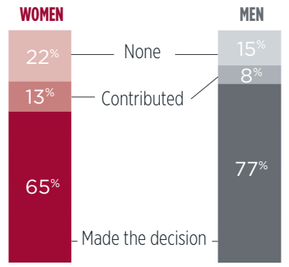
Gender equality ranking: 97 out of **142** countries

Formal labour participation:
84% for men,
51% for women

Stages of mobile access and usage

Obtain a SIM & handset

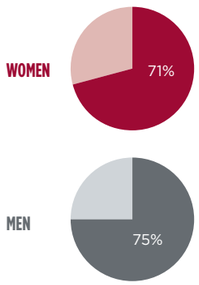
Role that handset owners played in selecting their handset (%)



- Women have less financial autonomy than men when it comes to handset purchase: 95% of men and 73% of women used their own money or the household budget to buy their handset. Of those, 28% of men and 43% of women had to first ask permission.

Obtain credit

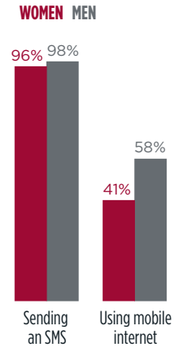
SIM owners who bought credit on their own with no help from anyone in last four weeks (%)



- A similar proportion of Indonesian women and men recharge credit on their own.
- The main reasons why women don't buy credit on their own include agents located too far away, not being in control of finances, and being afraid they will make a mistake and lose money.

Use

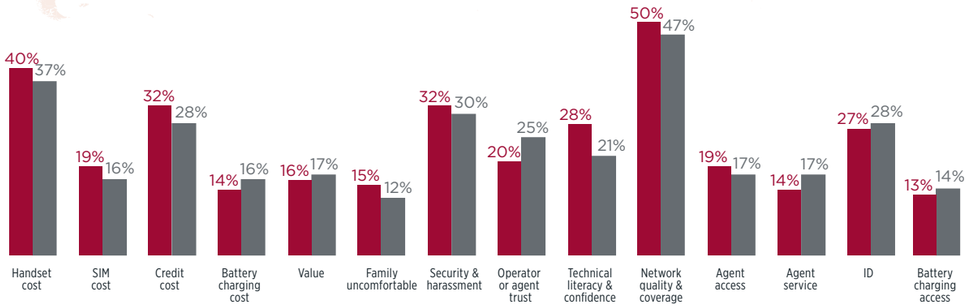
Mobile owners who report: (%)



- Women lag behind men in use of more sophisticated services: they are less likely to have used mobile internet and VAS, and use them less frequently.
- Gender differences in mobile internet use exist in both rural and urban areas: 45% of urban women vs 61% of urban men report using mobile internet.

Barriers to mobile access and usage

Respondents who agree or strongly agree that this barrier prevents them from owning or using a mobile phone (%)[4]



Barriers to mobile access and usage

HANDSET & CREDIT COST

Handset and credit cost is an important barrier for Indonesian women and men, particularly those in rural areas or who do not yet own a mobile phone: 60% of female borrowers and non-users report handset cost as a barrier.

A high cost of credit can limit usage. 28% of female owners (and 25% of male) cite credit cost as a barrier:

"My friend intended to use the Internet on her mobile but once she found out that she had to pay around Rp50,000-100,000 then she decided to go to an Internet café for only Rp2500 an hour."
– Rural female, Indonesia

TECHNICAL LITERACY & CONFIDENCE

Technical literacy and confidence is more of an issue for women than men, with 28% of female respondents (vs 21% of men) reporting that not knowing how to use a mobile properly is a barrier. Similar proportions report fears of making a mistake on their mobile and losing money as a barrier.

Indonesian women are also more likely than men to need help using mobile internet and learning to use their mobile. 74% of men report working out how to use their handsets on their own, vs only 53% of women, who usually relied on their spouse for help.

NETWORK QUALITY & COVERAGE

Network quality and coverage is the greatest barrier reported by both women and men in Indonesia. In rural areas, 53% of women and 51% of men perceive this as a barrier.

Network quality and coverage is also a concern in urban areas, where 48% of women and 43% of men cite it as a barrier.

"I have the problem with the signal. I kept losing it. Sometimes it just disconnects in the middle of a call."
- Urban female user, Indonesia

4. For the purpose of clarity, percentages for the following barriers have been calculated by taking a simple average from across "sub-barriers": "Value", "Security & harassment", "Technical literacy & confidence" and "Agent service"; see Appendix 2 for responses to all individual barriers.

Image Courtesy of Qualcomm® Wireless Reach™

Opportunities and recommendations

- Mobile stakeholders in Indonesia should focus on bridging the country's gender gap in mobile ownership, reaching the remaining unconnected women, and bridging the usage gap for more sophisticated services. This will involve addressing key barriers such as network quality and coverage, cost, security and harassment concerns (e.g. fraud), and technical literacy and confidence.
- A priority should be to identify solutions to serve Indonesia's geographically fragmented population with a quality network (e.g., active or passive infrastructure-sharing among mobile operators, energy-efficient and renewable energy networks in off-grid regions), and operators should focus on improving network quality more generally, including in urban areas.
- Initiatives to overcome the cost barrier include introducing handset credit models, repair services, and innovative data bundle packages to appeal to those who are more price-sensitive.
- Indonesian women's technical literacy, confidence, and use of more sophisticated services could be encouraged by making training modules available through mobile internet, including mobile and digital skills in school curricula, and by mobile operators training and incentivising agent networks or partnering with NGOs and other organisations.
- Mobile operators should also offer services that block/deter unwanted calls, SMS, and spam received over mobile, and consider tracking and suppressing phone numbers used by aggressive sales services or fraudsters.

DRC

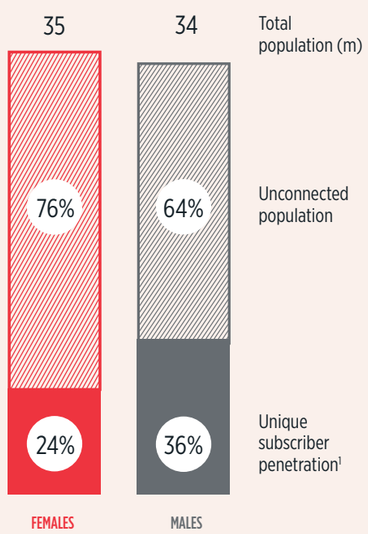
DRC's mobile market remains largely unconnected and suffers from a 33% gender gap in mobile ownership. Mobile stakeholders should focus primarily on bridging the country's wide gender gap in mobile ownership and reaching the remaining unconnected women, and secondarily on addressing the usage gap.

GENDER GAP IN OWNERSHIP

33%

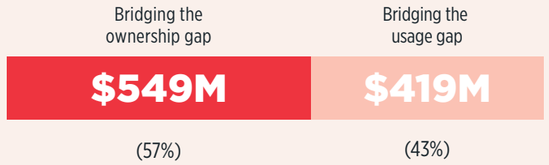
GENDER GAP VS. AVERAGE

HIGH



5 YEAR REVENUE OPPORTUNITY

$968M



1. GSMA intelligence data. Male-female split of unique subscribers was estimated from primary research in-country.
2. Average revenue per subscriber.
3. Compound annual growth rate.

Mobile market

DRC is a largely unconnected market, with only 30% unique subscriber penetration. The gender gap is an estimated 33%, translating into 4 million fewer women than men without a mobile phone. Usage is mostly basic (only 8% of connections are 3G) and ARPS[2], currently at $6, is declining at a rate of 4% per year. The market is highly competitive with seven operators, two of which together control over half the market.

Social norms around mobile

Women usually lack autonomy with mobile, with fewer women than men playing a role in selecting their handset or purchasing it themselves. Women are also less likely to pay for their own airtime. Control of women's mobile phone usage is also relatively high, with some husbands fearing their wives are being led astray by other men.

Population: 68m
Rural: 59%

GDP/capita: $484
Growth: 6% CAGR[3]

Unique subscriber penetration: 30%
Growth: 21% CAGR[3]

3G penetration:
8% of connections are 3G

Market share of top 3 mobile operators:
29% Vodacom
27% Airtel
15% Africell

Current ARPS[2]: $6
Growth: –4% CAGR[3]

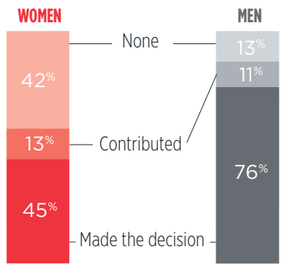
Gender equality ranking: N/A

Formal labour participation:
73% for men,
71% for women

Stages of mobile access and usage

Obtain a SIM & handset

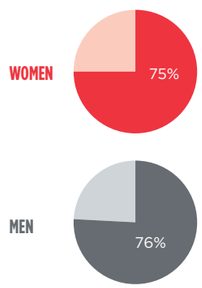
Role that handset owners played in selecting their handset (%)



- Fewer women than men have a role in selecting or purchasing their handset.
- 41% of female handset owners (vs 55% of men) went to the shop to buy their own handset.
- Of women who paid a fee for their handset, only 55% used their own money to pay for it (vs 88% of men).

Obtain credit

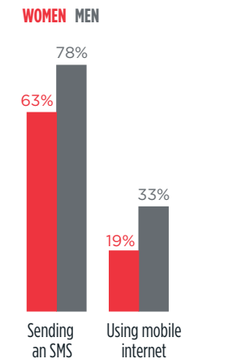
SIM owners who bought credit on their own with no help from anyone in last four weeks (%)



- A similar proportion of Congolese women and men recharge credit on their own.
- However, women still rely on others to pay; only 55% of female SIM owners (vs 85% of men) say they usually use their own money to top-up.

Use

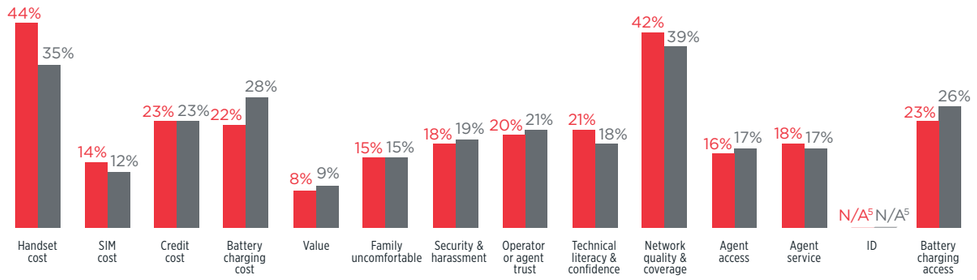
Mobile owners who report: (%)



- Other than voice, differences in men's and women's usage persist at every level, including SMS and mobile internet use.
- Disparities between women in rural and urban areas are very small at basic levels of use, but much more pronounced in mobile internet and app use.

Barriers to mobile access and usage

Respondents who agree or strongly agree that this barrier prevents them from owning or using a mobile phone (%)[4]



Barriers to mobile access and usage

HANDSET COST

Handset cost is a concern for women, particularly those from rural areas or poorer households. 53% of rural women, for instance, report this as a barrier compared to 40% of rural men.

Cost, rather than lack of value, is the key issue, as very few women (14%) report lack of need for a phone as a barrier. This was corroborated by women in focus groups:

"I have a neighbor who borrows my phone every day to call her husband because she doesn't have enough money to buy a phone, even the cheapest one."
– Urban female, DRC

BATTERY CHARGING ACCESS & COST

In DRC, both access to charging facilities and the cost of charging are key barriers for women and men.

This is a particular concern for both rural and urban men, and for rural women. For instance, 27% of rural women report access to charging as a barrier vs 17% of urban women.

