AfterAccess

ICT access and use in Asia and the Global South

A report based on nationally representative surveys of households and individuals conducted by DIRSI, LIRNE*asia* and Research ICT Africa

VERSION 3.0 — APRIL 2019

AfterAccess

ICT access and use in Asia and the Global South

About AfterAccess | The AfterAccess surveys are conducted by pro-poor sister networks DIRSI, LIRNE*asia* and Research ICT Africa. The surveys are nationally representative and use methodology that is comparable across the countries. AfterAccess currently includes completed surveys in 23 countries across the Global South – seven in Asia, ten in Africa and six in Latin America – making it the most comprehensive database on mobile phone and Internet access and use in the Global South.
For more information visit afteraccess.net or follow @AfterAccess.

About LIRNE*asia* | LIRNE*asia* is a pro-poor, pro-market think tank. Its mission is catalyzing policy change through research to improve people's lives in the emerging Asia Pacific by facilitating their use of hard and soft infrastructures through the use of knowledge, information and technology. LIRNE*asia* has been active in the Asia Pacific since 2005, conducting both demand- and supply-side research as well as advocating for policy changes in the ICT sector on issues ranging from universal service policy to open data, gender, big data and more. For more information, visit lirneasia.net or follow @LIRNE*asia*.

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Disclaimer | The views expressed in this work are the views of the authors and do not necessarily represent those of the International Development Research Centre (IDRC) Canada or its Board of Governors, the Ford Foundation, the Swedish International Development Cooperation Agency (SIDA) or any of the consultants hired to conduct the fieldwork.

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List of abbreviations

AJK	Azad, Jammu and Kashmir
ARPU	Average revenue per user
EA	Enumerator area
FATA	Federally administered tribal areas
GND	Grama niladhari division
GNI	Gross national income
GPS	Global positioning system
ICT	Information and communication technology
PPP	Purchasing power parity
PPS	Probability proportionate to size
PSU	Primary sampling unit
SEC	Socio-economic classification
USD	United States dollars

About the study

About AfterAccess

AfterAccess is a series of surveys on how individuals in 23 countries of the Global South access and use ICTs. The surveys reported here were conducted between April 2017 and January 2019 across Asia, Africa and Latin America, with the exception of the Myanmar survey which took place mid-2016. The research was conducted via 46,746 face-to-face household and individual interviews lasting 90 minutes each.

The objective of this global effort is to collect a range of household and individual data that can offer much greater insight on the demand-side barriers to digital equality, and in this way provide comprehensive bases of evidence to inform national and regional policy and regulation.

The surveys cover a wide range of topics related to the use of mobile phones, Internet, social media and other platforms. AfterAccess is uniquely positioned to disrupt the current narratives of homogeneity in mobile phone and Internet access and use, illustrate the multifaceted challenges faced by the developing world and identify precise points of policy intervention.

The surveys are nationally-representative of the 15-65 age group in each country, with a confidence level of 95% and a margin of error of approximately ±3%. That is, the data can be extrapolated to the 15-65 population in each country to produce estimates which will be within ±3% of the actual levels. The methodology and sample sizes allow for disaggregated analysis of urban-rural populations, genders and socio-economic groups (SEC) at the national level. Sample sizes vary from 1,171 in Mozambique to 5,069 in India (Figure 1).

The research was conducted by LIRNE*asia* in Asia, DIRSI in Latin America and Research ICT Africa in Africa. Comparable methodology and a (predominantly) common questionnaire were used across regions and countries.

AfterAccess has been recognized by the EQUALS global partnership for its contribution to bringing rigorous data to the policy process, specifically in the area of gender equality in technology. AfterAccess was selected from over 350 nominees for the 2018 Research category award. The award is intended to recognize 'outstanding projects and initiatives around the world that are helping women and girls become #EQUALSinTech.'

AfterAccess base methodology

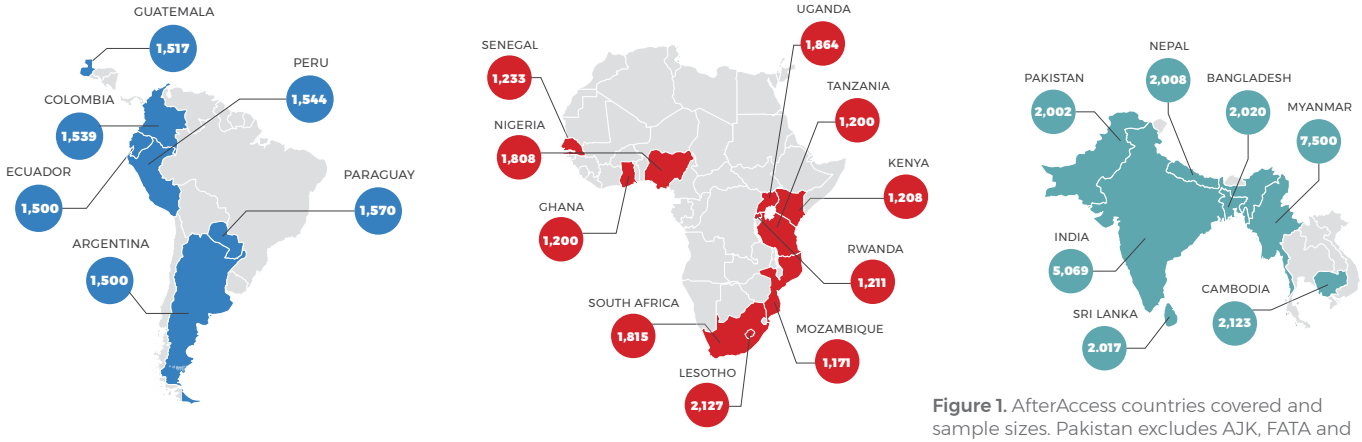


Figure 1. AfterAccess countries covered and sample sizes. Pakistan excludes AJK, FATA and Gilgit-Baltistan (~2% of population)

The key objective of the methodology is to ensure national representation at the desired levels of precision. The main requirements for this are:

(1) a comprehensive national sample frame at the most granular level possible (census enumerator areas (EAs) or blocks in the best case[1]); and

(2) random selection at every level of sample selection (i.e.: EA, household, individual)

The AfterAccess base methodology is designed to meet these two requirements.

AfterAccess base methodology

(1) Separation of EA sample frame into urban and rural EAs
(2) Sampling the required number of EAs from each stratum (urban and rural) using probability proportionate to size (PPS)
(3) Mapping, listing and marking all households in the selected EA
The lists serve as the sample frame for simple random selection of households. This was done with the assistance of key informants (e.g.: ward/ village leader, etc.)
(4) Simple random selection of the required number of households (20-25) from each selected EA
(5) Listing all household members or visitors aged 15-65[2] staying the night at the selected household
(6) Simple random selection (using the Kish grid) of one household member for individual survey from household list compiled in Step (5)

[1] A census divides a country in to blocks or EAs which have a rough density of 200 households. This is generally considered a manageable number of households that can be listed within a day.
[2] Aged 15+ in Africa and Latin America

Figure 2. Listing of households in Pakistan

Figure 3. Key informant interview in Cambodia

Figure 4. Listing of households in India

Figure 5. Key informant interview in India

In the AfterAccess base methodology, the random sampling of households and individuals (and other target groups that may be added on) is based on the census enumerator area sampling frames. In each country, the base methodology outlined above was adjusted depending on the availability and granularity of sample frames, and ground realities. The lowest administrative level sampling frames available to the public were grama niladhari divisions (GND) in Sri Lanka, villages and wards in India and Bangladesh, wards and village tracts in Myanmar, villages in Cambodia and wards in Nepal. No sampling frame was publicly available for Pakistan. Hence, the Pakistan Bureau of Statistics conducted the sampling of EAs from the national census sampling frame for us, using the AfterAccess base methodology and following our specifications.

Where the EA sampling frame was not available, the lowest-level administrative units publicly available for each country (ward, village, village-tract or GNDs as appropriate) were divided into smaller areas for listing and enumeration. These administrative units typically have a larger number of households than an EA. For instance, some wards (specifically in Mumbai) can have as many as 100,000 households, making listing households (Step 3) impossible if selected into the sample. Therefore, large administrative units were segmented on the field, according to pre-defined methodology, and one or more smaller segments then randomly selected for listing and enumeration (Step 4 onwards). These segments were then treated as EAs and Steps 3 onwards were applied accordingly.

In India, additional steps were required to balance the twin priorities of capturing the diversity of the population and managing fieldwork costs in the vast nation. These are described in detail on page 13. A larger sample size was also implemented in India, in consideration of these factors.

Country-specific summaries are provided in the following sub-sections, but it is important to note that the core principle of random selection was incorporated at every stage of sample selection to ensure national representation. There was no purposive, convenience or quota selection of any kind.

The fieldwork was conducted in Asia by competitively-selected market research companies. The companies were mainly involved in the fieldwork set-up (including scripting, translating and pilotd-testing of the questionnaire and training of enumerators) and execution as well as dataset delivery. LIRNE*asia* monitored the companies, in most cases by participating in field training and monitoring fieldwork both on the ground as well as remotely. The sample sizes in each country allow for disaggregation of

Figure 6. Segmentation map, India

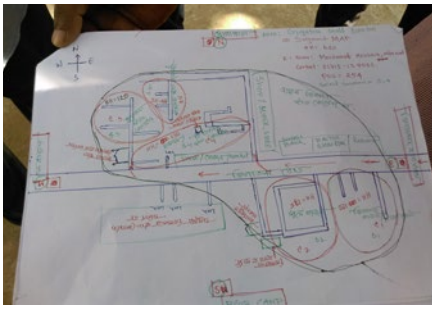


Figure 7. Segmentation map, Bangladesh

data by urban-rural, gender and SEC at the national level. **The data cannot be analyzed by province, state, district, sub district etc. in any of the countries except Myanmar, as the samples were not designed to do so.** In Myanmar, state-level disaggregation is possible, as the sample was designed to do so.

For detailed notes on methodology- please visit: bit.ly/AAAmethod

Sri Lanka survey and sampling methodology

In Sri Lanka, 2,017 households and individuals were surveyed from 100 GNDs in all nine (9) provinces (Figure 8).

The sampling methodology was designed to ensure representation of the target group (population aged 15-65) at a national level with a 95% confidence interval and a ±3.3% margin of error. That is, the data can be extrapolated to the 15-65 population of Sri Lanka with statistical confidence. The methodology and sample sizes also allow for disaggregated analysis of urban-rural populations and genders at the national level. The data cannot be analyzed by province, district or GND as the sample was not designed to do so.

The method was developed using GND-level data from the National Census of Population and Housing 2012. Sampling was conducted by LIRNE*asia*, using the AfterAccess base methodology with segmentation of wards as described earlier.

Fieldwork was conducted by Nielsen Sri Lanka in November 2018 – January 2019, with supervision of all field activities by LIRNE*asia* on the ground as well as remotely. The data was collected using mobile devices, and uploaded and reviewed on a daily basis, with live monitoring of GPS locations of survey teams.

Raw data collected was then weighted using 2018 mid-year national population estimates to correct for over- and under-sampling of certain population sub-groups.

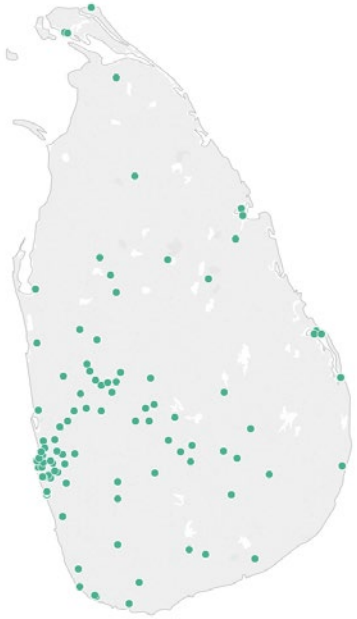


Figure 8. Sri Lanka sample locations based on GPS coordinates recorded during fieldwork

India survey and sampling methodology

In India, 5,069 households and individuals were surveyed from 250 wards and villages in 19 states and 108 districts (Figure 9).

The sampling methodology was designed to ensure representation of the target group (population aged 15-65) at a national level with a 95% confidence interval and a ±2.8% margin of error. That is, the data can be extrapolated to the 15-65 population of India with statistical confidence. The methodology and sample sizes also allow for disaggregated analysis of urban-rural populations and genders at the national level. The data cannot be analyzed by state, district or sub-district as the sample was not designed to do so.

The method was developed using (urban) ward- and (rural) village-level data from the 2011 National Primary Census Abstract Data, compiled from the Census of India website. Sampling was conducted by LIRNE*asia*, using the AfterAccess base methodology with segmentation of wards and villages as described earlier.

Two steps were added to the AfterAccess base methodology to manage the geographic spread of the sample in India while maintaining representativeness/randomness. Before wards and villages were selected, first, districts were randomly selected, and second, within the selected districts, sub-districts were randomly selected. Thereafter, wards and villages were randomly selected from the selected sub-districts. As stated earlier, randomness was maintained at every level of selection, thus ensuring representativeness.

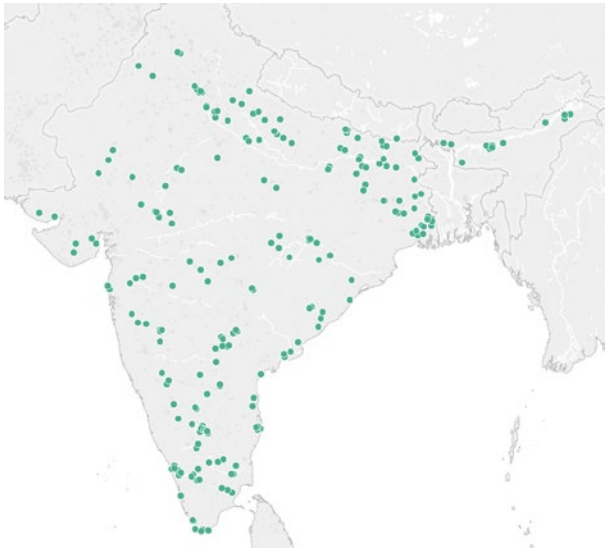


Figure 9. India sample locations based on GPS coordinates recorded during fieldwork

Field set-up, execution and dataset delivery were conducted by Ipsos India in October-November 2017, with supervision of all field activities by LIRNE*asia*. The data was collected using mobile devices, and uploaded and reviewed on a daily basis, with live monitoring of GPS locations of survey teams.

Raw data collected was then weighted using 2017 national population estimates to correct for over- and under-sampling of certain population sub-groups.

Pakistan survey and sampling methodology

In Pakistan, 2,002 households and individuals were surveyed from 100 census enumerator areas (Figure 10).

The sampling methodology was designed to ensure representation of 98% of the target group (population aged 15-65) at a national level with a 95% confidence interval and a ±3.3% margin of error. That is, the data can be extrapolated to the 15-65 population of Pakistan with statistical confidence. The methodology and sample sizes also allow for disaggregated analysis of urban-rural populations and genders in Pakistan at the national level. The data cannot be analyzed by province as the sample was not designed to do so.

Since the national census sampling frame is not publicly accessible, the Pakistan Bureau of Statistics (PBS) provided a sample of 100 EAs (selected according to the AfterAccess methodology) and facilitated access to the maps for the selected EAs. Sampling was based on the 2017 Census of Pakistan sampling frame. The AJK, FATA and Gilgit-Baltistan provinces – amounting to approximately 2% of the population – were excluded from the sample frame due to practical and security considerations.

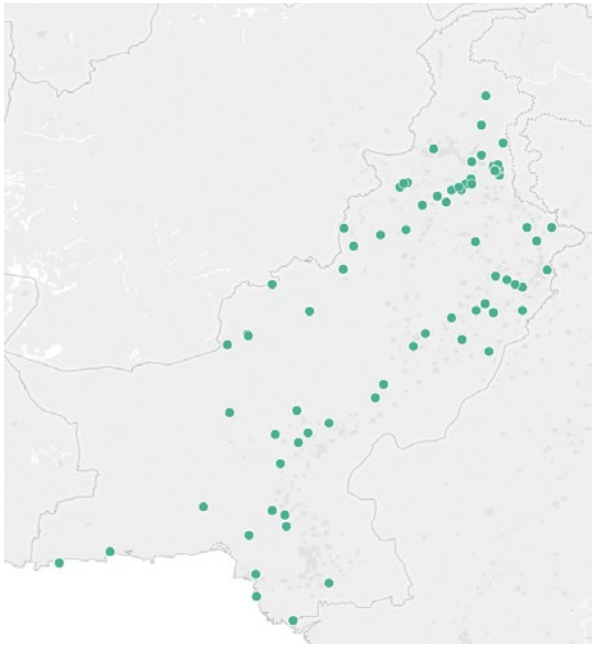


Figure 10. Pakistan sample locations based on GPS coordinates recorded during fieldwork

Field set-up, execution and dataset delivery were conducted by The Dynamics Research in October-December 2017, with supervision of all field activities by LIRNE*asia*. The data was collected using mobile devices, and uploaded and reviewed on a daily basis, with live monitoring of GPS locations of survey teams.

Raw data collected was then weighted using 2017 national population data to correct for over- and under-sampling of certain population sub-groups.

Myanmar survey and sampling methodology

The Myanmar survey of 2016 was conducted as a follow up to a baseline survey of ICT use in 2015, to track progress after liberalization of the country's mobile sector in 2013. As such, the sampling process was somewhat different and sample size was much larger, to enable national representation and state-wise disaggregation of the data at the same time.

In Myanmar, 7,500 households and individuals were surveyed from 72 townships (Figure 11). The survey was conducted in June-August 2016.

The sampling methodology was designed to ensure representation of the target group (population aged 15-65 living in accessible areas – approximately 97% of households or 96.3% of the population) at a national level with a 95% confidence interval and a ±3% margin of error. That is, the data can be extrapolated to the 15-65 population of Myanmar with statistical confidence.

The township was set as a PSU. Thirty-two of the 330 townships (containing approximately 3% of the households and population aged 15-65) were excluded from the sampling frame due to inaccessibility and security concerns.

Townships were stratified into geographic areas, population-based strata, as well as urban and rural. Seventy townships were selected with PPS systematic sampling. Within townships, two wards were selected in urban and four village tracts in rural areas. Within each, two segments (streets) were then selected using PPS systematic sampling. Following this, households were selected from a local administrator's household list, using systematic random sampling. Within a selected household, the Kish grid was used to select a member within the 15-65 age group, for survey.

The results can be disaggregated into administrative regions and states, geographic regions, urban versus rural locations, as well as by gender and age groups.

Fieldwork was conducted by Third Eye Co. Ltd. with supervision of all field activities by LIRNE*asia*.

Raw data collected was then weighted using 2016 national population estimates to correct for over- and under-sampling of certain population sub-groups.

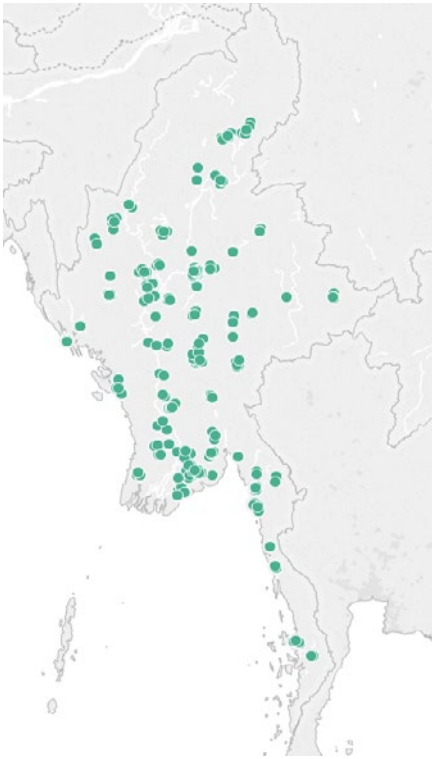


Figure 11. Myanmar sample locations based on GPS coordinates recorded during fieldwork

Bangladesh survey and sampling methodology

In Bangladesh, 2,020 households and individuals were surveyed from 100 wards and villages in 40 Zillas (Figure 12).

The sampling methodology was designed to ensure representation of the target group (population aged 15-65) at a national level with a 95% confidence interval and a ±3.3% margin of error. That is, the data can be extrapolated to the 15-65 population of Bangladesh with statistical confidence. The methodology and sample sizes also allow for disaggregated analysis of urban-rural populations and genders at the national level. The data cannot be analyzed by Zilla, as the sample was not designed to do so.

The method was developed using (urban) ward- and (rural) village-level data from the 2011 National Census Data. Sampling was conducted by LIRNE*asia* using the AfterAccess base methodology, with segmentation of wards and villages as described earlier.

Fieldwork was conducted in October-November 2017 by Ipsos India with supervision of all field activities by LIRNE*asia*. The data was collected using mobile devices, and uploaded and reviewed on a daily basis, with live monitoring of GPS locations of survey teams.

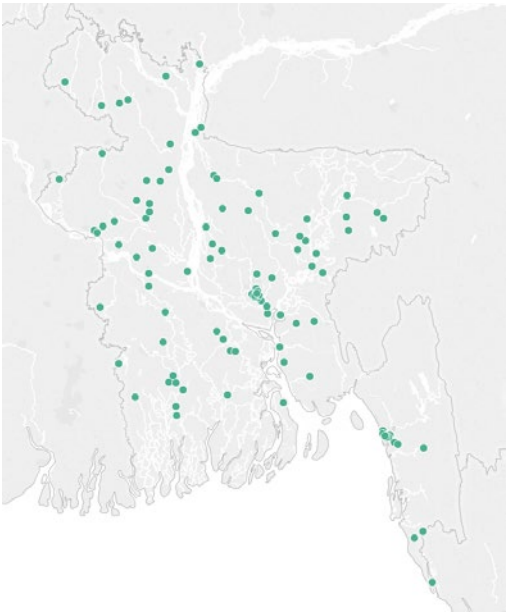


Figure 12. Bangladesh sample locations based on GPS coordinates recorded during fieldwork

Raw data collected was then weighted using 2017 national population estimates to correct for over- and under-sampling of certain population sub-groups.

Cambodia survey and sampling methodology

In Cambodia, 2,123 households and individuals were surveyed from 100 villages in 25 provinces (Figure 13).

The sampling methodology was designed to ensure representation of the target group (population aged 15-65) at a national level, with a 95% confidence interval and a ± 3.3% margin of error. That is, the data can be extrapolated to the 15-65 population of Cambodia with statistical confidence. The methodology and sample sizes also allow for disaggregated analysis of urban-rural populations and genders at the national level. The data cannot be analyzed by province as the sample was not designed to do so.

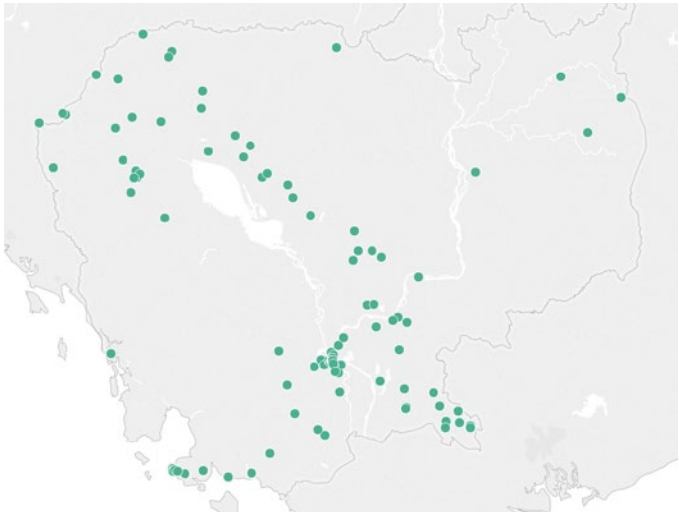


Figure 13. Cambodia sample locations based on GPS coordinates recorded during fieldwork

The method was developed using village-level data from the 2014 inter-censual survey. Sampling was conducted by LIRNE*asia* using the AfterAccess base methodology, with segmentation of villages as described earlier.

Fieldwork was conducted in September-October 2017 by Kantar TNS Cambodia with supervision of all field activities by LIRNE*asia*. The data was collected using mobile devices and uploaded and reviewed on a daily basis with live monitoring of GPS locations of survey teams.

Raw data collected was then weighted using 2017 national population estimates to correct for over- and under-sampling of certain population sub-groups.

Nepal survey and sampling methodology

In Nepal, 2,008 households and individuals were surveyed from 100 wards in 7 provinces (Figure 14).

The sampling methodology was designed to ensure representation of the target group (population aged 15-65) at a national level with a 95% confidence interval and a ±3.3% margin of error. That is, the data can be extrapolated to the 15-65 population of Nepal with statistical confidence. The methodology and sample sizes also allow for disaggregated analysis of urban-rural populations and genders at the national level. The data cannot be analyzed by province as the sample was not designed to do so.

The method was developed using ward-level data from the National Population and Housing Census 2011 based on the new structure of 753 local units. Sampling was conducted by LIRNE*asia* using the AfterAccess base methodology, with segmentation of wards as described earlier.

The fieldwork was conducted in April-May 2018 by Nielsen Nepal with supervision of all field activities by LIRNE*asia*. The data was collected using mobile devices, and uploaded and reviewed on a daily basis, with live monitoring of GPS locations of survey teams.

Raw data collected was then weighted using 2017 national population estimates to correct for over- and under-sampling of certain population sub-groups.

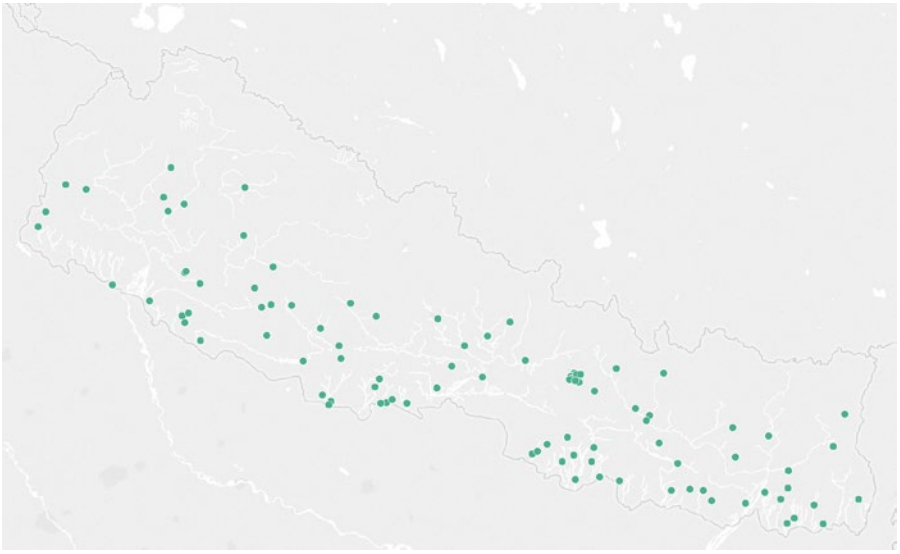


Figure 14. Nepal sample locations based on GPS coordinates recorded during fieldwork

Sample size determination

The desired level of accuracy was set to a confidence level of 95% and an absolute precision (relative margin of error) of 5%. The population proportion *p* was set conservatively to 0.5, which yields the largest sample size. The minimum sample size *n* was determined by the following equation (Rea & Parker, 1997)[3]:

$$n = \left(\frac{Z_a \sqrt{p\,(1 - p)}}{C_p} \right)^2 = \left(\frac{1.96 \sqrt{0.5(1 - 0.5)}}{0.05} \right)^2 = 384$$

Where
- n = Minimum sample size
- Z = Z - value for 0.05 level of significance
- C_p = Confidence level
- p = Population proportion

Inserting the parameters for the survey yields the minimum sample size for simple random sampling. Depending on the sampling method for the survey, the minimum sample size was multiplied by the design effect variable.

In the absence of empirical data from previous surveys that would have suggested a different value, the default value of 1.5 was chosen for the design effect in all countries except India, where 2 was chosen to account for the additional levels of sample selection. This yielded a minimum sample size of 768 per country for households and individuals. The actual sample size for countries was increased to larger than the minimum requirement to compensate for clustering effects and allow for urban-rural and gender-wise disaggregation of data. In the Asian survey countries, the sample size was increased to 2,000, with the exception of India where the sample size was further increased to 5,000, to ensure precision was maintained with the additional steps in sampling.

Weighting of data

Two weights were constructed, one for households, and one for individuals. The weights are based on the inverse selection probabilities. The weights gross up the data to national level.

[3] Rea, L. and Parker, R. (1997): Designing and Conducting Survey Research – A Comprehensive Guide, Jossey-Bass Publishers, San Francisco: Jossey-Bass.

Note on reading this report

The ordering of the survey countries presented in each chart and table of this report is based on descending GNI per capita (purchasing power parity or PPP terms), at constant 2011 international dollars. This is based on World Bank data for the year 2017 [4], as shown in Table 1.

Each data table or graph is accompanied by the relevant survey question and a table of sample bases for each tabulation. Where the number of respondents is low, the base is given in red, and where the number of respondents is insufficient for interpretation, the data is excluded.

Since the Myanmar survey was conducted earlier than the other countries (2016), an early version of the AfterAccess questionnaire was used. Where comparable data is available for Myanmar, it is included in the relevant figures or tables.

