Triggering mobile internet use among men and women in South Asia

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Basis Research is a consumer research consultancy working with global clients to deliver insight activation. Our qualitative team tackles research briefs of all kinds, using a range of innovative methods to build bespoke methodologies for our partners. From conducting ethnographic deep-dives into harder to reach communities, to constructing novel ways to discuss sensitive topics in challenging contexts, we draw from our experience to adapt to the unique challenges of markets in the global south. We have applied this expertise to our partnership with the GSMA, crafting an approach tailored to the specifics of the South Asia Mobile Internet Triggers study.

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Acknowledgements

Contents

An example of an initiative that aligns with the suggested recommendations.

1. Executive summary

Expanding internet access will benefit consumers, societies and economies

The internet has become increasingly important in driving economic growth and development, and internet use is rising rapidly, opening access to information, services, opportunities, and greater contact with global markets.[1] For most internet users in low- and middle-income countries, mobile phones are the first and only way for them to access the internet. Almost 5.1 billion people worldwide now own a SIM card and there are more than 3.8 billion subscribers to mobile internet services.[2]

Adoption and use of both the internet and mobile internet are, however, still far from universal or equitable. Regional disparities are considerable; for example, only 38 per cent of the population in South Asia subscribes to mobile internet services, lagging behind the global average of 51 per cent. Within countries, certain segments of society are considerably less likely to use mobile internet than others: women, those with less education, rural residents, and the poor account for a disproportionate number of non-users. Given the growing importance of the internet for accessing life-enhancing services, information and the global economy, low internet use among these groups risks exacerbating existing inequalities.

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1. A 10 per cent increase in internet penetration in a market leads to a 0.25–1.38 per cent increase in GDP, depending on a country's level of development and market conditions. See Changkyu Choi, 2009; Qiang, C. Z. W., Rossotto, C.M., 2009; Deloitte (2012), "What is the impact of mobile telephony on economic growth? A report for the GSM Association"; ITU (2012), "The Impact of Broadband on the Economy: Research to Date and Policy Issues".
2. GSMA Intelligence, Q3 2017.

The focus of this report: how to trigger mobile internet adoption in South Asia among those easiest to convert, the 'Potential Adopters'
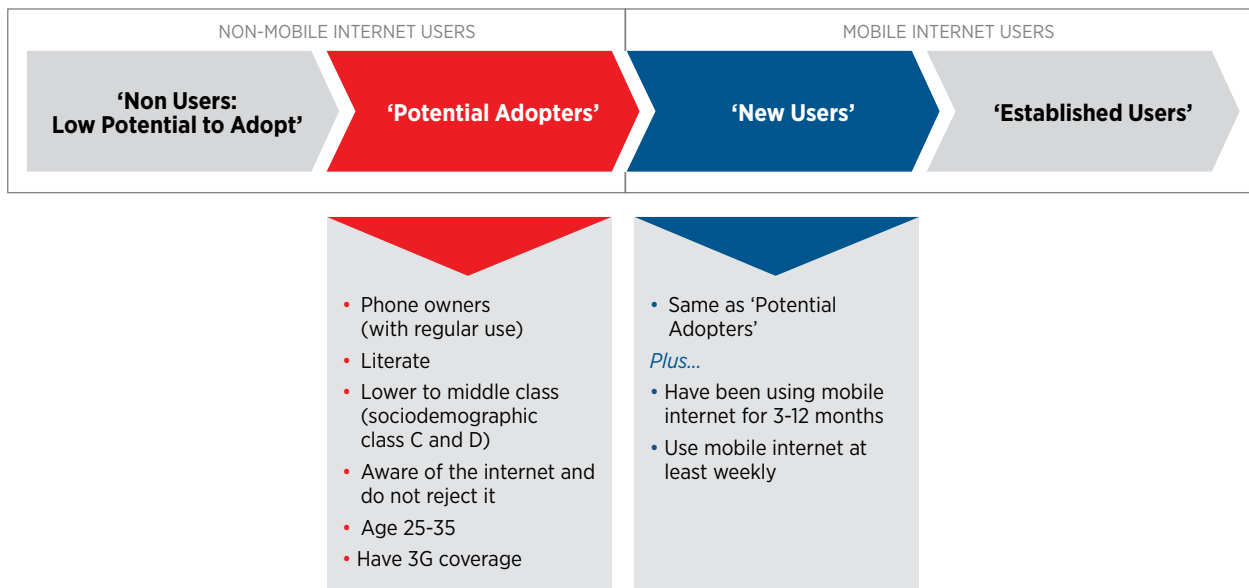
The objective of this study is to investigate **how the mobile industry can trigger mobile internet uptake among non-users (particularly women) in South Asia who appear to be economically and technically able to begin using mobile internet.**

The findings are drawn from qualitative research conducted in rural and urban areas of four South Asian markets: Bangladesh, India, Pakistan and Sri Lanka.

This report focuses exclusively on two segments of the population which we have defined as 'Potential Adopters' and 'New Users' (see Figure 1). Caution should be taken when extrapolating findings and recommendations to the general population (or other markets) as the relative importance of these suggestions is likely to vary for other groups in society (depending, for instance, on their social and financial situation).[3]

Figure 1

Defining the research sample: 'Potential Adopters' and 'New Users'

NON-MOBILE INTERNET USERS		MOBILE INTERNET USERS	
'Non Users: Low Potential to Adopt'	**'Potential Adopters'**	**'New Users'**	**'Established Users'**

'Potential Adopters'
- Phone owners (with regular use)
- Literate
- Lower to middle class (sociodemographic class C and D)
- Aware of the internet and do not reject it
- Age 25-35
- Have 3G coverage

'New Users'
- Same as 'Potential Adopters'

Plus…
- Have been using mobile internet for 3-12 months
- Use mobile internet at least weekly

This report focuses exclusively on 'Potential Adopters' and 'New Users', caution should be taken when extrapolating findings to the general population as the relative importance of the findings is likely to vary for other groups in society.

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3. For example, barriers identified in this report are specific to Potential Adopters and the relative importance of each barrier may vary for other groups (e.g. lower or higher income), and they may experience additional barriers not included in this report (e.g. respondents living outside of 3G coverage were purposely excluded from this research).

Key findings

1 Both New Users and Potential Adopters see the internet as a 'double-edged sword' that has the capacity for good when used as a tool for learning, communication, entertainment and development, but it also has a negative side: potentially addictive, a waste of time and money, a risk to an individual's safety because of scams, exposure to explicit content or cyber harassment, and potentially damaging to relationships. For Potential Adopters, the negative side of the web is often more front-of-mind than the positive.

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While all Potential Adopters recognise at least some benefits to using mobile internet, they typically feel 'it isn't for someone like me'. They ascribe many positive, aspirational attributes to internet users (as well as a few negative ones), but do not relate to this image themselves.

3 Potential Adopters experience five main barriers to adoption. In addition to feeling that the internet 'isn't for someone like me', Potential Adopters reported a range of other concerns about adopting mobile internet, from feeling they cannot afford it, to believing they do not trust it, to thinking they do not have time to learn it. These concerns (including the feeling that the internet is 'not for someone like me') can be summarised into five main barriers:

1 Fear of the negative side of the internet

2 Lack of affordability (actual and perceived)

3 Lack of need and relevance (actual and perceived)

4 Shortage of confidence and digital skills

5 The need for permission from gatekeepers

4 **Among Potential Adopters, women face more challenges adopting mobile internet than men, mainly due to social norms.** Mobile internet is either denied to women by gatekeepers or may seem less relevant and attainable because women are seen as being vulnerable to threats from the negative side of the web (posing risks to a family's reputation), having a lack of purchasing power, leading busy lives with little free time to learn or use technology, having smaller social circles, and having less confidence in learning digital skills. These dynamics mean women require more support than men to adopt mobile internet.

5 **For New Users, connection (chatting and sharing) is the greatest need the internet fulfils,** followed by news, entertainment, information and a range of other online activities.

6 **Popular use cases (instant messaging and social media) are not usually sufficient justification for Potential Adopters to start using the internet,** as they can be seen as more frivolous and do not deliver tangible returns on investment in terms of time or money.

7 **Two key triggers for mobile internet adoption were apparent** among male and particularly female Potential Adopters:

1 Use cases that have both personal appeal and externally justifiable rational benefits are particularly important for female Potential Adopters, and will help to persuade gatekeepers that access to mobile internet will benefit the entire household. Examples include video calling (especially for those with family living far away or overseas, as they can not only see the person, but it is also less expensive), learning a productive new skill (e.g. sewing, cooking), helping with their children's education[4] or anything that benefits the household financially (e.g. agricultural tips, help with work).

2 Use by others in their social circle had a significant and positive influence on adoption for both men and women New Users. It appears the more family and friends are using mobile internet, the more likely they are to use it, as it makes the internet less intimidating, more relevant and easier to learn, and creates a feeling that usage is inevitable.

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4. This was found to be less true for Sri Lanka, where concerns about children using the internet were greater than in other markets.

Recommendations to drive mobile internet adoption among Potential Adopters

This report provides actionable insights and recommendations for mobile operators to help Potential Adopters to overcome key barriers and trigger mobile internet adoption in South Asia.

The seven broad recommendations to drive mobile internet adoption that are listed below, and explored in greater depth in this report, are aimed primarily at mobile operators, but will apply to other stakeholders in the mobile ecosystem to some degree. They are relevant for both women and men, but since women often experience the barriers to mobile internet adoption more acutely than men, the recommendations are likely to have a disproportionately beneficial impact on *female* uptake. By focusing on driving adoption for those who require the most support (whether women, the more rural, poorer or less educated), this should also help promote uptake for those who experience the barriers less severely.

1	**Address negative perceptions of the internet,** helping users to feel safe and in control of their online activities while counteracting the 'bad press' the internet and social media often attracts.
2	**Improve affordability (both actual and perceived) of internet-enabled handsets and data.** Ensuring access to smartphones is crucial to drive mobile internet use.
3	**Make mobile internet more relevant and for 'someone like me'** to Potential Adopters, demonstrating the benefits and value for money.
4	**Promote use cases that have both personal appeal and rational, externally justifiable benefits,** as these will persuade Potential Adopters to start their mobile internet journey and help women to convince gatekeepers of the benefits of using it.
5	**Help build confidence and digital skills,** recognising that women may need additional support as they have smaller social circles and therefore fewer people to ask for advice. Women also tend to have lower levels of digital literacy and confidence than men. Consider leveraging agent networks to help provide education and advice.
6	**Design products, services and marketing with a less digitally literate user in mind,** making the mobile internet less intimidating and more user-friendly.
7	**Leverage social circles, including male gatekeepers,** to facilitate greater exposure to (and hence understanding of) mobile internet, make digital skills easier to acquire and mobile internet more relevant (the more friends and family use the internet, the more people there are to share and connect with). Recognise the need to persuade gatekeepers of how the family will benefit from women accessing mobile internet.

There is a significant opportunity to increase mobile internet adoption in South Asia. By expanding access to the internet for women, the poor, rural inhabitants and the lower educated, millions more will benefit from the opportunities it brings. While Potential Adopters have an appetite for using mobile internet, it is clear they face barriers to adoption and usage that are unlikely to be resolved on their own. Urgent, targeted action is therefore required from the mobile industry, policy-makers and other stakeholders to help encourage mobile internet use and enable greater digital inclusion.

1. The mobile internet landscape

The importance of expanding access to the internet

The internet is rapidly becoming a force for social and economic development, delivering substantial benefits for both individuals and society. It is playing a powerful and growing role in democratising access to information and services, opening up global markets, and expanding people's capacity for personal development. Mobile technology, and the access to internet services it facilitates, can make available information, services and life-enhancing opportunities, such as health information and guidance, financial services and employment opportunities, often for the first time. The increasing economic and social importance of the internet means that disparities in access threaten to entrench and exacerbate inequalities for traditionally marginalised groups—in particular women, rural residents, the less educated and the poor.

Through greater access to information, ideas and services, the internet helps to disperse the benefits of innovation via an economic 'spillover effect'. The internet, and by extension mobile, have therefore become increasingly important in driving economic growth.[5] In fact, a 10 per cent increase in internet penetration in a market leads to a 0.25–1.38 per cent increase in GDP, depending on a country's level of development and market conditions.[6]

As the internet reaches previously unconnected regions of the world, connectivity and internet access is increasingly led by mobile. Mobile access has grown at a truly unprecedented rate, with almost 5.1 billion people worldwide owning a SIM card and 3.8 billion subscribing to mobile internet services.[7]

Some groups are being left behind

These impressive global figures mask substantial regional disparities both between countries and within them. Not only are certain low- and middle-income countries lagging behind the global average, but certain groups in these markets are at a disadvantage, particularly women, the less educated, rural residents, and the poor[8] (see Figure 2). These groups risk being left behind as the internet—and the access to information, skills and technology that it facilitates—becomes an

increasingly important driver of economic growth.[9]

Even when the access exists via available network connectivity, adoption of internet can lag behind due to a wide variety of factors. For example, despite the challenge of rolling out infrastructure across such a large country, 84 per cent of India's population is covered by 3G or 4G networks, but only 41 per cent of the population currently uses mobile internet. By comparison, less than

5. See The World Bank, "World Development Report 2016: Digital Dividends".
6. A wide range of literature deals with the topic of the economic impact of internet access. See for example: Changkyu Choi, 2009; C.Z.W. Qiang, C.M. Rossotto, 2009; Deloitte (2012) "What is the impact of mobile telephony on economic growth? A report for the GSM Association"; ITU (2012), "The Impact of Broadband on the Economy: Research to Date and Policy Issues".
7. GSMA Intelligence, Q3 2017.
8. For example, research by Research ICT Africa, a regional ICT think tank, found there is a close relationship between differences in access to income and educational attainment by gender and access to the internet: Mariama Deen-Swarray, Alison Gillwald, and Ashleigh Morrell, 2012, "Lifting the Veil on ICT Gender Indicators in Africa," Policy Paper 13, Research ICT Africa and University of Cape Town.
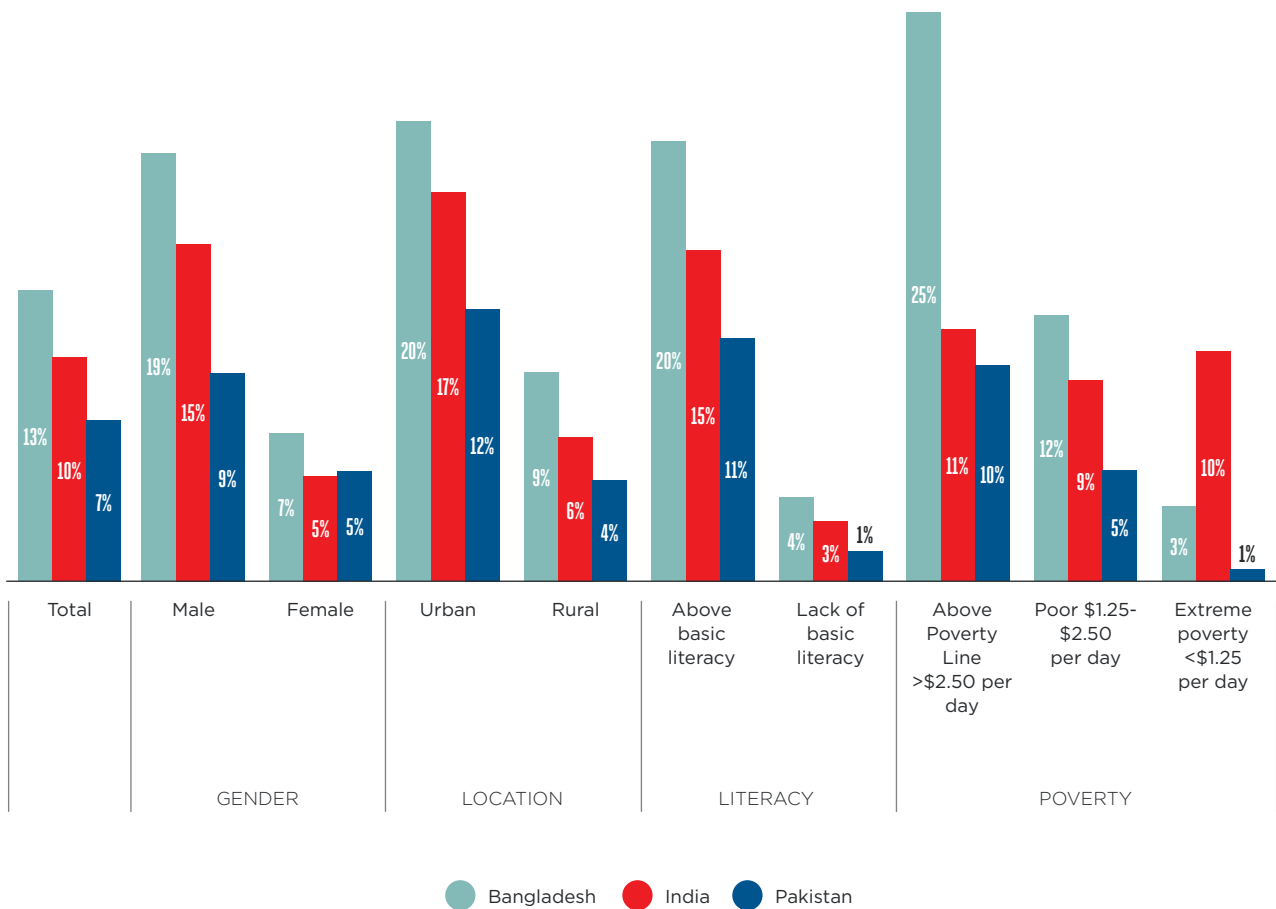9. Data from Telecom Regulatory Authority of India.

2 per cent of the Indian population has a fixed line internet connection.[10] Overall, 84 per cent of the population of South Asia is within 3G or 4G coverage, compared to only 52 per cent in Sub-Saharan Africa, where coverage is a significantly greater impediment to internet access and mobile internet uptake remains low at 28 per cent. Despite rapid growth in access in recent years, South Asia still lags behind the global average in mobile uptake, with an average of 55 per cent of the population subscribing to mobile services, compared to 67 per cent worldwide.[11]

Figure 2

Percentage of the adult population that has used mobile internet in the last 90 days

	Total	Male	Female	Urban	Rural	Above basic literacy	Lack of basic literacy	Above Poverty Line >$2.50 per day	Poor $1.25-$2.50 per day	Extreme poverty <$1.25 per day
Bangladesh	13%	19%	7%	20%	9%	20%	4%	25%	12%	3%
India	10%	15%	5%	17%	6%	15%	3%	11%	9%	10%
Pakistan	7%	9%	5%	12%	4%	11%	1%	10%	5%	1%
		GENDER		LOCATION		LITERACY		POVERTY		

● Bangladesh   ● India   ● Pakistan

Source: The Financial Inclusion Insights Program, InterMedia, Wave 4 2016, age 15+, N=6,000 in Bangladesh and Pakistan, N=45,540 in India.

10. Data from Telecom Regulatory Authority of India.
11. GSMA Intelligence Q2 2017, unique subscriber penetration estimates. Middle Africa has the lowest rate of uptake worldwide at 32%.

Women in particular are being left behind in South Asia

In addition to providing economic and educational opportunities, for women in particular, mobile ownership can promote and protect human rights and advance social and political empowerment.[12] This makes the persistent gender gap in mobile phone ownership even more concerning. The GSMA found that, in 2015, women in low- and middle-income countries were 14 per cent less likely than men to own a mobile phone. There is significant variation in the size of the gender gap between and within regions, and even within certain countries, with rural areas tending to have a wider gender gap than urban areas. South Asia has the widest gender gap in mobile phone access of any region: 38 per cent in 2015.[13]

Closing the gender gap in internet access also presents a significant commercial opportunity for mobile operators. The GSMA estimates that closing the gender gap in mobile phone access and usage in low- and middle-income countries could unlock an estimated US$ 170 billion market opportunity for the mobile industry from 2015 to 2020.

CONNECTED WOMEN COMMITMENT INITIATIVE

The Connected Women Commitment Initiative was launched in February 2016 to accelerate digital and financial inclusion for women by encouraging mobile operators in developing countries to make a formal commitment to increase the proportion of women in their mobile internet and/or mobile money customer base by 2020. As of November 2017, 33 operators have made 47 commitments across Africa, Asia and Latin America.

In South Asia, the following operators have made a formal Connected Women commitment to improve digital inclusion for women: Aircel India, Airtel India, Dialog Axiata PLC, Mobitel Sri Lanka, Ooredoo Maldives, Robi Axiata Limited, Telenor Pakistan and Vodafone India.

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12. For more information, see the Broadband Commission Working Group on the Digital Gender Divide (March 2017), "Recommendations for action: bridging the gender gap in Internet and broadband access and use".
13. Source: *"Bridging the gender gap: Mobile access and usage in low and middle-income countries"*, GSMA Connected Women, 2015.

2. Objectives and approach

Objectives of this study

The main objective of this study was to investigate **how stakeholders can trigger uptake in mobile internet among non-users (particularly women) in South Asia who appear to be economically and technically able to begin using it.**

Key research questions:

- What are the barriers to mobile internet use for those who seem to be in a position to adopt?

- How do social norms in these countries (India, Sri Lanka, Pakistan and Bangladesh) affect mobile access and internet uptake (particularly for women)?

- Which factors, institutions, and individuals are the greatest influences on mobile internet uptake for men and women?

- For recent mobile internet adopters, what was their path to adoption and what are their main reasons for using it (use cases)?

- Of the use cases identified, which should stakeholders focus on to trigger uptake among non-users?

A qualitative approach helped to go beyond the anecdotal

To understand how to make a difference in the short term, the research focused on how to convert those who appear to be in the best position to become mobile internet users. These 'Potential Adopters' were identified as those living within 3G coverage and who have a phone, basic literacy, and are not 'rejecters' of the internet (see Figure 3).