These concerns were echoed in focus groups:

"Charging a phone costs 300 FC and we haven't had electricity for three weeks."
– Rural female user, DRC

NETWORK QUALITY & COVERAGE

Network quality and coverage is an issue for both women and men, particularly in rural areas where 48% of women (and 41% of men) report this as a barrier. Women sometimes go to great lengths to find a signal:

"If the network doesn't work, I'll go to a mountain to make a call."
- Rural female, DRC

Network quality and coverage is also a concern in urban areas, where 30% of women cite this as a barrier:

"Poor network quality is another problem. Sometimes when you want to call someone, you have to wait ten minutes before getting through even though the phone you're calling is switched on."
- Urban female, DRC

4. For the purpose of clarity, percentages for the following barriers have been calculated by taking a simple average from across "sub-barriers": "Value", "Security & harassment", "Technical literacy & confidence" and "Agent service"; see Appendix 2 for responses to all individual barriers.

5. ID barrier question was not asked in DRC because at the time of the research, requirements for registration were unclear and, in practice, ID is rarely required to buy a SIM.

Opportunities and recommendations

- Mobile stakeholders in DRC should focus primarily on bridging the country's wide gender gap in mobile ownership and reaching the remaining unconnected women, and secondarily on the usage gap. This will involve addressing key barriers such as handset cost, network quality and coverage, and a limited charging infrastructure, whilst acknowledging the role social norms play in influencing women's access to mobile.
- Initiatives to overcome the handset cost barrier include introducing more competitively priced and subsidised handsets, partnerships between mobile operators and low-priced handset manufacturers, handset credit models, repair services, and lowering taxes on handsets.
- Men should be involved when marketing to women as they often influence women's mobile access and purchasing decisions.
- To help reach DRC's large rural population (59%) with a quality network and an accessible and affordable charging infrastructure, active or passive infrastructure-sharing among mobile operators should be encouraged. Operators should also consider energy-efficient and renewable energy networks, and equipping their more remote agents with solar-powered charging stations.
- Mobile operators should also focus on improving network quality more generally, in both rural and urban areas.

Kenya

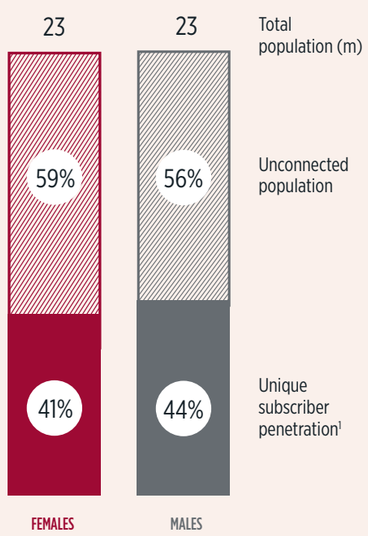
Kenya's relatively small gender gap in mobile phone ownership is likely due in part to the success of mobile money, providing women and their families with a clear value proposition for having a mobile phone. However, opportunities still exist to bridge the remaining gender gap in mobile ownership, reach the remaining unconnected women, and bridge the usage gap, particularly for more sophisticated services.

GENDER GAP IN OWNERSHIP

7%

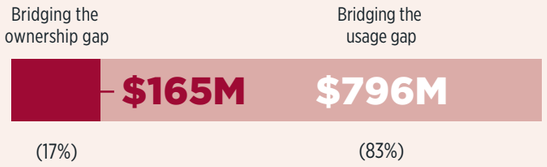
GENDER GAP VS. AVERAGE

LOW



5 YEAR REVENUE OPPORTUNITY

$961M



1. GSMA intelligence data. Male-female split of unique subscribers was estimated from primary research in-country.
2. Average revenue per subscriber.
3. Compound annual growth rate.

Mobile market

Kenya has a fast-growing unique subscriber penetration and a relatively small gender gap in mobile ownership of 7%. However, the gender gap in ownership is much higher among poorer households (16%). The market remains fairly basic, with only 14% of all connections 3G, and ARPS[2] is stable at $10. Safaricom has the dominant market share, followed by Airtel and Orange.

Social norms around mobile

Although Kenya's gender equality ranking on the WEF's global index is relatively good compared to our other 10 study countries, it still has a gender gap in ownership of 7%. A combination of factors, including lower financial independence and education levels, can inhibit women's access to and usage of mobile, particularly at more sophisticated levels of usage.

Population: 44m
Rural: 75%

GDP/capita: $1,245
Growth: 4% CAGR[3]

Unique subscriber penetration: 42%
Growth: 15% CAGR[3]

3G penetration:
14% of connections are 3G

Market share of top 3 mobile operators:
67% Safaricom
16% Airtel
9% Orange

Current ARPS[2]: $10
Growth: 1% CAGR[3]

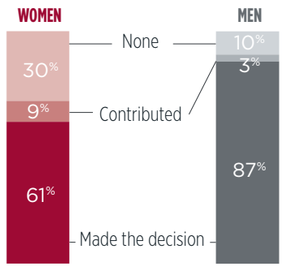
Gender equality ranking: 37 out of **142** countries

Formal labour participation:
72% for men,
62% for women

Stages of mobile access and usage

Obtain a SIM & handset

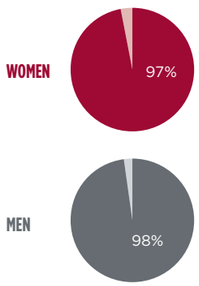
Role that handset owners played in selecting their handset (%)



- Women are less likely than men to play a role in selecting their handset and only 58% of women handset owners report purchasing their own mobile (vs 75% of men).
- Most women report independently choosing their SIM (72% of female owners vs 79% of men).

Obtain credit

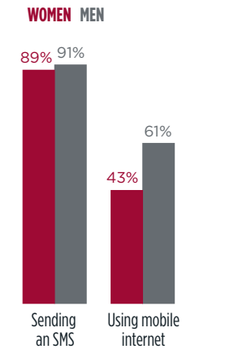
SIM owners who bought credit on their own with no help from anyone in last four weeks (%)



- Kenyan women are fairly autonomous when buying credit.
- Similar to men, women owners use various means to buy credit: 98% had used a scratch card in the last 4 weeks, 65% had used mobile money, and 62% had received credit from another person.

Use

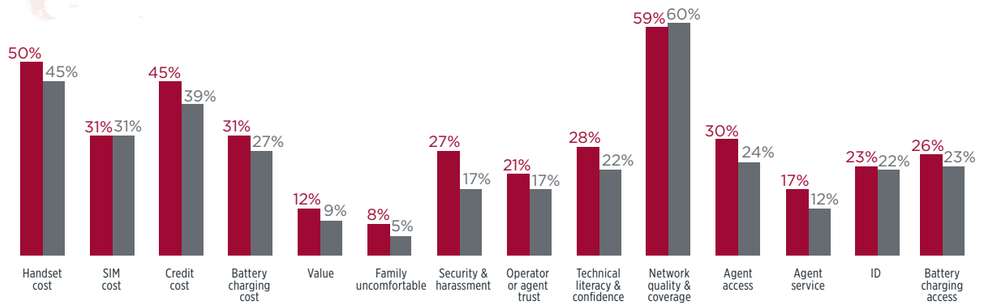
Mobile owners who report: (%)



- Overall, SMS use is fairly similar among Kenyan men and women.
- However, women are less likely to use mobile internet, especially among the less educated: only 33% of lower educated female owners (vs 52% of men) report using mobile internet.

Barriers to mobile access and usage

Respondents who agree or strongly agree that this barrier prevents them from owning or using a mobile phone (%)[4]



Barriers to mobile access and usage

COST

Women are more likely than men to report the cost of handsets, credit, and battery charging as a barrier. This can prevent some women from purchasing or upgrading their mobile phone, as well as limit everyday use.

Battery charging cost can prevent women from owning a mobile, particularly in rural areas:

"The charging cost is expensive especially in the rural areas where electricity is not in every household…so most of the families will not see the need of everyone owning a phone and instead only one person will own one."
– Urban female user, Kenya

TECHNICAL LITERACY & CONFIDENCE

Technical literacy and confidence is a greater barrier for women than men in Kenya. Gender disparities are most apparent among poorer households, with 43% of women (vs 28% of men) reporting trouble reading and understanding their mobiles as a barrier.

Women are also more likely than men to need help learning to use their mobile and with mobile internet.

"The first challenge was how to operate the phone because you have bought it and now you have to know how to use it… this will take time."
– Rural female user, Kenya

NETWORK QUALITY & COVERAGE

Network quality and coverage is the greatest barrier reported by both Kenyan women and men. This is a concern in urban as well as rural areas: 53% of urban women and 54% of urban men report this as a barrier, compared to 61% of rural women and 61% of rural men.

"Network is a problem especially in the rural area and also in some buildings here in the city."
- Urban female user, Kenya

"It hangs up on its own. You want to call someone but you find that it has hung up although you didn't do anything."
- Urban female user, Kenya

4. For the purpose of clarity, percentages for the following barriers have been calculated by taking a simple average from across "sub-barriers": "Value", "Security & harassment", "Technical literacy & confidence" and "Agent service"; see Appendix 2 for responses to all individual barriers.

Opportunities and recommendations

- Mobile stakeholders in Kenya should focus on bridging the country's remaining gender gap in mobile ownership, reaching the remaining unconnected women, and bridging the usage gap for more sophisticated services. This will involve addressing key barriers such as network quality and coverage, cost, and technical literacy and confidence.
- Initiatives to overcome the cost barrier include introducing handset credit models, repair services, lowering taxes on handsets and services that have a tangible socio-economic benefit, and innovative data bundle packages to appeal to those who are more price-sensitive.
- Designers of mobile services should ensure services are user-friendly and meet the needs of women who are less literate (e.g., consider icons, pictures, clear menus with fewer steps, and IVR).
- Kenyan women's use of mobile internet and more sophisticated services could also be encouraged through training and incentivising agent networks, exploring the viability of making training modules available through the mobile internet, and by including more advanced mobile and digital skills in school curricula.
- Solutions to serve Kenya's large rural population (75%) with a quality network should be considered (e.g., active or passive infrastructure-sharing among mobile operators, energy-efficient and renewable energy networks in off-grid regions), and operators should focus on improving network quality more generally, including in urban areas.

Niger

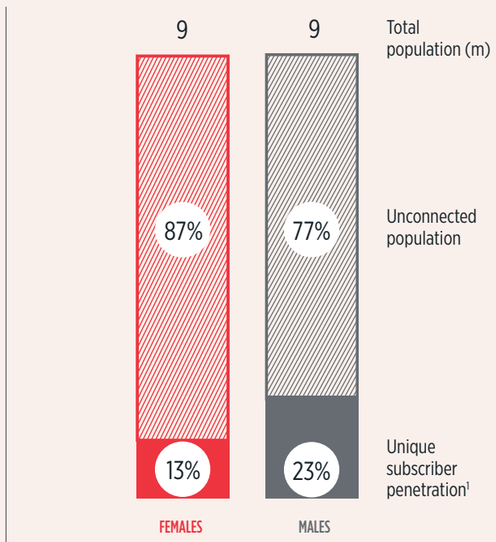
A large proportion of the mobile market in Niger remains unconnected, and the country has the widest gender gap in ownership of all our study countries. However, women in Niger value mobile, and mobile stakeholders should focus primarily on bridging the country's wide gender gap in mobile ownership and reaching the remaining unconnected women, and secondarily on addressing the usage gap.

GENDER GAP IN OWNERSHIP

45%

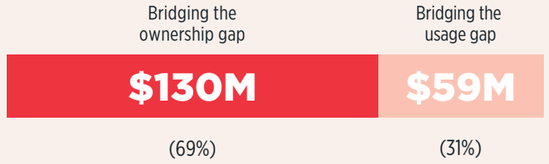
GENDER GAP VS. AVERAGE

HIGH



5 YEAR REVENUE OPPORTUNITY

$189M



1. GSMA intelligence data. Male-female split of unique subscribers was estimated from primary research in-country.
2. Average revenue per subscriber.
3. Compound annual growth rate.

Mobile market

With a unique subscriber penetration of only 18%, Niger's population is mostly unconnected. The gender gap in mobile ownership (45%) is the largest of all countries in this study. The market is not yet mature, with only 2% of connections 3G. ARPS[2] is low and declining. There are currently four mobile operators, with the two largest controlling the majority of the market.

