



Development
Fund



Women & Mobile: A Global Opportunity

A study on the mobile phone gender gap in low and middle-income countries





The GSMA represents the interests of the worldwide mobile communications industry. Spanning 219 countries, the GSMA unites nearly 800 of the world's mobile operators, as well as more than 200 companies in the broader mobile ecosystem. To find out more visit www.gsmworld.com. It also produces the premier industry events including the Mobile World Congress in Barcelona and the Mobile Asia Congress. Visit the congress websites www.mobileworldcongress.com and www.mobileasiacongress.com to learn more.



The Cherie Blair Foundation for Women strengthens the capacity of women entrepreneurs in countries where they lack equal opportunities. It specifically helps women entrepreneurs fill the gap in the economy commonly referred to as 'missing middle' – small and medium enterprises. The Foundation works in partnership with local organisations to develop and implement joint projects providing women entrepreneurs with access to business development tools, networks and finance. www.cherieblairfoundation.org



Vital Wave Consulting provides strategy consulting to accelerate sustainable growth in emerging markets. Through highly specialised consultants and field teams around the developing world, the company provides strategy consulting and market intelligence to Fortune 500 firms and global foundations. Vital Wave Consulting's work is focused specifically on the intersection of technology and emerging markets. The firm engages with clients in topic areas such as mServices, eHealth, micro-finance, remittances, low-cost devices, and alternative business models.

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Over the past five years, the mobile industry has made extraordinary progress in bringing the benefits of connectivity to most of the developing world. Across Africa, Asia and Latin America, mobile phones have enabled more than two billion people to become more productive and efficient, but there was growing anecdotal evidence to suggest that women in these regions weren't benefitting as much as men.

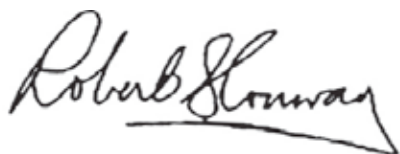
To better understand the extent of the gender gap in mobile usage and why it has occurred, the GSMA Development Fund joined forces with the Cherie Blair Foundation for Women, which shares our belief that people at the base of the economic pyramid need to be empowered with the right tools to find employment and build businesses that will enable them to eventually escape poverty. Among the most important of these tools is a mobile phone.

Together, the GSMA Development Fund, the Cherie Blair Foundation and Vital Wave Consulting have produced this groundbreaking report that reveals for the first time the extent of the gender gap in mobile usage in many low and middle income countries. The research – the first detailed global study of its kind – shows that a female in a low or middle-income country is 21% less likely to own a mobile phone than a male.

In line with the Third UN Millennium Development Goal on gender equality, closing this gap would empower more women, enabling them to be better connected with family and friends, while helping them obtain paid-for work or run their own businesses. Greater usage of mobile phones by women would stimulate social and economic growth, while generating incremental subscriber and revenue growth for mobile operators.

Indeed, it is clear that better serving women would be beneficial to mobile operators' businesses. This report shows that there are 300 million fewer female subscribers than male subscribers who have mobile phone coverage, but don't have a handset. If operators could just bring mobile phone penetration among women on a par with penetration among men, this report shows they would collectively earn US\$13 billion in additional revenues each year.

So, how can the mobile industry close the gender gap? Our research has found that cost and a perception that it isn't necessary to own a mobile phone are the two biggest barriers to connecting more women in developing countries. Through our new mWomen programme the GSMA will work with its members (including the vast majority of mobile operators in the developing world) to tackle these barriers and dramatically boost the number of women who can benefit from owning and having access to a mobile phone. Through this programme, we will bring together gender experts, mobile operators and application providers to exchange best practice and trial promotions designed to increase female ownership of mobile phones. The GSMA is fully committed to closing the gender gap.



Rob Conway, Chief Executive Officer, GSMA



It is my pleasure to present the report Women & Mobile – A Global Opportunity. I am convinced the findings will provide valuable insights for the development community and the mobile industry alike. The report outlines the immense opportunity of connecting the 300 million women who do not yet benefit from access to a mobile phone and demonstrates what a powerful impact a phone can have on improving the social and economic status of women, families and entire communities.

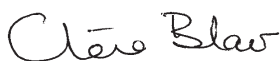
Women's lack of access to technology is often deplored, and as a working mother myself; I have experienced the enormous flexibility a mobile phone can bring. But with growing anecdotal reports of a global gender gap in access to technology I welcomed the chance to support this first attempt to investigate systematically just how many women actually own or access a mobile phone in low and middle income countries, what barriers they face to owning a phone and finally how we can mobilise the relevant actors to address these barriers and close the gender gap. Meeting women's organisations in all parts of the world, I was impressed to see how the use of a mobile phone can improve women's access to literacy, health, banking, employment and business opportunities to mention just a few.

If there was any doubt about the importance of having a phone, the report tells us that 93% of all women surveyed feel safer and more connected. 55% of all women in business say they have earned additional income due to owning a mobile phone and 41% of all the women interviewed have testified that the phone has increased their income and professional opportunities.

This report does not claim to provide an answer to all the open questions, but it hopes to stimulate debate, further research and most importantly action so that women, in particular in rural areas, can benefit from the powerful opportunities a mobile phone can provide. What shines out of this study is that Women and Mobile represent an untapped market and great development potential that we need to embrace.

The Cherie Blair Foundation for Women and the GSMA Development Fund will both take action and implement programmes that bridge this gender gap. We are looking forward to joining with other partners interested in working with us on this important initiative.

Enjoy reading,



Founder, the Cherie Blair Foundation for Women



Acknowledgements

The GSMA Development Fund, the Cherie Blair Foundation for Women and Vital Wave Consulting would like to thank everyone who has generously shared their insights and knowledge to inform this report.

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We also thank the Queen of the Hashemite Kingdom of Jordan, Rania Al Abdullah, for her contribution.



Executive Summary

300 Million Fewer Female than Male Subscribers: A US\$13 Billion Opportunity

Mobile phone ownership in low and middle-income countries has skyrocketed in the past several years. But a woman is still 21% less likely to own a mobile phone than a man. This figure increases to 23% if she lives in Africa, 24% if she lives in the Middle East, and 37% if she lives in South Asia. Closing this gender gap would bring the benefits of mobile phones to an additional 300 million women. By extending the benefits of mobile phone ownership to more women, a host of social and economic goals can be advanced.

Nine in Ten Women Feel Safer Because of Their Mobile Phones

Mobile phone ownership provides distinct benefits to women, including improved access to educational, health, business and employment opportunities. Women surveyed across low and middle-income countries on three continents believe that a mobile phone helps them lead a more secure, connected and productive life. This survey has also found that:

- From India to Senegal to Kosovo, women are using the power of mobile phones to unlock economic opportunities
- Women business owners in particular perceive the phone as an essential productivity tool, with more than half saying they have used a mobile phone to earn additional income
- 85% of women report feeling more independent because of their mobile phone.

2/3

Women represent nearly two-thirds of the untapped market for mobile growth. Mobile operators aiming to be market leaders in five years time must excel at bringing on new female subscribers.



Joshua Haynes

"From connecting communities and transforming communications, to enhancing well-being and opening up trade, the mobile phone is revolutionising business practices in Jordan, especially for those in rural areas. But its potential around the world is yet untapped. This comprehensive report is a crucial first step for budding business women in developing countries; it proves how important it is to bring women into the conversation and close the gender gap in accessing mobile phone technology. This issue has been on hold for too long! I look forward to the day when women everywhere benefit from this powerful development tool."

**Rania Al Abdullah,
Queen of the Hashemite Kingdom
of Jordan**

Revenue Opportunities Range from US\$740 Million in Latin America to US\$4 Billion in East Asia

Closing the mobile gender gap by adding 300 million women subscribers in low and middle-income countries will bring significant social benefits to women and their families as well as US\$13 billion immediate incremental revenue (ARPU or average revenue per user) to mobile operators.

The incremental revenue opportunity ranges from US\$740 million in Latin America to US\$4 billion in East Asia. The greatest incremental gains for women can be made in South Asia, the Middle East and Africa, the three regions where the gender gap is the biggest.

The long-term opportunity is even larger. Over the next five years, two out of every three potential new subscribers will be women. By connecting all of these women, mobile operators have the potential to add 600 million subscribers and boost their collective annual revenues by US\$29 billion.



The Landscape of Female Mobile Phone Ownership and Usage

Understanding the factors that determine which women own or use a mobile phone is essential to the adoption of strategies to expand ownership.

Five specific factors influence whether or not a woman owns a mobile phone in low and middle-income countries:

- 1 Household income
- 2 Urban/rural location
- 3 Age
- 4 Occupation
- 5 Education level

Household income and whether a woman lives in an urban or rural location have the most influence over women's mobile phone ownership rates. For example, a woman in an urban area is 23% more likely to own a mobile phone than a woman in a rural area, even if the two women are the same age and have the same income, educational level and occupation. Income has a similar influence on mobile phone ownership rates; every additional US\$100 in monthly household income increases a woman's likelihood of owning a mobile phone by 13%. Age, occupation and educational levels also play a role.

"Orascom Telecom has deep roots in the developing countries in which it operates and realises that in order to have a systematic understanding of how mobile technology can empower women, you need to look at both individual and societal characteristics. Both levels of analysis can identify either barriers or enablers of adopting mobile technology."

Naguib Sawiris,
Executive Chairman,
Orascom Telecom Holding

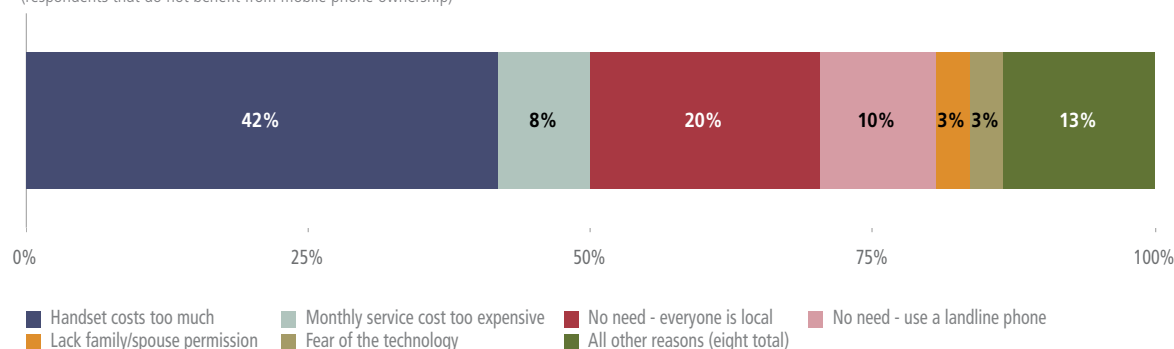
Barriers to Mobile Phone Ownership

There are nearly half a billion women in low and middle-income countries who access mobile phones through borrowing and more than two hundred and fifty million who have yet to make use of a mobile phone at all. These women typically see borrowing as convenient and rarely pay for the service they use. Their familiarity with mobile phones, however, makes them a good candidate for ownership.

The reasons women cite for not owning a mobile phone include the cost of handsets and service, a lack of need for a mobile phone and fear of being able to master the technology. Cultural issues, such as the traditional roles of men and women, are also a factor in women's mobile phone ownership and can delay or even prevent a woman's acquisition of a mobile phone. Strategies that address these concerns are essential to encourage more women to own a mobile phone and are included in the recommendations of the report.

What are the top reasons why you do not own a mobile phone

(respondents that do not benefit from mobile phone ownership)



Key Female Demographic Groups

Categorising women by demographic traits enables a deeper understanding of differences in mobile phone ownership rates and usage patterns. The categorisation also sheds light on the barriers preventing the different groups of women from owning mobile phones and potential solutions for overcoming them.

Women in rural areas and lower income brackets stand to benefit the most from closing the gender gap.

Each group of women has a unique set of needs that can be addressed with a mobile phone. Tailored strategies can be implemented to address these needs and move more women into ownership. Increasing awareness of how mobile phones can improve their standard of living will resonate with **Women at the Base of the Pyramid (BOP)** (women with household incomes of less than US\$75 per month) and **Rural Women at Work**. Appealing to feelings of safety, connection and modernity, and positioning the mobile phone as more than a communication tool are two strategies to increase ownership amongst **Women in the Home**. **Women at School** are likely to own a mobile phone, and with their heavy use of SMS, are good candidates for social programmes delivered via SMS messages. **Career Women**, a group already using mobile phones, provide a glimpse into the future profile of female mobile phone owners as educational and professional opportunities for women to expand.

Overview of the Demographic Groups

	Women at the BOP	Rural Women at Work	Women in the Home	Women at School	Career Women
Description	14-74 years old - Urban and Rural 26% own a mobile phone	14-74 years old - Rural 57% own a mobile phone	21-74 years old - Urban and Rural 61% own a mobile phone	21-27 years old - Urban - Nearly 90% own a mobile phone	21-49 years old - Urban 97% own a mobile phone
Key Usage Figures (Owners)	- ARPU/month: US\$5.43 - SMS sent/month: 18 % who pay for own service: 54%	- ARPU/month: US\$6.45 - SMS sent/month: 67 % who pay for own service: 77%	- ARPU/month: US\$6.44 - SMS sent/month: 28 % who pay for own service: 45%	- ARPU/month: US\$8.57 - SMS sent/month: 145 % who pay for own service: 51%	- ARPU/month: US\$12.86 - SMS sent/month: 59 % who pay for own service: 98%
Distinguishing Characteristics	- Though ownership rates are low, more than half of these women have exposure to mobile phones through borrowing - More than a third express concern about being able to use the technology	- Use of phone to find employment is 70% higher than average - Greatest investment: nearly 35% say that they have reduced spending in other areas to pay for mobile phone, suggesting high perceived value	- Largest and most diverse segment - Many say they don't need a mobile phone because they are connected locally or via landline - Younger, wealthier homemakers more likely to own	- Heavy users: Students spend 10% more than the average woman on mobile services, or 11% more than average as a percent of their household income - Expensive handsets: Students invest heavily in handsets	- Coverage slightly more important than price or convenience - Two-thirds have used their phone to find employment - ARPU higher than any other group

*Excludes homemakers

Recommendations and Next Steps

The GSMA Development Fund, in partnership with the Cherie Blair Foundation for Women, undertook this study in order to understand women's ownership of mobile phones in low and middle-income countries as well as the benefits mobile phones can bring to development. The report makes the case for empowering women through mobile technology.

The research findings suggest steps that can increase women's uptake of mobile phones; they also highlight questions that will require further research and collaboration. Developing a comprehensive plan for empowering women with mobile phones will require the involvement of all stakeholders from the private, non-profit and public sectors. Each stakeholder will need to take steps on their own, but also work together.

An Agenda for Action:

Mobile Telecommunications Industry

- Specifically address women in segmentation strategies and marketing tactics
- Position the phone as a life enhancing and income-generating tool
- Understand and operate within the local culture
- Leverage alternative financing mechanisms and channels.

Development Community

- Leverage alternative financing mechanisms and channels
- Create innovative programmes to increase the uptake of mobile phones amongst women
- Promote the mobile phone as an effective development tool which creates education, health, employment, banking and business opportunities
- Help identify culturally relevant and acceptable ways of promoting mobile phone ownership amongst women.

Policymakers

- Shift the tax burden away from the poorest in society of which women are the majority
- Create incentives for the development of mobile services that benefit women.

All Stakeholders

- Collaborate for maximum impact
- Designate high-profile champions of mobile phones for women
- Conduct further research to advance understanding of women and mobile phones.

Introduction

A Critical First Step

From farmers to business owners, the mobile phone is providing women with information when and where they need it. Women who own mobile phones are becoming increasingly dependent on them. Even some of the poorest women in the world are willing to invest their limited funds in mobile phone services because of the financial and social benefits they bring. Yet many women – particularly in low and middle-income countries – still do not benefit from the positive impact that owning a mobile phone can have on their lives and livelihoods.

It has long been believed that fewer women than men own mobile phones in low and middle-income countries. But there is little reliable data to verify and quantify the size and impact of this difference. Both society and industry could benefit from equalising male and female mobile phone ownership rates given the important role women and mobile phones play in socio-economic development.