Potential Adopters were then compared to a group of recent mobile internet adopters ('New Users') who
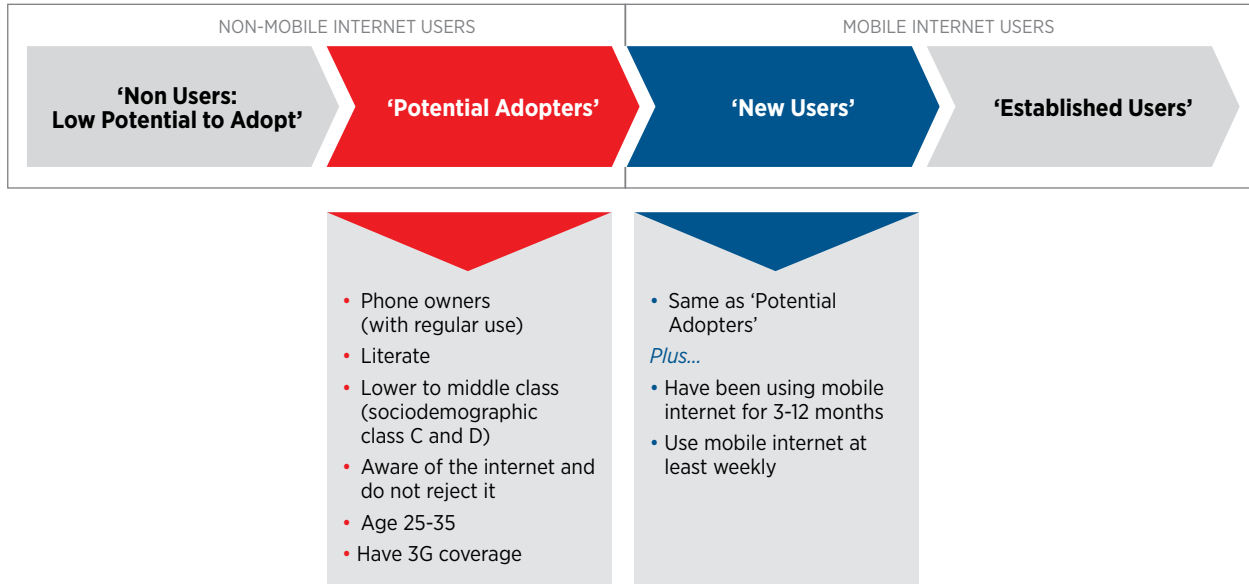
had the same socio-demographic background to help understand what can spark and maintain mobile internet use. While this group is relatively tightly defined, it is estimated that, together, New Users and Potential Adopters represent roughly 11% of the adult population (11.7 million people) in Bangladesh, 7% (63 million people) in India and 14% (15 million people) in Pakistan.[14]

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14. The Financial Inclusion Insights Program, InterMedia, wave 4, based on those people who are: age 25–35, living above extreme poverty ($1.25/day), have basic literacy, have at least some primary school education, own a mobile phone handset and come from a range of professions, including students and housewives but excluding management. Survey sample size: Pakistan = 6,000, Bangladesh = 6,000, India = 45,540. Base used for size of population = age 15+, population figures and splits are taken from the UN Databank.

Figure 3

Defining the research sample: 'Potential Adopters' and 'New Users'

NON-MOBILE INTERNET USERS		MOBILE INTERNET USERS	
'Non Users: Low Potential to Adopt'	**'Potential Adopters'**	**'New Users'**	**'Established Users'**

'Potential Adopters'
- Phone owners (with regular use)
- Literate
- Lower to middle class (sociodemographic class C and D)
- Aware of the internet and do not reject it
- Age 25-35
- Have 3G coverage

'New Users'
- Same as 'Potential Adopters'
Plus...
- Have been using mobile internet for 3-12 months
- Use mobile internet at least weekly

This report focuses exclusively on 'Potential Adopters' and 'New Users', caution should be taken when extrapolating findings to the general population as the relative importance of the findings is likely to vary for other groups in society.[15]

A qualitative methodology was used to go beyond what was reported to explore deeper rational and emotional barriers and motivations.

The research employed several fieldwork methods including focus group discussions, in-depth interviews, written and photographic pre-tasking (respondents were asked to keep a three-day diary of their mobile phone use), home visits and retailer visits. This was combined with calls with mobile network operators (MNOs), and expert interviews (see Figure 4). For more detail on this methodology, please see the Appendix.

Figure 4

The research methodology

METHODOLOGY: QUAL

GROUPS, IN-DEPTH INTERVIEWS, HOME VISITS AND PRE-TASKS • RETAILER VISITS • EXPERT INTERVIEWS • CALLS WITH MNOS

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15. For example, barriers identified in this report are specific to Potential Adopters and the relative importance of each barrier may vary for other groups, as well as other factors not captured (e.g. the barrier of having no 3G coverage was purposely excluded from this research).

Four South Asian markets were included in the fieldwork

Fieldwork was conducted in early 2017 in four South Asian markets: India, Sri Lanka, Pakistan and Bangladesh. (For an overview of these markets, please see the Appendix.) Both urban and rural locations were visited in each market (except Pakistan, where the second location was peri-urban) (see Figure 5).

Figure 5

Research locations

MARKET	India Uttar Pradesh + Tamil Nadu		Sri Lanka	Bangladesh	Pakistan
URBAN LOCATION	Lucknow, Uttar Pradesh	Chennai, Tamil Nadu	Colombo	Dhaka	Lahore
RURAL LOCATION	Badarka village, Unnao district	Dhamal village, Kanchipuram district	Anuradhapura	Kalihati	Gujranwala smaller urban area, rather than rural

The research deliberately supressed some barriers to mobile internet use

The criteria of selection for the sample deliberately removed some traditionally significant barriers to not only mobile internet adoption, but also mobile phone ownership and usage. The impact of the following barriers was therefore potentially reduced or even eliminated.

- *Network coverage:* Only locations with 3G coverage were selected.

- *Internet awareness:* All respondents had to be aware of the internet or at least an internet-enabled product or service.

- *Internet rejection:* those who totally rejected the idea of the internet were excluded from the study.[16]

- *Literacy:* All non-mobile users had to have at least a basic level of literacy (this criteria was not imposed on users, as we were interested in whether any illiterate people were currently using mobile internet and, if so, how and why).[17]

- *Digital literacy:* Owning and using their own phones meant all respondents had at least a very basic level of digital literacy.

- *Community restrictions on phone ownership:* As all respondents had to own at least a basic handset this meant that communities with very strong social norms preventing women from owning mobile phones were excluded from the research.

- *Affordability:* As all respondents were SEC C and D, and already had the funds to own (and use) their own mobile phones,[18] the affordability barrier was somewhat alleviated.

Findings should be extrapolated with caution

Since this report focuses on 'Potential Adopters' and 'New Users' only, caution should be taken extrapolating findings and recommendations to the general population (or other groups or similar markets) as they are likely to have different characteristics, and behaviours (for example, affluence levels or age). Many of the insights and recommendations for action will likely be relevant to some degree, but for groups with very different profiles, further investigation should be conducted to confirm how much they apply.[19]

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16. Internet rejecters were defined as anyone who agreed with the statement, 'I do not like the idea of the internet at all; it is something I would never want to access in any way, including on a mobile phone".
17. For the literacy levels of the general population of these markets please see the Market Snapshots in the Appendix.
18. Many Potential Adopters owned a basic phone, so the cost of a smartphone could still be perceived as a barrier for them.
19. For example, barriers identified in this report are specific to Potential Adopters and the relative importance of each barrier may vary for other groups (e.g. lower or higher income), and they may experience additional barriers not included in this report (e.g. respondents living outside of 3G coverage were purposely excluded from this research).

Mainly due to social norms female Potential Adopters face more challenges embracing mobile internet

3. Research findings

3.1 Social norms have a negative effect on women's adoption of mobile internet

MAIN TAKEAWAYS

- Many female New Users and Potential Adopters have limited financial autonomy and power to decide whether or not to access mobile phones and the internet, with men often acting as gatekeepers.

- Women are seen as vulnerable to corruption by the negative side of the internet, which some see as a potential risk to the family's reputation.

- Female Potential Adopters lead very busy lives, and many feel they do not have time to learn how to use the internet, or to use it once they have.

> **"We can ask, but realistically it's a male dominated society, and whatever our husbands say, we have to agree with."**
>
> Female, Potential Adopter, urban, Bangladesh

> **"My husband wants my world to be my home, my family. He doesn't want me to know any world other than this. That's why he made me stop my studies. And no, I'm not at all happy with this situation."**
>
> Female, Potential Adopter, rural, Bangladesh

Many of the barriers to and reasons for adopting mobile internet can only be explained by understanding the daily lives of Potential Adopters and New Users, as social context has a major influence on attitudes and behaviours relating to mobile access and use. Social norms surrounding what is considered appropriate behaviour for women are particularly important when considering the adoption and use of mobile technology. Phone ownership can promote independence and emancipation for women, and in turn disrupt the status quo and traditional views of women's roles in the household. For these reasons some communities disapprove and discourage phone ownership and usage by women and on rare occasions go as far as prohibiting it completely.[20] Indeed, the research found that social norms contribute significantly to restrict mobile internet use by women in the South Asian markets studied.

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20. http://www.independent.co.uk/news/world/asia/girls-and-unmarried-women-in-india-forbidden-from-using-mobile-phones-to-prevent-disturbance-in-a6888911.html

Social norms vary within and between markets

In this research, Pakistan was found to be the most conservative society, followed by Bangladesh. India was somewhere in the middle, with the greatest variation in attitudes,[21] and Sri Lanka had the most liberal values by far. In all countries, rural areas were at the conservative end of the spectrum, with more liberal attitudes expressed in urban areas.

Social norms influence the adoption of mobile internet in three main ways:

(1) Women are perceived as vulnerable to corruption by the internet, which puts the reputation of their family at risk

To a greater or lesser extent, women in all four countries experienced intense pressure to conform to social expectations and protect their family's reputation.[22] This fear of reputational damage, combined with the perception that women are more easily influenced and susceptible to being "led astray", resulted in many gatekeepers being cautious about women's access to the internet, especially without supervision and protection.

Fears that the internet could fuel inappropriate flirtations, harassment, or other online safety concerns (e.g. fraud, misuse of personal images or exposure to explicit images), all contributed to women's internet access being either heavily policed or denied completely.

> **"After my sister created a Facebook account, a lot of men started calling her... She cried. And her husband hit her."**
>
> Female, Potential Adopter, urban, Sri Lanka

> **"Women have to demonstrate all the time that they're good... As soon as you're in private, the assumption is you're doing something bad."**
>
> Caroline Osella, SOAS

21. Despite exploration and contrary to expectations, no discernible differences could be found in this sample in the level of progressiveness of gender norms between the two Indian states visited which may be as a result of the profile of people we spoke to, the Potential Adopters and New Users. For example, in Lucknow, Uttar Pradesh, where it might be expected that views would be more conservative, men were keen to project liberal attitudes towards women; by contrast, men in Chennai, Tamil Nadu, considered to be the more liberal state, expressed disappointment over what they perceived as a decline in female modesty and standards of behaviour (such as women wearing trousers, or riding two-wheel vehicles independently). However, these viewpoints could in themselves be representative of differences in norms between the two states: in Lucknow, men and women were keen to distance their more liberal views from ones they assumed were prevalent in surrounding villages, where women were felt to be denied many 'city' freedoms; meanwhile, the apparent discontent of many men in Chennai may be a reaction to the increasingly westernised lifestyle practiced by other women in the city, perhaps within higher socioeconomic classes.
22. Even though this was less true in Sri Lanka, many men there do still fear the possibility of reputational damage via a wife's misconduct (e.g. having an affair or flirtation).

Lipi, Dhaka

Lipi is a housewife from Dhaka, Bangladesh. She lives with her son and daughter, and her husband works abroad. For Lipi, the internet could mean less loneliness and more independence.

"If I could pay a bill online, with no help from anyone, I could help my husband, relieve his stress... I'd feel very independent."

She doesn't know much about the internet, but knows you can make cheap video calls with it. This would mean she could speak to her husband more often, for less money, and that her children could see their father's face even when he is far away.

Lipi also likes the idea of paying bills online and believes it could make her feel independent. Furthermore, she knows her children will need the internet for school soon and that their father won't be around to teach them. At the moment, she feels too busy to argue for having mobile internet, but she might discuss it with her mother-in-law.

"Internet means doing video calls, seeing the other person when you call them... and it's much cheaper than landline."

Pen portraits represent a composite of findings from respondents, please note all names have been changed.

(2) Women's purchasing and decision-making power is restricted

In more liberal households, where women can leave the home without permission or an escort, they will typically have greater financial autonomy and influence on household decisions, and feel freer to discuss grievances with their husbands or ask for things they want for themselves.[23] In more conservative households, these freedoms will be either restricted or completely absent.

Even when women manage day-to-day household finances, decision-making power does not tend to extend beyond this, for example, few women have their own money and most rarely make independent spending decisions about mobile services. In Bangladesh, only 25 per cent of women are involved in decisions about who in the household will receive a handset, compared to 36 per cent of women in Pakistan.[24]

Even though men usually have financial autonomy and personal freedom, and can more freely pursue entertainment and socialise, they must also meet certain social expectations. For example, once men are married they are expected to act in their family's interest and protect their family reputation. Nonetheless, they usually have limited involvement in childcare, are free to spend money on themselves and have more leisure time.

"I can't roam around with friends any more, it wouldn't look right. It's not that I'm told not to, I just know what my responsibilities are."

Male, New User, rural, India

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23. Attitudes toward women are fairly consistent in terms of their role in the household, but there is significant variation in terms of how yielding husbands are to their wives' personal desires.
24. The Financial Inclusion Insights Program, InterMedia, Wave 4 2016. N=6,000 in Bangladesh and Pakistan, N=45,540 in India. Responses to the question, "*Who decides on who should have a phone in your household?*". Includes responses given as 'Myself' and 'Everyone makes the decisions' for Bangladesh and Pakistan. 16% of Indian female respondents decided for their household, although response options were not entirely comparable to Pakistan and Bangladesh.

③ Women's daily lives can be extremely busy with little time to learn new things

Expectations of married women were relatively consistent in all four countries. Women are typically expected to give up work outside the home, to devote most of their time to childcare and looking after the household, to acknowledge the authority of their husband (and parents-in-law) over where they go and how they spend their time, and to put the needs of their family before their own.[25]

Daily life becomes extremely busy for women as they juggle housework, childcare, cooking, and often some paid work (see Figure 6). Rural women are typically even busier, as their days also involved tending farmland in addition to the home and sometimes paid work. Relatively simple tasks can take up a great deal of time and energy – for example, a round trip on public transport to the bank to pay a bill can take three hours. All these responsibilities and expectations mean that women have little time to themselves.[26]

Women can also lead rather isolated lives, as social activity is often restricted after marriage and husbands act as gatekeepers to information and people outside the household.[27] Mobiles therefore become very important to women as they enable them to keep in contact with friends and family and ease their loneliness.[28] Despite, or perhaps because of this, many women are hungry for ways to communicate, share and enrich their daily lives, but feel they have little time to learn how to use the internet and worry they will become distracted from their chores.

Figure 6

Women's busy lives

"I wake up 5, sometimes even 4 o'clock. I make tea, make breakfast, then once children are off to school, get some time to go to the fields."

Female, Potential Adopter, rural, India

Chores and alarms start at around 5.30am – from pre-tasks, rural India

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25. Households often consist of 'joint families', in which the woman lives with her husband and his family and, in India and Sri Lanka (and some Bangladeshi households), mothers-in-law frequently have significant influence and control within a household.
26. Note: the same conclusions cannot confidently be drawn for Pakistan, due to the sample constraints noted on page 8.
27. This situation is again less severe for those in Sri Lanka, particularly in more liberal Colombo.
28. Calling friends and family is a source of happiness and security for women who are New Users and Potential Adopters: they can be making up to 20 calls per day. SMS tends not to be used as much as voice, as it is more appealing to actually talk. Women appreciate being able to chat on their phones while doing chores. These communication habits ease loneliness and help them to keep in touch with people from their hometown.
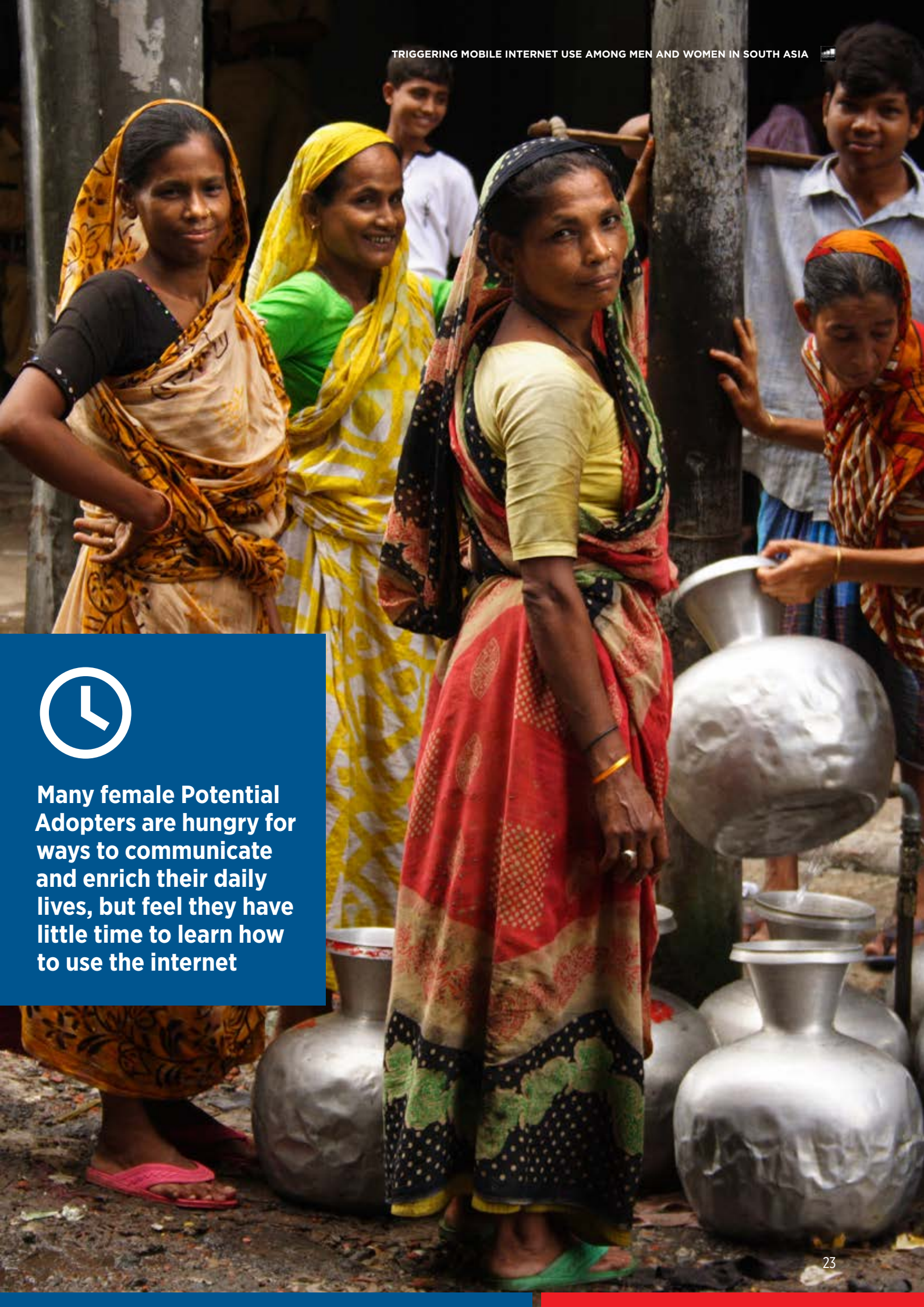
Many female Potential Adopters are hungry for ways to communicate and enrich their daily lives, but feel they have little time to learn how to use the internet

Roshni, Dhamal

Roshni lives in Dhamal village, Tamil Nadu, India. She has a daughter and a son and owns a basic phone. For her, the internet could be a way for her to increase her income.

Roshni takes care of her house, tends the family fields daily, and occasionally makes blouses to sell. Until now, she hasn't had much interest in the internet, seeing it mainly as a way to chat with friends, something she has little time for. She also worries it would take a lot of time and money when she needs to be focused on work—there is always something to do. However, she was thrilled to discover she could use the internet to find and download new stitching patterns, watch tutorial videos on new sewing techniques, and compare the prices of different items she could learn to make.

> **"I currently don't have the time or money to attend the tailoring class in town, so I can't learn new patterns. If I could do this online, it would be much cheaper, and I could make much more money."**

Pen portraits represent a composite of findings from respondents, please note all names have been changed.

Men tend to purchase mobile top-ups for women

Except in Sri Lanka, retailers reported that most of their customers are male. This is because men typically purchase airtime/data for their wives and other female family members, deciding how much of their allowance should be spent on mobile credit and how often they can top up. (Previous GSMA research found that only 61 per cent of female SIM owners in India had bought credit on their own in the past four weeks compared to 89 per cent of men.[29]) However, women who are employed, in more liberal marriages, and/or live in urban areas, are more likely to top up their phone credit themselves.

When men make purchases on behalf of women, they typically prefer to buy credit in small increments to maintain control of the budget and feel assured that their wives will not accidentally use a large amount of data. This means that women are at times left without credit for days. In addition to these household dynamics, women face several other barriers to topping up:

- **Sharing their phone number in public whilst topping up can lead to harassing calls from men.**[30] This is a particularly severe problem in India, while less overt in Sri Lanka and Pakistan. Tactics women use to avoid sharing their number include purchasing scratch cards (very common in Sri Lanka) and calling ahead for credit, which means their husband goes to the store and pays later.

- **The male-dominated environment of specialist phone shops** can be very off-putting for women and another reason why men in the household do not like women visiting them.

