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 2.0

LIRNE*asia*, October 2018

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. This currently includes completed surveys in 18 countries across the Global South: six in Asia, seven in Africa, and five in Latin America. An additional four countries are being surveyed at the time of publication, 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 whose 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 LIRNE*asia* 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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Core Research Team | To date, the following people from the three research organizations have contributed to the AfterAccess project:

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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
GNI	Gross national income
ICT	Information and communication technology
PPP	Purchasing power parity
PPS	Probability proportionate to size
PSU	Primary sample unit
USD	United States dollars

about the study

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about

about AfterAccess

AfterAccess is a series of surveys of how individuals in 18+ countries of the Global South access and use ICTs. The surveys reported here were conducted between April 2017 and June 2018 in 18 countries across Asia, Africa and Latin America, with the exception of the Myanmar survey which took place mid-2016. The research was conducted via 38,005 face-to-face household and individual interviews lasting 90 minutes each. More countries are currently being added to the list.

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 far more comprehensive national and regional evidence bases to inform 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 in each country, for the 15-65 age group, with a confidence margin of 95% and margin of error of approximately ±3%. That is, **the data can be extrapolated to the 15-65 population in each country**, producing 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 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. AfterAccess was selected from over 350 nominees for the 2018 #EQUALSinTech award in the Research category. The award is intended to recognize 'outstanding projects and initiatives around the world that are helping women and girls become #EQUALSinTech.'

AfterAccess base methodology

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 or blocks in the best case); and

(2) random selection at every level of sample selection (i.e.: district, ward/village, household, individual).

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

In the base methodology, the random sampling of households and individuals (and other target groups that may be added on) is based on the EA (Enumerator Area) sample frames. A Census divides a country in to blocks or EAs which have a rough density of 200 households. This number is generally considered a manageable number of households that can be listed within a day.

The methodology involves the following steps:

(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[1] staying the night at the selected household
(6) Simple random selection (using the Kish grid) of one household member for survey from household list compiled in Step 5

[1]Aged 15+ in Africa and Latin America

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Figure 2: Key informant interview in India to obtain PSU information

Figure 3: Key informant interview in Cambodia to obtain PSU information

Figure 4: Segmentation map, India

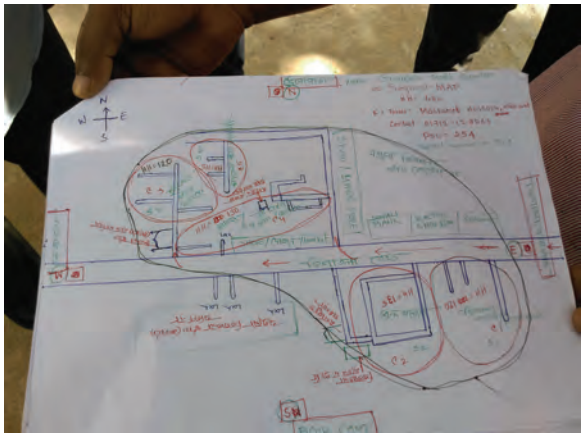

Figure 5: Segmentation map, Bangladesh

Figure 6: Listing of households, Nepal

Figure 7: Listing of households, Pakistan

In each country, the base methodology outlined above was adjusted depending on the availability and granularity of sample frames, as well as the ground realities. In India, Bangladesh, Cambodia and Nepal sample frames at ward and village level were available. In Myanmar the ward and village-tract sample frames were available. No sample frame was publicly available for Pakistan, but the sampling of EAs (using the base methodology) from the national census sample frame was carried out for us, using our specifications, by the Pakistan Bureau of Statistics.

Where the EA sample frame was not available, wards and villages had to be divided into smaller areas for listing and enumeration. Wards and villages typically have a larger number of households than an EA (approximately 200). 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 wards and villages had to be segmented on the field, according to pre-defined methodology, and one or more smaller segments were then randomly selected for listing and enumeration (Step 4 onwards). These segments were then treated as EAs and Steps 3 onwards were applied accordingly.

An additional step was required in India to balance the twin priorities of capturing the diversity of the population and managing fieldwork costs in the vast nation. The larger sample size in India was also implemented 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 pilot testing the questionnaire and training of enumerators) and execution as well as dataset delivery. LIRNE*asia* monitored the companies, in most cases by participating in the field training and monitoring the fieldwork both on the ground as well as remotely.

The sample sizes in each country allow for disaggregation of data by urban-rural, gender and socio-economic classification 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 by country, please visit: http://bit.ly/AfterAccessAsia-method

India survey and sampling methodology

In India, 5,000 households and individuals were surveyed from 250 wards and villages in 19 states and 108 districts (Figure 8). The survey was conducted in October-November 2017.

The sampling methodology was designed to ensure representation of the target group (population aged 15-65) at a national level with 95% confidence interval and a ±2.8% margin of error, i.e.: so the data can be extrapolated to those groups on a national level with statistical confidence. 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 ward (urban) and village (rural) level data from the 2011 National Primary Census Abstract Data, compiled from the Census of India website. The sampling was conducted by LIRNE*asia*, using the AfterAccess base methodology with segmentation of wards and villages as described earlier.

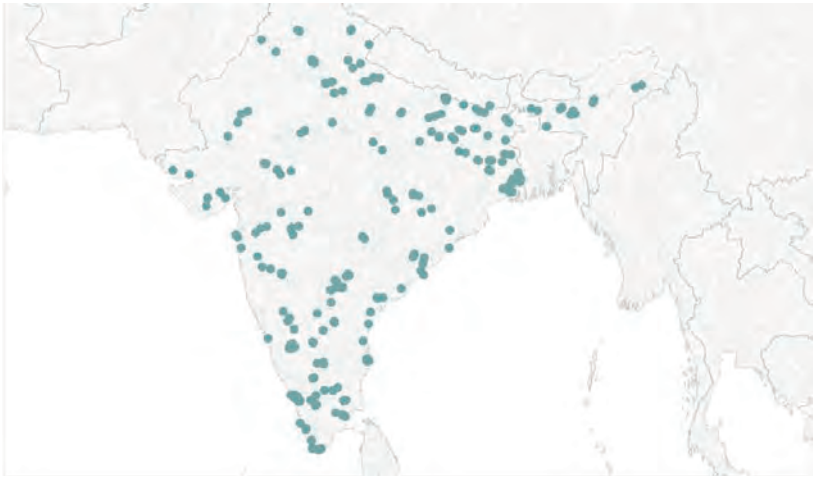

Figure 8: India sample locations
Based on GPS coordinates recorded during fieldwork

Two steps were added to the AfterAccess base methodology to manage the geographic spread of the sample in India while maintaining representation /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 selected sub-districts. As stated earlier, randomness was maintained at every level of selection, thus ensuring representation.

Field set-up, execution and dataset delivery were conducted 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.

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, 2,000 households and individuals were surveyed from 100 census enumerator areas (Figure 9) in October-December 2017.

The sampling methodology was designed to ensure representation of 98% of the target group (population aged 15-65) at a national level with 95% confidence interval and a ±3.3% margin of error, i.e.: so the data can be extrapolated to those groups on a national level with statistical confidence. The data cannot be analyzed by province as the sample was not designed to do so.

Since the national census sample 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 Pakistan national census sample 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.

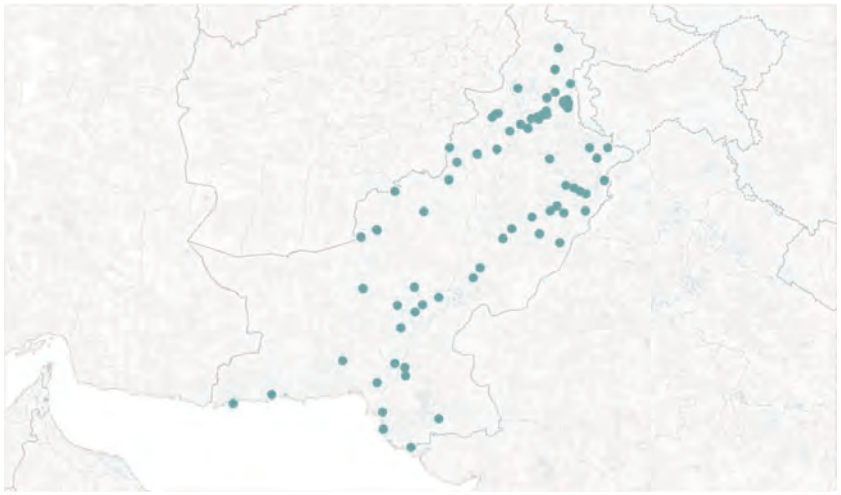

Figure 9: Pakistan sample locations
Based on GPS coordinates recorded during fieldwork

Field set-up, execution and dataset delivery were conducted by The Dynamics Research, 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.

Bangladesh survey and sampling methodology

In Bangladesh, 2,000 households and individuals were surveyed from 100 wards and villages in 40 Zillas (Figure 10).

The sampling methodology was designed to ensure representation of the target group (population aged 15-65) at a national level, with 95% confidence interval and a ± 3.3% margin of error, i.e.: so the data can be extrapolated to those groups on a national level with statistical confidence. The data cannot be analyzed by Zilla, as the sample was not designed to do so.

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

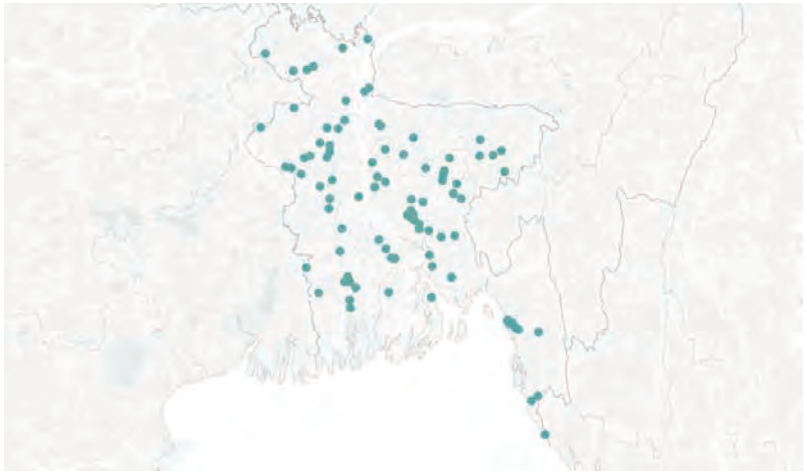

Figure 10: Bangladesh sample locations
Based on GPS coordinates recorded during fieldwork

The 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.

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, 2,100 households and individuals were surveyed from 100 villages in 25 provinces (Figure 11).

The sampling methodology was designed to ensure representation of the target group (population aged 15-65) at a national level, with 95% confidence interval and a ±3.3% margin of error, i.e.: so the data can be extrapolated to those groups on a national level with statistical confidence. The data cannot be analyzed by province as the sample was not designed to do so.

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

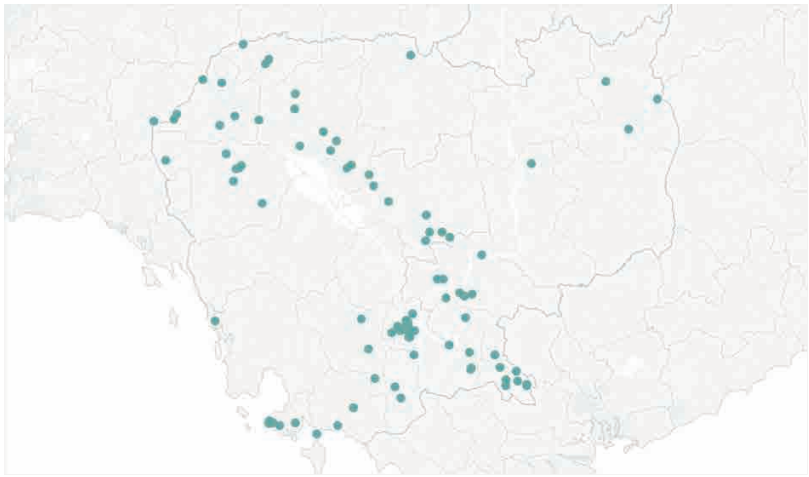

Figure 11: Cambodia sample locations
Based on GPS coordinates recorded during fieldwork

The 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.

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Nepal survey and sampling methodology

In Nepal, 2,000 households and individuals were surveyed from 100 wards in 7 provinces (Figure 12) in April-May 2018.

The sampling methodology has been designed to ensure representation of the target group (population aged 15-65) at a national level with 95% confidence interval and a ±3.3% margin of error, i.e.: so the data can be extrapolated to those groups on a national level with statistical confidence. 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. The sampling was conducted by LIRNE*asia*, using the AfterAccess base methodology with segmentation of wards as described earlier.

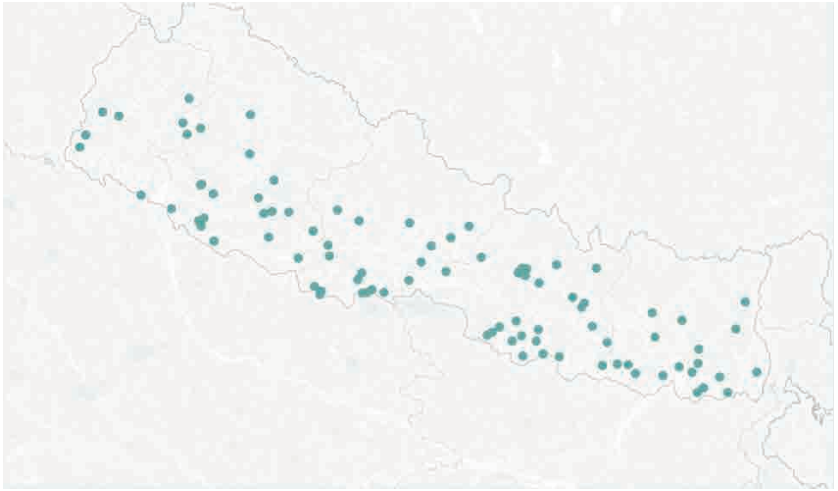


Figure 12: Nepal sample locations
Based on GPS coordinates recorded during fieldwork

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.

Myanmar survey and sampling methodology

The Myanmar survey was conducted in 2016, as a follow up to a baseline survey of ICT use in 2015, to track progress after the country's mobile sector was liberalized 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, 7,204 households and individuals were surveyed from 72 townships (Figure 13). 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 95% confidence interval and a ±3% margin of error, i.e.: so the data can be extrapolated to those groups on a national level 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.

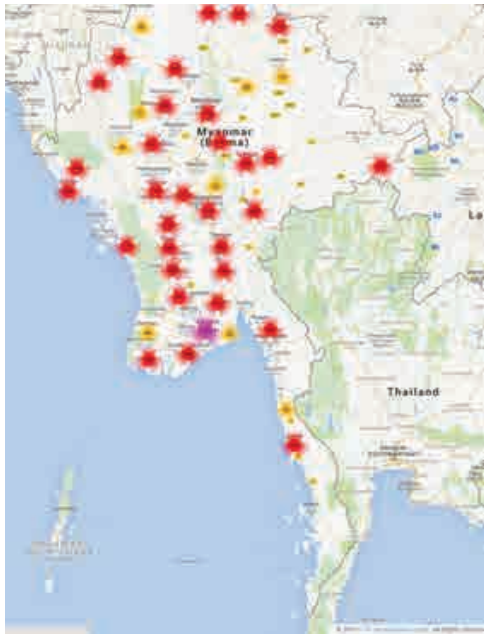


Figure 13: Myanmar sample locations
Based on GPS coordinates recorded during fieldwork

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) :

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

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 disaggregation of data, as well as gender-based disaggregation. 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.

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

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.

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 current international dollars. This is based on World Bank data for the year 2017 [4], as shown in Table 1.

Each data table or graph from the survey data 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.