The report is a critical first step in determining how mobile phones can advance the socio-economic development of women. The report outlines how many women own mobile phones and how they use them. It also highlights how many women do not own mobile phones and the reasons why. The research findings suggest concrete steps that can increase the uptake of mobile phones amongst women and also raise questions that will require further research and collaboration. Mapping a comprehensive plan for empowering women with mobile phones will require the involvement of stakeholders from the private, non-profit and public sectors.

Mobile Phones and the Gender Gap

“I used to wonder about this machine called a mobile phone, but once I began to use it, I realised its many advantages. I can immediately call the wholesale market to inquire about prices and place direct orders. I have eliminated the middleman. I am now recognised as a businesswoman, growing and selling sesame seeds and not just as somebody’s wife or sister.” Jasuben Malek, a member of the Self Employed Women’s Association (SEWA), Gujarat, India.

This quote encapsulates how far the use of mobile phones by women has advanced in the past decade. What was once seen as a luxury for urban consumers in wealthy countries has now become a tool that touches the lives of women from remote farming communities to teeming megacities. Empowering these women with this critical tool represents an enormous social and commercial opportunity.

“In less than a decade mobile phones in Pakistan have gone from being a toy for the rich to a tool for the successful.”

**Bilal Sheikh, CMO for Mobilink,
Pakistan**

Women Are the New Face of Mobile Subscribers

The number of mobile phone owners in low and middle-income countries has skyrocketed in the past several years. But there are still 1.25 billion adults in these countries that live in areas with mobile network coverage that have not yet benefited from mobile phone ownership. The majority of these people are women. Women represent both powerful socio-economic change agents and a major market opportunity for mobile operators. As the mobile revolution continues to affect people at all levels of the economic pyramid, one thing is clear: **the face of the new subscriber over the next several years is female.**

Women and Mobile Phones: A Winning Combination for Development

A wide range of social and economic goals can be advanced by extending the benefits of mobile phone ownership to more women. This is due in part to the ubiquity of mobile phones in low and middle-income countries and their connection to economic and business growth. It is also due to the acknowledged role that empowered women play in improving standards of living for all members of society.

The Link between Mobile Phones and Economic Growth

In just a few years, mobile phones have surpassed traditional media such as radio, television and computers to become the most accessible form of technology in low and middle-income countries.

Mobile phones connect people and provide them with information that is useful in their daily lives. There is considerable evidence that greater mobile phone penetration rates are associated with faster economic growth, job creation and profitable businesses. Researchers in academia, development organisations and private business have discovered the following:

- A study published by consultancy Deloitte in 2007 found that a 10% increase in mobile phone penetration rates is linked to an increase in low and middle-income country GDP of 1.2% (see endnote ii).
- A 2006 Ovum study found that the mobile industry had already created 3.6 million jobs (directly and indirectly) in India and was expected to add a million more jobs annually (see endnote ii).
- A survey in South Africa and Egypt commissioned by Vodafone in 2005 found that 62% of businesses in South Africa and 59% in Egypt attributed increased profits to mobile phones (see endnote ii).

Mobile phones are a tool for economic growth, and investments in women improve the well-being of families and communities. Empowering more women with mobile phones can accelerate social and economic development.

Those statistics indicate a strong link between increases in mobile phone penetration and faster economic and business development.

Empowering Women Leads to Social and Economic Development

Evidence has been mounting for decades that empowering women leads to positive economic and social change. Some of the most powerful ways to advance development centre on increasing women's access to education, health care and financial services, which in turn allows them to improve their quality of life and that of their families. The importance of women as socio-economic change agents is demonstrated by some key statistics:

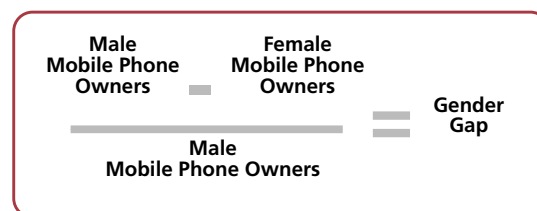
- A 2008 OECD report cites evidence that women direct up to 90% of their income to their families and communities (see endnote iii).
- The Food and Agricultural Organisation noted in 2009 that women are critical for food security as they cultivate up to 80% of the food in many low and middle-income countries (see endnote iii).
- The Inter-American Development Bank reported in 2006 that children of employed mothers have a 5% greater educational attainment than other children in thirteen out of fifteen Latin American countries (see endnote iii).

Mobile phones are a tool for economic growth, and investing in women improves the overall well-being of families. Empowering more women with mobile phones can accelerate social and economic development.

Defining the Gender Gap

This study defines and quantifies the "gender gap" in mobile phone ownership in low and middle-income countries. It provides recommendations to different stakeholders on how it can be closed. The gender gap is best understood by looking at the rate of mobile phone ownership amongst females relative to that of males (Figure 1). As it is expressed in this report, the gender gap is defined as how much less likely a woman is to own a phone than a man. The process of quantifying this gap is illustrated in Figure 1.

Figure 1: Calculation of the Mobile Phone Gender Gap



For example, if 40% of all males and 30% of all females within a specific geography own a mobile phone, it can be said that women are 25% less likely than men to own a mobile phone. The gender gap is thus 25% (see endnote iv). To close the gap an additional 10% of

the female population would have to acquire mobile phones. This would bring mobile phone ownership rates to 40% for each gender, achieving gender parity.

Why Is the Gender Gap Important?

The report concludes that the disparity in ownership between males and females represents a lost social and commercial opportunity. **Eliminating the gap and achieving gender parity in mobile phone ownership would result in hundreds of millions of new subscribers, a benefit to mobile operators, to the women themselves and to the societies in which they live.**

A Brief Note About Methodology

The findings and case studies within this report are based on three sources of data: field research, in-depth interviews and third-party secondary data. Field research was conducted with more than 2,000 women surveyed across four low and middle-income countries on three continents (Bolivia, Egypt, India and Kenya). Approximately 40 in-depth interviews were conducted with executives in the mobile telecommunications industry, leaders of non-profit organisations and academics across a diverse set of low and middle-income countries. Third-party data sources such as the GSMA's Wireless Intelligence database, United Nations statistics and the International Telecommunications Union's (ITU) World Telecommunications Indicators 2008 database were accessed along with other secondary sources to gather and validate demographic and mobile phone usage statistics.

To quantify the current size and value of the gender gap within low and middle-income countries, a model was formulated and populated with data from 149 low and middle-income countries. The model calculates the value of closing the gender gap and maintaining continued parity in male and female subscribers over the long term. The calculations are based on the assumption that the potential market is comprised of women from 14-74 years old who live in areas with mobile coverage. By late 2009, mobile networks were estimated to cover 89% of the population of low and middle-income countries.

The calculations are based on the number of mobile phone subscribers. Although some women in low and middle-income countries have a mobile phone subscription, or SIM, but not a handset, the dominant model is one subscription per handset. This report therefore, uses the term "mobile phone owner" (or "owner") interchangeably with "mobile service subscriber" (or "subscriber"). For more information on methodologies, please see Appendix B.

There are 300 million fewer female subscribers than male subscribers in low and middle-income countries.

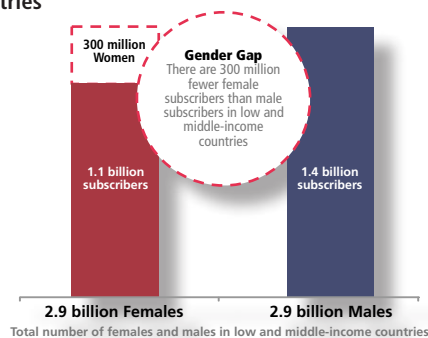


Closing the Mobile Phone Gender Gap

Mobile communication has expanded rapidly over the past several years within low and middle-income countries. After discounting subscribers with multiple SIM cards, there are 2.5 billion mobile subscribers in these countries. This represents 43% of the 5.8 billion residents. Around 1.4 billion of these subscribers are men, whereas only 1.1 billion are women (Figure 2).

Women in low and middle-income countries often begin using mobile phones later than male members of the family and are less likely overall to own a mobile phone. This is despite the fact that mobile phone ownership can bring a wide range of social and economic benefits to women and their families.

Figure 2: Number of Women and Men that Benefit from Mobile Phone Ownership in Low and Middle-Income Countries



To quantify the gender gap, one must understand the breakdown of male and female subscribers. Today, 1.4 billion, or 48% of the 2.9 billion males in low and middle-income countries, benefit from mobile phone ownership. In contrast, just 1.1 billion, or 38%, of the 2.9 billion females in these countries have mobile phones. This equals a mobile phone gender gap of 300 million women. These 300 million women are adults (14 -74 years old) who live in areas with mobile network coverage. The difference in figures between the men and women in terms of mobile phone penetration means that women in low and middle-income countries are 21% less likely to own a mobile phone than a man.

A woman is 21% less likely to own a mobile phone than a man in low and middle-income countries.

Of the remaining 3.3 billion citizens of low and middle-income countries, there are 750 million females, or 26% of all females, who could – but do not yet – benefit from mobile communications. This is the size of the current total potential market of women subscribers in these countries. In comparison, there are only around 500 million men, or 17% of all males, in the total potential market of male subscribers in these same countries. The remaining 2.05 billion individuals lie outside mobile network coverage areas or are under the age of 14 and over 74 years old. These individuals are not considered part of the potential market.

Closing the mobile gender gap by adding 300 million new women subscribers in low and middle-income countries can bring immediate incremental revenue to mobile operators as well as significant social benefits to the women and their families.

The 300 million women of the current gender gap present the next wave of mobile subscribers. Many of these women are in lower-income brackets and have less disposable income than current subscribers. In the short-term, these women are expected to spend less than current subscribers pay per month for mobile services. Through an analysis of the survey results, it is estimated that these new subscribers will spend slightly over half, or 51%, of what current mobile owners spend.

Closing the mobile phone “gender gap” represents a US\$13 billion incremental, annual revenue opportunity for mobile operators in low and middle-income countries, with the greatest potential gains in South Asia, the Middle East and Africa.

This level of spending is cross-validated via a statistical model which predicts that, on average, ARPU (average revenue per user) will be lower as female penetration levels increase and lower-income women adopt the technology. To calculate the value of closing the gender gap on a global level, it is assumed that each of the 300 million new female subscribers will generate 51% of the country's respective average ARPU (see the Methodology overview in Appendix B for further explanation of the calculation of the 51% figure). On average, this equals slightly less than US\$4 per month – or US\$44 per year – for each of the 300 million female subscribers in incremental annual revenues (ARPU) for mobile operators in low and middle-income countries. Capturing these women would therefore result in US\$13 billion in incremental, annual revenues for mobile operators.

Gender Gap Hotspots: South Asia, the Middle East and Africa

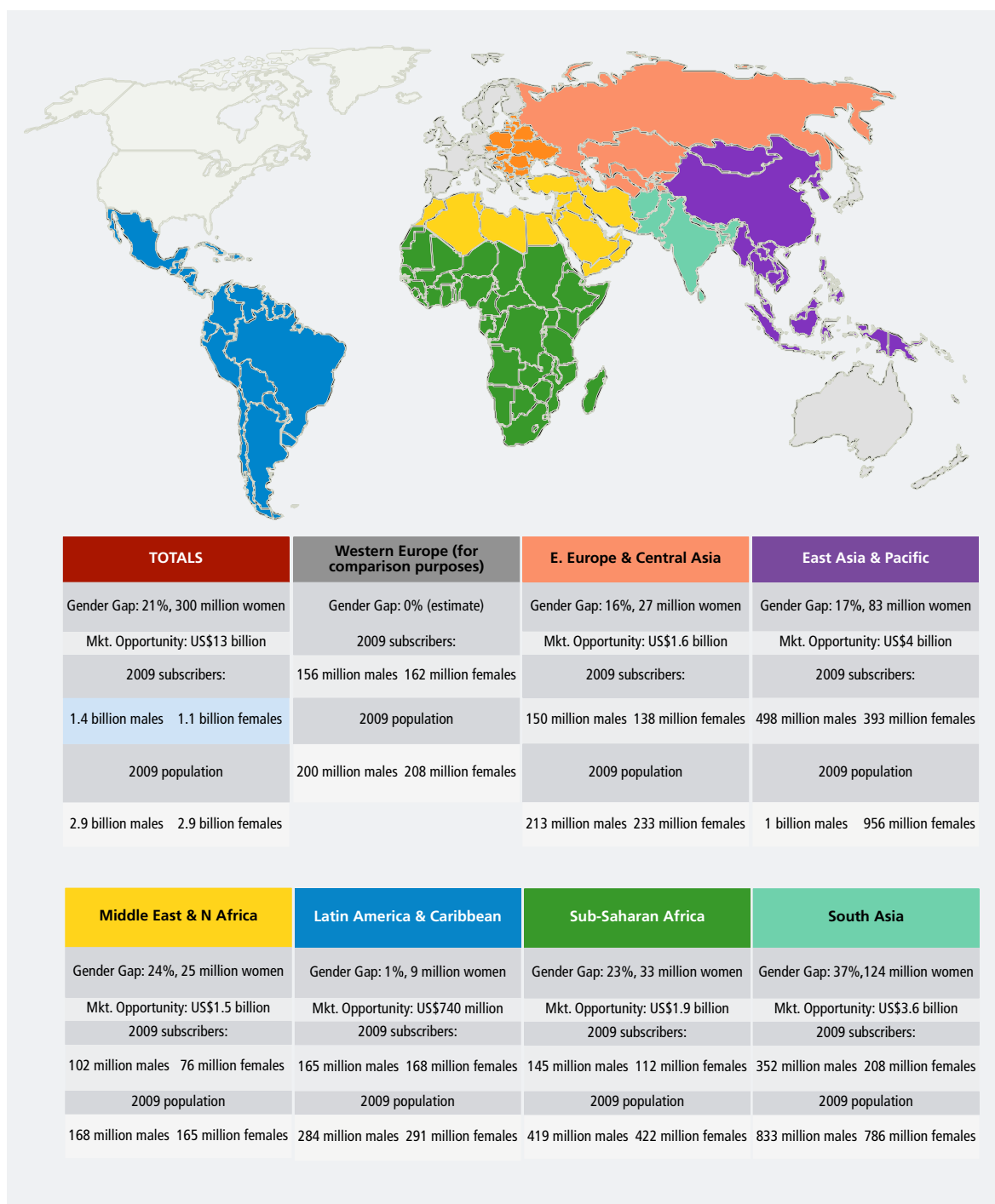
The greatest gains for women can be made in South Asia, the Middle East and Africa. Across low and middle-income countries, women are 21% less likely to own a mobile phone than a man. On a regional level, there is a great deal of diversity in the size of the gender gap (Figure 3). For instance, in Latin America, a small gender gap of 1% can be attributed to relatively high overall mobile penetration rates and special conditions such as those found in Mexico, where emigration has left many women as the head of household. Conversely, the gender gap is most

profound in South Asia where 124 million fewer women than men enjoy the benefits of mobile phone ownership.

The variations in the gender gap generally correspond with overall levels of economic development and a woman's role and participation in society, including levels of education and workforce participation. As will be discussed in the *Mobile Phone Ownership and Usage* section, income and urbanisation, two aspects of economic development, are the most important determinants of female mobile uptake. Cultural issues, such as traditional roles of men and women can also factor in the gap, delaying or even preventing a woman's acquisition of mobile phones. In South Asia, all of these forces are at play. The region as a whole has one of the lowest per-capita income levels and one of the largest percentages of its residents in rural areas. India, one of the more developed countries in the South Asia region, has the highest mobile gender gap of the four countries included in the survey (see the *A Geographic Perspective on Women and Mobile Phones* section). The mobile gender gap is even more extreme in countries such as Pakistan and Afghanistan where traditional female roles are firmly rooted, leaving women with little control over the purchase of a mobile phone. Operators in these countries, such as Mobilink and Roshan, are creating innovative campaigns and programmes that address women and men in culturally appropriate ways (see pages 19, 20).

A woman is 23% less likely to own a mobile phone than a man if she lives in Africa, 24% if she lives in the Middle East, and 37% if she lives in South Asia.