Country	Rank	GNI per capita, PPP (constant 2011 international $)
Argentina	1	18,444.47
Colombia	2	12,850.37
South Africa	3	11,922.86
Peru	4	11,773.43
Paraguay	5	11,548.06
Sri Lanka	6	11,347.92
Ecuador	7	10,318.93
Guatemala	8	7,284.24
India	9	6,359.19
Pakistan	10	5,311.22
Nigeria	11	5,202.66
Ghana	12	3901.60
Myanmar	13	3,897.59
Bangladesh	14	3,676.92
Cambodia	15	3,419.63
Lesotho	16	3,151.28
Senegal	17	3,054.88
Kenya	18	2,961.94
Tanzania	19	2,556.66
Nepal	20	2,487.93
Rwanda	21	1,814.14
Uganda	22	1,658.20
Mozambique	23	1,100.37

Table 1. GNI per capita of survey countries, PPP

[4] https://data.worldbank.org/indicator/NY.GNP.PCAP.PP.KD, accessed 12 February 2019.

Connectivity

Mobile phone ownership

Mobile phone ownership ranged from a low of 40% of 15-65-year-olds in Mozambique, the poorest country among the countries surveyed, to 91% of the same age group in Argentina, the richest of the countries surveyed (Figure 15). Most of the Asian countries surveyed were clustered in the region of two-thirds of their 15-65 population owning a mobile phone (i.e.: having an active mobile SIM and device). Most notably among the Asian survey countries, Nepal, the poorest, had mobile penetration of 72% of the 15-65 population at the time of survey – on par with Bangladesh (74%) and just a little behind Sri Lanka (78%) which was the richest of the Asian survey countries.

In all countries, desktop and laptop computer ownership lagged far behind mobile phone ownership. With the exception of the richer Latin American countries, penetration of desktop and laptop computers did not exceed 15% of the 15-65 population. Among the Asian survey countries, only Sri Lanka (12%) exceeded 6%, but considering its income level, could have been expected to perform better.

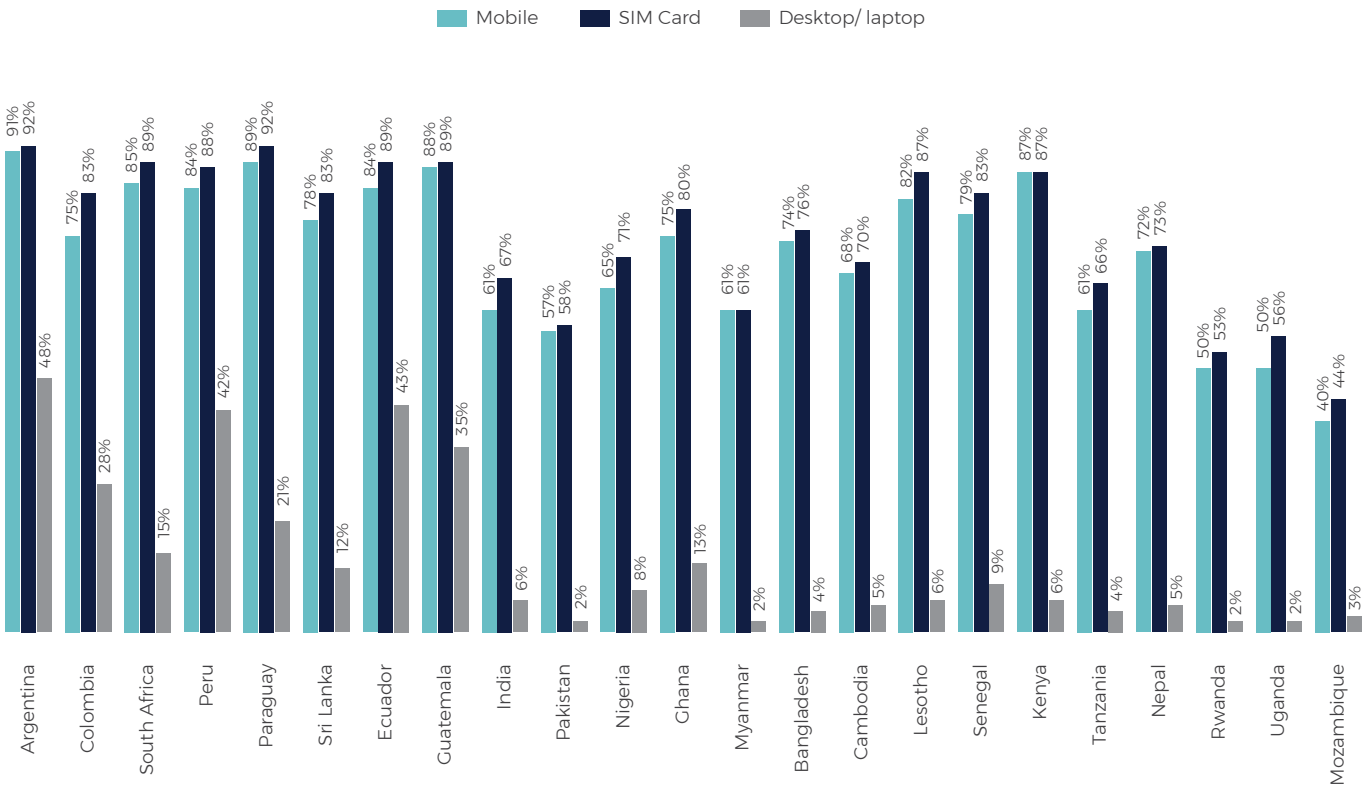
The majority of countries had an urban-rural gap in mobile phone ownership, with rural areas of the country lagging behind (Figure 16). Of the Asian countries surveyed, Pakistan, Bangladesh and Sri Lanka had very small gaps, indicating that rural dwellers were almost as likely to own a mobile phone as urban dwellers. The other Asian countries had considerable gaps of 15-22%, meaning that, in these countries, rural dwellers were between 15 and 22 percent less likely to own a mobile phone than urban dwellers.

The gender gap in mobile ownership was highest in India, with women 46% less likely to own a mobile phone than men (Figure 17). Among the other Asian countries surveyed, Pakistan (37%) and Bangladesh (34%) were followed by Myanmar (28%), Cambodia (20%) and Nepal (19%). Interestingly, Sri Lanka's gender gap (17%) was much higher than that of its income peers and more in line with its geographical peers. Unlike the more developed, higher-penetration countries of Latin America and South Africa (where in some cases, women were slightly more likely to own a mobile phone than men), gender inequality in mobile phone ownership remained a problem in much of Asia and Africa.

When the data were disaggregated by income within the survey countries (Figure 18), it was clear that those with incomes above the average income of those in the sample had higher levels of mobile phone ownership and vice versa, insofar as they earned something at all.

Figure 15.

Mobile phone, SIM card and desktop/laptop ownership (% of population aged 15-65)



Q1 Do you own a mobile phone?

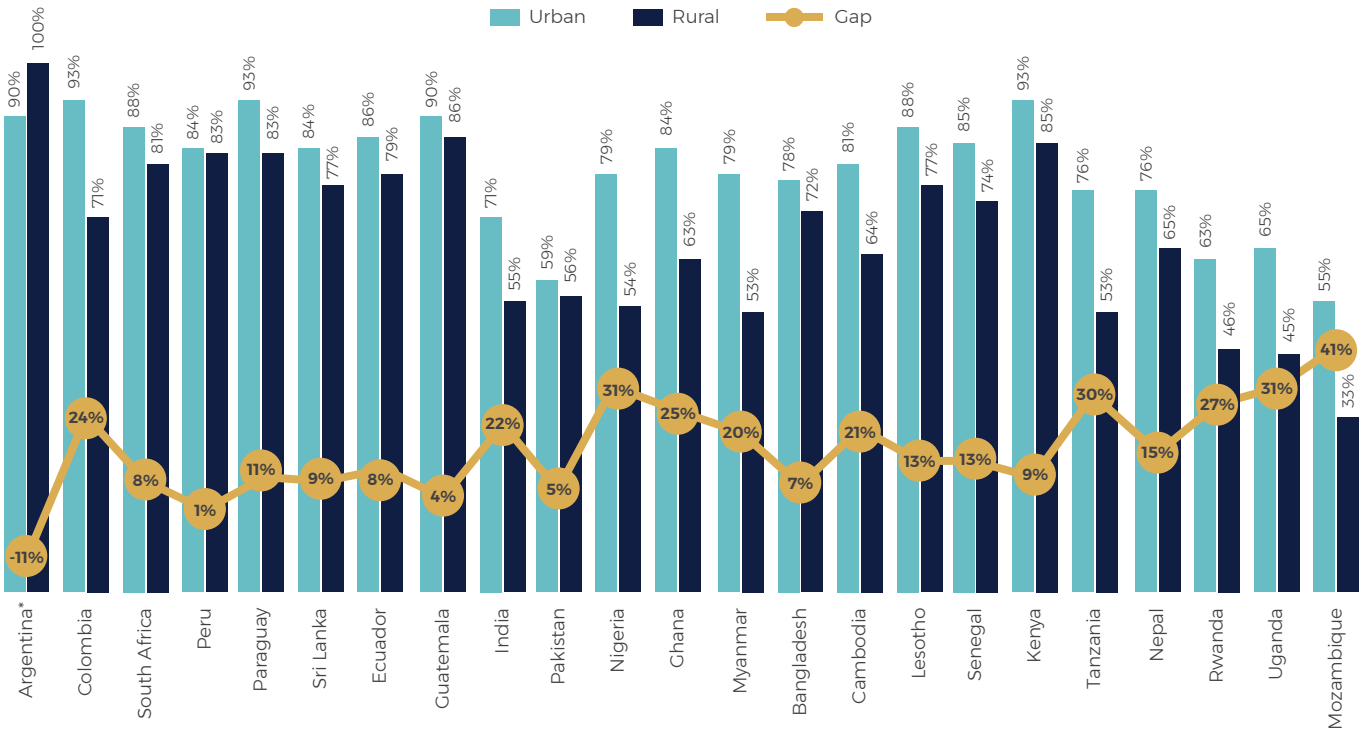
Q2 How many active SIM cards do you have (SIM cards that you used in the last 30 days)?

Q3 Do you own a personal desktop computer or laptop?

Base	Argentina	Colombia	South Africa	Peru	Paraguay	Sri Lanka	Ecuador	Guatemala	India	Pakistan	Nigeria	Ghana	Myanmar	Bangladesh	Cambodia	Lesotho	Senegal	Kenya	Tanzania	Nepal	Rwanda	Uganda	Mozambique
All respondents	1,240	1,425	1,610	1,478	1,357	2,017	1,420	1,407	5,069	2,002	1,706	1,145	7,204	2,020	2,123	1,844	1,181	1,179	1,102	2,008	1,118	1,757	1,091

Figure 16.

Urban-rural gaps in mobile phone ownership (% of population aged 15-65)



Urban-rural gap in mobile phone ownership % = (Urban mobile phone owners (% of urban population) − Rural mobile phone owners (% of rural population)) ÷ Urban mobile phone owners (% of urban population)

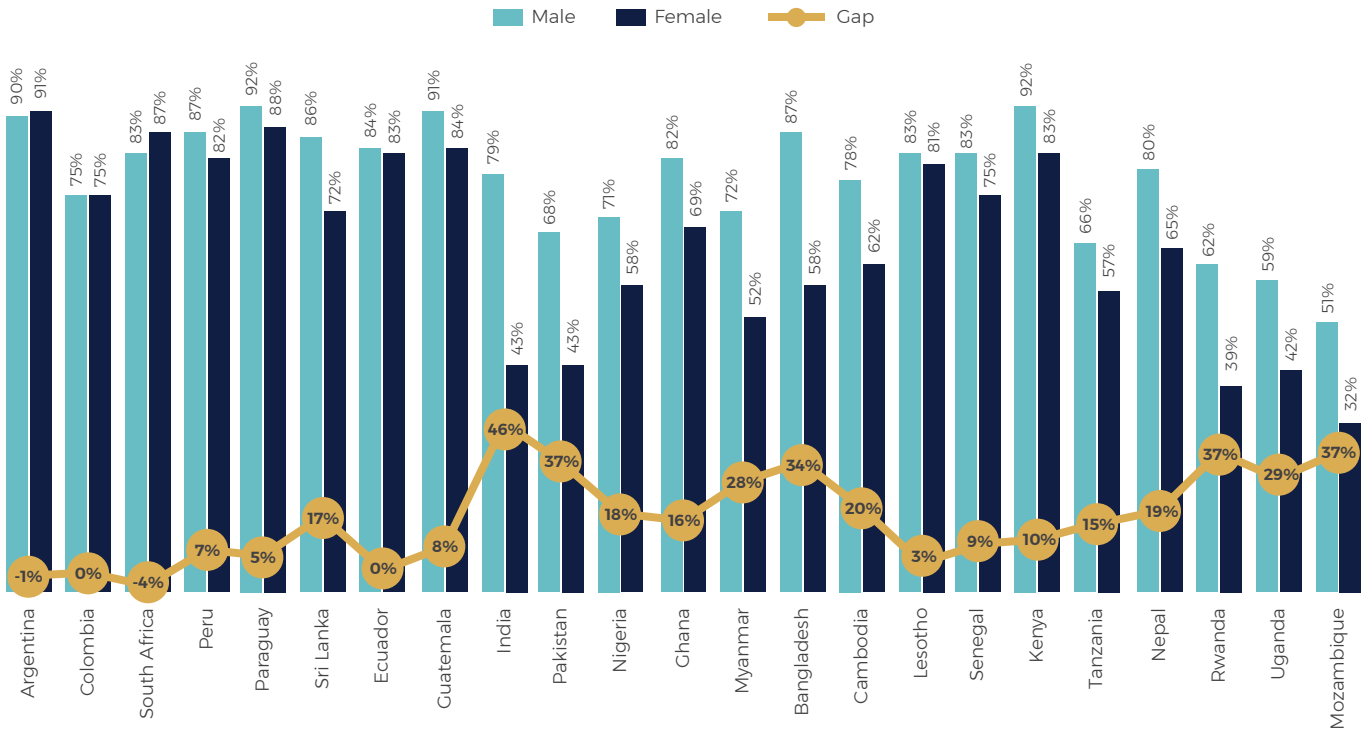
Q Do you own a mobile phone?

Base	Argentina	Colombia	South Africa	Peru	Paraguay	Sri Lanka	Ecuador	Guatemala	India	Pakistan	Nigeria	Ghana	Myanmar	Bangladesh	Cambodia	Lesotho	Senegal	Kenya	Tanzania	Nepal	Rwanda	Uganda	Mozambique
All respondents (Urban)	1,208	986	1,050	1,178	824	803	932	550	2,200	793	1,147	721	3,477	808	897	844	790	727	720	940	711	1,024	718
All respondents (Rural)	32	439	765	300	533	1,214	488	857	2,869	1,209	661	479	3,727	1,212	1,226	1,000	391	481	480	538	500	733	453

* Low rural base

Figure 17.

Gender gaps in mobile phone ownership (% of population aged 15-65)



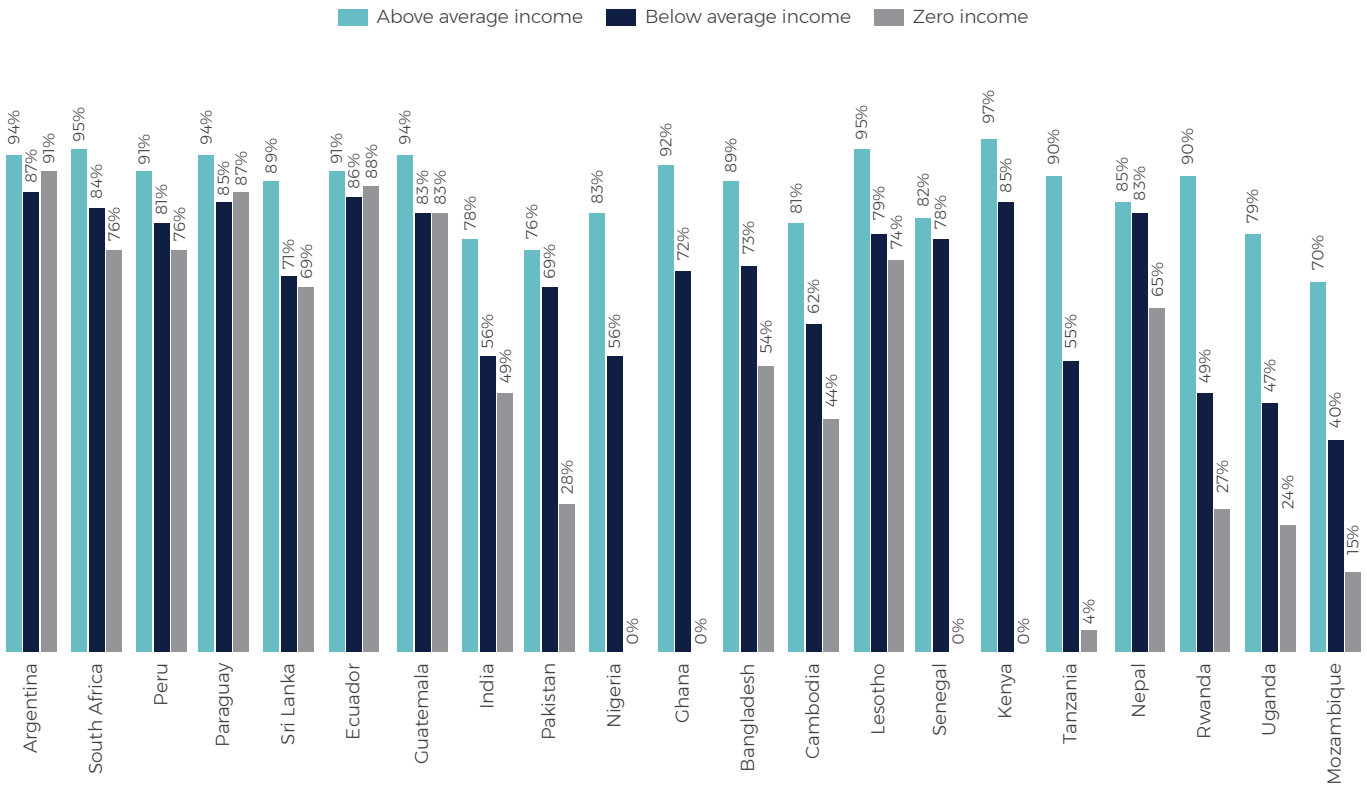
Gender gap in mobile phone ownership % = (Male mobile phone owners (% of male population) − Female mobile phone owners (% of female population)) ÷ Male mobile phone owners (% of male population)

Q Do you own a mobile phone?

Base	Argentina	Colombia	South Africa	Peru	Paraguay	Sri Lanka	Ecuador	Guatemala	India	Pakistan	Nigeria	Ghana	Myanmar	Bangladesh	Cambodia	Lesotho	Senegal	Kenya	Tanzania	Nepal	Rwanda	Uganda	Mozambique
All respondents (Male)	478	487	795	508	879	834	511	656	2,478	1,060	912	547	3,818	1,092	735	515	603	544	531	912	556	848	527
All respondents (Female)	762	938	1,020	970	478	1,183	909	751	2,591	942	896	653	3,386	928	1,388	1,329	578	664	669	1,096	655	909	644

Figure 18.

Mobile phone ownership by income (% of population aged 15-65)



Q Do you own a mobile phone?

Base	Argentina	South Africa	Peru	Paraguay	Sri Lanka	Ecuador	Guatemala	India	Pakistan	Nigeria	Ghana	Bangladesh	Cambodia	Lesotho	Senegal	Kenya	Tanzania	Nepal	Rwanda	Uganda	Mozambique
All respondents	1,240	1,610	1,478	1,357	2,017	1,420	1,407	5,069	2,002	1,706	1,145	2,020	2,123	1,844	1,181	1,179	1,102	2,008	1,118	1,757	1,091

Type of handset

In the Asian countries surveyed, mobile phone markets comprised predominantly basic handsets with no or limited Internet capability – even in richer Sri Lanka (Figure 19). A basic phone was defined as one on which only calls and texting were possible, and a feature phone as having additional capabilities for multi-media (e.g.: photos, music, etc.) and Internet. A smartphone (also known as a touchphone in Myanmar) was defined as one which used an operating system such as Android, iOS, etc. through which third party 'apps' could be run on it, usually with a touch screen (covering 75% or more of its front area).

India performed worst on this aspect (market share with Internet-enabled handsets, i.e.: smart- or feature-phones). Overall, among the Asian survey countries, India's mobile phone market had the lowest percentage-share of Internet-enabled mobile phones, though Pakistan had the lowest smartphone penetration. Despite Pakistan's (and Bangladesh's) low smartphone penetration, it still had a significant feature phone segment, enabling users to access the Internet. Interestingly, Cambodia and Nepal – the lowest-income Asian countries studied – had smartphone penetration higher (close to half the market in both cases) than the richer Asian countries studied, including Sri Lanka, the richest. Similarly, Myanmar (whose mobile market was liberalized most recently, in 2013) had a smartphone penetration of 78% of the market by 2016 when the survey was conducted.[5]

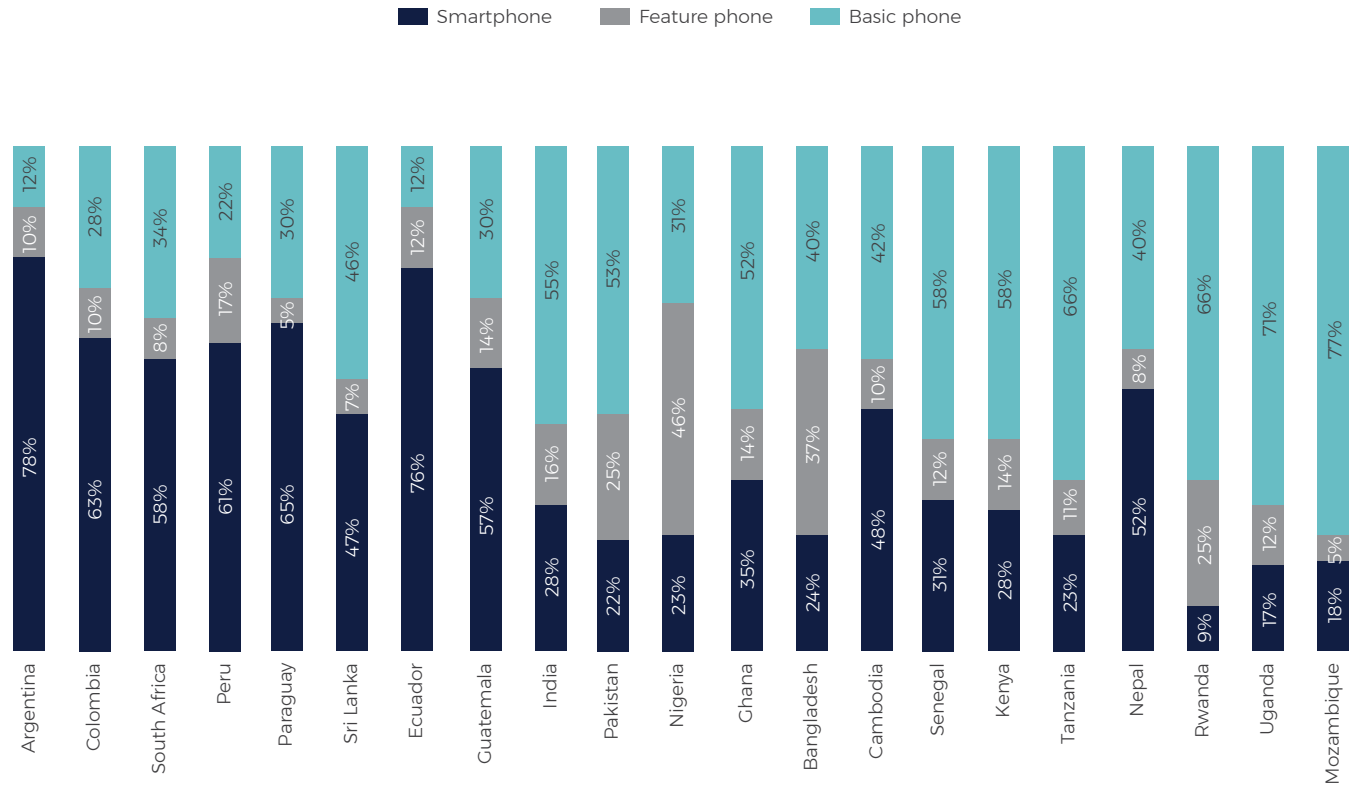
As expected, incidence of smartphone ownership among urban respondents was higher than among rural respondents (Figure 20), a feature of disparities in income as well as, perhaps, device availability and perceived relevance between urban and rural. The difference in smartphone ownership between urban and rural respondents in the Asian countries surveyed appears to be largest in India and Pakistan.

The gender gap was not as large with respect to device type (Figure 21) as with mobile phone ownership, noted earlier. It appears that the bigger hurdle is for women to get connected (become mobile phone owners). Thereafter, they are sometimes as likely as men to get an Internet-enabled phone.

[5] The Myanmar data is not depicted in the relevant graph due to slight differences in the survey question responses. It can not be directly compared with that from the other survey countries. For further information, the Myanmar report can be viewed at: bit.ly/LIRNE*asia*Myanmar2016.

Figure 19.

Handset type owned (% of population aged 15-65)

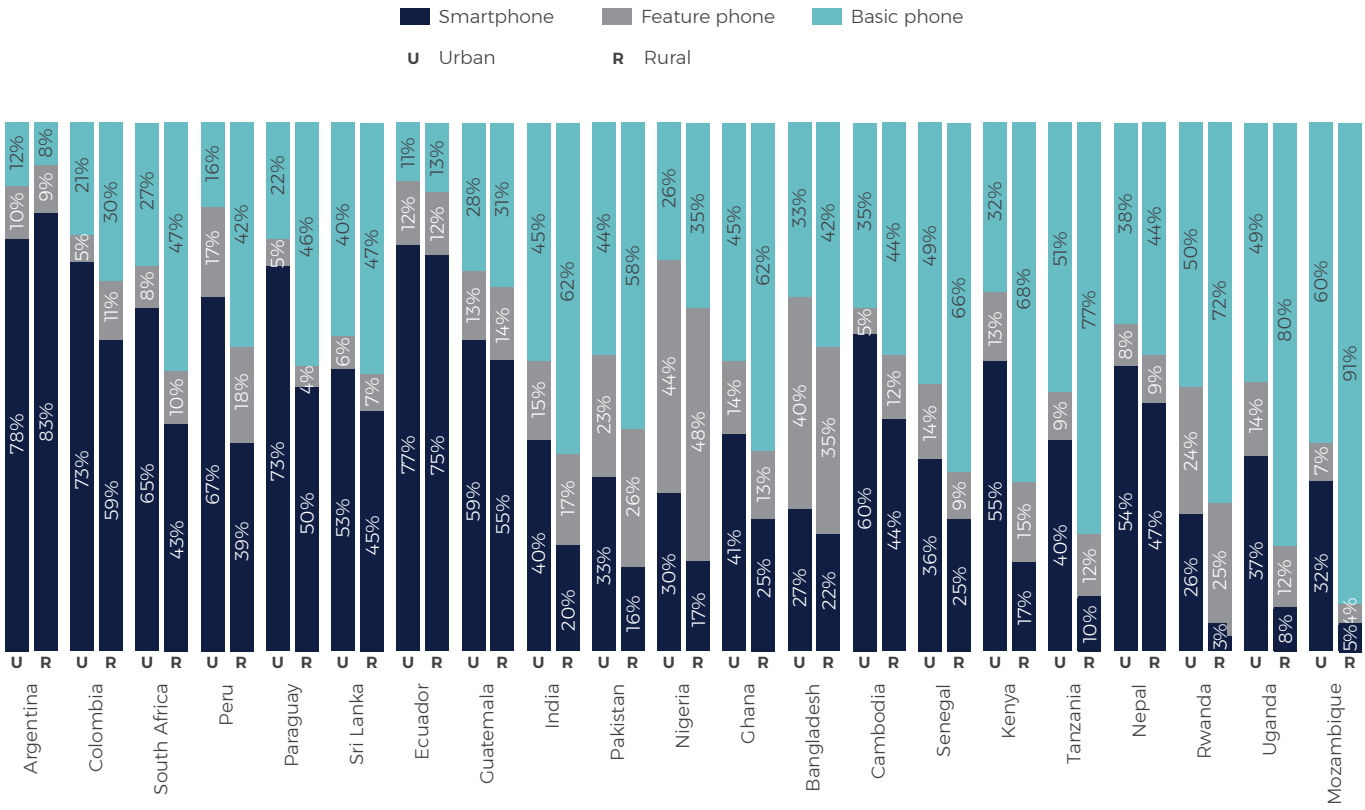


Q What type of mobile phone is it?

Base	Argentina	Colombia	South Africa	Peru	Paraguay	Sri Lanka	Ecuador	Guatemala	India	Pakistan	Nigeria	Ghana	Bangladesh	Cambodia	Senegal	Kenya	Tanzania	Nepal	Rwanda	Uganda	Mozambique
Mobile phone owners	1,116	1,297	1,398	1,234	1,209	1,609	1,191	1,214	3,252	1,208	1,123	901	1,531	1,526	969	1,054	761	1,478	635	1,031	632

Figure 20.