[4] https://data.worldbank.org/indicator/NY.GNP.PCAP.PP.KD

Table 1: GNI per capita of survey countries, PPP

	GNI Per capita, PPP (constant 2011 international dollars). 2017
Argentina	18,461
Colombia	12,938
South Africa	11,923
Peru	11,789
Paraguay	8,380
Guatemala	7,278
India	6,026
Nigeria	5,326
Pakistan	5,311
Ghana	4,096
Myanmar	3,898
Bangladesh	3,677
Cambodia	3,413
Kenya	2,961
Tanzania	2,557
Nepal	2,471
Rwanda	1,811
Mozambique	1,093

connectivity

15

mobile phone ownership

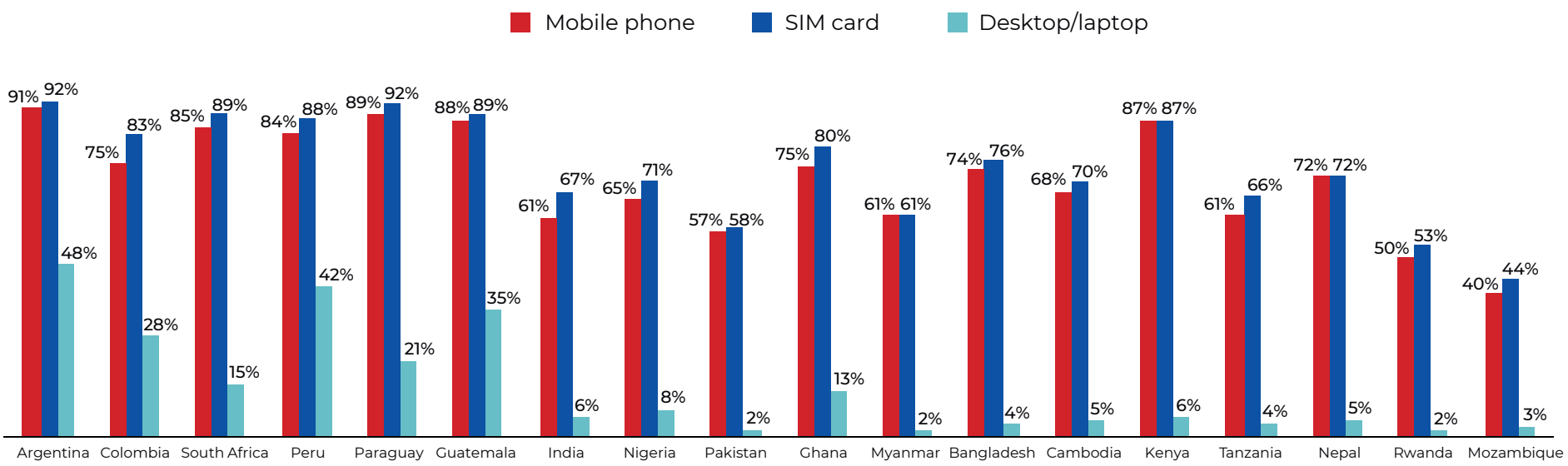
Mobile phone ownership ranged from a low of 40% of 15- to 65-year-olds in Mozambique, the poorest country among the countries surveyed, to 91% of the same age group in Argentina, the richest of the countries surveyed (Figure 14). With the exception of Nepal, most of the Asian countries surveyed were 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). Nepal was slightly higher with 72% of its 15-65 population owning a mobile phone at the time of survey.

In all countries, desktop and laptop computer ownership lagged far behind mobile phone ownership. Even in the more developed Latin American countries and South Africa, penetration of desktop and laptop computers did not exceed 50% of the 15-65 population. None of the Asian countries surveyed had computer ownership higher than 6% of the population aged 15-65.

The majority of countries had an urban-rural gap with rural areas of the country lagging behind in mobile penetration (Figure 15). Pakistan and Bangladesh had very small gaps, indicating that rural dwellers are 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 was highest in India, with women 46% less likely to own a mobile phone than men (Figure 16). Among the other Asian countries surveyed, Pakistan (37%) and Bangladesh (34%) were followed by Myanmar (28%), Cambodia (20%) and Nepal (19%). 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 17), it was clear that those with incomes above the average income of those in the sample have higher levels of mobile phone ownership and vice versa, insofar as they earn something at all.

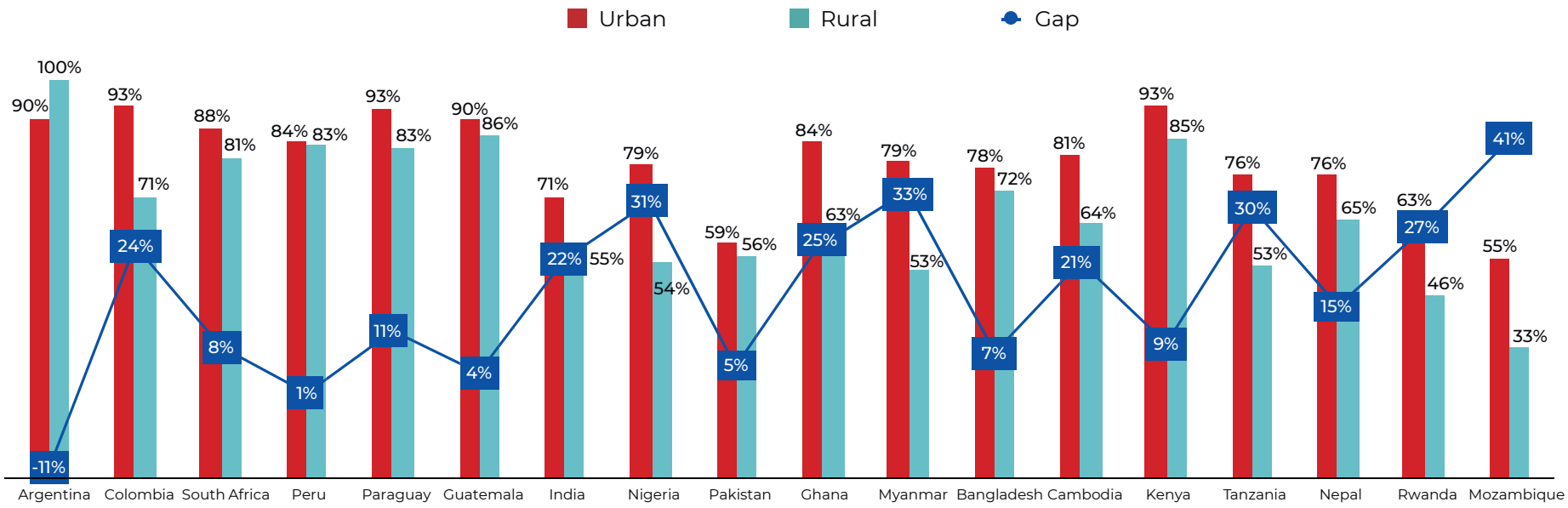
Figure 14: Mobile phone, SIM card, desktop/laptop ownership (% of population aged 15-65)



Q1: Do you own a mobile phone?
Q2: How many active SIM cards do you have (SIM cards that you used in last 30 days)?
Q3: Do you own a personal desktop computer or laptop?

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

Figure 15: Mobile phone ownership (% of population aged 15-65)



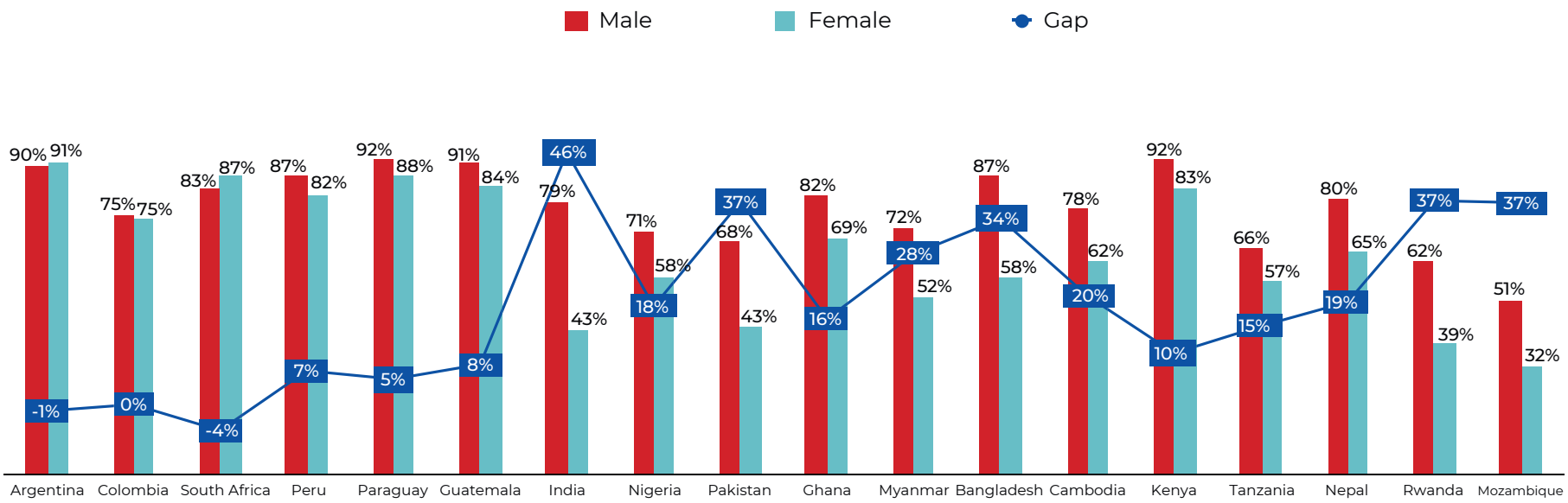
Urban-rural gap in mobile phone ownership % = (Urban mobile phone owners (% of urban population) − Rural mobile phone owners (% of rural population)) / Urban mobile phone owners (% of urban population)

Q: Do you own a mobile phone?

Base	Argentina		Colombia		South Africa		Peru		Paraguay		Guatemala		India		Nigeria		Pakistan		Ghana		Myanmar		Bangladesh		Cambodia		Kenya		Tanzania		Nepal		Rwanda		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
All respondents	1,208	32*	986	439	1,050	765	1,178	300	824	533	550	857	2,200	2,869	1,147	661	793	1,209	721	479	3,477	3,727	808	1,212	897	1,226	727	481	720	480	940	538	711	500	718	453

*Low Rural base for Argentina

Figure 16: Mobile phone ownership (% of population aged 15-65)

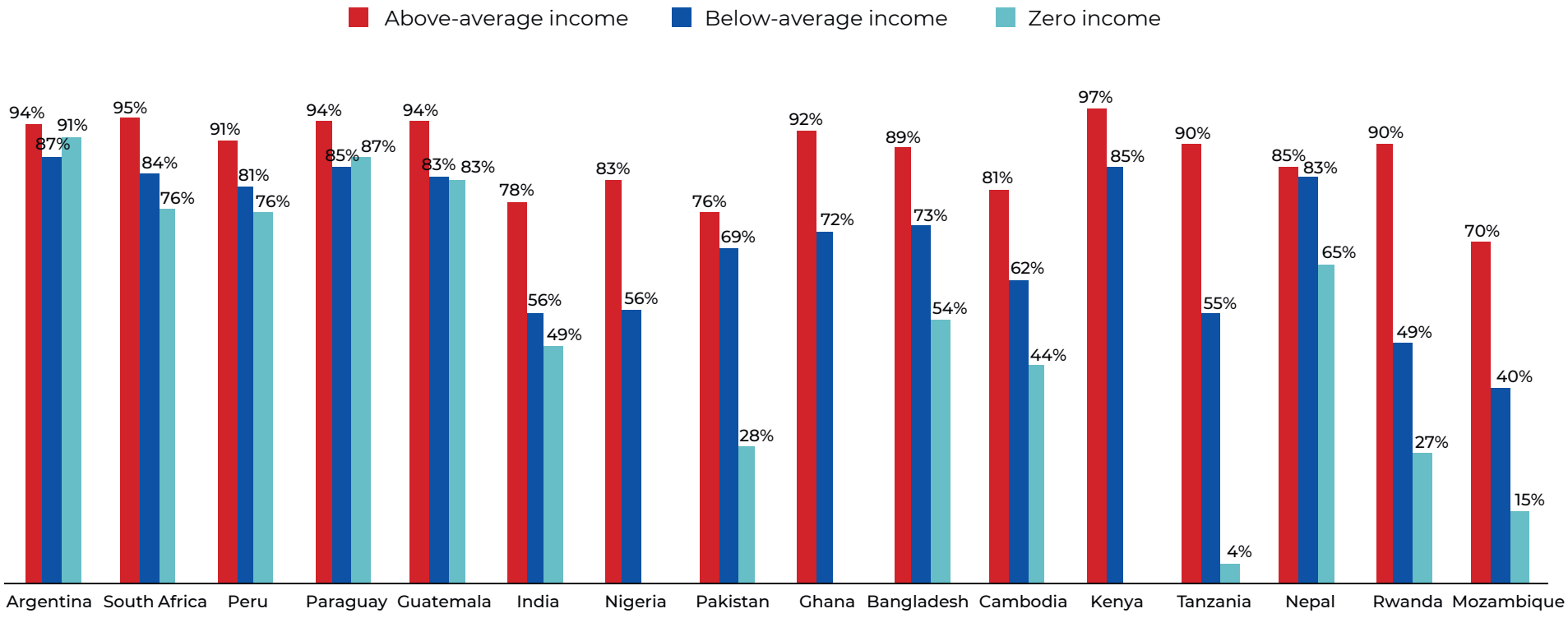


Male-Female gap in mobile phone ownership % = (Male mobile phone owners (% of male population) − Female mobile phone owners (% of female population)) / Male mobile phone owners (% of male population)

Q: Do you own a mobile phone?

Base	Argentina		Colombia		South Africa		Peru		Paraguay		Guatemala		India		Nigeria		Pakistan		Ghana		Myanmar		Bangladesh		Cambodia		Kenya		Tanzania		Nepal		Rwanda		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
All respondents	478	762	487	938	795	1,020	508	970	879	478	656	751	2,478	2,591	912	896	1,060	942	547	653	3,818	3,386	1,092	928	735	1,388	544	664	531	669	912	1096	556	655	527	644

Figure 17: Mobile phone ownership (% of population aged 15-65)



Q: Do you own a mobile phone?

Base	Argentina	South Africa	Peru	Paraguay	Guatemala	India	Nigeria	Pakistan	Ghana	Bangladesh	Cambodia	Kenya	Tanzania	Nepal	Rwanda	Mozambique
All respondents	1,240	1,610	1,478	1,357	1,407	5,069	1,710	2,002	1,145	2,020	2,123	1,179	1,102	2,008	1,118	1,091

handset type

In the Asian countries surveyed, mobile phone markets comprise predominantly basic handsets with no or limited Internet capability (Figure 18). A basic phone was defined as one on which only calls and texting are 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 uses an operating system such as Android, iOS, etc., through which third party 'apps' can be run on it, usually with a touch screen (covering 75% or more of its front area).

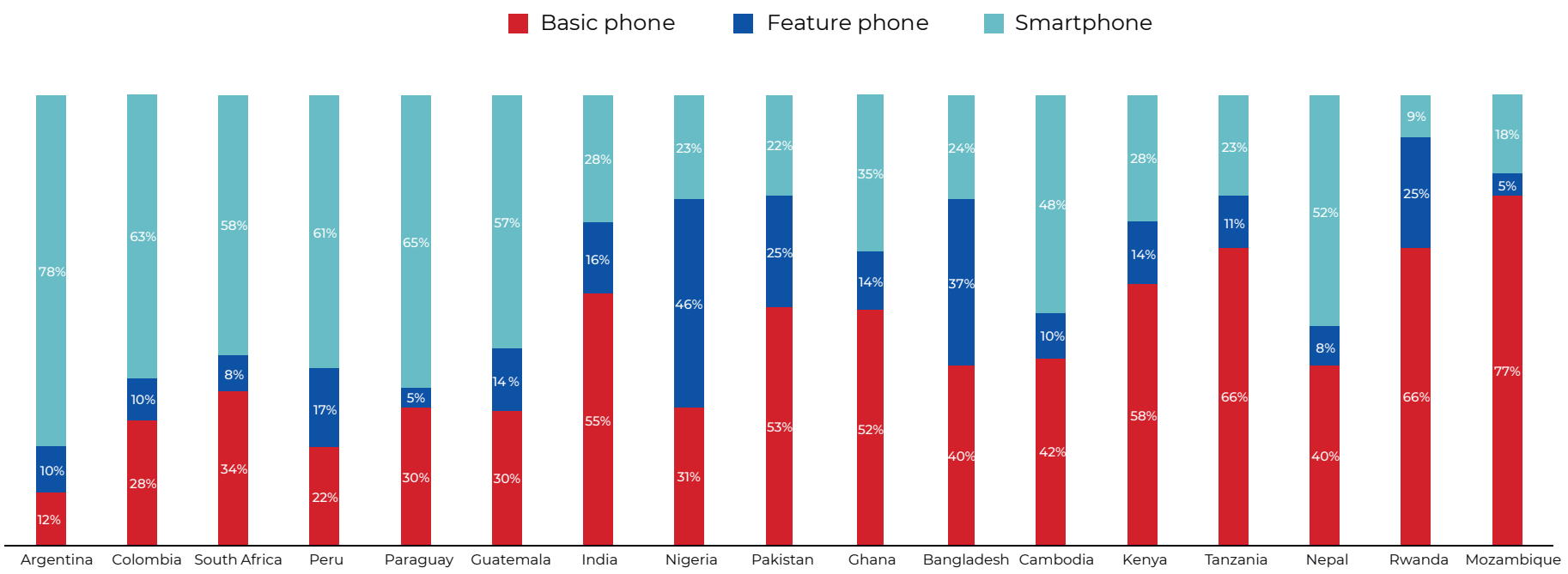
India, though it is the richest of the Asian countries surveyed, performs worst on this aspect (market share with Internet-enabled handsets). Overall, India's mobile phone market has the lowest percentage-share of Internet-enabled mobile phones, surpassed by both Pakistan and Bangladesh. The latter two, though they have low smartphone penetration, have a significant feature phone segment, enabling users to access the Internet. Interestingly, Cambodia and Nepal – the lower income Asian countries studied – had smartphone penetration higher (close to half the market in both cases) than the richer Asian countries studied. 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, smartphone ownership among urban respondents was higher than among rural respondents (Figure 19), 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 high in device type (Figure 20) as in mobile phone ownership, noted earlier. It appears that the bigger hurdle is for women to get connected (become mobile phone owners). Thereafter, they are almost 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/LIRNEasiaMyanmar2016.