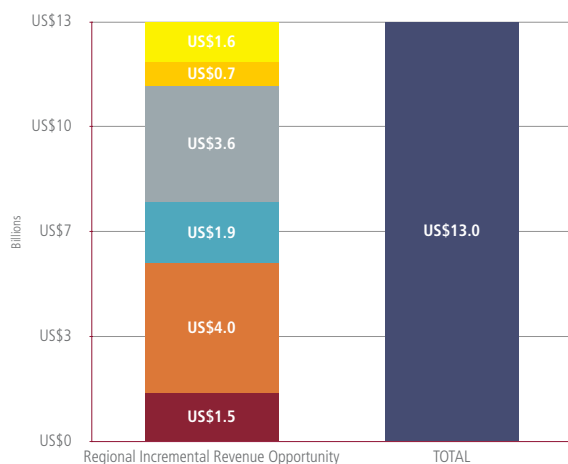
Figure 3: Gender Gap: Size and Immediate Revenue Opportunity (ARPU) by Region



From a revenue perspective, the incremental opportunity for mobile operators for closing the mobile gender gap ranges from US\$740 million in Latin America to US\$4 billion in East Asia and the Pacific (Figure 4). Cumulative service revenue opportunity is greatest in low and middle-income countries in East Asia and the Pacific, South Asia and Sub-Saharan Africa. These three regions represent nearly US\$9.5 billion, or over 70% of the US\$13 billion revenue opportunity in low and middle-income countries.

Incremental revenue opportunities range from US\$740 million in Latin America to US\$4 billion in East Asia.

Figure 4: Regional Incremental, Annual Revenue Opportunity (ARPU)



Tomorrow's Subscribers Will Largely Be Women

Over the next five years, population growth and the expansion of mobile networks will increase the number of potential female subscribers between 14 to 74 years old who live in areas of mobile network coverage. In 2014, there will be well over a billion women in low and middle-income countries, up from 750 million today. At the same time, mobile operators are projected to add nearly 900 million unique new subscribers by 2014. Assuming that the mobile gender gap is closed and parity is maintained between the genders, two out of three new subscribers, or nearly 600 million out of the 900 million new subscribers to be added by 2014 will be women. By connecting all of these women, even at the reduced ARPU level, mobile operators could boost their collective annual revenues by US\$29 billion. Success in capturing this market will necessitate targeted efforts that address women's needs and overcome their perceived and real barriers to mobile ownership.

Women represent nearly two-thirds of the untapped market for mobile growth. Mobile operators aiming to be market leaders in 5 years time must excel at bringing on new female subscribers.

Pakistan **Mobiles Boost Female Literacy** **Mobilink, SMS for Literacy**

Mobilink and UNESCO teamed up to use SMS messages to improve young women's literacy.

Demonstrating the positive impact of mobile phones on girls' lives can help overcome community resistance to female ownership

Pakistani mobile operator Mobilink, a subsidiary of Orascom, has learned a great deal about attitudes regarding women and mobile phones, especially as penetration rates soared in Pakistan over the last several years. In addition to creating a product tailored specifically for the women's market several years ago, Mobilink has sought to demonstrate the power of mobile phones to improve literacy rates for adolescent girls in rural areas of Pakistan where reading materials are often scarce. Yet there is often resistance to girls' having the independence that mobile phones symbolise.

For four months in 2009, Mobilink partnered with UNESCO and a local non-governmental organisation (NGO), Bunyad, on a pilot project in a rural area of southern Punjab province involving 250 females aged 15-24 who had recently completed a basic literacy programme. Each of the girls was provided with a low-cost mobile phone and prepaid connection. Teachers were trained by Bunyad to teach students how to read and write using mobile phones. The company set up a system for the NGO to send out SMS messages in an effort to maintain and improve participants' literacy, which often lapses because of inadequate access to interesting reading material. Crucially, the low-cost phones were enabled to send and receive messages in Urdu, the local language, rather than in English. The girls received up to six messages a day on a variety of topics including religion, health and nutrition, and were expected to practise reading and writing down the messages and responding to their teachers via SMS. Monthly assessments of participants learning gains were conducted to assess impact.

Programme organisers encountered considerable resistance on the part of parents and community leaders to the idea of allowing girls to have mobile phones, largely due to the conservative social norms of the area. This resistance began to soften, however, once people began to see the nature of the messages the girls were receiving and the benefits the programme conferred. Exams taken by the girls participating in the programme showed striking early gains in literacy, with the share of girls receiving the lowest scores dropping nearly 80%. Participants and their families are even taking advantage of other features of the phones, including the calculator. While 56% of learners and their families initially maintained negative feelings toward the programme, 87% were satisfied with its results by the end. Families also appreciated the greater sense of security that being able to contact their daughters or wives provided. Users can pay US\$6 to buy their phones at the end of the programme and continue receiving text messages, and Mobilink, UNESCO and Bunyad plan to expand the programme further.

The success of this programme demonstrates how mobile phones can be used to increase the reach and effectiveness of basic education programmes. It also illustrates the fact that suspicion of mobile phones can be overcome by showing parents and leaders how mobiles can be used to transmit culturally sensitive information whilst increasing girls' sense of security.



Afghanistan

Speaking to Women with Words that Resonate

Roshan, Aali for Mother

Afghan mobile operator Roshan launches a series of culturally-appropriate promotions for women that emphasise family and security.

Culturally sensitive marketing builds a connection of trust

Roshan, which means “light” in Dari and Pashto, is Afghanistan’s largest mobile network operator. With the Aga Khan Fund for Economic Development as a majority shareholder, the company matches its financial objectives with a strong commitment to the development of the country. Boosting mobile phone use among women is not only seen as a revenue opportunity, as no other operator in Afghanistan was targeting the women’s market, but also provides an opportunity to benefit one of the country’s most marginalised segments.

Prevailing cultural attitudes in Afghanistan impose very traditional roles on men and women. Society is family-oriented, with men controlling most of the family’s assets and spending decisions; women occupy the traditional role of sister, wife and mother. Company research indicated that for men, the primary reason for a woman to have a mobile phone would be to provide a connection between herself and her family, or in some cases, her workplace. Use outside this circle is often viewed with suspicion.

Working within these cultural expectations, Roshan launched the Aali for Mother Campaign in April 2009. The promotion was based on SIM Aali, their flagship mass market tariff plan, but offered a Family and Friends option at reduced rates with a focus on women while accenting the themes of motherhood and family.

Marketing messages were targeted at both men and women, and as shown in the advert emphasised the mobile phone’s role in enabling women to attend to family responsibilities. Advertisements showed depictions of women in traditional gender roles, like singing a lullaby to her child, and positioned men as the “gift bearer.”

Since the launch, the percentage of women among new Roshan subscribers has continued to grow to approximately 18% today. It is estimated that Roshan has the highest number of female subscribers in Afghanistan. The campaign has also further established Roshan as a trusted brand. Through its commercial and corporate social responsibility efforts, the company continues to promote the economic empowerment of women in Afghan society through a variety of initiatives including the Women’s Public Calls Offices project. Roshan has stayed within cultural boundaries even while expressing and showing themes of modernity and progress. And with the success of Aali for Mother, Roshan is looking at providing more products and promotions tailored to women, built around the Family and Friends offering.

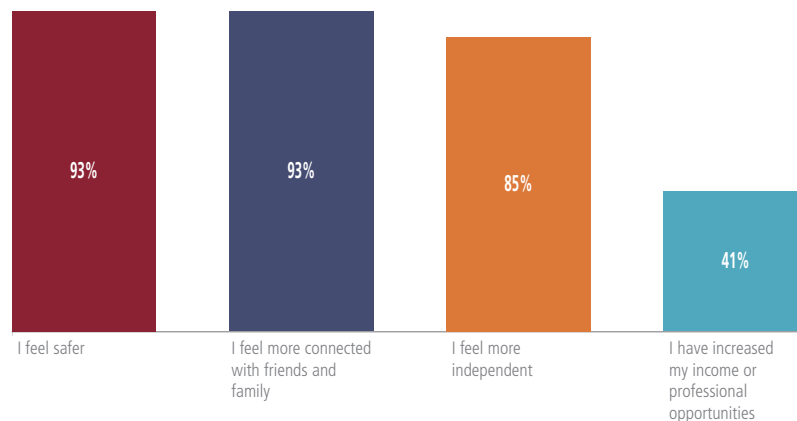


Women Benefit from Mobile Phone Ownership

Mobile phone ownership provides distinct benefits to women such as improved access to educational, health, business and employment opportunities. Women surveyed across low and middle-income countries on three continents believe that a mobile phone helps them lead more secure, connected and productive lives (Figure 5).

Figure 5: Positive Outcomes and Feelings Associated with Mobile Phone Ownership

% of respondents (mobile phone owners) that answered the below statements positively



"I Feel Safer Because I Own a Mobile Phone"

Women mobile phone owners of every age, location and socio-economic status cite the increased feeling of safety and security that comes with mobile phone ownership. The need for safety can be high in some areas of low and middle-income countries whilst the resources to handle threats to it may be scarce. Situations that may have previously provoked anxiety for women or their male relatives have been in some cases reduced or eliminated through the presence of a communication line. Reinforcing the way in which mobile phones address this universal need is a compelling way to communicate the benefits of a mobile phone to both women and men.

Nine in ten women report feeling safer and more connected because of their mobile phone.

Putting Minds at Ease Wins Hearts Too Idea Cellular, India

Staying on top of the market in India's ultra-competitive mobile phone scene requires keeping an eye on its fastest-growing demographic groups. Idea Cellular, one of India's five biggest mobile operators with over 50 million subscribers, has pursued a bigger slice of women's growing share of India's subscriber base by learning what women in different age groups, professions and regions need in a communications device. Several years ago, Idea unveiled a Women's Card that included several innovative features designed to address what a research study and anecdotal information indicated was women's top concern when it came to mobiles: concern about not being able to reach family members if they ran out of airtime. To meet that need, Idea created a feature that allowed women to dial a three-digit code to have a "Please call immediately" SMS sent to three designated people who could then call the sender, and another that allows "negative balance" calls by women who have run out of balance. Use of the SMS alert was extensive, and both female and male subscribers appreciated the sense of security provided by the feature.

"I Feel More Connected Because I Own a Mobile Phone"

Communicating with family and friends is a core activity of everyday life. At the same time, development and globalisation are making individuals more mobile, reducing the time family members spend together at home. In some areas, migration of family members to cities or even abroad is distancing these individuals from their families and friends. In this environment, a mobile phone can be an essential tool for maintaining contact with loved ones. Nine in ten women surveyed report feeling more connected with friends and family because they own a mobile phone.

The men in the family also appreciate this level of connection. Almost all of the homemakers who received a mobile phone from their husbands note that it was given to them so that they could better stay connected with family and friends.

Additional Research Area #1

There are many advantages a woman experiences through owning a mobile phone – from the ability to leave home to go to work or school to feelings of success. A better understanding of how perceptions of independence improve women's well-being will inform campaigns designed to increase ownership.

"I Feel More Independent Because I Own a Mobile Phone"

As growth takes hold in low and middle-income countries, more opportunities are created for women outside of the home. Women increasingly have the chance to go to school, work outside their homes or even find employment outside of their immediate towns and villages. A mobile phone can help foster a sense of independence. Women need to take advantage of these opportunities by using the mobile phone as a tool to stay in touch with their family at home. Of women mobile owners surveyed, 85% report feeling more independent because of their mobile phone.



"I always carry my mobile phone when I go out because I can call my mother in case I am late. I call my neighbor's mobile phone and ask her if she can walk over to our house and find my mom so that I can talk to her."

Nokia

Mobile Phones Unlock Economic Opportunities

The information, communication and services provided by a mobile phone are helping women save time and money, improve productivity, increase returns-on-investment and maximise household resources. A woman can create and take advantage of new opportunities to increase income for herself and her family via a mobile phone. Four in ten women surveyed across low and middle-income countries report enjoying increased economic or professional opportunities due to owning a mobile phone.

"A mobile phone is not a luxury anymore, it is a necessity."

Michelle Berrios,
Entel S.A., Bolivia

Kenya Farmers Helpline or "Huduma Kwa Wakulima" Kencall, Kenya

For a twenty-five cent call on their mobile phone, farmers in Kenya can save several dollars by getting practical advice on their farming and livestock strategies. For instance, farmers have called to ask why their chickens are attacking each other and were informed that they were overcrowded. This type of concrete advice provides an enormous return for the farmer. Around 43% of the calls to Kencall's Kenya Farmers Helpline or "Huduma Kwa Wakulima" are from women farmers, who rarely, if ever, receive expert assistance from extension workers or other agricultural professionals. Kencall's CEO, Nicholas Nesbitt, calls this "just-in-time information" and reports that farmers are "investing in making these calls because they believe they will see a concrete return."

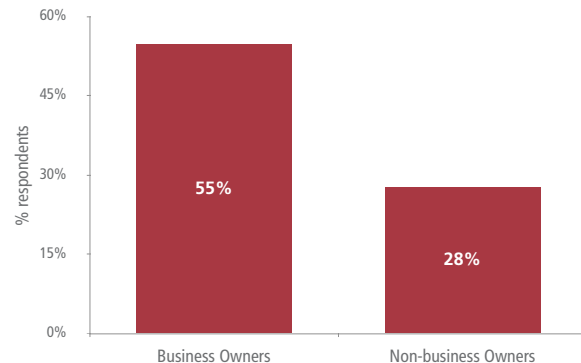
Mobile Phones are Woman's Business Lifeline

Women business owners in particular perceive the phone as an essential productivity tool and are therefore more likely to own a mobile phone. For example:

- 80% of business owners in the survey benefit from mobile phone ownership compared to only 63% of non-business owners
- Business owners report that they are two-and-a-half times more likely to use their mobile phone to earn income than non-business owners (Figure 6)
- Business owners in the survey are also much more likely to be interested in receiving services such as notifications of money transfers via their mobile phones than non-business owners (67% vs. 41%).

Figure 6: I have Earned Additional Income with My Mobile Phone

(all respondents)



Additional Research Area #2

Studies into the direct and indirect links between female mobile phone ownership and the economic impact on families can advance the understanding of the benefit a mobile phone can have on women and society.

Women are using the power of mobile phones to make their voices heard and to increase transparency in political processes.

Mobile Phones Enable Women's Voices to be Heard

Women in many low and middle-income countries have historically had a smaller role than men in the political sphere or have been excluded altogether. Mobile phones are now providing women with a mechanism to become active in their communities and nations. Today mobile phones are being used by women to organise, advocate change and participate in politics and community affairs. Mobile phones are also being used to build and strengthen women's support networks outside of their immediate families.

The Zumbido and Women for Women International case studies on pages 24 and 25 illustrate how, from Kosovo to Mexico, mobile phones are empowering women socially and helping them strengthen ties with their communities.

"An example from one of Orascom Telecom's operations demonstrates how mobile technology is used as a tool of social and economic empowerment. In Pakistan, we have implemented the Lady Health Worker (LHW) project in which we provided females in rural areas with a low-cost mobile phone bundled with a pre-paid SIM to help reduce infant mortality rates. LHWs can now communicate with their supervisors, basic and district health units, hospitals and ambulances. This example and the ability of the mobile phone to provide an additional source of income have resulted in the acceptance of mobile phones."

**Naguib Sawiris, Executive Chairman,
Orascom Telecom Holding**

My Project Zain Zain, Saudi Arabia

Through My Project Zain, mobile operator Zain has given women in Saudi Arabia the opportunity to open and successfully manage businesses in the mobile phone industry. For Dr. Aziza H. Al Ahmadi, the originator of this initiative, it was essential to provide women with both the raw materials to launch the business as well as management, business and know-how training and ongoing advice to ensure its continued success. Entrepreneurs such as Gada in Jeddah have thrived in this programme. Gada was able to secure promotional deals with major retail outlets and soon plans to hire three or four additional women to join her team. Gada notes that "before this project, I felt I had some financial problems, but today I work a lot on this project because it has changed my life and increased my family income." Thus far, Zain has helped launch 38 women-owned businesses in Saudi Arabia and it plans to increase that number this year.

Mexico

Mobile Phones Reduce the Distance for People in Need

SHM, Zumbido

Project Zumbido, an mHealth project for HIV/AIDS patients in Mexico, leveraged the anonymity provided by mobile phones to build virtual support groups for those struggling with the social isolation of their disease.