Type of handset owned, by location (% of population aged 15-65)

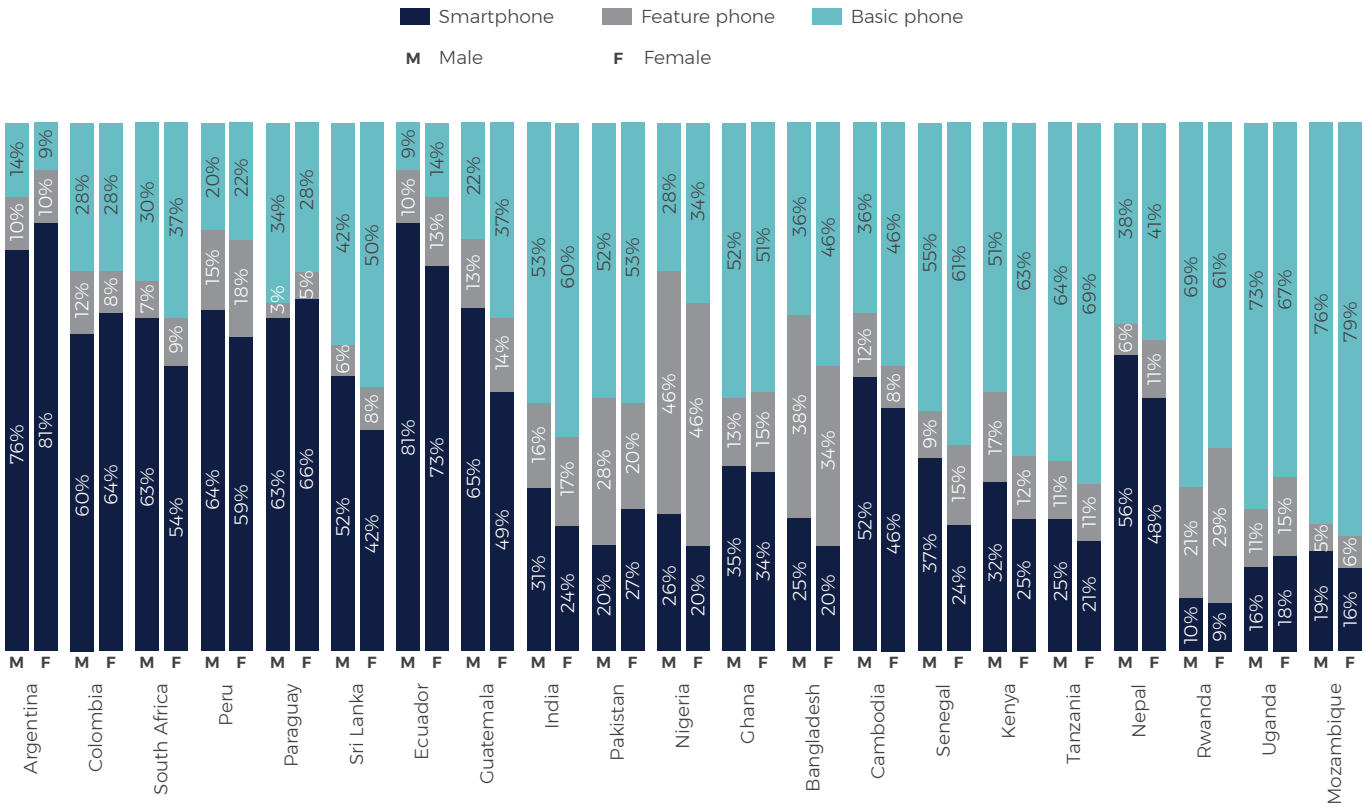


Q What type of mobile phone is it?

Base	Argentina	Colombia	South Africa	Peru	Paraguay	Sri Lanka	Ecuador	Guatemala	India	Pakistan	Nigeria	Ghana	Bangladesh	Cambodia	Senegal	Kenya	Tanzania	Nepal	Rwanda	Uganda	Mozambique
Mobile phone owners	1,116	1,297	1,398	1,234	1,209	1,609	1,191	1,214	3,252	1,208	1,123	901	1,531	1,526	969	1,054	761	1,478	635	1,031	632

Figure 21.

Type of handset owned, by gender (% of population aged 15-65)



Q What type of mobile phone is it?

Base	Argentina	Colombia	South Africa	Peru	Paraguay	Sri Lanka	Ecuador	Guatemala	India	Pakistan	Nigeria	Ghana	Bangladesh	Cambodia	Senegal	Kenya	Tanzania	Nepal	Rwanda	Uganda	Mozambique
Mobile phone owners	1,116	1,297	1,398	1,234	1,209	1,609	1,191	1,214	3,252	1,208	1,123	901	1,531	1,526	969	1,054	761	1,478	635	1,031	632

New adopters

Most of the Asian countries surveyed connected approximately 30% of their current subscribers in the past three years (Table 2), predominantly from among rural dwellers (Table 3) and women (Table 4).

Table 2.

Number of years since becoming a mobile phone owner (% of mobile phone owners aged 15-65)

Country	Number of years since becoming a mobile phone owner															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	15+
Argentina	4%	3%	4%	3%	7%	7%	4%	6%	3%	23%	3%	6%	3%	2%	9%	15%
Colombia	11%	10%	7%	5%	10%	9%	5%	7%	3%	10%	1%	6%	1%	1%	7%	9%
South Africa	6%	6%	5%	5%	4%	4%	7%	4%	4%	4%	4%	5%	4%	4%	3%	30%
Peru	5%	7%	8%	6%	13%	6%	6%	7%	4%	15%	2%	4%	2%	1%	7%	8%
Paraguay	6%	6%	8%	6%	12%	6%	6%	6%	2%	15%	1%	5%	2%	1%	9%	11%
Sri Lanka	15%	8%	9%	7%	6%	5%	3%	7%	3%	9%	3%	3%	4%	2%	3%	12%
Ecuador	6%	7%	9%	5%	10%	6%	3%	7%	2%	15%	2%	5%	2%	2%	7%	11%
Guatemala	13%	11%	11%	5%	11%	6%	3%	7%	2%	12%	1%	3%	0%	1%	5%	7%
India	15%	14%	10%	6%	12%	6%	9%	3%	4%	6%	2%	4%	1%	1%	2%	4%
Pakistan	9%	10%	8%	3%	6%	6%	10%	4%	8%	3%	3%	7%	3%	2%	3%	13%
Nigeria	7%	5%	7%	5%	9%	4%	7%	5%	8%	11%	6%	8%	6%	3%	4%	6%
Ghana	14%	9%	7%	9%	6%	6%	9%	6%	5%	9%	3%	4%	3%	1%	4%	4%
Bangladesh	8%	12%	10%	7%	11%	6%	11%	6%	8%	5%	3%	5%	1%	1%	1%	4%
Cambodia	12%	6%	9%	7%	11%	4%	8%	3%	3%	12%	3%	5%	2%	3%	4%	8%
Senegal	2%	8%	12%	8%	6%	7%	7%	4%	7%	5%	6%	5%	4%	4%	3%	14%
Kenya	11%	9%	8%	8%	8%	4%	10%	9%	5%	6%	3%	4%	3%	2%	3%	7%
Tanzania	11%	7%	7%	7%	6%	7%	12%	10%	7%	6%	4%	6%	3%	2%	1%	5%
Nepal	5%	9%	13%	9%	15%	9%	10%	5%	3%	9%	4%	2%	2%	1%	2%	2%
Rwanda	18%	11%	11%	5%	15%	5%	3%	7%	3%	9%	2%	2%	1%	1%	3%	3%
Uganda	7%	11%	11%	10%	7%	7%	5%	3%	7%	4%	3%	4%	1%	4%	2%	12%
Mozambique	12%	12%	8%	8%	8%	9%	6%	3%	4%	6%	3%	7%	3%	2%	4%	5%

Table 3.

Number of years since becoming a mobile phone owner, by location (% of mobile phone owners aged 15-65)

	Argentina		Colombia		South Africa		Peru		Paraguay		Sri Lanka		Ecuador		Guatemala		India		Pakistan		Nigeria		Ghana		Bangladesh		Cambodia		Senegal		Kenya		Tanzania		Nepal		Rwanda		Uganda		Mozambique	
	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural
< 1	4	6	6	13	6	6	4	10	6	7	16	15	5	7	11	15	13	17	7	10	8	6	6	9	10	20	9	13	2	1	5	13	5	15	5	6	15	19	6	7	5	18
2-5	17	19	16	36	17	29	30	43	29	34	33	30	32	31	41	37	41	42	26	29	22	30	36	43	31	33	27	35	32	35	29	34	22	32	42	54	40	44	37	40	28	41
6-10	43	50	34	33	24	22	39	35	36	36	22	28	34	35	29	32	28	29	31	31	35	34	38	35	36	33	31	29	28	31	35	34	44	38	38	31	28	26	27	27	36	23
11-15	22	6	25	13	22	16	17	10	17	17	17	14	16	18	12	11	13	8	20	18	28	25	15	9	18	11	21	16	21	22	21	13	23	10	12	9	10	9	15	14	22	16
15+	15	19	19	5	31	28	9	2	13	7	13	12	12	9	7	6	5	4	16	12	7	5	5	4	6	2	11	7	18	10	10	6	6	5	2	1	6	2	15	11	9	2

Table 4.

Number of years since becoming a mobile phone owner, by gender (% of mobile phone owners aged 15-65)

	Argentina		Colombia		South Africa		Peru		Paraguay		Sri Lanka		Ecuador		Guatemala		India		Pakistan		Nigeria		Ghana		Bangladesh		Cambodia		Senegal		Kenya		Tanzania		Nepal		Rwanda		Uganda		Mozambique	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
< 1	4	4	11	11	5	6	6	5	5	7	16	15	6	6	12	14	12	21	9	7	7	7	6	12	12	16	8	14	2	1	9	12	7	14	3	8	14	23	8	7	11	14
2-5	16	18	26	33	18	23	25	37	24	34	33	30	28	34	34	43	40	46	26	32	25	27	38	47	30	34	26	38	30	38	31	34	26	29	39	53	40	47	35	46	36	34
6-10	36	49	39	30	23	23	36	39	36	35	22	28	36	33	33	29	31	23	32	29	34	36	37	33	36	34	32	28	29	30	36	33	41	41	42	29	31	22	26	28	27	30
11-15	25	19	10	20	21	19	20	13	18	16	17	14	17	17	12	10	12	7	19	18	28	25	13	7	17	14	22	14	23	18	14	16	17	14	13	9	11	7	16	12	20	17
15+	19	11	13	6	32	29	12	5	16	8	13	12	14	10	9	5	5	3	13	14	7	5	6	2	5	3	12	5	16	12	9	6	8	2	2	1	5	1	16	8	5	5

Q When did you get your first ever mobile phone connection (i.e.: working handset and SIM card)? (date converted to time since)

Base	Argentina	Colombia	South Africa	Peru	Paraguay	Sri Lanka	Ecuador	Guatemala	India	Pakistan	Nigeria	Ghana	Bangladesh	Cambodia	Senegal	Kenya	Tanzania	Nepal	Rwanda	Uganda	Mozambique
Mobile phone owners	1,116	1,297	1,398	1,234	1,209	1,609	1,191	1,214	3,252	1,208	1,123	901	1,531	1,526	969	1,054	761	1,478	635	1,031	632

Multiple SIM ownership

More than one quarter of mobile phone owners in the Asian countries surveyed had more than one active SIM at the time of survey (Table 5). This includes a SIM that had been used in the 30 days preceding survey. The actual number ranged from 34% in Bangladesh to 23% in Pakistan. Though similar if not higher numbers were seen in the African countries surveyed, multiple SIM use was less common in the Latin American countries surveyed.

Multiple SIM ownership was higher among men, urban dwellers (except in Pakistan and Sri Lanka, where the relationship was reversed), those with higher levels of income and those of the younger age groups (below 35 years) (Table 6).

Table 5.

Number of active SIM cards (% of population aged 15-65)

	Argentina	Colombia	South Africa	Peru	Paraguay	Sri Lanka	Ecuador	Guatemala	India	Pakistan	Nigeria	Ghana	Myanmar	Bangladesh	Cambodia	Lesotho	Senegal	Kenya	Tanzania	Nepal	Rwanda	Uganda	Mozambique
1	93%	79%	80%	83%	89%	68%	89%	87%	74%	77%	48%	57%	73%	66%	71%	68%	68%	80%	59%	72%	58%	56%	76%
2	6%	20%	18%	13%	9%	29%	10%	12%	23%	19%	42%	38%	25%	30%	26%	28%	30%	18%	36%	28%	37%	41%	21%
3	1%	1%	2%	3%	1%	2%	1%	1%	2%	3%	7%	3%	1%	2%	3%	3%	3%	1%	4%	0%	5%	2%	3%
4	0%	0%	0%	0%	0%	1%	0%	0%	1%	1%	3%	1%	1%	1%	1%	0%	0%	0%	1%	0%	0%	0%	0%
5	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
6+	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Q How many active SIM cards do you have, (SIM cards that you used in the last 30 days)?

Base	Argentina	Colombia	South Africa	Peru	Paraguay	Sri Lanka	Ecuador	Guatemala	India	Pakistan	Nigeria	Ghana	Myanmar	Bangladesh	Cambodia	Lesotho	Senegal	Kenya	Tanzania	Nepal	Rwanda	Uganda	Mozambique
Mobile phone owners	1,116	1,297	1,398	1,234	1,209	1,609	1,191	1,214	3,252	1,208	1,123	901	4390	1,531	1,526	1,708	969	1,054	761	1,478	635	1,031	632

Table 6.

Multiple SIM use, by location, gender, education level, income level and age group

(% of mobile phone owners aged 15-65)

		Argentina	Peru	Paraguay	Sri Lanka	Ecuador	Guatemala	India	Pakistan	Nigeria	Ghana	Bangladesh	Cambodia	Lesotho	Senegal	Kenya	Tanzania	Nepal	Rwanda
Location	Urban	7%	17%	12%	28%	11%	12%	29%	20%	55%	46%	35%	35%	36%	32%	25%	51%	30%	55%
	Rural	10%	16%	8%	33%	10%	13%	24%	26%	48%	39%	34%	27%	29%	33%	17%	34%	25%	37%
Gender	Male	8%	23%	14%	37%	17%	14%	29%	28%	58%	51%	38%	33%	35%	39%	23%	42%	31%	42%
	Female	7%	13%	9%	27%	7%	11%	21%	15%	44%	34%	28%	27%	31%	25%	16%	41%	25%	42%
Education	Secondary or higher	7%	18%	13%	35%	11%	12%	31%	34%	58%	47%	43%	41%	54%	44%	23%	50%	39%	65%
	Primary or none	0%	9%	8%	19%	11%	13%	22%	22%	35%	38%	27%	24%	30%	25%	15%	31%	14%	32%
Income	Above average	12%	26%	16%	35%	20%	16%	30%	24%	61%	50%	38%	37%	47%	44%	41%	51%	34%	50%
	Below average	4%	11%	7%	39%	13%	10%	24%	24%	45%	42%	32%	25%	30%	28%	14%	34%	30%	41%
	Zero income	4%	11%	7%	23%	10%	9%	23%	19%	0%	0%	31%	26%	22%	0%	0%	40%	26%	32%
Age	15-25	4%	15%	10%	42%	8%	9%	33%	23%	43%	36%	39%	27%	29%	33%	20%	44%	34%	39%
	26-35	7%	18%	13%	46%	11%	12%	27%	27%	59%	52%	38%	35%	39%	32%	19%	46%	32%	49%
	36-45	13%	18%	10%	32%	13%	17%	25%	22%	58%	46%	33%	33%	38%	39%	22%	42%	24%	49%
	46-55	9%	18%	11%	22%	15%	16%	19%	18%	48%	47%	31%	28%	28%	24%	22%	30%	18%	33%
	56-65	5%	11%	9%	14%	8%	19%	16%	24%	42%	28%	18%	22%	22%	31%	10%	32%	12%	23%

Q How many active SIM cards do you have, (SIM cards that you used in the last 30 days)?

Base	Argentina	Peru	Paraguay	Sri Lanka	Ecuador	Guatemala	India	Pakistan	Nigeria	Ghana	Bangladesh	Cambodia	Lesotho	Senegal	Kenya	Tanzania	Nepal	Rwanda
Mobile phone owners	1,116	1,234	1,209	1,609	1,191	1,214	3,252	1,208	1,123	901	1,531	1,526	1,708	969	1,054	761	1,478	635

Internet

Lack of awareness of the Internet was a considerable problem across Asian (and, to a lesser extent, African) countries surveyed (Figure 22). For example, in India just 35% of the population aged 15-65 said they knew what the Internet was, with similar numbers seen in Pakistan and Bangladesh. Surprisingly in Nepal – the poorest of the Asian countries surveyed – 46% of the 15-65 population knew what the Internet was.

The levels of use were even lower than levels of awareness in all the Asian countries surveyed, except Cambodia. This anomaly could be interpreted as a possible difference in the manner in which the questions were asked on the field in Cambodia. Myanmar, Cambodia and Nepal (the poorer three of the Asian countries surveyed) had higher levels of Internet use than the other Asian countries surveyed.

The urban-rural gap in Internet use was large in most countries (even the higher income ones), with rural-dwellers lagging behind as much as 48% in India and 32-42% in Bangladesh, Cambodia, Myanmar and Nepal (Figure 23). Sri Lanka's urban-rural gap was just 23%.

The gender gap in Internet use was markedly larger in the Asian and African countries surveyed than the Latin American ones (Figure 24), even in Sri Lanka whose income level is on par with that of the Latin American countries.

Smartphone owners are the highest users of the Internet in the Asian countries surveyed (Figure 25). Unlike in the Latin American countries or some of the African countries surveyed, feature phone owners in the Asian countries barely used the Internet.

Current Internet users were asked if there was anything that limited their use of the Internet. Of the Asian countries surveyed, Nepal, Bangladesh, Sri Lanka and India had more than a quarter of Internet users who stated that their Internet use was not limited by any factors (Figure 26). While the Asian survey countries performed slightly better than the African survey countries in terms of (perceived) cost of data, it was cited as a primary limitation to greater use by 30% of Internet users aged 15-65 in Bangladesh, 29% in Nepal and 25% in Sri Lanka. The speed of the Internet was a major barrier to greater use in Cambodia, with 70% of Internet users aged 15-65 citing it as a primary limiting factor, compared to much lower numbers in the other Asian countries surveyed. A considerable number of users in Pakistan (50%) cited 'lack of time' as a primary limiting factor to more Internet use.

Figure 26 contains responses on main limiting factors in survey countries where respondents were asked to cite the primary factor (single response) while Figure 27 presents the responses from countries where respondents were allowed to name more than one factor if applicable. The question was asked slightly differently in different countries. As such, a wider set of concerns was voiced in the latter set of countries (Figure 27), with issues related to cybersecurity and privacy being cited more commonly in Latin America. In Africa, data cost, speed of the Internet and lack of time were the more common concerns.

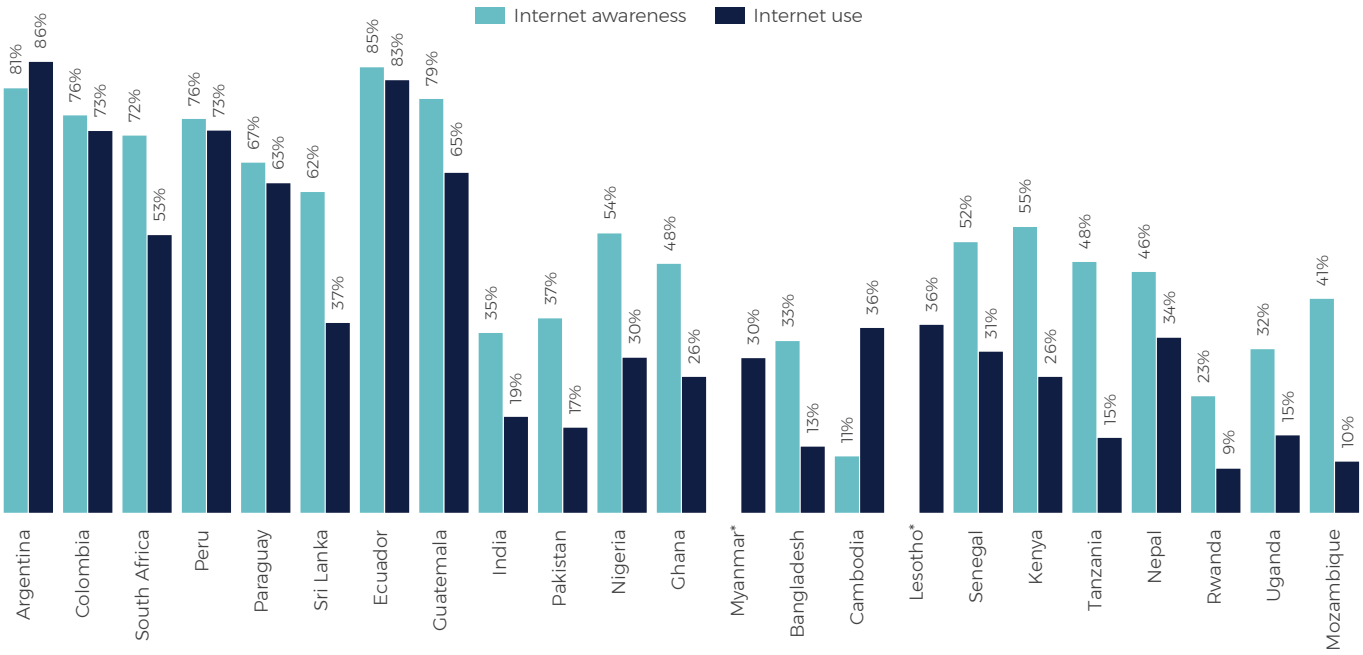
As Figure 28 shows, Internet and social media use went hand-in-hand across the countries surveyed. Social media use levels among the 15-65 population were as low as Internet use in the Asian countries surveyed. The following section provides more detail on social media use. Sri Lanka, Cambodia and Nepal appeared to be further ahead in social media use as well as Internet use than their geographic peers. However, Sri Lanka lagged behind its income peers.

A lack of awareness of what the Internet is, was the key barrier to Internet use across survey countries (Figure 29), with more than 60% of current non-users in the Asian countries (as high as 97% in Cambodia) citing this as a main reason for non-use. In the African survey countries, the lack of a device seemed to be a key concern, while in Latin America, the lack of devices was a smaller concern and not knowing how to use the Internet was also an issue.

Surprisingly, there was non-awareness even among current smartphone owners who didn't use the Internet, across survey countries (Figure 30).

Figure 22.

Internet awareness and use (% of population aged 15-65)



Q1 Do you know what the Internet is?

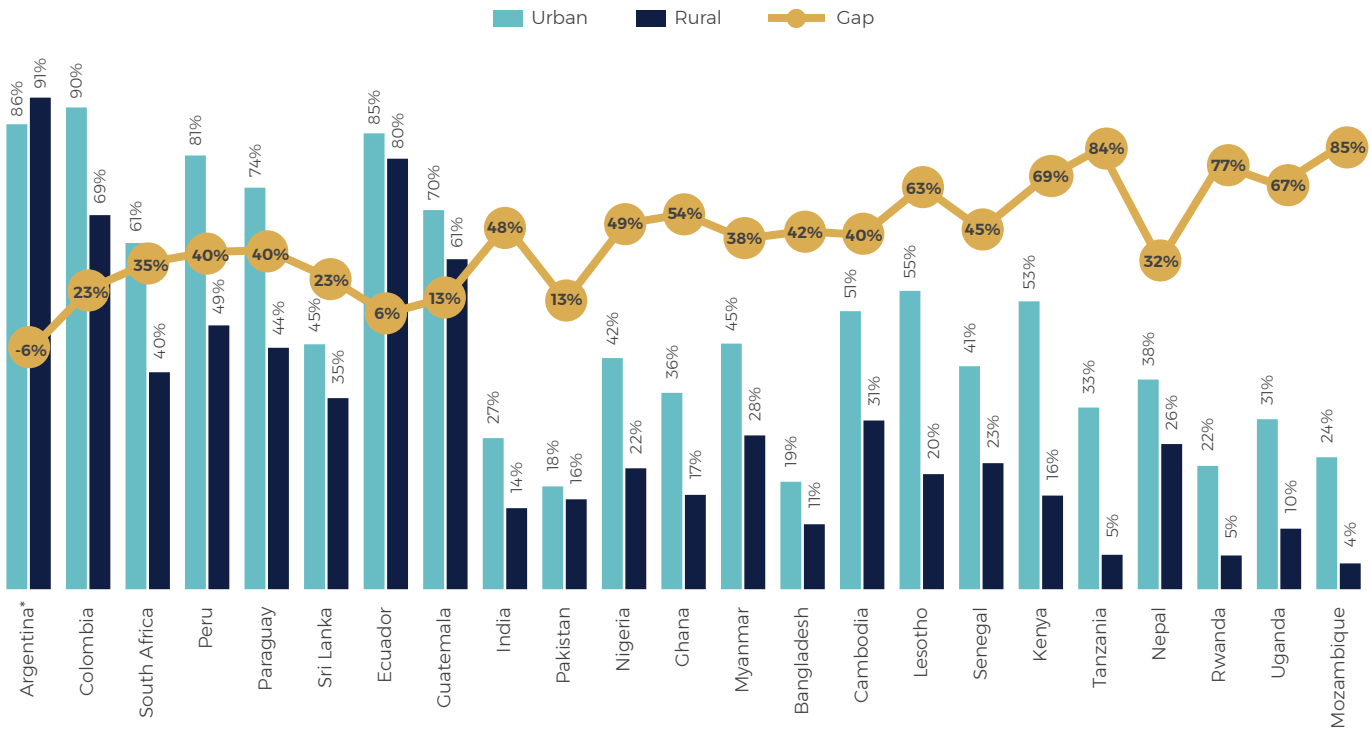
Q2 Have you ever used the Internet (Gmail, Google, Facebook, email etc.)?

Base	Argentina	Colombia	South Africa	Peru	Paraguay	Sri Lanka	Ecuador	Guatemala	India	Pakistan	Nigeria	Ghana	Myanmar	Bangladesh	Cambodia	Lesotho	Senegal	Kenya	Tanzania	Nepal	Rwanda	Uganda	Mozambique
All respondents	1,240	1,425	1,610	1,478	1,357	2,017	1,420	1,407	5,069	2,002	1,706	1,145	7,204	2,020	2,123	1,844	1,181	1,179	1,102	2,008	1,118	1,757	1,091

* No data available for Q1

Figure 23.

Urban-rural gap in Internet use (% of population aged 15-65)



Urban-rural gap in Internet use % = (Urban Internet users (% of urban population) − Rural Internet users (% of rural population)) ÷ Urban Internet users (% of urban population)

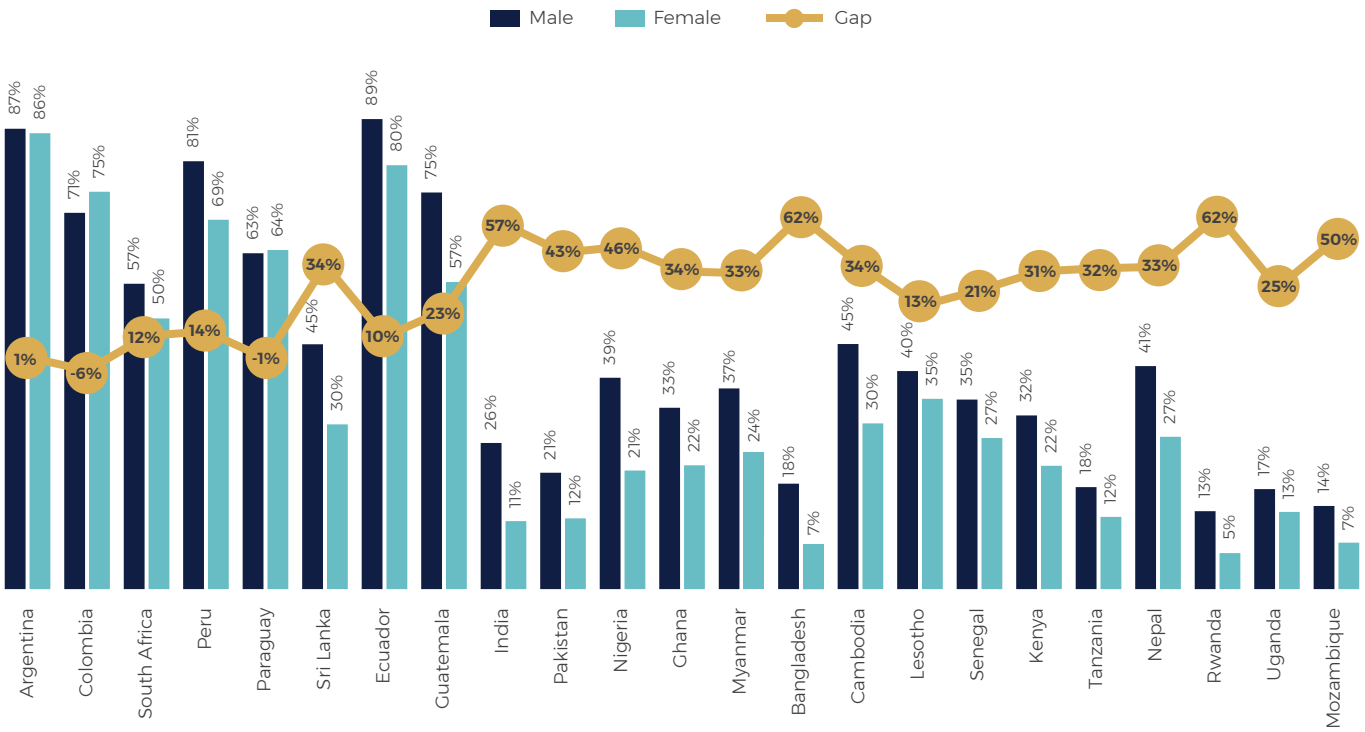
Q Have you ever used the Internet (Gmail, Google, Facebook, email etc.)?