Social norms around mobile

Gender inequality in Niger is relatively strong and affects women's access and use of mobile. A lack of financial autonomy, poor education and monitoring of usage, all influence women's ability to use a mobile phone or to own one in the first place. Many women only borrow mobile phones. Some men check on their partner's mobile usage and try to regulate it, often because they fear extra-marital affairs.

Population: 18m
Rural: 82%

GDP/capita: $415
Growth: 6% CAGR[3]

Unique subscriber penetration: 18%
Growth: 13% CAGR[3]

3G penetration:
2% of connections are 3G

Market share of top 3 mobile operators:
44% Airtel
35% Orange
14% Moov

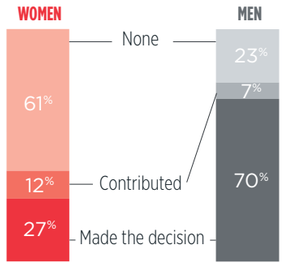
Current ARPS[2]: $5
Growth: –12% CAGR[3]

Gender equality ranking: N/A

Formal labour participation:
90% for men,
40% for women

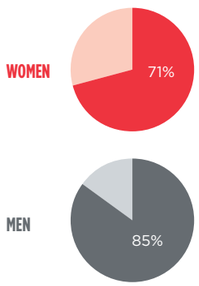
Stages of mobile access and usage

Obtain a SIM & handset
Role that handset owners played in selecting their handset (%)



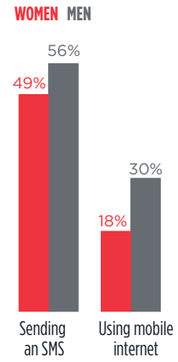
- Most women (61% vs only 23% of men) said they had no input in the selection of their handset. 42% received it as a gift and 20% said that it was bought by someone else on their behalf.
- Women are also more likely to have basic handsets (72% of women vs 58% of men).

Obtain credit
SIM owners who bought credit on their own with no help from anyone in last four weeks (%)



- The main reasons why women don't buy credit on their own include not having control of the finances, agents that are too far away, or feeling that it is inconvenient or inappropriate to go to an agent on their own.

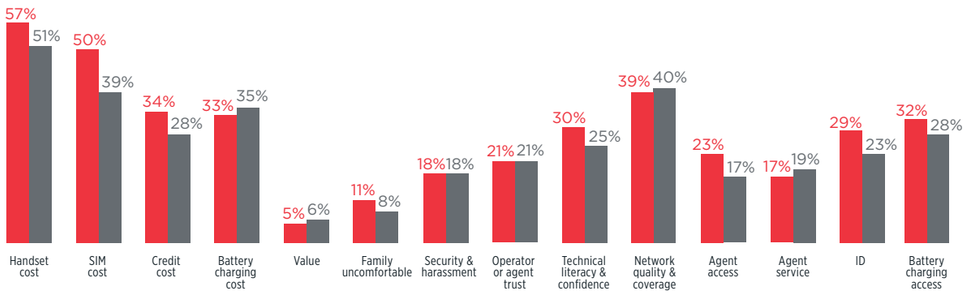
Use
Mobile owners who report: (%)



- Women lag behind men at all levels of mobile use, but particularly for more sophisticated services, such as mobile internet.
- Women lag behind men in usage in both rural and urban areas, and at all levels of education and income.

Barriers to mobile access and usage

Respondents who agree or strongly agree that this barrier prevents them from owning or using a mobile phone (%)[4]



Barriers to mobile access and usage

COST AND NETWORK QUALITY & COVERAGE

Cost and network quality and coverage are the greatest barriers to owning and using a mobile phone in Niger. These issues are particularly acute for those in rural areas. Rural women and men, for instance, report the cost of handsets, credit, SIMs and battery charging as much higher barriers than urban respondents.

"For some, simply topping-up can be a difficulty because of the cost."
– Urban female, Niger

"Personally, I have no difficulty topping-up for calls, but for all other usage only rich people can afford it."
– Urban male, Niger

TECHNICAL LITERACY & CONFIDENCE

Whilst confidence is reported as a relatively modest barrier to mobile ownership and use, technical literacy is an important barrier in Niger, and especially for women.

43% of women and 35% of men report trouble reading content or language on mobiles as a barrier, and this is still high even just among owners (39% of women owners vs 29% of male owners).

Low literacy and education levels in Niger, particularly among women, play an important role in contributing to this issue.

BATTERY CHARGING ACCESS

Access to battery charging facilities for handsets is a greater barrier for women and men in Niger than in all other countries studied.

This concern is predominantly among rural rather than urban respondents. 37% of rural women and 32% of rural men cite access to battery charging facilities as a barrier, compared to only 11% of urban women and 12% of urban men.

"In rural areas people have to face problems with lack of electricity."
- Urban female, Niger

4. For the purpose of clarity, percentages for the following barriers have been calculated by taking a simple average from across "sub-barriers": "Value", "Security & harassment", "Technical literacy & confidence" and "Agent service"; see Appendix 2 for responses to all individual barriers.

"For some, simply topping-up can be a difficulty because of the cost."
— Urban female, Niger

Opportunities and recommendations

- Mobile stakeholders in Niger should focus primarily on bridging the country's wide gender gap in mobile ownership and reaching the remaining unconnected women, and secondarily on the usage gap. This will involve addressing key barriers such as handset cost, network quality and coverage, technical literacy, a limited charging infrastructure, and the strong influence social norms have on women's access to mobile.
- Positively, women value mobiles in Niger: 95% of non-users say they would use and regularly top-up a mobile if given one — more than all other countries studied. Operators should build on this opportunity, involving men when marketing to women as they often influence women's mobile access and purchasing decisions.
- Initiatives to overcome the handset cost barrier include introducing more competitively priced and subsidised handsets, partnerships between mobile operators and low-priced handset manufacturers, handset credit models, repair services, and lowering taxes on handsets. For those still unable to afford a handset, industry should investigate solutions to improve borrower's experience.
- To help reach Niger's large rural population (82%) with a quality network and an accessible and affordable charging infrastructure, active or passive infrastructure-sharing among mobile operators should be encouraged, and operators should consider energy-efficient and renewable energy networks, and equipping their more remote agents with solar-powered charging stations.

Egypt

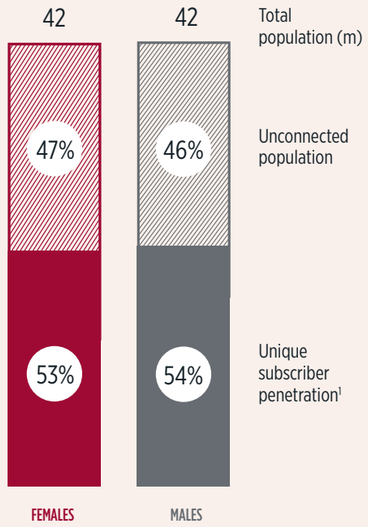
Egypt's mobile market has a unique subscriber penetration of 54% and a small gender gap in mobile phone ownership. However, opportunities still exist to reach the remaining unconnected women, and bridge the usage gap, by addressing barriers such as handset cost, network quality and coverage, and harassment.

GENDER GAP IN OWNERSHIP

2%

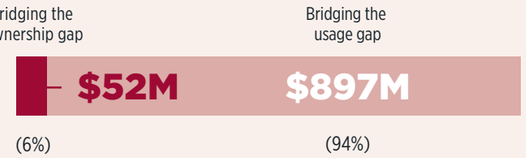
GENDER GAP VS. AVERAGE

LOW



5 YEAR REVENUE OPPORTUNITY

$949M



1. GSMA intelligence data. Male-female split of unique subscribers was estimated from primary research in-country.
2. Average revenue per subscriber.
3. Compound annual growth rate.

Mobile market

Egypt has a unique subscriber penetration of 54% and a small gender gap in mobile phone ownership, though it is greater among certain segments of the population. The market is maturing, with 30% of all connections 3G. Intense competition in the mobile market has contributed to a decline in ARPS[2] in recent years to a current value of $7. Vodafone is the market leader, followed by Mobinil and Etisalat.

Social norms around mobile

Although the gender gap in mobile ownership is small, social norms affect the way Egyptian women interact with mobile. 40% say their family feels (or would feel) uncomfortable with them using a mobile, although this figure is also high for men at 31%. This is likely driven in part by harassing phone calls from strangers, which over half of women report as a barrier.

Population: 82m

GDP/capita: $3,314
Growth: 2% CAGR[3]

Unique subscriber penetration: 54%
Growth: 9% CAGR[3]

3G penetration:
30% of connections are 3G

Market share of top 3 mobile operators:
41% Vodafone
34% Mobinil
25% Etisalat

Current ARPS[2]: $7
Growth: –12% CAGR[3]

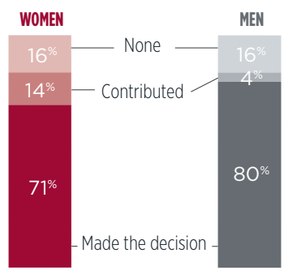
Gender equality ranking: 129 out of **142** countries

Formal labour participation:
75% for men,
24% for women

Stages of mobile access and usage

Obtain a SIM & handset

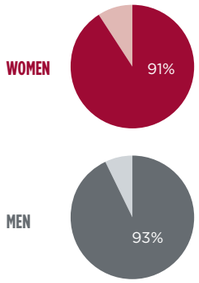
Role that handset owners played in selecting their handset (%)



- Women have less financial autonomy than men when it comes to handset purchase: 83% of men and 58% of women used their own money or the household budget to buy their handset. Of those, 25% of men and 49% of women had to first ask permission.

Obtain credit

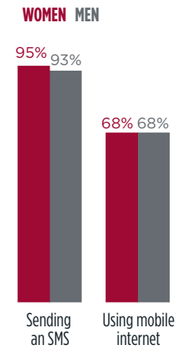
SIM owners who bought credit on their own with no help from anyone in last four weeks (%)



- Egyptian women are fairly autonomous when buying credit.
- However, women still rely on others to pay; only 38% of female SIM owners (vs 75% of men) say they usually use their own money to top-up.

Use

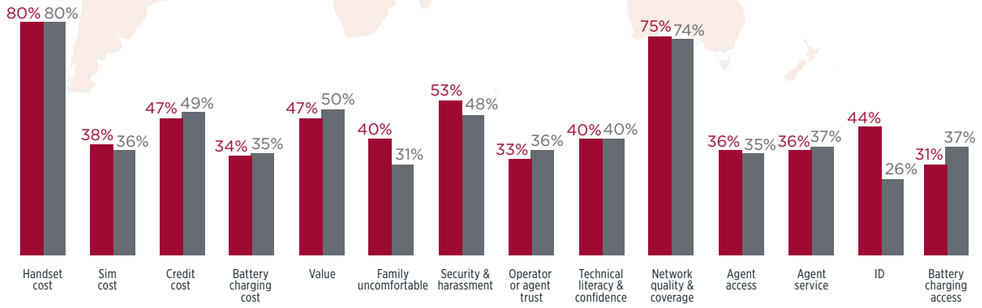
Mobile owners who report: (%)



- Usage is more similar among Egyptian men and women compared with other study countries.
- Women are, in fact, more likely than men to listen to music/radio.
- However, women tend to use SMS and mobile internet less frequently than men.
- Usage gaps are most pronounced among wealthier households.

Barriers to mobile access and usage

Respondents who agree or strongly agree that this barrier prevents them from owning or using a mobile phone (%)[4]



Barriers to mobile access and usage

HANDSET COST AND NETWORK QUALITY & COVERAGE

Handset cost and network quality and coverage are the greatest barriers reported by Egyptian women and men.

Handset cost is a concern even among higher income households: 87% of women from wealthier households (vs 77% from poorer households) cite it as a barrier.