- **Unwelcoming agents:** Retailers sometimes actively discourage women from buying data. One retailer in Pakistan felt it was inappropriate to sell to women due to other men being in the shop.

hindustantimes[31]

Stalkers' delight: Mobile numbers of girls for sale in UP recharge shops

> **"Sometimes women do ask to buy internet, but I won't allow it. I tell them, 'Call the network helpline, don't come here'."**
>
> Male, top-up and cigarette kiosk retailer, urban, Pakistan

29. GSMA Connected Women (2015), "Bridging the gender gap: Mobile access and usage in low and middle-income countries", SIM owners who bought credit on their own with no help from anyone in the last 4 weeks. Among SIM owners who recharged through scratch cards, e-top-up, or mobile money – women: N= 434 and men: N= 174
30. Most pre-pay top-up mechanisms require the purchaser to share their phone number with the agent to receive credit, often saying the number out loud when others can hear. The numbers are often recorded in a book, which can be referenced later.
31. http://www.hindustantimes.com/india-news/girls-mobile-numbers-up-for-sale-in-uttar-pradesh-price-rs-50-to-rs-500/story-5lYPcav12h7rnW6A6UDLLI.html

Dhaka top-up kiosk: Kiosk selling cigarettes and top-ups. Men smoke nearby using a lighter tethered to the kiosk.

When women can venture out for top-ups, retailers reported they tend to purchase data in smaller amounts than men. Most women, both Potential Adopters and New Users, prefer smaller generalist stores for topping up. Mini-markets are preferred, as customers are typically less likely to be men, and they can also buy other household items at the same time. However, this means women interact with staff who are generally less informed than specialist agents, and this affects whether they get the best deals and potentially their level of digital literacy (retailers reported that women sometimes visited kiosks when they needed assistance downloading apps, yet most admitted to having little confidence in advising customers on this).

INDIA: VODAFONE'S SAKHI PACK

In India, where safety and harassment-related crimes represent a high proportion of registered crimes against women, many women regularly experience harassing phone calls and messages. A perceived key enabler of voice and SMS harassment occurs when either the reseller or a bystander overhears a customer's number being shared when they are topping up (the number is often required to add credit to an account). Therefore, some customers avoid in-store topping up as they do not wish to publicly disclose their mobile number.[32]

In 2017, Vodafone India launched Sakhi pack, a SIM proposition that includes a private recharge service, enabling customers to top up anonymously in-store.[33] Subscribers are able to top-up using an One Time Password (OTP)[34] code, without sharing their mobile number. They also receive 10 minutes of free local emergency calls per month, and 90 days of free SMS-based beauty and health information. The SIM pack is sold through temporary stalls in local female-friendly markets. It aims to attract more female customers, particularly in rural areas, and ultimately, transition these customers to more profitable data packages. The private top up feature in Sakhi Pack addresses the widely felt need for safer, more private top up facilities for women. Three months post launch Sakhi pack had 15,000 subscribers and by October 2017 it had been sold to over 100,000 people of whom Vodafone estimates that over 80% of these customers are rural women.

32. GSMA research due to be published in 2018.
33. Vodafone Press Release, 'Vodafone launches 'Vodafone Sakhi' an innovative product to empower rural women' 11 February 2017, http://www.vodafone.in/documents/Pdfs/Pressreleases/PRESS_RELEASE_Vodafone_Sakhi_UPW.pdf
34. OTP = One Time Password. This is a unique code that is sent to a registered mobile via SMS.

3.2 Perceptions of the internet: a double-edged sword

MAIN TAKEAWAYS

- Understanding of the benefits of the internet varied among Potential Adopters, and there was limited knowledge of technical terms.

- The internet is seen as a double-edged sword with the potential for both good and bad, depending on who is using it and for what.

- Potential Adopters ascribe many positive, aspirational attributes to internet users (and a few negative ones), but do not see themselves in the same light. They do not feel that the internet is meant for someone like them.

To identify what is blocking and driving mobile internet adoption, it is vital to understand awareness and perceptions of the internet. This includes attitudes and feelings toward the internet in general, how these differ between men and women, as well as Potential Adopters and New Users. For some, perceptions of how the internet is used and how it impacts users can itself be a barrier to use.

> **"It's like a knife. In the hands of a surgeon, it can save a life, but in the hands of a crook, it can end one."**
>
> Male, New User, urban, India

Understanding of the internet varies among Potential Adopters

The vast majority of Potential Adopters have tried using the internet at some point, typically on the phone of a friend, relative, or spouse, or on a PC at an internet café, at home, or at work. However, some (especially rural women) had little understanding of what the internet is and what it offers. Many Potential Adopters did not know how to access the internet on their handset and did not understand the terminology surrounding it (e.g. what 3G/4G or MB/GBs are), what specific apps did, how to perform different tasks online or how to pay for data.

Pakistan was the exception when it came to how people commonly accessed the internet. While the majority still appear to access the internet primarily through mobile phones, there was higher reported use of Wi-Fi, fixed lines and computers.

- Some will have had a PC or laptop at home, before they got a smartphone – and will continue to do so.

- Home connections (especially fixed line) were more common in this sample than in other markets.

- Men use Wi-Fi outside of the home (in public or at work), either in addition to or instead of data on their mobile, as it is free and they need it for business. However, women did not use Wi-Fi to the same extent due to being more confined to the home.

In India, it appeared that awareness of mobile internet is steadily increasing. Two reasons stood out: the rise of Jio, an MNO that was offering free data at the time of the research, and awareness of Digital India,[35] which women appeared to be extremely engaged with and willing to contribute to.

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35. Digital India is a flagship programme of the Government of India with a vision to transform India into a digitally empowered society and knowledge economy. The programme is centred around three key areas: (1) Digital Infrastructure, (2) Governance and Services on Demand, and (3) Digital Empowerment of Citizens. To accomplish this vision by 2019, steps are being taken to improve digital infrastructure in the country, increase access to network devices, and enhance digital literacy. The programme has various initiatives, such as Broadband Highways, Universal Access to Mobile Connectivity, E-Governance, Electronic Delivery of Services, Information for All, IT for Jobs, among others. Digital India is intended to boost employment and economic growth, increase transparency and accountability, and enhance productivity and literacy. For more information, see: http://digitalindia.gov.in/content/approach-and-methodology, https://www.oneindia.com/feature/what-is-digital-india-programme-explained-1792279.html and http://ijed.informaticspublishing.com/index.php/ijed/article/view/115328.

The internet is seen as a double-edged sword

The idea that the internet has the potential for both good and bad depending on who uses it was consistent across all four markets and for both men and women (see Figure 7). It was clear that, for New Users, the positives of the internet outweighed the negatives, while for Potential Adopters, the negative side was often foremost in their minds. However, all Potential Adopters and New Users saw some good in the internet and recognised the opportunities it offered.

> **"My friend showed me the internet and I was so impressed. You can't even describe it."**
>
> Female, Potential Adopter, urban, Bangladesh

Figure 7

The internet is perceived as a double-edged sword

The good... ➕		The negative... ➖
• Learning • Communication • Entertainment • Personal development	Internet visualisation task image: **knife, male user, Sri Lanka**	• Addictive – time and money • Safety risk • Damaging to relationships

> **"A knife. It shows we can get good things and bad things. A knife is useful to cut something – but it can also harm people."**
>
> Male, Potential Adopter, urban, Sri Lanka

The good side of the internet: even the most cautious see some benefits

Even for more cautious Potential Adopters, the internet generally had positive associations: learning opportunities, communication (keeping in touch with friends and relatives), entertainment (through content and hobbies) and, for some, personal development by keeping 'up to date' (see Figure 8). For Potential Adopters, these positive associations and benefits underpin the motivations behind internet adoption and will be explored in more detail later in this report.
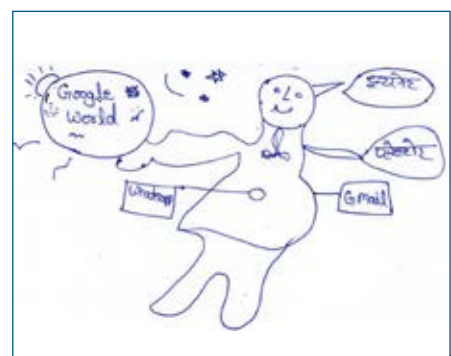
Figure 8

Visualisation of the 'good side' of the internet
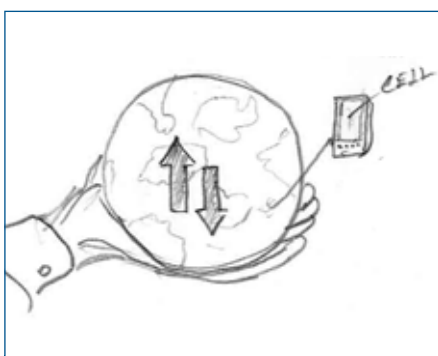
Pre-task image: **Female, New User, India**

"**We can understand everything, we can sit at home and see everything.**"

Female, Potential Adopter, rural, India

Pre-task image: **Male, New User, India**

Rabbi, Dhaka

Rabbi lives with his wife, two sons, and daughter in Dhaka, Bangladesh. He thinks the internet is a necessary part of modern family life with wide-reaching benefits.


"**A non-user would think I'm spending too much money on internet, because they don't know all the benefits I'm getting. Facebook, watching videos, video calling abroad – which actually saves us money.**"

Rabbi loves sharing all the photos he takes, chatting to friends on Facebook, and checking sports updates throughout the day. He has also been able to expand the range of products in his grocery store by reading about new product trends and researching the quality of different brands on Google.

Since he experienced how enjoyable and informative the internet is, and because his older son needs it for schoolwork, he decided to invest in a Wi-Fi router for his home. He now uses Wi-Fi to video call his brother and to watch YouTube videos with his family.
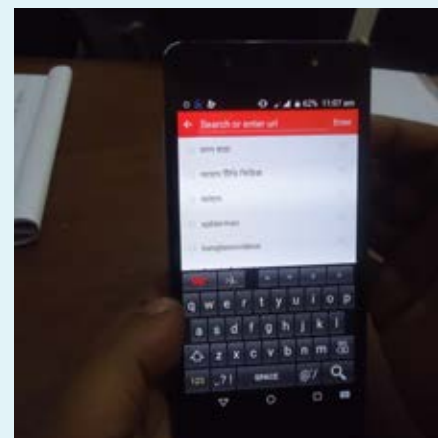
Pen portraits represent a composite of findings from respondents, please note all names have been changed.

The negative side of the internet: three main worries

Many negative associations with the internet were reported, as most were cautious about what they see as the dangerous, slightly intangible, negative side of the web (see Figure 9). While they did not always find it easy to explain exactly what constituted this negative side, there were three common concerns:

1	**Hard to control:** Many Potential Adopters, and even some New Users, consider the internet hard to control, from how much time and money you spend on it to the content you might accidently be exposed to.
2	**Risk to personal safety:** This covers a wide range of potential threats, from cyberbullying to fears of scams and misappropriation of personal details and images.
3	**Potentially damaging to relationships and reputations:** There was a particular fear that inappropriate relationships will be formed over the internet.

While some male New Users openly discussed viewing pornography, this was not linked too strongly to the negative side of the web for them. However, it made the men very aware of what their wives and children could be exposed to. For many of those who did not view explicit content out of choice, risk of inadvertent exposure was a concern.

These worries about the negative potential of the internet create a primary barrier to mobile internet adoption, which is explored further in the section on Barriers to internet adoption for Potential Adopters.

> **"Sometimes adult content pops up even though I have not searched for that content. It is bad. People who see this might think bad about us."**
>
> Female, New User, urban, Bangladesh

> **"We've seen girls and boys get in trouble using the internet— girls can get raped or even killed."**
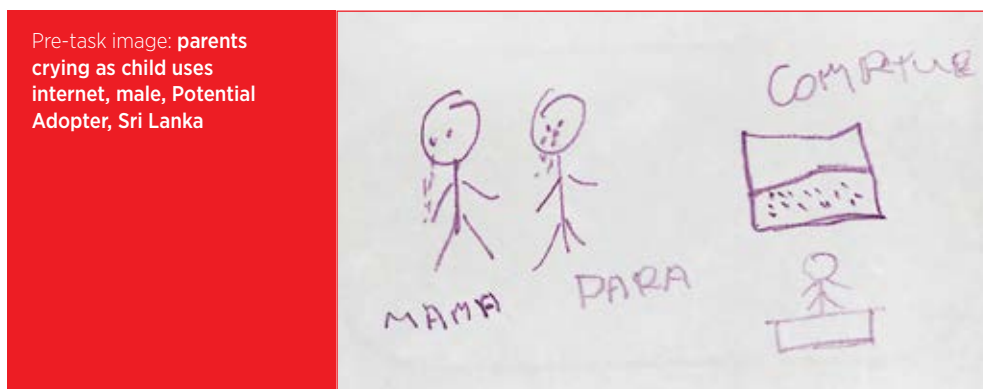>
> Male, Potential Adopter, urban, Bangladesh

> **"I think many conservative men in rural India would see social media as a grave risk to their unmarried daughters."**
>
> Sara Chamberlain, BBC Media Action, India

Figure 9

Visualisation of the negative side of the internet

Pre-task image: **parents crying as child uses internet, male, Potential Adopter, Sri Lanka**

Perceptions of internet users are also two-sided

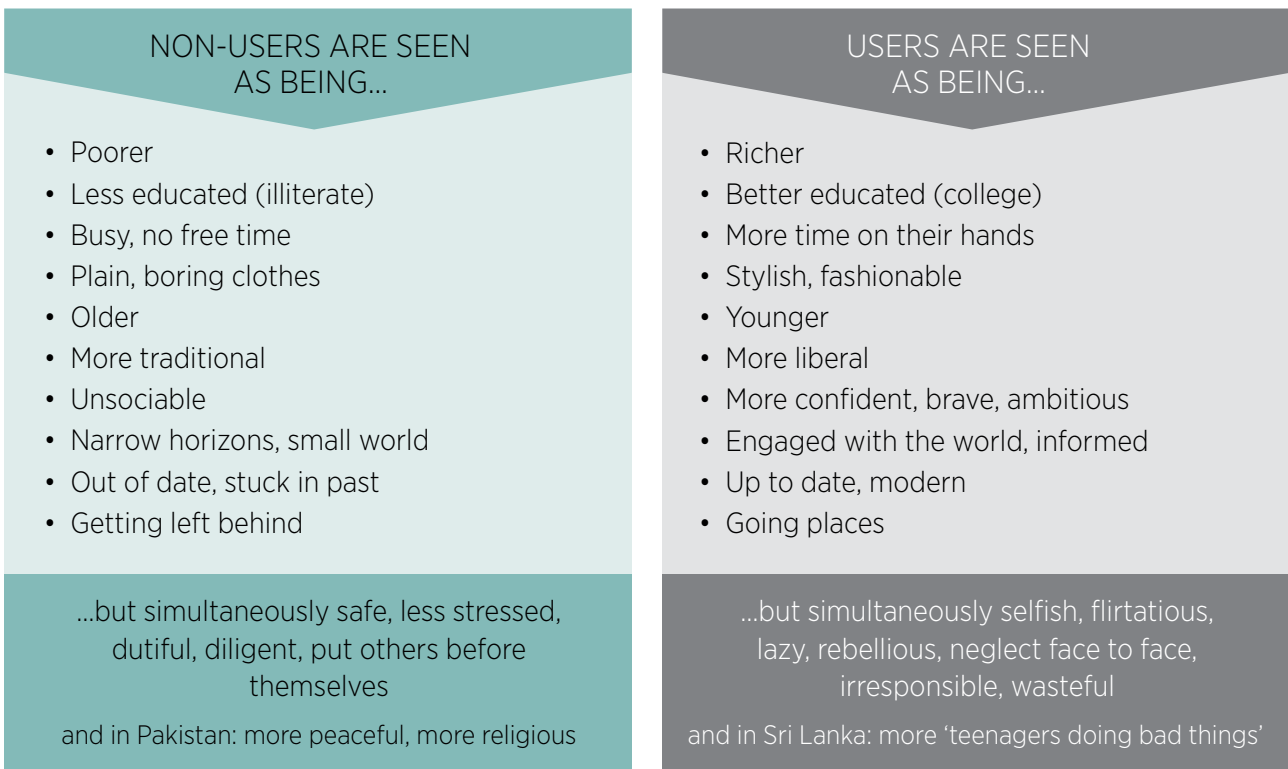Although Potential Adopters projected many positive attributes onto internet users, they did not actually relate to them. The internet users they describe seem far removed from the image they have of themselves, making them feel the internet is 'not for them' (see Figure 10).

FOR MANY, FACEBOOK IS THE ULTIMATE DOUBLE-EDGED SWORD

For many, Facebook represents both the best and the worst of the internet. For Facebook users, it opens up a world of sharing, news, and entertainment. But following media coverage of crime and scandals involving Facebook, which can be seen as a very male space, many of the women we spoke with are either scared to use Facebook or have been stopped from using it.[36]

Figure 10

Perceptions of internet users and non-users: internet users are seen as modern and sophisticated, but can also be seen as 'lazy' and 'irresponsible'

NON-USERS ARE SEEN AS BEING…	USERS ARE SEEN AS BEING…
• Poorer	• Richer
• Less educated (illiterate)	• Better educated (college)
• Busy, no free time	• More time on their hands
• Plain, boring clothes	• Stylish, fashionable
• Older	• Younger
• More traditional	• More liberal
• Unsociable	• More confident, brave, ambitious
• Narrow horizons, small world	• Engaged with the world, informed
• Out of date, stuck in past	• Up to date, modern
• Getting left behind	• Going places
…but simultaneously safe, less stressed, dutiful, diligent, put others before themselves and in Pakistan: more peaceful, more religious	…but simultaneously selfish, flirtatious, lazy, rebellious, neglect face to face, irresponsible, wasteful and in Sri Lanka: more 'teenagers doing bad things'

While Potential Adopters are more aware of the negatives of the internet, they also project many desirable attributes onto New Users. However, they did not relate to these users, feeling that the internet is 'not for someone like me'.

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36   According to a report by the UK consultancy We Are Social, of the 153 million Facebook users in India, only about 24% are women. This makes India one of the countries with the widest gender gap in Facebook use and one of the worst in the Asia-Pacific Region, along with Bangladesh (23%), Pakistan (22%) and Sri Lanka (29%). https://qz.com/775470/facebook-fb-has-a-massive-gender-divide-in-india/.

THE INTERNET SUFFERS FROM NEGATIVE PRESS

Concerns about the safety and security risks of the internet can be compounded by portrayals in the media. The South Asian press appears to regularly include stories of crimes and scandals fuelled by the internet and social media.

These crimes include stories of adultery, women tricked by fake profiles, women raped or murdered by men they are connected to on Facebook, or suicides linked to misused photographs.

Affairs begun on social media, particularly Facebook, are also a common theme in popular soap operas, with social media often playing a central role in many plotlines, particularly in Sri Lanka.[37]

HIGHLIGHTS

- A 21-year-old woman committed suicide after unidentified people doctored her photo, showing her as scantily clad, and uploaded it on Facebook last week.
- Vinupriya was shocked when her friends told her that a morphed semi-nude picture of her was on Facebook.
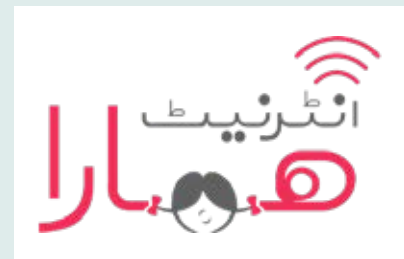
Salem: A 21-year-old woman committed suicide by hanging on Monday after unidentified people doctored her photo, showing her as scantily clad, and uploaded it on Facebook last week.

CYBER STALKING MENACE INVADES SRI LANKA

CEYLON TODAY

Third of all cyber crime cases in Mumbai this year are 'fakebook' profiles

PAKISTAN: HAMARA INTERNET

Hamara Internet is an initiative supporting women's rights to use the internet free from harassment, surveillance, or other digital threats.[38] A project of the Digital Rights Foundation and driven by Night Dad, it aims to empower women and girls to thrive in the digital space and learn how to defend themselves in an increasingly connected world. The Hamara Internet team of digital defenders routinely holds digital security training workshops throughout Pakistan. The team also develops online safety tools and resources for women.

i Social
Infolady Social Enterprise Limited

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37. 1. http://timesofindia.indiatimes.com/city/salem/21-yr-old-woman-commits-suicide-after-morphed-photo-appears-on-Facebook/articleshow/52948971.cms
2. http://www.ceylontoday.lk/print20160701CT20161030.php?id=4609 / https://srilankatwo.wordpress.com/2016/08/25/cyber-stalking-menace-invades-sri-lanka/
38. Hamara Internet (accessed October 2017) https://hamarainternet.org/

3.3 Five main barriers to internet adoption for Potential Adopters

MAIN TAKEAWAYS

- All Potential Adopters see at least some benefit to using mobile internet.

- Potential Adopters reported many interlinked concerns about using mobile internet.