Base	Argentina	Colombia	South Africa	Peru	Paraguay	Sri Lanka	Ecuador	Guatemala	India	Pakistan	Nigeria	Ghana	Myanmar	Bangladesh	Cambodia	Lesotho	Senegal	Kenya	Tanzania	Nepal	Rwanda	Uganda	Mozambique
All respondents (Urban)	1,208	986	1,050	1,178	824	803	932	550	2,200	793	1,147	721	3,477	808	897	844	790	727	720	940	711	1,024	718
All respondents (Rural)	32	439	765	300	533	1,214	488	857	2,869	1,209	661	479	3,727	1,212	1,226	1,000	391	481	480	538	500	733	453

* Low rural base

Figure 24.

Gender gap in Internet use (% of population aged 15-65)



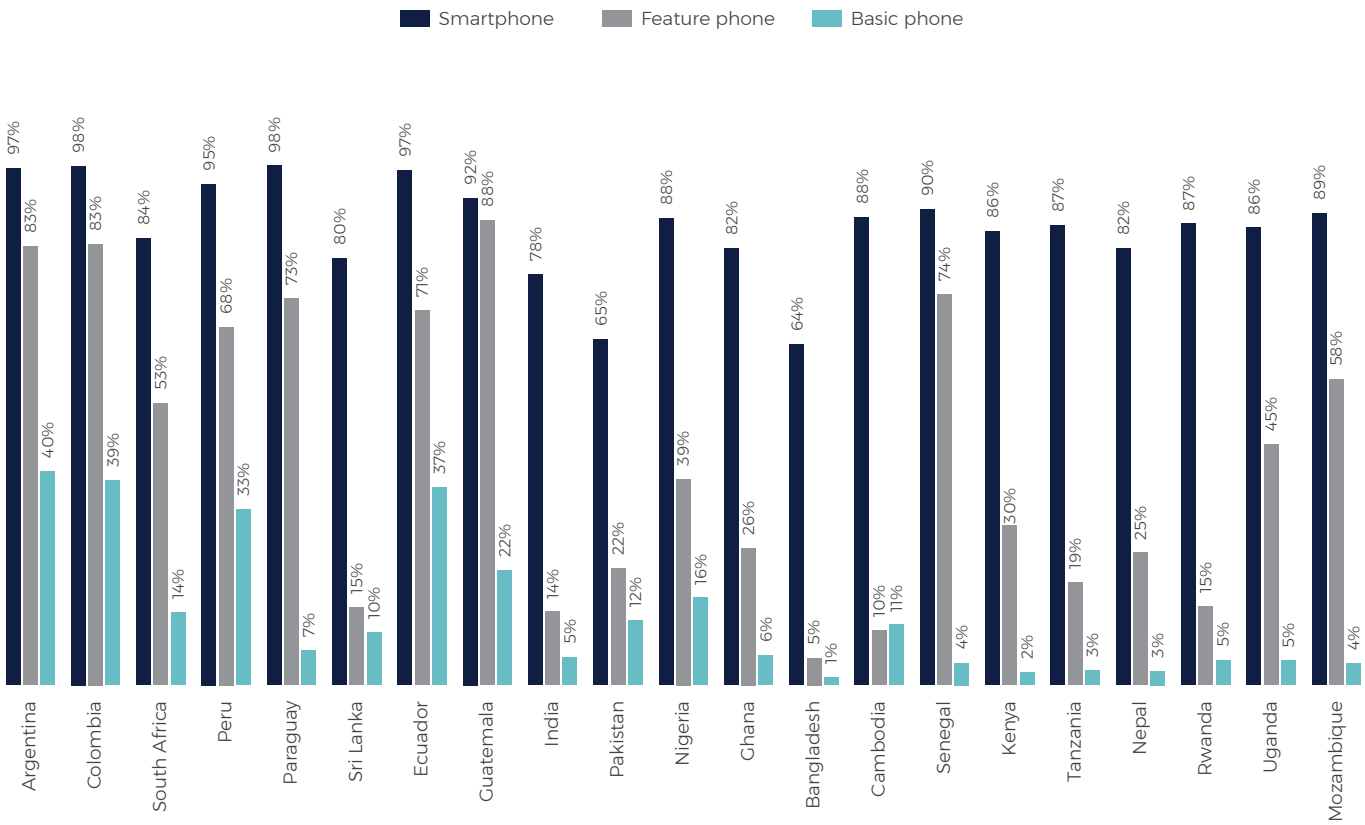
Gender gap in Internet use %	=	(Male Internet users (% of male population)	−	Female Internet users (% of female population)	) ÷	Male Internet users (% of male population)

Q Have you ever used the Internet (Gmail, Google, Facebook, email etc.)?

Base	Argentina	Colombia	South Africa	Peru	Paraguay	Sri Lanka	Ecuador	Guatemala	India	Pakistan	Nigeria	Ghana	Myanmar	Bangladesh	Cambodia	Lesotho	Senegal	Kenya	Tanzania	Nepal	Rwanda	Uganda	Mozambique
All respondents (Male)	478	487	795	508	879	843	511	656	2,478	1,060	912	547	3,818	1,092	735	515	603	544	531	912	556	848	527
All respondents (Female)	762	938	1,020	970	478	1,183	909	751	2,591	942	896	653	3,386	928	1,388	1,329	578	664	669	1,096	655	909	644

Figure 25.

Internet use, by type of handset owned (% of mobile phone owners aged 15-65)

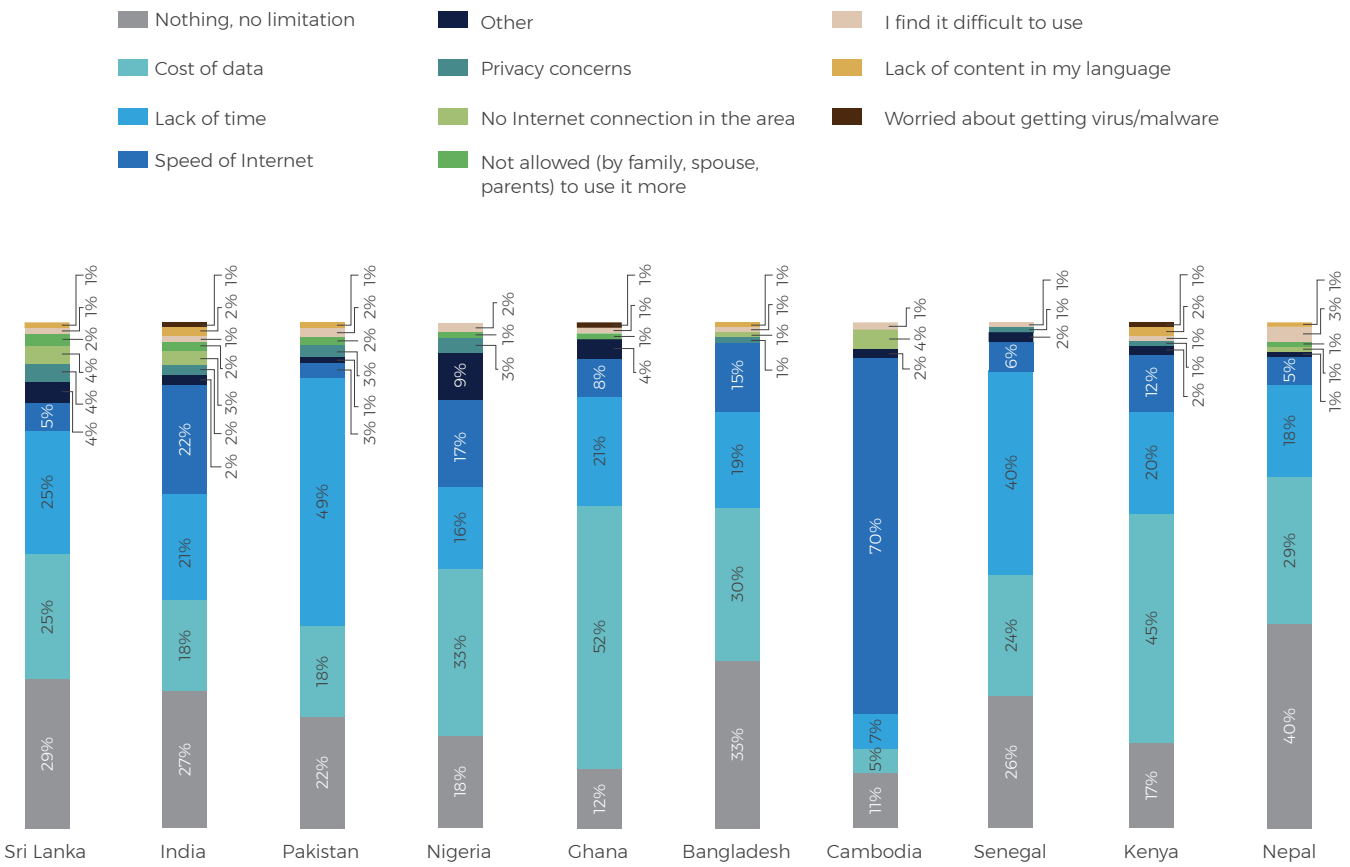


Q Have you ever used the Internet (Gmail, Google, Facebook, email etc.)?

Base	Argentina	Colombia	South Africa	Peru	Paraguay	Sri Lanka	Ecuador	Guatemala	India	Pakistan	Nigeria	Ghana	Bangladesh	Cambodia	Senegal	Kenya	Tanzania	Nepal	Rwanda	Uganda	Mozambique
Mobile phone owners	1,116	1,297	1,398	1,234	1,209	1,609	1,191	1,214	3,252	1,208	1,123	901	1,531	1,526	969	1,054	761	1,478	635	1,031	632

Figure 26.

Main limitation to Internet use (% of Internet users aged 15-65)



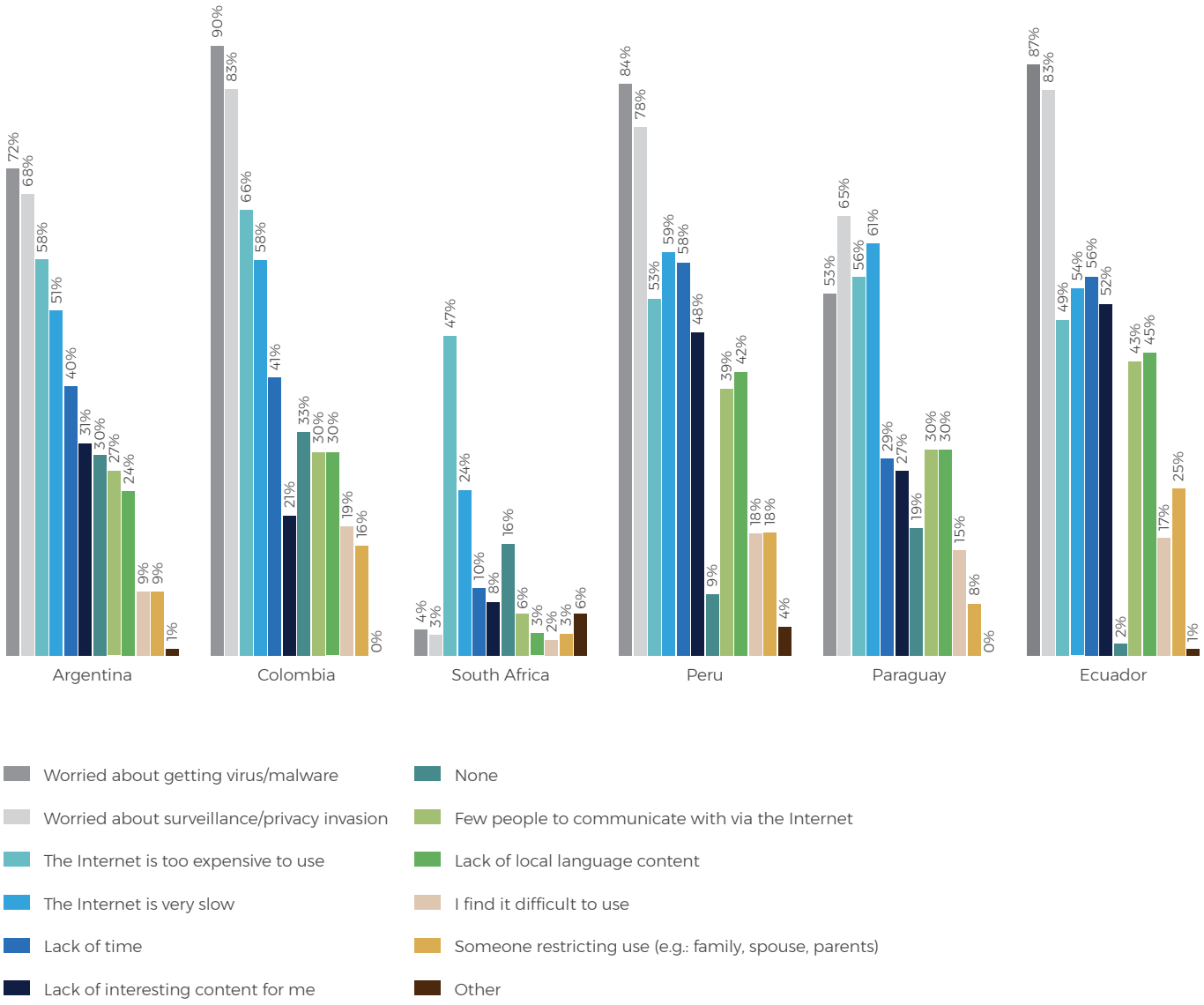
Q What is the main limitation to your use of the Internet?*

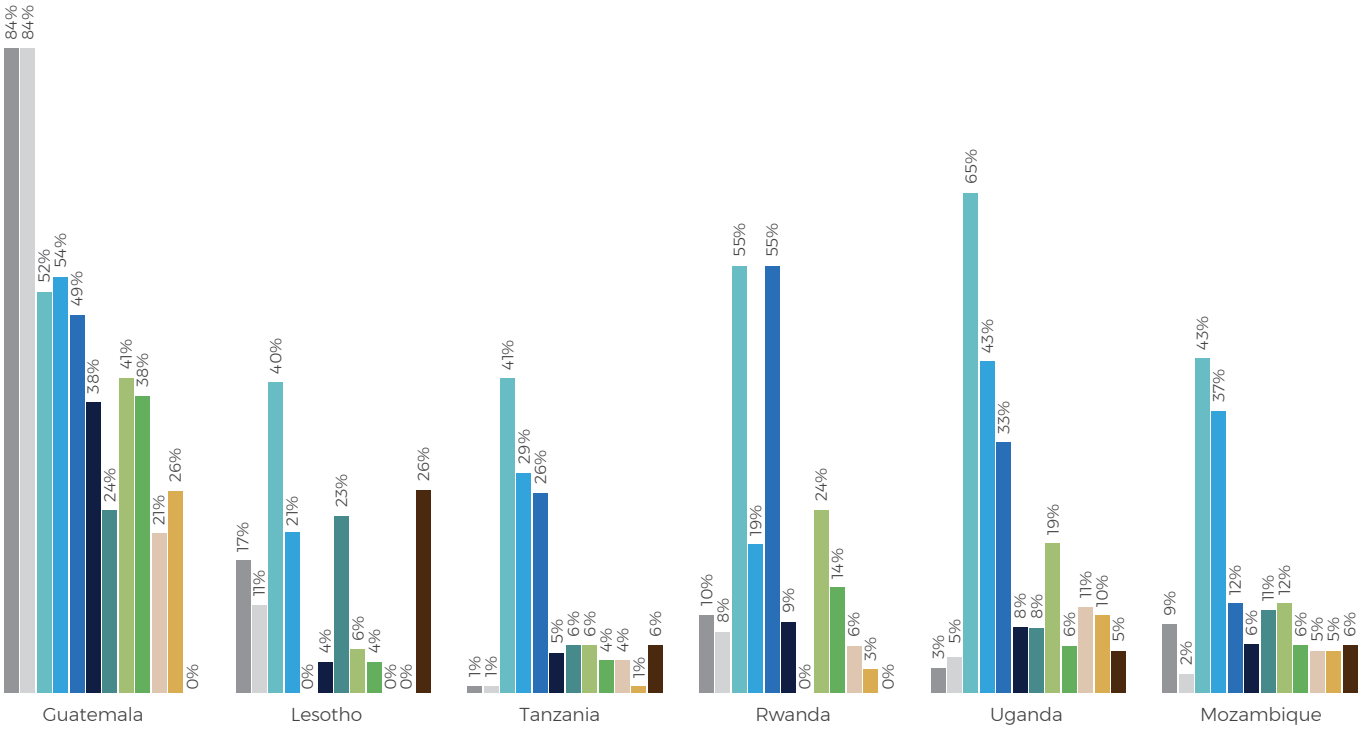
Base	Sri Lanka	India	Pakistan	Nigeria	Ghana	Bangladesh	Cambodia	Senegal	Kenya	Nepal
Internet users	739	919	427	529	311	266	804	393	440	692

* Single-response question

Figure 27.

Limitations to Internet use (% of Internet users aged 15-65)





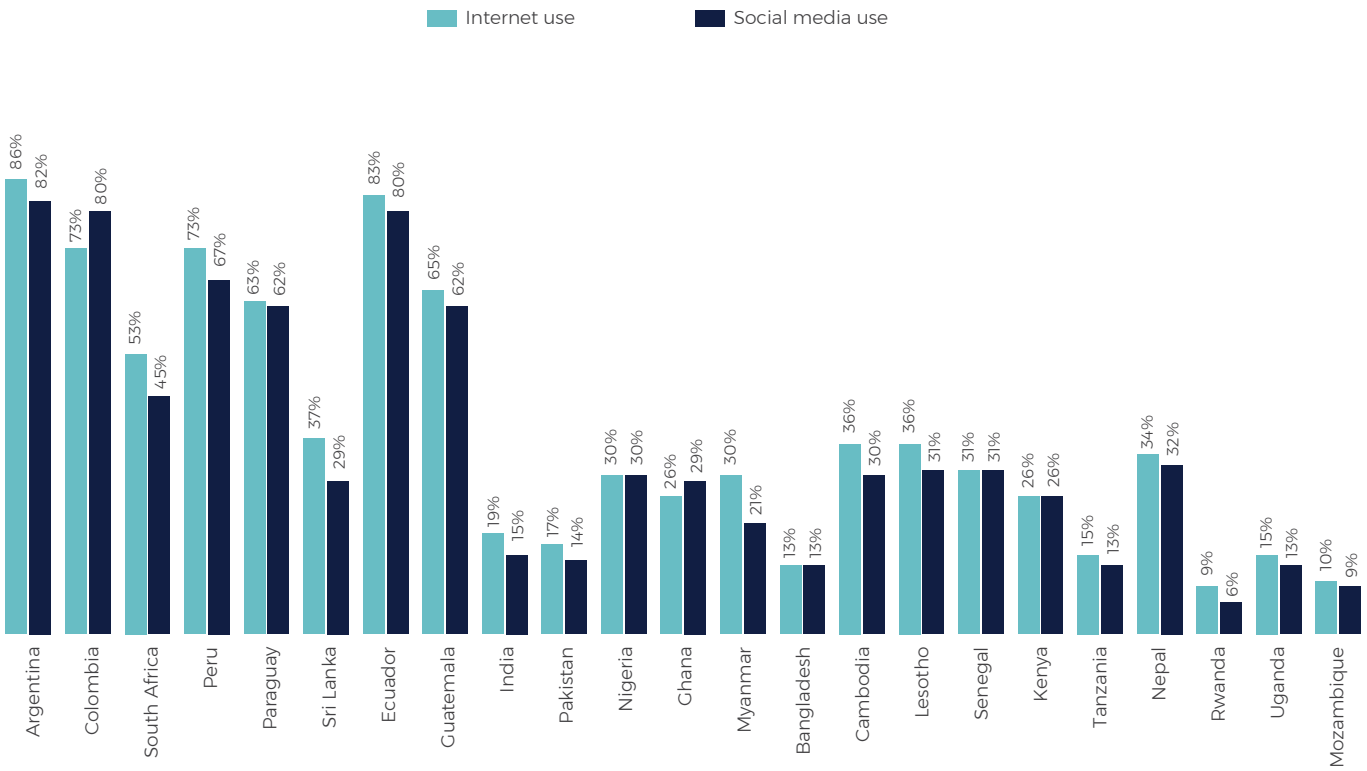
Q I'm going to read some phrases that other people have mentioned as limitations to the use of Internet. For each one, please, tell me if you consider it a limitation or not.*

Base	Argentina	Colombia	South Africa	Peru	Paraguay	Ecuador	Guatemala	Lesotho	Tanzania	Rwanda	Uganda	Mozambique
Internet users	1,006	1,192	829	1,120	886	1,165	1,104	652	266	172	346	238

* Multiple-response question

Figure 28.

Internet and social media use (% of population aged 15-65)



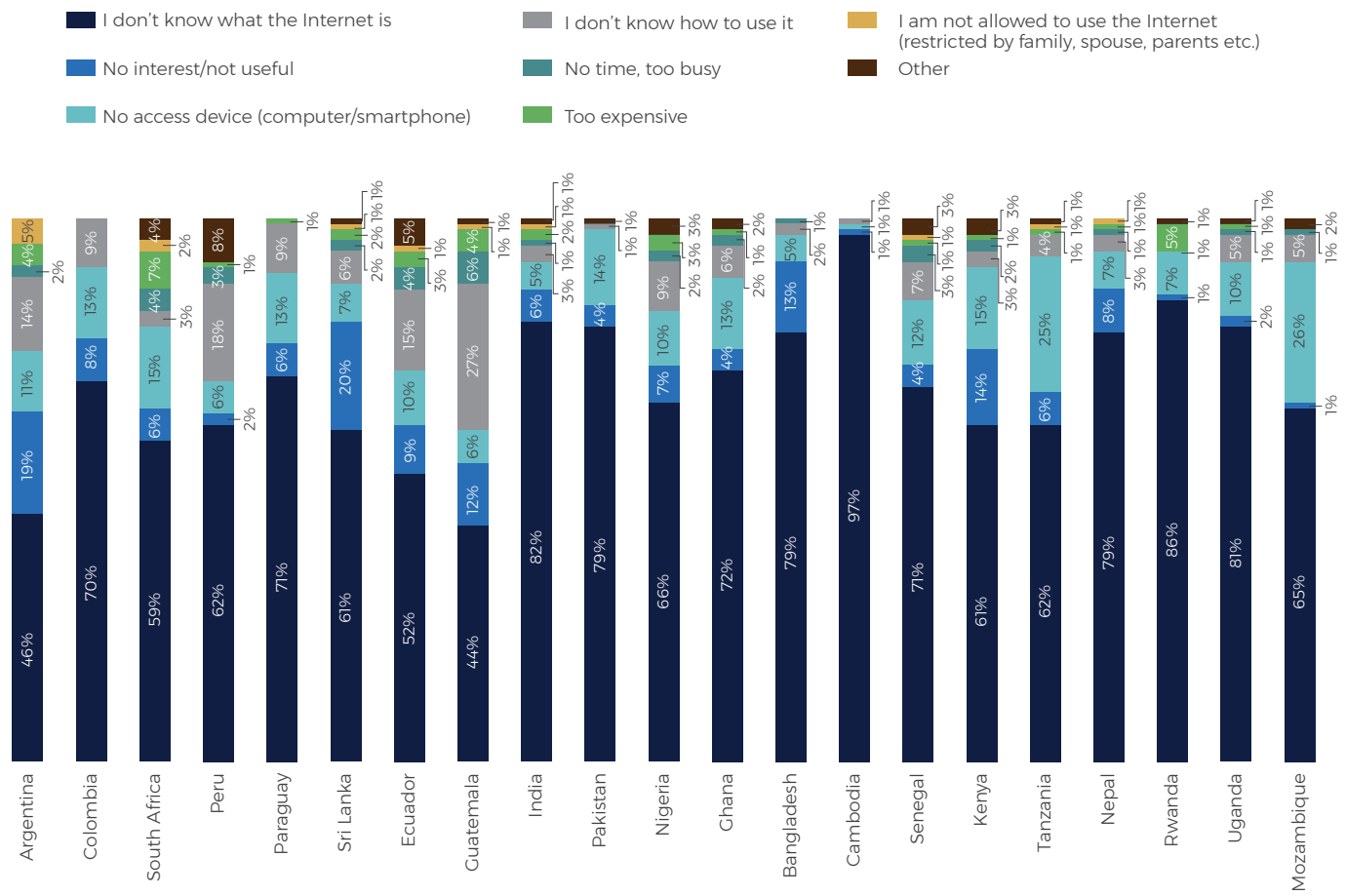
Q1 Have you ever used the Internet (Gmail, Google, Facebook, email etc.)?

Q2 Do you use social media like Facebook, WhatsApp, Twitter etc.?

Base	Argentina	Colombia	South Africa	Peru	Paraguay	Sri Lanka	Ecuador	Guatemala	India	Pakistan	Nigeria	Ghana	Myanmar	Bangladesh	Cambodia	Lesotho	Senegal	Kenya	Tanzania	Nepal	Rwanda	Uganda	Mozambique
All respondents	1,240	1,425	1,610	1,478	1,357	2,017	1,420	1,407	5,069	2,002	1,706	1,145	7,204	2,020	2,123	1,844	1,181	1,179	1,102	2,008	1,118	1,757	1,091

Figure 29.

Main reason for not using the Internet (% of non-Internet users aged 15-65)



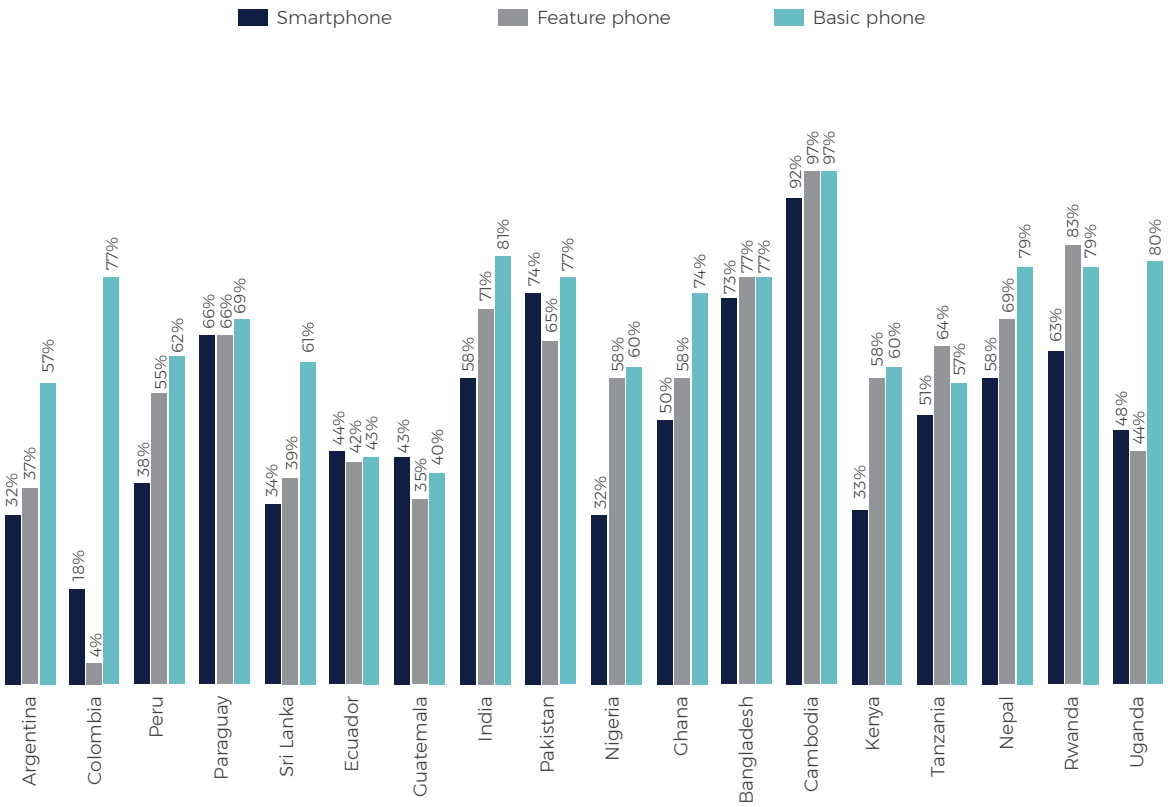
Q What is your main reason for not using the Internet?

Base	Argentina	Colombia	South Africa	Peru	Paraguay	Sri Lanka	Ecuador	Guatemala	India	Pakistan	Nigeria	Ghana	Bangladesh	Cambodia	Senegal	Kenya	Tanzania	Nepal	Rwanda	Uganda	Mozambique
Non-Internet users	192	248	806	391	536	1,278	255	484	4,150	1,575	1,177	837	1,754	1,319	788	740	840	1,316	947	1,411	855

Figure 30.

Main reason for not using the Internet – "I don't know what the Internet is"

(% of non-Internet users aged 15-65 who own mobile phones)



Q What is your main reason for not using the Internet?

Base	Argentina	Colombia	Peru	Paraguay	Sri Lanka	Ecuador	Guatemala	India	Pakistan	Nigeria	Ghana	Bangladesh	Cambodia	Kenya	Tanzania	Nepal	Rwanda	Uganda
Non-Internet users who own mobile phones	133	204	283	410	918	168	353	2,424	820	636	607	1,267	779	622	498	800	478	723

App use

The highest-reported use of mobile apps by mobile phone owners across the countries was on social networking apps such as Facebook, WhatsApp and Instagram (Table 7). For example, 70% and 71% of mobile phone owners aged 15-65 in Nepal and Cambodia, respectively, used social networking apps, compared to, 61% in Sri Lanka, 48% in India, 25% in Pakistan and just 19% in Bangladesh.

Voice and messaging apps were also popular across the board, though social media apps were the most popular in most countries.