Network quality and coverage is a large barrier to mobile ownership and usage: 94% of female non-owners report it as a barrier, and 73% of women owners:

"For a while now, to get good coverage we need to go on the balcony, screaming, so that the whole neighbourhood hears what you are saying."
– Female user, Egypt

SECURITY & HARASSMENT

Harassment via mobile and security concerns (e.g. phone theft) are key issues for Egyptian women. 55% of women (vs 42% of men) report harassing calls from strangers as a barrier to them owning or using a mobile.

This issue was frequently reported in focus groups:

"There are men who call me but say very, very rude things."
– Female user, Egypt

"Guys if they want revenge on a girl, they distribute her number to everyone so she is forever harassed."
– Male user, Egypt

ID

Access to ID is a concern for Egyptian women; more so than for men. 44% of women vs 26% of men report that ID is a barrier to owning or using a mobile. Field observations suggest this might be because one form of ID is required to purchase a SIM and a second is needed to change a tariff plan, and women are less likely than men to possess two different forms of identification.

This barrier is a particular issue for women from poorer households or who are less educated: 56% of low-educated women perceive this as a barrier compared to 32% of highly educated women and 38% of low-educated men.

4. For the purpose of clarity, percentages for the following barriers have been calculated by taking a simple average from across "sub-barriers": "Value", "Security & harassment", "Technical literacy & confidence" and "Agent service"; see Appendix 2 for responses to all individual barriers.

Opportunities and recommendations

- Mobile stakeholders in Egypt should focus on reaching the remaining unconnected women and bridging the usage gap, by addressing key barriers such as handset cost, network quality and coverage, low perception of value, ID, and fears related to security and harassment.
- Industry should take into account that entry-level, low-key, and durable handsets with internet access are likely to appeal to Egyptian women, enabling them to access mobile internet whilst feeling less afraid to carry the handset around with them.
- Other initiatives to overcome the handset cost barrier (particularly for smartphones) include partnerships between mobile operators and low-priced handset manufacturers, and lowering taxes on handsets.
- Designers and providers of mobile services should focus on relevant services and content that meet the needs of women (and their families), such as services that block/deter harassing calls/SMS/spam and allow women to recharge credit remotely and privately. Mobile stakeholders should consider a public awareness campaign/reporting helpline to address harassment.
- Mobile stakeholders should also ensure that ID requirements for owning and using a mobile are gender-sensitive and straightforward from the customer perspective (e.g., limit the different types of ID required).
- Mobile operators should continually invest to improve network quality and coverage. The National Telecommunications Regulatory Authority can support by licensing more spectrum to mobile operators (particularly below 1GHz), streamlining the approval processes for operators to deploy fibre, and encouraging infrastructure sharing between operators.

Jordan

In Jordan, there is a wide gender gap in mobile phone ownership and some differences in men's and women's use of more sophisticated services. Bridging the gender gap in ownership and usage should therefore be made a priority and represents a significant revenue opportunity.

GENDER GAP IN OWNERSHIP

21%

GENDER GAP VS. AVERAGE

HIGH

Mobile penetration data unavailable due to uncertainties and fluctuations in Jordan's population, including complexities arising from the recent influx of Syrian refugees.

5 YEAR REVENUE OPPORTUNITY

$326M

1. Average revenue per subscriber.
2. World Bank 2013 figure. Current population uncertain due to recent influx of refugees.
3. Compound annual growth rate.

Mobile market

Jordan's mobile market is fairly mature with 39% of all connections now 3G. However, the gender gap in mobile ownership is significant: women are 21% less likely than men to own a mobile phone, and 19% less likely in just urban areas alone. ARPS[1] is high at $14, but declining rapidly at 7% per year. Zain has the largest share of the market (40%), followed by Orange (31%) and Umniah (29%).

Social norms around mobile

Ranked near the bottom of the WEF's global gender equality index, Jordan has relatively high levels of gender discrimination. Although most evident outside the capital, Amman, social norms, such as women's lower financial autonomy and decision-making power, limit women's access and use of mobile. Younger women in particular can have their mobile use curtailed by their families to avoid inappropriate contacts.

Population: **6**m²
Rural: **17%**

GDP/capita: **$5,214**
Growth: **3%** CAGR[3]

Unique subscriber penetration: **N/A**

3G penetration:
39% of connections are 3G

Market share of top 3 mobile operators:
39% Zain
34% Orange
28% Umniah

Current ARPS[1]: **$13**
Growth: **–7%** CAGR[3]

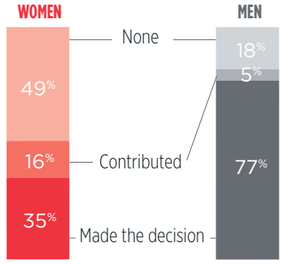
Gender equality ranking: **134** out of **142** countries

Formal labour participation:
67% for men,
16% for women

Stages of mobile access and usage

Obtain a SIM & handset

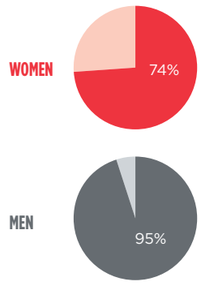
Role that handset owners played in selecting their handset (%)



- Women have little autonomy in the way they obtain handsets: only 31% of female owners report purchasing it themselves (vs 78% of men).
- 74% of female SIM owners also said the SIM was not registered in their own name (vs 40% of men).

Obtain credit

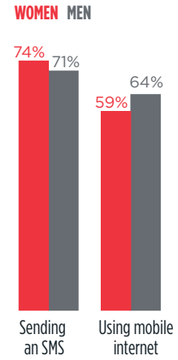
SIM owners who bought credit on their own with no help from anyone in last four weeks (%)



- Most female owners (74%) are able to obtain credit on their own.
- However, this can be an issue for some women due to not being in control of finances, feeling that it is inconvenient or inappropriate to go to an agent on their own, or feeling uncomfortable interacting with agents.

Use

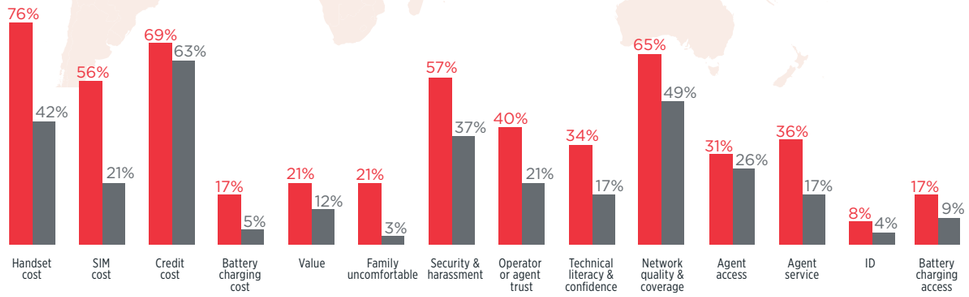
Mobile owners who report: (%)



- The usage gap between men and women is relatively small.
- Some differences exist in women's and men's use of mobile internet, which is most pronounced among higher income groups: 68% of women from wealthier households (vs 77% of men) report using mobile internet.

Barriers to mobile access and usage

Respondents who agree or strongly agree that this barrier prevents them from owning or using a mobile phone (%)[4]



Barriers to mobile access and usage

HANDSET & CREDIT COST

Handset and credit cost is a key concern for Jordanian women, and more so than for men. This difference is more accentuated among poorer households or those living in rural areas: 81% of women from poorer households (vs 39% of men) report handset cost as a barrier, and 72% (vs 57% of men) report credit cost as a barrier.

Husbands and families usually pay for women's mobile-related expenses, which can restrict use:

"The mobile line is my husband's so it's difficult for me to download things and share them with friends....so I am going to buy a line for me personally."
– Urban female, Jordan

NETWORK QUALITY & COVERAGE

Network quality and coverage is a concern felt most strongly by rural respondents and urban women. 71% of rural women and 74% of rural men report this as a barrier, compared to 63% of urban women and 44% of urban men.

"The network is very bad even if you want to make regular phone calls."
- Rural female, Jordan

Women may perceive network quality and coverage as a higher barrier in urban settings due to mobility constraints. Women typically spend more time than men indoors at home, where the signal is likely to be poorer than outside.

SECURITY & HARASSMENT

Security concerns (e.g. phone theft) and harassing calls are key concerns for Jordanian women. 53% of women (vs 22% of men) report security concerns as a barrier, and 58% of women (vs 23% of men) report harassing calls from strangers as a barrier.

Focus groups revealed that some men dial unknown numbers in order to try to speak with women, and that women value services that block/screen numbers:

"Sometimes if men dial a wrong number and a girl picks up, they might keep on calling her and bothering her even late at night when her husband is around and this is really annoying."
– Rural female, Jordan

4. For the purpose of clarity, percentages for the following barriers have been calculated by taking a simple average from across "sub-barriers": "Value", "Security & harassment", "Technical literacy & confidence" and "Agent service"; see Appendix 2 for responses to all individual barriers.

Opportunities and recommendations

- Mobile stakeholders in Jordan should focus on bridging the country's wide gender gap in mobile ownership as well as the gap in more sophisticated usage. This will involve addressing key barriers such as cost, network quality and coverage, harassment concerns, and the social norms that limit women's access to mobile (particularly younger women).
- Initiatives to overcome the cost barrier include introducing more competitively priced handsets and creative tariff plans/data packages to appeal to women's usage patterns/routines. Jordan has a relatively high level of mobile-related taxation,[5] so policy-makers should lower taxes on handsets and services. These actions will likely disproportionately benefit women.
- Men and other influential family members (e.g. parents of younger women) should also be involved when marketing to women because they often influence women's access to mobile, purchasing decisions, and use of more sophisticated services (e.g. social media).
- Initiatives to overcome harassment concerns include offering services that block/deter unwanted calls/SMS/spam and allow women to recharge credit remotely and privately. In addition, mobile ecosystem stakeholders should consider a public awareness campaign on the harassment issue, with a reporting helpline.
- Mobile operators should continually invest to improve network quality and coverage in both urban and rural areas. The Telecommunications Regulatory Commission can help create space for operator investment by licensing harmonised spectrum (particularly sub-1GHz) on equitable terms, streamlining local approval processes for network deployment, and encouraging infrastructure sharing between operators.

5. Deloitte and GSMA. "Digital Inclusion and Mobile Sector Taxation", 2015.

Colombia

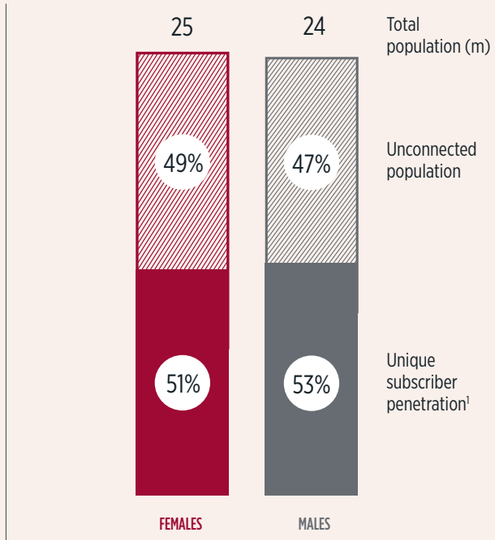
With a relatively high unique subscriber penetration and a small gender gap in mobile ownership, issues around access to mobile are less relevant to women in Colombia than in most other countries studied. However, opportunities still exist to reach the remaining unconnected women, and bridge the usage gap, particularly of more sophisticated services, by addressing barriers such as security and harassment concerns.

GENDER GAP IN OWNERSHIP

3%

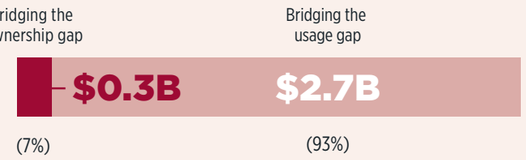
GENDER GAP VS. AVERAGE

LOW



5 YEAR REVENUE OPPORTUNITY

$3B



1. GSMA intelligence data. Male-female split of unique subscribers was estimated from primary research in-country.
2. Average revenue per subscriber.
3. Compound annual growth rate.