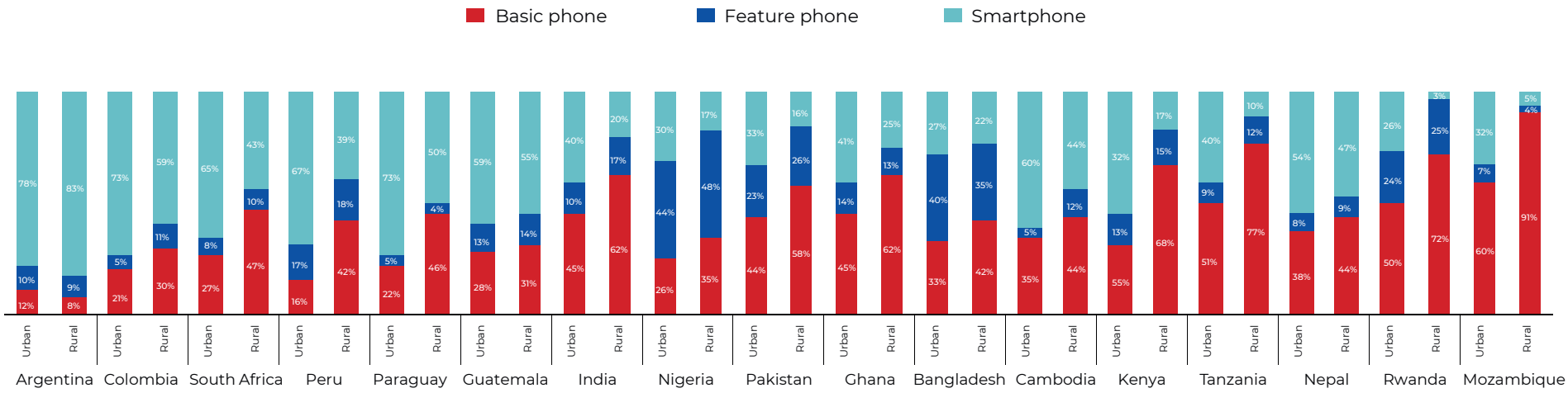
Figure 18: Handset type owned (% of mobile phone owners aged 15-65)



Q: What type of mobile phone is it?

Base	Argentina	Colombia	South Africa	Peru	Paraguay	Guatemala	India	Nigeria	Pakistan	Ghana	Bangladesh	Cambodia	Kenya	Tanzania	Nepal	Rwanda	Mozambique
Mobile phone owners	1,116	1,297	1,398	1,234	1,209	1,214	3,252	1,123	1,208	901	1,531	1,526	1,054	761	1478	635	632

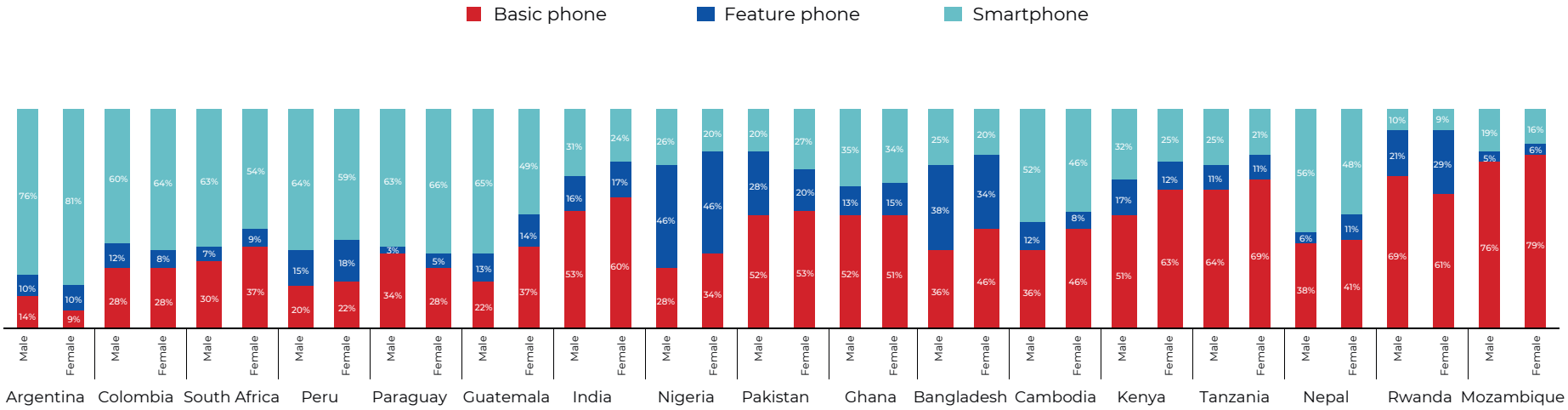
Figure 19: Handset type owned (% of mobile phone owners aged 15-65)



Q: What type of mobile phone is it?

Base	Argentina	Colombia	South Africa	Peru	Paraguay	Guatemala	India	Nigeria	Pakistan	Ghana	Bangladesh	Cambodia	Kenya	Tanzania	Nepal	Rwanda	Mozambique
Mobile phone owners	1,116	1,297	1,398	1,234	1,209	1,214	3,252	1,123	1,208	901	1,531	1,526	1,054	761	1478	635	632

Figure 20: Handset type owned (% of mobile phone owners aged 15-65)



Q: What type of mobile phone is it?

Base	Argentina	Colombia	South Africa	Peru	Paraguay	Guatemala	India	Nigeria	Pakistan	Ghana	Bangladesh	Cambodia	Kenya	Tanzania	Nepal	Rwanda	Mozambique
Mobile phone owners	1,116	1,297	1,398	1,234	1,209	1,214	3,252	1,123	1,208	901	1,531	1,526	1,054	761	1478	635	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)

	Years															
	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%
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%
Nigeria	7%	5%	7%	5%	9%	4%	7%	5%	8%	11%	6%	8%	6%	3%	4%	6 %
Pakistan	9%	10%	8%	3%	6%	6%	10%	4%	8%	3%	3%	7%	3%	2%	3%	13 %
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%
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%
Mozambique	12%	12%	8%	8%	8%	9%	6%	3%	4%	6%	3%	7%	3%	2%	4%	5%

Q. When did you get your first ever mobile phone connection (i.e, working handset and SIM card)? [record year] (converted to time since)

Base	Argentina	Colombia	South Africa	Peru	Paraguay	Guatemala	India	Nigeria	Pakistan	Ghana	Bangladesh	Cambodia	Kenya	Tanzania	Nepal	Rwanda	Mozambique
Mobile phone owners	1,116	1,297	1,398	1,234	1,209	1,214	3,252	1,123	1,208	901	1,531	1,526	1,054	761	1478	635	632

Table 3: Number of years since becoming a mobile phone owner (% of mobile phone owners aged 15-65) by urban-rural

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

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

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

Table 4: Number of years since becoming a mobile phone owner (% of mobile phone owners aged 15-65) by gender

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

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

Base	Argentina	Colombia	South Africa	Peru	Paraguay	Guatemala	India	Nigeria	Pakistan	Ghana	Bangladesh	Cambodia	Kenya	Tanzania	Nepal	Rwanda	Mozambique
Mobile phone owners	1,116	1,297	1,398	1,234	1,209	1,214	3,252	1,123	1,208	901	1,531	1,526	1,054	761	1,478	635	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, 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 mobile phone owners aged 15-65)

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

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

Base	Argentina	Colombia	South Africa	Peru	Paraguay	Guatemala	India	Nigeria	Pakistan	Ghana	Myanmar	Bangladesh	Cambodia	Kenya	Tanzania	Nepal	Rwanda	Mozambique
Mobile phone owners	1,116	1,297	1,398	1,234	1,209	1,214	3,252	1,123	1,208	901	4,400	1,531	1,526	1,054	761	1478	635	632

Table 6: Multiple SIM use (% of mobile phone owners aged 15-65)

		Argentina	Colombia	South Africa	Peru	Paraguay	Guatemala	India	Nigeria	Pakistan	Ghana	Bangladesh	Cambodia	Kenya	Tanzania	Nepal	Rwanda	Mozambique
Location	Urban	7%	8%	20%	17%	12%	12%	29%	55%	20%	46%	35%	35%	25%	51%	30%	55%	26%
	Rural	10%	25%	20%	16%	8%	13%	24%	48%	26%	39%	34%	27%	17%	34%	25%	37%	22%
Gender	Male	8%	21%	20%	23%	14%	14%	29%	58%	28%	51%	38%	33%	23%	42%	31%	42%	24%
	Female	7%	20%	20%	13%	9%	11%	21%	44%	15%	34%	28%	27%	16%	41%	25%	42%	24%
Education	Has secondary education or higher	7%	26%	20%	18%	13%	12%	31%	58%	34%	47%	43%	41%	23%	50%	39%	65%	24%
	Has primary or no education	0%	14%		9%	8%	13%	22%	35%	22%	38%	27%	24%	15%	31%	14%	32%	
Income	Above average income earners	12%		22%	26%	16%	16%	30%	61%	24%	50%	38%	37%	41%	51%	34%	50%	39%
	Below average income earners	4%		19%	11%	7%	10%	24%	45%	24%	42%	32%	25%	14%	34%	30%	41%	10%
	Zero income earners	4%		18%	11%	7%	9%	23%	0%	19%	0%	31%	26%	0%	40%	26%	32%	7%
Age (years)	15-25	4%	14%	25%	15%	10%	9%	33%	43%	23%	36%	39%	27%	20%	44%	34%	39%	24%
	26-35	7%	32%	25%	18%	13%	12%	27%	59%	27%	52%	38%	35%	19%	46%	32%	49%	25%
	36-45	13%	7%	16%	18%	10%	17%	25%	58%	22%	46%	33%	33%	22%	42%	24%	49%	23%
	46-55	9%	31%	10%	18%	11%	16%	19%	48%	18%	47%	31%	28%	22%	30%	18%	33%	25%
	56-65	5%	12%	15%	11%	9%	19%	16%	42%	24%	28%	18%	22%	10%	32%	12%	23%	13%

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

Base	Argentina	Colombia	South Africa	Peru	Paraguay	Guatemala	India	Nigeria	Pakistan	Ghana	Bangladesh	Cambodia	Kenya	Tanzania	Nepal	Rwanda	Mozambique
Mobile phone owners	1,116	1,297	1,398	1,234	1,209	1,214	3,252	1,123	1,208	901	1,531	1,526	1,054	761	1478	635	632

Internet

The lack of Internet awareness was a considerable problem across Asian (and, to a lesser extent, African) countries surveyed (Figure 21). For example, in India just 35% of the population aged 15-65 knew what the Internet is, 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 is.

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; Figure 22), with rural-dwellers lagging behind as much as 48% in India and 32-42% in Bangladesh, Cambodia, Myanmar and Nepal.

The gender gap in Internet use was markedly larger in the Asian and African countries surveyed than the Latin American ones (Figure 23).

Looking at the type of device owned by Internet users, it was clear that smartphone owners were the highest users of the Internet in Asian and African countries surveyed. In the Latin American countries surveyed, feature phone owners used the Internet almost as much as smartphone owners (Figure 24). Most feature phone owners in the Asian and African countries surveyed did not use the Internet.

Of the Asian countries surveyed, Nepal, Bangladesh and India had larger proportions of Internet users who stated that their Internet use was not limited by any factors. Cost of data was cited as a primary limitation to greater use by 30% of Internet users aged 15-65 in Bangladesh, 29% in Nepal, and 18% in both India and Pakistan (Figure 25). 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 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 limiting factor.

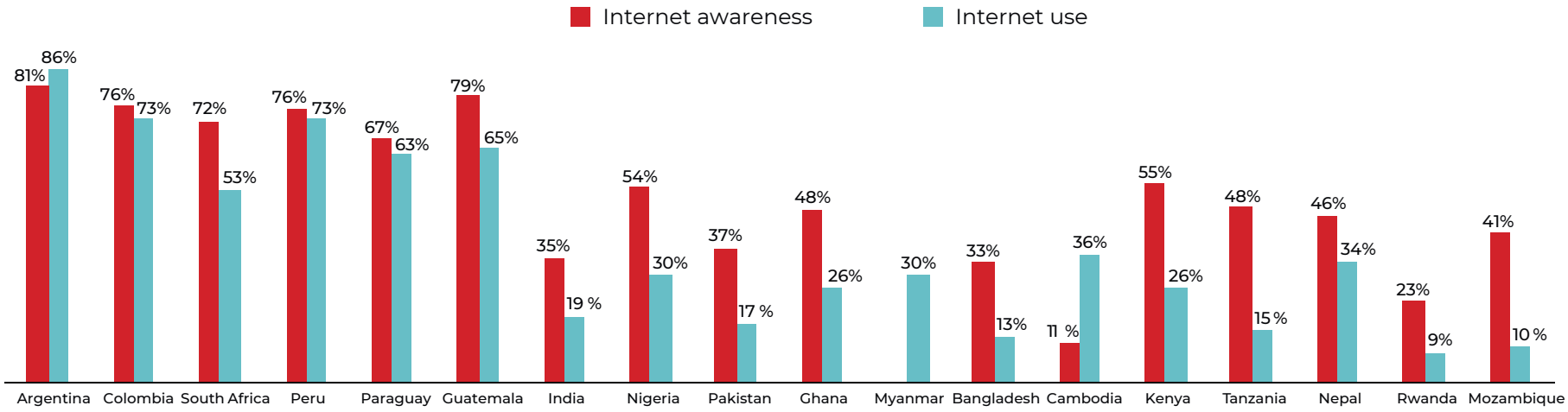
Figure 25 contains responses on limiting factors in survey countries where respondents were asked to cite the primary factor (single response) while Figure 26 presents the responses from countries where respondents were allowed to name more than one factor if applicable. As such, a wider set of concerns was voiced in the latter set of countries, with issues relating to cyber security and privacy being cited in Latin America, while in Africa, data cost, speed of the Internet and lack of time were concerns.

As Figure 27 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. Again, Myanmar, Cambodia and Nepal appear to be further ahead in social media use as well as Internet use.

A lack of awareness of what the Internet is, is the key barrier to Internet use in the Asian survey countries (Figure 28), with more than two-thirds of Internet non-users in India, Pakistan, Bangladesh and Nepal citing this as the reason for non-use. Among Cambodian non-users aged 15-65, while 21% said they don't know what the Internet is, 41% said they don't know how to use it. In the African survey countries, the lack of a device seemed to be the main 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 some non-awareness even among current smartphone owners who don't use the Internet (Figure 29).