- The concerns can be translated into five main barriers to adoption:
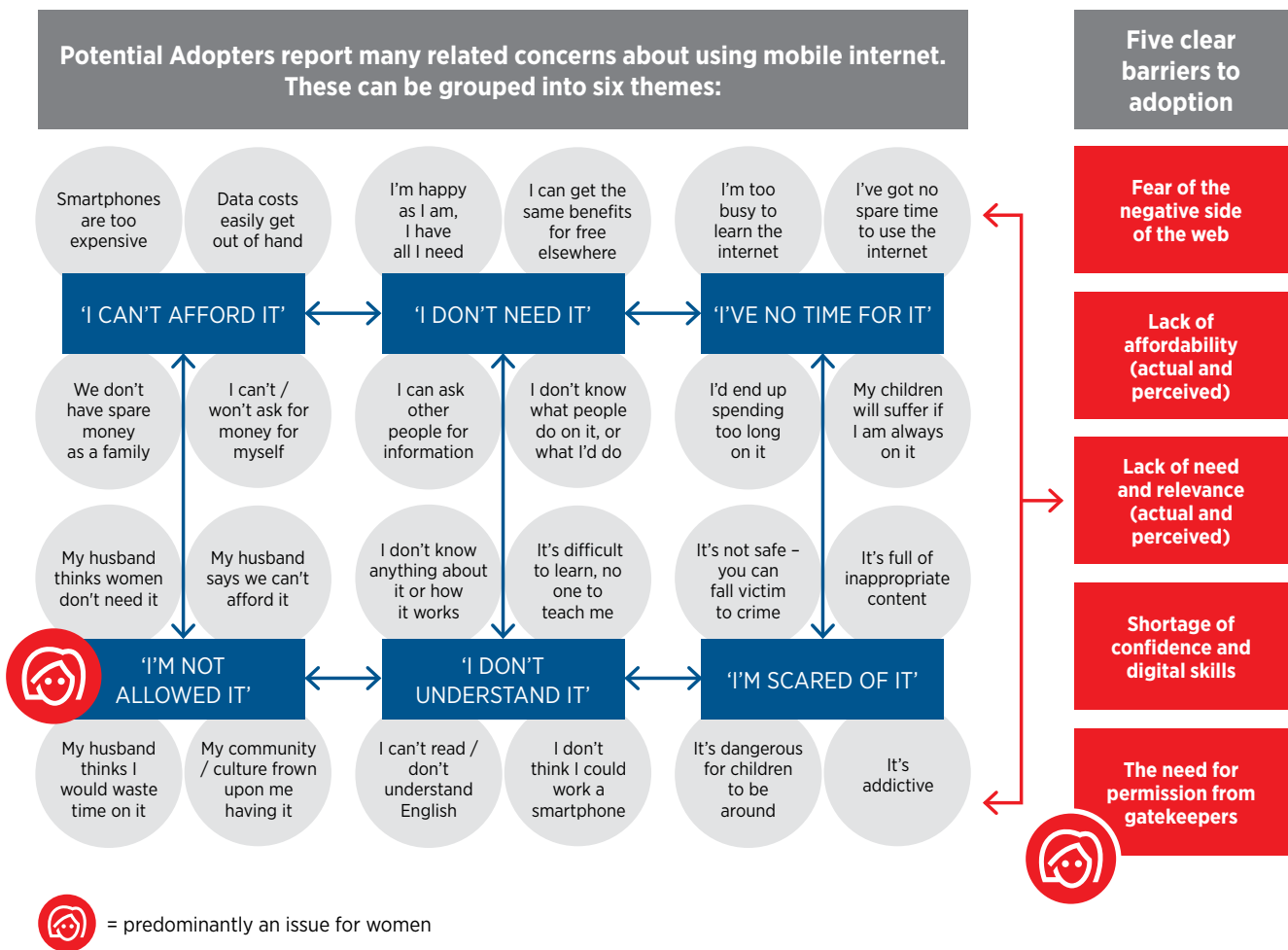
1) Fear of the negative side of the web
2) Lack of affordability (actual and perceived)
3) Lack of need and relevance (actual and perceived)
4) Shortage of confidence and digital skills
5) The need for permission from gatekeepers

Although all Potential Adopters recognised at least some benefit to using mobile internet, they also cited, in addition to feeling that the internet 'isn't for someone like me', a range of concerns to explain why they did not use it, from feeling they could not afford it, to believing they do not trust it, to thinking they do not have time to learn it. These concerns are closely related and interdependent. For example, fear of the internet was commonly rooted in a fundamental lack of understanding of what the internet was and how to use it, while affordability concerns, particularly for women, were typically compounded by a lack of financial independence and the need for permission from a gatekeeper.

> **"The internet is for intelligent, educated people. Those of us with half knowledge won't use it."**
>
> Female, Potential Adopter, urban, India

> **"I really can't afford it, because I'd get addicted and then spend too much money."**
>
> Female, Potential Adopter, urban, India

Five main barriers to mobile internet adoption can be extrapolated from these concerns (see Figure 11):

1	Fear of the negative side of the web
2	Lack of affordability (actual and perceived)
3	Lack of need and relevance (actual and perceived)
4	Shortage of confidence and digital skills
5	The need for permission from gatekeepers

The first four barriers apply to both men and women, although women often feel them more acutely than men. The fifth barrier applies almost exclusively to women, as men rarely have to ask for permission to use the internet and did not feel they had to justify their use of mobile internet to others, except in some instances to their wife or parents.[39] For the most part, if men saw value in accessing the internet and were able to afford a phone, they were typically able to begin using it. The barriers for rural and urban Potential Adopters were very similar, but some were felt more acutely by those in rural areas, particularly lack of affordability and confidence/digital skills, and, for women, permission from gatekeepers.

Figure 11

Barriers to mobile internet use for Potential Adopters

Potential Adopters report many related concerns about using mobile internet. These can be grouped into six themes:

Five clear barriers to adoption

Smartphones are too expensive	Data costs easily get out of hand	I'm happy as I am, I have all I need

'I CAN'T AFFORD IT' **'I DON'T NEED IT'** **'I'VE NO TIME FOR IT'**

I'm happy as I am, I have all I need | I can get the same benefits for free elsewhere | I'm too busy to learn the internet | I've got no spare time to use the internet

We don't have spare money as a family | I can't / won't ask for money for myself | I can ask other people for information | I don't know what people do on it, or what I'd do | I'd end up spending too long on it | My children will suffer if I am always on it

My husband thinks women don't need it | My husband says we can't afford it | I don't know anything about it or how it works | It's difficult to learn, no one to teach me | It's not safe – you can fall victim to crime | It's full of inappropriate content

'I'M NOT ALLOWED IT' **'I DON'T UNDERSTAND IT'** **'I'M SCARED OF IT'**

My husband thinks I would waste time on it | My community / culture frown upon me having it | I can't read / don't understand English | I don't think I could work a smartphone | It's dangerous for children to be around | It's addictive

Fear of the negative side of the web

Lack of affordability (actual and perceived)

Lack of need and relevance (actual and perceived)

Shortage of confidence and digital skills

The need for permission from gatekeepers

= predominantly an issue for women

39. Primarily in Pakistan.

INDIA: VODAFONE'S SMART SNEHIDI

Launched in 2017, the Smart Snehidi programme seeks to improve access to internet-enabled smartphones among low- and middle-income female micro-entrepreneurs. The programme is led by Vodafone and Hand in Hand (HiH), a non-profit organisation, which assists women to build microenterprises, access finance through self-help groups (SHGs), and to learn digital skills. As a partner in Smart Snehidi, HiH facilitates microfinance loans for smartphone purchase among members of its SHGs and trains women to use these devices in their businesses. Vodafone works with HiH to ease financial barriers through attractive talk time and data plans. The Smart Snehidi programme is accessible only to members of HiH SHGs who earn at least INR 2000 (or ~$31) per month. As of April 2017, the programme has enabled 2,500 women to access smartphones in 3 districts across Tamil Nadu, India, with an ambition of enrolling 50,000 women across 19 districts of Tamil Nadu within the next three years.[40] Smart Snehidi has been particularly appealing as it tackles two key barriers—handset price and digital literacy—which makes internet affordable as well as unlocking how to use it. The programme has demonstrated that addressing handset price is key (few will really consider the internet until reassured on this) and combining this with training could have a significant impact.

1   Fear of the negative side of the web

As mentioned earlier, many Potential Adopters were very aware of, and perhaps exaggerated what they perceived as the negative side of the web, feeling that *'I can't control it and I can't trust it'*. These fears primarily revolved around:

- The belief that the internet is **hard to control** due to its perceived addictive qualities, control over time (becoming distracted from chores or studies), control over finances (spending more money than planned, which also feeds the perception that the internet is unaffordable), and control over what content you (or family members) are exposed to.

- **Risk to personal safety:** These are widespread fears, including unsolicited exposure to explicit or shocking content (especially worrisome when thinking about their children), cyber harassment from strangers, identity theft, misuse of photos, or even being radicalised by terrorists.

- **Potentially damaging to relationships:** The internet is perceived as damaging to relationships in several ways:
  - As a way to conduct inappropriate relationships;
  - Loss of interest in face-to-face interaction; or
  - Men's fear of losing influence over their wives. Some husbands worry that women might be 'radicalised', start questioning the status quo or, at the very least, neglect their chores and pay less attention to them and their children.

These worries inform all the other barriers, and are exacerbated by a lack of digital skills, which typically help users feel more in control, use security settings, and navigate more safely. They are also part of the underlying reasons why women find they need permission from gatekeepers to use the internet and can make the internet seem less relevant to their lives.

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40. GSMA, 'Accelerating affordable smartphone ownership in emerging markets', July 2017, https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2017/07/accelerating-affordable-smartphone-ownership-emerging-markets-2017.pdf

(2) Lack of affordability (actual and perceived)

Even though Potential Adopters had sufficient funds to own and use at least a basic mobile handset, smartphones remain prohibitively expensive for many, despite declining prices. While handset and data costs were two of the most frequently cited barriers, the very real obstacle of cost was magnified by misconceptions about price. Potential Adopters often overestimated the cost of smartphones and had very little understanding of how megabytes and gigabytes related to actual usage.

Many were also concerned they would not be able to control their spending on data, both because they were unsure how much data was used by different tasks, and anecdotes about the unreliability and unpredictability of data usage were common, with many respondents claiming their data would disappear seemingly at random. New Users managed this concern by buying small data packs rather than larger, more cost-effective ones. This fear of uncontrollable spending on data is an example of a barrier to usage grounded in reality, but which has a disproportionate impact on less confident prospective customers.

(3) Lack of need and relevance (actual and perceived)

While all Potential Adopters had a basic awareness of the internet, misconceptions and a lack of understanding about what the internet was and the benefits it offered, were rife. Combined with concerns about the affordability of mobile internet, participants felt *'it is not a good use of my money or my time'*. There was a strong feeling among Potential Adopters

that the internet was *'not for somebody like me'*. A common explanation among men was that they did not feel a need to access the internet. While many were aware that friends were using the internet, they drew a distinction between themselves and users, stating that they did not see any pressing needs or gaps in their lives that the internet would fill.

Therefore, many did not see the internet as relevant, and some even considered it a time waster because they had little exposure to constructive use cases in their social circle.

Indeed, many Potential Adopters, particularly women, cited lack of time as a barrier to use, both the time it takes to learn to use the internet and the time spent using it. Using mobile internet was also sometimes seen as something that could be a distraction from chores.

> **"How will my mother-in-law react if I get distracted by the internet whilst my work stands idle?"**
>
> Female, Potential Adopter, urban, India

Some Potential Adopters did not feel the need to use mobile internet for tasks they were already performing offline (particularly in rural areas). For example:

- Keeping in touch via voice calls, SMS, or meeting face-to-face
- News from TV, newspapers, or village talk
- Finding fashion, beauty, and recipes in women's magazines and TV shows
- Being entertained by TV, social functions, trips, visiting friends and relatives, family time
- 'Sideloading' – sharing content between devices (often with Bluetooth or SD cards), such as TV, movies, music, explicit content from friends or top-up shops (particularly common in India and Bangladesh)

4 Lack of confidence and digital skills

Potential Adopters often exaggerated the difficulty of learning to use mobile internet, which was linked to concerns about control and staying safe online, combined with a general lack of confidence (driven largely by a lack of understanding) about:

- Not knowing, and hence not being able to control, the cost of certain online tasks;
- Feeling embarrassed by their lack of understanding and not wanting to ask for help (particularly men); and
- The dominance of English-language content which, in addition to contributing to the idea that the internet is 'for the educated' and not appropriate for people like them, made Potential Adopters feel they could not learn how to use it.

This lack of confidence tended to be exacerbated for women and rural Potential Adopters, as they tended to have less exposure to the mobile internet and, for women especially, fewer people to ask for advice on how to use it.

However, New Users reported that once they began using the internet, learning basic skills had not been particularly difficult, especially once they had found someone who could teach them. When it came to concerns about the lack of content in their local language, Potential Adopters generally felt they would be able to overcome this barrier, particularly after they had seen others using the internet. Some even saw it as an opportunity to improve their English skills.

> **"If you don't have proper English, it can be a barrier... everything is in English. It would be good if there's something in Sinhala."**
>
> Female, Potential Adopter, rural, Sri Lanka

> **"Even with no English, I think they will understand. I do not think it's a barrier. She will understand less, but can overcome it."**
>
> Male, Potential Adopter, rural, Bangladesh

(5) Permission from gatekeepers

A major practical barrier to women accessing the internet was the need to get permission from gatekeepers (predominantly husbands, but sometimes parents and in-laws). This was primarily due to gatekeepers being concerned that women are easily influenced, which, combined with the perceived threat of the negative side of the web, resulted in the gatekeeper being fearful that the family's reputation would be put at risk by women's use of the internet. To compound matters, as female Potential Adopters typically did not have the financial autonomy to purchase phones or data on their own, they needed to ask gatekeepers for money to do so. In a typical household, men gained access to the internet first. If a husband was not yet online, it was almost impossible for his wife to access the internet.

Some women in the Potential Adopters group felt they might be able to persuade their husband, but were unwilling or not motivated enough to have that conversation. Many women felt that asking for access for themselves was inappropriate, or they would be seen as spending money without considering the needs of the family, making them seem less 'respectable'.

This was a key barrier for women in all markets except Sri Lanka.

> **"We can ask, but realistically it's a male dominated society, and whatever our husbands say, we have to agree with."**
>
> Female, Potential Adopter, urban, Bangladesh

INDIA: GOOGLE INTERNET SAATHIS

Launched by Google India and the Tata Trusts Collectives for Integrated Livelihood Initiatives, Google Internet Saathis addresses the digital gender gap in India by facilitating digital literacy among rural women. The programme trains women to become master trainers, or "saathis" (companions), who are given a smartphone or tablet and a bicycle to help women in their villages experience the benefits of the internet. The programme includes an awareness module and a hands-on training module using mobile devices in local languages. Sessions cover a wide range of topics relevant to women. By August 2017, 100,000 villages across 10 states were reached through 25,000 Internet Saathis. Almost 90 per cent of the women who attended the training reported having a better understanding of the internet.[41] The training is particularly appealing as it is offered for women by women in their own villages, and is therefore deemed safe for women to attend. This "no strings attached" educational programme has appeal to those who wanted to find out more about the internet without the obligation of buying a phone.

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41. Google Blog, 'Empowering women in 100,000 villages with Internet Saathi program', 2 August 2017, https://india.googleblog.com/2017/08/empowering-women-in-100000-villages.html (research by IPSOS).

Ranking barriers by importance

The barriers identified in the research were the most important ones in all four countries surveyed, but they varied by market, making a precise regional ranking impossible. However, a qualitative ranking of barriers by their impact on adoption by Potential Adopters could be done for each country (see Figure 12).

Figure 12

Qualitative ranking of barriers to mobile internet use for male and female Potential Adopters, by country

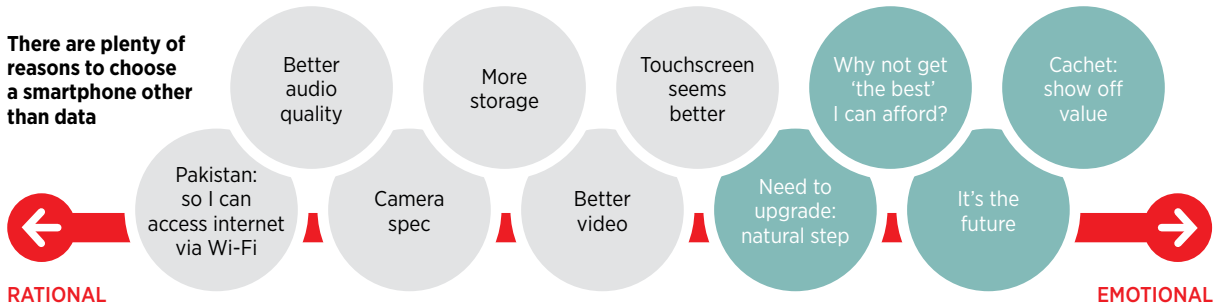| Pakistan	Bangladesh	India	Sri Lanka
Fear of the negative side of the internet: not suitable for women	Lack of affordability: actual handset price	Lack of need and relevance: lack of time to access	Lack of affordability: perceived handset price
Permission from gatekeeper	Lack of affordability: perceived handset price	Lack of affordability: actual handset price	Lack of affordability: actual handset price
Fear of the negative side of the internet: concerns around safety, content and identity	Lack of need and relevance (perceived)	Lack of affordability: perceived handset price	Lack of need and relevance (perceived)
Lack of need and relevance: Wi-Fi / fixed connection available	**Permission from gatekeeper**	Shortage of confidence and digital skills	**Fear of the negative side of the internet:** concerns around safety, content and identity
Lack of affordability: perceived handset price	Shortage of confidence and digital skills	**Fear of the negative side of the internet:** concerns around safety, content and identity	**Fear of the negative side of the internet:** risk of overuse / addiction
Lack of affordability: actual handset price	**Fear of the negative side of the internet:** concerns around safety, content and identity	**Permission from gatekeeper**	Shortage of confidence and digital skills

= barriers that primarily affect women

= barriers that primarily affect men

Figure 13

Reasons for purchasing a smartphone (other than wanting to use mobile internet)

There are plenty of reasons to choose a smartphone other than data

RATIONAL

Pakistan: so I can access internet via Wi-Fi

Better audio quality

Camera spec

More storage

Better video

Touchscreen seems better

Need to upgrade: natural step

Why not get 'the best' I can afford?

It's the future

Cachet: show off value

EMOTIONAL

NOT ALL SMARTPHONE OWNERS ARE MOBILE INTERNET USERS

According to independent research, around 30 per cent of smartphone owners in Pakistan, Bangladesh, and India have never used the internet on a phone.[42]

There are a multitude of reasons why a Potential Adopter may own a smartphone but not use the mobile internet, ranging from emotional (wanting the 'best' phone they can afford as a status symbol) to more rational (wanting a phone with a great camera) (see Figure 13). These smartphone owners appear to be in a strong position to start using mobile internet. Not only has the handset affordability barrier been removed, but they also tend to be more digitally literate (at ease with touchscreens) and have been exposed to pre-loaded apps.

For Potential Adopters, the key remaining barriers tend to be:

- **Digital literacy:** Just because someone can use a smartphone does not mean they know how to use the internet on it.

- **Perceived lack of need:** Due in part to not being truly aware of the potential of the internet and relevant use cases, as many felt they could do what they needed offline (e.g. by sideloading content).

- **Entrenched perceptions of the risks of the internet:** They do not see the benefits outweighing the risks.

- **Permission and financial support** from gatekeepers, particularly for women.

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42. The Financial Inclusion Insights Program, InterMedia, 2016. Exact figures were 31% in Bangladesh 28% in Pakistan and 30% in India. Survey sample size: Pakistan = 6,000, Bangladesh = 6,000, India = 45,540.

HANDSET COST IS A CRITICAL BARRIER TO MOBILE INTERNET ADOPTION FOR MANY CONSUMERS IN EMERGING MARKETS

A recent research report by the GSMA Connected Society and Connected Women programmes explores the current state of smartphone affordability. Regions that are home to the majority of the world's poor are also those lagging behind the most in smartphone adoption. South Asia has adoption levels of 30 per cent, much lower than the 50 per cent global average.[43] High rates of poverty and income inequalities make handsets unaffordable for many. In India, over half the population live in multi-dimensional poverty,[44] and an average-priced smartphone can cost up to 16 per cent of the annual income of poor and low-income groups.[45] The GSMA estimates that over 134 million people in India are unable to afford one of the cheapest internet-enabled handsets on the market because it exceeds the affordability threshold of 5 per cent of income.[46,47]

The perceived 'value for money' of handsets is determined not only by the price of the device, but also by handset quality and an understanding of the benefits of ownership. Lowering smartphone prices alone may not be sufficient for all consumers in making them seem affordable. An understanding of relevant online use cases is important for consumers for them to justify their investment in a smartphone. As well as this the research revealed that many consumers were concerned about the quality of the handset and some were suspicious of lower cost models, fearing them to be a poor investment. For men in particular, the brand of handset was also an important consideration in the purchase decision, and some would rather buy a second-hand phone if it meant they could afford a better brand.

Some preferred to wait and save up to get a smartphone to use the internet, rather than settling for a cheaper feature phone. Many also exaggerated smartphone costs, which led to people thinking they could not afford one even if they could. (Potential Adopters in Bangladesh believed the cheapest smartphone cost 7,000 Tk, with 'quality' handsets costing up to 40,000 Tk. However, it is now possible to get a lower-end smartphone from around 3,000 Tk in Bangladesh, a price some of the respondents believed to be affordable). The *Accelerating Affordable Smartphone Ownership in Emerging Markets* report also outlines models and recommendations for how mobile operators and partners can improve smartphone penetration in their markets. Additionally, the study explored how – for much of the population in low- and middle-income countries – the cost of even the cheapest internet-enabled handsets represent a prohibitively large portion of their income. See the example of Bangladesh and India below.