Mobile phones create virtual communities for HIV+ patients

Social isolation can intensify the impacts of any serious medical condition, leading to anxiety, depression or even a failure to follow prescribed medical treatments. Support groups that promote social relationships among patients help counter these negative impacts. Forming and maintaining these groups can be costly and logistically difficult, especially in rural areas and for women that juggle childcare, housework and jobs.

When studying this situation among HIV/AIDS patients in Mexico, SHM, a UK-based consultancy, realised the mobile phone could address these issues. In initial focus groups, SHM found that women tended to suffer more than men from stigma and discrimination associated with their condition and were more reluctant to share their personal stories in face-to-face group settings. The mobile phone was the perfect tool to address these concerns as it provided both an instant and private form of communication and greater accessibility than other media.

To test their assumptions, SHM developed Project Zumbido ("buzz" in Spanish) in 2007 as a three-month pilot in the Mexican state of Jalisco. An initial group of 40 participants was divided into four smaller groups, each with a mix of men and women from urban and rural locations. SHM provided the groups with mobile phones, unlimited text messages and group messaging software that allowed participants to send their individual messages to every member of their pre-defined group.

Even though many of the participants – particularly the women – hadn't used SMS or even a mobile phone before, they quickly grasped the technology. The pilot was particularly empowering for women. One woman from a rural area had felt extremely isolated. She had three children and few friends, and she was from a very conservative town where she had never been able to attend school. Membership

in the group was so important to her that she used an alphabet poster and help from her friends to learn how to write and send text messages. Her group encouraged her both to continue to learn to use the phone and to improve her writing skills. By the end of the project, she had sent an average of 15 text messages per day, more than any other participant.

By the end of the three-month pilot, group members had sent an average of 80,000 text messages per month. SHM clearly proved their concept, as programme participants reported greatly improved emotional states and better compliance with their drug regimens. Many of the women are still using the phones to arrange personal meetings with former group members. The continued use of SMS-based support groups will hinge on them being less costly than physical support groups. However Project Zumbido demonstrates that mobile phones can empower women by reducing the distances between people in need of community. Said one woman, "My group gave me courage to make some decisions in my life."



Kosovo

Rural Women 'Mobile-ise' for a Say in Their Constitution

Women for Women International

Using mobile phones to give women a voice in Kosovo's new constitution.

Women connected by mobile phones make their voices heard

In the heady days after Kosovo declared its independence in February 2008, the fledgling state's leaders began establishing the foundations of a new governing order. Among the many voices clamoring to make their opinion heard, those of rural and marginalised women were perhaps the most frequently underrepresented in the halls of power. So when Women for Women International country director Hamide Latifi saw that a public forum for input into a new constitution included few women, she leapt into action.

Latifi spent days arguing with the constitutional commission that women's interests, and especially those of rural women, needed to be represented. The commission finally relented but gave organisers less than 48 hours to mobilise women in rural areas and transport them to Drenas, where the forum was being held and the constitution drafted. In such a short period, the only method of communication that could accomplish such a task was the mobile phone. Women for Women staff began contacting graduates of their programs on their mobile phones and encouraging them to phone other women in their area. Organisers succeeded in gathering 250 women from around the country to participate in the forum.

The results were dramatic. A number of the women spoke to the group about the need to consider women's issues in drafting the constitution. One of them, Habibe Gerxhaliu, a mother of four whose husband was killed during the war, raised important points about the necessity of having the new Constitution address gender equality and make special provisions for the many women widowed as a result of the war. The constitution approved in April 2008 includes Article 7, which enshrines this equality and guarantees women's participation in all aspects of public life.

Women for Women organisers attribute the success of this effort in part to the role played by mobile phones. Majlinda Mazelliu, deputy director of Women for Women International in Kosovo said "Thanks to the power of the mobile phone, we managed to mobilise 250 women within 48 hours. This was critical, because if we had to go door-to-door, we could have reached maybe only half that number within the time we had."



Mobile Phone Ownership and Usage

Further understanding of the factors that influence who owns or uses a mobile phone is essential to the adoption of any strategy to increase ownership. This section looks at variables that shape the mobile phone landscape and how they affect the way in which phones are used. It also distinguishes between a) women who own mobile phones, b) women who do not own but use mobile phones (borrowers) and c) women who have yet to make use of mobile phones. It identifies the reasons why some women do not yet own or even borrow mobile phones.

Five Key Traits Predict Mobile Phone Ownership

It is important to understand what factors influence ownership in order to increase women's mobile phone ownership rates. A range of factors including demographic traits, attitudes and access to other means of communication all determine a woman's likelihood of owning a mobile phone. Certain demographic factors, however, weigh more heavily than others in mobile phone ownership.

Five specific factors largely dictate women's mobile phone ownership in low and middle-income countries:

- 1 Household income
- 2 Urban/Rural location
- 3 Age
- 4 Occupation
- 5 Education level

Five factors have the greatest influences on women's mobile phone ownership in low and middle-income countries: household income, urban/rural location, age, occupation and education level.

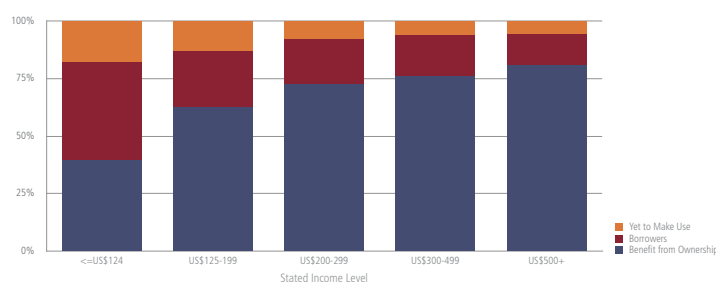
Each one of these five factors has an independent influence on ownership rates. These demographic characteristics are more predictive of women's mobile phone ownership rates than other factors such as the woman's financial and decision-making power or interest in the availability of value-added services.

Income and Location: The Most Important of the Five Factors

The survey results show that regardless of education levels, rural/urban location, occupation and age, every additional US\$100 in monthly household income increases the likelihood of ownership by 13%. Nearly 80% of women surveyed in the highest income brackets own a mobile phone, whereas that figure falls to only 40% for those surveyed in the lowest bracket (Figure 7).

Figure 7: Ownership and Usage by Income Level

(100% equals the total number of respondents)



Whilst income predicts actual ownership, it does not necessarily determine a woman's ability to use a mobile phone. A large proportion of women in low and middle-income countries borrow mobile phones from spouses, other family members or friends. In contrast with ownership, women in lower income brackets are more likely to borrow a mobile phone than wealthier women.

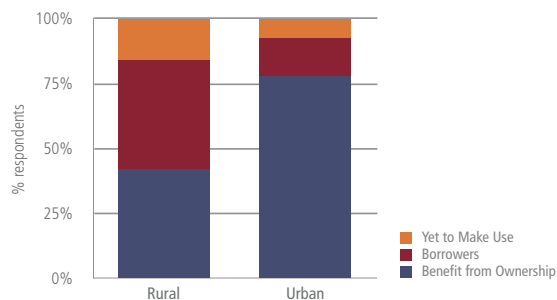
The other major factor in determining ownership is whether a woman lives in an urban area or a rural one (all rural areas included in this survey have mobile coverage). When all other factors (age, income, occupation and education level) are equal, an urban woman is 23% more likely to own a phone than a rural woman. When actual disparities in these variables are figured in, the urban women surveyed are twice as likely to own a phone as rural women (Figure 8).

There are several reasons that could explain the disparity in ownership rates, including service availability and exposure to the technology. Many rural residents receive mobile phone coverage long after their urban counterparts. Mobile phone networks are generally installed first in urban areas,

where people are highly concentrated, electricity is generally reliable and retail outlets exist or are relatively easy to establish. The lag in access to mobile technology in rural areas results in later adoption.

Figure 8: Ownership and Usage by Location

(100% equals the total number of respondents)



Another reason for the disparity in rural/urban mobile phone ownership rates could be the relative lack of exposure to the technology in rural areas. Mobile phones are seen everywhere from downtown Bangkok to Johannesburg and Mexico City. From people talking on their mobile phones in the street to billboards and store fronts promoting them, technology is omnipresent. As one moves out to more rural areas, there is far less evidence of technology. Lack of exposure could lead to less awareness of the mobile phone's features and benefits, resulting in lower adoption.

Women in rural areas and lower income brackets stand to benefit the most from closing the gender gap in mobile communications.

Notably, borrower rates are nearly four times higher in rural areas compared to urban areas. This demonstrates that whilst the gap in ownership rates is large between rural and urban areas, the gap in usage rates is significantly lower.

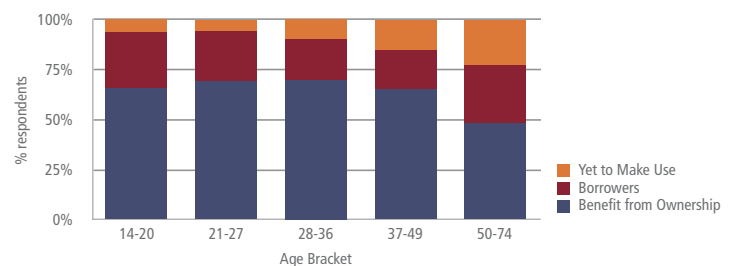
Age: Ownership Peaks in the Late 20s and Early 30s

Owners outnumber borrowers and women who have yet to make use of a mobile phone in all age brackets of this survey. As seen in Figure 9, ownership rates

peak amongst survey respondents aged 28-36 years old. Mobile phone ownership rates are the lowest amongst women over 50 years old.

Figure 9: Ownership and Usage by Age

(100% equals the total number of respondents)



It is clear that the number of women who have yet to make use of the mobile phone increases dramatically with age. Women surveyed between 50 and 74 years of age are less likely to either own or use a mobile phone. By contrast, rates of usage (which encompasses borrowing as well as owning) are highest amongst women surveyed between 14-27 years of age.

The finding suggests that whilst younger women are less likely to own a mobile phone, their high rates of borrowing indicate that they are comfortable using them. Factors other than age, therefore, are preventing these younger women from moving into ownership.

Occupation: Professionals and Business Owners More Likely to Own Mobile Phones

Occupation has a strong influence on mobile phone ownership rates, independent of income, age, location and education level. Unsurprisingly, women working in professional or administrative positions demonstrate the highest levels of mobile phone ownership. Female business owners also demonstrate high levels of mobile phone ownership, based on the need to be in touch with customers and suppliers. Lastly, students register relatively high levels of ownership and usage (borrowing) as well. Students are exposed to different types of technology through their institutions and studies. This exposure and the fact that many of their friends are likely to own a mobile phone will both influence ownership rates.

At the other end of the ownership scale, homemakers, artisans and farmers demonstrate significantly lower levels of ownership. Homemakers, by definition, stay at home more than most other women and may not be aware of all benefits offered by a mobile phone. Interestingly, although women engaged in agriculture own phones at a rate far lower than women in other occupations, their high rate of borrowing indicates that they are frequently able to make use of phones.

Education: A Consistent Correlation

Whilst age and occupation tell a less obvious story about ownership and usage, education tells a more linear one. Without exception, ownership levels rise as a woman's education level increases. The effect is especially dramatic at the extremes, where ownership rates stand at over 90% for women with a college degree, compared to just over 20% for those surveyed with no schooling. Rates of non-use also show a steady increase as education levels decline.

Women Who Borrow or Do Not Use Mobile Phones

To move more women into mobile phone ownership, one must understand the factors that influence ownership as well as *how* women are using mobile phones. Some women access the technology via borrowing rather than ownership. These women could be the next wave of future subscribers.

Women Who Borrow Mobile Phones

Shared usage of new products such as mobile phones and computers is extremely common in low and middle-income countries where consumers are price-sensitive and technology is generally adopted later than in developed markets. In these countries, nearly half a billion adult women (between 14 and 74 years old) who live in areas with mobile network coverage access mobile phones through borrowing. These women, who are referred to as "borrowers" in this report, are the most likely to acquire their own mobile phone in the future, as they have already been exposed to its capabilities and benefits. Understanding their needs and characteristics is crucial to understanding how to unlock this large new subscriber base.

Nearly half a billion women in low and middle-income countries access mobile phones through borrowing, making them the most likely to move into ownership.

There are twice as many borrowers in rural areas as in urban areas. This is due to the lower ownership rates in rural areas but could also be because many rural communities retain a more communal sense of living. Nearly all of the borrowers in the survey reported that they borrowed the mobile phone from only one person, typically a household member. If a woman is married, this person is her spouse; if she is single, she borrows from her parents or siblings. Rarely, if ever, do women pay for these services.

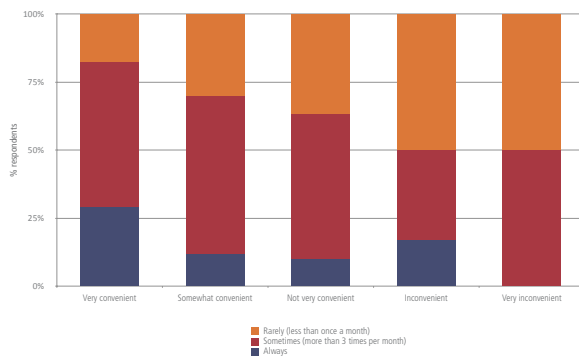
Borrowers do not benefit from the full range of capabilities of the mobile phone. They may miss out on the delivery health, financial and educational services provided via the mobile phone.

Women borrowers in the survey do not perceive that borrowing someone else's phone is inconvenient. Two-thirds of them report that it is very or somewhat convenient. Less than five percent believe it is very inconvenient.

What is interesting is the link between convenience of borrowing and frequency of usage. As Figure 10 shows, there is a strong correlation between how convenient it is to borrow a mobile phone and how much one uses it. Because it is likely more convenient to use a mobile phone if you own one rather than borrow one, borrowers could actually use a mobile phone more than they anticipate if they acquire one. Increased usage would have both social and commercial benefits. Further exploration is required to compare borrowers' predicted versus actual usage once they acquire a mobile phone.

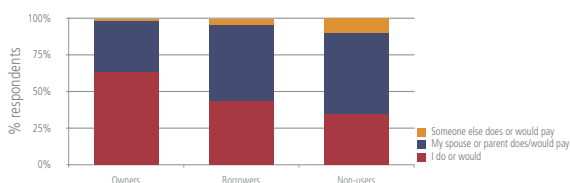
**Figure 10: Convenience and Frequency of Borrowing:
How Convenient Is it for You to Borrow Someone Else's
Mobile Phone?**

(borrowers only)



Borrowers estimate that they would spend less than half of what current owners in the survey report spending per month on a mobile phone service (ARPU or average revenue per user). Part of the reason why borrowers anticipate spending less on mobile services (ARPU) is probably due to the fact that they are less likely to be paying for this service themselves (Figure 11). Almost 60% of them report that a spouse or parent would pay for their mobile phone service. This figure was even higher for women who have yet to make use of a mobile phone. This means that programmes designed to increase women's usage will often need to address men as well as women.

Figure 11: Who Does or Would Pay for Your Mobile Phone Service



Both owners and borrowers tend to receive more calls than they make and very few have ever accessed the Internet via a mobile phone. Where the two types of users differ significantly is on the use of text messaging services. Nearly 80% of all mobile phone owners surveyed reported that they use text messaging services.

Programmes designed to increase women's ownership of mobile phones need to target men as well as women. Spouses or parents are likely to pay for the mobile phone service of new subscribers.

By contrast, less than a quarter of borrowers use text messaging. Borrowers are therefore not benefiting from the full range of services offered from a mobile phone. This discrepancy will become increasingly important as text messages are used to deliver education, health and financial services in low and middle-income countries.

Additional Research Area #3

The development community and mobile industry could conduct research to determine how usage and the perceived value of a mobile phone increases once a woman acquires a mobile phone and how that perceived value changes over time. This will improve the understanding of development and revenue potential for moving these women into ownership.