Figure 21: Internet awareness and use (% of population aged 15-65)

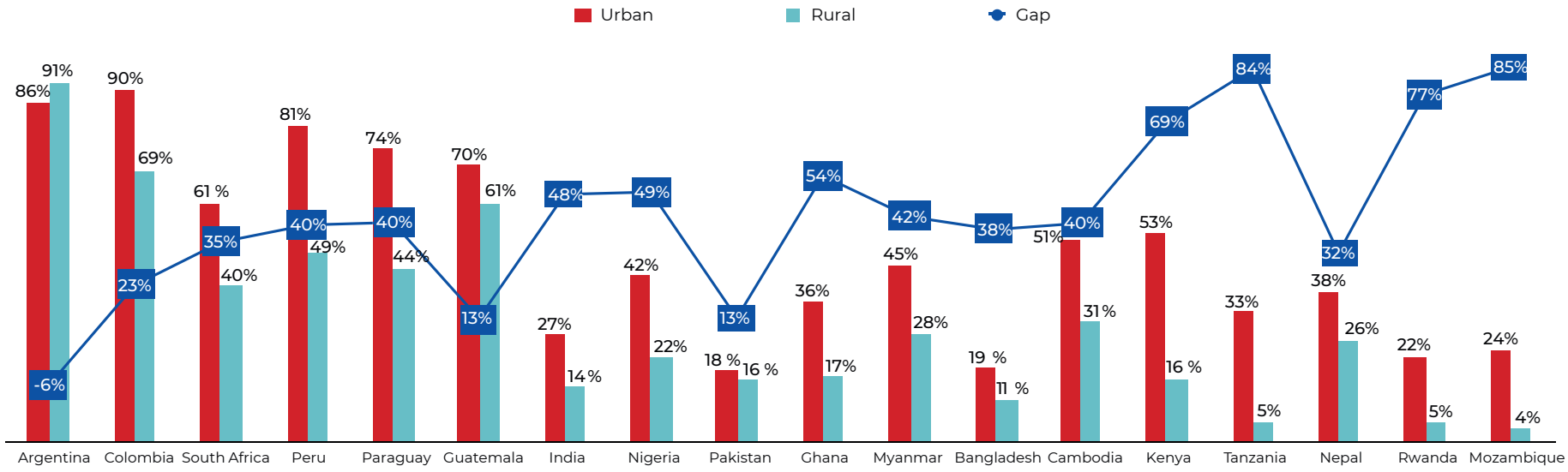


Q1: Do you know what the Internet is?
Q2: Have you ever used the Internet (Gmail, Google, Facebook, email)?

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

*Internet awareness questions was not asked in Myanmar

Figure 22: Internet use (% of population aged 15-65)



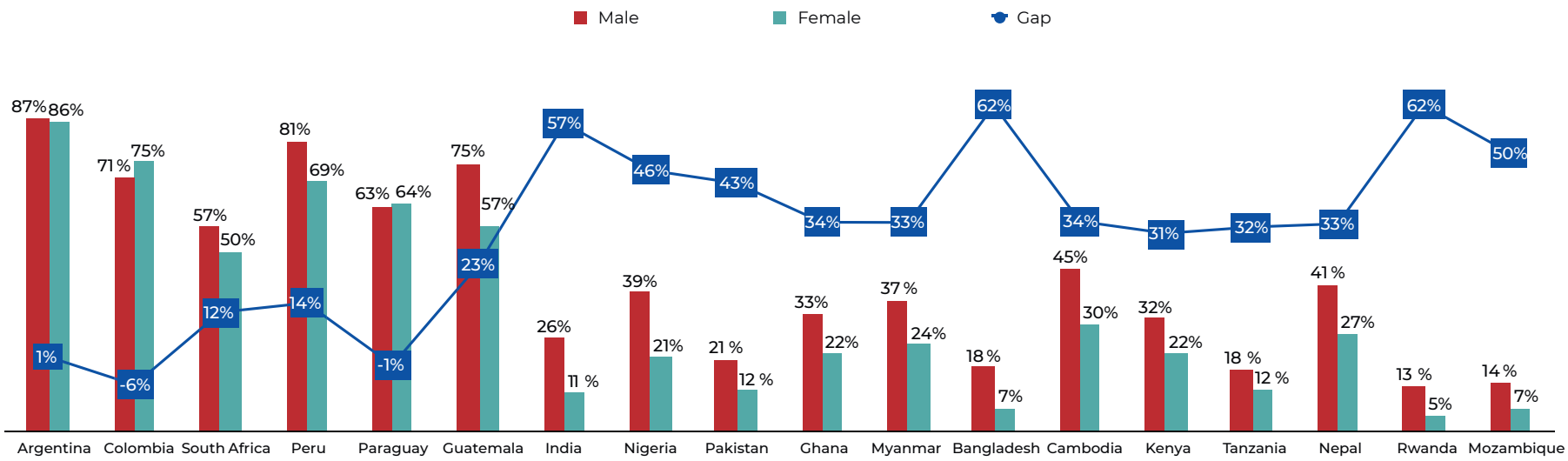
Q: Have you ever used the Internet (Gmail, Google, Facebook, email)?

Base	Argentina		Colombia		South Africa		Peru		Paraguay		Guatemala		India		Nigeria		Pakistan		Ghana		Myanmar		Bangladesh		Cambodia		Kenya		Tanzania		Nepal		Rwanda		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
All respondents	1,208	32*	986	439	1,050	765	1,178	300	824	533	550	857	2,200	2,869	1,147	661	793	1,209	721	479	3,477	3,727	808	1,212	897	1,226	727	481	720	480	940	538	711	500	718	453

$$\text{Urban-rural gap in Internet use (\%)} = \frac{\text{Urban Internet users (\% of urban population)} - \text{Rural Internet users (\% of rural population)}}{\text{Urban Internet users (\% of urban population)}}$$

*Low rural base for Argentina

Figure 23: Internet use (% of population aged 15-65)

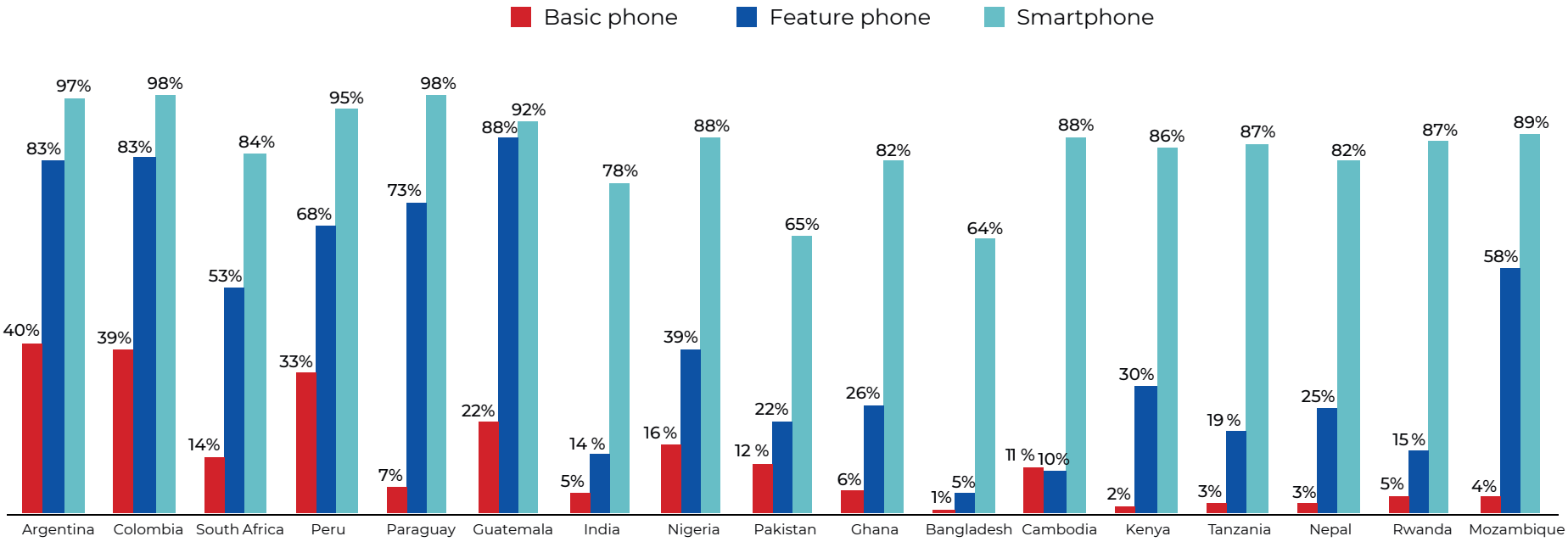


Q: Have you ever used the Internet? (Gmail, Google, Facebook, email)

Base	Argentina		Colombia		South Africa		Peru		Paraguay		Guatemala		India		Nigeria		Pakistan		Ghana		Myanmar		Bangladesh		Cambodia		Kenya		Tanzania		Nepal		Rwanda		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
All respondents	478	762	487	938	795	1,020	508	970	879	478	656	751	2,478	2,591	912	896	1,060	942	547	653	3,818	3,386	1,092	928	735	1,388	544	664	531	669	912	1,096	556	655	527	644

$$\text{Gender gap in Internet use (\%)} = \frac{\text{Male Internet users (\% of male population)} - \text{Female Internet users (\% of female population)}}{\text{Male Internet users (\% of male population)}}$$

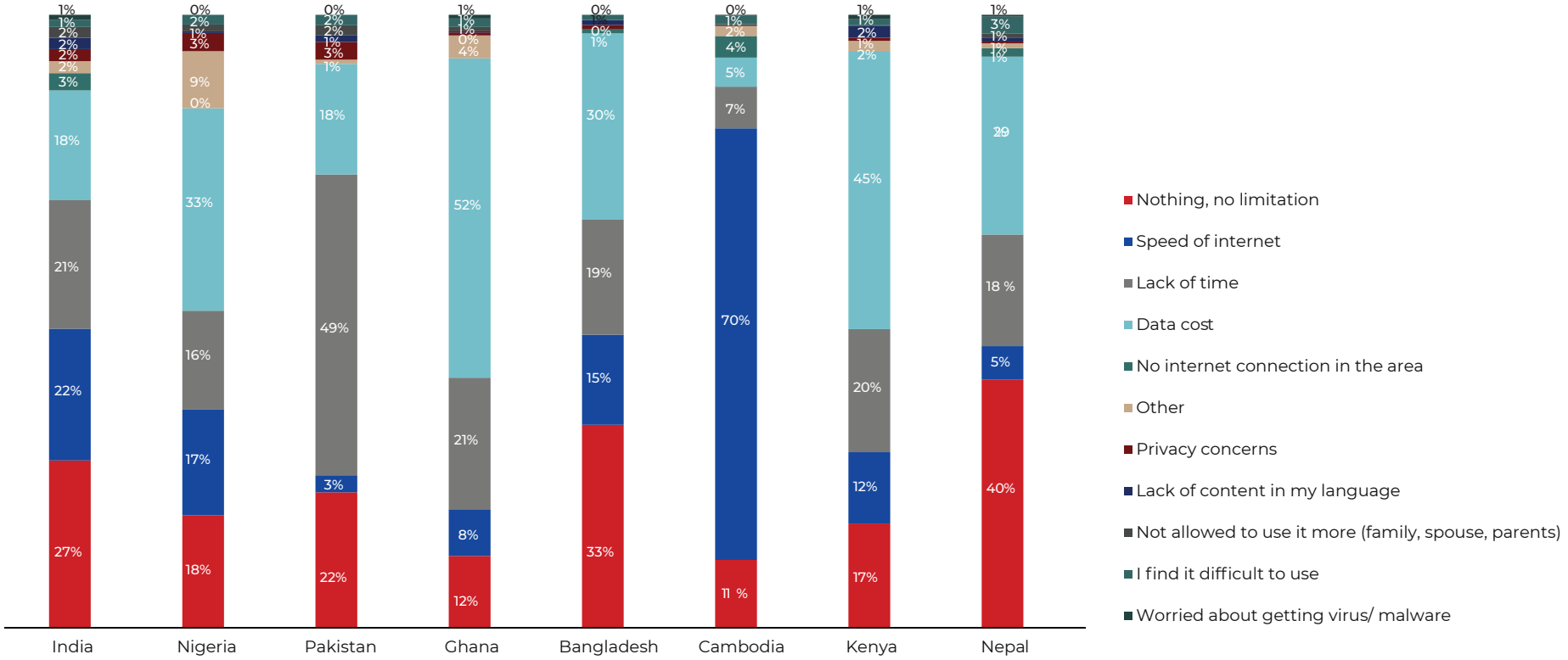
Figure 24: Internet use (% of mobile phone owners aged 15-65)



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

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

Figure 25: Limitations on Internet use (% of Internet users aged 15-65)

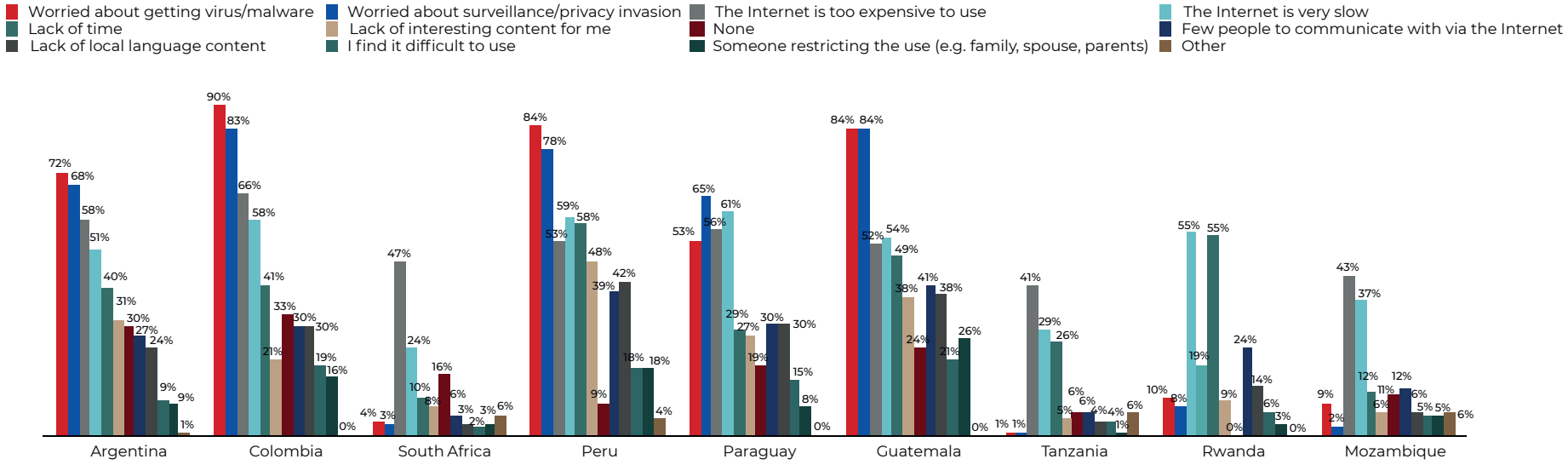


Q: What is the main limitation on your use of the Internet? (Single response question)

Base	India	Nigeria	Pakistan	Ghana	Bangladesh	Cambodia	Kenya	Nepal
Internet users	919	529	427	311	266	804	440	692

*Question was asked as a single-response question in these countries

Figure 26: Limitations on Internet use (% of Internet users aged 15-65)

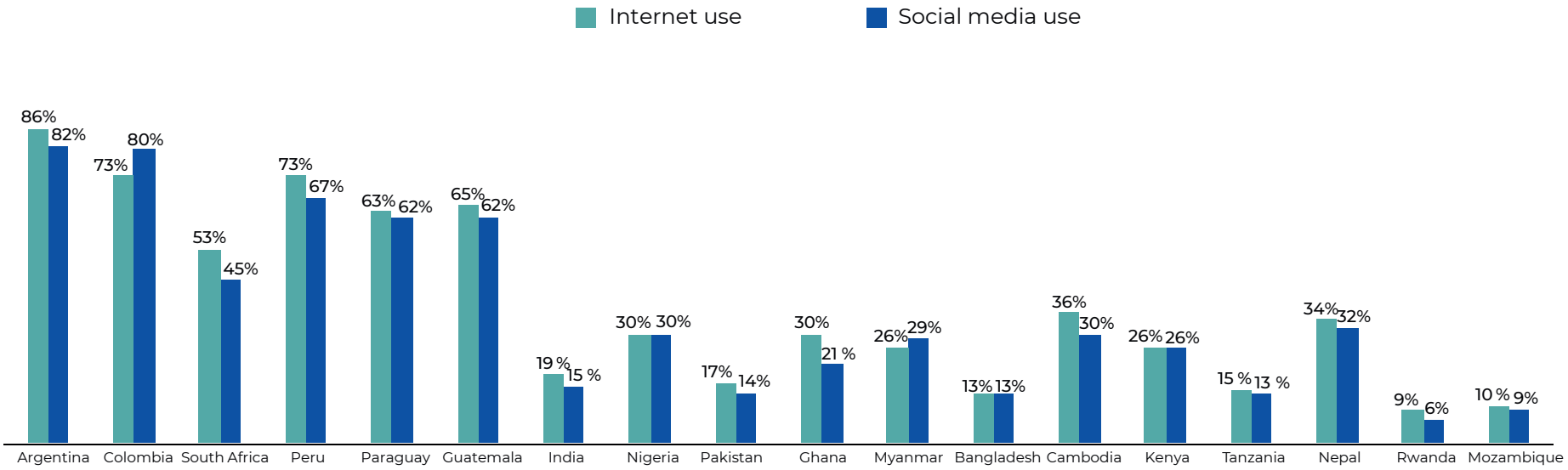


Q: I'm going to read some phrases that other people have mentioned limit their use of the Internet. For each one, please, tell me if you consider it a limitation or not. (Multiple response question)