Download the report here: *Accelerating affordable smartphone ownership in emerging markets*
https://www.gsma.com/mobilefordevelopment/programme/connected-women/accelerating-affordable-smartphone-ownership-in-emerging-markets

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43. GSMA Intelligence, 2017.
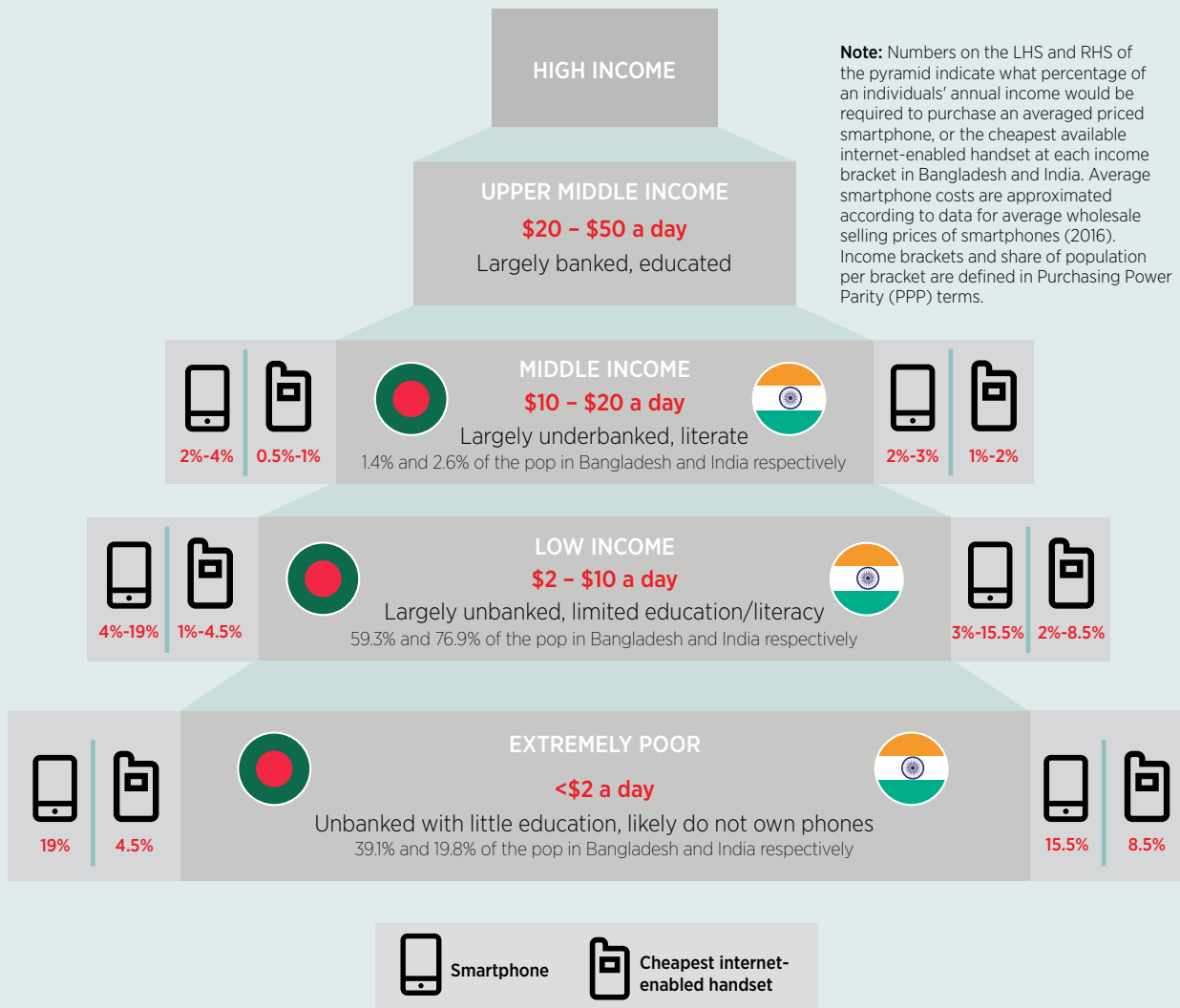44. UNDP (2016), "Human Development Report 2016".
45. Strategy Analytics (2017), "Global Handset ASP & Revenue Forecasts by 88 Countries: 2012 to 2022".
46. GSMA Connected Society and Connected Women (2017), "Accelerating affordable smartphone ownership in emerging markets".
47. Recent shifts in handset pricing in the Indian market, such as the announcement of the JioPhone, are not accounted for in this calculation and are likely to reduce this number.

Income pyramid showing percentage of income required for a device, based on average smartphone prices and cheapest available internet-enabled handset in Bangladesh and India (2016)

Note: Numbers on the LHS and RHS of the pyramid indicate what percentage of an individuals' annual income would be required to purchase an averaged priced smartphone, or the cheapest available internet-enabled handset at each income bracket in Bangladesh and India. Average smartphone costs are approximated according to data for average wholesale selling prices of smartphones (2016). Income brackets and share of population per bracket are defined in Purchasing Power Parity (PPP) terms.

HIGH INCOME

UPPER MIDDLE INCOME
$20 – $50 a day
Largely banked, educated

MIDDLE INCOME
$10 – $20 a day
Largely underbanked, literate
1.4% and 2.6% of the pop in Bangladesh and India respectively

2%-4% 0.5%-1%   2%-3% 1%-2%

LOW INCOME
$2 – $10 a day
Largely unbanked, limited education/literacy
59.3% and 76.9% of the pop in Bangladesh and India respectively

4%-19% 1%-4.5%   3%-15.5% 2%-8.5%

EXTREMELY POOR
<$2 a day
Unbanked with little education, likely do not own phones
39.1% and 19.8% of the pop in Bangladesh and India respectively

19% 4.5%   15.5% 8.5%

Smartphone   Cheapest internet-enabled handset

Tarifica pricing data for cheapest internet-enabled handset available via mobile operator channels, 2017; Strategy Analytics. "Global Handset ASP & Revenue Forecasts by 88 Countries: 2012 to 2022", 2017; Pew Research Centre. "A Global Middle Class is More Promise than Reality" 2015.

THE IMPORTANCE OF DIGITAL SKILLS

As digital products and services become central to people's lives, the ability to understand, use and create them has become increasingly important. Ultimately, the internet will only be able to drive socioeconomic development once people have the digital skills to capture and create value from it. Supporting the development of these skills should therefore be a priority for governments and organisations in low- and middle-income countries. Unless this happens, it is possible that existing inequalities will be magnified rather than reduced.[48]

The term 'digital skills' (or digital literacy) is a multidimensional concept encompassing capabilities in a variety of areas, such as the ability to find and interpret digital data and information, communicate with others online, or create digital content.[49] Given the breadth of skills covered by the term, it is useful to distinguish between 'basic functional' digital skills (e.g. knowing how to use a touchscreen device), 'generic' digital skills (e.g. using specialist software for work) and 'high-level' skills (e.g. the ability to create apps).[50]

While all these areas are important, a lack of basic functional skills is currently one of the greatest barriers to internet adoption in developing economies. Previous GSMA Connected Society and Connected Women consumer research in Asia has shown that many ordinary users lack the skills or confidence to discover what is available on the internet, or the motivation to progress to more valuable uses (such as using the internet for education or employment).[51] A 2015 study found that many mobile internet users were unable to expand their usage beyond the few applications they were already familiar with. Crucially, women experience these issues more acutely than men due to a lack of opportunities to 'trial' services, a greater fear of losing money by experimenting, and a greater perceived lack of value or incentive to learn.[52]

To help address this shortfall in basic digital skills, in 2016, the Connected Society team created the Mobile Internet Skills Training Toolkit (MISTT), a set of resources for organisations (including MNOs) interested in conveying the fundamentals of using the internet. Originally developed in India with Idea Cellular, Telenor and Digital Empowerment Foundation, our user research showed that rather than starting from first principles, it would be preferable to develop a toolkit that would provide users with a practical, visual introduction to the internet focused on the most popular services. The result was a series of modules centred on WhatsApp, YouTube, Google (as well as safety and cost). In June 2017, MISTT was localised in Rwanda by Tigo, where over 300 agents received training as part of a pilot.[53] Over the course of 2018, additional modules and languages will be added, with rollouts planned in other markets.[54]

To access the Mobile Internet Skills Training Toolkit, please visit:
https://www.gsma.com/mobilefordevelopment/programmes/connected-society/mistt

48. For further discussion, see World Bank, "World Development Report 2016: Digital Dividends".
49. The EU's DigComp 2.0 is probably the best-known framework for understanding these different competencies.
50. See more in Broadband Commission (September 2017), "Working Group on Education: Digital Skills for Life and Work".
51. See: GSMA and Mozilla (July 2015) "Approaches to Local Content Creation: Realising the Smartphone Opportunity GSMA, and Mobile internet usage challenges in Asia – awareness, literacy and local content".
52. GSMA Connected Women and Connected Society, Accelerating Digital Literacy: Empowering Women to use the mobile internet
53. Results from this pilot will be released later in the year.
54. If you interested in learning more about the MISTT, or are interested in using the resources to train users, please get in touch.

'Sometimes it scares me that the internet world is so huge, I could get lost in it'

Female, Potential Adopter, peri-urban, Pakistan

TRIGGERING MOBILE INTERNET USE AMONG MEN AND WOMEN IN SOUTH ASIA

3.4 The journey to mobile adoption: motivations and influences

MAIN TAKEAWAYS

- Social circles have a major influence on mobile internet adoption for both men and women. It appears the more family and friends are using mobile internet, the more likely they are to use it.

- For New Users, the adoption path differed by gender, particularly as women needed to gain permission to access and use mobile internet while men did not.

> **"I paid a friend to try the internet on her phone. She watched over me, showed me what to do, so I felt safe. By myself, I'm too scared to touch the phone!"**
>
> Female, Potential Adopter, urban, India

For most New Users, mobile phones were the first way they had accessed the internet. While paths to adoption varied between countries, regions and individuals, there were three strong themes:

1 Internet use in one's social circle is key to making the internet more relevant and less intimidating

When discussing their path to using the internet, New Users often described a sense that 'everyone' in their social circle was using it—those in their village, family, friends and especially overseas connections (if they had them). This perception not only increased their own exposure to the internet and its use cases, but also made adoption seem inevitable. Digital skills developed gradually as they watched others in their social circle use mobile internet and experimented with it themselves when they could. Over time, the risks of the internet seemed less imposing.

2 Cost-effective communication is a strong pull to the internet

The desire for connection (especially cost-effective communication) was a major motivation for all New Users. Awareness of Facebook, the ability to share photos, messaging apps, and especially video calling, increased their interest in adoption. For women who may have become disconnected from friends or moved away from family after marriage, reconnecting had particularly strong appeal. Other strong motivations to adopt included staying informed, being seen as 'up to date', fear of missing out and, for men, entertainment and work. Helping children with their schoolwork was also a relatively strong motivation for women in all markets except Sri Lanka.[55]

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55. In Sri Lanka, for both New Users and Potential Adopters concerns about children's exposure to the internet (due to fear of the negative side e.g. cyber bullying, exposure to explicit content and also overuse and becoming distracted from schoolwork) outweighed what they perceived to be the benefit.

(3) Women's paths to adoption are unique as they need their husband's support

For men, awareness of the potential benefits of the mobile internet and being in the right financial position were often enough to stimulate them to adopt. However, most women were unable to independently decide to begin using mobile internet as they needed the support of their husband, both permission and financial.

Female New Users typically pointed to important, selfless tasks to **persuade their husband of the benefit of mobile internet to the household**. A common acceptable use case was to keep in touch with a husband working away from home or abroad via video calls and sending messages. Other use cases that demonstrated the shared value of internet access included using it for work (e.g. sending photos of products they make/sell to potential clients), assisting with their children's schoolwork or providing entertainment for them and, in India, paying bills and buying train tickets.

To overcome gatekeepers' concerns about the risks of exposure to the negative side of the internet, some female New Users willingly 'self-policed' online activity.

This 'self-policing' involved control strategies such as: sharing only family pictures (not them on their own), chatting in small WhatsApp groups (of which they know all the members), not using identifiable profile pictures on social media and only visiting well known sites and asking husbands permission to browse new ones.

Greater phone sharing (as wives or children regularly borrow the husband's internet-enabled handset to go online) sometimes drove a husband to buy another internet-enabled phone. Also, when husbands upgraded their phones, wives often received the old handset, removing a key barrier to data adoption. However, even when they could share their husband's phone, women overwhelmingly preferred having their own connection.

While husbands and social circles were undoubtedly the main influence on women's uptake among New Users, there were other factors as well. The primary influences on mobile internet uptake can be qualitatively ranked by the degree of influence on prospective internet users and the nature of their influence on internet uptake, either by encouraging or discouraging it (see Figure 14).

Figure 14

Influences on women's internet use (consumer perception)
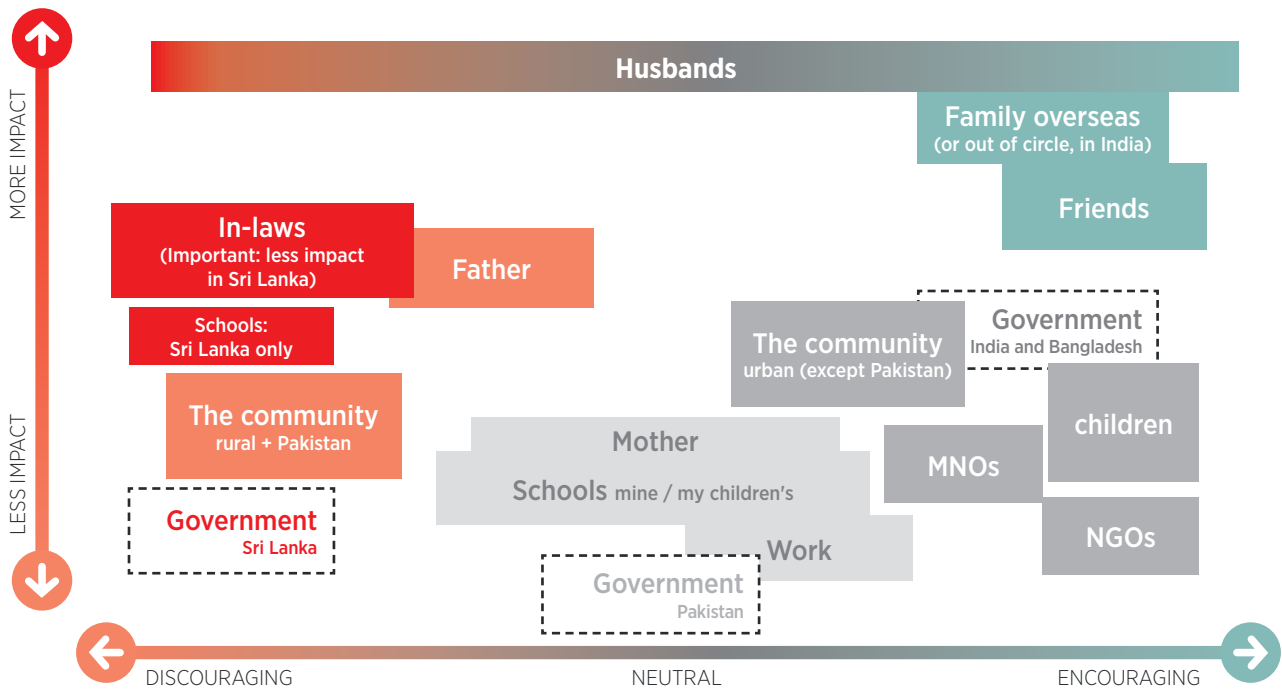
The government in Sri Lanka was seen by respondents as a negative influence due to a recent tax increase, which was widely perceived to have raised prices. In India and Bangladesh, the government was seen as encouraging uptake through digital initiatives, while in Pakistan the perceived influence was more neutral.
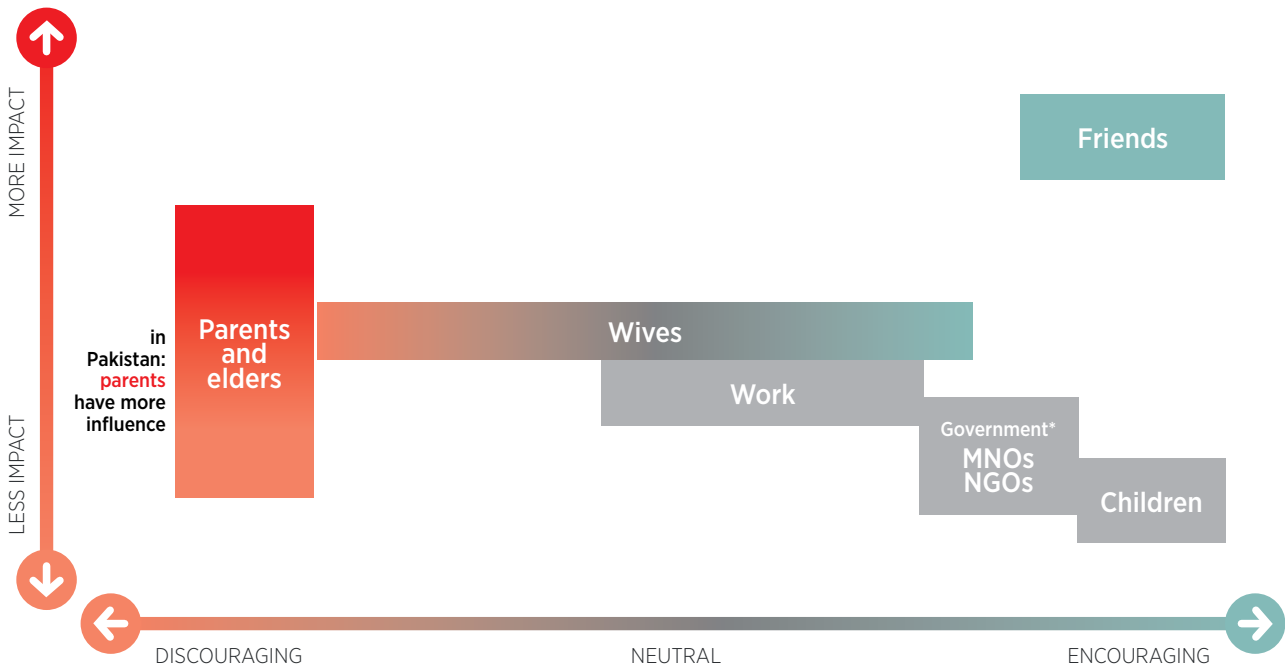
Men rarely need to justify their internet use to others

External influences played a less important role for men than women as they typically make their own decisions. For men, internet use by friends was key to adoption as it not only increased their exposure to (and desire for) the internet, but also gave them a sense they were missing out if they were not using it (see Figure 15). Although they had less need to persuade others of their right to access the internet, the possibility of using the internet for work often helped new adopters justify (to themselves and sometimes wives and parents) the cost of getting online. For example, the possibility of connecting with colleagues or prospective clients or to look for work were all easily understandable and appealing use cases, even for those with limited understanding of the internet (see Figure 16).

Figure 15

Influences on men's internet use (consumer perception)

MORE IMPACT

LESS IMPACT

in Pakistan: parents have more influence

Parents and elders

Wives

Work

Government*
MNOs
NGOs

Children

Friends

DISCOURAGING   NEUTRAL   ENCOURAGING

The government in Sri Lanka was seen by respondents as a negative influence due to a recent tax increase, which was widely perceived to have raised prices. In India and Bangladesh, the government was seen as encouraging uptake through digital initiatives, while in Pakistan the perceived influence was more neutral.

Atif, Gujranwala

Atif lives in Gujranwala, Pakistan. He is married with children and runs his own business selling birds in the market. He is a new mobile internet user and sees his smartphone as a tool for business and entertainment.

Atif uses his phone to take photos of the birds he has for sale and then shares them with potential buyers on Facebook and WhatsApp. He also finds Google and Facebook very useful sources of information on birds. To pass the time at his shop, he likes to watch and share videos and Islamic messages on Facebook, and chat with his friends through mobile apps. At night, he plays online games, that is, unless his wife catches him, because he then has to turn off his phone.

"Initially I had to take all my birds to the shop to sell them, which was very difficult. Now I can take their pictures and send it to different groups to easily make a sale."

"Internet is the best way to reduce boredom. You can find everything you want to do, to pass the time."

Pen portraits represent a composite of findings from respondents, please note all names have been changed.

Figure 16

Qualitative ranking of reasons why New Users adopted mobile internet, by country

Pakistan	Bangladesh	India	Sri Lanka
Video call with family far away / abroad	Video call with family / friends overseas	Communication: chat (WhatsApp), social networks	Communication: chat, social networking (Facebook)
Communication: chat with friends (WhatsApp, Viber)	Communication: chat, social networking (Facebook)	To be modern, developed, stylish; moving with times	Video call with family overseas
Compared to Wi-Fi: cheaper, always available	To be stylish and modern; fit in with friends / others	Desire for access to (global) information on any topic	Work: communication, working more efficiently
Gaining knowledge and information	Encouraged / sent enabled handset by someone abroad	Content curiosity / excitement – video, music	Frustration with household data sharing
Work: promote my business, find new opportunities	Encouraged by husband / child: household decision	Frustration of sharing / net café / no access when husband out net café can also be a trigger for men	Husband proposed it

based on qualitative assessment

communication benefits highlighted in blue

= factors that primarily affect women

= factors that primarily affect men

How New Users overcame barriers to adopting mobile internet

BARRIER	HOW NEW USERS OVERCAME THE BARRIER	IMPLICATIONS FOR HELPING POTENTIAL ADOPTERS OVERCOME THE BARRIER
Fear of the negative side of the internet	For New Users, concerns over the negative or dangerous aspects of the internet were overcome primarily through exposure to the positive and appealing applications of the internet through their social circles. This resulted in perceived benefits outweighing the risks. However, many New Users were still conscious of and concerned by the negative side of the internet and remained cautious online (e.g. only visiting certain sites). New Users, however, appeared to be more liberal and less concerned with the negative side of the internet than Potential Adopters, so this may have been less of a barrier for them.	Potential Adopters need to be more aware of relevant and compelling use cases and the benefits they deliver, as well as advice on how to stay safe online and minimise risks (e.g. education about how to use privacy settings). Potential Adopters may require more reassurance to overcome this barrier and begin using mobile internet than the slightly more liberal New Users did.
Lack of affordability (actual and perceived)	New Users who could not afford an internet-enabled handset found it very difficult to overcome this barrier and mainly relied on being gifted a phone. New Users who had previously over-estimated handset costs normally learned about lower cost options from friends and family. Objections to the cost of data often dissipated when they understood the value they would get from using mobile internet.	For those truly unable to afford an internet-enabled phone, more help is needed from the ecosystem (e.g. creating affordable payment plans). There needs to be more awareness of the true cost of smartphones. Mobile internet needs to be seen as more relevant to strengthen the perception of value for money.
Lack of relevance (use cases and 'lack of time')	New Users had become aware of a use case or service (usually shown to them by a friend or family member) that had tangible benefit (e.g. cheap video calling or use for work, such as a driver using maps). Exposure and experience (nearly always through friends and family) demonstrated how quick and easy it actually was to learn and use the internet. Understanding the relevance of the internet often meant that other barriers fell away (especially for men).	Potential Adopters need to be aware of relevant use cases with clear benefits. Many in this audience need reassurance that the internet does not require a heavy time investment, either to learn or to use.

BARRIER	HOW NEW USERS OVERCAME THE BARRIER	IMPLICATIONS FOR HELPING POTENTIAL ADOPTERS OVERCOME THE BARRIER
Shortage of confidence and digital skills	New Users had been shown by friends or family members what to do. By gaining experience with one app or use case, many New Users were able to develop the digital skills they needed to become more confident in exploring other online activities. Even with just limited exposure to / experience with the internet, concerns about language (not speaking English) were generally dispelled.	Potential Adopters need more information and practical help to develop their digital skills and enable them to start using mobile internet.
The need for permission from gatekeepers	Some female New Users had directly asked gatekeepers for access to mobile internet, emphasising the positive benefits of it rather than the negatives. Other women had to wait to be given access, sometimes when husbands either upgraded their own phone (and gave their wives their old, internet-enabled one) or became frustrated with wives and children borrowing their handsets to access the internet so bought them one that they could use. Women also 'self-policed' their online activity (e.g. only using certain apps) and husbands often monitored their mobile internet use (though not closely).	Gatekeepers, particularly husbands, need to be convinced of the benefits of women using mobile internet, both to themselves and the family. Gatekeepers also need to be reassured that women will not be negatively influenced by the internet.