Women Who Do Not Use Mobile Phones

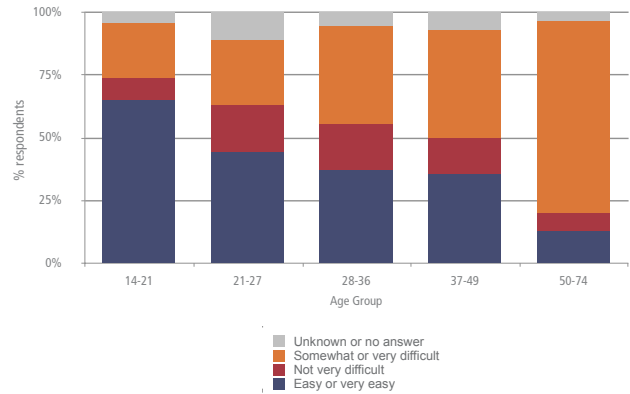
Nearly 270 million women, or 15% of all adult women (between 14 and 74 years old) that live in areas with mobile network coverage, never use a mobile phone. These women are labelled *Yet to Make Use* of mobile phones in this report.

When asked why they have never borrowed a mobile phone, nearly half report that they do not feel a need for one. Some women said this is because their communications circle is local (39% of these respondents). Other women have a landline phone that fulfils their communication needs (15% of these respondents). Another reason for not borrowing a mobile phone is social in nature: women are embarrassed to ask. Establishing a culture of shared ownership could directly address this issue.

A minority of women within this category perceive that mobile phones are difficult to use (Figure 12). This perception increases dramatically with age, and nearly eight out of ten women aged 50 years and above believe that it would be somewhat or very difficult to use a mobile phone.

Figure 12: Perceived Ease of Using a Mobile Phone: How Easy Do You Think it Would be for You to Use a Mobile Phone?

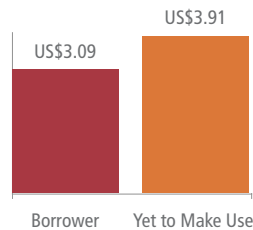
(100% equals all respondents who have yet to make use of a mobile phone)



Female borrowers may be the next wave of subscribers, but women who have yet to make use of mobile phones estimate that they would spend more per month on a mobile service (Figure 13). This suggests that current non-users place a high value on mobile phone services.

Figure 13: Estimated Monthly ARPU (Average)

(respondents that borrow and have yet to make use of mobile phones)



Nearly two-thirds of women who have not used mobile phones report that they do not have immediate plans to purchase a mobile phone. Yet one-third of these women noted that their use of mobile phone services could be accelerated if the handset were provided at a discount or even for free. Because there is little correlation between initial handset price and ARPU, facilitating the initial purchase of a low-cost handset is a good way for operators to generate service revenues that pay off in the long term.

Facilitating the initial purchase of a low-cost handset is a good way for operators to generate service revenues that pay off in the long term.

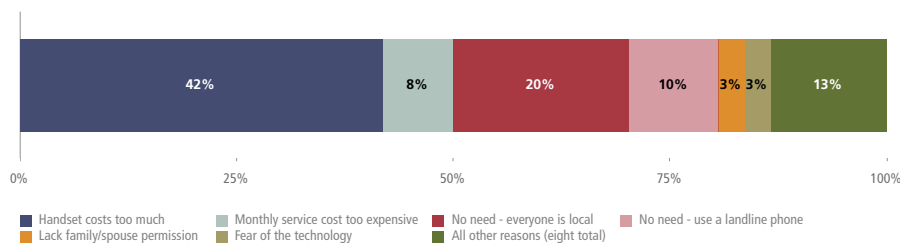


Barriers to Mobile Phone Ownership

Though a number of factors are at play, as shown in Figure 14, the price of handsets and service and the perceived lack of need for a mobile phone are the most prominent barriers to mobile phone ownership. For a few women, generally younger ones, permission by care taker plays a role, and for others, generally more mature women, fear of the technology inhibits their usage.

Figure 14: What Are the Top Reasons Why You Do Not Own a Mobile Phone

(respondents that do not benefit from mobile phone ownership)



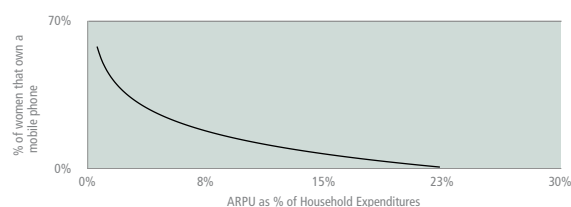
Cost of Handsets Still a Stumbling Block

Despite the proliferation of low-cost handsets, priced at US\$20 in some low and middle-income countries, the initial cash outlay for buying a handset is the most commonly cited barrier to owning a mobile phone by women in the survey. Even those who borrow phones and have relatively high incomes cite the cost of handsets as the main barrier to mobile phone ownership.

The cost of a mobile phone service is also an obstacle to ownership. This finding bolsters the case that affordability, or the relationship between incomes and the cost of service, is critical to increasing the number of women who benefit from mobile phones.

How is affordability defined for women in low and middle-income countries? The curve in Figure 15 was developed from the consumer survey and represents an estimated demand curve. This curve demonstrates that when the price of a mobile phone service is less than 5% of household expenditures, ownership levels amongst the female population begin to increase dramatically.

Figure 15: Percent of Women who Own Mobile Phones vs. ARPU as % of Household Expenditure



Perceived Lack of Need is a Barrier

Aside from cost, the perceived lack of need for a mobile phone was the second most commonly given reason for not owning or borrowing. The women who cite “no need” as a reason for not owning a mobile phone generally have access to a landline phone or live in close proximity to everyone with whom they wish to communicate. This reason was commonly cited by homemakers and female farmers.

There are indications that a lack of knowledge about the full range of benefits of mobile phones is the largest barrier for many of these women. One third of women who report not needing a mobile phone because they have a local social circle admit that they fear the technology. The fear is based on concerns with the level of literacy (basic or technical) required to use the device. Educational programmes and simple product design are both strategies that address this concern. A pilot programme in Senegal run by the NGO Tostan and supported by UNICEF (see case study on page 32) provides an example of how women can learn how to use mobile phones whilst improving their literacy and becoming change agents in their community.

For women who own or have access to landline phones, changing the perception of “no need” can hinge on introducing innovative services that bring value to the customer, beyond basic communications. Positioning the mobile phone as a productivity tool or a health or educational resource is likely to have more impact than lowering prices or increasing financing options for the women.

Senegal Building Literacy, Building Leaders Tostan/UNICEF, Jokko Initiative

Tostan and UNICEF launch the Jokko Initiative, which uses SMS technology to reinforce women's literacy skills and build their confidence as social change agents.

Creating demand for mobile phones by demonstrating their benefits

Family and community are at the centre of life in rural Senegal. In the past, limited literacy and inadequate technology have made it difficult for women to be leaders in civic life, but the NGO Tostan and UNICEF have teamed up for a project in Senegal that is tackling these challenges and allowing women to be a force for social change in their communities.

The Jokko Initiative (Jokko means "communication" in Wolof, one of Senegal's national languages) is a two-year pilot programme that trains participants of Tostan's non-formal education program on using mobile phones. Part of Jokko is a community forum tied to Tostan's literacy and maths programme. One of its unique features is users' ability to send an SMS message to a central server, where it is then sent out to an entire community of other users.

Community members can send out messages on a range of topics of interest to the community, including vital events like births or deaths, service announcements and even poems. Many of the messages pertain to local events organised by women in the groups, and some deal with income-generating activities, allowing women to promote their goods to other participants. The program reinforces the literacy skills of women who often have little access to written material and whose reading and writing skills might otherwise lapse. But it also allows women, who comprise 80% of Tostan's participants, to organise themselves to effect change, by allowing the diffusion of ideas widely and cheaply. Organisers hope that this tool will connect women and girls across broader communities to create advocacy and support networks for decisions pertaining to girls' health and well-being, such as promoting girls' education, delaying marriage and abandoning female genital cutting.



One of the most powerful lessons from this project has been the use of local references to teach people how to use the phone. In community sessions, trainers used the visual of a mango tree to help users understand the idea of a phone menu and the transmission of their messages to members of the wider community.

Tostan and UNICEF hope to have over 200 villages using the platform in a year. Despite being in its early stages, positive results are already evident. Guillaume Debar of Tostan says that women, especially older women, are proud of their ability to use the phones and serve as an example to their daughters and granddaughters. Women who may not otherwise have been aware of the various benefits of using mobile phones now want to use them, which illustrates the fact that demand for mobile phones can be created through demonstrations of their many benefits to a community.

Women's Mobile Phone Ownership

The previous sections provide a clear picture of the scale of the opportunity involved in closing the gender gap and extending the benefits of mobile phone ownership to all women. To gain a richer perspective on *how* to achieve these goals, it is essential to have a deeper understanding of the female population. Examining specific demographic groups and usage patterns provides richer insights on how different women use mobile phones. It allows for the identification of ownership barriers affecting different groups of women, which can help lead to potential solutions for overcoming them.

Five Demographic Groups of Particular Interest

This section looks at five major demographic groups of women, each of which was identified through a statistical analysis of relevant demographic and behavioural characteristics. The demographic groups are defined below and outlined in Figure 16:

- *Women at the base of the pyramid (BOP)* includes all women whose household incomes are below US\$75 per month, and includes all occupations, education levels, ages and professions included in this survey

- *Rural women at work* includes any woman who resides in rural areas, is between 14 and 74 years of age, lives in a household with an income level of between US\$75 and US\$500 per month and who is *not* a homemaker
- *Women in the home* includes all women who are homemakers between the ages of 21 and 74 years of age, reside in urban *or* rural areas and live in a household with an income level of between US\$75 and US\$1,000 per month
- *Women at school* includes all women who are students between the ages of 14 and 27 years of age, reside in urban areas and live in a household with an income level of between US\$75 and US\$500 per month
- *Career women* includes women who classify themselves as professionals, reside in urban areas, are between 21 and 49 years of age and live in a household with an income level of between US\$200 and US\$750 per month.

'Understanding women's usage patterns is essential before you can look at strategies to increase the uptake.'

Claire Thwaites,
mobile communications policy expert

Figure 16: Overview of Pertinent Demographic Groups

	Women at the BOP	Rural Women at Work	Women in the Home	Women at School	Career Women
Description	14-74 years old - Urban and Rural 26% own a mobile phone	14-74 years old - Rural 57% own a mobile phone	21-74 years old - Urban and Rural 61% own a mobile phone	21-27 years old - Urban - Nearly 90% own a mobile phone	21-49 years old - Urban 97% own a mobile phone
Key Usage Figures (Owners)	- ARPU/month: US\$5.43 - SMS sent/month: 18 % who pay for own service: 54%	- ARPU/month: US\$6.45 - SMS sent/month: 67 % who pay for own service: 77%	- ARPU/month: US\$6.44 - SMS sent/month: 28 % who pay for own service: 45%	- ARPU/month: US\$8.57 - SMS sent/month: 145 % who pay for own service: 51%	- ARPU/month: US\$12.86 - SMS sent/month: 59 % who pay for own service: 98%
Distinguishing Characteristics	- Though ownership rates are low, more than half of these women have exposure to mobile phones through borrowing - More than a third express concern about being able to use the technology	- Use of phone to find employment is 70% higher than average - Greatest investment: nearly 35% say that they have reduced spending in other areas to pay for mobile phone, suggesting high perceived value	- Largest and most diverse segment - Many say they don't need a mobile phone because they are connected locally or via landline - Younger, wealthier homemakers more likely to own	- Heavy users: Students spend 10% more than the average woman on mobile services, or 11% more than average as a percent of their household income - Expensive handsets: Students invest heavily in handsets	- Coverage slightly more important than price or convenience - Two-thirds have used their phone to find employment - ARPU higher than any other group

*Excludes homemakers

Ownership Rates by Demographic Group

Figures 17 and 18 compare ownership rates and ARPU of the five demographic groups that are explored further in this section. These figures indicate that there are major differences in the ownership and usage patterns of the various groups. The case study shows an example of an operator who used differentiated calling rates to attract new mobile phone owners and value added services to increase usage by existing ones.

Figure 17: Percent of Women who Benefit from Mobile Phone Ownership by Demographic Group
(100% equals all respondents in the specific segment)

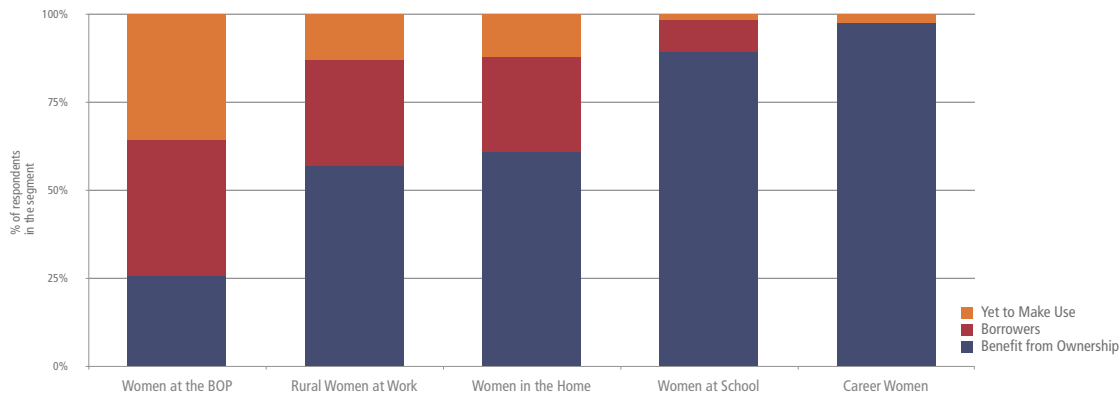
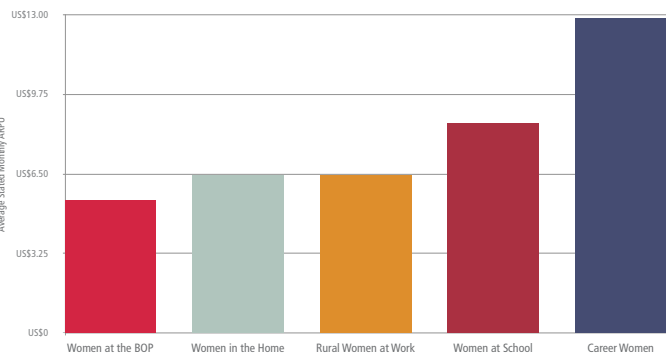


Figure 18: Average Stated Monthly ARPU by Demographic Group
(Respondents that own a mobile phone)



Bangladesh Speaking to Women's Hopes and Needs Banglalink, Ladies First

To motivate adoption of mobile telephony and build a foundation of trust, Banglalink launched Ladies First, a product that offered a comprehensive package of services to three distinct segments of women consumers and was promoted with a culturally-sensitive marketing communications plan.

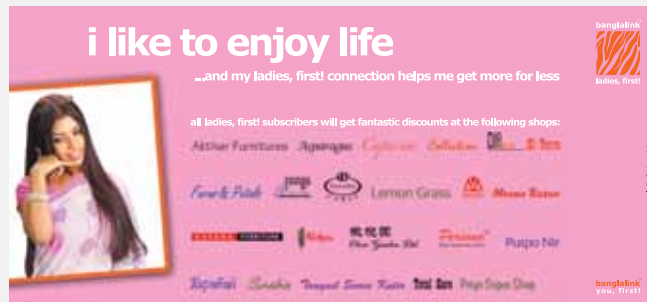
Culturally sensitive marketing builds a connection of trust

Banglalink launched in 2005 with a mission to make mobile telephony more accessible and affordable for the masses. But Bangladesh is a fiercely competitive market with wide cultural differences between urban and rural areas, men and women, and even among women from differing socio-economic conditions.

To differentiate themselves in this competitive environment, the company developed a broad segmentation strategy that included a focus on women, a previously underserved segment. In a market abundant with male-oriented marketing strategies, Banglalink believed that promotions for women would help them stand out from their competition.

The company conducted extensive market research and identified three distinct consumer segments among Bangladeshi women — college students, working women and homemakers — each with their own communication needs and lifestyle choices. The research also helped guide the company's marketing messages by revealing that women responded favorably to seeing portrayals of themselves in aspirational, rather than stereotypical, roles.

The company launched its pioneering Ladies First product in late 2005, offering pre-paid connection with special call rates as well as customised value-added services, such as store discounts and information services (e.g., cooking and first aid tips) accessible via short message codes, relevant for each segment's lifestyle needs. Marketing campaigns for each segment showed positive and empowered depictions of women. Banglalink kept the Ladies First brand visible through ongoing sponsorship of women-oriented events like International Women's Day.