Among the Asian countries surveyed, the most diverse use of apps (entertainment apps, business apps, news apps etc.) was seen in India, Cambodia and Nepal. The most diverse use across the survey countries was seen in the more developed markets of Latin America, but strikingly, one third of mobile phone owners aged 15-65 in these three countries (India, Cambodia and Nepal) used news apps on mobile phones.

Pakistani and Bangladeshi Internet-enabled-mobile owners used a less diverse range of apps, sticking mainly to social media, voice and messaging apps – all at relatively low levels.

Table 7.

Use of mobile apps (% of mobile phone owners aged 15-65)

	Argentina	Colombia	South Africa	Peru	Paraguay	Sri Lanka	Ecuador	Guatemala	India	Pakistan	Nigeria	Ghana	Bangladesh	Cambodia	Senegal	Kenya	Tanzania	Nepal	Rwanda	Uganda	Mozambique
Social networking apps (Facebook, WhatsApp, Instagram, Snapchat, Twitter, LinkedIn, Line etc.)	95%	94%	52%	82%	88%	61%	88%	87%	48%	25%	52%	68%	19%	71%	85%	30%	22%	70%	12%	50%	20%
Messaging or chat (text) apps (WhatsApp, Skype, Viber, Line, Talkray, Telegram, Facebook Messenger etc.)	89%	86%	45%	77%	90%	53%	86%	78%	46%	25%	43%	64%	22%	50%	85%	26%	17%	67%	16%	42%	28%
Entertainment apps (movie trailers, celebrity gossip, radio station guides etc.)	27%	43%	24%	44%	28%	29%	50%	37%	43%	13%	28%	40%	13%	51%	36%	17%	28%	38%	30%	35%	16%
Voice apps (WhatsApp, Skype, Viber, Line, Talkray etc.)	89%	86%	45%	77%	90%	57%	86%	78%	42%	24%	43%	64%	17%	27%	85%	26%	17%	41%	16%	42%	28%
Game apps (puzzles, charades etc.)	19%	32%	32%	31%	18%	28%	34%	34%	34%	15%	31%	46%	13%	37%	40%	16%	9%	34%	9%	43%	17%
News apps (local news, national headlines, technology announcements, sports etc.)	49%	41%	25%	60%	38%	31%	61%	51%	33%	12%	37%	44%	8%	36%	38%	16%	16%	37%	17%	32%	15%
Educational applications (dictionary, learning tools etc.)	34%	39%	27%	55%	25%	32%	55%	50%	30%	10%	36%	53%	8%	32%	49%	16%	12%	29%	7%	31%	14%
Search tool apps (maps, directions, phone numbers, recipes etc.)	51%	49%	30%	56%	32%	33%	59%	47%	29%	16%	28%	43%	7%	23%	39%	19%	19%	24%	18%	23%	12%
Business apps (calculate, convert, translate, etc.)	28%	22%	13%	45%	21%	21%	43%	26%	26%	14%	25%	30%	15%	51%	40%	13%	26%	11%	24%	17%	8%
Weather apps (local forecasts, natural disaster updates etc.)	57%	42%	26%	51%	46%	22%	52%	37%	22%	11%	18%	32%	3%	24%	22%	10%	4%	15%	2%	21%	12%
Trading or e-commerce apps (selling and buying online e.g.: eBay)	43%	23%	8%	36%	16%	14%	37%	18%	19%	12%	8%	18%	3%	6%	29%	9%	6%	3%	4%	10%	5%
Transport apps (public transportation info, taxis, Uber etc.)	31%	15%	10%	35%	10%	16%	33%	22%	17%	17%	6%	13%	2%	1%	20%	9%	4%	3%	5%	9%	6%
Payment gateway apps (e.g.: PayPal)*						8%			15%	7%			1%	2%				4%			

Q Do you use these types of mobile apps on your phone?

Base	Argentina	Colombia	South Africa	Peru	Paraguay	Sri Lanka	Ecuador	Guatemala	India	Pakistan	Nigeria	Ghana	Bangladesh	Cambodia	Senegal	Kenya	Tanzania	Nepal	Rwanda	Uganda	Mozambique
Feature or smartphone owners	982	1,020	1,552	972	809	849	1,039	846	1,397	571	795	458	936	878	433	1,074	789	903	660	374	667

* This question was asked only in Asian countries.

Social media

Social media

As seen in the previous sections, social media was the most popular use of apps on mobile phones, used by as many as 70-71% of mobile phone owners in Cambodia and Nepal (Table 7). However, its use was not evenly spread across all market segments.

Gender gaps in social media use were seen across all Asian countries surveyed, with particularly large gaps in India, Bangladesh and Pakistan (Figure 31) – similar to those seen in Internet use – with Sri Lanka not too far behind.

Urban rural gaps were also seen (Figure 32) at similar levels as those in Internet use – from as high as 53% in India to as low as 23% in Pakistan.

Social media use was seen almost entirely among smartphone owners in the Asian countries surveyed (Figure 33), although some feature phone owners (e.g.: 31% and 19% aged 15-65 in Nepal and Pakistan respectively) also used social media.

The less-educated and those with lower incomes lagged behind in their use (Table 8). Social media use was most concentrated among those below the age of 35.

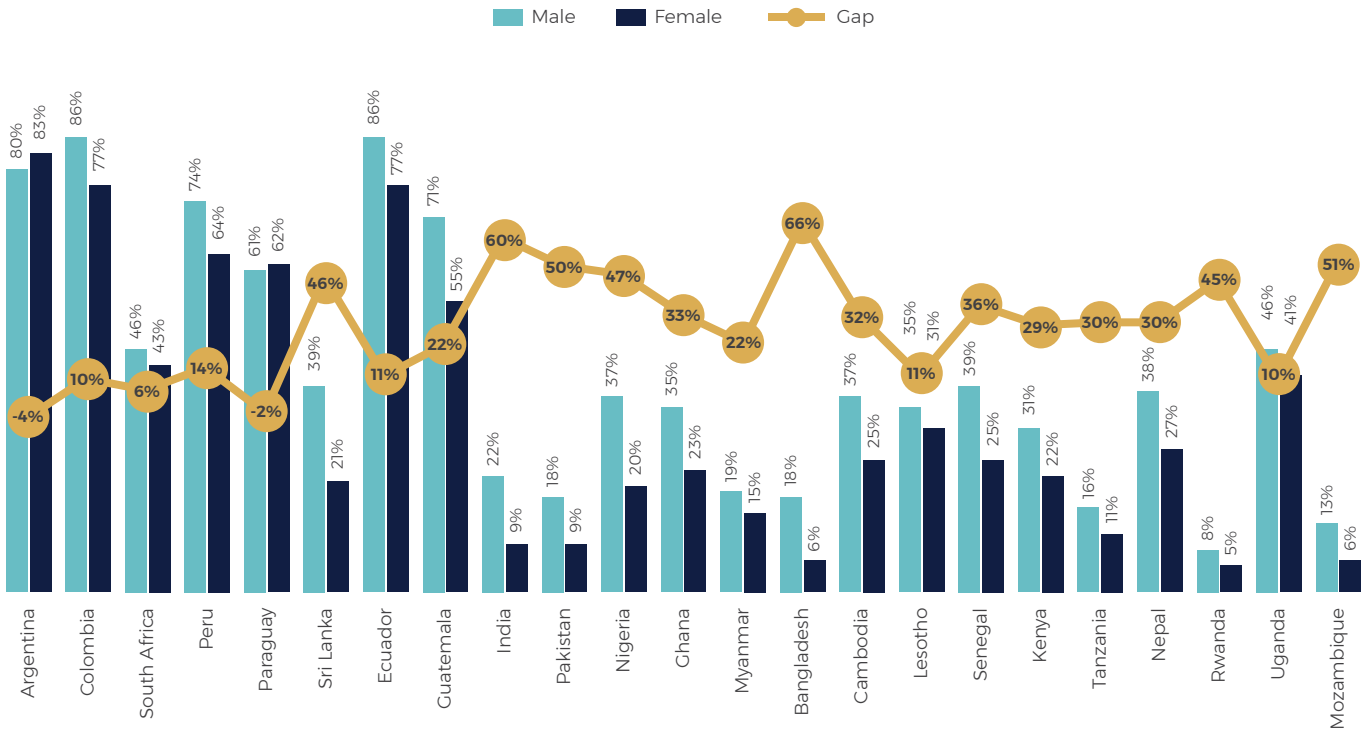
Social media was mostly used for keeping in touch with family and friends as well as chatting (text) and calls (Table 9). Many used it as a source of news, ranging from 52% of social media users aged 15-65 in Pakistan to 86% in Cambodia and even higher in some African countries.

The majority of social media users were willing to share their name, gender, age etc. on social media, and even contact information (Figure 34). However, users were more guarded about religious and political views as well as sexual orientation.

Bangladeshi and Indian as well as Sri Lankan social media users aged 15-65 were less trusting of the news they read on social media while users in Cambodia and Nepal were far more trusting and Pakistani respondents were largely ambiguous (Figure 35). Approximately 40-60% of Indian, Pakistani and Bangladeshi social media users aged 15-65 stated that they did not share or forward content on social media, while a further percentage indicated that they verified the content before forwarding it (Figure 36). Nepali social media users aged 15-65 were less cautious about sharing or forwarding content on social media.

Figure 31.

Gender gaps in social media use (% of population aged 15-65)



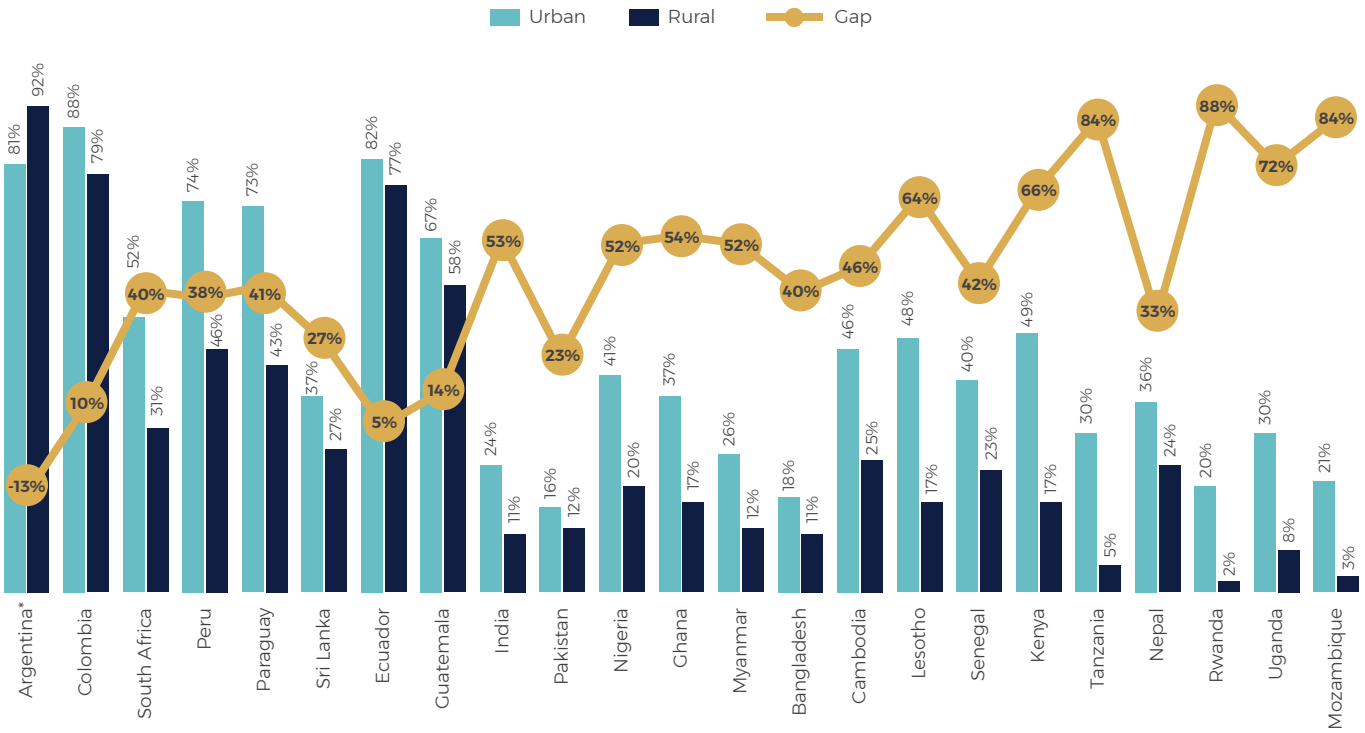
Gender gap in social media use % = (Male social media users (% of male population) − Female social media users (% of female population)) ÷ Male social media users (% of male population)

Q Do you use social media like Facebook, WhatsApp, Twitter etc.?

Base	Argentina	Colombia	South Africa	Peru	Paraguay	Sri Lanka	Ecuador	Guatemala	India	Pakistan	Nigeria	Ghana	Myanmar	Bangladesh	Cambodia	Lesotho	Senegal	Kenya	Tanzania	Nepal	Rwanda	Uganda	Mozambique
All respondents (Male)	478	487	795	508	879	834	511	656	2,478	1,060	912	547	3,818	1,092	735	515	603	544	531	912	556	848	527
All respondents (Female)	762	938	1,020	970	478	1,183	909	751	2,591	942	896	653	3,386	928	1,388	1,329	578	664	669	1,096	655	909	644

Figure 32.

Urban-rural gaps in social media use (% of population aged 15-65)



Urban-rural gap in social media use %	=	(Urban social media users (% of urban population)	−	Rural social media users (% of rural population)	) ÷	Urban social media users (% of urban population)

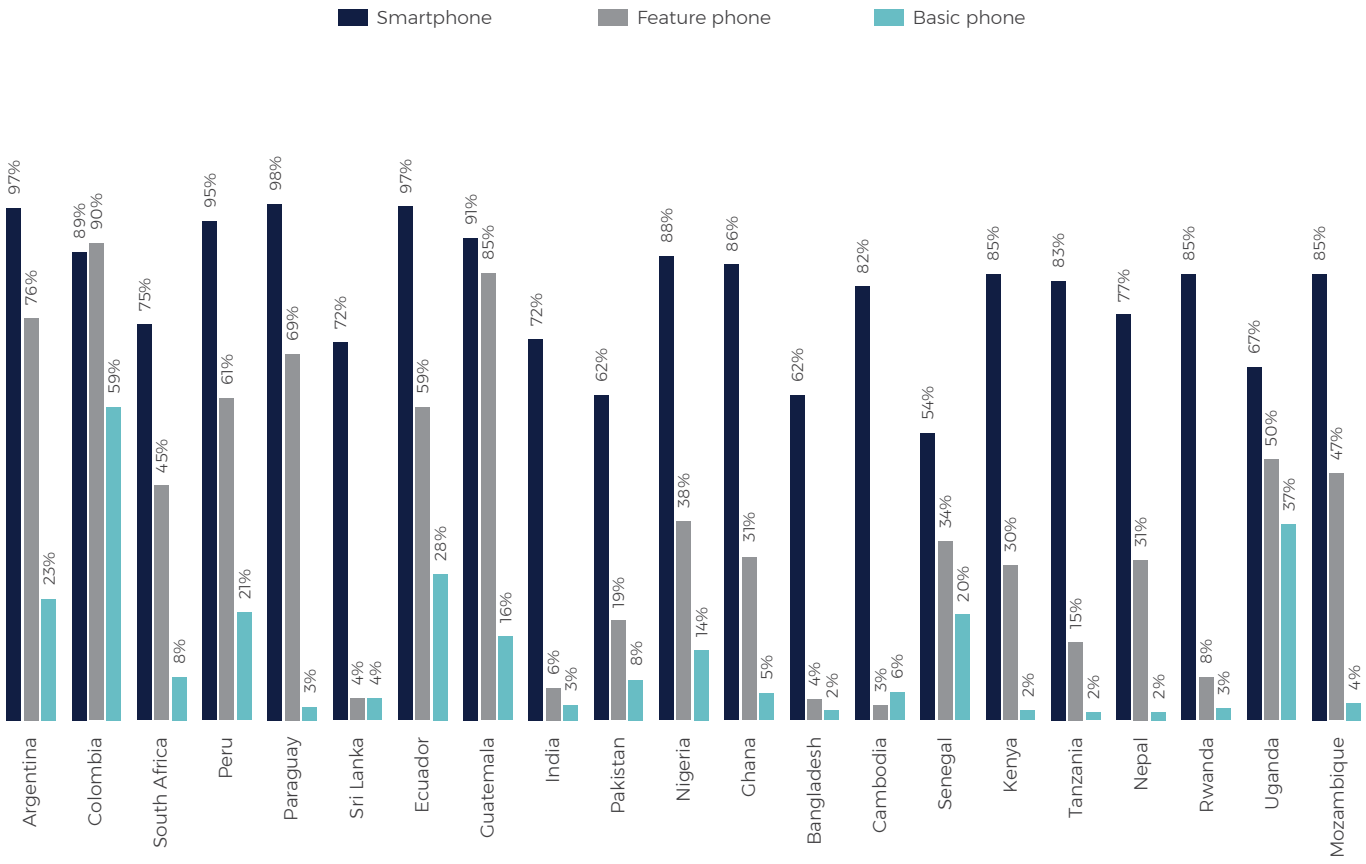
Q Do you use social media like Facebook, WhatsApp, Twitter etc.?

Base	Argentina	Colombia	South Africa	Peru	Paraguay	Sri Lanka	Ecuador	Guatemala	India	Pakistan	Nigeria	Ghana	Myanmar	Bangladesh	Cambodia	Lesotho	Senegal	Kenya	Tanzania	Nepal	Rwanda	Uganda	Mozambique
All respondents (Urban)	1,208	986	1,050	1,178	824	803	932	550	2,200	793	1,147	721	3,477	808	897	844	790	727	720	940	711	1,024	718
All respondents (Rural)	32	439	765	300	533	1,214	488	857	2,869	1,209	661	479	3,727	1,212	1,226	1,000	391	481	480	538	500	733	453

* Low rural base

Figure 33.

Social media use (% of mobile phone owners aged 15-65)



Q Do you use social media like Facebook, WhatsApp, Twitter etc.?

Base	Argentina	Colombia	South Africa	Peru	Paraguay	Sri Lanka	Ecuador	Guatemala	India	Pakistan	Nigeria	Ghana	Bangladesh	Cambodia	Senegal	Kenya	Tanzania	Nepal	Rwanda	Uganda	Mozambique
Mobile phone owners	1,116	1,297	1,398	1,234	1,209	1,609	1,191	1,214	3,252	1,208	1,123	901	1,531	1,526	969	1,054	761	1,478	635	1,031	632

Table 8.

Social media use, by education level, income level and by age group (% of population aged 15-65)

		Argentina	Peru	Paraguay	Sri Lanka	Ecuador	Guatemala	India	Pakistan	Nigeria	Ghana	Bangladesh	Cambodia	Lesotho	Senegal	Kenya	Tanzania	Nepal	Rwanda
Education	Secondary education or higher	82%	73%	88%	36%	88%	81%	29%	42%	51%	52%	22%	64%	74%	64%	43%	26%	59%	24%
	Primary or none	15%	34%	40%	9%	69%	40%	5%	11%	3%	9%	6%	19%	28%	14%	5%	3%	9%	1%
Income	Above average	83%	75%	75%	41%	86%	64%	22%	26%	37%	39%	15%	40%	49%	38%	43%	31%	44%	20%
	Below average	79%	58%	49%	19%	80%	57%	10%	10%	25%	27%	11%	25%	26%	29%	21%	7%	35%	4%
	Zero income	86%	77%	65%	22%	88%	69%	15%	6%	0%	0%	11%	13%	23%	0%	0%	1%	28%	5%
Age	15-25	91%	90%	89%	52%	93%	85%	29%	19%	32%	38%	22%	48%	51%	45%	40%	14%	47%	6%
	26-35	90%	79%	75%	44%	87%	66%	15%	13%	34%	36%	14%	41%	38%	43%	27%	23%	40%	12%
	36-45	85%	55%	63%	28%	78%	49%	10%	9%	25%	18%	9%	23%	21%	25%	16%	8%	25%	7%
	46-55	73%	43%	44%	12%	56%	33%	6%	7%	17%	16%	3%	11%	7%	9%	9%	7%	10%	1%
	56-65	52%	28%	22%	6%	36%	22%	2%	11%	9%	7%	1%	8%	6%	6%	7%	3%	3%	1%

Q Do you use social media like Facebook, WhatsApp, Twitter etc.?

Base	Argentina	Peru	Paraguay	Sri Lanka	Ecuador	Guatemala	India	Pakistan	Nigeria	Ghana	Bangladesh	Cambodia	Lesotho	Senegal	Kenya	Tanzania	Nepal	Rwanda
All respondents	1,240	1,478	1,357	2,017	1,420	1,407	5,069	2,002	1,706	1,145	2,020	2,123	1,844	1,181	1,179	1,102	2,008	1,118

Table 9.

What social media is used for (% of social media users aged 15-65)

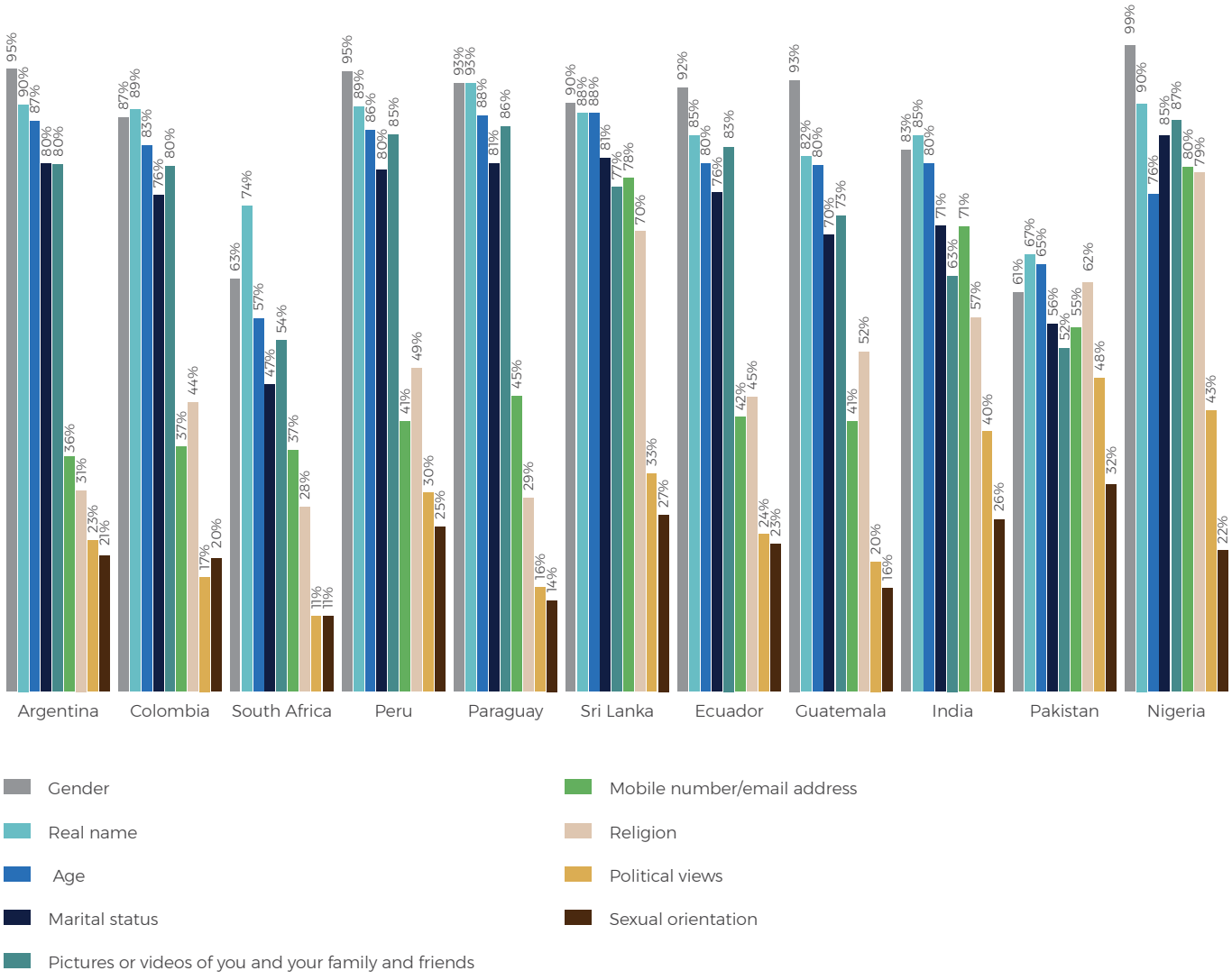
	South Africa	Sri Lanka	India	Pakistan	Nigeria	Chana	Bangladesh	Cambodia	Senegal	Kenya	Tanzania	Nepal	Rwanda	Uganda	Mozambique
Chatting (text)	93%	76%	86%	73%	97%	95%	93%	72%	81%	96%	99%	97%	98%	49%	93%
Staying in contact with friends and family	77%	76%	91%	72%	96%	92%	94%	79%	96%	92%	86%	93%	90%	46%	90%
Making calls	73%	80%	83%	70%	58%	81%	78%	76%	94%	62%	72%	90%	79%	24%	73%
Sharing videos/pictures/music	65%	68%	74%	63%	83%	86%	67%	67%	90%	84%	88%	87%	82%	27%	80%
Making new friends	63%	66%	68%	58%	90%	93%	76%	61%	91%	91%	90%	80%	85%	24%	83%
Reading news	62%	78%	77%	52%	86%	80%	73%	86%	89%	79%	94%	81%	89%	21%	74%
Playing games	45%	49%	66%	54%	41%	53%	42%	32%	55%	46%	38%	42%	45%	13%	47%
Looking for educational content	44%	63%	71%	51%	74%	76%	57%	50%	71%	71%	57%	42%	49%	9%	71%
Getting opinions/sharing experiences	43%	62%	63%	48%	76%	73%	57%	54%	56%	80%	70%	61%	67%	15%	52%
Making professional and business contacts	29%	37%	57%	38%	47%	46%	37%	26%	65%	51%	42%	14%	43%	5%	37%
Following government social media pages (to look for jobs or updates on policies)	25%	38%	58%	39%	46%	44%	35%	40%	54%	55%	54%	27%	54%	2%	24%
Following local politicians	21%	38%	47%	41%	31%	34%	33%	43%	49%	56%	54%	29%	54%	4%	18%
Sharing own produced content	21%	49%	55%	45%	27%	43%	52%	50%	48%	41%	36%	9%	43%	2%	46%
Marketing products/services	13%	18%	45%	34%	25%	27%	29%	9%	46%	31%	21%	8%	18%	2%	20%

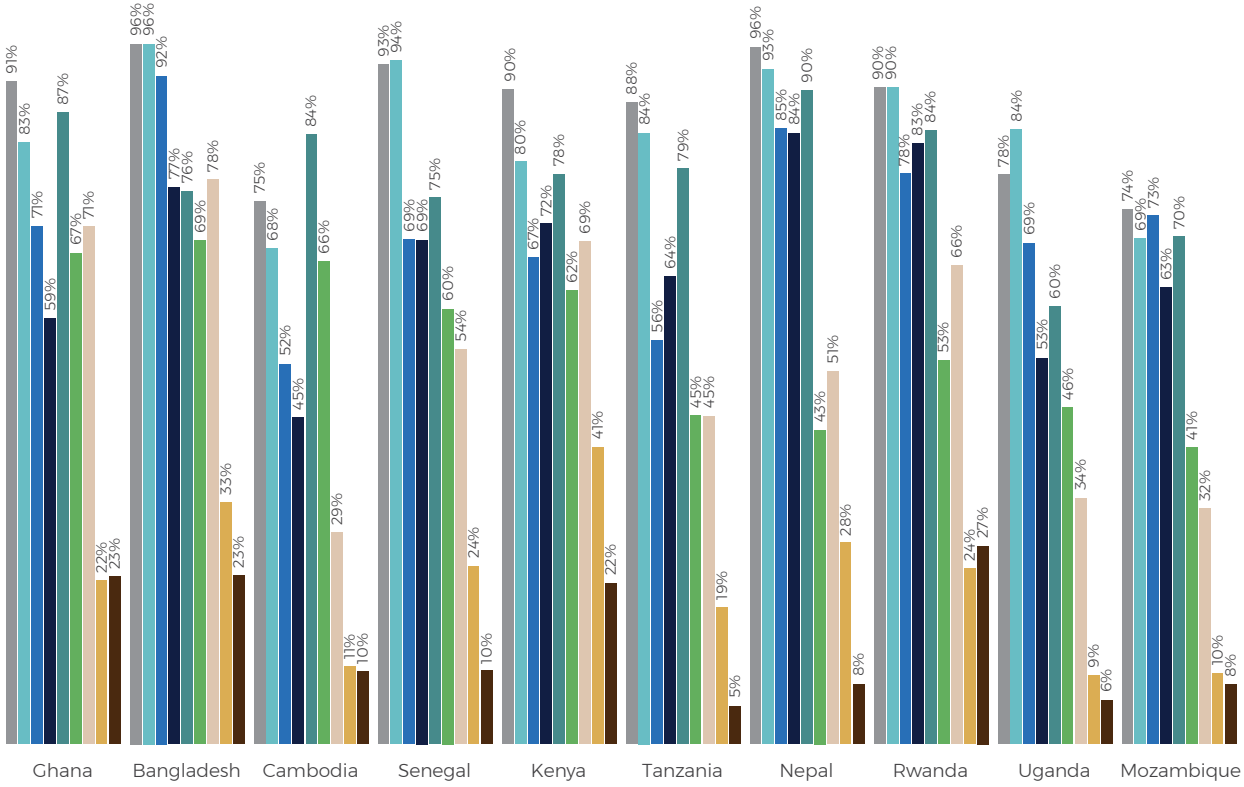
Q What do you use social media for?