3.5 New Users: use cases and drivers

- The use cases that originally motivated New Users to adopt mobile internet are not necessarily how they spend most of their time online.

- Communication was the most popular use case, fulfilling needs for connection and helping some to overcome feelings of isolation.

- Video is an important hook; content was considered better, more enjoyable, and more accessible when provided in video.

- Many use cases made day-to-day life easier for New Users or saved money—Potential Adopters were not aware of this and found it hard to grasp even after it was explained.

> **"Without it? ...We'd feel very lonely".**
>
> Female, New User, urban, Sri Lanka

> **"I can know about whole country, whole world, in the palm of my hand. Search for information, get the latest update... it is the big achievement of our time."**
>
> Female, New User, urban, Bangladesh

Above all, the internet provides connection

Many New Users may have justified their adoption of mobile internet with worthier and more socially acceptable use cases, but once they started using it, the majority of their time online was spent on communication.

A broad range of activities were undertaken by New Users, but **connection with others was the primary need the internet fulfilled.** It helped to tackle feelings of loneliness among some New Users, particularly women whose lives became more restricted after marriage or when their husbands were working away.

Communication was the most popular use case for both male and female New Users in all countries. Chatting on messaging apps, IP calling, video calling and sending photos were common activities. A range of apps were used, especially Imo, WhatsApp and Facebook.

Accessing news, entertainment and information were also popular for male and female New Users alike, with Google and YouTube being almost universally popular. New Users tended to feel excited about the 'world of information' the internet represented and feeling 'up to date', educated and informed. Religious and spiritual content held great appeal in Pakistan, India and Bangladesh.

Education for children is another major use case and many parents hated the feeling that their children would be left behind if they did not have access to the internet.

Using mobile internet to save time and make tasks more convenient was something some New Users had discovered since adoption. These tended to be New Users who had been online the longest and were more confident and digitally literate.

> "If I pay my electricity bill online, I don't have to lose time by going to the bank."
>
> Male, New User, rural, Bangladesh

> "The travelling expenses for a shopping trip can be saved if you shop online, and you also spend less time on it."
>
> Female, New User, rural, India

> "I think it's now mandatory. As a parent, it's my responsibility to give internet to my kids."
>
> Female, New User, urban, Bangladesh

Afroza, Kalihati

Afroza lives with her in-laws and daughters in Kalihati in rural Bangadesh. Her husband works in Saudi Arabia. She recently got a smartphone and was thrilled to be introduced to the internet, but her use has stalled at a basic stage.

> "The first time we used Imo, me and my children felt so excited to see my husband, and he was so happy to see us. It was a wonderful experience."

When she got the phone, her brother-in-law installed Imo for her and showed her how to make a video call. Most days, she only turns her data on for an hour in the morning to video call her husband. She is happy that her children get to see their father and that she can now talk to him more frequently.

Afroza has heard that bills can be payed online and thinks this would allow her to manage her family bills from home rather than depend on her husband. However, she doesn't know how to do this and her husband is reluctant to help her.

Pen portraits represent a composite of findings from respondents, please note all names have been changed.

Men are more likely to value work-related use cases

Beyond these popular use cases, browsing habits diverged somewhat for men and women. Content accessed predominantly by women New Users generally reflected their typical status as housewives and mothers: cooking, crafts, health and childcare were common themes.

> "The most important thing was we had no information about personal female problems. Now through the mobile, we can get whatever information we need."
>
> Female, New User, urban, Bangladesh

By contrast, men more commonly cited content relating to work and job seeking. Many respondents (typically men) used the internet to gain a better understanding of prices before selling what they produced—this was particularly common with crop prices for farmers. Additionally, many women expressed an interest in the ability of the internet to increase their earning capacity—particularly by facilitating small home businesses—although this was a less common use case for women than for men. Methods to help save time and money tended to be a higher priority for female New Users versus male ones (see Figure 17).

> "I look for product details, so if I want to introduce something new in the shop, I look up the product, what it costs, what are the pros and cons... and for job search it's so useful."
>
> Male, New User, urban, Bangladesh

Learning new skills gives a sense of accomplishment and independence

Despite expressing interest in education, few used the internet for systematic study or learning. Of far greater interest was building on existing skills that were useful for day-to-day life and made an immediate contribution to earning power. Learning and developing skills independently gave New Users a sense of independence, empowerment and validation that was highly valued. For women, this was strongly manifested when they could contribute to the family by using mobile internet, such as finding information to help with their children's education.

> **"Now recipes are available online. We don't need to be enrolled in cooking classes. All women want to try out new dishes! My daughter also learns with me."**
>
> Female, New User, Bangladesh

Figure 17

Most popular internet use cases for New Users

Biggest use is chatting, calling, and sharing – photos, videos, thoughts, jokes, well wishes, gossip, updates on well being, invites, recent purchases / achievements...
Next: news + information; entertainment – TV, movies, music, stories (India and Bangladesh); and maps (India, Sri Lanka); religious / spiritual engagement (teachings, videos – Pakistan, India, Bangladesh)

Women also mention...

- **Helping with children's schoolwork**
- **Shopping – much more than men**
- **Recipes and food**
- **Beauty tips, hairstyles**
- **Academic results**
- **Arts and crafts**
- **Dance steps**
- **Weight loss tips**
- **'Learning new things': facts, techniques, religious education**
- **Women's health**
- **Stitching patterns**
- **Games**
- **Booking tickets for family trips (India)**
- **Family health (Sri Lanka)**

Men also mention...

- **Use for work** (more so than women)
- **Job seeking** (more so than women)
- **Explicit content**
- **Banking, bill paying** – more so than women

! It is not uncommon for men and women to express the view that **men use the internet for more productive, work-related, 'important' things,** while women for more **trifling,** domestic, casual things

Sumani, Unnao

Sumani is a housewife who lives in a rural village near Unnao, India. She has fully integrated the internet into her daily routine.

She begins each morning by sending a quick 'good morning' WhatsApp message to her group of close friends and then plays religious music on YouTube while she does her chores. When she has some time for herself she searches for jobs on Naukri.com, works on her online flower garland course, or uses Google to prepare afternoon tuition sessions for her two young children. She also uses YouTube to watch religious programmes or to look up new recipes, beauty tips, or mehndi designs.

"In my free time, I read something or make notes for my kid from the internet. I attend courses on the internet, like the flower making course."

Pen portraits represent a composite of findings from respondents, please note all names have been changed.

The importance of video

Across all use cases and markets, video plays a critical role. New Users find video engaging, novel and accessible. Whether video calling, watching news, learning new skills or being entertained via TV and movies, content was preferred when provided in video.

As well as making content more enjoyable, the availability of local language content means video is often more accessible than text-based content. The emotional impact of video content was also far greater, particularly for video calling compared to regular calling, which had near-universal appeal.

"YouTube can show me creative work, craft skills, dance steps, cooking... With YouTube I can follow the steps."

Female, New User, urban, India

BANGLADESH:
GRAMEENPHONE

Grameenphone, the largest telecom operator in Bangladesh, partnered with the Wikimedia Foundation to provide Wikipedia for Grameenphone users free of cost to make information accessible and affordable for those who use mobile internet.[56] Grameenphone is also helping to localise high-quality educational content from Khan Academy for students in Bangladesh. Under the initiative "Localizing Khan Academy", Grameenphone is partnering with Agami Education Foundation (Bangladesh) and Agami Inc. (USA), to translate the Khan Academy platform into Bangla and open the Academy Bangla Live Site.[57]

56. Grameenphone Press Release, 'Wikipedia is now free for Grameenphone users', 10 April 2016, https://www.grameenphone.com/about/media-center/press-release/wikipedia-now-free-grameenphone-users
57. Grameenphone Press Release, 'Grameenphone to localize high quality educational contents of Khan Academy', 9 July 2015, https://www.grameenphone.com/about/media-center/press-release/grameenphone-localize-high-quality-educational-contents-khan

Use cases that are both appealing to the individual and justifiable to others are the most compelling for driving internet adoption

3.6 Potential Adopters require online use cases that deliver rational benefits

MAIN TAKEAWAYS

- Even though they are from a similar socio-demographic background, New Users have made a leap to mobile internet usage that Potential Adopters have not. This is perhaps because Potential Adopters appeared more conservative and more concerned about the negative side of the internet.

- Potential Adopters can see the benefits of using mobile internet, but typically reject what they see as 'frivolous' uses.

- To stimulate adoption, especially for women, mobile internet needs to deliver rational benefits.

> **"When we understand the reason to do it, we'll do it."**
>
> Male, Potential Adopter, urban, India
> (talking about using mobile internet)

Potential Adopters appear to be more conservative than New Users

New Users have made a leap across a digital divide that potential users have not, despite having very similar socio-demographic profiles. The groups project slightly different attitudes, however, with Potential Adopters seeming, on the whole, more conservative and more concerned about the negative side of the internet.

Potential Adopters can see the benefits of using mobile internet

Even among the most cynical, there is a sense that the internet is the future and the next generation will be internet users. For many, the general idea of 'having internet' is desirable and powerful: being up to date and not being left behind. Most felt it was inevitable that they or their children would at some point need to become internet users.

Digging deeper, many women hoped for greater confidence and independence through the internet, including the ability to contribute to their family and provide for their children.

> **"Because I belong to a new generation, my father gifted me a smartphone, my sisters-in-law are from the older generation so they did not have it. But now everyone has it, even kids have multimedia phones."**
>
> Female, New User, rural, South India

> **"We want to learn about the internet… we want to understand this thing our kids are doing."**
>
> Female, Potential Adopter, rural, Bangladesh

Radhika, Dhamal

Radhika is a housewife who lives in Dhamal, India. For her, having access to internet could significantly improve her family's income.

"You can check out the new fertilisers and machinery, new crops to try, all this information is there."

Radhika thinks she can benefit from the internet in many ways. First, she thinks she can use it to learn about healthy food for her children. She also knows she can get information online about farming methods, crop prices and new agricultural machinery, which can help her increase her farm's profits. Moreover, Radhika is good at embroidery and spends a lot of time and money attending classes. If she could look up patterns for blouses online instead, she could use these and save the time she spends going to classes.

She has tried to persuade her husband that she needs internet by arguing it would be used for their children's schoolwork, but he remains stubborn, as he is yet to adopt himself.

Pen portraits represent a composite of findings from respondents, please note all names have been changed.

To stimulate adoption, mobile internet needs to deliver rational benefits

Among Potential Adopters, internet use cases that centred on entertainment (e.g. games or TV content) were rejected as being too 'frivolous'. Instead, what appealed were more meaningful and justifiable uses with rational benefits.

Internet use that helped save time and effort, and potentially money, were seen as beneficial. However, Potential Adopters were often unaware of many of the online activities that New Users were engaging in and it was sometimes difficult for them to grasp that something they perceived as costing them time and money could actually do the opposite. These advantages were not typically identified as major benefits by most respondents.

When asked what would motivate them to adopt, Potential Adopters had a relatively consistent response: information, education for children (less so for Sri Lanka), searching for work or generating household income (mostly men), and video calling (for those with family overseas, this had the emotional benefit of seeing family far away as well as the rational benefit of it being cheaper than standard voice calls).

"I'd like to learn about the internet... so I can talk to my sister with video calls."

Female, Potential Adopter, urban, Sri Lanka

Women especially feel the need to justify adoption with socially acceptable use cases that benefit the entire household (and appeal to them personally)

Chatting and sharing, the most popular use cases among New Users were very appealing to Potential Adopters, both men and women. However, the internet can also be seen as a time waster, so while these uses personally motivated adoption, they were not necessarily the strongest triggers.

Like the women who were New Users, women who were Potential Adopters found that to persuade their husbands to allow them to use mobile internet, they needed to convince them

of the benefit it would bring to the entire household, such as helping with children's schoolwork, learning productive new things (e.g. recipes or health information), or contributing to household income (e.g. through information to improve farming or their cottage industry).

Ultimately, use cases that are both *appealing to the individual* and *justifiable to others* are most compelling.

SRI LANKA: CONNECTED WOMEN

In March 2017, Sri Lanka's Dialog Axiata launched an island-wide programme to reduce the gender gap in mobile and internet use.[58] Linked to the GSMA's Connected Women initiative, this is an ICT awareness programme targeting rural women. By hosting a series of workshops, the programme intends to educate women about the benefits of using the internet for personal development and entrepreneurial opportunities, as well as cyber safety. The programmes outline the benefits of digital inclusion for women, including access to news and education, health and safety information, lifestyle, entrepreneurial opportunities and promoting their business. Another key topic is the responsible and safe use of the internet, including access and safeguards for children and young adults.[59] Dialog will be rolling out further workshops in partnership with the Ministry of Women and Child Affairs.

58. Prism, "Connected Women Initiative gets underway to bridge gender gaps in internet usage", March 2017, https://prism.axiata.com/latest-news/connected-women-initiative-gets-underway-to-bridge-gender-gaps-in-internet-usage.
59. Prism, "Connected Women Initiative gets underway to bridge gender gaps in internet usage", March 2017, https://prism.axiata.com/latest-news/connected-women-initiative-gets-underway-to-bridge-gender-gaps-in-internet-usage.

Sanduni, Anuradhapura

Sanduni is a housewife with two children who lives in Anuradhapura, Sri Lanka. She owns a feature phone, but does not use mobile internet, which she is both curious and uncertain about.

She knows about the internet because her husband has a smartphone and data access and she has watched him using the internet on his phone. She has also overheard people in the village talking about new stitching patterns online, which she finds really appealing because she loves embroidery.

Sanduni thinks the internet is convenient because 'everything's at your fingertips'. She knows she could use it to keep in touch with old friends and to explore new fashion trends. She is not worried about potential internet risks because she would seek her husband's advice on what to do online. However, she is concerned about her lack of education and the fact that they are unable to afford the 12,000 Rs she thinks a smartphone would cost.

"I know about internet from when my husband got a phone, he said you can know these sorts of things. He's told me that you can know anything through the internet."

Pen portraits represent a composite of findings from respondents, please note all names have been changed.

BANGLADESH: INFOLADY

The Infolady initiative is driving mobile internet adoption and use in Bangladesh. iSocial, short for "Infolady Social Enterprise Limited", is a model for empowering communities through female entrepreneurship.[60] Developed by Dnet in 2004, the Infolady model is a "women-for-women" family-based info-preneurship model. The women, known as Kallyani, travel between villages via bicycle equipped with devices (laptop, tablet, smartphone, Wi-Fi hotspot, digital camera) that villagers can use. The women have been trained to provide simple legal and medical advice,[61] supporting marginalised communities to improve their well-being and make informed choices. The women are empowered as entrepreneurs by charging for digital services for their communities, which also provides the programme with a sustainable business model. Over 100 women in Bangladesh have become entrepreneurs through four pilot phases. The Infolady model has served over 450,000 rural residents between 2011 and 2015.

60. Dnet, 'Empowering communities through women entrepreneurship' (accessed Oct 2017), http://dnet.org.bd/page/infolady
61. Apolitical, 'Bangladeshi girls bring villagers the internet by bike', 28 March 2017, https://apolitical.co/solution_article/bangladeshi-women-bring-internet-rural-villages-bikes/
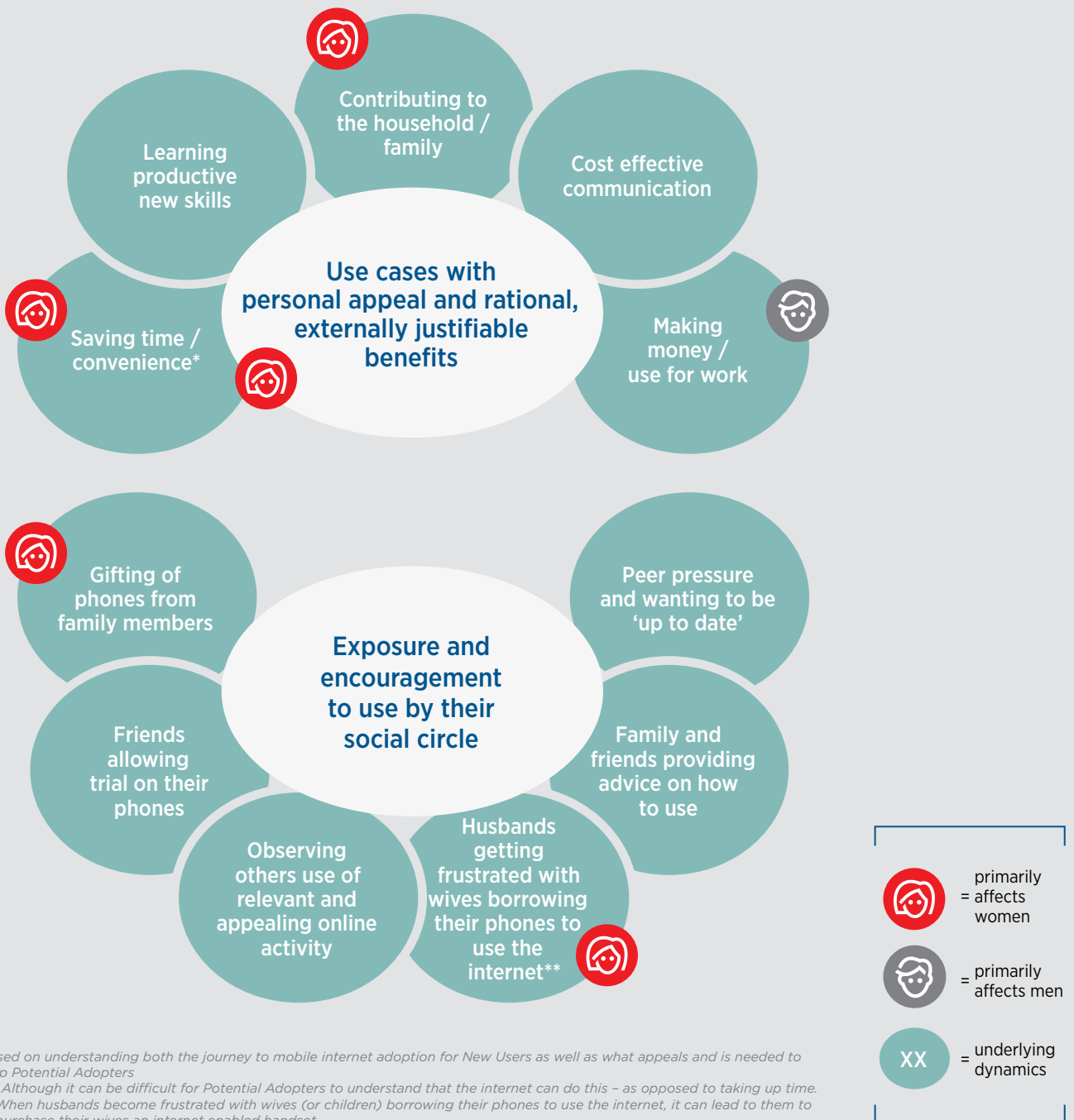
Two clear triggers help Potential Adopters to adopt mobile internet

Combining key lessons from the New Users path to adoption and understanding what Potential Adopters find most relevant and appealing about mobile internet produces two main triggers that can help drive

adoption: 1) Use by others in one's social circle and 2) Use cases that provide both a rational justification and have personal appeal (see Figure 18):

Figure 18

The two main triggers for mobile internet adoption

- Learning productive new skills
- Contributing to the household / family
- Cost effective communication
- Saving time / convenience*
- Making money / use for work

Use cases with personal appeal and rational, externally justifiable benefits

- Gifting of phones from family members
- Peer pressure and wanting to be 'up to date'
- Friends allowing trial on their phones
- Family and friends providing advice on how to use
- Observing others use of relevant and appealing online activity
- Husbands getting frustrated with wives borrowing their phones to use the internet**

Exposure and encouragement to use by their social circle

Legend:
- = primarily affects women
- = primarily affects men
- XX = underlying dynamics

Based on understanding both the journey to mobile internet adoption for New Users as well as what appeals and is needed to help Potential Adopters
*   Although it can be difficult for Potential Adopters to understand that the internet can do this – as opposed to taking up time.
** When husbands become frustrated with wives (or children) borrowing their phones to use the internet, it can lead to them to purchase their wives an internet enabled handset.

3.7 Optimising marketing to drive adoption

MAIN TAKEAWAYS

- Potential Adopters found advertising that included simple, non-technical language and relatable characters the most motivating.

- Ads in English and specific details of data bundles reinforced many Potential Adopters' perception that the internet was too complex for 'someone like me'.

## To appeal to Potential Adopters, marketing should use language and characters they can relate to

Marketing can be a powerful catalyst for any product adoption, but making it effective requires a clear understanding of the target audience, the messages they find compelling, and using effective channels. To understand how current marketing was performing for Potential Adopters, a selection of print ads from different operators, all promoting mobile internet, was shared with them for discussion (see Figure 20). New Users dissected the MNO advertisements relatively confidently, evaluating which they thought were the best deals on data and so on. To aid comprehension and appeal for Potential Adopters, it was found that a different communications approach would be needed (especially with messaging, images and language).