Banglalink customers have shown tremendous support for the Ladies First promotion. Based on this success, Banglalink continues to prominently feature positive depictions of women in their marketing communications, and the Ladies First service has also been "exported" to Mobilink, Banglalink's sister company in Pakistan. Promotions aimed at other segments of their diverse population have taught the same lesson: all successful promotions begin by understanding the cultural differences and communication needs of the target audience.

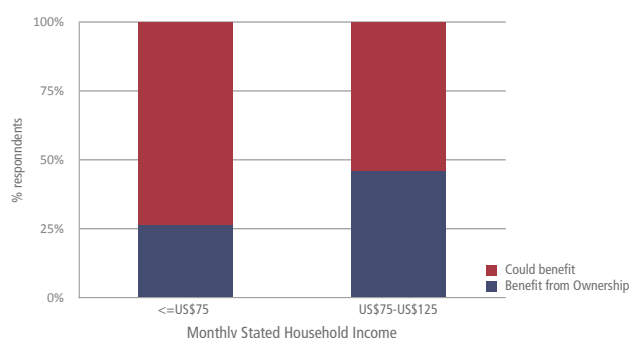
Women at the Base of the Pyramid (BOP): The Final Frontier

Women with the lowest incomes are typically some of the last to benefit from advancements in technology. This holds true for mobile phones. Women with household incomes below US\$75 per month comprise the lowest-income group in the survey. Unsurprisingly, their ownership rates are far lower than those of other demographic groups. As shown in Figure 19, just one-quarter of the lowest-income women own a mobile phone, compared to nearly half of women in the next income bracket, who earn US\$75-125 per month.

The vast majority of *Women at the BOP* reside in rural areas, are not employed and did not attend secondary school. Those that are employed tend to work in agriculture and service industries, e.g. – seamstresses or street vendors.

Figure 19: Percent of Women in the Lowest Income Brackets who Benefit from Mobile Phone Ownership

(all respondents with a household income of ≤US\$125 per month)



BOP in the study was defined as Socio Economic Classification (SEC) groups D and E. Samarajiva, Rohan., Zainudeen, Zainab., Iqbal, Tahani. and Ratnadiwakara, Dimuthu. "Who's Got the Phone? The Gendered Use of Telephones at the Bottom of the Pyramid" Paper presented at the annual meeting of the International Communication Association, TBA, Montreal, Quebec, Canada, May 21, 2008.

Women in this income bracket who own mobile phones tend to purchase the phones themselves and acquire them primarily to stay connected with friends and family members. More than half of the women pay for their own mobile phone service and acquire phone cards at retail outlets. On average, they spend almost 10% of their monthly household income on their mobile phone service.

Despite low mobile phone ownership rates amongst the women in this income bracket, a large number already make use of this tool. More than half of the women in this income bracket report that they

borrow mobile phones. A small percent are heavy users, borrowing daily, with the majority using the phone only a few times a month. These women perceive borrowing as convenient because they tend to borrow from immediate household members, i.e., spouses, parents or siblings.

Additional Research Area #4

Studies conducted by LIRNEasia in South and East Asian countries find few differences in the frequency, average length and purpose of mobile phone calls by men and women at the BOP. In Pakistan there are actually significant differences in male and female usage patterns. The authors assume these differences are due to cultural and societal norms in Pakistan. Further investigation into the differences between male and female usage patterns can be useful in challenging pre-existing assumptions about male and female usage patterns and ARPU rates.

Of the women who have yet to make use of the phone in this income group, more than one-third express concerns with the complexity of the technology or the level of literacy required to use the device.

Basic needs are also a primary concern for women in this lowest income bracket. More than 80% noted that if given a gift of US\$20, they would spend it on basic needs such as food, clothing and medicine.

Yet these women and their families are investing in relatively expensive consumer goods. Nearly nine in ten of the women in this income group have a television at home and four in ten own a stove, refrigerator and/or radio. The presence of these consumer goods demonstrates the ability of members of these households to secure significant funds if the perceived need is great enough. This means that low-income women who do not benefit from ownership are likely to view mobile phones as a necessity before they will be willing to invest in them.

Of the women who have yet to make use of the phone in *Women at the BOP* group, more than one-third express concerns with the complexity of the technology or the level of literacy required to use the device. The Ugandan organisation WOUNET (see case study on page 37) is addressing unfamiliarity with mobile phones by introducing them in shared usage situations and in combination with more traditional media such as radios.

Uganda

Mobile Phones Amplify Traditional Communications in Rural Uganda

WOUGNET

The Women of Uganda Network introduces mobile phones to supplement traditional methods of communicating information to women about agriculture.

**Combining mobile phones with traditional information channels
boosts the effectiveness of both**

In the northern areas of Uganda, agriculture remains the primary activity of nearly all inhabitants, and women have long been the backbone of the agricultural sector. But long delays in transmitting needed information about agricultural and market conditions have often held back the economic potential of the region and limited women's ability to provide for themselves and their families.

The Women of Uganda Network was formed in 2000 by several women's groups in the country with the goal of leveraging the power of information and communications technology (ICT) to disseminate information more quickly and accurately. In 2005, WOUGNET began working with twelve rural women farmers' groups in the Apac district on an initiative that uses mobile phones to extend the reach and effectiveness of more traditional information channels. Each of twelve groups in the district was equipped with a mobile phone and a radio cassette player, which would allow women to participate in a popular local agricultural radio show, communicate with agricultural extension workers and share information with each other. The initiative is supported by the Technical Centre for Agricultural and Rural Cooperation ACP EU (CTA) and Hivos.

The use of SMS messaging was a critical part of the programme. While the women's groups were provided with free airtime for the first six months, they were responsible for covering airtime costs after this period. Voice calling rates remain high in Uganda, so WOUGNET trained the women on how to use lower-cost SMS to ask questions of local agricultural organisations and extension workers. Information on farming techniques and practices is also sent out in SMS form to the groups in Luo, the local language, and is then further disseminated by word of mouth, which helps overcome the barrier posed by illiteracy. Also essential to the programme's success was the stipulation that phones remain in the custody of a designated woman in each of the groups, which prevents their unauthorised use and promotes ownership of ICTs by women.

Since the beginning of the programme, the groups have grown and prospered. One of them, formed in 2006, has increased its goat herd from six to 40 and branched out into honey production and sunflower cultivation. The groups have also been able to earn income by charging members and non-members for unrelated phone calls and battery charging. The men in these areas have been generally supportive due to the extra income the programme provides.

Dorothy Okello, WOUGNET's Coordinator, thinks that the initiative has worked because the mobile phones were used to complement communication channels, such as radio shows and extension workers, with which the women already felt comfortable. She said: "The mobile phones we introduced had to complement, not replace, other modes of communication. People were already used to the radio because it was the primary way of getting information when mobile phones were used mostly by men or thought of as devices for socialising."

But women have continued to pay for airtime even after the end of the subsidy because of the value demonstrated in transmitting information. The project demonstrates that finding a way to marry mobile technology to existing practices can reap a bumper crop of benefits.



Rural Women at Work: Demand Restrained by Income

Rural women who work outside the home form one of the most interesting demographic groups in the survey. Their ownership and ARPU levels are comparable to those of homemakers and slightly below the average for the survey.

More than a third of rural women working outside the home who own mobile phones say that they have reduced other expenditure to pay for their mobile service. This is 70% higher than the comparable statistic for women as a whole (Figure 20). These women are also more likely than either students or homemakers to pay for mobile service themselves. This suggests greater control over the choices they make regarding usage and choice of operator. Whilst ARPU is lower for rural women working outside the home than it is for groups such as students or professionals, ARPU as a percentage of household income is higher for this demographic group. This level of investment in mobile services demonstrates that rural women place greater relative value on mobile services than urban women working outside the home do.

for farmers, a subset of rural women working outside the home. Farmers' ARPU as a share of income is 37% higher than average. Farmers use mobile phones to improve their farming practises and maximise the sale of their goods. Their level of spending suggests they value mobile phones immensely.

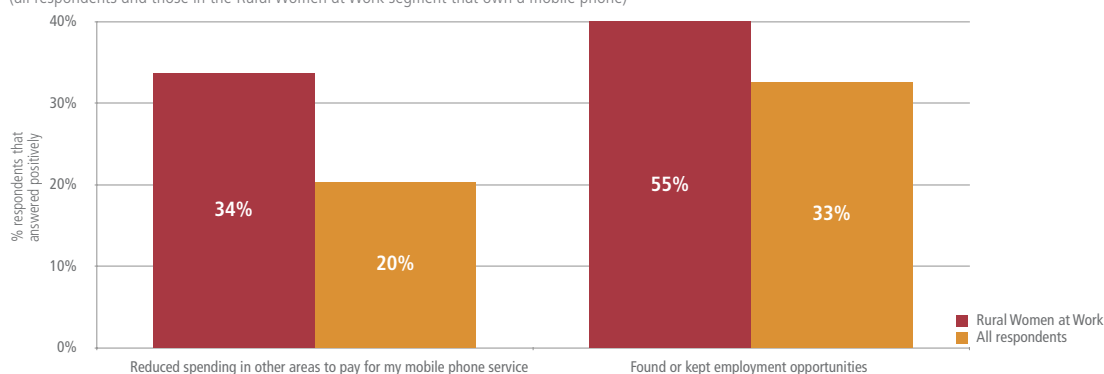
Move more rural women into ownership by demonstrating that mobile phones are tools that can improve their standard of living.

Whilst mobile phone ownership levels and ARPU for rural women working outside the home trail those of other demographic groups, the responses indicate that rural women who do own mobile phones value them highly (Figure 21), a fact illustrated by the way the women of the Self Employed Women's Association (SEWA) in India are using phones to improve their standard of living (see case study on page 39).

It is critical to demonstrate to rural women that mobile phones are tools that can improve their standard of living to move more of them into ownership.

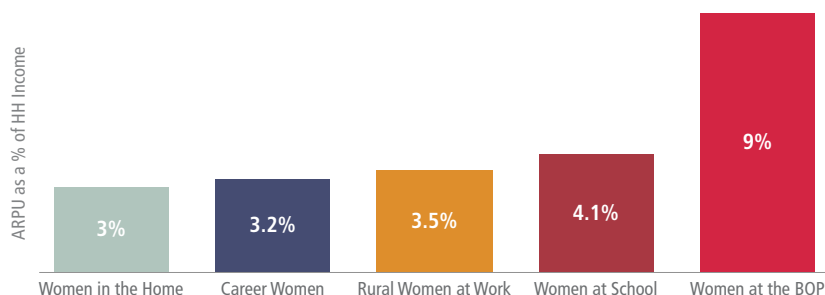
Figure 20: Because of My Mobile Phone, I Have...

(all respondents and those in the Rural Women at Work segment that own a mobile phone)



Other findings indicate that rural women working outside the home are using their mobile phones to improve their standard of living. The percentage of rural women working outside the home that have found employment or generated additional income as a result of owning a mobile phone is about a third higher than it is for the other demographic groups. This number is particularly striking

Figure 21: Stated Monthly ARPU as a % of household (HH) Income



India Raising the Incomes of Agricultural Workers by Raising Awareness SEWA

The Self Employed Women's Association of India discovers that women will invest in the information that mobile phones can deliver if it raises their incomes and improves their lives.

Profiting from investments in information

In the information age, knowledge equals power and, increasingly, profit. While money is often scarce for the millions of Indian women who make their living in the informal sector, a leading women's organisation is learning that women will invest in information provided through mobile phones if it improves their livelihoods.

The Self Employed Women's Association (SEWA) is a trade union comprised of more than 1.1 million women members in India (about 600,000 in Gujarat state) who work in the informal sector. One of SEWA's objectives is to achieve "livelihood security" for its members, which it defines as having work, income, food and social security. Enhancing women's bargaining position is one of the mechanisms it employs to achieve these goals. The mobile phone is an excellent tool for achieving these objectives, and a survey in Gujarat state revealed that nearly one-third (about 177,000) of SEWA members owned mobile phones.

The agricultural sector provides a powerful demonstration of how information delivered using mobiles can increase women's incomes. Each day, SEWA sends agricultural workers SMS messages with up-to-date spot and future commodity prices for each market so they can determine when and where to get the best price for their produce. This also enhances the women's ability to do both crop planning and make informed harvesting decisions. For women that do not have a mobile phone, a SEWA member posts the prices on a PC-based "notice board" in the village. Women have not only been able to increase their incomes, but they have also saved money by not having to travel in order to get the latest market prices. Similarly, workers on the salt pans use mobiles to get the latest market information and decide their selling strategy on this basis.

SEWA is also pilot-testing a cell phone-based management system, which uses an interactive voice response (IVR) system rather than SMS, since not all of its members are language or technology-literate. In addition to commodity prices, this system also provides members with information on SEWA-administered microloans. The results of the pilot test are impressive, with 20,000 women having used this system. "We were surprised at how much poor, rural women were hungry for communication and information," said Reema Nanavaty, Director, Economic & Rural Development of SEWA.

Even with the extremely competitive mobile phone rates in India, a phone call or SMS message is a significant investment for SEWA members. These women are making the investment because they recognise that their livelihoods, and the lives of their families, will improve as a result of the information they obtain from their mobile phone. These women's experiences demonstrate that opening the door to increased income will open the door to increased mobile phone adoption and usage.



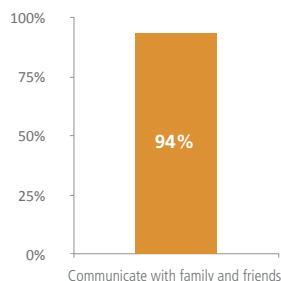
Women in the Home: The Largest and Most Diverse Group

The largest group in the survey consists of homemakers. This demographic group represents nearly half of all of the survey respondents and constitutes a significant and diverse proportion of the mobile phone market. The opportunity in this demographic group is to bring the benefits of mobile phone ownership to nearly 40% of the homemakers currently without them. To do so, one must understand and devise strategies tailored to their unique needs and wants.

Homemakers in the survey are fairly average in their ownership levels and attitudes. But when reviewing their mobile phone usage, they appear unique. They are the least likely to pay for their mobile service themselves, and nearly one-third received their mobile phones as a gift from their spouses. The main purpose of the gift was to ensure that the women could stay connected with family and friends (Figure 22).

Figure 22: My Spouse Gave Me a Mobile Phone to...

(100% equals all homemakers that received the phone as a gift from their spouses)

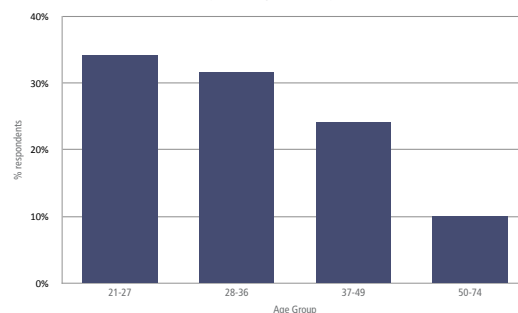


Homemakers are more likely than the average woman to say that they do not need a phone either because everyone with whom they need to communicate is local or because they have a landline. And they are less likely to say they have cut back on other expenditure in order to have a mobile phone. All of the findings indicate that many homemakers do not yet see the value of owning a mobile phone.

Upon further investigation into the homemaker demographic group, a more nuanced picture emerges, especially as with regards to the feelings homemakers associate with mobile phone ownership. Age impacts how homemakers view a mobile phone. Younger homemakers are more likely to say that owning a mobile phone makes them feel independent. On the other hand, a higher percentage of young homemakers say that a family member would object to them owning a phone (Figure 23).

Figure 23: Would Anyone in Your Family Object to You Having Your Own Mobile Phone?

(all homemakers that answered positively to this question)



More mature homemakers, meanwhile, are more likely to say that they do not own a mobile phone because they are afraid of either technology in general or of the interface of mobile phones. Income levels also play a role in the benefits Women in the Home perceive from mobile phone ownership. More affluent women are likely to say that mobile phones make them feel safer or more secure, and homemakers with more education say that mobile phone ownership makes them feel more independent.

Appealing to feelings of *safety, connection and modernity*, and positioning the mobile phone as more than a communication tool are two strategies to increase ownership amongst homemakers.