Mobile market

Unique subscriber penetration in Colombia is relatively high at 52% and growing steadily. The gender gap in mobile ownership is limited. The market remains mostly unsophisticated with only 17% of all connections 3G. ARPS[2] is high at $19, and rising steadily with 4% annual growth. Among the three Colombian operators, Claro dominates with 59% market share.

Social norms around mobile

Women and men tend to interact with mobile in a similar way. However, there are some exceptions where the gender gap in ownership is greater (e.g., among respondents who are older, or from higher income households), and women can still face challenges; 28% say their family feels uncomfortable with them owning or using a mobile – almost twice the number of men.

Population: 48m
Rural: 24%

GDP/capita: $7,831
Growth: 5% CAGR[3]

Unique subscriber penetration: 52%
Growth: 3% CAGR[3]

3G penetration:
17% of connections are 3G

Market share of top 3 mobile operators:
59% Claro
25% Movistar
15% Tigo

Current ARPS[2]: $19
Growth: 4% CAGR[3]

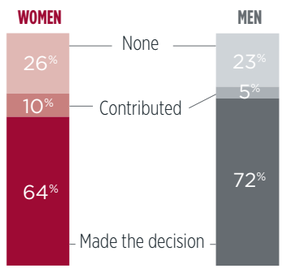
Gender equality ranking: 53 out of **142** countries

Formal labour participation:
80% for men,
56% for women

Stages of mobile access and usage

Obtain a SIM & handset

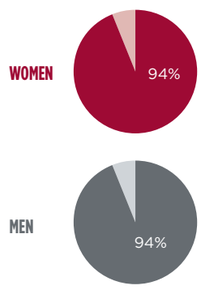
Role that handset owners played in selecting their handset (%)



- Women are less likely than men to go to a shop and buy their own handset (50% of female handset owners vs 63% of male), and more likely to be given a phone as a gift or obtain it from someone who no longer needs it.
- Women are also more likely to have more basic handsets.

Obtain credit

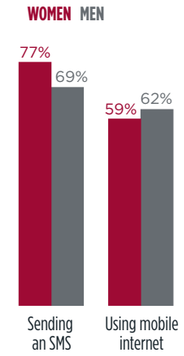
SIM owners who bought credit on their own with no help from anyone in last four weeks (%)



- The vast majority of women purchase airtime without any assistance and 79% say they use their own money to pay for their mobile airtime.
- Women are slightly less likely to use post-paid: 17% of female SIM owners vs 21% of male.

Use

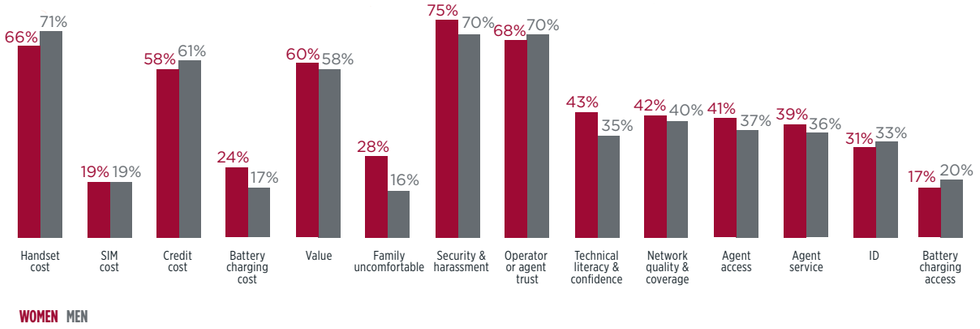
Mobile owners who report: (%)



- Women's SMS use is usually similar or greater than men's, but women often lag behind men at more sophisticated usage levels.
- Although a similar number of women and men have tried mobile internet, women usually use it less frequently.
- Women are also less likely to have used VAS.

Barriers to mobile access and usage

Respondents who agree or strongly agree that this barrier prevents them from owning or using a mobile phone (%)[4]



Barriers to mobile access and usage

HANDSET & CREDIT COST

Both men and women commonly report that the cost of handsets and credit prevents them from using mobile.

Interestingly, issues around cost are just as likely to be reported by women and men from wealthier households as poorer households.

The cost of mobile data is considered particularly high and was a key complaint in focus groups:

"The internet is costly: my phone does not have a data package but if I had one, it'll be more expensive."
– Rural female user, Colombia

SECURITY & HARASSMENT

In Colombia, security and harassment issues related to mobile are of prime concern (e.g., calls from strangers), particularly for women. For instance, 87% of women (vs 78% of men) report security concerns, such as handset theft as a barrier.

This is corroborated by focus group participants, some of whom have devised tactics such as using hands-free devices to limit risks. Others say they feel safer with less expensive handsets:

"I wouldn't spend so much on a cell phone, it's too dangerous if you step out on the street and use it, you have to hide and you can't call."
– Urban female user, Colombia

TECHNICAL LITERACY & CONFIDENCE

Technical literacy and confidence is a greater barrier for women than men. More specifically, a key concern is making a mistake on their mobile and losing money. This is cited as a barrier by 59% of Colombian women and 46% of men, and both low and highly educated women are more likely to cite this is an issue than men.

"I don't know all the functions my phone has. Technology goes by really fast and they come up with new things, so you are going to have to ask someone to help."
– Urban female user, Colombia

4. For the purpose of clarity, percentages for the following barriers have been calculated by taking a simple average from across "sub-barriers": "Value", "Security & harassment", "Technical literacy & confidence" and "Agent service"; see Appendix 2 for responses to all individual barriers.

"I wouldn't spend so much on a cell phone, it's too dangerous if you step out on the street and use it, you have to hide and you can't call."

— Urban female user, Colombia

Opportunities and recommendations

- Mobile stakeholders in Colombia should focus on reaching the remaining unconnected women, and bridging the usage gap — particularly for mobile internet and other more sophisticated services — by addressing key barriers such as cost, low perception of value compared with alternative internet/landline channels, and fears related to security, harassment, and accidentally losing money.
- Industry should take into account that entry-level, low-key, and durable handsets with internet access are likely to appeal to women, enabling them to access mobile internet and more sophisticated services whilst feeling less afraid to carry the handset around with them.
- Other initiatives to overcome the cost barrier include handset credit models, lowering taxes on handsets and services that have a tangible socio-economic benefit, and innovative data bundle packages.
- Designers and providers of mobile services should focus on innovative safety-related apps and services for women, and mobile operators should offer services that block/deter unwanted calls, SMS, and spam.
- Colombian women's confidence and use of more sophisticated services could be improved through strengthening agent networks, training modules available through mobile internet, or partnerships between mobile operators and other organisations (e.g., NGOs, public institutions) to integrate mobile training into existing programmes.

Mexico

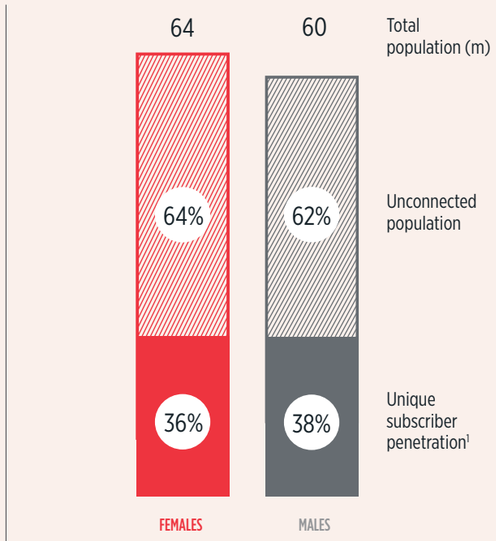
Mexico has a large unconnected market and a relatively small gender gap in mobile phone ownership. Opportunities exist to bridge the remaining gender gap in rural areas and among other groups, reach the country's remaining unconnected women with mobile, and bridge the usage gap between women and men for more sophisticated services such as mobile internet.

GENDER GAP IN OWNERSHIP

6%

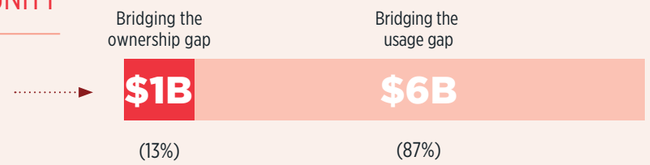
GENDER GAP VS. AVERAGE

LOW



5 YEAR REVENUE OPPORTUNITY

$7B



1. GSMA intelligence data. Male-female split of unique subscribers was estimated from primary research in-country.
2. Average revenue per subscriber.
3. Compound annual growth rate.

Mobile market

Mexico has a relatively low unique subscriber penetration of 37% and a small gender gap in mobile phone ownership. The market is maturing with 39% of connections 3G and 2% 4G. ARPS[2] is very high at $26, and stable. Telcel dominates the market with 69% market share, followed by Movistar (20%) and three smaller operators.

Social norms around mobile

While gender inequality exists in Mexico, particularly around economic participation, women tend to have relatively high levels of autonomy in accessing mobile. However, the gender gap in mobile ownership is greater among certain groups (e.g. 26% in rural areas), and harassment via mobile is a key issue for Mexican women compared to other countries studied. Women also lag behind men in more sophisticated usage.

Population: 122m
Rural: 21%

GDP/capita: $10,307
Growth: 3% CAGR[3]

Unique subscriber penetration: 37%
Growth: 3% CAGR[3]

3G penetration:
39% of connections are 3G

Market share of top 3 mobile operators:
69% Telcel
20% Movistar
8% Lusacell

Current ARPS[2]: $26
Growth: 1% CAGR[3]

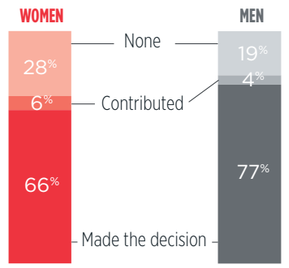
Gender equality ranking: 80 out of **142** countries

Formal labour participation:
80% for men,
45% for women

Stages of mobile access and usage

Obtain a SIM & handset

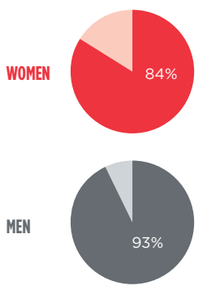
Role that handset owners played in selecting their handset (%)



- Women are less likely than men to select their own handset and to pay for it. 71% of women who purchased a handset themselves said they used their own money to pay for it, vs 93% of men.
- In contrast, women and men have similar levels of autonomy when it comes to SIM purchase.

Obtain credit

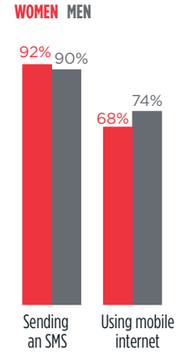
SIM owners who bought credit on their own with no help from anyone in last four weeks (%)



- 16% of women do not buy their own credit. Reasons include not being in control of finances, not knowing how to top up, and agents that are too far away.
- Post-paid is less common but used more by men than women (12% of male SIM owners vs 6% of women).

Use

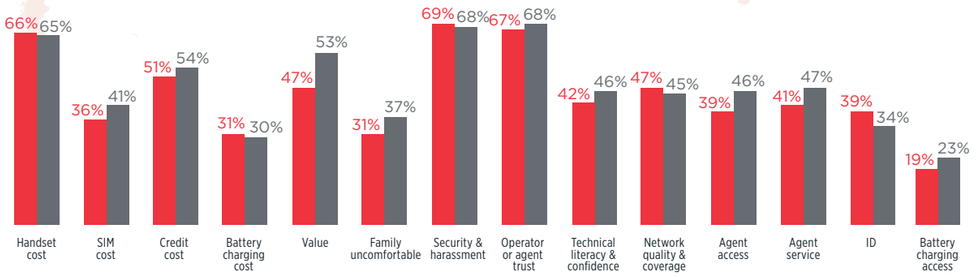
Mobile owners who report: (%)



- Overall, women lag behind men in using more sophisticated services.
- In urban areas, despite similar ownership levels, fewer women than men have used mobile internet.
- In rural areas, there are fewer female than male owners, but they are more likely to have used mobile internet.