Base	South Africa	Sri Lanka	India	Pakistan	Nigeria	Chana	Bangladesh	Cambodia	Senegal	Kenya	Tanzania	Nepal	Rwanda	Uganda	Mozambique
Social media users	669	593	754	369	496	323	251	680	387	423	241	648	156	312	230

Figure 34.

Types of information shared on social media (% of social media users aged 15-65)



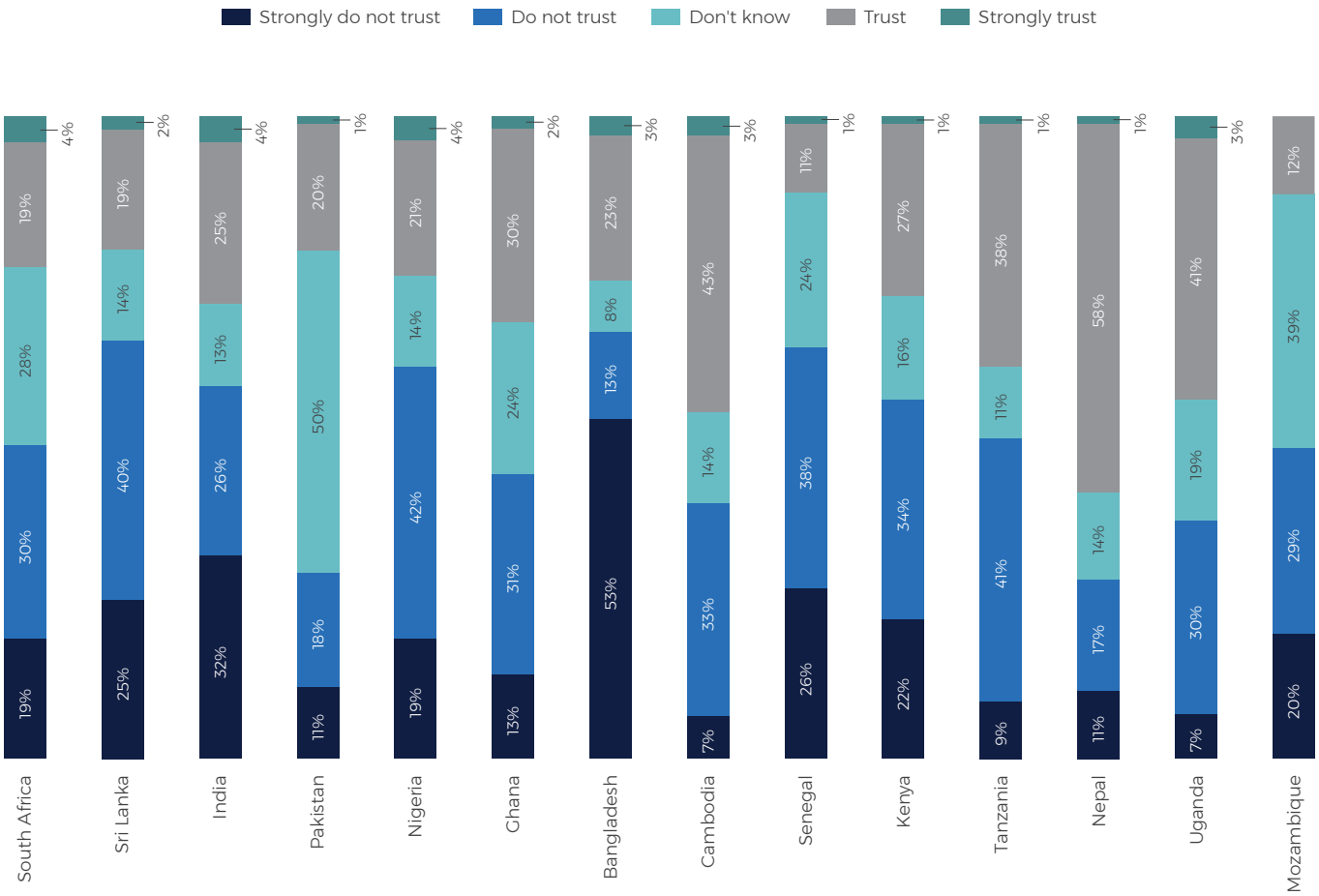


Q What information do you share on social media ?

Base	Argentina	Colombia	South Africa	Peru	Paraguay	Sri Lanka	Ecuador	Guatemala	India	Pakistan	Nigeria	Ghana	Bangladesh	Cambodia	Senegal	Kenya	Tanzania	Nepal	Rwanda	Uganda	Mozambique
Social media users	993	1,246	669	999	802	593	1,122	878	754	369	496	323	251	680	387	423	241	648	156	312	230

Figure 35.

Degree of trust in news read on social media (% of social media users aged 15-65)

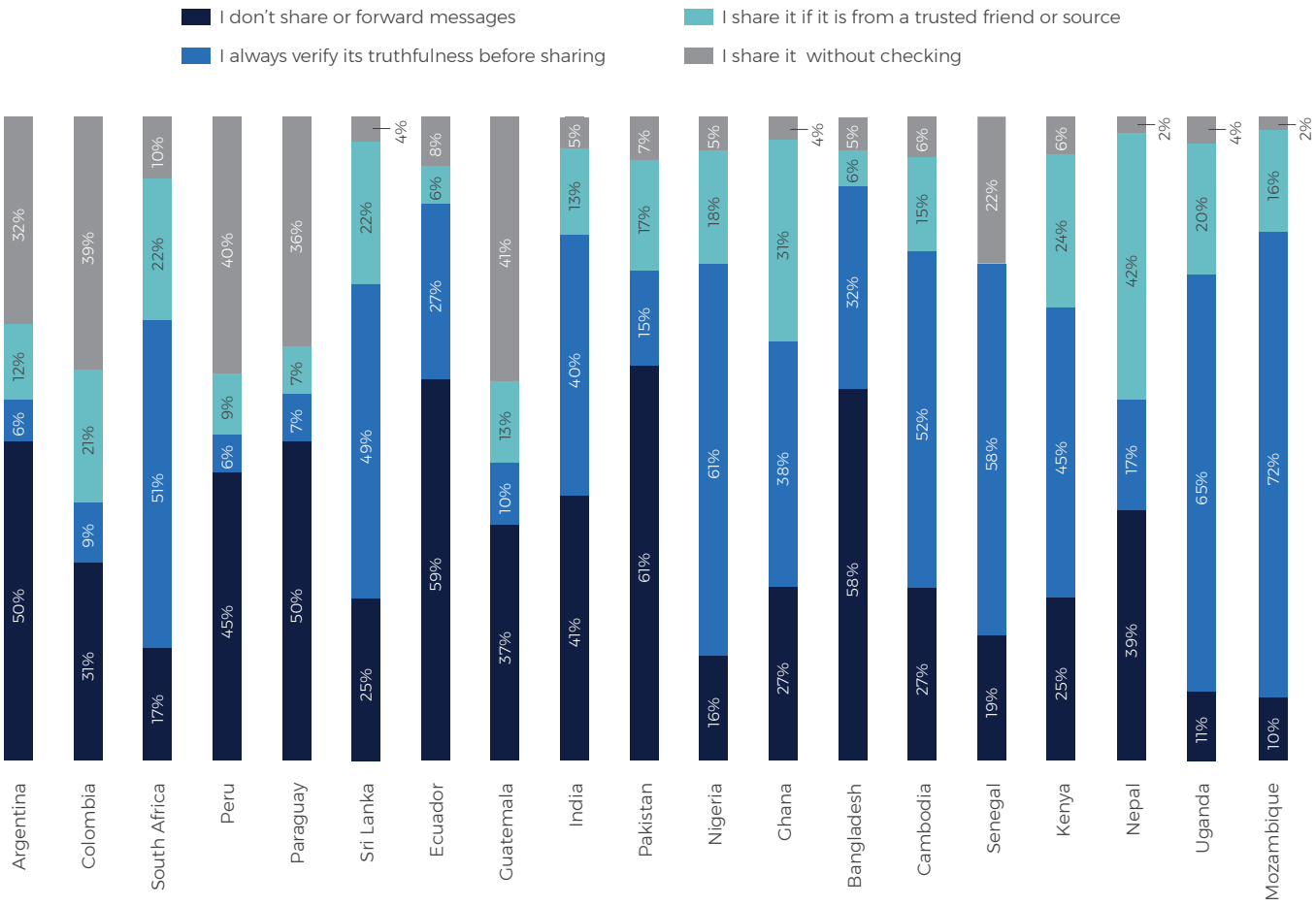


Q Can you trust news you read on social media (Facebook etc.)?

Base	South Africa	Sri Lanka	India	Pakistan	Nigeria	Chana	Bangladesh	Cambodia	Senegal	Kenya	Tanzania	Nepal	Uganda	Mozambique
Social media users	669	593	754	369	496	323	251	680	387	423	241	648	312	230

Figure 36.

Sharing content on social media (% of social media users aged 15-65)



Q When you share news that is on your newsfeed or forward messages that you receive, do you:

Base	Argentina	Colombia	South Africa	Peru	Paraguay	Sri Lanka	Ecuador	Guatemala	India	Pakistan	Nigeria	Ghana	Bangladesh	Cambodia	Senegal	Kenya	Nepal	Uganda	Mozambique
Social media users	993	1,246	669	999	802	593	1,122	878	754	369	496	323	251	680	387	423	648	312	230

Public Wi-Fi

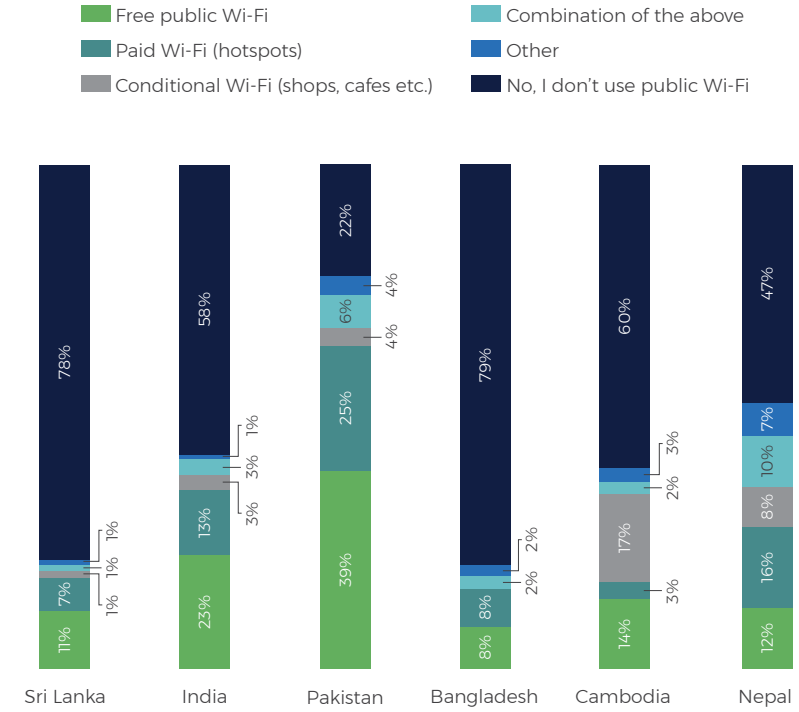
Public Wi-Fi

Public Wi-Fi was used by 78% of Internet users aged 15-65 in Pakistan, 53% in Nepal, 42% in India, 40% in Cambodia, 22% in Sri Lanka and 21% in Bangladesh (Figure 37). Free Wi-Fi was utilized by at least half of all these respondents, but was most popular among those in Pakistan. Users of other forms of public Wi-Fi used paid and/or conditional hotspots.

On the whole, a larger share of rural Internet users made use of the free public Wi-Fi than urban Internet users (Figure 38). The latter more often used paid hotspots. More male Internet users made use of public Wi-Fi than female (Figure 39) and more respondents from higher SECs than lower (Figure 40). The relationship between age and Wi-Fi use appears to be somewhat U-shaped (Figure 41). The youngest (15-25) and oldest (55-65) use free public Wi-Fi more often than the middle age groups (i.e.: those earning, with less time and flexibility, etc.).

Figure 37.

Public Wi-Fi use (% of Internet users aged 15-65)

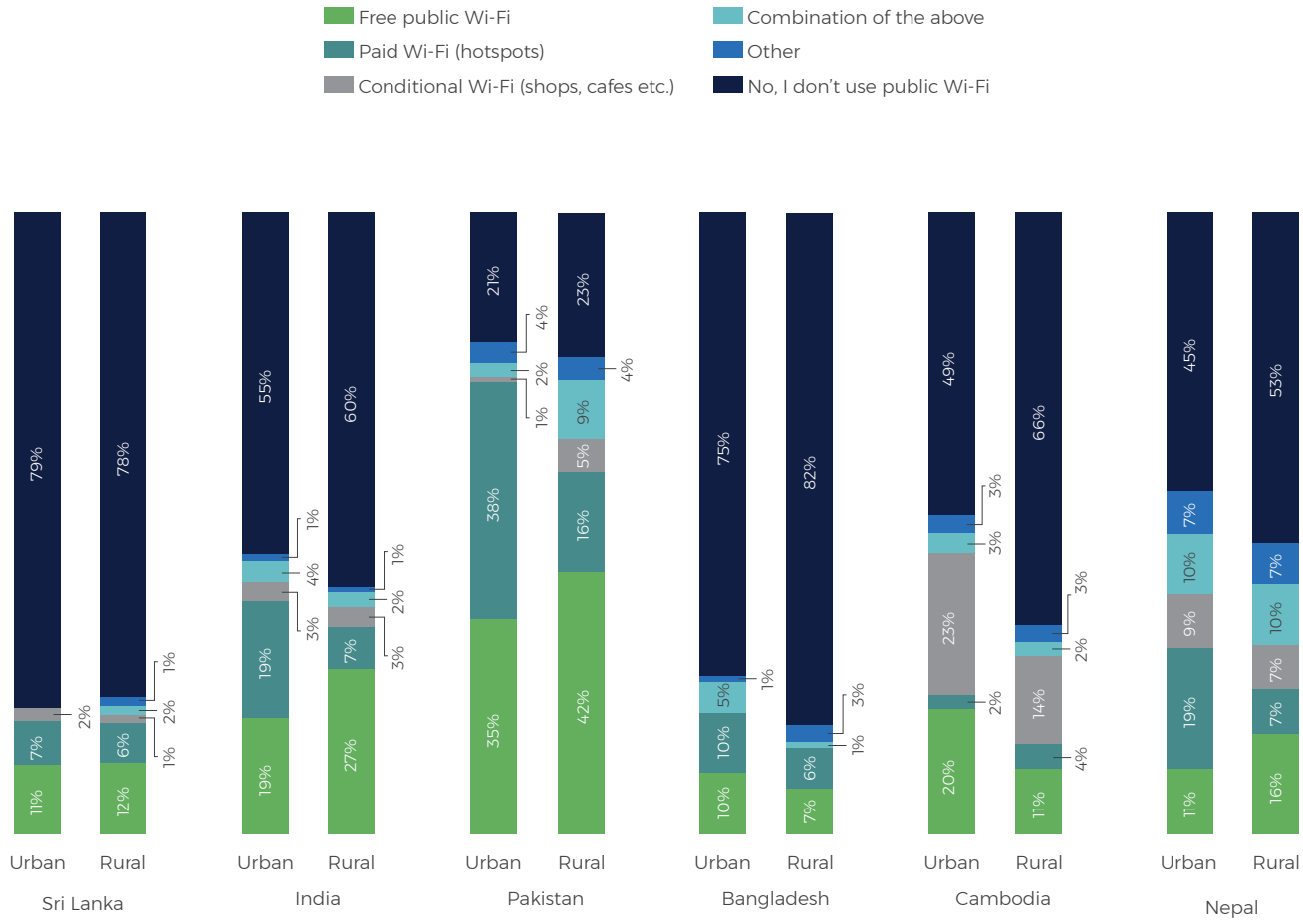


Q Do you access the Internet over public Wi-Fi through the following means?

Base	Sri Lanka	India	Pakistan	Bangladesh	Cambodia	Nepal
Internet users	739	919	427	266	804	692

Figure 38.

Public Wi-Fi use, by location (% of Internet users aged 15-65)

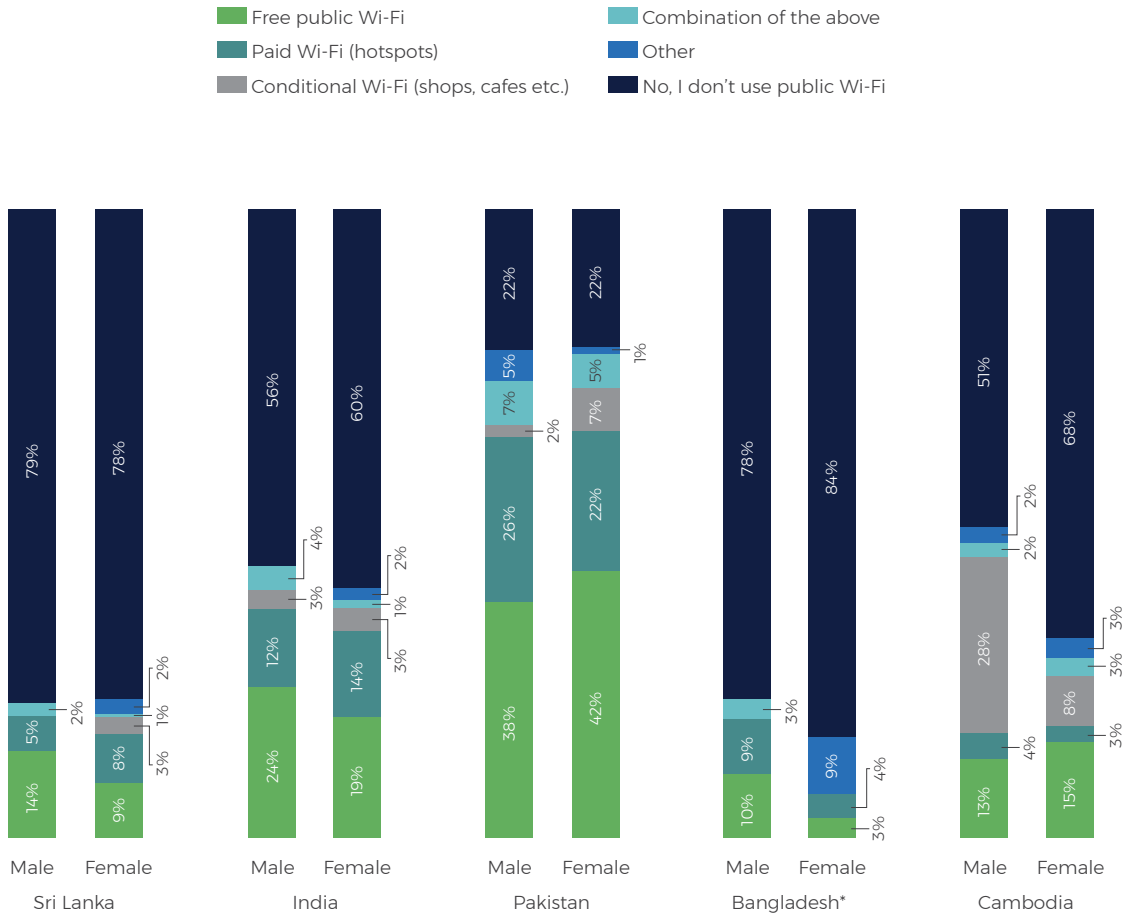


Q Do you access the Internet over public Wi-Fi through the following means?

	Sri Lanka		India		Pakistan		Bangladesh		Cambodia		Nepal	
Base	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural
Internet users	348	391	476	443	211	216	146	120	456	348	478	214

Figure 39.

Public Wi-Fi use, by gender (% of Internet users aged 15-65)



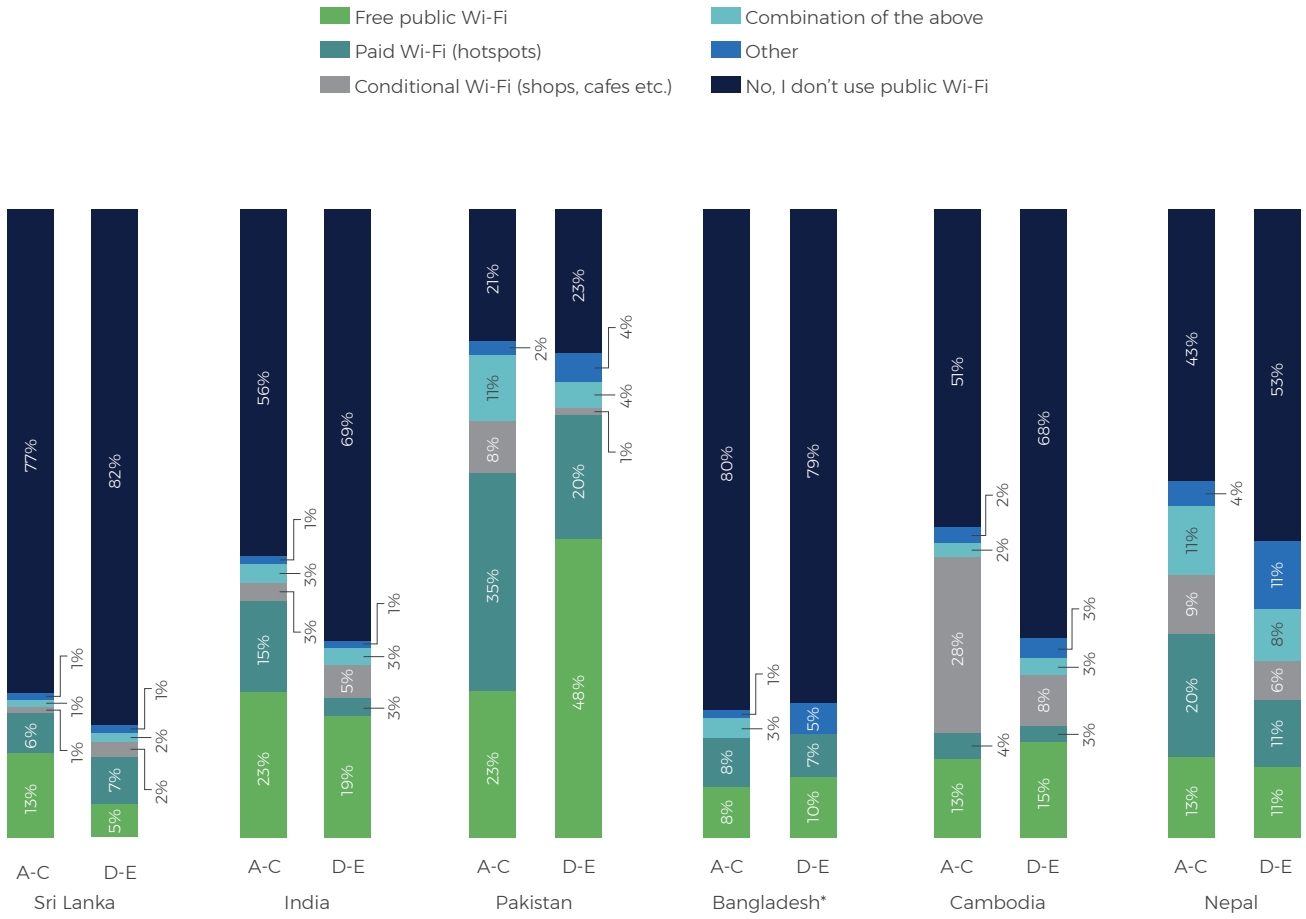
Q Do you access the Internet over public Wi-Fi through the following means?

	Sri Lanka		India		Pakistan		Bangladesh		Cambodia	
Base	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Internet users	390	349	652	267	283	144	199	**67**	365	439

* Low base for Bangladesh women

Figure 40.

Public Wi-Fi use, by SEC (% of Internet users aged 15-65)



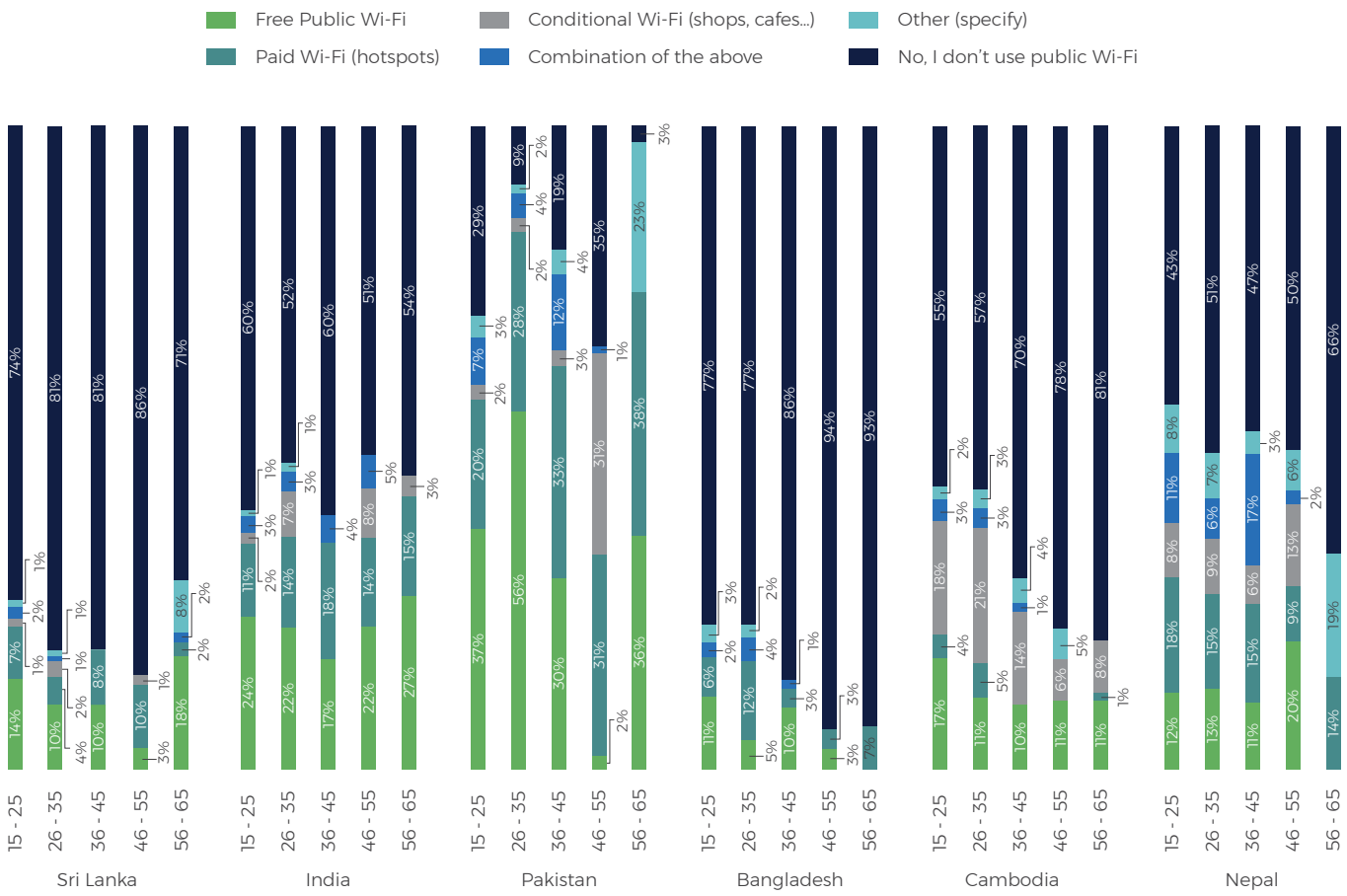
Q Do you access the Internet over public Wi-Fi through the following means?

	Sri Lanka		India		Pakistan		Bangladesh		Cambodia		Nepal	
Base	A-C	D-E	A-C	D-E	A-C	D-E	A-C	D-E	A-C	D-E	A-C	D-E
Internet users	572	167	809	109	207	220	217	**49**	196	595	418	274

* Low base for Bangladesh SEC D-E

Figure 41.

Public Wi-Fi use, by age group (% of Internet users aged 15-65)



Q Do you access the Internet over public Wi-Fi through the following means?

Base	Sri Lanka	India	Pakistan	Bangladesh	Cambodia	Nepal
Internet users (15-25)	188	441	191	111	309	276
Internet users (26-35)	174	261	116	**84**	283	264
Internet users (36-45))	142	135	**74**	**51**	127	116
Internet users (46-55))	**55**	**60**	**28**	**14**	**54**	**30**
Internet users (56-65)	**28**	**22**	**18**	**6**	**31**	**6**

Note: Bases are low for some age groups (indicated in red)

Mobile phone expenditure

Mobile phone expenditure

The average amount spent monthly on services (including voice, SMS and data) by mobile phone owners in the Asian countries surveyed was lower than that spent by users from the Latin American and African countries surveyed (Figure 42). Indian mobile phone owners spent USD2.3 on average at the time of survey (October-November 2017) – the lowest from the survey countries. Bangladeshi owners spent the second lowest (USD 2.9) from among the Asian countries, and Nepali the third lowest (USD 3.2).