For the homemakers that have yet to acquire mobile phones, appealing to specific feelings will be compelling. Spouses also play a role in the acquisition and usage of the technology and will need to understand the value of the phone for their wives and families. Lastly, there is potential to position the mobile phone as more than a communication tool to capture the imaginations of women who either already have landline phones or communicate in relatively local circles. The case study on page 41 shows how multinational operator MTN is creating campaigns that address the unique needs of homemakers in its different markets.

Additional Research Area #5

Understanding the benefits of mobile phones in the local context can help with the development of culturally-sensitive campaigns and programmes targeting women.

Africa, Middle East and Central Asia **Thinking Globally and Acting Locally** MTN, Her&Home

Multi-national operator MTN Group developed a global segmentation framework that could be customised to each of its markets in order to address its diverse customer base. The company's regional subsidiaries then used this framework to roll out locally-tailored promotional programmes for women identified as belonging to the Her & Home segment.

Developing solutions that address the diversity of women's communications needs drives revenue and subscriber growth

MTN Group provides mobile phone services to more than 108 million subscribers in Africa and the Middle East through a network of subsidiaries in 21 countries. With such a varied marketplace, the company recognised the need for a global segmentation framework that would provide a better understanding of its customer base and could be applied across all the areas they serve.

Through a mix of qualitative and quantitative research, the company developed a framework identifying six unique segments common across all of its markets. The research identified stay-at-home women as an underserved market and one with high potential for new subscriptions and increased usage.

The global segmentation model also included key value propositions and guidelines for each of the six segments as they relate to key business issues such as pricing, products, sales and distribution, communications and more. It is up to each of the regional subsidiaries to prioritise the segments and bring these value propositions to life.

For example, MTN Afghanistan has set up women-only retail stores, run by women for women. This female-only retail environment was key to achieving success in the female market segments in this country, where cultural norms strongly discourage contact between unrelated men and women. In Liberia, meanwhile, the MTN operator

recognised that women in the Her&Home segment need regular contact with a small circle of family and friends. Therefore, new tariff plans were developed aimed specifically at this segment which would offer discounted calling during relevant times of day and preferential rates for a select group of mobile numbers. The communications were also specifically designed to appeal to this segment need – a need to be “closer.”

Through its research and market segmentation strategies, MTN is reaching stay-at-home women in unique ways in each market it serves. In addition to driving revenue opportunities and subscriber growth, the company believes its focus on the women's market is a crucial element in building its brand as a socially progressive company.



Free to be closer
Connect with friends
and family.



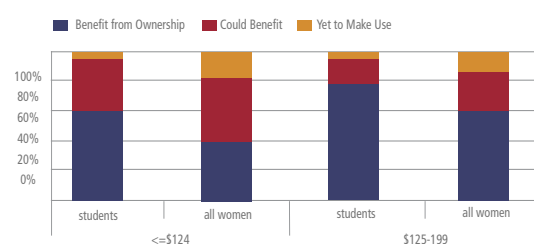
Women at School: Heavy SMS Users and a Willingness to Spend

Students stand out as a demographic group for several reasons. Their ownership and usage rates exceed the average of other women in all but the highest income bracket (Figure 24). Students spend more on their handsets as a percentage of income than any other demographic group. Their ARPU also exceeds that of other women by more than 10%.

The main reason that the ARPU of students is above average is their heavy use of SMS messaging. Whilst the call volume for students is near or even slightly below that of the average, as demonstrated in Figure 25, female students send nearly three times as many text messages as the average female mobile phone owner. This heavy use of SMS makes female students good candidates for social programmes that involve SMS, as the Malaysian operator Maxis has demonstrated with its Her Maxis service offering (see case study on page 43 and for mobile services delivered via text message).

Figure 24: Mobile Phone Ownership by Stated Household Income: Students and All Respondents

(100% equals all students or all respondents in the survey)



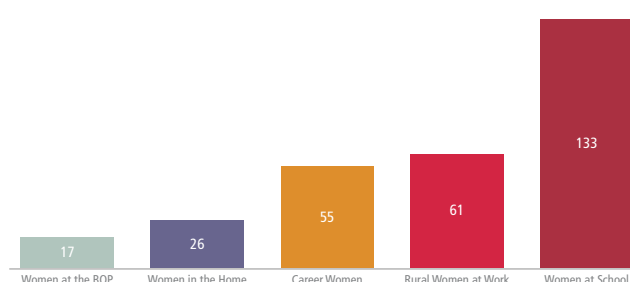
Some of these characteristics can be attributed to the fact that students overwhelmingly belong to the two youngest age brackets and reside in urban areas, where mobile phone use is highest. However, barriers remain for student ownership and use. About 37% of students who do not own a mobile phone cite the cost of either the handset or monthly service as a reason. And 23% say they have no need because of access to a landline or a social circle that is mostly local.

Female students are good candidates for SMS-based social programmes and services.

Cultural issues are also a factor. Around 39% of students who do not own a mobile phone say that the primary reason is because a family member would object to them doing so. In addition, only around half of students pay for their own service, meaning a parent or spouse exercise some level of control of their usage habits as well.

Figure 25: Number of SMS Messages Sent per Month

(Mobile Owners Only)



Malaysia Making the Mobile the Indispensable Lifestyle Device Maxis

Malaysian mobile operator Maxis has reaped success by teaming with content providers to deliver information that women can use in their daily lives.

Delivering bite-sized content relevant to women's lives can be key to stimulating uptake of value-added services

While poorer low and middle-income countries continue to add female mobile subscribers, wealthier nations such as Malaysia have not only succeeded in reaching nearly 100% penetration in its population, but in closing the gender gap in mobile ownership. This means that Malaysia's major mobile carriers can no longer rely on a growing subscriber base to fuel growth in revenues and profits.

With so much of the population using mobile phones, mobiles have moved from being merely communication tools to all-around "lifestyle devices." Maxis, Malaysia's largest mobile operator by market share, anticipated this shift several years ago and began adopting a segmentation strategy that would increase ARPU by enticing customers to use more value-added services. To address the important female market, in 2006 the company created Her Maxis, a mobile portal offering lifestyle content relevant to women. The lessons the company has learned from its experience with Her Maxis have shed light on how to deliver content that women, as well as other segments, are willing to spend money on.

Her Maxis lets women access content that appeals to their lifestyle in a number of different areas. In addition to diversions such as jokes, horoscopes, games and a service that notifies women of hot shopping deals, Her Maxis offers useful content in areas such as health and beauty, fashion and relationships. This appeals especially to teenage girls and women in their early twenties, who are the heaviest users of mobile portals in Malaysia.

Early on, Maxis used a generic content provider to supply this information, but the carrier shifted strategy and soon began partnering with two prominent women's magazines, *Female* and *Seventeen*.

According to Kee Saik Meng of Maxis, "we realized that magazines are authorities on lifestyles for different segments, including women. By partnering we could offer fresh content to our subscribers, and the magazines could reach women without access to the physical magazine, so this was a good fit for them too."

Providing relevant content requires understanding what different women find useful in their everyday life. Older women are interested in different content than teenagers, so Maxis is working to develop content such as tips for working women and video recipes. Delivering bite-size batches of information is critical, in part because large downloads can be time-consuming and might be interrupted. With about 50,000 users and a projected 100% annual growth rate over the next few years, Her Maxis has become an important and growing offering for Maxis. Its success indicates that delivering convenient information in a format women can use is a good path toward making mobiles the indispensable device in women's lives.



Career Women: Using Mobile Phones to Create Opportunities

Although they are the smallest of the demographic groups reviewed, nearly all professional women own a mobile phone and they spend much more than the average woman. These women view their mobile phones as indispensable tools for success rather than simply devices for keeping in touch with friends and family.

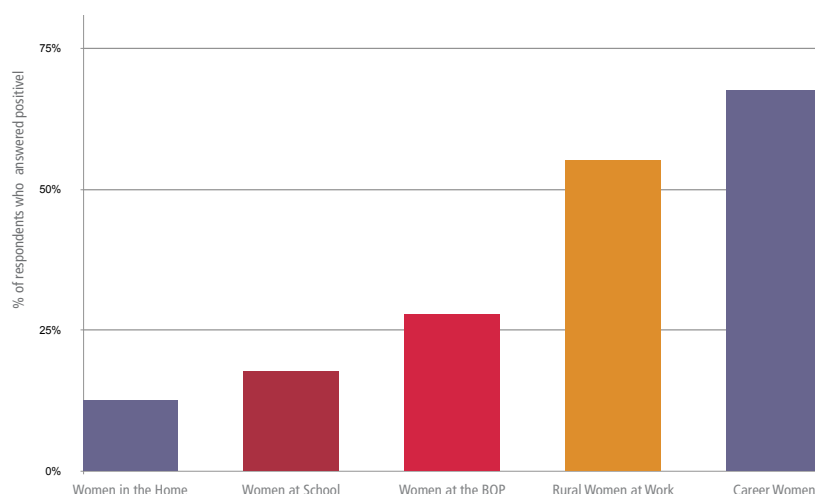
Professional women's ARPU, at nearly US\$13 per month, is by far the highest amongst the demographic groups represented in the survey. It is nearly 50% higher than the ARPU reported by students and approximately double that of homemakers and rural women working outside the home. Professionals also rank near the top in the price they pay for handsets and in the number of calls that they make each month. A full 98% of women in this demographic group pay for their mobile service themselves, meaning they are likely to have control over which operator they choose and the amount of money they spend.

In addition, as shown in Figure 26, two-thirds of professional women who own a mobile phone say that they have used their phone to find employment, more than double the proportion for other demographic groups. Professional women also say that their mobile operator's coverage is very important to them and that price is not the most important consideration in their decision when selecting an operator. These two traits differentiate them from other demographic groups.

The findings highlight that the majority of professional women view the mobile phone as an economic necessity and use it heavily. Given their appealing attributes, capturing and retaining professional women will be critical for operators in terms of future growth and profitability. The characteristics of professional women provide a glimpse into the profile of female mobile phone owners in the future as educational and professional opportunities for women expand.

Figure 26: I Have Found Employment Opportunities or Customers Because of My Mobile Phone

(Respondents that own a mobile phone)



Value-added Services for Mobile Phone Owners Telenor Pakistan

One value-added service which is popular among Telenor Pakistan's female subscribers is cooking recipes. Ten to eleven thousand subscribers dial into an interactive voice response (IVR) system per day to listen to new recipes. Approximately 30% of callers are repeat users. The service is moderately priced and is targeted towards homemakers. However, the service is useful for other demographic groups such as working women trying their hands at cooking as well. Usman Javaid, Director Marketing at Telenor Pakistan believes that demographic group specific VAS will have an increasingly important role in driving the growth of mobile sector, in years to come.

A Geographic Perspective on Women and Mobile Phones

Surveys of women from four low and middle-income countries representing different regions and cultures – Bolivia, Egypt, India and Kenya – informed the findings in this report. Whilst aggregated survey results were used to inform overall conclusions, there are some interesting differences in the demographic and cultural context shaping women's mobile phone usage in each of the countries. Highlighted in this section are some of the unique patterns for women's mobile phone usage evident in the local environments. Note: sources for GDP, population and mobile phone penetration data are contained in the endnotes.

Bolivia



2009 GDP per capita	US\$1,716
Population	9.9 million
Adjusted mobile penetration	42%
Female mobile penetration	38%
Male mobile penetration	47%
Mobile gender gap	19%

Changing female roles underscore ownership patterns in the urban-dominant environment

Bolivia is the most urbanised country included in the study, with 66% of its population residing in urban areas. A large urban population is characteristic of other countries in the Latin America & Caribbean region. The mobile phone gender gap was found to be the lowest in Bolivia, where women are 19% less likely to own a mobile phone than men. Furthermore, adult Bolivian women living in areas with mobile network coverage were more likely to own a phone than those in the other three countries surveyed.

The higher mobile phone ownership rates are likely to be a reflection of the profile of women living in urban settings. The role of women in these areas is transforming as economies grow and cities attract more residents. Bolivian women surveyed were more likely to be in the workforce. They report the highest personal income and contribute more to overall household income than women in the other three countries. The large number of Bolivian women who work could also be the reason why most mobile phone owners in the survey pay for their own mobile

services. Overall, Bolivian women report the highest ARPU, both in absolute terms and as a percentage of household income, of women in the four countries. This could be due in part to the relatively high mobile service rates in Bolivia but also to an increasing ability to pay their own bill.

Egypt



2009 GDP per capita	US\$2,450
Population	83 million
Adjusted mobile penetration	55%
Female mobile penetration	47%
Male mobile penetration	63%
Mobile gender gap	26%

Cultural considerations behind women's mobile usage

Egypt has the highest per capita income of the four countries in the survey. Virtually all Egyptians live in areas with mobile network coverage, and it has the highest mobile penetration rate (55% of all Egyptians) of the countries surveyed. Egypt is also a country where traditional roles for males and females are prevalent. More than half of Egyptian women surveyed are homemakers. Traditional female roles in the household help explain the relatively large mobile penetration gap between men and women. A woman is 26% less likely to own a mobile phone than a male in Egypt. Furthermore, Egypt has the highest rates of women who have yet to make use of a mobile phone. Whilst Egyptian women surveyed play a major role in household decision-making, more women received a mobile phone as a gift than women in the other three countries. In addition, nearly a quarter of all women surveyed report that a family member would object to them having mobile phone.

Egyptian women who own a mobile phone dedicate a significant portion of their income to the handset and services. These women report paying the highest price for their handset, both in terms of total price and as a percentage of income, of women in the four countries. They are second, after Bolivia, in terms of the amount they spend on mobile services, both in absolute terms and as a portion of their household income.

India



2009 GDP per capita	US\$1,033
Population	1.2 billion
Adjusted mobile penetration	34%
Female mobile penetration	28%
Male mobile penetration	40%
Mobile gender gap	31%

Low service costs drive female mobile phone usage, but low ownership rates prevail

India has a large rural population with 70% of its citizens residing in rural areas. India also has the largest share of women surveyed who are homemakers (around 70%). Rural women and homemakers have been found to have lower rates of mobile phone ownership than urban women and those who work or are in school. Indian demographics, combined with its low overall mobile penetration, help explain why less than 30% of all Indian women currently own a mobile phone.

The Indian mobile market is fiercely competitive with some of the lowest service rates in the world. These low rates seem to be helping to drive interest and usage of the mobile phone amongst women. Whilst a relatively low percentage of women in India own a mobile phone overall, those that do own a phone use them more than mobile owners in the other three countries.

In addition, most women in the survey that do not own a mobile phone borrow phones from family and friends. Despite large rural and homemaker populations, Indian women are becoming exposed to and benefiting from mobile phones.

Kenya



2009 GDP per capita	US\$842
Population	39.9 million
Adjusted mobile penetration	39%
Female mobile penetration	34%
Male mobile penetration	44%
Mobile gender gap	22%

Women are recognising the value of mobile services

In Kenya, the introduction of innovative services offered via the mobile phone is changing women's views towards them. Kenyan women indicate a very strong interest in mobile services. These women have personally seen the mobile phone act as an information resource and transaction tool.

Almost eight in ten Kenyan women reported an interest in mobile services such as money transfers, scheduling doctors' appointments and receiving recipes and beauty tips. Part of this interest may be fuelled by the success of services such as M-PESA and Zap, SMS-based money transfer services with millions of subscribers in Kenya.

The interest in these services may also be driven by the country's geographic makeup. Of the four countries included in the survey, Kenya has the highest share of population (78%) living in rural areas. Interestingly, it also has the lowest disparity between rural and urban mobile phone ownership rates.

Demand for transactional services such as money transfer over the mobile phone is higher for women in rural areas, where infrastructure is less developed. Exposure to mobile phones by women in these regions may be helping to drive broad awareness and interest in these new services.

Earning Money by Saving Time Zain, Kenya

Stella, housecleaner in Nairobi: "Zap allows me to send money to my family. I don't have to get on a bus for hours or ask a friend or family member to deliver the money. I simply send the money by Zap and it arrives fast. I sometimes had to take time off work to take money home. Now I can send it through Zap and instead of travelling, use the time to work and make more money. My family is better off with Zap."



Recommendations and Next Steps

Closing the mobile phone gender gap will bring substantial benefits to women, their families and society at large. Members of the mobile telecommunications industry also stand to gain from the addition of these new customers. To realise this opportunity, dedicated strategies and programmes must be created and implemented.