Figure 20

Examples of MNO print advertising promoting the mobile internet
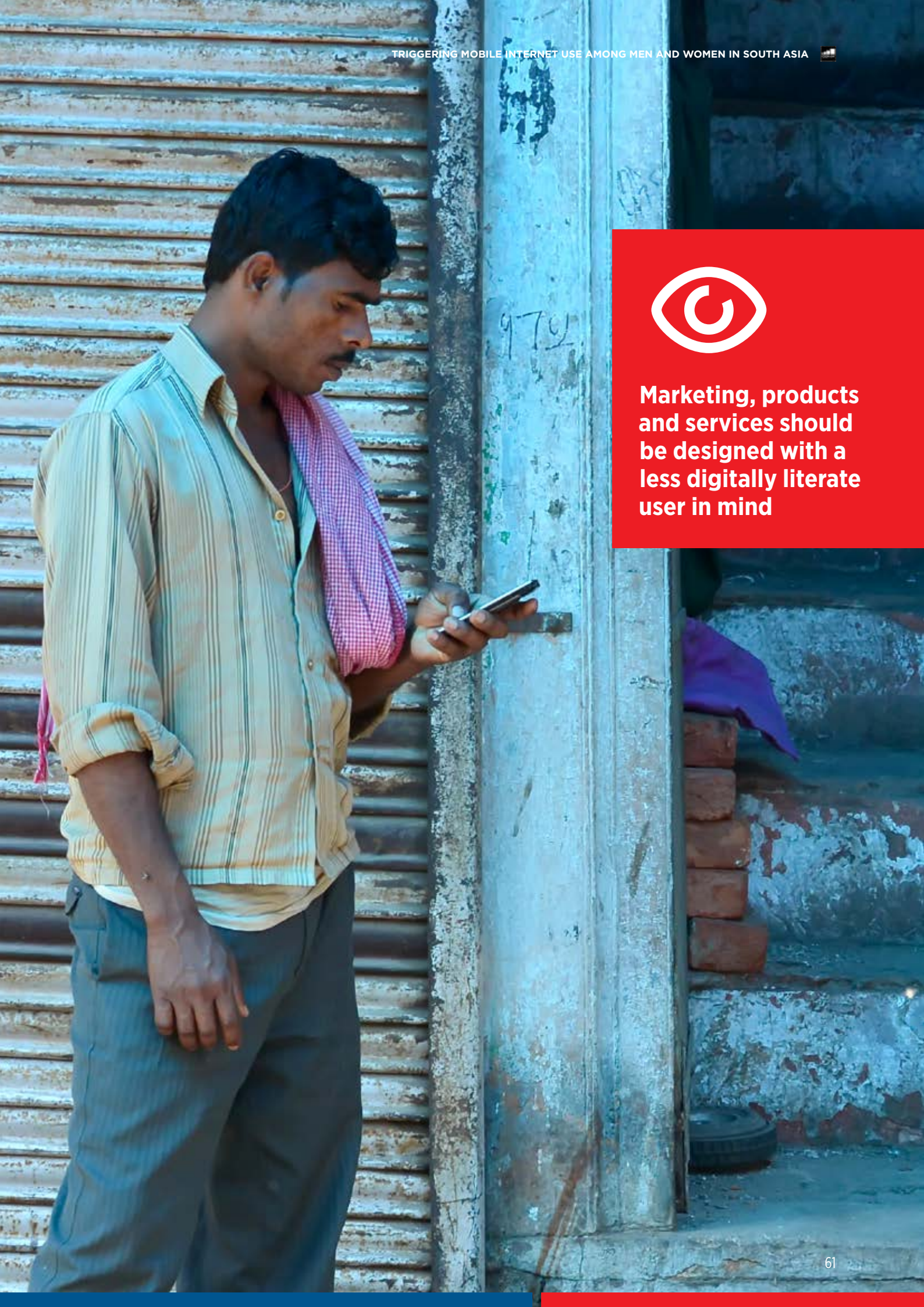
Marketing, products and services should be designed with a less digitally literate user in mind

In all markets, Potential Adopters reported noticing some advertising for mobile internet. However, levels of understanding and what was retained varied depending on the level of exposure (some women do not leave home regularly enough to be exposed to much above-the-line marketing), digital literacy[62]

and other factors. The main media channels Potential Adopters mentioned noticing (for any advertising) were TV ads, newspapers, SMS and top-up cards. There is a tendency among Potential Adopters to only notice data advertising from their own network provider.

What doesn't work for Potential Adopters:

- **'Technical' language** can be off-putting for Potential Adopters. While New Users are responsive to deals and offers, as well as claims on speed and coverage, Potential Adopters need simpler language. Potential Adopters may have heard of MBs, 3G or 4G, but most do not understand them. Ads about Wi-Fi, routers, and home connections also tend not to be understood at all.

- **Ads in English** were not always understood, but they had the effect of reinforcing that the internet was 'not for me'—that it is for more educated professional people.

- **Too much detail** was often overwhelming, especially if combined with technical phrases and ad copy in English.

What does work or could work for Potential Adopters:

- **Relevant use cases** – Ads that clearly communicate use cases that make Potential Adopters feel the internet is 'for me' and would benefit the household.

- **Identifiable characters** – Relatable people (not too aspirational) in positive scenarios help to make Potential Adopters feel the internet is 'for me'. The most positive responses were to print ads showing smiling, 'normal' people, especially families. The relevance of the internet can be conveyed to women in a very direct way by showing women in ads who look like them.

- **Clear messages in the local language** – Analogies were often misunderstood or simply did not resonate. Messages need to be clear and transparent for Potential Adopters to catch the meaning.

- **Transparent pricing and free trials** – The possibility for no or low financial penalty experimentation was well received, and pricing needs to be communicated clearly without too many technical terms.

- **Logos of popular apps and bright colours** can grab Potential Adopters' attention and make the ads more relevant and appealing.

Since Potential Adopters are less internet-aware and easily overwhelmed with technical information, marketing needs to be simple yet relevant, with a clear message about why they should adopt.

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62. All had at least a basic level of literacy.

4. Recommendations

There is a significant opportunity to increase mobile internet adoption in South Asia, connecting millions more to the benefits it can deliver. While Potential Adopters have an appetite for using mobile internet, they also face barriers to adoption and use that are unlikely to be resolved on their own. Urgent, targeted action is therefore required from the mobile industry, policy-makers and other stakeholders to help stimulate adoption and drive digital inclusion. A holistic approach to tackling barriers to mobile internet adoption is recommended—one that addresses a range of barriers and triggers will be most helpful in driving the next generation of mobile internet users to adopt.

Seven recommendations to stimulate mobile internet use among Potential Adopters

The following recommendations are to trigger mobile internet adoption among both male and female Potential Adopters in South Asia. Caution should be taken when extrapolating recommendations to the general population (or other markets), as the relative importance of these suggestions are likely to vary for other groups (depending, for instance, on their social and financial situation), and for some groups additional actions may be needed (e.g. improving 3G coverage).

The seven broad recommendations to drive mobile internet adoption that are listed below are aimed primarily at mobile operators, but will apply to other stakeholders in the mobile ecosystem to some degree. They are relevant for both women and men, but since women often experience the barriers to mobile internet adoption more acutely than men, the recommendations are likely to have a disproportionately beneficial impact on *female* uptake. By focusing on driving adoption for those who require the most support (whether women, the more rural, poorer or less educated), this should also help promote uptake for those who experience the barriers less severely.

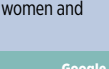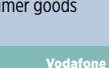|	
1	**Address negative perceptions of the internet,** giving users the tools to feel safe and in control of their online activities, while counteracting the negative press the internet and social media often attracts.
2	**Improve affordability (both actual and perceived) of internet-enabled devices and data.** Ensuring access to smartphones is crucial to drive mobile internet use.
3	**Make mobile internet more relevant and for 'someone like me'** to Potential Adopters, demonstrating the benefits and value for money.
4	**Promote use cases that have both personal appeal and rational, externally justifiable benefits,** as these will persuade Potential Adopters to start their mobile internet journey and help women to convince gatekeepers of the benefits of using it.
5	**Help build confidence and digital skills,** recognising that women may need additional support as they have smaller social circles and therefore fewer people to ask for advice, and tend to have lower levels of digital literacy and confidence than men. Consider leveraging agent networks to help provide education and advice.
6	**Design products, services and marketing with a less digitally literate user in mind,** making the mobile internet less intimidating and more user-friendly.
7	**Leverage social circles, including male gatekeepers,** to facilitate greater exposure to (and hence understanding of) mobile internet, make it easier to acquire digital skills and make the internet seem more relevant (the more friends and family use the internet, the more people there are to share and connect with). Recognise the need to persuade gatekeepers of how internet access for women will benefit to the family, and consider using agents (important customer touchpoints) as an extension of women's social circles.

Converting strategic recommendations into actions

The table below provides examples of potential actions mobile operators could take to implement each of the seven strategic recommendations. Many of these actions are also likely to be relevant to other stakeholders in the mobile industry.

Actions have been categorised into those relating to products and service design, marketing and distribution

Table of recommendations

1. Address negative perceptions of the internet	2. Improve affordability (both actual and perceived) of internet-enabled handsets and data	3. Make mobile internet more relevant and for 'someone like me'	4. Promote use cases that have both personal appeal and rational, externally justifiable benefits
Offer mechanisms to help control data consumption and expenditure: e.g. daily spend limits, warning reminders for data charges.	Design solutions to make internet-enabled handsets more affordable: e.g. microloans, partnerships with low-priced handset manufacturers, instalment plans, repair services, mobile marketplace. **Vodafone Smart Snehidi** See page 34	Research which internet products and services Potential Adopters in your market find relevant and appealing (and which ones they do not), taking gender differences into account.	Analyse existing data on mobile internet use (with a gender lens) to understand which products and services recent adopters of your service are using most.
Consider creating smaller data packs to help control costs and calm fears about over-spending.	Encourage handset manufacturers to continue to lower the cost of smartphones (ideally with long-lasting battery life).	Consider using the local language, not English, for content as well as product and service interfaces.	Design and/or encourage others to design mobile internet products and services that have both personal appeal and rational, externally justifiable benefits, particularly those that help save money or develop productive skills e.g. video calling apps, help with children's schoolwork, health, sewing/embroidery, cooking and crafts.
Design and/or encourage others to design mobile products and services with easy-to-use privacy settings.	Introduce more creative pricing to appeal to the price-sensitive (particularly female Potential Adopters): e.g. creative tariff plans, innovative data packages, bite-sized/on-demand data pricing.	Consider using the local language, not English, in marketing.	Design and/or encourage others to design mobile internet products and services that could help Potential Adopters generate household income e.g. agricultural information for farmers. **Bangladesh Infolady** See page 58
Encourage ecosystem players to design apps that would make Potential Adopters, especially women, feel safer going online e.g. blocking unwanted messages or filtering/removing explicit content. **Hamara Internet** See page 31	Encourage trial of mobile internet products/services at low or no cost through promotional deals.	Show 'real' people in marketing material who look like the audience (or only slightly more aspirational) to make Potential Adopters feel the internet is more 'for someone like me'.	Consider partnering with providers of existing products or services to deliver relevant content. **Grameenphone Bangladesh** See page 53
Provide education about privacy settings (particularly for social media) through marketing. **Hamara Internet** See page 31	Design and/or encourage others to design 'data-light' versions of mobile apps/services (addresses cost barriers and will also benefit areas with poor-quality network coverage).	Use logos of popular apps in marketing that Potential Adopters may recognise, trust and relate to.	Promote, through marketing, products and services that have both personal appeal and rational, externally justifiable benefits e.g. video calling apps, help with children's schoolwork, health, crafts, cooking, etc.
Offset the negative reputation of the internet with positive stories promoting the benefits of mobile internet use.	Tackle misconceptions about the cost of smartphones and data through marketing.	Research which communication channels reach Potential Adopters (by gender) in your market most efficiently: e.g. women are often better targeted via below-the-line activities and 'word of mouth'.	Create incentives for agents to communicate use cases and sell data packs to both female and male Potential Adopters (design packs for which sales and use can be easily monitored).
Consider partnering with an NGO and/or government body to launch public awareness campaigns (including in schools) to draw attention to cyber safety and harassment, raise awareness of ways to prevent and respond to it, and educate people about acceptable online behaviour.	Create incentives for agents to promote mobile internet's value for money and to tackle misconceptions about the cost of smartphones and data.		
Create incentives for agents to help Potential Adopters feel safe online (particularly women, who are more vulnerable to threats and harassment).			

5. Help build confidence and digital skills	6. Design products, services and marketing with a less digitally literate user in mind	7. Leverage social circles, including male gatekeepers
Ensure product/service pilots include groups who are less confident online, including women, the less literate, rural residents, and those with lower education levels.	Pilot and test products and services to ensure ease of use (include female Potential Adopters and those with lower literacy levels in the testing).	Consider targeting male gatekeepers by creating 'his and hers' combo data tariffs or SIM packs, or 'buy one internet-enabled handset, get another half price'.
Support Potential Adopters to learn on their own: e.g. create 'bite-sized' digital skills tips as short videos, which could be put on YouTube, preloaded onto handsets or sideloaded, included in a 'welcome' pack, or played on agents' devices. These videos could also be shared with NGOs that focus on improving digital skills.	Design and/or encourage others to design mobile internet products and services that are user-friendly and meet the needs of Potential Adopters who are less confident and literate: e.g. clear user menus with fewer steps, simplified content (websites, apps), comprehensible terminology, local language, icons/symbols/pictures/comic-style stories as well as (or instead of) text.	Feature families in marketing and focus on the benefits of mobile internet to the family.
Consider offering remote support (e.g. simple online interface) to help with questions about data/apps.	Encourage handset manufacturers to simplify features on internet-enabled handsets, focusing on what Potential Adopters value to improve the user experience.	Target men in marketing campaigns to reach female Potential Adopters in settings where men commonly make decisions about women's access to mobile.
Consider partnering with NGOs or other organisations that have expertise in technical literacy training to teach Potential Adopters to use mobile internet. **Google Internet Sathis** See page 37	Use video as a hook, as it is considered by many to be more accessible than text-based services, especially for the less literate (but always give users the option to play or not, to avoid concerns about data costs).	Consider 'user recruit user' incentive schemes, motivating friends and family to encourage those they know to also adopt mobile internet.
Train and incentivise agents to provide advice on using mobile internet and popular apps. **MISTT** See page 42	Consider 'time-based' or 'service-based' pricing for data packs, not just volume (MB/GB), as these will be easier to understand e.g. one hour of unlimited browsing or 1 day of WhatsApp for $USDxx.	Consider recruiting female agents in settings where female Potential Adopters and their families feel less comfortable interacting with male agents (this will encourage women to top up independently and also ask for advice if needed).
Offer practical training with hands-on-demonstrations via roadshows with specialists. Women training women is particularly well received, even by conservative men. **Dialog Sri Lanka** See page 57	Explain price information clearly, avoiding complex terminology (e.g. "gigabyte") and communicating (or avoiding) 'hidden' fees.	Consider non-traditional agents who are trained to help others use mobile internet, particularly female Potential Adopters who may be more house-bound e.g. roving agents.
Consider letting Potential Adopters 'try before they buy', especially if promoting lower-cost devices that consumers may be more sceptical about e.g. via stalls run by informed agents that can provide advice. For women, locate these stalls in female-friendly areas.	Use simple language in marketing, not elaborate terminology or acronyms. Consider using icons/symbols/pictures/comic-style stories as well as (or instead of) text.	Tap into social circles to recruit/create 'ambassadors' who can teach friends and family how to use the internet and understand the benefit to the household. Particularly important for women as they will usually trust other women and be comfortable learning from them. **Google Internet Sathis** See page 37
	Communicate a clear message in marketing avoiding analogies and too much detail.	Consider using more female-friendly distribution to target female Potential Adopters e.g. local women's group leaders, partnering with NGOs with trusted local networks, female-focused fast-moving consumer goods distribution networks or beauty parlours. **Vodafone Sakhi Pack** See page 25
	Communicate through marketing that the internet is easy and quick to learn.	

Key for categorisation of suggested actions:

Product / Service

Marketing

Distribution

See page XX = an example of an initiative that is featured in the report

N.B. Some mobile operators or industry players may have already partially or fully implemented a number of these recommended actions. In these instances it is suggested that they revisit and evaluate such initiatives in light of the findings of this report and the needs of Potential Adopters

Policy makers have an important role in accelerating digital inclusion

Policy makers also have a role in helping Potential Adopters access the benefits of mobile internet. For example, focused policy intervention and coordination with the mobile industry to improve digital skills, affordability and online safety (e.g. developing legal and policy frameworks to address online harassment), will help to promote digital inclusion. An example of successful multi-stakeholder cooperation is the Broadband Commission Working Group on the Digital Gender Divide, which developed a set of recommendations for action that policy-makers and other stakeholders can take to address the gender gap in internet access and use.[63]

By expanding access to the internet in South Asia for women, the poor, rural inhabitants and the lower educated, millions more will benefit from the opportunities it brings.

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63. The recommendations are categorized into four specific action areas: (1) collect, analyse and track gender-disaggregated data; (2) integrate gender equality targets and key performance indicators into policies; (3) address the barriers women face; and (4) support multi-stakeholder cooperation. Members of the working group have also made concrete commitments to take forward some of the recommended actions. The complete report can be found here: http://www.broadbandcommission.org/Documents/publications/WorkingGroupDigitalGenderDivide-report2017.pdf

5. Appendix
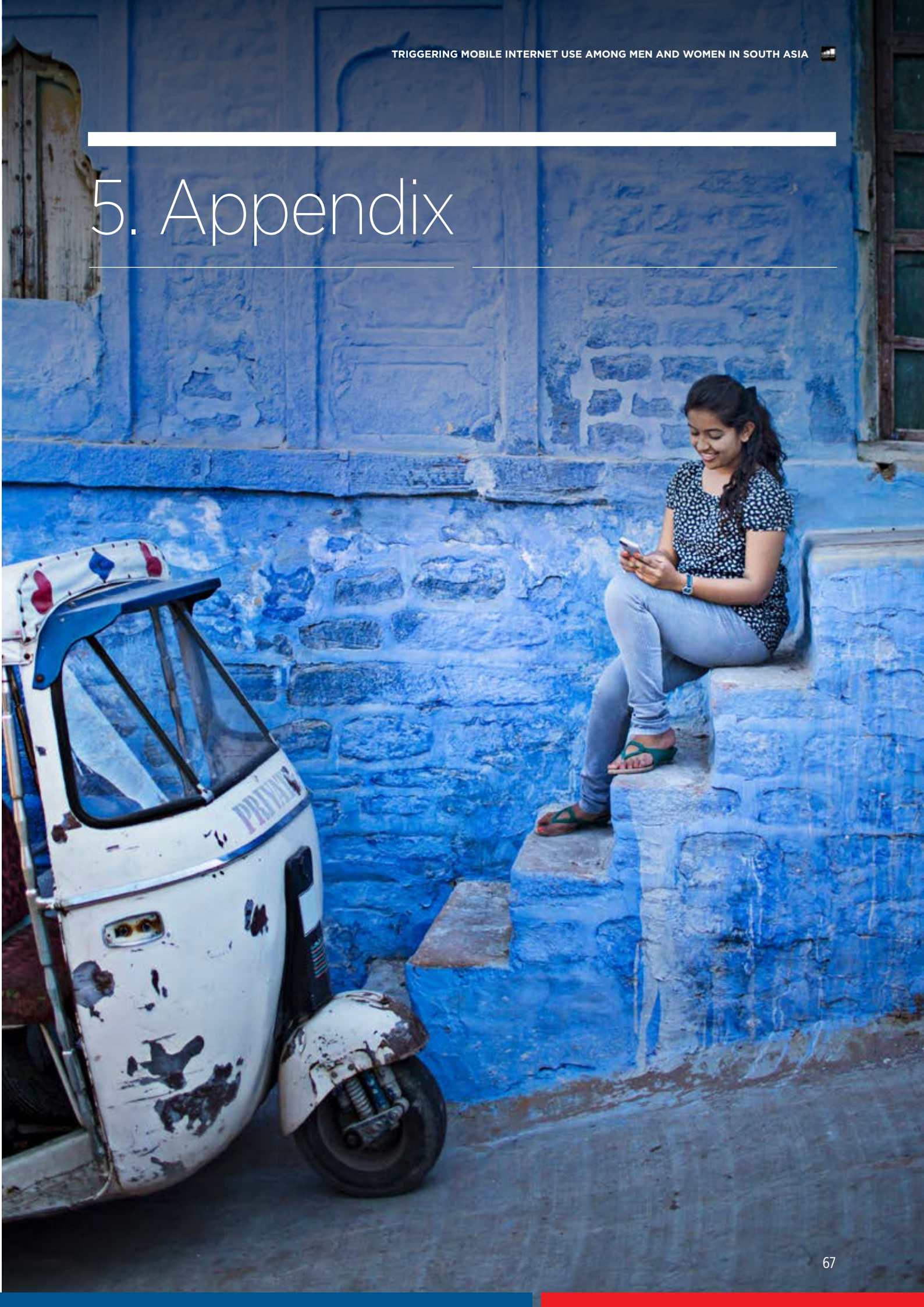
5.a Market snapshots

Market snapshot: **India**

The mobile landscape

India has a competitive and fast-growing mobile market, with unique subscriber penetration of 56 per cent. India's large population makes it the second-largest telecom market in the world by subscriber count. Expanded 3G and 4G coverage and falling handset prices have driven rapid uptake of mobile and internet.

However, cost and cultural barriers have created a wide gender gap in both mobile phone ownership and internet use. Women in India are 59 per cent less likely than men to own a mobile phone, and 69 per cent less likely to have used the internet in the last 90 days.[65]

There is substantial variation in uptake of mobile services within India due to its size and diversity. In more rural areas, there are often more pronounced cultural barriers to women owning mobile phones, creating a much larger gender gap in certain areas of the country.

Overview of social norms for Potential Adopters and New Users

Our research found that the home is seen as the 'safest place' for women in a social environment where sexual harassment is rife. Many women reported regular harassment in public spaces and are aware of a range of threats through stories in the media, ranging from social media persecution to high-profile cases of rape and violent assaults. Mothers-in-law are an especially dominant influence over 25- to 35-year-old women, who seem to be subjected to almost constant monitoring of their behaviour amid fears for the reputation of the family. Nonetheless, Indian women

India[64]	
Population (millions)	1,335
Male literacy rate, 15+	81%
Female literacy rate, 15+	63%
Unique subscriber penetration	56%
Mobile internet penetration	41%
Financial inclusion rate	53%
3G coverage	84%

India: Highest level of education achieved, by gender
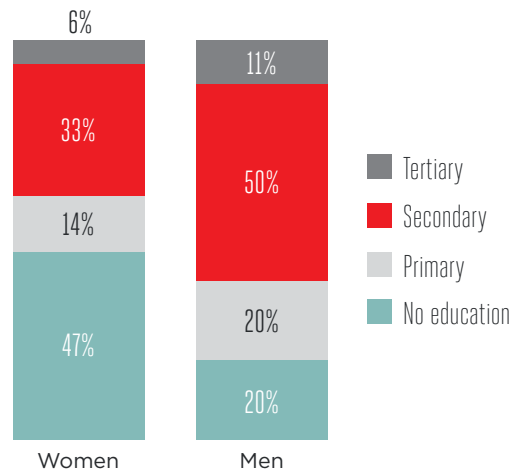
Education 2010, Barro-Lee

often stand up for themselves, appearing to be more confident and willing to challenge social norms than in most other markets (other than Sri Lanka).