Barriers to mobile access and usage

Respondents who agree or strongly agree that this barrier prevents them from owning or using a mobile phone (%)[4]



Barriers to mobile access and usage

SECURITY & HARASSMENT

Security and harassment concerns are one of the greatest barriers to mobile ownership and use in Mexico for both men and women. 78% of women and 79% of men report security concerns (e.g. handset theft) as a barrier, and 76% of women and 67% of men report harassment from strangers on their mobile as a barrier.

Women in focus groups were concerned that owning a mobile phone increases the risk of being robbed. Others said they were worried about scams, such as being called by strangers pretending to have kidnapped loved ones in order to extort money.

OPERATOR OR AGENT TRUST

Mistrust of operators or agents is high in Mexico among both men and women, especially in rural areas: 64% of urban women and 80% of rural women report fears of operators or agents cheating them as a barrier to them owning or using a mobile.

Some focus group participants felt that credit was being stolen from their account or that they were charged for data they didn't use:

"In my case, I put a lot of money in my account and suddenly when I consulted the balance, it was removed already."
– Urban female, Mexico

NETWORK QUALITY & COVERAGE

Network quality and coverage is an issue for both men and women in Mexico and across rural and urban areas.

In urban areas, 47% of women and 47% of men report it as a barrier, whereas in rural areas it is more of a concern among women. 50% of rural women report network quality and coverage as a barrier compared to 35% of men.

Women in a rural focus group explained how poor coverage can limit usage:

"There's no coverage, it is not that we don't know how to use it or we don't know it, no, it is because there is no coverage."
- Rural female, Mexico

4. For the purpose of clarity, percentages for the following barriers have been calculated by taking a simple average from across "sub-barriers": "Value", "Security & harassment", "Technical literacy & confidence" and "Agent service"; see Appendix 2 for responses to all individual barriers.

Opportunities and recommendations

- Mobile stakeholders in Mexico should focus on bridging the remaining gender gap in ownership, reaching the country's remaining unconnected women, and bridging the gender gap in usage of more sophisticated services (e.g. mobile internet) by addressing key barriers such as cost, and fears related to security, harassment, and being cheated.
- Industry should take into account that entry-level, low-key, durable handsets with internet access are likely to appeal to women, enabling them to access mobile internet whilst feeling less afraid to carry the handset around with them.
- Other initiatives to overcome the cost barrier include introducing handset credit models, lowering taxes on handsets and services that have a tangible socio-economic benefit, and innovative data bundle packages to appeal to those who are more price-sensitive.
- Designers and providers of mobile services should ensure that the potential for fraudulent activity is minimised, and reinforce customer trust — particularly in rural areas — through the agent network and other sales channels (e.g., operators could train agents to provide a more trustworthy service and explain pricing clearly, introduce stricter agent recruitment policies, and recruit female agents).
- Mobile operators should offer services that block/deter unwanted calls and spam received over mobile. Operators should also consider tracking and suppressing phone numbers used by aggressive sales services or fraudsters.

Turkey

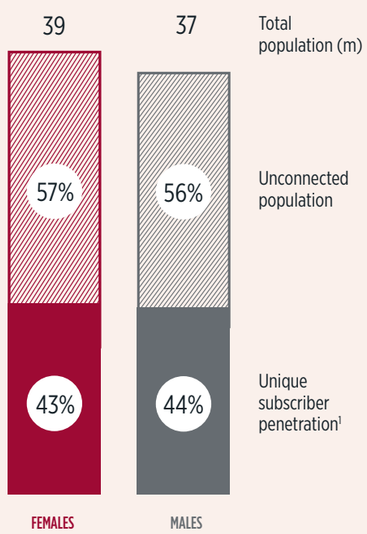
Turkey's mobile market has a unique subscriber penetration of 44% and a small gender gap in mobile phone ownership. However, opportunities still exist to reach the remaining unconnected women and bridge the usage gap by addressing key barriers, such as cost concerns.

GENDER GAP IN OWNERSHIP

2%

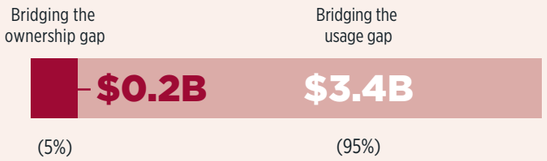
GENDER GAP VS. AVERAGE

LOW



5 YEAR REVENUE OPPORTUNITY

$4B



1. GSMA intelligence data. Male-female split of unique subscribers was estimated from primary research in-country.
2. Average revenue per subscriber.
3. Compound annual growth rate.

Mobile market

Turkey's predominantly urban population has a unique subscriber penetration of 44% and a small gender gap in mobile ownership (2%). The market is mature, with 65% of connections 3G, and a high ARPS[2] at $22. The market is dominated by the historical operator, Turkcell, followed by Vodafone and Avea.

Social norms around mobile

Although the gender gap in mobile ownership is small, social norms such as women's lower economic participation and financial autonomy can limit Turkish women's ability to select their own handset, purchase credit, or use a mobile. This tends to be more apparent among rural or poorer households.

Population: 75m
Rural: 28%

GDP/capita: $10,971
Growth: 5% CAGR[3]

Unique subscriber penetration: 44%
Growth: 1% CAGR[3]

3G penetration:
65% of connections are 3G

Market share of top 3 mobile operators:
48% Turkcell
30% Vodafone
23% Avea

Current ARPS[2]: $22
Growth: 1% CAGR[3]

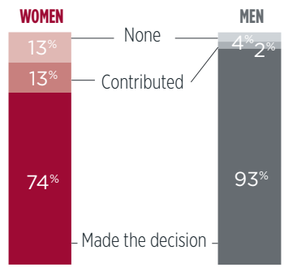
Gender equality ranking: 125 out of **142** countries

Formal labour participation:
71% for men,
29% for women

Stages of mobile access and usage

Obtain a SIM & handset

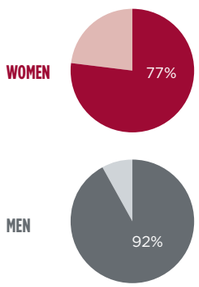
Role that handset owners played in selecting their handset (%)



- Women are less likely than men to select their own handset and to pay for it. 45% of women who purchased a handset themselves said they used their own money to pay for it, vs 75% of men.
- 37% of female SIM owners also said the SIM was not registered in their own name (vs 19% of men).

Obtain credit

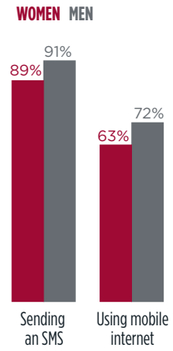
SIM owners who bought credit on their own with no help from anyone in last four weeks (%)



- E-top up and post-paid are the most common ways for women and men to obtain credit.
- Women are less likely to refill at an agent on their own because they are not the ones who pay for it. Other reasons include agents being located too far away or feeling unsafe/ uncomfortable going to the shop.

Use

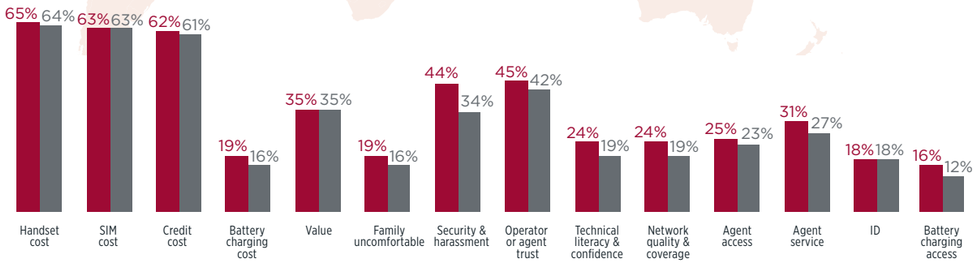
Mobile owners who report: (%)



- Women lag behind men in use of more sophisticated services. They are less likely to have used mobile internet, and use mobile internet and VAS less frequently.
- Gender differences are more pronounced among rural or poorer households: 43% of rural women (vs 60% of men) have used mobile internet.

Barriers to mobile access and usage

Respondents who agree or strongly agree that this barrier prevents them from owning or using a mobile phone (%)[4]



Barriers to mobile access and usage

COST

Cost is the greatest barrier reported by Turkish women and men. The cost of credit in particular is a key issue compared to other countries studied.

Handset, credit, and SIM costs are particular concerns for rural women; more so than for men. 75% of rural women (vs 61% of rural men), for instance, report handset cost as a barrier.

In focus groups, rural women mentioned that high handset costs prevent them from upgrading to smartphones or internet-enabled phones:

"I wish we could afford the ones with touchscreens but we can't."
– Rural female user, Turkey

SECURITY & HARASSMENT

In Turkey, security and harassment issues related to mobile are key concerns, particularly for women. 57% of women (vs 41% of men) report spam calls/SMS as a barrier, 40% (vs 35% of men) report harassing calls from strangers as a barrier, and 36% (vs 25% of men) report security concerns, such as handset theft as a barrier.

Women in an urban focus group, for instance, voiced fears of having their mobile stolen and someone being able to access their photos/contacts, and complained of harassment from men via WhatsApp and prank calls pretending they had won the lottery.

AGENT OR OPERATOR TRUST

Almost half of both men and women surveyed reported a lack of trust of operators or agents as a barrier.

Lack of trust is higher among women from certain groups, such as those who are from wealthier households or rural areas. 56% of rural women, for instance, report lack of trust of operators/agents as a barrier, vs 41% of urban women.

Female focus groups suggested that one reason for lack of trust may be due to customers misunderstanding data pricing charges.

4. For the purpose of clarity, percentages for the following barriers have been calculated by taking a simple average from across "sub-barriers": "Value", "Security & harassment", "Technical literacy & confidence" and "Agent service"; see Appendix 2 for responses to all individual barriers.

Opportunities and recommendations

- Mobile stakeholders in Turkey should focus on reaching the remaining unconnected women and bridging the usage gap, particularly for mobile internet and other more sophisticated services. This will involve addressing cost concerns, as well as other key barriers such as fears related to security, harassment and fraud, operator/agent trust, and low perception of value.
- Initiatives to overcome the cost barrier include partnerships between mobile operators and low-priced handset manufacturers, microloans for handsets, tariff plans and data bundle packages to appeal to women's usage patterns/routines, and on-demand or bite-sized data pricing. Turkey has a relatively high level of mobile-related taxation,[5] so policy-makers should lower taxes on handsets and services that have a tangible socio-economic benefit.
- Mobile operators should also ensure pricing is clear and transparent (particularly for data) and that customers are sufficiently educated on it through the agent network and other channels (e.g., SMS reminders of impending credit limits).
- Designers and providers of mobile services should focus on relevant services and content that meet the needs of women. An area of opportunity is likely to be services that help women to feel more secure and less harassed, such as innovative safety-related apps/services, and services that block/deter unwanted calls/SMS/spam.
- To help address security and harassment concerns, mobile operators should also consider tracking and suppressing phone numbers used by aggressive sales services or fraudsters.