Actions must be taken by all major stakeholders – the mobile telecommunications industry, development organisations and policymakers – to realise the mWomen opportunity. The recommendations are organised by stakeholder, but they also include a list of strategies applicable to all entities.

Mobile Telecommunications Industry

Specifically address women in segmentation strategies and marketing tactics

As basic as it seems, the first critical step is to formally include women in marketing strategies and tactics. Traditionally, the mobile industry has segmented and targeted customers by age, location and/or socio-economic level. Only recently have a handful of operators begun to adopt gender-oriented approaches. Targeting campaigns to women to increase female uptake can be a fundamental step toward improving women's lives with mobile phones.

Position the phone as a life enhancing and income generating tool

The socio-economic benefits of using mobile phones have been demonstrated throughout the report: women feel safer, better connected, and generate additional income. The mobile phone industry can emphasise these benefits and highlight success stories to overcome cost concerns on the part of both women and potential financing partners.

Understand and operate within local culture

The role of women varies from one culture to another, and so do the specific marketing messages that compel women to acquire a mobile phone. Women are also not always the sole decision-makers when it comes to mobile phone ownership. In many low

and middle-income countries, men have significant influence over their wives and daughters' purchases of mobile phones. Addressing men and their concerns – as well as women and their aspirations – through marketing programmes will contribute to boosting adoption of mobile phones by women.

Leverage alternative financing mechanisms and channels

Microfinance institutions (MFIs) focus on providing loans to women, particularly to support income-generating initiatives. Mobile communications companies could partner with MFIs and extend their reach into more rural and underserved areas. MFIs, once familiarised with how mobile phones can be used as productivity tools, could bundle loans and training for women. Female entrepreneurs would then be able to invest in a phone as part of an enterprise "package" to jumpstart a new business or expand an existing one.

Development Community

Leverage alternative financing mechanisms and channels

Microfinance institutions (MFIs) are well-positioned to be financing partners. MFIs generally make loans to women to assist them with income-generating initiatives. As a first step, MFIs will need to understand how mobile phone ownership contributes to positive business results. MFIs could then integrate mobile phones into loan programmes. This will make it easier for women, particularly in rural and agricultural communities to obtain loans for mobile phones. Lending circles – from Consorcio in Brazil to Huis in China and Gameyas in Egypt – are also prevalent amongst women across low and middle-income countries and are another avenue to explore.

Create innovative programmes to increase women's mobile ownership rates

Organisations focused on women's empowerment can directly promote mobile phone ownership as a part of their programmes. For example, non-profit organisations have given their female grantees mobile phones so that they could participate in

virtual support groups and receive crop and weather information. The women recipients were responsible for purchasing their own mobile phone services, but the handsets were donated. Whether phones are donated, loaned or financed, getting them into women's hands is a fundamental step towards enhancing women's lives and livelihoods.

Promote the mobile phone as an effective development tool that creates education, health, employment, banking and business opportunities

From HIV/AIDS awareness to increasing women's literacy and civic engagement, mobile phones are playing a critical role in addressing some of the greatest challenges in low and middle-income countries. Development organisations could benefit from exploring the potential of mobile phone-enabled services to advance their social missions. As more mobile phone-enabled services are created, women will have additional incentives to invest in mobile phones.

Help identify culturally relevant and acceptable ways of promoting mobile phone ownership amongst women

Resistance to mobile phones, or indeed any technology, can often be reduced to fear of the unknown. Development organisations can address this concern in several ways. Culturally-sensitive and localised training, such as the use of mango tree roots branching out to convey the idea of a phone menu, is a good method for reducing anxiety over learning to use the technology. Another potential solution is encouraging younger women, who are often early adopters of mobile phones, to help their older family members and friends with mobile phone usage. These approaches, and others, are worth exploring to unlock the potential of mobile phones for all women.

Policymakers

Shift the tax burden away from the poorest in society of which women are the majority

Governments have considerable influence over the affordability of mobile phones and services through

regulation and taxation policies. There are several concrete steps they can take to lower cost as a barrier for the poorest in society, especially benefiting women. Taxation is one of the most immediate. In many countries, high excise rates, tariffs or even luxury taxes elevate the price of handsets and put them out of range for many poor women. Shifting the burden of taxation away from the poorest citizens would move more women into ownership, increase entrepreneurship and have significant social and family benefits.

Measures to reduce or eliminate taxes at the retail level have been shown to significantly increase mobile penetration, with all the social benefits this brings, and have been shown to be revenue positive for governments.

Create incentives for the development of mobile services that benefit women

Another way policymakers can advance the adoption of mobile phones is to create policy frameworks and programmes that encourage the development of mobile services such as mobile banking and mobile health. For instance, a government could integrate mobile phone-enabled health services into its overall public health programme. It could also expand the availability of mobile phone-enabled government services to increase the attractiveness of mobile phone ownership for women.

All Stakeholders

Collaborate for maximum impact

Closing the gender gap will require collaboration and cooperation across all stakeholders. Each has a unique perspective, set of assets and knowledge base that, if combined, can have a multiplying effect.

Designate high-profile champions of mobile phones for women

Each stakeholder has a role in increasing the visibility of the benefits and value of mobile phones for women. High-profile champions can spread awareness and overcome scepticism. Mobile industry leaders, development organisations and policy makers can designate well-respected individuals to promote women's mobile phone ownership. Examples of

potential champions include industry leaders, activists for women's empowerment, high-ranking government officials or symbolic or cultural leaders.

Conduct further research to advance understanding of women and mobile phones

Deeper knowledge of the impact of mobile phones on women's lives can increase the capacity of the mobile ecosystem and development community to realise the mWomen opportunity. All ecosystem actors, including the mobile industry, development organisations and policymakers, can sponsor research into the ways in which mobile phones empower women. Such research is useful for guiding outreach activities to women and in convincing others in positions of influence to support action aimed at increasing women's uptake.

Suggested areas of further research include:

- Explorations of the many aspects of independence potentially offered by a mobile phone – from the ability to leave home and attend school to feelings of success
- Studies into the direct and indirect links between female mobile phone ownership and the economic improvement of families
- An examination of how usage and the perceived value of a mobile phone increases once a woman acquires a mobile phone and how that perceived value changes over time
- Comparative study of the differences in mobile phone usage patterns and behaviours amongst men and women in low and middle-income countries
- Research to determine how mobile phones can benefit women in locally-specific contexts.

An Agenda for Action:

Mobile Telecommunications Industry

- Specifically address women in segmentation strategies and marketing tactics
- Position the phone as a life enhancing and income-generating tool
- Understand and operate within the local culture
- Leverage alternative financing mechanisms and channels.

Development Community

- Leverage alternative financing mechanisms and channels
- Create innovative programmes to increase the uptake of mobile phones amongst women
- Promote the mobile phone as an effective development tool which creates education, health, employment, banking and business opportunities
- Help identify culturally relevant and acceptable ways of promoting mobile phone ownership amongst women.

Policymakers

- Shift the tax burden away from the poorest in society of which women are the majority
- Create incentives for the development of mobile services that benefit women.

All Stakeholders

- Collaborate for maximum impact
- Designate high-profile champions of mobile phones for women
- Conduct further research to advance understanding of women and mobile phones.

Appendix A: Key Terms and Concepts

ARPU: Average revenue per user. ARPU is used to describe the total amount of money that a mobile operator receives from its subscriber base divided by the total number of its subscribers. It is also used in this report to describe the amount that one spends or would spend on mobile services.

Base of the Pyramid (BOP): In this report, BOP is used to describe individuals with a household income of less than US\$75 per month.

Borrowing & Borrowers: Used to describe an individual's use of a mobile phone that does not belong to them. A "borrower" refers to an individual who does not own a mobile phone but uses another person's mobile phone.

Demographic Groups: Used in this report to categorise women based on a set of statistically relevant characteristics: profession, household income, urban/rural location and occupation.

Gender Gap: Is how much less likely a female is to own a phone than a male.

Low and Middle-income Countries: Includes all countries classified as low income, lower-middle income or upper-middle income by the World Bank. These countries have a 2008 gross national income (GNI) per capita of US\$11,905 or less.

Mobile Phone Subscriber vs. Mobile Phone Owner: "Mobile phone subscriber" is used to describe an individual that subscribes to mobile services. A "mobile phone owner" is a person that owns a mobile phone handset and subscription. Because most individual subscribers also have a mobile handset, the terms mobile phone subscriber and mobile phone owner are used interchangeably in this report.

Mobile Usage: Refers simply to using a mobile phone, regardless of whether the user owns or has borrowed the phone.

mWomen: The use of mobile phones by women. It is also used to define a field of interest to further understanding of women's mobile usage.

Potential Market: Individuals who are able and likely to purchase a mobile phone and service. This includes women between the ages of 14 and 74 years old who do not currently own a mobile phone and live in areas with mobile network coverage.

Appendix B: Methodology

Methodologies Used

Core findings in this report are derived from data collected through primary and secondary research, including third party databases, expert interviews and more than 2,000 in-person consumer surveys. Analytical techniques were used to quantify and characterise women's ownership and usage of mobile phones, determine the value of equalising male and female ownership rates and highlight best practices in increasing mobile phone ownership amongst women. The study focuses exclusively on low and middle-income countries.

Expert Interviews: Forty in-depth interviews were conducted with experts across the world, including senior representatives from the mobile telecommunications industry, women's development organisations and academics. These interviews served to collect anecdotes and data on best practices in increasing women's mobile phone ownership and the impact mobile phones are having on the women's lives, families and livelihoods. Findings from these interviews were the basis for the case studies contained in this report. The expert interviews also served to provide data to cross-validate and support elements of the market sizing model.

Statistically-significant Consumer Surveys in Four Countries: More than 2,000 women were surveyed across four low and middle-income countries – Bolivia, Egypt, India, and Kenya – which represent a cross-section of cultures and regions. The surveys were administered to a statistically-significant and demographically-representative sample of women between the ages of 14 and 74 years old. It included both women who currently subscribe to mobile phone services and those that do not. The survey did not include women who lived in areas without mobile coverage. The survey sample included women of different ages, income levels and geographic locations (urban, peri-urban and rural areas). The survey instrument included questions on women's mobile phone ownership, mobile phone usage patterns, preferences, and, for those that do not own a mobile phone, obstacles to ownership. Data gathered through the customer surveys informed key contents of the report, including the market sizing, characterisation and segmentation analysis.

Market Sizing: A market sizing model was developed to calculate the current size and value of the gender gap in 149 low and middle-income countries. The model also calculated the value of closing the gap and maintaining parity in male and female subscribers in the long term. The sizing model is anchored in country-level data on male and female subscribership gathered through primary research (the statistically-significant field surveys and expert interviews), third-party market research studies and academic studies. More than a dozen data points were used to determine the ratio of male to female subscribers in each of the three World Bank classified income groups (low income, lower-middle-income and upper-middle-income). The ratios (weighted based on population size) were applied to population data from United Nations statistics (UNDATA) and adjusted mobile subscriber data (note: original data on total mobile connections were gathered from the GSMA's Wireless Intelligence database and were adjusted to remove duplicate subscriptions). This enabled the determination of the total number of female and male subscribers, mobile penetration by age and gender and the mobile penetration "gap" between men and women both in terms of percentage and absolute number of subscribers. Cross-checks of resulting figures against population groups with mobile network coverage were used for quality control. (Note: gender and age groups are assumed to be distributed equally under mobile network coverage. Mobile network coverage data for 2007 were gathered from the International Telecommunications Union's World Telecommunications Indicators 2008 database. Given mobile expansion, mobile coverage levels have been adjusted to approximate current mobile coverage rates. The final gender gap was calculated to be 300 million women (actual value equals 302 million; however actual figures in this report – included in this section in parentheses – have been rounded for simplicity).

To determine the immediate annual revenue opportunity represented by closing the current gender gap in low and middle-income countries, an annualised ARPU was calculated. This figure was calculated based on the amount that non-owners of a mobile phone in the consumer survey report said they would spend if they owned a mobile phone, which totalled 51% of reported spending by mobile owners. Therefore, 51% of national ARPU (average ARPU for 2009) was used. This figure was cross-validated via a statistical model predicting ARPU levels corresponding to different female penetration levels. It is consistent with the trend of ARPUs decrease as lower-income subscribers become customers. The 300 million (302 million) women in the gap times the annualised ARPU rate per country (equivalent to US\$44 on average) equals a US\$13 billion (US\$13.3 billion) opportunity.

The market sizing model was also used to calculate the value of closing the gap and maintaining parity in male and female subscribers in the long term. First, the cumulative subscriber growth from 2009 to 2014 was calculated totalling 900 million (893 million) unique subscribers. These subscribers were then broken out by gender. This model assumes that the current gender gap of 300 million (279 million after discounting in areas with insufficient mobile growth) will be closed first. The remaining 600 million (615 million) new subscribers will be split evenly amongst men and women. The annualised ARPU of 51% of the national ARPU for 2009 was again used to determine the commercial value of these new subscribers, equivalent to an average annual value of US\$49. The 600 million (586 million) potential new female subscribers times the annualised ARPU rate of US\$49 (average ARPU rate is higher in the long-term as more women are coming from higher-ARPU regions) equals a US\$29 billion (US\$28.6 billion) long-term opportunity.

Characterisation and Segmentation of the mWomen Opportunity: A quantitative analysis of the field consumer surveys was used to characterise women in terms of their mobile phone ownership, usage and perceptions. A variety of statistical tools – multiple regression analysis, graphical survey response analysis, and “precision demographic segmentation” – were used to identify the pertinent demographic groups. Precision segmentation analysis is an iterative process of refining and narrowing market demographic groups by identifying the clusters of people with common or correlated characteristics. The process began with an exhaustive segmentation model (women who benefit from mobile phone ownership, borrowers and women yet to make use of mobile phones), which was then narrowed down to the demographic groups most in need and likely to respond to mobile customer acquisition efforts. This methodology resulted in an in-depth characterisation of key demographic groups, including detailed profiles containing demographic, behavioural and attitudinal patterns as they relate to their lives (generally) and mobile communications (specifically). An income class, Women in the BOP, was added to the demographic groups given its strategic importance in this study.

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Figure 26: I Have Found Employment Opportunities or Customers Because of My Mobile Phone

Endnotes

- i The World Bank classified countries by per capita gross national income (GNI). Countries with a 2008 GNI per capita of US\$11,905 or less are considered low or middle-income countries. World Bank Country Classifications. Accessed on December 28, 2009. Retrieved from <http://web.worldbank.org>
- ii Sources: The sources for the bullet points in this section are:
 - 1st bullet point: Deloitte. (2007). *Global Mobile Tax Review 2006-2007*. Page 24. Accessed on December 28, 2009. Retrieved from <http://www.gsmworld.com>
 - 2nd bullet point: Bhavnani, Asheeta. Won-Wai Chiu, Rowena. Janakiram, Subramaniam & Silarszky, Peter. (15 June 2008). *The role of mobile phones in sustainable rural poverty reduction*. World Bank. Accessed on December 28, 2009. Retrieved from <http://siteresources.worldbank.org>
 - 3rd bullet point: Africa: The Impact of Mobile Phones. Moving the debate forward. (March 2005). The Vodafone Policy Paper Series, Number 3. Accessed on December 28, 2009. Retrieved from: www.vodafone.com
- iii The sources for the bullet points in this section are:
 - 1st bullet point: OECD. (2008) *Gender equality: empowering women so that development is effective*. Accessed on December 29, 2009. Retrieved from <http://www.oecd.org>
 - 2nd bullet point: Food and Agriculture Organization. *Women and Food Security*. Accessed on December 28, 2009. Retrieved from: <http://www.fao.org>
 - 3rd bullet point: Inter-American Development Bank. (2006, March). *Sustaining Development for all: Expanding Access to Economic Activity and Social Services*. P.119. Accessed on December 28, 2009. Retrieved from <http://idbdocs.iadb.org>
- iv The calculation of the gender gap is as follows: 40% (male mobile phone owners) minus 30% (female mobile phone owners) = 10%; 10% divided by 40% (male mobile phone owners) = 25% gender gap. In this case it can be said that women are 25% less likely than men to own a mobile phone.



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