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

* Question was asked as a multiple-response question in these countries

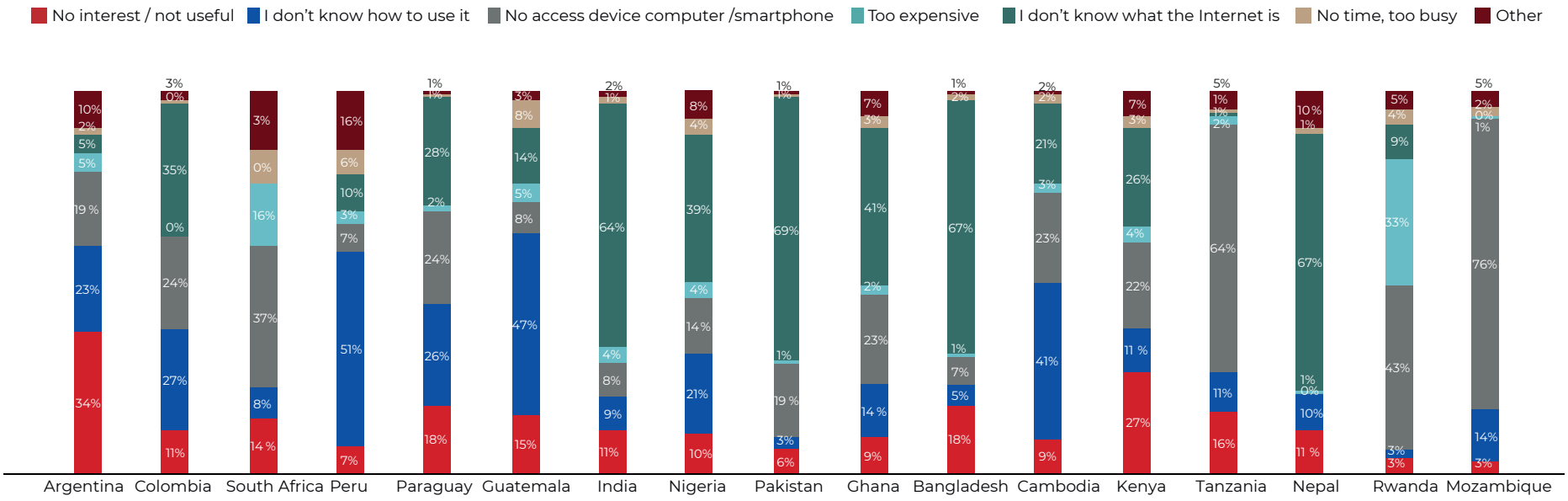
Figure 27: Internet and social media use (% of population aged 15-65)



Q1: Have you ever used the Internet (Gmail, Google, Facebook, email)?
Q2: Do you use social media like Facebook, Whatsapp, Twitter etc.?

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

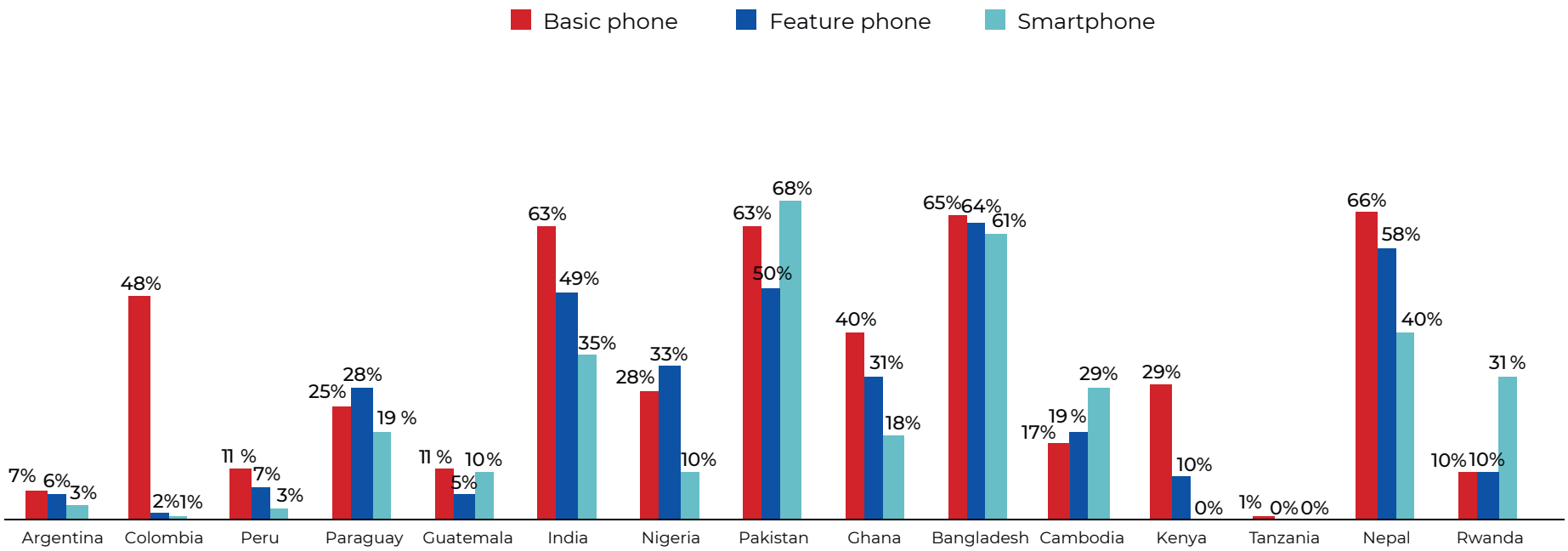
Figure 28: Reasons for not using the Internet (% of non-Internet users aged 15-65)



Q: What is the main reason why you do not use the Internet?

Base	Argentina	Colombia	South Africa	Peru	Paraguay	Guatemala	India	Nigeria	Pakistan	Ghana	Bangladesh	Cambodia	Kenya	Tanzania	Nepal	Rwanda	Mozambique
Non-Internet users	192	248	317	391	536	484	4,150	1,177	1,575	837	1,754	1,320	741	319	1,316	151	319

Figure 29: Reasons for not using the Internet - I don't know what the Internet is (% of non-Internet users aged 15-65)



Q: What is the main reason why you do not use the Internet?

Base	Argentina	Colombia	South Africa	Peru	Paraguay	Guatemala	India	Nigeria	Pakistan	Ghana	Bangladesh	Cambodia	Kenya	Tanzania	Nepal	Rwanda	Mozambique
Non-Internet users	192	248	317	391	536	484	4,150	1,177	1,575	837	1,754	1,320	741	319	1,316	151	319

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, Instagram, etc. (Table 7). For example, 48% of mobile phone owners aged 15-65 in India used social networking apps, compared to 70% in Nepal, 71% in Cambodia, 25% in Pakistan and just 19% in Bangladesh.

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

Among the Asian countries surveyed, the most diverse range of apps (entertainment apps, business apps, news apps etc.) was used in India, Cambodia and Nepal. The most diverse uses across the survey countries were 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 mobile phone 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 feature or smartphone owners aged 15-65)

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

Q: Are you using these types of mobile apps on your phone?

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

social media

41

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 (Figure 30) in India, Bangladesh and Pakistan – similar to those seen in Internet use.

Urban rural gaps were also seen (Figure 31) at similar levels as those in Internet use: 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, though some feature phone owners (e.g.: 31% and 19% aged 15-65 in Nepal and Pakistan respectively) also used social media (Figure 32).

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

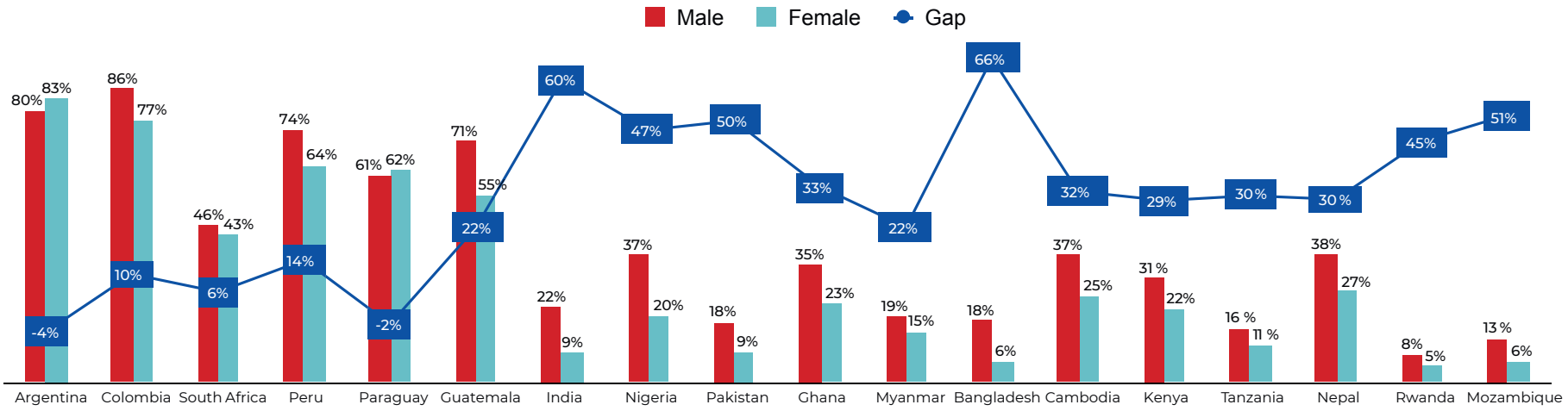
Social media is mostly used for keeping in touch with family and friends as well as chatting (text) and calls (Table 9). Many use it as a source of news, ranging from 73% in Bangladesh to 86% in Cambodia, and even higher in some African countries.

The majority of social media users are willing to share their name, gender, age etc. on social media, and even contact information. However, users are more guarded when it comes to religious and political views as well as sexual orientation (Figure 33).

Bangladeshi and Indian 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 34). 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 35). Cambodian and Nepalese social media users aged 15-65 were less cautious about sharing or forwarding content on social media.

Fifty-eight percent of Indian social media users said they do not trust the news they read on social media.

Figure 30: Social media use (% of population aged 15-65)



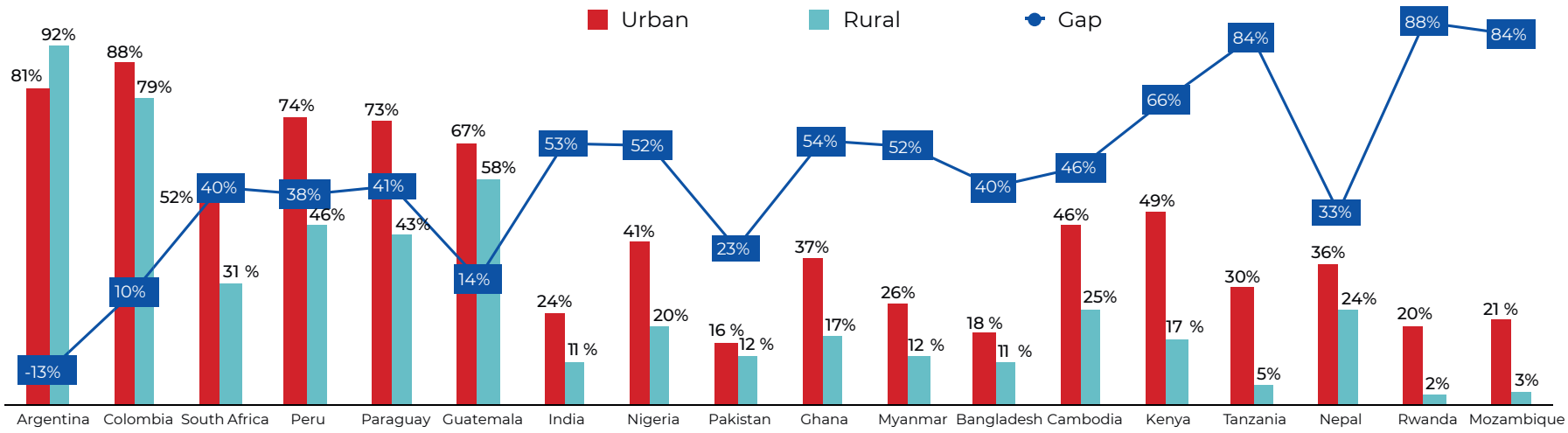
$$\text{Gender gap in social media use (\%)} = \frac{\text{Male social media users (\% of male population)} - \text{Female social media users (\% of female population)}}{\text{Male social media users (\% of male population)}}$$

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

Base	Argentina		Colombia		South Africa		Peru		Paraguay		Guatemala		India		Nigeria		Pakistan		Ghana		Myanmar		Bangladesh		Cambodia		Kenya		Tanzania		Nepal		Rwanda		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
All respondents	478	762	487	938	795	1,020	508	970	879	478	656	751	2,478	2,591	912	896	1,060	942	547	653	3,386	3,818	1,092	928	735	1,388	544	664	531	669	912	1,096	556	655	527	644

social media

Figure 31: Social media use (% of population aged 15-65)

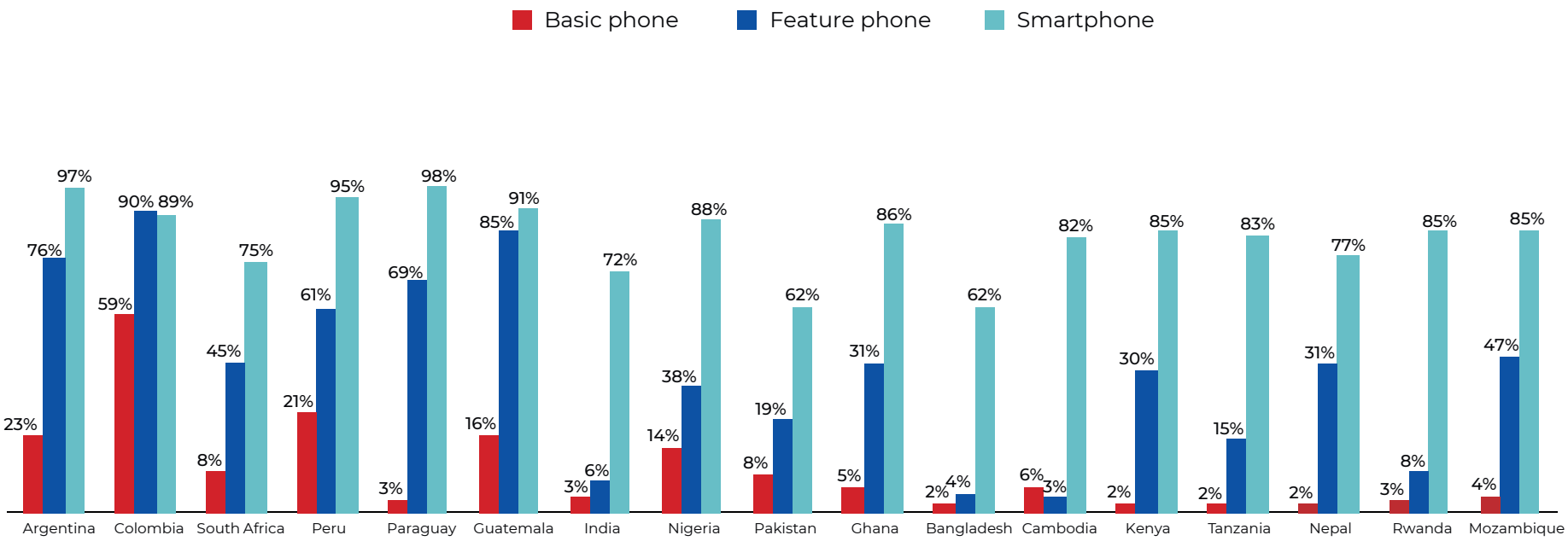


Urban-rural gap in social media use (%) = (Urban social media users (% of urban population) − Rural social media users (% of rural population)) / Urban social media users (% of urban population)

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

Base	Argentina		Colombia		South Africa		Peru		Paraguay		Guatemala		India		Nigeria		Pakistan		Ghana		Myanmar		Bangladesh		Cambodia		Kenya		Tanzania		Nepal		Rwanda		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
All respondents	1,208	32*	986	439	1,050	765	1,178	300	824	533	550	857	2,200	2,869	1,147	661	793	1,209	721	479	3,477	3,727	808	1,212	897	1,226	727	481	720	480	1,203	805	711	500	718	453