***5.** Deloitte and GSMA. "Digital Inclusion and Mobile Sector Taxation", 2015.*

Appendix 2: Data tables

Table 1

Perception of barriers to owning and using a mobile phone

Respondents who agree or strongly agree (%)[1]

HIGHEST BARRIER PERCEIVED IN THAT COUNTRY — LOWEST BARRIER PERCEIVED IN THAT COUNTRY

	Income and affordability							
	Handset cost		SIM cost		Credit cost		Battery charging cost	
	W	M	W	M	W	M	W	M
Niger	57%	51%	50%	39%	34%	28%	33%	35%
India	50%	45%	29%	25%	39%	36%	16%	17%
DRC	44%	35%	14%	12%	23%	23%	22%	28%
Mexico	66%	65%	36%	41%	51%	54%	31%	30%
Indonesia	40%	37%	19%	16%	32%	28%	14%	16%
China	50%	49%	32%	36%	53%	53%	24%	32%
Turkey	65%	64%	63%	63%	62%	61%	19%	16%
Kenya	50%	45%	31%	31%	45%	39%	31%	27%
Colombia	66%	71%	19%	19%	58%	61%	24%	17%
Egypt	80%	80%	38%	36%	47%	49%	34%	35%
Jordan	76%	42%	56%	21%	69%	63%	17%	5%

	Incentives to own and use																			
	Value[3]		Value – detail								Family uncomfortable		Security & harassment[3]		Security and harassment – detail				Operator / agent trust	
			No relevant services / content		Don't need to contact people I frequently speak to		Already have a landline		Already have internet access						Security concerns (e.g., handset theft)		Strangers		SPAM			
	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M
Niger	5%	6%	7%	7%	8%	6%	2%	3%	2%	7%	11%	8%	18%	18%	11%	11%	21%	21%	22%	22%	21%	21%
India	15%	17%	20%	26%	18%	19%	10%	7%	11%	17%	16%	14%	34%	33%	37%	35%	33%	27%	32%	36%	21%	17%
DRC	8%	9%	11%	11%	14%	10%	2%	4%	6%	10%	15%	15%	18%	19%	15%	17%	19%	17%	21%	23%	20%	21%
Mexico	47%	53%	52%	56%	38%	42%	50%	54%	47%	58%	31%	37%	69%	68%	78%	79%	76%	67%	54%	58%	67%	68%
Indonesia	16%	17%	20%	20%	17%	16%	10%	7%	17%	23%	15%	12%	32%	30%	34%	28%	28%	27%	33%	36%	20%	25%
China	36%	39%	38%	37%	22%	21%	38%	45%	44%	51%	30%	31%	63%	64%	63%	60%	69%	66%	56%	66%	56%	58%
Turkey	35%	35%	26%	26%	39%	39%	35%	36%	38%	37%	19%	16%	44%	34%	36%	25%	40%	35%	57%	41%	45%	42%
Kenya	12%	9%	20%	16%	13%	9%	5%	6%	9%	4%	8%	5%	27%	17%	36%	23%	22%	11%	24%	17%	21%	17%
Colombia	60%	58%	59%	53%	48%	49%	71%	70%	62%	58%	28%	16%	75%	70%	87%	78%	74%	65%	63%	67%	68%	70%
Egypt	47%	50%	48%	49%	39%	37%	53%	57%	49%	56%	40%	31%	53%	48%	49%	44%	55%	42%	54%	57%	33%	36%
Jordan	21%	12%	38%	31%	16%	4%	11%	3%	19%	10%	21%	3%	57%	37%	53%	22%	58%	23%	59%	65%	40%	21%

	User capability and design								Infrastructure											
	Technical literacy & confidence[3]		Technical literacy & confidence – detail						Network quality & coverage		Agent service[3]		Agent service – detail				Agent access		ID		Battery charging access	
			Don't know how to use a mobile / the more complex features		Trouble reading content / language		Worried will make a mistake and lose moeny						Uncomfortable interacting		Unhelpful							
	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M
Niger	30%	25%	33%	28%	43%	35%	14%	12%	39%	40%	17%	19%	12%	15%	22%	23%	23%	17%	29%	23%	32%	28%
India	35%	26%	34%	23%	32%	24%	38%	31%	45%	35%	17%	12%	22%	12%	12%	11%	20%	18%	27%	28%	10%	12%
DRC	21%	18%	20%	21%	27%	23%	17%	11%	42%	39%	18%	17%	15%	14%	21%	20%	16%	17%	—[2]	—[2]	23%	26%
Mexico	42%	46%	35%	36%	33%	40%	57%	62%	47%	45%	41%	47%	35%	41%	47%	52%	39%	46%	39%	34%	19%	23%
Indonesia	28%	21%	28%	21%	26%	20%	29%	21%	50%	47%	14%	17%	14%	17%	14%	17%	19%	17%	27%	28%	13%	14%
China	48%	46%	48%	41%	34%	31%	63%	66%	40%	43%	40%	44%	35%	43%	45%	45%	34%	33%	17%	20%	19%	26%
Turkey	24%	19%	24%	22%	22%	17%	25%	19%	24%	19%	31%	27%	29%	23%	33%	30%	25%	23%	18%	18%	16%	12%
Kenya	28%	22%	27%	24%	30%	21%	28%	20%	59%	60%	17%	12%	16%	11%	17%	12%	30%	24%	23%	22%	26%	23%
Colombia	43%	35%	37%	31%	32%	27%	59%	46%	42%	40%	39%	36%	37%	37%	41%	35%	41%	37%	31%	33%	17%	20%
Egypt	40%	40%	38%	41%	33%	35%	49%	44%	75%	74%	36%	37%	40%	42%	31%	31%	36%	35%	44%	26%	31%	37%
Jordan	34%	17%	29%	19%	30%	14%	42%	19%	65%	49%	36%	17%	39%	17%	33%	17%	31%	26%	8%	4%	17%	9%

1: *Shows % who agree or strongly agree with Q 55: "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?" [Example] "Handset prices are expensive".*

2: *ID barrier question was not asked in DRC because at the time of research, requirements for registration were unclear and, in practice, ID is rarely required to buy a SIM. Therefore, ID was assumed to not be a barrier in DRC.*

3: *Percentages for the following barriers have been calculated by taking a simple average from across 'sub-barriers': 'Value', 'Security & harassment', 'Technical literacy & confidence' and 'Agent service'.*

Note: *For each barrier in each country, N=648 to 881 for women and N=164 to 314 for men.*

Appendix 2: Data tables

Table 2
Type of handset owned
Handset owners (%)

		Basic phone	Feature phone	Smartphone	N=
Niger	FEMALE	72%	27%	1%	345
	MALE	58%	36%	5%	144
India	FEMALE	59%	40%	1%	468
	MALE	47%	48%	5%	191
DRC	FEMALE	52%	42%	6%	348
	MALE	48%	43%	8%	124
Mexico	FEMALE	10%	64%	26%	549
	MALE	6%	66%	28%	220
Indonesia	FEMALE	24%	55%	21%	661
	MALE	19%	56%	25%	182
China	FEMALE	7%	54%	39%	807
	MALE	4%	54%	42%	225
Turkey	FEMALE	29%	58%	13%	795
	MALE	28%	59%	12%	234
Kenya	FEMALE	27%	60%	14%	714
	MALE	29%	52%	19%	212
Colombia	FEMALE	23%	70%	8%	680
	MALE	19%	63%	17%	200
Egypt	FEMALE	8%	63%	29%	770
	MALE	6%	63%	31%	215
Jordan	FEMALE	27%	12%	61%	651
	MALE	25%	12%	63%	212

Based on: *Q19 - Does your handset have the following? "QWERTY/AZERTY keypad", "Touchscreen"; "Ability to access the internet"; "Ability to download an app"*

Handset definitions:

Basic phone: None of the above-mentioned features

Feature phone: At least one of the above-mentioned features

Smartphone: All features

Note: *Due to rounding, percentages may not add up to 100%*

Table 3a
Most common source of money for respondent's handset
Handset owners who have paid a fee for their handset or received it as part of their overall subscription fee

		My own money	The general household budget	My spouse (husband or wife)	Another male relative	Another female relative	Friends / others	N=
Niger	FEMALE	75%	1%	14%	7%	1%	1%	86
	MALE	99%	0%	0%	0%	1%	0%	76
India	FEMALE	23%	21%	48%	8%	0%	0%	349
	MALE	72%	11%	1%	16%	0%	0%	174
DRC	FEMALE	55%	3%	23%	11%	4%	3%	219
	MALE	88%	0%	0%	7%	2%	3%	99
Mexico	FEMALE	71%	4%	13%	4%	7%	0%	398
	MALE	93%	0%	0%	4%	2%	1%	172
Indonesia	FEMALE	67%	6%	22%	2%	2%	0%	481
	MALE	95%	0%	1%	2%	2%	0%	151
China	FEMALE	90%	2%	2%	3%	2%	0%	672
	MALE	92%	2%	0%	2%	2%	2%	199
Turkey	FEMALE	45%	13%	24%	15%	3%	0%	568
	MALE	75%	5%	0%	17%	1%	2%	182
Kenya	FEMALE	81%	1%	10%	3%	3%	1%	485
	MALE	99%	0%	0%	0%	1%	0%	178
Colombia	FEMALE	88%	0%	6%	2%	2%	1%	373
	MALE	94%	0%	2%	1%	3%	0%	147
Egypt	FEMALE	42%	16%	18%	16%	7%	1%	579
	MALE	79%	4%	1%	15%	2%	0%	185
Jordan	FEMALE	43%	2%	44%	7%	3%	0%	276
	MALE	95%	1%	0%	4%	1%	0%	180

Exact question was: *Q24 – Who paid for this handset?*

Note: *Due to rounding, percentages may not add up to 100%*

Table 3b
Did you have to ask permission to spend money to buy your handset?
Handset owners who paid for their handset with their own money or with the general household budget (%)

		Yes	No	N=
Niger	FEMALE	22%	78%	66
	MALE	9%	91%	75
India	FEMALE	61%	39%	171
	MALE	34%	66%	152
DRC	FEMALE	34%	66%	132
	MALE	31%	69%	87
Mexico	FEMALE	5%	95%	304
	MALE	3%	97%	160
Indonesia	FEMALE	43%	57%	349
	MALE	28%	72%	144
China	FEMALE	9%	91%	612
	MALE	9%	91%	187
Turkey	FEMALE	23%	77%	329
	MALE	15%	85%	144
Kenya	FEMALE	10%	90%	398
	MALE	7%	93%	174
Colombia	FEMALE	2%	98%	329
	MALE	5%	95%	138
Egypt	FEMALE	49%	51%	335
	MALE	25%	75%	151
Jordan	FEMALE	27%	73%	118
	MALE	6%	94%	171

Exact question was: *Q25 - Did you have to ask permission to spend this money?*

Note: *Due to rounding, percentages may not add upto 100%*

Appendix 2: Data tables

Table 3c

Most common source of money for refilling credit balance/paying monthly bill

SIM owners (%)

		My own money	The general household budget	My spouse (husband or wife)	Another male relative	Another female relative	Friends/ others	N=
Niger	FEMALE	56%	6%	27%	8%	2%	1%	330
	MALE	93%	1%	1%	2%	1%	1%	147
India	FEMALE	14%	23%	50%	11%	2%	0%	472
	MALE	77%	7%	1%	15%	0%	0%	193
DRC	FEMALE	55%	10%	17%	8%	6%	4%	383
	MALE	85%	2%	1%	8%	4%	1%	133
Mexico	FEMALE	59%	10%	16%	6%	7%	2%	547
	MALE	90%	2%	0%	4%	1%	2%	212
Indonesia	FEMALE	69%	14%	14%	1%	2%	0%	668
	MALE	93%	2%	1%	2%	2%	1%	183
China	FEMALE	82%	5%	2%	6%	5%	0%	806
	MALE	88%	4%	0%	4%	4%	0%	225
Turkey	FEMALE	42%	16%	27%	14%	2%	0%	795
	MALE	78%	6%	0%	16%	0%	0%	234
Kenya	FEMALE	79%	7%	7%	2%	4%	1%	739
	MALE	96%	2%	0%	2%	1%	0%	215
Colombia	FEMALE	79%	2%	9%	4%	4%	2%	675
	MALE	92%	1%	1%	3%	2%	3%	197
Egypt	FEMALE	38%	18%	18%	16%	9%	1%	775
	MALE	74%	5%	0%	16%	4%	0%	218
Jordan	FEMALE	19%	11%	49%	15%	6%	0%	652
	MALE	89%	1%	0%	8%	2%	0%	213

Exact question was: *Q44 - Where does the money to refill your credit or pay your monthly bill usually come from?*

Note: *Due to rounding, percentages may not add up to 100%*

Table 3d

Did you have to ask permission to spend money to refill your credit?