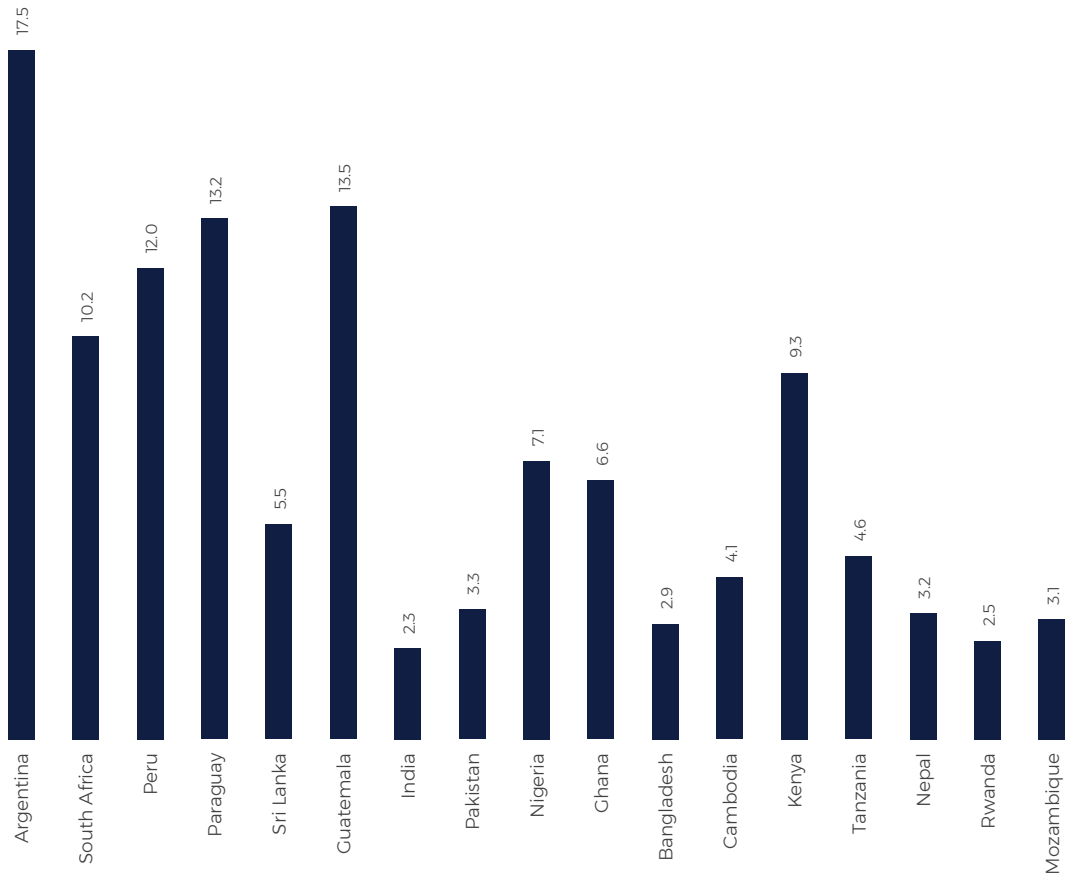
It should be noted that the expenditure amounts captured through a demand-side survey (i.e.: from the user, rather than from the supply-side or the network provider) might differ largely from industry ARPU numbers. For example, at the end of September 2017 the Indian ARPU was INR89[6], or USD 1.37. The discrepancy can be accounted for by the fact that in the demand side data, the average is calculated based on the number of unique subscribers, while APRU (supply-side) is calculated based on the number of active SIMs, which we know from the survey is a larger number than that of unique subscribers (e.g.: 26% of mobile phone owners in India had more than one SIM). Another difference is that the survey target group consists of those aged 15-65 only, while ARPU calculations make no such distinction.

Table 10 provides expenditure data as captured by the survey, disaggregated by urban-rural, gender, income and age groups as well as handset types.

[6] https://coai.com/sites/default/files/COAI%20ARPU%20REPORT%20Q2%20FY%202017-18%20Final.pdf

Figure 42.

Average monthly expenditure on mobile services (USD)



Q Could you tell me how much you spent last month for voice, SMS and data in total (airtime *and* subscription)?

Base	Argentina	South Africa	Peru	Paraguay	Sri Lanka	Guatemala	India	Pakistan	Nigeria	Ghana	Bangladesh	Cambodia	Kenya	Tanzania	Nepal	Rwanda	Mozambique
Mobile phone owners	1,116	1,398	1,234	1,209	1,609	1,214	3,252	1,208	1,123	901	1,531	1,526	1,054	761	1,478	635	632

Table 10.

Average monthly expenditure on mobile services, by location, gender, income level, age group and type of handset (USD)

		Argentina	South Africa	Peru	Paraguay	Sri Lanka	Guatemala	India	Pakistan	Nigeria	Ghana	Bangladesh	Cambodia	Kenya	Tanzania	Nepal	Rwanda	Mozambique
Location	Urban	17.4	18.7	12.9	15.3	8.8	13.7	4.4	2.7	8.5	11.9	4.1	7	17.7	7.3	7.6	6.8	5.8
	Rural	23.3	7.7	8.7	9.3	6.7	13.4	2.4	5.1	8	6.3	3	5	9	4	6.3	2.1	2.2
Gender	Male	19.2	18.3	14.8	15.5	8.7	16.5	3.7	4.4	9.7	8.3	3.9	6	13.6	6.1	7.6	4.2	4.1
	Female	15.9	12.5	10.3	12	5.6	10.9	2.4	3.9	6.5	11.4	2.3	5.3	9.6	4.6	6.8	2.4	3.5
Income level	Above average	22.2	35.8	17.4	17.5	9.9	18.6	4.7	7.8	13.6	27	4.1	7.2	27	8.5	10.4	8.3	6.1
	Below average	14.9	7.9	8.3	10	4.5	9.2	1.7	1.8	4.7	6.3	2.2	4.6	7.2	3.1	6.9	1.9	1.5
	Zero income	11.4	5.1	8.3	10.6	4.2	11	2.6				2.5	3.1		0.5	6.5	1.3	1.6
Age group (years)	15-25	15	9.8	10.9	14.5	8.2	13.1	3.8	6	5.3	9.4	3.4	6.2	10	5.4	7.1	3.7	3.3
	26-35	17.6	14.5	13	15.2	7.8	15.6	3.3	4.7	9.7	9.2	3.5	6.7	10	6.3	7.8	3.5	4.1
	36-45	21.4	23.8	12.3	13.3	7.8	14	2.7	2.7	10	11.7	3.3	5.7	13.5	4.2	6.6	4.5	3.6
	46-55	17.1	18.2	12.1	11	5.7	12.1	3.3	2.2	10.1	7.9	3	4.5	12.1	5	7.8	2.1	3.7
	56-65	17.8	11.7	11.5	10.9	5.3	12.4	2.2	2.7	8	11.1	2.6	3.4	18.2	5.7	7.4	1.8	7.8
Type of handset	Basic phone	11.3	5	6.5	7.5	3.7	8.4	2.1	3.8	5.4	6.8	2.4	3.5	7.3	4	6	2.1	2.3
	Feature phone	14	9.4	9.6	13.3	3.9	14	2.1	4.6	8.9	7.4	2.5	3.9	9.1	3.1	9.5	2.2	6.3
	Smartphone	18.9	21.8	14.6	15.9	10.7	16.2	6	5	10.8	15.2	6	7.8	21.2	10.7	8.2	16	9.5

Q Could you tell me how much you spent last month for voice, SMS and data in total (airtime *and* subscription)?

Base	Argentina	South Africa	Peru	Paraguay	Sri Lanka	Guatemala	India	Pakistan	Nigeria	Ghana	Bangladesh	Cambodia	Kenya	Tanzania	Nepal	Rwanda	Mozambique
Mobile phone owners	1,116	1,398	1,234	1,209	1,609	1,214	3,252	1,208	1,123	901	1,531	1,526	1,054	761	1,478	635	632

Online harrassment

Online harassment

Of Internet users aged 15-65, over a quarter in Cambodia, 19% in India, 12% in Pakistan and Bangladesh, 9% in Sri Lanka and 4% in Nepal indicated that they had experienced online harassment before (Figure 43). In India and Bangladesh, experiences with online harassment were higher among rural Internet users, while in Cambodia, urban Internet users faced higher levels of harassment (Figure 44). The other Asian survey countries did not show a significant urban-rural gap.

Gender-wise disaggregation of the data showed that, except for Cambodia, more men reported having experienced online harassment than women (Figure 45). In Cambodia, the pattern was reversed with up to 29% of female Internet users aged 15-65 having experienced harassment as compared to 23% of their male counterparts.

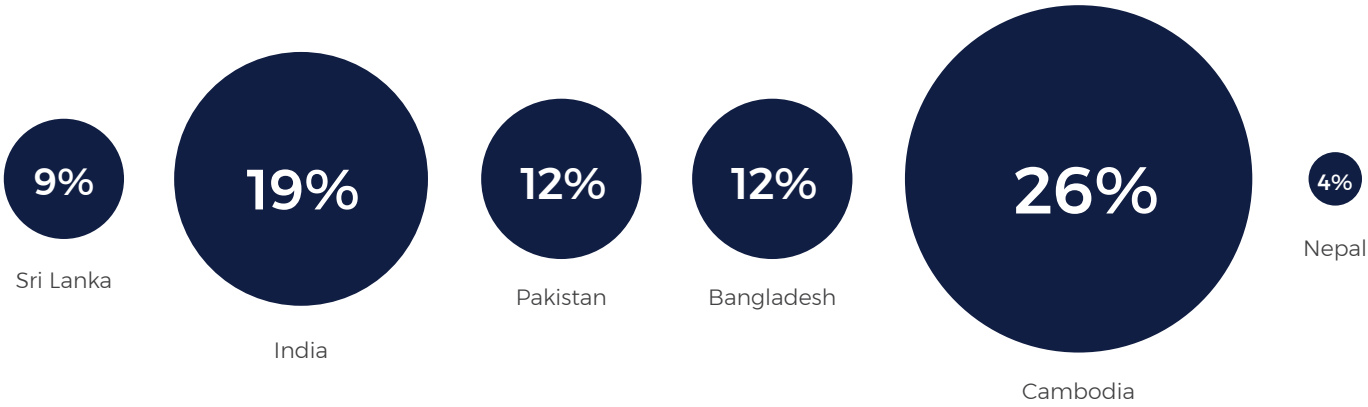
The most common form of online harassment experienced by Indian victims was being called offensive names, while in Cambodia it was being cyber stalked (Figure 46)[7]. In both countries, the most common platform on which harassment was experienced was social media, though Indian respondents also mentioned chat applications and website comments sections (Figure 47).

Half of the Internet users in Cambodia who experienced harassment indicated that they did not know the perpetrator – either offline or online – while a quarter each said they either knew the person offline or they only knew them online (Figure 48). In India, a third each of respondents indicated that the perpetrator was from one of these three groups of people (unknown offline or online, known online but not offline, known both online and offline). When asked what effect the harassment had on the respondent, the most common response was "It had no effect" (Figure 49). However, 28% of Indian respondents who experienced online harassment said the incident/s reduced their use of the particular website.

[7] Bases for the other four Asian countries become too low to analyze harassment from here on.

Figure 43.

Experienced online harassment before (% of Internet users aged 15-65)



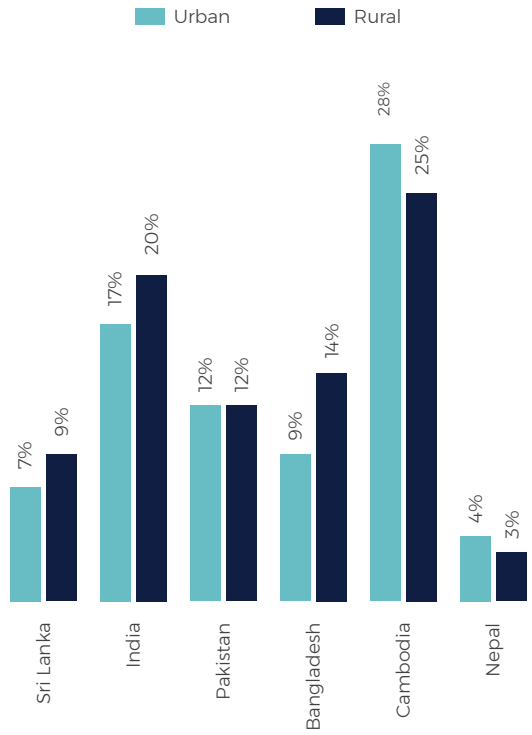
Q1 Being called offensive names
Q2 Being purposefully embarrassed or criticized in another way (besides being called offensive names)
Q3 Being physically threatened
Q4 Being sexually harassed
Q5 Being approached repeatedly by unwanted contacts (cyber-stalked)

Base	Sri Lanka	India	Pakistan	Bangladesh	Cambodia	Nepal
Internet users	763	919	427	266	804	765

Figure 44.

Experienced online harassment, by location

(% of Internet users aged 15-65)

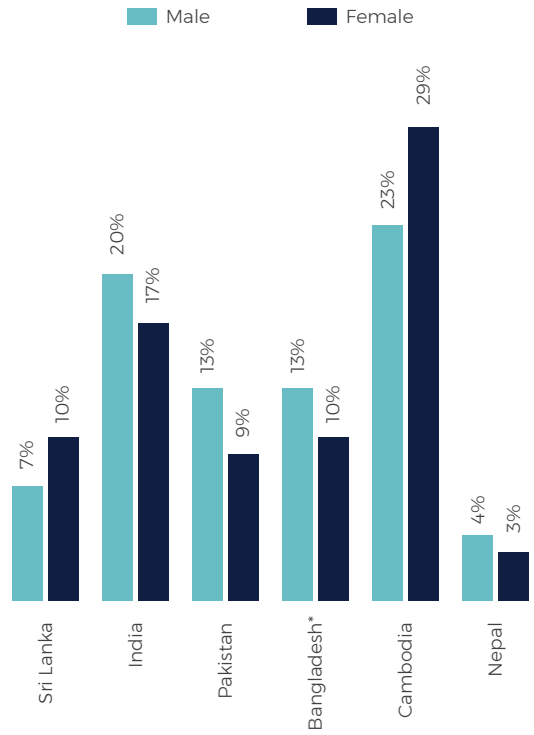


Base	Sri Lanka	India	Pakistan	Bangladesh	Cambodia	Nepal
Internet users (Urban)	348	476	211	146	456	478
Internet users (Rural)	391	443	216	120	348	214

Figure 45.

Experienced online harassment, by gender

(% of Internet users aged 15-65)



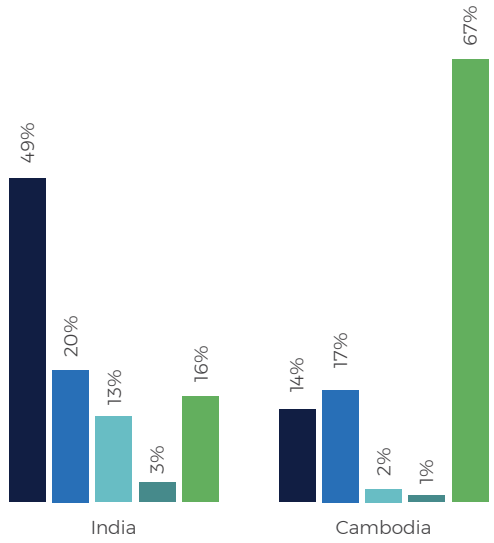
Base	Sri Lanka	India	Pakistan	Bangladesh	Cambodia	Nepal
Internet users (Male)	390	652	283	199	365	384
Internet users (Female)	349	267	144	67	439	308

Q1 Being called offensive names
Q2 Being purposefully embarrassed or criticized in another way (besides being called offensive names)
Q3 Being physically threatened
Q4 Being sexually harassed
Q5 Being approached repeatedly by unwanted contacts (cyber-stalked)

* Low base for Bangladesh women

Figure 46.

Forms of harassment experienced (% of respondents who experienced online harassment)



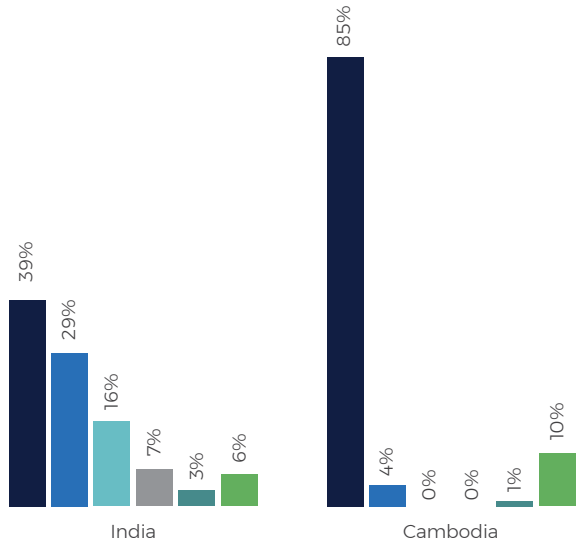
- Being called offensive names
- Being purposefully embarassed or criticized in any other way (besides being called offensive names)
- Being physically threatened
- Being sexually harassed
- Being approached repeatedly by unwanted contacts (cyber-stalked)

Q Which form of harassment did you most recently experience, personally?

Base	India	Cambodia
Respondents who faced online harassment	178	197

Figure 47.

Platform on which the harassment was experienced (% of respondents who experienced online harassment)



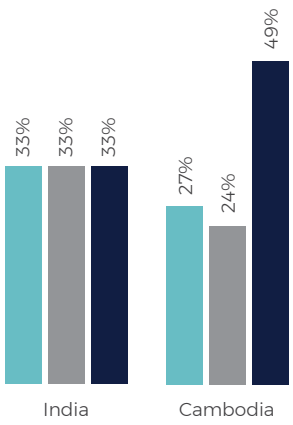
- Social media (e.g.: Facebook)
- Chat application (e.g.: WhatsApp)
- Comments section of a website
- Online gaming platforms
- Email
- Other

Q On which type of platform did you experience this harassment?

Base	India	Cambodia
Respondents who faced online harassment	178	197

Figure 48.

Source of harassment (% of Internet users who have experienced online harassment)



Someone I've met offline before

One of my online contacts/ friends that I've never met offline

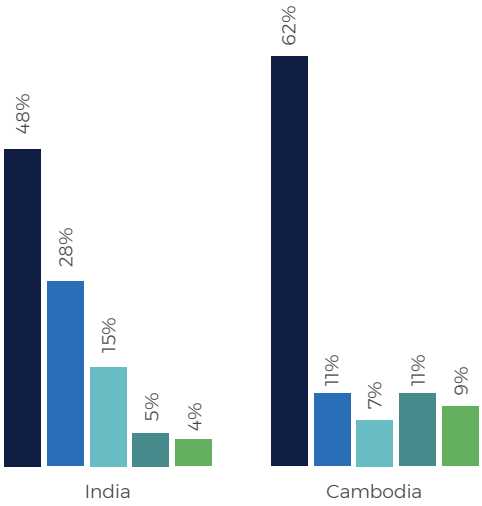
Someone I don't know at all (online or offline)

Q Who was the source of this harassment?

Base	India	Cambodia
Respondents who faced online harassment	178	197

Figure 49.

Effect of harassment on Internet use (% of Internet users who have experienced online harassment)



It has had no effect

I reduced use of the particular website

I deleted the app or my profile

I unfriended/ blocked contacts or left that group/ forum

I now limit my use of the Internet as a whole

Q What effect has this had on your use of the Internet?

Base	India	Cambodia
Respondents who faced online harassment	178	197

E-commerce

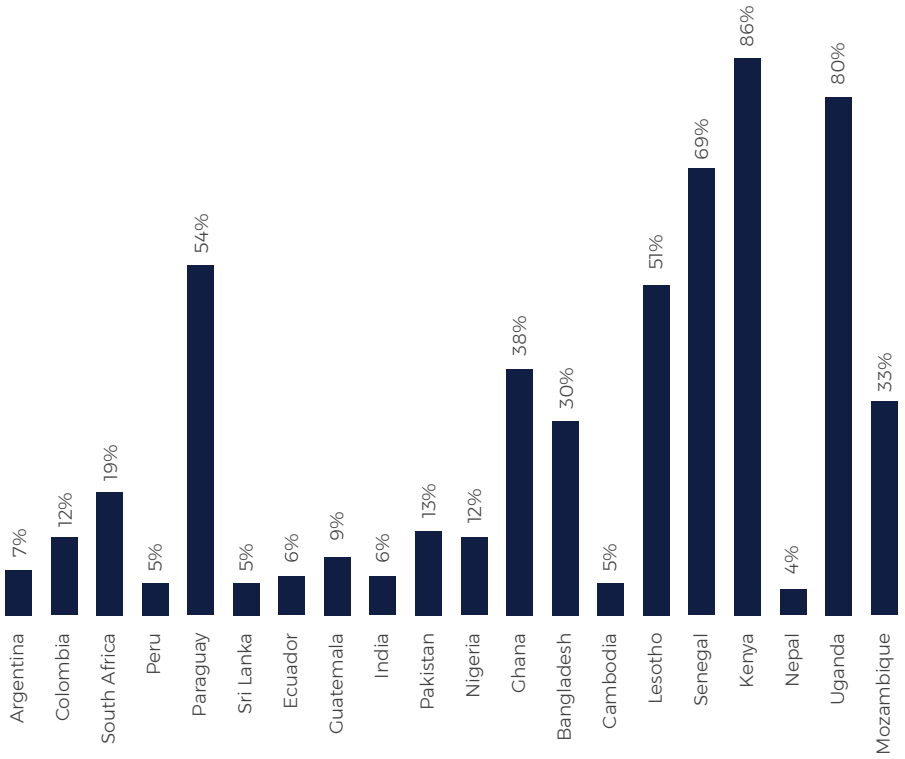
Mobile money

On a percentage basis, the use of mobile phones for financial transactions (i.e.: to send or receive money) was very low in the Asian survey countries. For example, in India, only 6% of mobile phone owners aged 15-65 said yes when asked if they ever used their mobile phone for financial transactions. Bangladesh had the highest use of 30% among the Asian survey countries (Figure 50).

It is noted that in some cases, the data presented in the graphs, based on the survey questions, does not tally with supply-side data, for example Indian supply side data indicates that at the time of survey, Paytm users alone should have accounted for 15% of the Indian population, whereas according to survey responses, mobile money is used by 5% of mobile phone owners aged 15-65. The capping of the age group which this survey captures could lead to some amount of under-estimation.

Figure 50.

Mobile money use (% of mobile phone owners aged 15-65)



Q Do you ever use your mobile phone for financial transactions: to send or receive money?

Base	Argentina	Colombia	South Africa	Peru	Paraguay	Sri Lanka	Ecuador	Guatemala	India	Pakistan	Nigeria	Ghana	Bangladesh	Cambodia	Lesotho	Senegal	Kenya	Nepal	Uganda	Mozambique
Mobile phone owners	1,116	1,297	1,398	1,234	1,209	1,609	1,191	1,214	3,252	1,208	1,123	901	1,531	1,526	1,708	969	1,054	1,478	1,031	632

Platforms

Using platforms for *buying* goods and services[8]

Internet users were asked if they were aware of Internet websites or mobile apps to buy and sell goods or services that they need – essentially digital platforms. This could include apps such as Uber, Lyft, AliExpress and Upwork.com, as well as social media such as Facebook and Instagram.

The responses showed that Sri Lankan and Indian Internet users had the highest levels of awareness among respondents from the Asian countries, with Cambodian respondents coming in third (Figure 51). Awareness was highest with regard to buying and selling goods and services (through platforms such as Amazon, AliExpress, eBay, etc.), buying/selling tickets and appointments, and transport and ridesharing apps. Almost half of Sri Lanka's and India's Internet users aged 15-65 were aware of these. When it came to actual use (Figure 52) as well, India had the highest number of users (out of those aware of the platforms) in Asia, followed by Sri Lanka, mostly with respect to the same three types of platforms noted earlier (goods/ products, transport services, tickets and appointments).

In Cambodia, the levels of awareness of various kinds of platforms among Internet users aged 15-65 (Figure 51) had barely translated to use for buying (Figure 52).

Convenience was a key driver of platform use for buying via platforms in India, Sri Lanka and Cambodia, while better pricing was a major driver in Pakistan, and to a lesser extent in India also (Figure 53).

Of the respondents who had used platforms to buy goods or services in the three months leading to the survey, most had made less than five transactions (Figure 54). Heavy use was not widespread.

Among users, many used the platform only to search for goods/ services. Some went onto place an order via the platform, but very few (26% of users in Cambodia, 17% in Sri Lanka, 16% in India and 1% in Pakistan) completed the full transaction (search, order, payment and delivery) through the platform (Figure 55). The reasons for this ranged from lack of a need to do so (they have access to sufficient offline options), concerns about sharing personal and financial details with third parties, and concerns regarding the quality of the product or whether they would receive the product (Table 11). Not knowing how to use these platforms was also a problem for some, particularly in Cambodia.

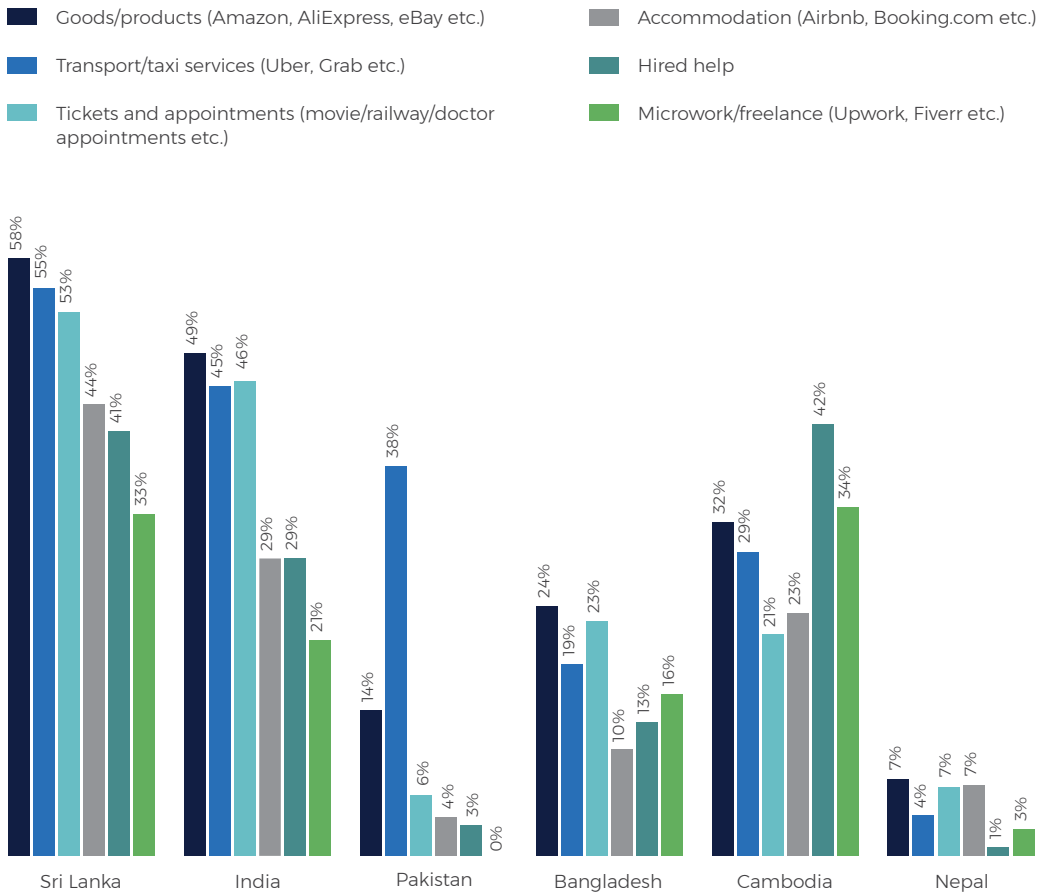
Payments were most often done through debit cards (India and Sri Lanka) and cash-on-delivery (all Asian survey countries) among others, with some in India and Pakistan stating they used mobile and/or Internet banking (Figure 56).

Lack of skills was a barrier to greater use of platforms for buying goods and services (Figure 57). In Pakistan, Bangladesh and India, large proportions (87%, 59% and 49% respectively) of those who were aware of these platforms stated that they did not know how to use them. In Nepal and Sri Lanka, the biggest barrier was relevance (45% and 69% respectively).

[8] Due to low bases (i.e.: low numbers of people who were aware of platforms as well as low numbers of those that used them), only where the base of users in a particular country is sufficient for meaningful analysis is the data presented.

Figure 51.