Figure 32: 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	Guatemala	India	Nigeria	Pakistan	Ghana	Bangladesh	Cambodia	Kenya	Tanzania	Nepal	Rwanda	Mozambique
Mobile phone owners	1,116	1,297	1,398	1,234	1,209	1,214	3,252	1,123	1,208	901	1,531	1,526	1,054	761	1,478	635	632

social media

Table 8: Social media use (% of population aged 15-65)

		Argentina	Colombia	South Africa	Peru	Paraguay	Guatemala	India	Nigeria	Pakistan	Ghana	Bangladesh	Cambodia	Kenya	Tanzania	Nepal	Rwanda	Mozambique
Education	Has secondary education or higher	82%	85%	45%	73%	88%	81%	29%	51%	42%	52%	22%	64%	43%	26%	59%	24%	9%
	Has primary or no education	15%	76%		34%	40%	40%	5%	3%	11%	9%	6%	19%	5%	3%	9%	1%	
Income	Above average income earners	83%		62%	75%	75%	64%	22%	37%	26%	39%	15%	40%	43%	31%	44%	20%	19%
	Below average income earners	79%		40%	58%	49%	57%	10%	25%	10%	27%	11%	25%	21%	7%	35%	4%	6%
	Zero income earners	86%		33%	77%	65%	69%	15%	0%	6%	0%	11%	13%	0%	1%	28%	5%	4%
Age	15-25	91%	85%	59%	90%	89%	85%	29%	32%	19%	38%	22%	48%	40%	14%	47%	6%	14%
	26-35	90%	72%	50%	79%	75%	66%	15%	34%	13%	36%	14%	41%	27%	23%	40%	12%	7%
	36-45	85%	90%	40%	55%	63%	49%	10%	25%	9%	18%	9%	23%	16%	8%	25%	7%	6%
	46-55	73%	78%	34%	43%	44%	33%	6%	17%	7%	16%	3%	11%	9%	7%	10%	1%	3%
	56-65	52%	69%	19%	28%	22%	22%	2%	9%	11%	7%	1%	8%	7%	3%	3%	1%	3%

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

Base	Argentina	Colombia	South Africa	Peru	Paraguay	Guatemala	India	Nigeria	Pakistan	Ghana	Bangladesh	Cambodia	Kenya	Tanzania	Nepal	Rwanda	Mozambiqu	e
All respondents	1,240	1,425	1,610	1,478	1,357	1,407	5,069	1,706	2,002	1,145	2,020	2,123	1,179	1,102	2,008	1,118	1,091	

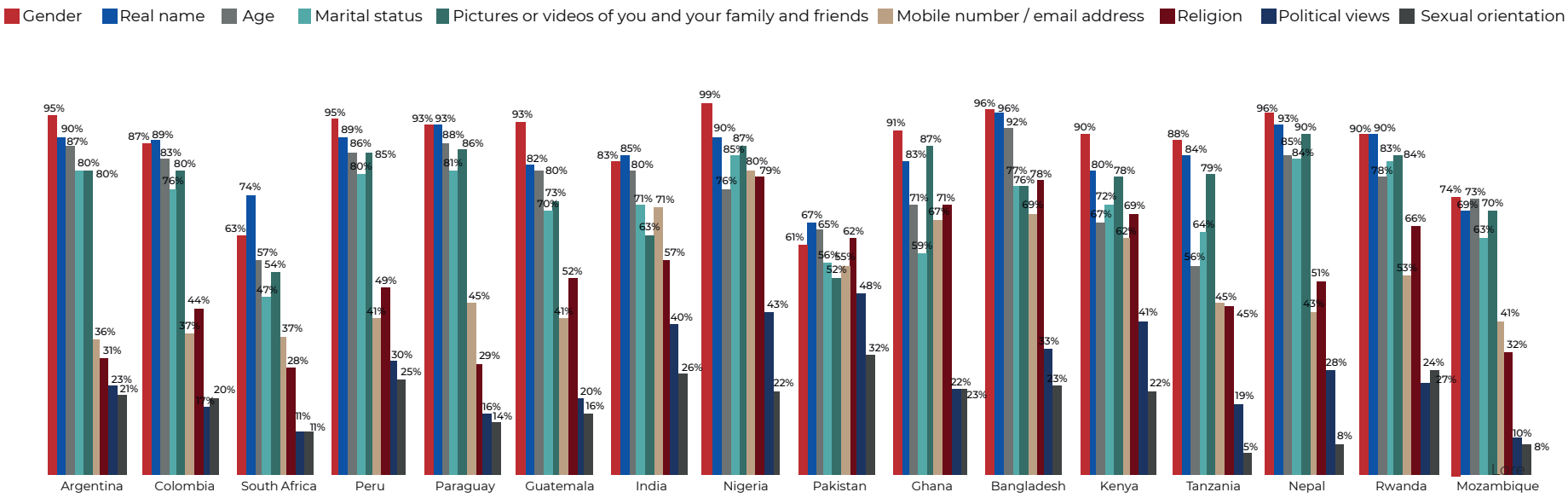
Table 9: What social media is used for (% of social media users aged 15-65)

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

Q: What do you use social media for?

Base	South Africa	India	Nigeria	Pakistan	Ghana	Bangladesh	Cambodia	Kenya	Tanzania	Nepal	Rwanda	Mozambique
Social media users	669	754	496	369	323	251	680	423	241	648	156	230

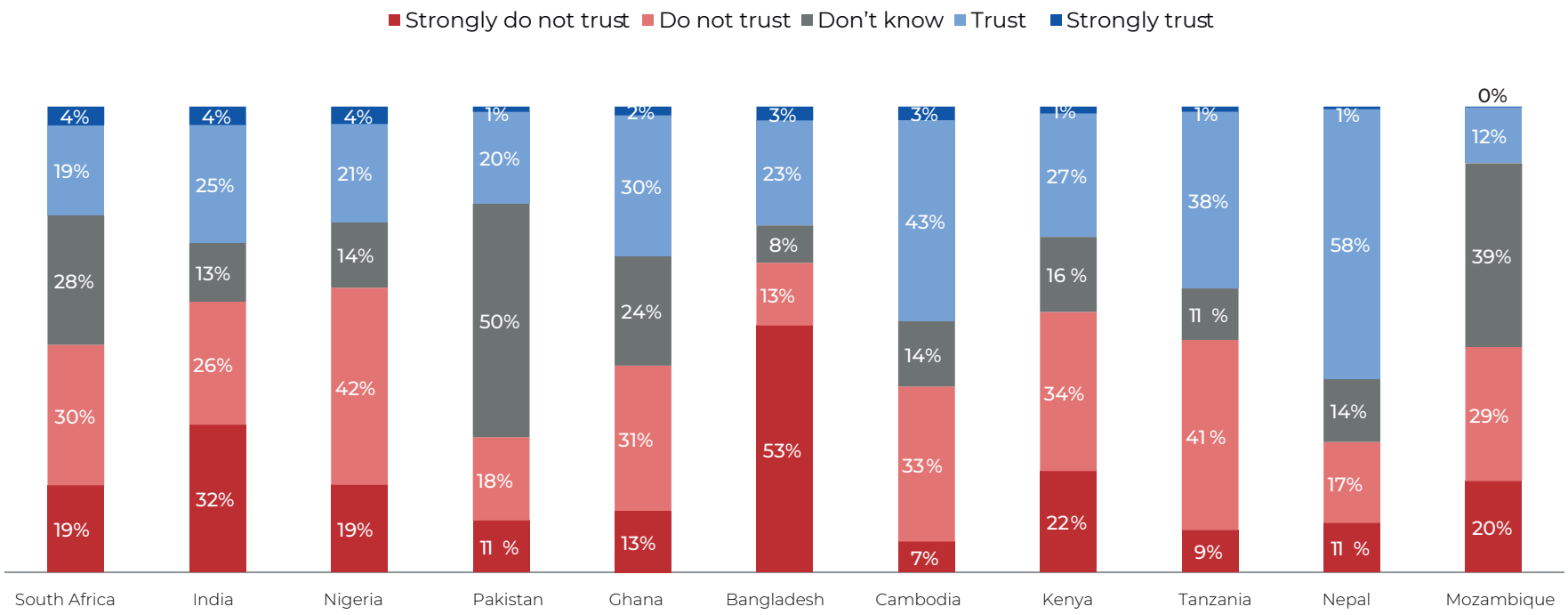
Figure 33: Types of information shared on social media (% of social media users aged 15-65)



Q: What information do you share on social media?

Base	Argentina	Colombia	South Africa	Peru	Paraguay	Guatemala	India	Nigeria	Pakistan	Ghana	Bangladesh	Kenya	Tanzania	Nepal	Rwanda	Mozambique
Social media users	993	1,246	669	999	802	878	754	496	369	323	251	423	241	648	156	230

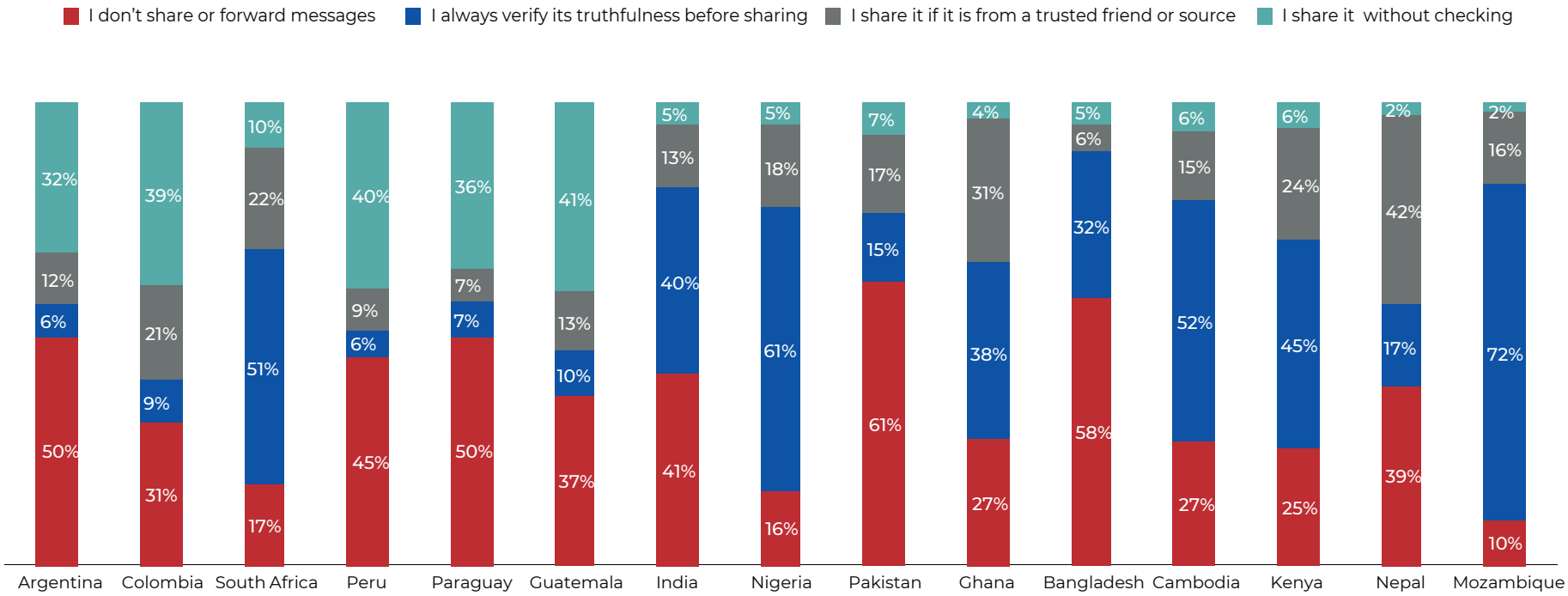
Figure 34: Degree of trust in news read on social media (% of social media users aged 15-65)



Q: Can you trust news you read on social media?

Base	South Africa	India	Nigeria	Pakistan	Ghana	Bangladesh	Cambodia	Kenya	Tanzania	Nepal	Mozambique
Social media users	669	754	496	369	323	251	680	423	241	648	230

Figure 35: 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	Guatemala	India	Nigeria	Pakistan	Ghana	Bangladesh	Cambodia	Kenya	Nepal	Mozambique
Social media users	993	1,246	669	999	802	878	754	496	369	323	251	680	423	648	230

public wi-fi

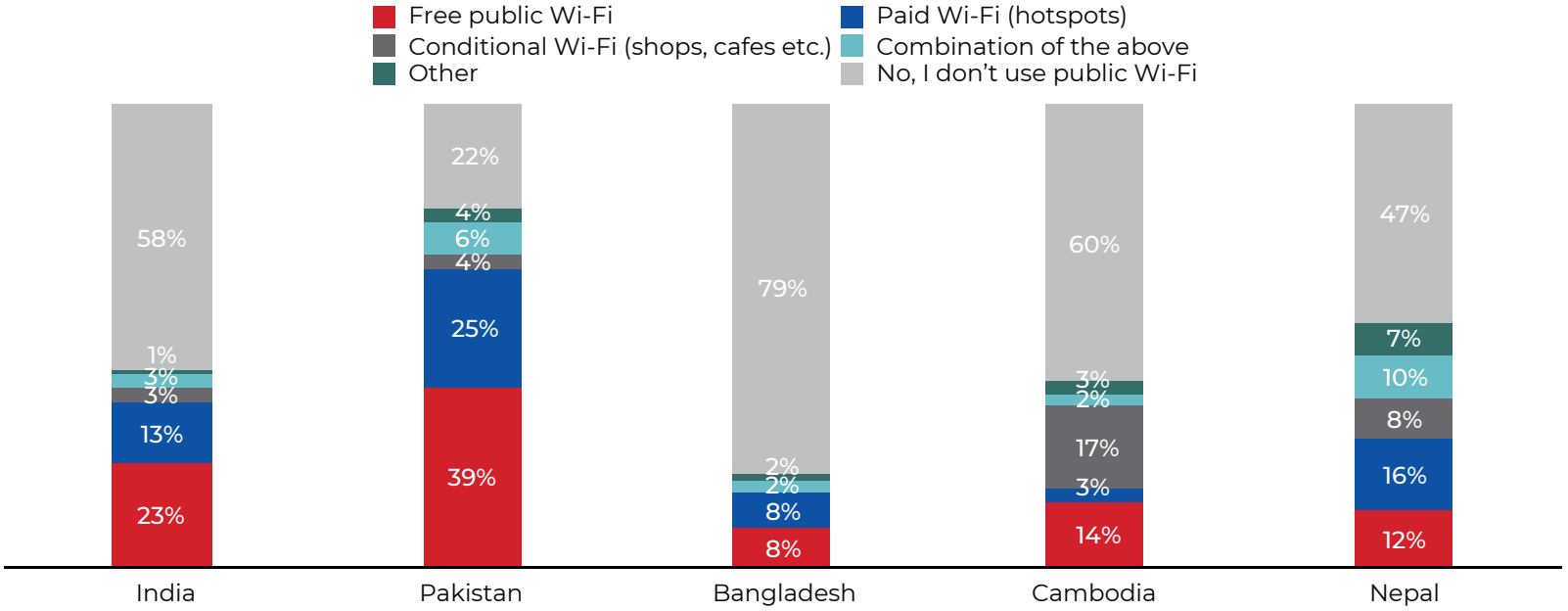
51

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 and 21% in Bangladesh (Figure 36). Free Wi-Fi was utilized by at least half of all these respondents, but was most popular among those in Pakistan. Other public Wi-Fi users used paid and / or conditional hotspots.

A larger share of rural Internet users made use of the free public Wi-Fi than urban Internet users (Figure 37). The latter more often used paid hotspots. More male Internet users made use of public Wi-Fi than female,(Figure 38) 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 39). The youngest (15-25) and oldest (55-65) use free public W-Fi more often than the middle age groups (i.e.: those earning, with less time and flexibility, etc.).