SIM owners who paid for their credit with their own money or with the general household budget (%)

		Yes, always	Yes, most of the time	Sometimes	No	N=
Niger	FEMALE	5%	3%	7%	86%	199
	MALE	1%	0%	2%	97%	131
India	FEMALE	13%	5%	24%	59%	166
	MALE	14%	1%	7%	78%	160
DRC	FEMALE	6%	7%	5%	82%	232
	MALE	8%	3%	7%	82%	106
Mexico	FEMALE	1%	5%	2%	92%	396
	MALE	3%	0%	2%	94%	193
Indonesia	FEMALE	6%	0%	10%	83%	540
	MALE	6%	1%	6%	88%	176
China	FEMALE	3%	1%	1%	95%	704
	MALE	2%	1%	3%	93%	209
Turkey	FEMALE	4%	4%	24%	68%	459
	MALE	3%	3%	13%	81%	196
Kenya	FEMALE	1%	1%	3%	95%	609
	MALE	0%	0%	0%	100%	207
Colombia	FEMALE	2%	0%	1%	97%	520
	MALE	0%	0%	0%	99%	170
Egypt	FEMALE	12%	16%	24%	47%	421
	MALE	10%	4%	16%	70%	166
Jordan	FEMALE	15%	11%	3%	71%	198
	MALE	0%	1%	5%	94%	193

Exact question was: *Q25 - Did you have to ask permission to spend this money?*

Note: *Due to rounding, percentages may not add up to 100%*

Table 4

Respondents who need help to ...

Handset owners (%)

		Make a call	N=	Send SMS	N=	Use the internet on a mobile phone	N=
Niger	FEMALE	7%	329	56%	296	81%	250
	MALE	2%	147	42%	134	61%	110
India	FEMALE	5%	472	50%	455	76%	380
	MALE	2%	193	29%	190	61%	170
DRC	FEMALE	7%	383	27%	373	75%	299
	MALE	3%	133	19%	130	58%	116
Mexico	FEMALE	1%	547	4%	542	20%	521
	MALE	0%	212	9%	211	20%	207
Indonesia	FEMALE	0%	667	2%	656	40%	497
	MALE	0%	183	0%	182	25%	147
China	FEMALE	12%	807	24%	792	37%	779
	MALE	11%	225	17%	225	30%	219
Turkey	FEMALE	1%	794	7%	762	20%	657
	MALE	0%	234	5%	229	17%	212
Kenya	FEMALE	2%	739	10%	737	49%	703
	MALE	1%	215	9%	215	37%	213
Colombia	FEMALE	1%	675	12%	665	27%	646
	MALE	5%	197	17%	194	25%	188
Egypt	FEMALE	0%	774	5%	768	29%	679
	MALE	0%	219	1%	218	25%	197
Jordan	FEMALE	1%	652	12%	633	29%	582
	MALE	0%	213	12%	213	22%	206

Exact question was: *Q58 - Do you know how to do the following operations without any help?*

Appendix 2: Data tables

Table 5
Who first taught you how to use your handset?
Handset owners (%)

		I worked it out for myself	My spouse (husband or wife)	Another male relative	Another female relative	A male friend (including neighbours)	A female friend (including neighbours)	The agent/ shopkeeper	Others	N=
Niger	FEMALE	44%	28%	19%	5%	2%	2%	0%	1%	345
	MALE	66%	2%	15%	1%	14%	0%	1%	1%	144
India	FEMALE	33%	39%	25%	1%	0%	2%	0%	0%	468
	MALE	74%	2%	11%	0%	11%	1%	0%	1%	191
DRC	FEMALE	61%	14%	11%	4%	4%	1%	4%	1%	348
	MALE	65%	0%	14%	2%	10%	1%	7%	1%	124
Mexico	FEMALE	68%	3%	13%	12%	1%	0%	2%	1%	549
	MALE	81%	2%	7%	6%	1%	0%	2%	1%	219
Indonesia	FEMALE	53%	22%	9%	10%	1%	4%	1%	0%	661
	MALE	74%	4%	8%	6%	7%	0%	1%	0%	182
China	FEMALE	56%	6%	13%	9%	0%	1%	13%	1%	807
	MALE	71%	2%	6%	4%	2%	0%	13%	1%	225
Turkey	FEMALE	73%	14%	6%	5%	0%	1%	2%	0%	795
	MALE	90%	0%	5%	1%	2%	0%	1%	0%	234
Kenya	FEMALE	69%	10%	9%	5%	2%	2%	3%	1%	714
	MALE	81%	2%	5%	2%	6%	0%	3%	1%	212
Colombia	FEMALE	61%	6%	11%	15%	1%	2%	5%	0%	680
	MALE	73%	1%	9%	8%	4%	1%	5%	1%	200
Egypt	FEMALE	56%	16%	15%	10%	1%	2%	0%	0%	770
	MALE	76%	2%	12%	3%	5%	0%	1%	0%	214
Jordan	FEMALE	77%	6%	8%	8%	0%	0%	0%	0%	651
	MALE	92%	1%	5%	1%	0%	0%	0%	0%	212

Exact question was: *Q30 - Who first taught you to use this handset?*

Note: *Due to rounding, percentages may not add up to 100%*

Table 6
Opinions on partners checking each other's mobile phone
All respondents (%)

		It is acceptable for a husband to check the numbers on his wife's mobile phone						It is acceptable for a wife to check the numbers on her husband's mobile phone					
		Strongly agree	Agree	TOTAL agree	Disagree	Strongly disagree	N=	Strongly agree	Agree	TOTAL agree	Disagree	Strongly disagree	N=
Niger	FEMALE	49%	36%	86%	6%	8%	742	32%	26%	58%	18%	24%	703
	MALE	48%	31%	79%	9%	12%	195	22%	23%	45%	24%	30%	188
India	FEMALE	17%	32%	48%	21%	30%	805	15%	29%	44%	24%	32%	794
	MALE	19%	27%	46%	21%	32%	204	19%	27%	46%	28%	27%	200
DRC	FEMALE	39%	38%	76%	14%	10%	789	31%	39%	70%	17%	12%	790
	MALE	35%	39%	75%	14%	11%	197	21%	30%	51%	26%	23%	196
Mexico	FEMALE	7%	21%	28%	46%	26%	706	13%	23%	36%	44%	20%	710
	MALE	9%	25%	34%	42%	23%	284	7%	23%	30%	43%	27%	286
Indonesia	FEMALE	15%	72%	86%	12%	1%	807	13%	75%	88%	10%	2%	809
	MALE	14%	68%	82%	16%	2%	204	13%	67%	80%	17%	3%	204
China	FEMALE	1%	24%	25%	54%	21%	813	2%	29%	31%	50%	19%	815
	MALE	1%	32%	33%	45%	22%	222	0%	30%	30%	47%	23%	223
Turkey	FEMALE	12%	23%	35%	40%	25%	770	13%	22%	35%	38%	27%	771
	MALE	14%	16%	30%	44%	27%	226	11%	15%	26%	44%	30%	225
Kenya	FEMALE	12%	28%	41%	28%	31%	854	15%	27%	41%	28%	31%	854
	MALE	9%	32%	41%	31%	28%	232	8%	30%	37%	32%	31%	232
Colombia	FEMALE	4%	15%	19%	57%	24%	772	7%	22%	29%	52%	19%	786
	MALE	9%	21%	30%	50%	20%	226	7%	17%	24%	51%	25%	227
Egypt	FEMALE	21%	49%	71%	21%	9%	837	30%	40%	70%	20%	9%	838
	MALE	30%	40%	70%	18%	12%	227	34%	27%	61%	25%	14%	226
Jordan	FEMALE	10%	28%	37%	15%	48%	824	13%	30%	42%	15%	43%	824
	MALE	19%	15%	34%	12%	54%	213	15%	11%	25%	15%	60%	212

Exact question was: *Q54 - I would like to ask your opinion of men and women using mobile phones in your community. Please tell me the extent to which you agree or disagree with the following statements: "It is acceptable for a husband to check the numbers on his wife's mobile phone."; "It is acceptable for a wife to check the numbers on her husband's mobile phone."*

Note: *Due to rounding, percentages may not add up to 100%*

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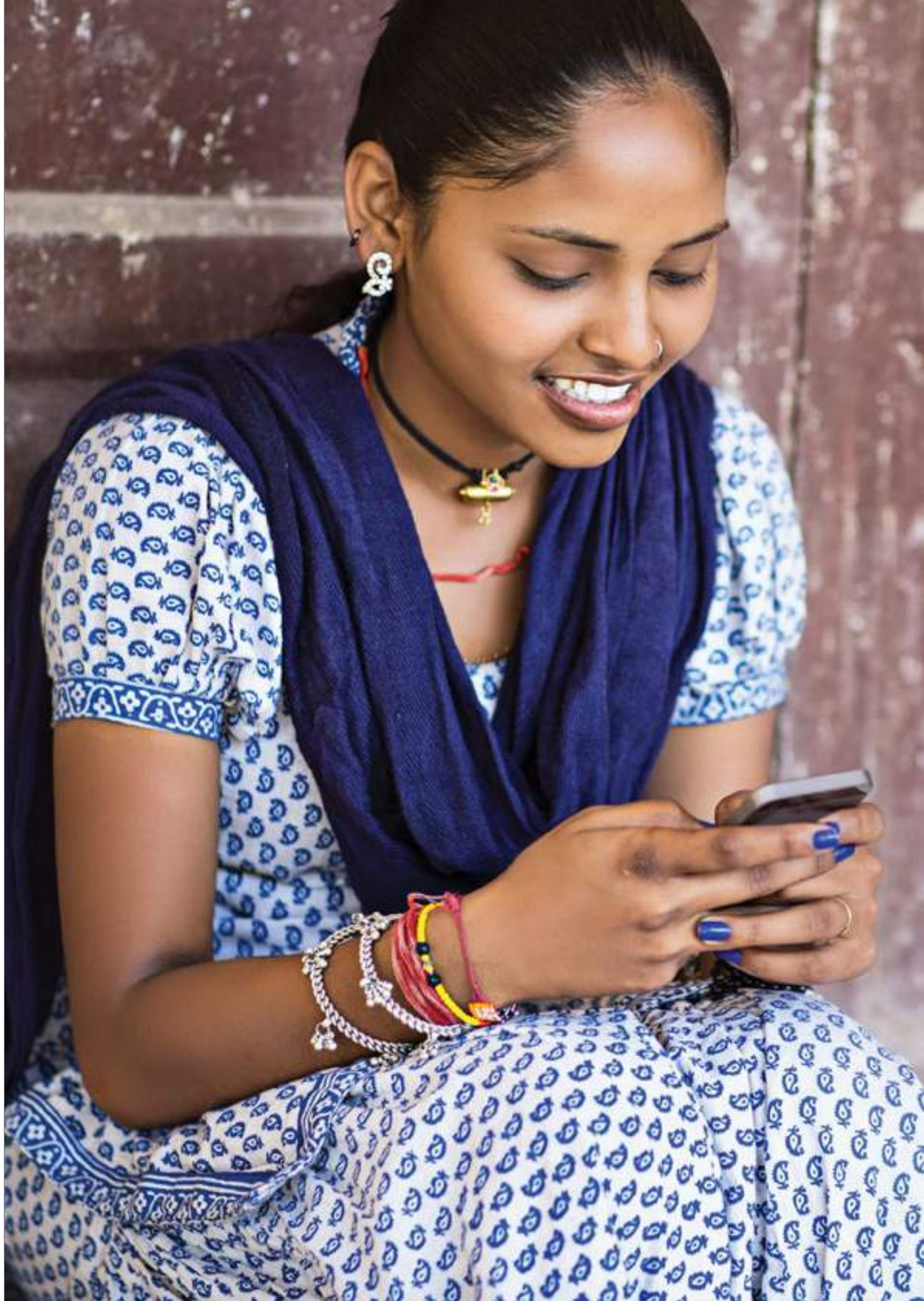

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