The Indian women who participated in the research were hungry for learning and information, and see the internet as part of their personal development and would hate to be 'left behind'.

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64. Sources: UN (population); World Bank (literacy and financial inclusion); GSMA Intelligence Q3 2017 (unique subscriber penetration, mobile internet penetration and 3G coverage)
65. The Financial Inclusion Insights Program, InterMedia, 2016

Market snapshot: **Bangladesh**

The mobile landscape

Bangladesh is a large and fast-growing mobile market, but mobile ownership remains low, with 55 per cent of the population subscribing to mobile services. Smartphone uptake is marginally ahead of India, with 12 per cent of the adult population owning a smartphone.[67]

High population density in Bangladesh makes coverage somewhat less of a barrier to mobile access than in other low-income markets, particularly in rural areas. However, mobile internet uptake remains low, with issues of spectrum scarcity limiting availability and quality.

Bangladesh has a substantial gender gap in mobile access, driven largely by social norms around gender that are prevalent across South Asia. Women in Bangladesh are 37 per cent less likely than men to own a mobile phone.[68]

Overview of social norms for Potential Adopters and New Users

Among the subset of the population we talked to, both men and women accept that their society is 'male-dominated' and fathers and husbands are the ruling force in the home. Nevertheless, cultural norms are perhaps relatively less restrictive for women in Bangladesh than in India or Pakistan. Women's education is held in high regard, which means there is a smaller gender gap in literacy than in India and Pakistan, and more women are in the workforce. There also appear to be fewer concerns about day-to-day harassment than in India, and less of a default assumption that women will be led astray. Social media is also associated less directly with crimes against women, although it is often linked with terrorism.

Bangladesh[66]	
Population (millions)	164
Male literacy rate, 15+	65%
Female literacy rate, 15+	58%
Unique subscriber penetration	55%
Mobile internet penetration	35%
Financial inclusion rate	31%
3G coverage	90%

Bangladesh: Highest level of education achieved, by gender
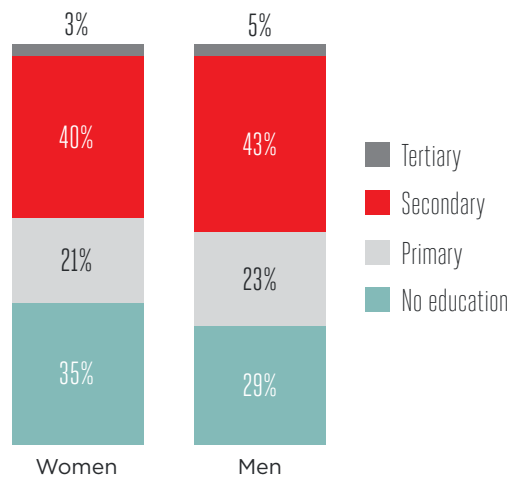
Education 2010, Barro-Lee

Rural economic migration to Muslim countries in the Middle East is common, meaning that many rural women live apart from their husbands and manage their household day to day.

Mobile payments are becoming more popular, and the 'Digital Bangladesh' movement is gaining traction in cities. Urban men and women often sense a push from the government to get people online; women in particular express a desire to be part of this 'digital revolution'. However, this market is distinguished by an urban-rural gap in exposure, awareness and digital literacy, which is wider than in other sample markets, especially for women.

66. Sources: UN (population); World Bank (literacy and financial inclusion); GSMA Intelligence Q3 2017 (unique subscriber penetration, mobile internet penetration and 3G coverage)
67. The Financial Inclusion Insights Program, InterMedia, Wave 4
68. The Financial Inclusion Insights Program, InterMedia, Wave 4

Market snapshot: **Pakistan**

The mobile landscape

Pakistan is one of the less developed telecom markets in South Asia. Unique subscriber penetration remains below 50 per cent of the population, and 10 per cent of the adult population owns a smartphone.[70]

Pakistan also has the largest gender gap in phone ownership of all four markets covered in this report, and indeed one of the largest gender gaps in the world, with women more than 58 per cent[71] less likely than men to own a mobile phone.

The social norms preventing women from accessing technology are pronounced in Pakistan, and access to education is also limited. Female literacy rates in Pakistan are only 43 per cent, compared to 70 per cent for men.
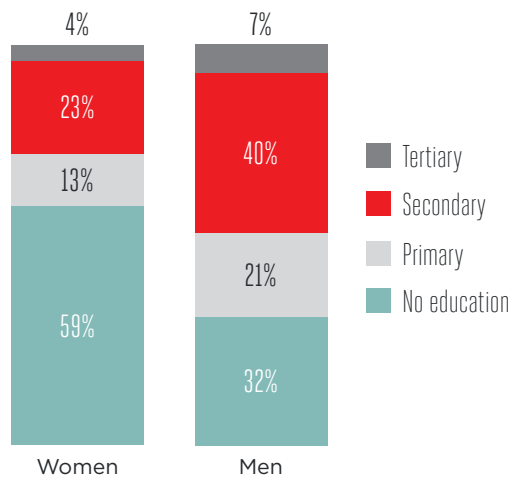
As LTE networks roll out across Pakistan, falling data costs have sparked growing interest in the internet. However, for women, access to the internet and other digital services remains severely curtailed.

Overview of social norms for Potential Adopters and New Users

Of all the markets in the sample, Pakistan appeared to have the strongest social norms preventing women from using mobile. Women reported having little to no freedom, and many were not permitted to leave the house. Yet, in contrast to the other markets, women did not seem to challenge these social norms. Very few would think to ask for a phone or mobile data; this is categorically a decision for the husband to make. Men are the absolute gatekeepers of women's access to technology in Pakistan, and women's access to the internet is often actively resisted by men. Husbands will only allow supervised access for their wives, and retailers will sometimes refuse to sell data to women.

Pakistan[69]	
Population (millions)	195
Male literacy rate, 15+	70%
Female literacy rate, 15+	43%
Unique subscriber penetration	49%
Mobile internet penetration	34%
Financial inclusion rate	13%
3G coverage	76%

Pakistan: Highest level of education achieved, by gender

Education 2010, Barro-Lee

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69. Sources: UN (population); World Bank (literacy and financial inclusion); GSMA Intelligence Q3 2017 (unique subscriber penetration, mobile internet penetration and 3G coverage)
70. The Financial Inclusion Insights Program, InterMedia, Wave 4
71. The Financial Inclusion Insights Program, InterMedia, Wave 4

Market snapshot: **Sri Lanka**

The mobile landscape

Sri Lanka is the most economically developed of the four countries in this report, and has the most mature telecom market. Over 70 per cent of the population has a mobile connection, and literacy is near universal for both men and women.

Equally, smartphone uptake is growing rapidly, with smartphones representing over 46 per cent of connections in Sri Lanka in Q2 2017, according to GSMA Intelligence.

Social norms preventing women from accessing mobile services are also less prevalent in Sri Lanka than in any of the other countries. This is a key reason why the gender gap in mobile phone ownership is lower than other South Asian countries at 12 per cent.[73]

Overview of social norms for Potential Adopters and New Users

Of the four South Asian markets included in this research, women on the whole appeared to enjoy the most freedom in Sri Lanka. With respect to family life and values, couples tended to project a collaborative image, women appear to have a voice in the home, and girls' education seems to be prioritised equally to that of boys. Some women had started using mobile internet purely because they wanted to, without necessarily having to persuade their husbands, which is more the norm for this segment than in the other markets. However, this attitude only related to a minority of liberal women, and is still not the case for most of the women observed in this sample. Especially in rural areas, Potential Adopters still need to provide demonstrable, rational justifications to use the internet.

Some of the risks affecting women elsewhere in South Asia appear to be less severe in Sri Lanka. Women are less concerned about topping up their phones themselves, in part because scratch

Sri Lanka[72]	
Population (millions)	21
Male literacy rate, 15+	94%
Female literacy rate, 15+	92%
Unique subscriber penetration	72%
Mobile internet penetration	42%
Financial inclusion rate	83%
3G coverage	90%

Sri Lanka: Highest level of education achieved, by gender

Education 2010, Barro-Lee
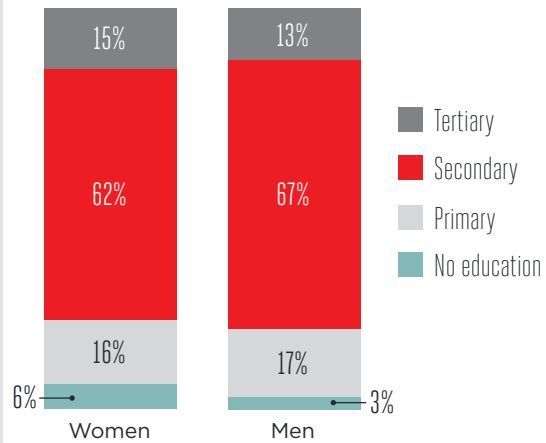
cards are widely available and do not require them to share their number. Concerns about digital identity fraud remain, however, spread through services such as Facebook, as do worries that women might be exposed to inappropriate explicit content.

Sri Lanka appeared more subject to international influences. There were frequent mentions of devices being obtained from family living in the Middle East, and there was comparatively high awareness of handset and other technological developments coming from this region.

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72. Sources: UN (population); World Bank (literacy and financial inclusion); GSMA Intelligence Q3 2017 (unique subscriber penetration, mobile internet penetration and 3G coverage)
73. Gallup Worldpoll, 2015

5.b Research methodology

A qualitative approach helped to go beyond the anecdotal

A qualitative methodology allowed the research to probe below the surface—beyond reported barriers to using mobile internet and perceived benefits, to deeper rational and emotional motivations for adoption.

The approach was to first speak with recent New Users of mobile internet to gain a full picture of how mobile internet fits into their lives, how they overcame barriers to adoption, what their key use cases were, and how they justify the decision to continue paying for and using the internet. These lessons were then discussed with a matched (by sociodemographic profile) sample of non-users, the

'Potential Adopters', to understand, among other things, how relevant and appealing these use cases were for them (see Figure 23).

The research employed several fieldwork methods including focus group discussions, in-depth interviews, written and photographic pre-tasks (respondents were asked to keep a three-day diary of their mobile phone use), home visits and retailer visits. Before fieldwork began, three experts on mobile development or social norms and gender roles in South Asia were consulted as were local mobile network operators (MNOs) (see Figure 21).

Figure 21

The research methodology

Research occurred in four South Asian markets: India, Bangladesh, Pakistan and Sri Lanka (see Figure 22). In India, ten focus group discussions were conducted involving a moderator and six respondents, as well as eight in-depth interviews, all of which included a 45-minute follow-up in-home visit to explore a more ethnographic angle. Half of this fieldwork took place in the north of the country (Uttar Pradesh) and half in the south (Tamil Nadu). Four short telephone interviews were also conducted with women registered with a specific initiative designed to drive internet adoption and

usage. In the other markets (Bangladesh, Pakistan and Sri Lanka), seven focus group discussions and six in-depth interviews were conducted, once again spread between two locations in each market: one a major city and one a more rural location. In Sri Lanka, three in-home follow-up interviews were conducted following some of the in-depth interviews, while two of these visits took place in the other two markets. Local retailers were asked about the shopping behaviour of their customers, and some light-touch ethnographic interviews were conducted in the street with locals.

Figure 22

Research locations

MARKET		URBAN LOCATION	RURAL LOCATION*
India	**North:**	Lucknow, Uttar Pradesh	Badarka village, Unnao district
	South:	Chennai, Tamil Nadu	Dhamal village, Kanchipuram district
Sri Lanka		Colombo	Anuradhapura
Bangladesh		Dhaka	Kalihati
Pakistan		Lahore	Gujranwala smaller urban area, rather than rural

## Selecting the research sample: Potential Adopters and New Users

To understand how to make a difference in the short term, the research focused on how to convert those who appear to be in the best position to become mobile internet users. These 'Potential Adopters' were identified as those living within 3G coverage and who have a phone, with at least basic literacy, and are not 'rejecters' of the internet (see Figure 23).

Potential Adopters were then compared to a group

of recent mobile internet adopters ('New Users') who had the same socio-demographic background to help understand what can spark and maintain mobile internet use. While this group is relatively tightly defined, it is estimated that, together, New Users and Potential Adopters represent roughly 11% of the adult population (11.7 million people) in Bangladesh, 7% (63 million people) in India and 14% (15 million people) in Pakistan.[74]

Figure 23

Defining the research sample: 'Potential Adopters' and 'New Users'
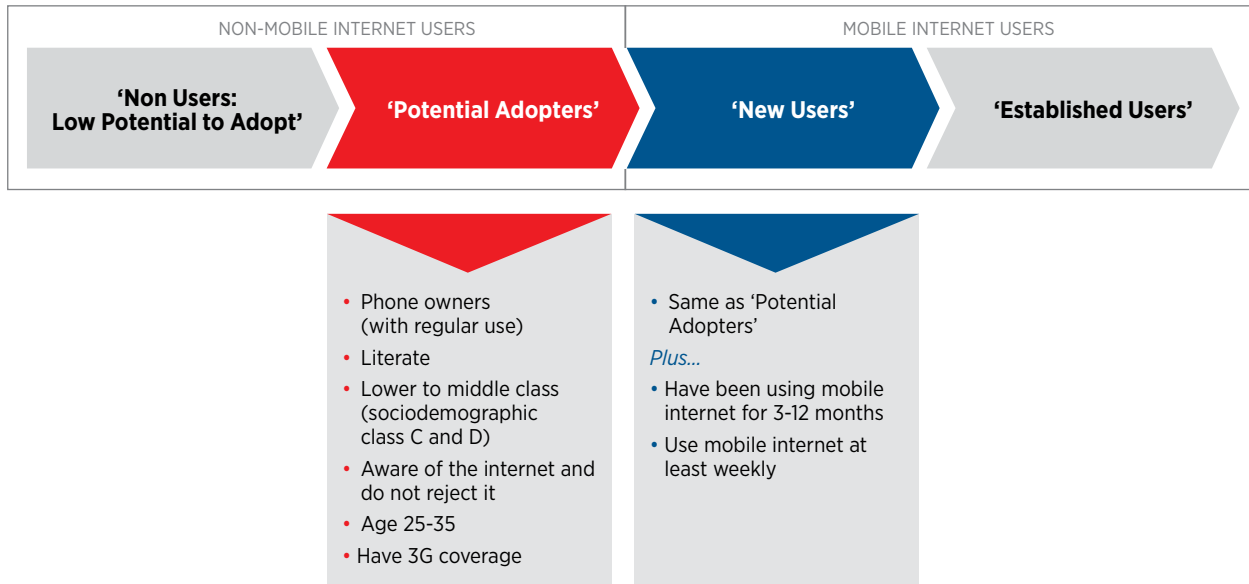
This report focuses exclusively on 'Potential Adopters' and 'New Users', caution should be taken when extrapolating findings to the general population as the relative importance of the findings is likely to vary for other groups in society.[75]

74. FII data, based on those people who are: age 25–35, living above the poverty line ($1.25/day), have basic literacy, have at least some primary school education, own a mobile phone handset and come from a range of professions, including students and housewives but excluding management. Survey sample size: Pakistan = 6,000, Bangladesh = 6,000, India = 45,540. Base used for size of population = age 15+, Population figures and splits are taken from the UN Databank.
75. For example, barriers identified in this report are specific to Potential Adopters and the relative importance of each barrier may vary for other groups, as well as other factors not captured (e.g. the barrier of having no 3G coverage was purposely excluded from this research).

Defining Potential Adopters and New Users

New Users and Potential Adopters were recruited to have a very similar socio-demographic profile (i.e. a matched sample) with the only major difference being whether they used mobile internet or not:

- **Network coverage**
  - All respondents lived in locations with 3G coverage

- **Age**
  - 25–35 (felt to be a key age for adoption of mobile internet as more likely to own a mobile handset (previous studies have shown that in South Asia there are more barriers to phone ownership for those who are younger, particularly for women, e.g. women in South Asia are often not allowed to have a mobile phone until they are married))[76]

- **Socioeconomic class (SEC)**
  - Grade C and D (i.e. lower-middle class), defined using local metrics (those in SEC AB are more likely to have adopted already)

- **Education and literacy**
  - Recruited respondents with a range of education levels, from basic literacy (some primary school) to college graduate level

- **Employment**
  - All men were working, range of professions
  - Women: range of working, students and housewives

- **Handset**
  - All owned their own mobile phone and used it multiple times a week
  - Handset type:
    - New Users: mix of feature and smartphone, heavily skewed to smartphones
    - Potential Adopters: mix of all three handset types (basic phones, feature phones and smartphones)

- **Data use**
  - New Users:
    - Adopted mobile internet in the last 3–12 months
    - Use mobile internet at least once a week
  - Potential Adopters:
    - None to be frequent users of the internet via other methods

- **Internet awareness and openness**
  - All aware of the internet or an internet-enabled service (e.g. WhatsApp), after prompting
  - All open to using the internet at some point in the future, to differing degrees

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76. According to data from the Financial Inclusion Insights program (FII 2016) in Bangladesh, India and Pakistan both women and men aged 25-35 are more likely to personally own a mobile phone. Bangladesh (men 88%, women 58%); India (men 77%, women 41%); Pakistan (men 89%, women 40%).

Figure 24

A breakdown of the sample

	Bangladesh	Pakistan	Sri Lanka	India
Number of respondents	48	48	48	68
GENDER				
Female	27	27	27	42
Male	21	21	21	26
HANDSET				
Smartphone	25	24	25	33
Feature phone	11	17	10	21
Basic phone	12	7	13	14
MOBILE INTERNET USAGE				
User	22	22	22	35
Non-user	26	26	26	33
FAMILY SITUATION				
Married	46	35	34	55
Unmarried	2	13	14	13
0 children	10	16	19	20
1-3 children	38	31	28	44
>3 children	0	1	1	4
EDUCATION				
Primary e-ducation	20	6	0	0
Secondary education	23	40	0	0
Higher education	4	2	0	0
N/A	1	0	48	68

Several recruitment challenges may have influenced the findings

- Pakistan was a more urban sample, and so is excluded from conclusions about urban and rural differences.[77]
- Underrepresentation of working women in Pakistan and Bangladesh due to fieldwork timing and apparently low incidence in locations visited.[78]

- Confusion around handset type owned for some respondents.[79]

77. This was due to safety and logistical concerns. The second location in this market is classified as a 'smaller urban area', and is not an agricultural community.
78. When comparing against national statistics for female labour force participation rates, and considering the specific socioeconomic classes targeted, the resulting sample was felt to be representative. Furthermore, outside of Pakistan (where no agricultural location was visited), it was common for women defining themselves as 'housewives' to participate in unremunerated, home, or farm-based work.
79. As a result, some feature phones were categorised incorrectly as either basic phones or smartphones, due to low awareness of precise internet capacity of feature phones. In this instance, this confusion was a finding in itself; the correct handset classifications were retroactively applied for the analysis.

Social desirability bias affects how social norms are reported

Researching social norms is particularly challenging as responses to questions are often consciously or subconsciously influenced by social desirability bias and a 'research effect'. Some respondents projected liberal or traditional lifestyles and values based on where they were and what they thought the moderators wanted to hear. In more traditional locations, like Lucknow in India, some respondents were keen to assert how liberal they were, while others in India were just as keen to impress how traditional and conservative they were.

> **"Women in the villages can't leave the house and show their face... here in Lucknow, they wear jeans!"**
>
> Male, urban, India

The research deliberately supressed some barriers to mobile internet use

The criteria for selection for the sample deliberately removed some traditionally significant barriers to not only mobile internet adoption, but also mobile phone ownership and usage. The impact of the following barriers was therefore potentially reduced or even eliminated.

- *Network coverage:* Only locations with 3G coverage were selected.
- *Internet awareness:* All respondents had to be aware of the internet or at least an internet-enabled product or service.
- *Internet rejection:* those who totally rejected the idea of the internet were excluded from the study.[80]
- *Literacy:* All non-mobile users had to have at least a basic level of literacy (this criteria was not imposed on users, as we were interested in whether any illiterate people were currently using mobile internet and, if so, how and why).[81]
- *Digital literacy:* Owning and using their own phones meant all respondents had at least a very basic level of digital literacy.
- *Community restrictions on phone ownership:* As all respondents had to own at least a basic handset this meant that communities with very strong social norms preventing women from owning mobile phones were excluded from the research.
- *Affordability:* As all respondents were SEC C and D, and already had the funds to own (and use) their own mobile phones,[82] the affordability barrier was somewhat alleviated.

Findings and recommendations should be extrapolated with caution

Since this report focuses on 'Potential Adopters' and 'New Users' only, caution should be taken extrapolating findings and recommendations to the general population (or other groups or similar markets) as they are likely to have different characteristics, and behaviours (for example, affluence levels or age). Many of the insights and recommendations for action will likely be relevant to some degree, but for groups with very different profiles, further investigation should be conducted to confirm how much they apply.[83]

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80. Internet rejecters were defined as anyone who agreed with the statement, "I do not like the idea of the internet at all; it is something I would never want to access in any way, including on a mobile phone".
81. For the literacy levels of the general population of these markets please see the Market Snapshots in the Appendix.
82. Many Potential Adopters owned a basic phone, so the cost of a smartphone could still be perceived as a barrier for them.
83. For example, barriers identified in this report are specific to Potential Adopters and the relative importance of each barrier may vary for other groups (e.g. lower or higher income), and they may experience additional barriers not included in this report (e.g. respondents living outside of 3G coverage were purposely excluded from this research).