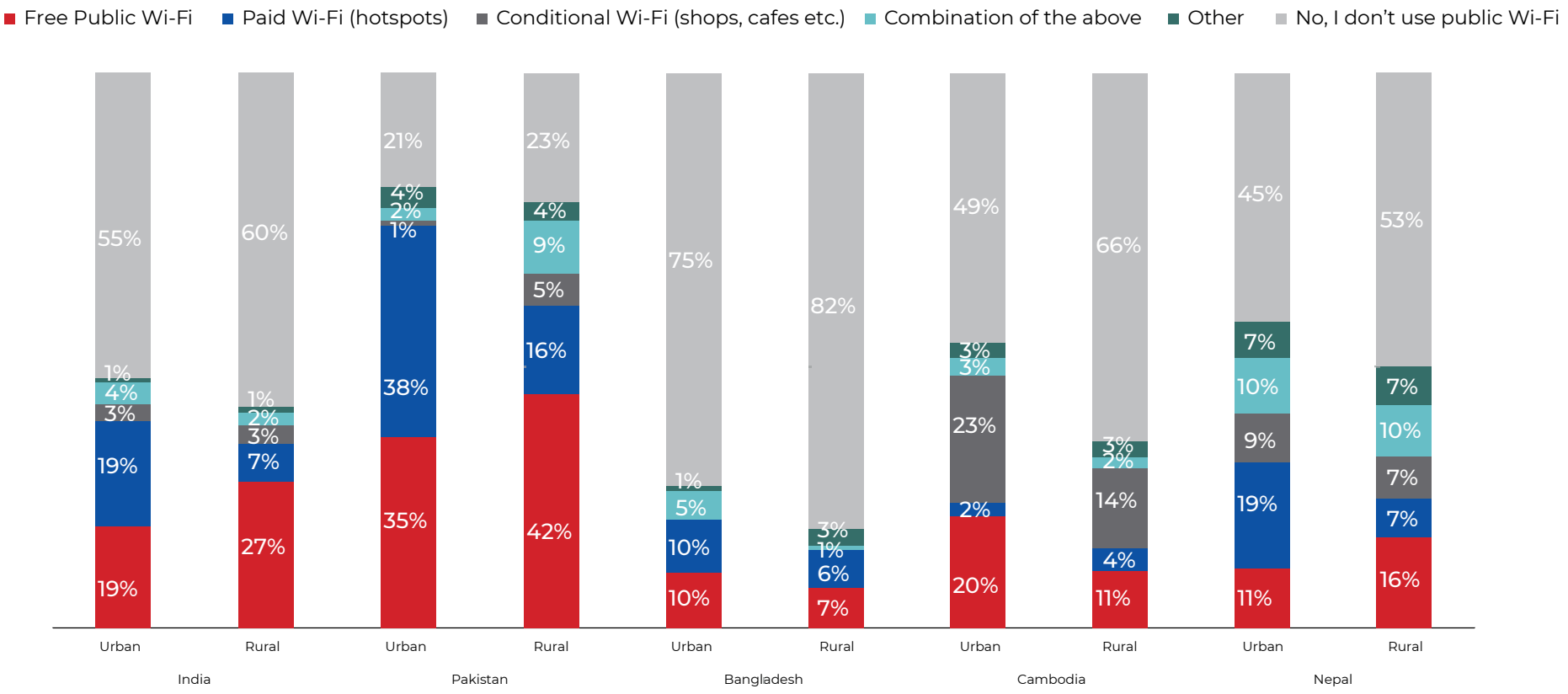
Figure 36: Public Wi-Fi use (% of Internet users aged 15-65)



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

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

Figure 37: Public Wi-Fi use (% of Internet users aged 15-65)

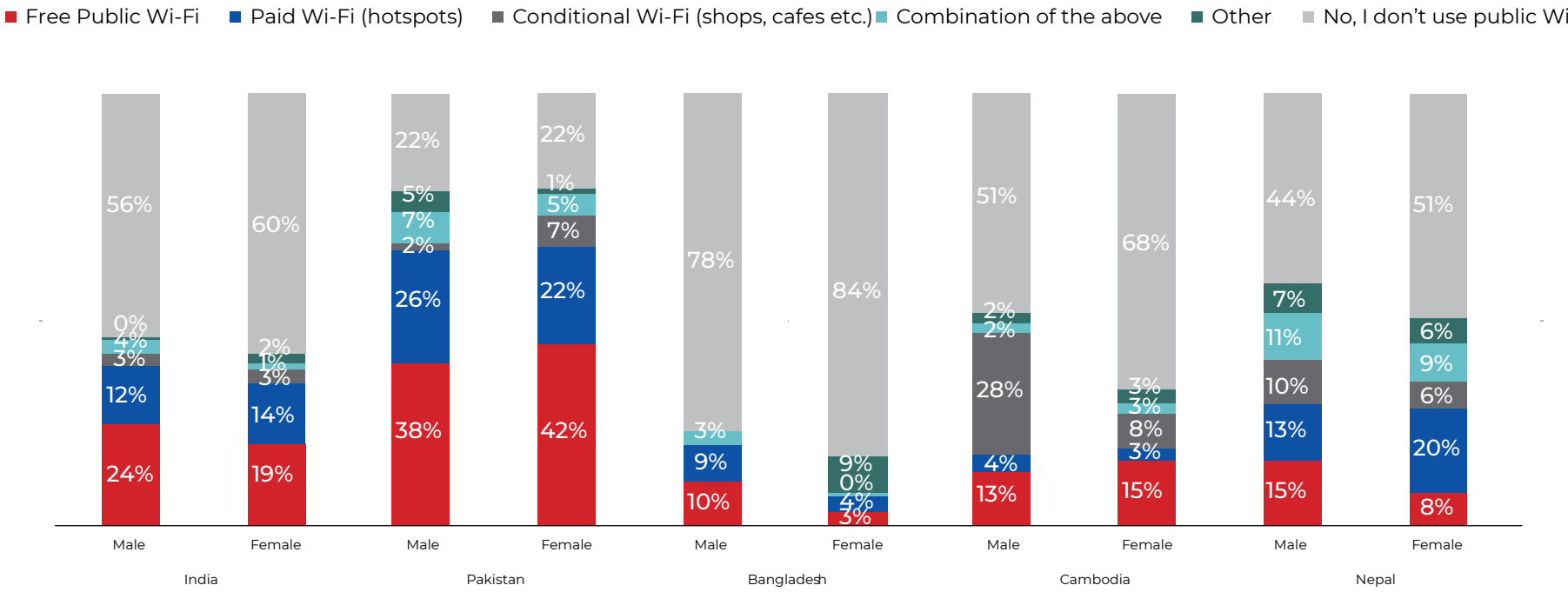


Q: Do you access the Internet through public Wi-Fi through the following means?

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

public wi-fi

Figure 38: Public Wi-Fi use (% of Internet users aged 15-65)

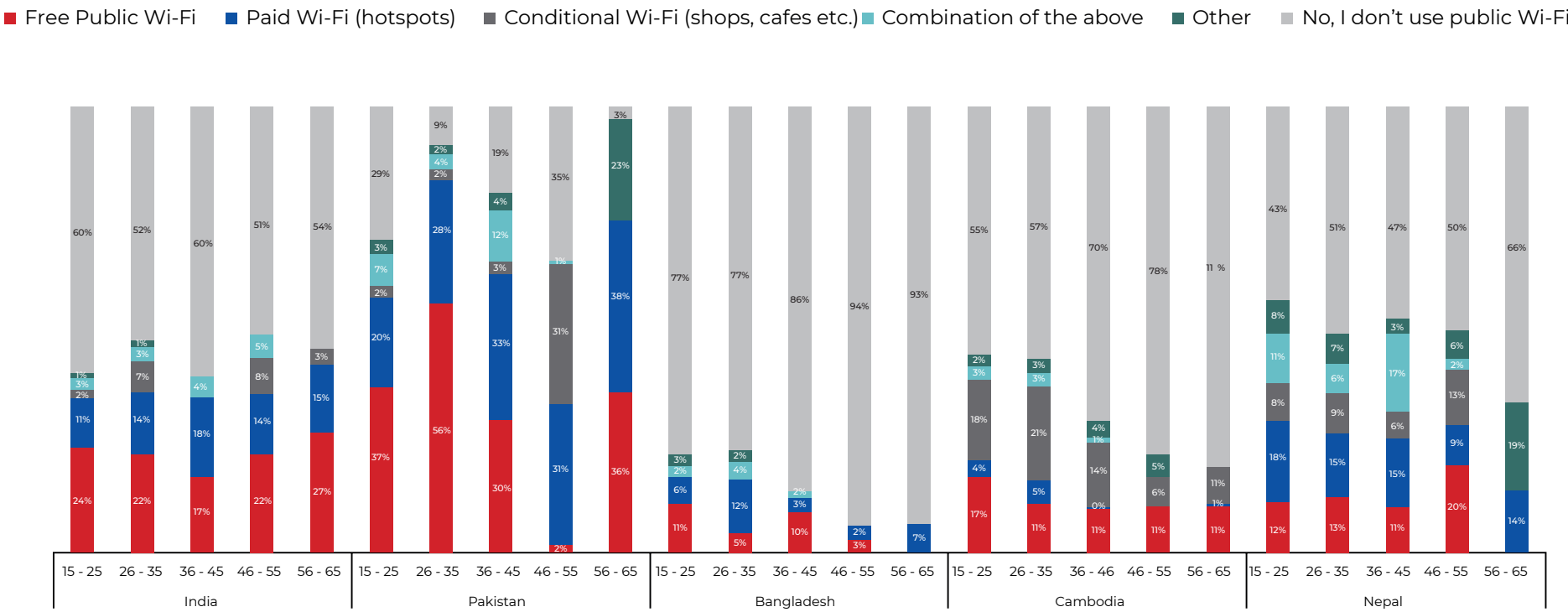


Q: Do you access the Internet through public Wi-Fi through the following means?

Base	India		Pakistan		Bangladesh		Cambodia		Nepal	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Internet users	652	267	283	144	199	67*	365	439	384	308

*Low base for Bangladesh - women

Figure 39: Public Wi-Fi use (% of Internet users aged 15-65)



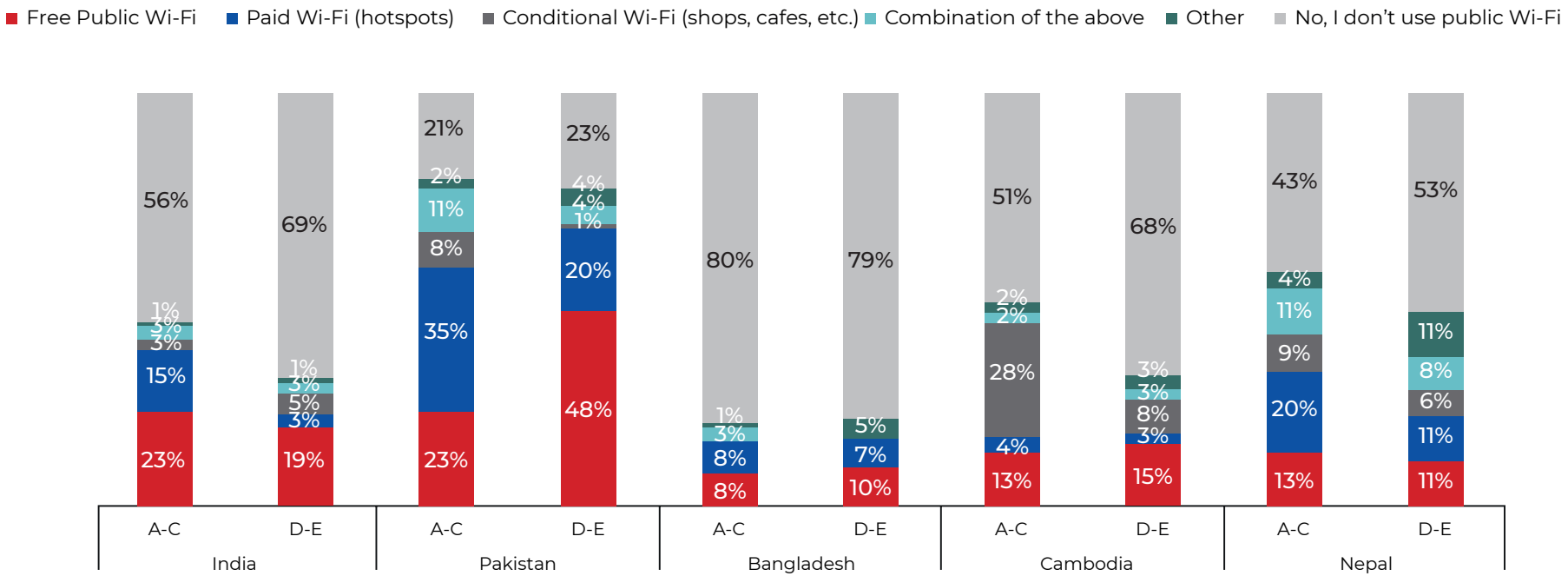
Q: Do you access the Internet through public Wi-Fi through the following means?

	India					Pakistan					Bangladesh					Cambodia					Nepal				
Base	15 - 25	25 - 35	35 - 45	45 - 55	55 - 65	15 - 25	25 - 35	35 - 45	45 - 55	55 - 65	15 - 25	25 - 35	35 - 45	45 - 55	55 - 65	15 - 25	25 - 35	35 - 45	45 - 55	55 - 65	15 - 25	25 - 35	35 - 45	45 - 55	55 - 65
Internet users	441	261	135	60	22	191	116	74	28	18	111	84	51	14	6	309	283	127	54	31	276	264	116	30	6

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

public wi-fi

Figure 40: Public Wi-Fi use (% of Internet users aged 15-65) - by socioeconomic classification



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

	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
Internet Users	809	109	207	220	217	49	196	595	418	274

*Low base for Bangladesh – SEC D-E

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 41). 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 3.0) and Pakistani the third lowest (USD3.3).

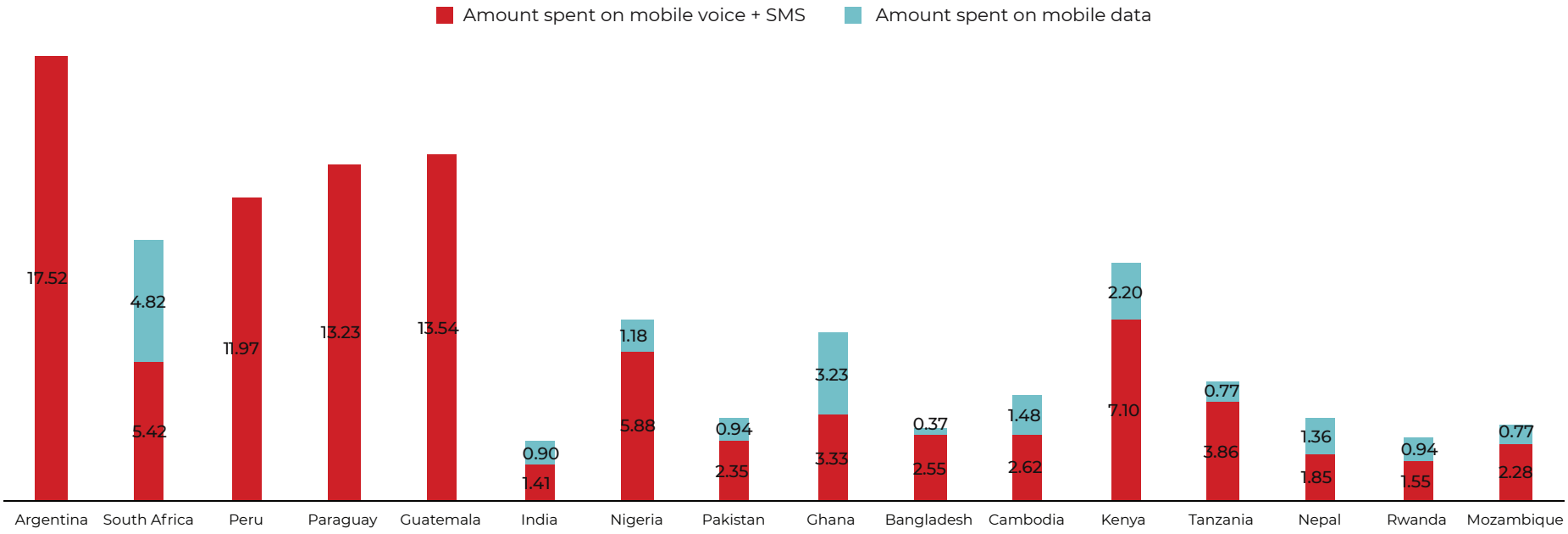
In the countries where disaggregated data are available (i.e.: voice + SMS versus data), it is clear that the larger portion of expenditure is still on voice + SMS rather than data.

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[7], 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.