Awareness of platforms for buying/selling (% of Internet users aged 15-65)

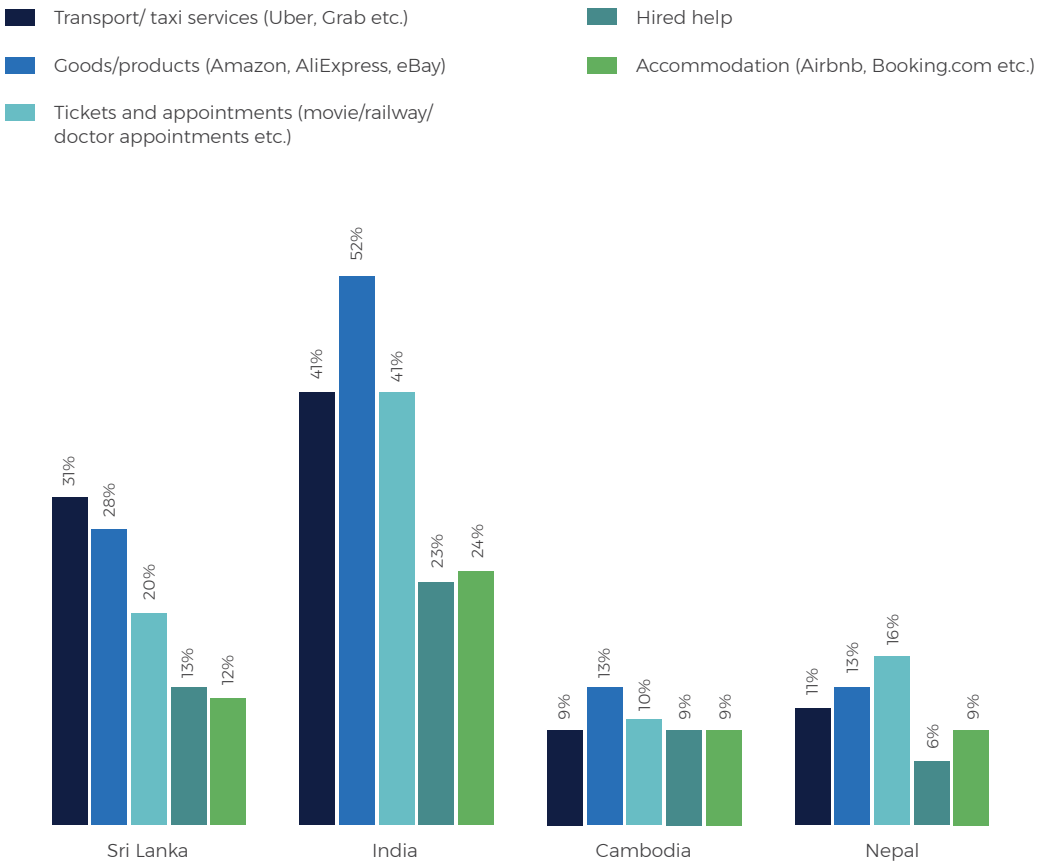


Q Have you heard of opportunities to buy/sell these goods or services through the Internet or apps?

Base	Sri Lanka	India	Pakistan	Bangladesh	Cambodia	Nepal
Internet users	763	919	427	266	804	187

Figure 52.

Use of platforms for **buying** (% of Internet users aged 15-65 who are aware of platforms)

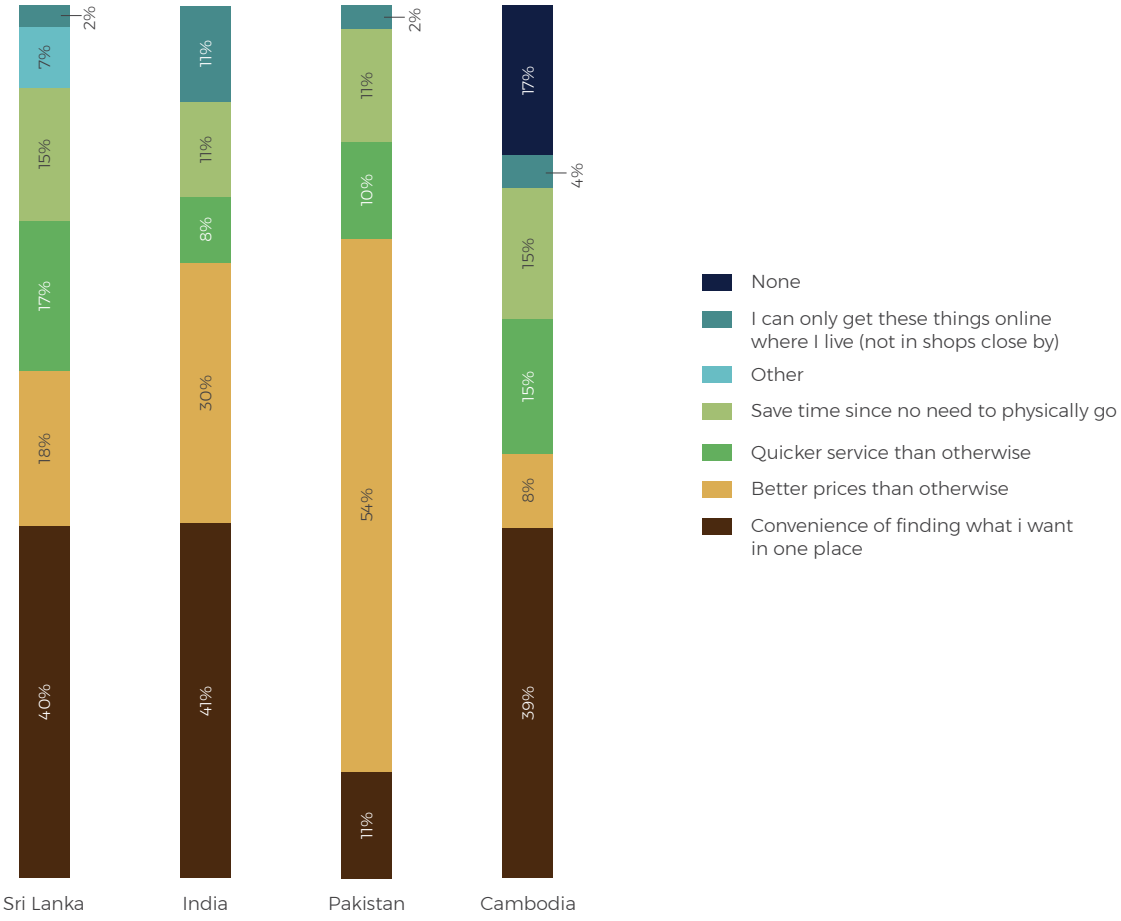


Q Have you ever bought any of the following goods or services through the Internet or apps?

Base	Sri Lanka	India	Cambodia	Nepal
Internet users who are aware of Transport/taxi services (Uber, Grab etc.)	400	396	259	154
Internet users who are aware of Goods/products (Amazon, AliExpress, eBay)	425	430	276	159
Internet users who are aware of Tickets and appointments (movie/railway/doctor appointments etc.)	384	410	185	139
Internet users who are aware of Hired help	307	258	355	141
Internet users who are aware of Accommodation (Airbnb, Booking.com etc.)	321	265	209	88

Figure 53.

Main reason for **buying** on platforms (% of Internet users aged 15-65 who had made a purchase/hire via platforms)



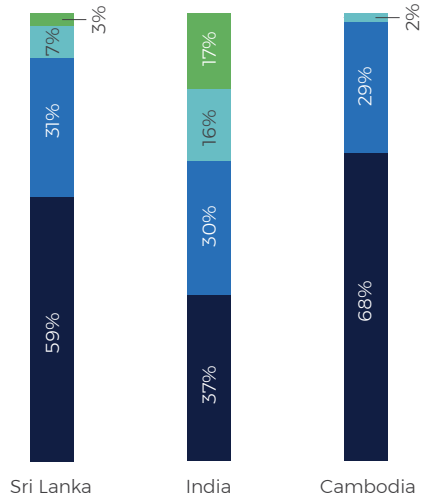
Q Why do you choose to use the Internet or apps to search for/buy goods and services?

Base	Sri Lanka	India	Pakistan	Cambodia
Those who had used platforms for buying	172	239	125	102

Figure 54.

Frequency of **buying** via platforms during last 3 months

(% of Internet users aged 15-65 who had made a purchase/hire via platforms)



Q How many times have you bought a good or service using the Internet in the last three (3) months?

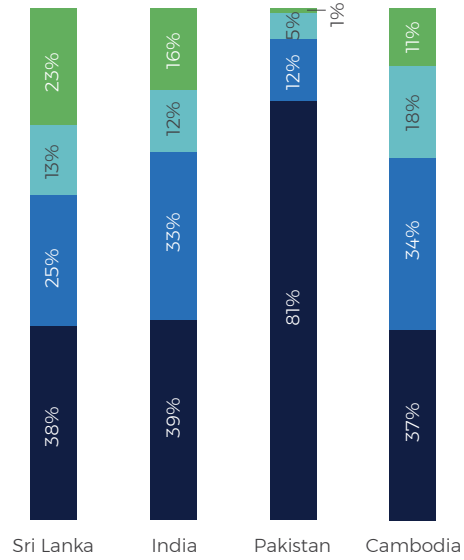
Base	Sri Lanka	India	Cambodia
Those who had used platforms for buying	172	239	102

Note: The question was administrated differently in Pakistan and is not comparable with the other three countries.

Figure 55.

Transaction components completed via platforms: **buying**

(% of Internet users aged 15-65 who had made a purchase/hire via platforms)



Q In your most frequent online purchases or hires do you use the Internet to:

Base	Sri Lanka	India	Pakistan	Cambodia
Those who had used platforms for buying	172	239	125	102

Table 11.

Reasons why platform users stop at search when **buying**

(% of platform users aged 15-65 who did not place orders or pay via platforms)

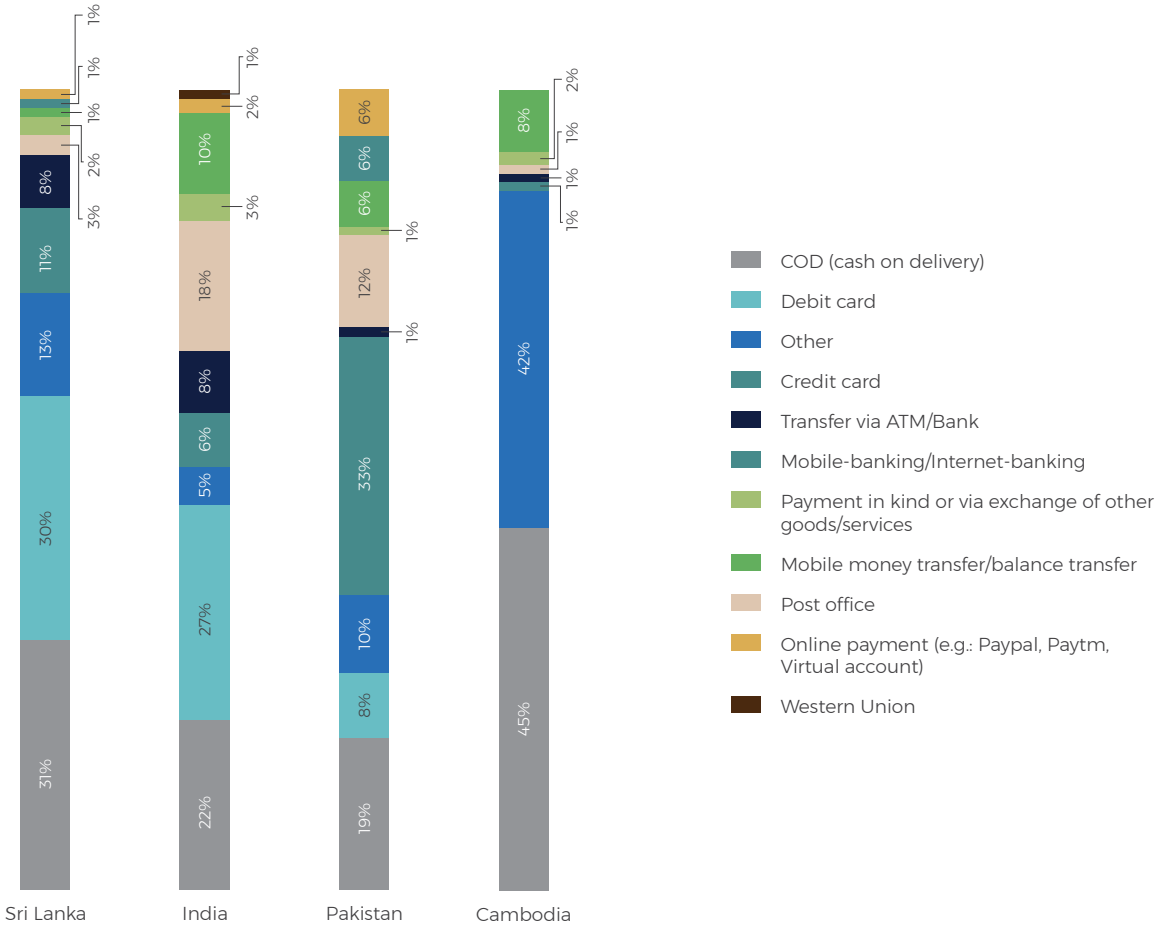
	Sri Lanka	India	Pakistan
I don't need to (e.g.: I can buy all necessary goods/services from physical stores)	33%	31%	25%
I don't know how to	22%	22%	64%
I am not certain that I will receive the goods/services	21%	20%	2%
I cannot be certain of the quality of the product	20%	23%	3%
Delivery charges are too high	7%	18%	6%
I am not certain that my payment will reach the seller	6%	10%	3%
There is no option to place order or do payment online	6%	13%	1%
It takes too much time	5%	15%	1%
I'm not comfortable sharing personal details online with third parties	4%	24%	4%
I am not comfortable using sellers/service providers that I don't know	3%	5%	2%
I'm not comfortable sharing financial details online with third parties	2%	11%	0%
Online prices of goods/services are too high	1%	11%	0%
I've had a negative experience in the past	0%	7%	0%
I've heard of people having negative experiences with these platforms	0%	4%	2%

Q In your most frequent online purchases or hires, what are the reasons you don't place an order or make a payment through the Internet or mobile apps?

Base	Sri Lanka	India	Pakistan
Platform users who did not place orders or pay via platforms	101	175	110

Figure 56.

Usual payment method (% of Internet users aged 15-65 who made a purchase/hire via platforms)



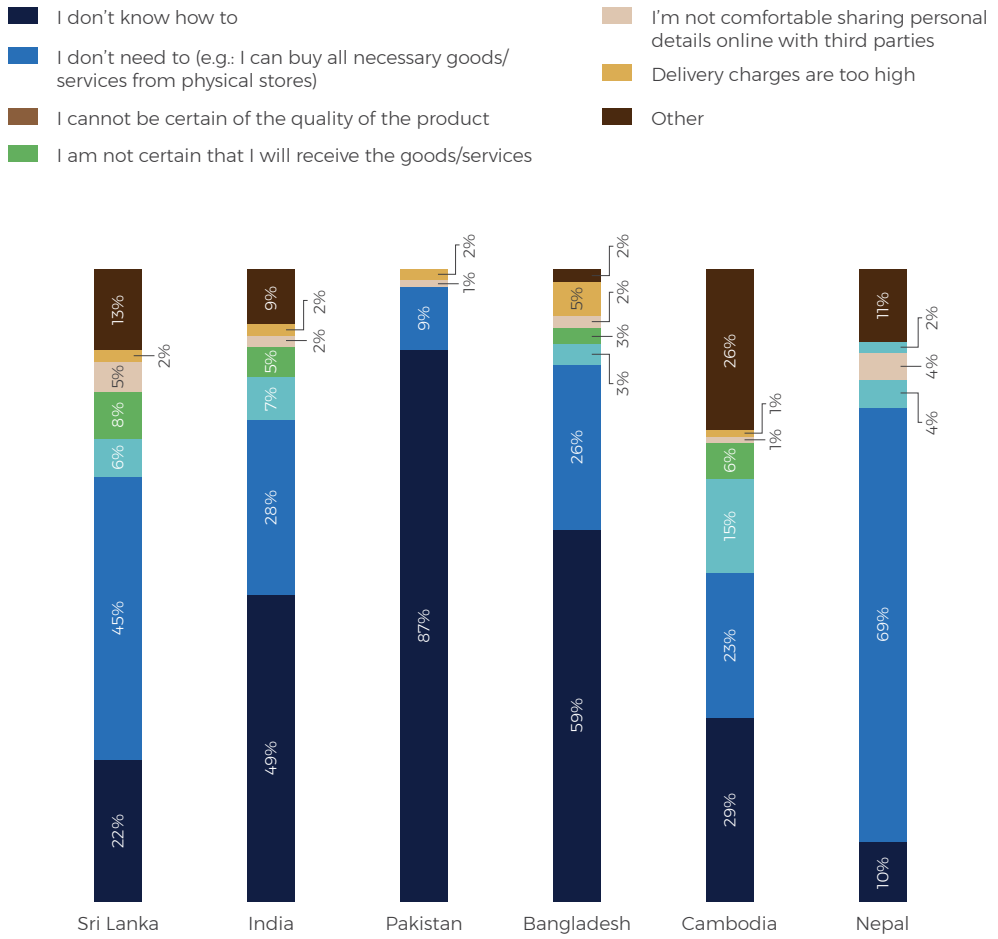
Q What methods of payment do you usually use for your purchases?

Base	Sri Lanka	India	Pakistan	Cambodia
Platform users who purchased through platforms	172	239	125	102

Figure 57.

Main reason for not buying on platforms

(% of Internet users aged 15-65 who are aware of but don't use platforms for buying)



Q What is the primary reason you don't buy goods/services through the Internet or mobile apps?

Base	Sri Lanka	India	Pakistan	Bangladesh	Cambodia	Nepal
Respondents who are aware of but don't use platforms	172	586	302	227	421	158

Platforms

Using platforms for *selling* goods and services[9]

There was low use of platforms to sell products or services across all Asian countries surveyed (Figure 58).

The bases of respondents in all the countries, except for India, become too small to analyze meaningfully beyond this point, therefore only the Indian case of use is further considered.

Better job rates/prices and getting access to a larger number of customers were the key drivers for use (Figure 59). Only 27% of sellers in India had sold more than five products or services over the last three months (Figure 60). Only 12% of those who used platforms to sell goods or services completed the full transaction (search, order, payment and delivery) within the platform – many only used the platform to search for and accept jobs (Figure 61). The reasons for this ranged from lack of a need to do so (they have access to sufficient offline options) followed by not knowing how to accept orders and receive payments online (Table 12). Concerns about sharing personal and financial details with third parties and low online prices of goods or services were also problems for some.

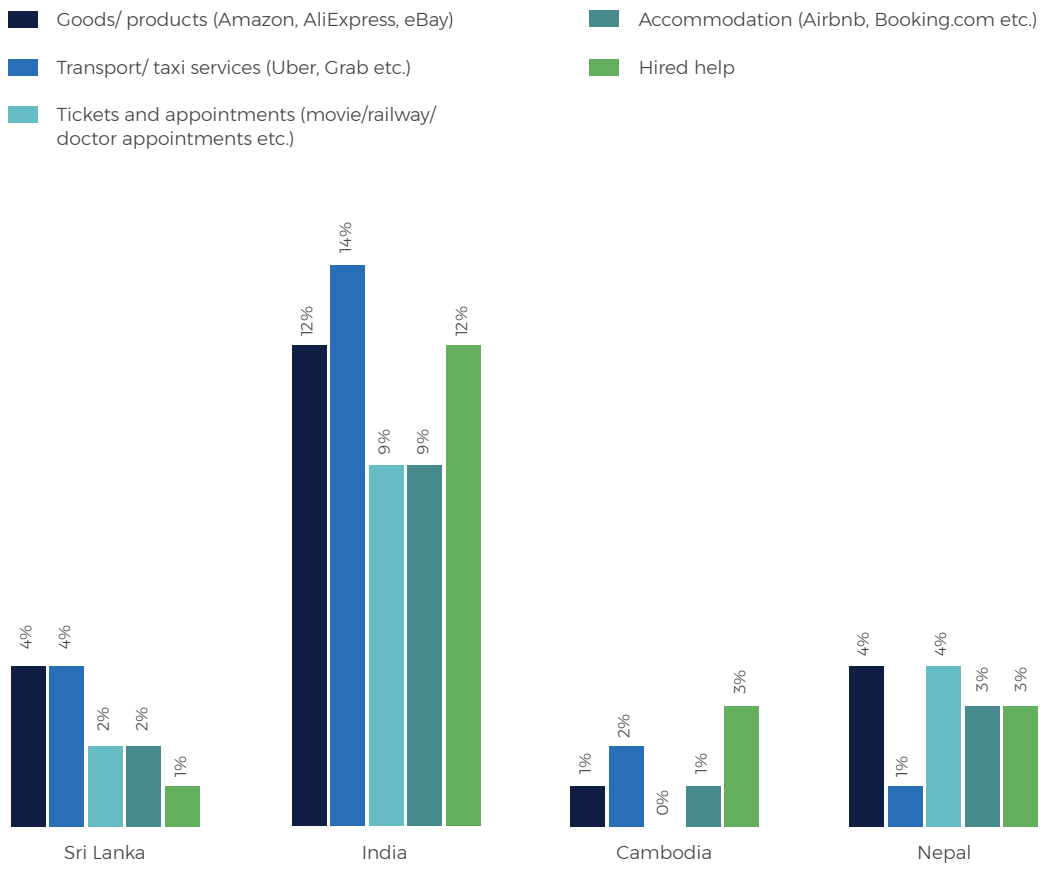
Most of those who used platforms for selling goods or services claimed that what they earn online was not essential but nice to have. However, 24% claimed that the earnings are essential to them (Figure 62).

Across the Asian countries surveyed, the key reason for not using platforms to sell services (among those who were aware of the possibility) was lack of need (Figure 63). The second most common reason was lack of knowledge on how to, especially in Cambodia.

[9] Due to low bases (i.e.: low numbers of people who are aware of platforms as well as low numbers of those that use them), only where the base of users in a particular country is sufficient for meaningful analysis is the data presented

Figure 58.

Use of platforms for **selling** (% of Internet users aged 15-65 who are aware of platforms)



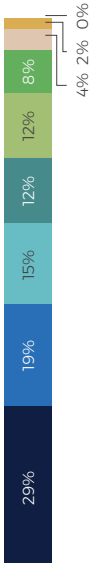
Q Have you ever sold any of the following goods or services through the Internet or apps?

Base: Internet users who are aware of platforms for:	Sri Lanka	India	Cambodia	Nepal
Goods/products (Amazon, AliExpress, eBay)	425	430	276	159
Transport/taxi services (Uber, Grab etc.)	400	396	259	154
Tickets and appointments (movie/railway/doctor appointments etc.)	384	410	185	139
Accommodation (Airbnb, Booking.com etc.)	321	265	209	88
Hired help	307	258	355	141

Figure 59.

Main reason for **selling** on platforms

(% of Internet users aged 15-65 who sold goods or services via platforms)



- It offers better job rates/prices than otherwise
- It provides access to a larger number of customers than otherwise
- I need to be able to control my own schedule due to child care, school, or other obligations
- There are not many other job opportunities in my area
- To gain work experience for future job opportunities
- It helps to fill gaps or fluctuations in other sources of income
- Other
- For fun, or to do something with my spare time
- None

Q What is your main reason for using these websites/apps to sell goods and/or services?

Base	India
Platform users who sell through platforms	106

Figure 60.

Frequency of **selling** via platforms during last 3 months

(% of of Internet users aged 15-65 who sold goods or services via platforms)

- 0
- 1-5
- 6-10
- >10

Q How many times have you sold a good or service (by taking on jobs) using the Internet in the last three (3) months?

Base	India
Platform users who sell through platforms	106

Figure 61.

Transaction components completed via platforms: **selling**

(% of Internet users aged 15-65 that sold goods or services via platforms)

- Search for jobs/orders only
- Search for and accept jobs/orders only
- Search for, accept and receive payment for jobs/orders
- Search for, accept, receive payment and deliver jobs/orders

Q In the most frequent way you have used to earn money by selling things or taking on jobs through the Internet, do you usually

Base	India
Platform users who sell through platforms	106

Figure 62.

Importance of earnings from platforms

(% of Internet users aged 15-65 who sell goods or services via platforms

- It is an important component of my budget, but not essential
- It is essential for meeting my basic needs
- It's nice to have but I could live comfortably without it

Q Which of the following statements best describes the income you earn from using these services?

Base	India
Platform users who sell through platforms	106

Table 12.

Reasons why platform users stop at search when **selling**

(% of platform users aged 15-65 who did not accept jobs or payment via platforms)

Reason	India
I don't need to	50%
I don't know how to	42%
I'm not comfortable sharing financial details online with third parties	18%
Online prices of goods/services are too low	15%
I am not comfortable using buyers/service providers that I don't know	14%
There is no option to accept order or receive payment online	13%
I'm not comfortable sharing personal details online with third parties	11%
I am not certain that I will receive payment from the buyer	11%
I've had a negative experience in the past	11%
It takes too much time	9%
I've heard of people having negative experiences with these platforms	4%
Service provider commission is too high	2%
Other	0%

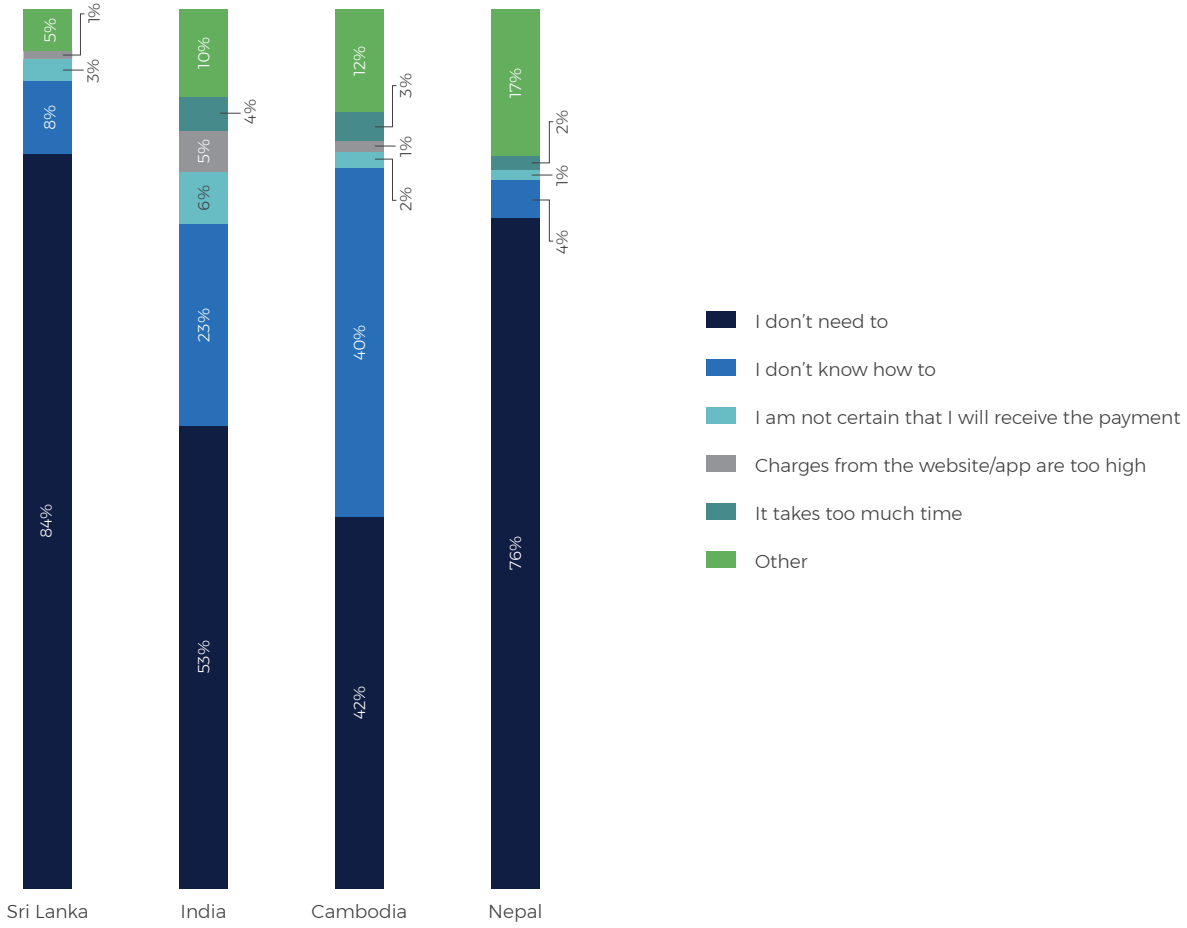
Q In your most frequent sales, what are the reasons you usually don't accept the order/payment through the Internet or mobile apps?

Base	India
Platform users who did not accept jobs or payment via platforms	101

Figure 63.

Reason for not **selling** on platforms

(% of Internet users aged 15-65 who are aware of but don't use platforms for selling)



Q What is the primary reason you don't sell goods or services through the Internet or mobile apps?

Base	Sri Lanka	India	Cambodia	Nepal
Platform users who don't sell through platforms	405	356	506	157

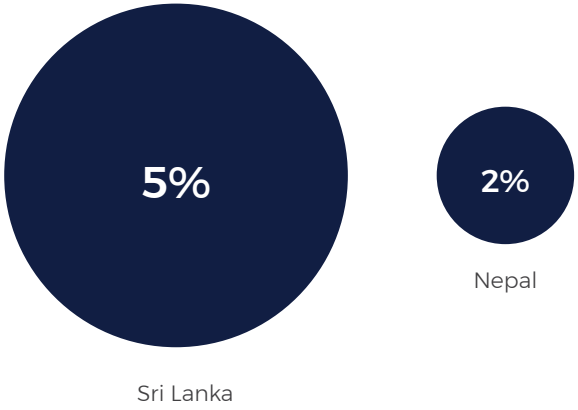
Cybersecurity

Cybersecurity awareness[10]

Internet users in Sri Lanka and Nepal were asked if they had faced cybersecurity issues related to their devices or their online accounts. Incidence was very low (Figure 64), only 5% and 2% of Internet or social media users aged 15-65 in Sri Lanka and Nepal respectively answered “yes”.

Figure 64.

Cyber security (% of Internet or social media users aged 15-65)



Q To your knowledge have any of your devices or accounts ever been taken over by someone else, either through the Internet or in person?

Base	Sri Lanka	Nepal
Internet or social media users	761	713

[10] Questions related to cybersecurity were included in an updated version of the AfterAccess questionnaire which was used only in the Asian countries where fieldwork took place in the latter part of the survey period (i.e.: Sri Lanka and Nepal).

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