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

Figure 41: Average amount spent by mobile phone owners last month on voice + SMS and on data (USD)



Q: In terms of mobile phone expenditure, could you tell me how much you spent last month for voice, SMS and data in total (airtime *and* subscription)?
Q: In terms of mobile phone expenditure, could you tell me how much you spent last month on data only (dedicated top-up or data bundles)? (=0 if does not use mobile phones)

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

*Disaggregated data (i.e.: voice + SMS vs. data only) not available for Argentina, Colombia, Peru, Paraguay and Guatemala. Total (composite average spend on voice + SMS + data) reported for these countries.

mobile phone expenditure

Table 10: Average amount spent by mobile phone owners last month on mobile services (USD)

		Argentina	South Africa		Peru	Paraguay	Guatemala	India		Nigeria		Pakistan		Ghana		Bangladesh		Cambodia		Kenya		Tanzania		Nepal		Rwanda		Mozambique	
		Voice + SMS + data	Voice + SMS + data	Data only	Voice + SMS + data	Voice + SMS + data	Voice + SMS + data	Voice + SMS + data	Data only	Voice + SMS + data	Data only	Voice + SMS + data	Data only	Voice + SMS + data	Data only	Voice + SMS + data	Data only	Voice + SMS + data	Data only	Voice + SMS + data	Data only	Voice + SMS + data	Data only	Voice + SMS + data	Data only	Voice + SMS + data	Data only	Voice + SMS + data	Data only
Urban-Rural	Urban	17.4	12.6	6.1	12.9	15.3	13.7	3.1	1.3	7	1.5	2.1	0.6	7.6	4.3	3.6	0.5	4.9	2.1	12.6	5.1	5.9	1.4	4.9	2.7	4.2	2.6	4.3	1.5
	Rural	23.3	5.5	2.2	8.7	9.3	13.4	1.8	0.6	7.2	0.8	4	1.1	4.9	1.4	2.7	0.3	3.8	1.2	8	1	3.7	0.3	4	2.3	1.8	0.3	2	0.2
Gender	Male	19.2	12.3	6	14.8	15.5	16.5	2.7	1	8	1.7	3.3	1.1	6.2	2.1	3.4	0.5	4.3	1.7	11.2	2.4	5.3	0.8	5	2.6	2.9	1.3	3.4	0.7
	Female	15.9	8.6	3.9	10.3	12	10.9	1.7	0.7	5.9	0.6	3.2	0.7	7	4.4	2.1	0.2	4	1.3	7.6	2	3.9	0.7	4.2	2.6	1.9	0.5	2.7	0.8
Income	Above-average income earners	22.2	23.7	12.1	17.4	17.5	18.6	3.3	1.4	11.7	1.9	6	1.8	15.3	11.7	3.7	0.4	5.2	2	20.9	6.1	7	1.5	6.8	3.6	5.1	3.2	4.9	1.2
	Below-average income earners	14.9	5.7	2.2	8.3	10	9.2	1.3	0.4	4	0.7	1.5	0.3	4.8	1.5	2	0.2	3.4	1.2	6.1	1.1	2.9	0.2	4.4	2.5	1.7	0.2	1.2	0.3
	Zero-income earners	11.4	3.3	1.8	8.3	10.6	11	1.8	0.8							2.1	0.4	3.1	0			0.5	0	4.2	2.3	1.2	0.1	1.1	0.5
Age	15-25	15	6.5	3.3	10.9	14.5	13.1	2.6	1.2	4.3	1	4.5	1.5	4.4	5	2.9	0.5	4	2.2	7.4	2.6	4.4	1	4.7	2.4	2	1.7	2.5	0.8
	25-35	17.6	9.6	4.9	13	15.2	15.6	2.4	0.9	8	1.7	3.6	1.1	6.9	2.3	3.1	0.4	4.7	2	8.1	1.9	5.1	1.2	5.1	2.7	2.5	1	3.4	0.7
	35-45	21.4	15.7	8.1	12.3	13.3	14	2	0.7	9	1	2.4	0.3	8.5	3.2	3	0.3	4.7	1	11.1	2.4	3.8	0.4	4.1	2.5	3.5	1	3	0.6
	45-55	17.1	12.7	5.5	12.1	11	12.1	2.5	0.8	9.1	1	1.8	0.4	6.3	1.6	2.8	0.2	3.8	0.7	10.1	2	4.7	0.3	4.2	3.6	1.9	0.2	3.2	0.5
	55-65	17.8	9	2.7	11.5	10.9	12.4	1.8	0.4	7.4	0.6	2.1	0.6	9.7	1.4	2.5	0.1	3	0.4	16.4	1.8	5.4	0.3	4.3	3.1	1.7	0.1	4.8	3
Handset type	Basic phone	11.3	4.5	0.5	6.5	7.5	8.4	1.7	0.4	4.8	0.6	3.1	0.7	5.7	1.1	2.4	0	3.4	0.1	7.2	0.1	3.9	0.1	3	3	1.9	0.2	2.1	0.2
	Feature phone	14	6.7	2.7	9.6	13.3	14	1.7	0.4	8.1	0.8	3.5	1.1	5.6	1.8	2.4	0.1	3.6	0.3	8.1	1	3.1	0	5.3	4.2	1.9	0.3	4.6	1.7
	Smartphone	18.9	14.1	7.7	14.6	15.9	16.2	3.8	2.2	8.1	2.7	3.6	1.4	8.2	7	4.7	1.3	4.9	2.9	14.2	7	7.6	3.1	5.7	2.5	8.2	7.8	6.7	2.8

Q: In terms of mobile phone expenditure, could you tell me how much you spent last month for voice, SMS and data in total (airtime *and* subscription)?
Q: In terms of mobile phone expenditure, could you tell me how much you spent last month on data only (dedicated top-up or data bundles e.g.) (=0 if does not use mobile phones)

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

online harassment

61

Online Harassment

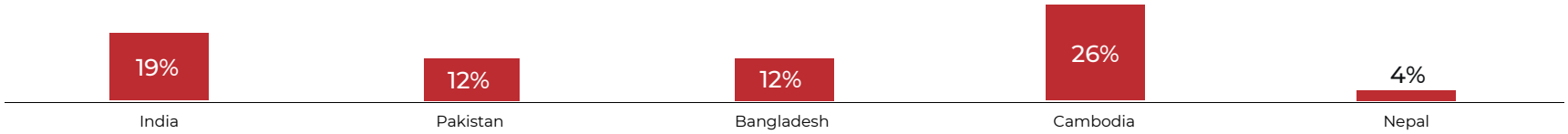
Of Internet users aged 15-65, over a quarter in Cambodia, 19% in India, 12% in Pakistan and Bangladesh and 4% in Nepal indicated that they had experienced online harassment (Figure 42). In India and Bangladesh, experiences with online harassment were higher among rural Internet users, while in Cambodia, urban Internet users faced higher levels of harassment (Figure 43). Pakistan and Nepal did not show a significant rural-urban gap.

The gender disaggregation of the data showed that, except for Cambodia, more men reported having experienced online harassment than women. 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 (Figure 44).

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 45; bases for the other three Asian countries become too low to analyze harassment from here on). Across 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 46).

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 47). 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 48). However, 28% of Indian respondents who experienced online harassment said the incident/s reduced their use of the particular website.

Figure 42: Experienced online harassment before (% of Internet users aged 15-65)

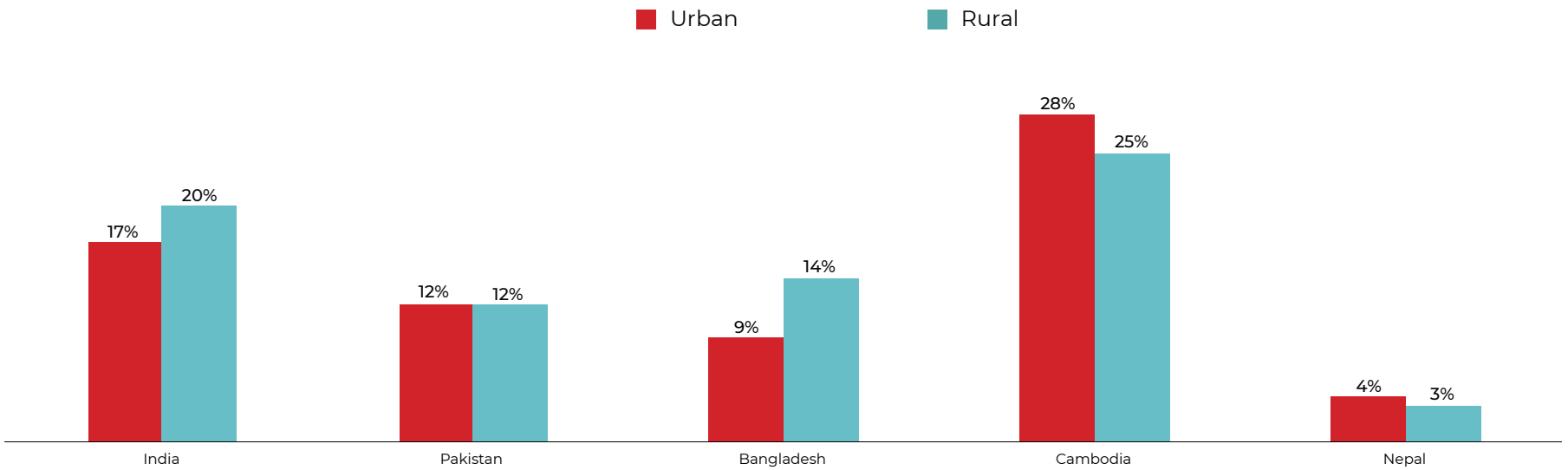


Q1: Being called offensive names
Q2: Being purposefully embarrassed or criticized in another way (besides being called offensive names)
Q3: Being physically threatened
Q4: Being sexually harassed
Q5: Being approached repeatedly by unwanted contacts (cyber-stalked)

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

online harassment

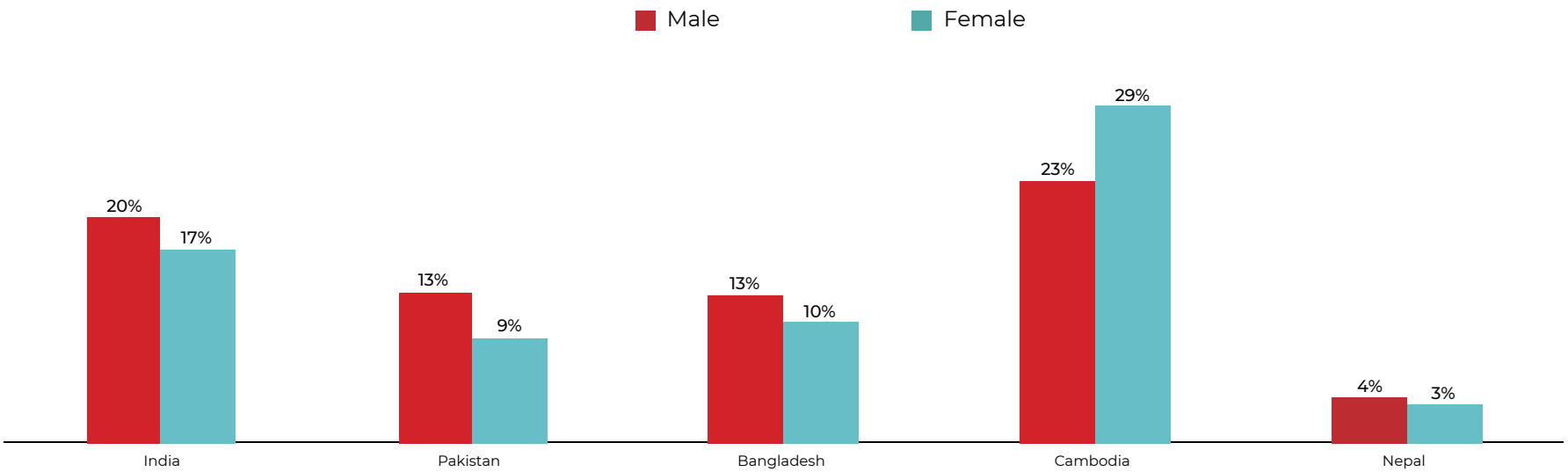
Figure 43: Experienced online harassment before (% of Internet users aged 15-65)



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)

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

Figure 44: Experienced online harassment before (% of Internet users aged 15-65)



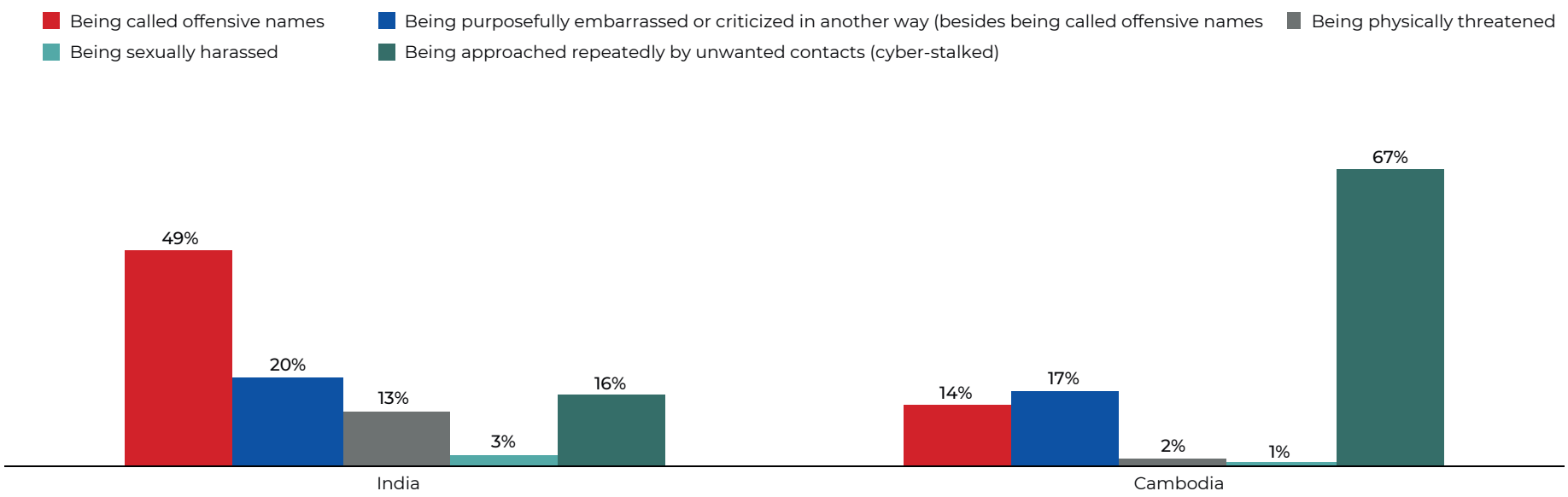
Q1: Being called offensive names
Q2: Being purposefully embarrassed or criticized in another way (besides being called offensive names)
Q3: Being physically threatened
Q4: Being sexually harassed
Q5: Being approached repeatedly by unwanted contacts (cyber-stalked)

Base	India		Pakistan		Bangladesh		Cambodia		Nepal	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Internet users	652	267	283	144	199	67*	365	439	384	308

*Low base for Bangladesh - women

online harassment

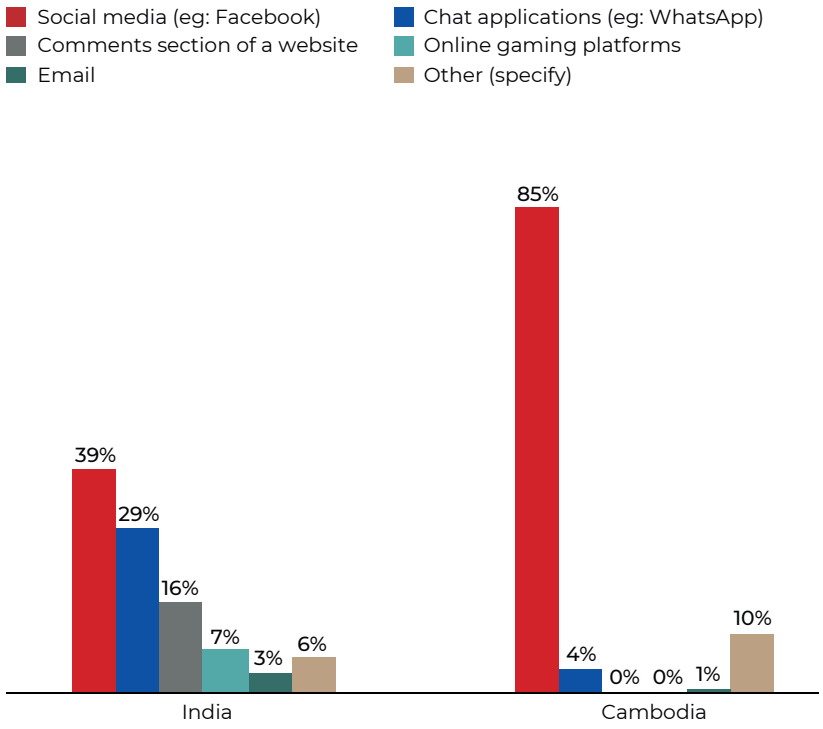
Figure 45: Form of harassment experienced (% of Internet users who have experienced online harassment)



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

Base	India	Cambodia
Respondents who faced online harassment	178	197

Figure 46: Platform on which harassment was experienced (% of Internet users who have experienced online harassment)

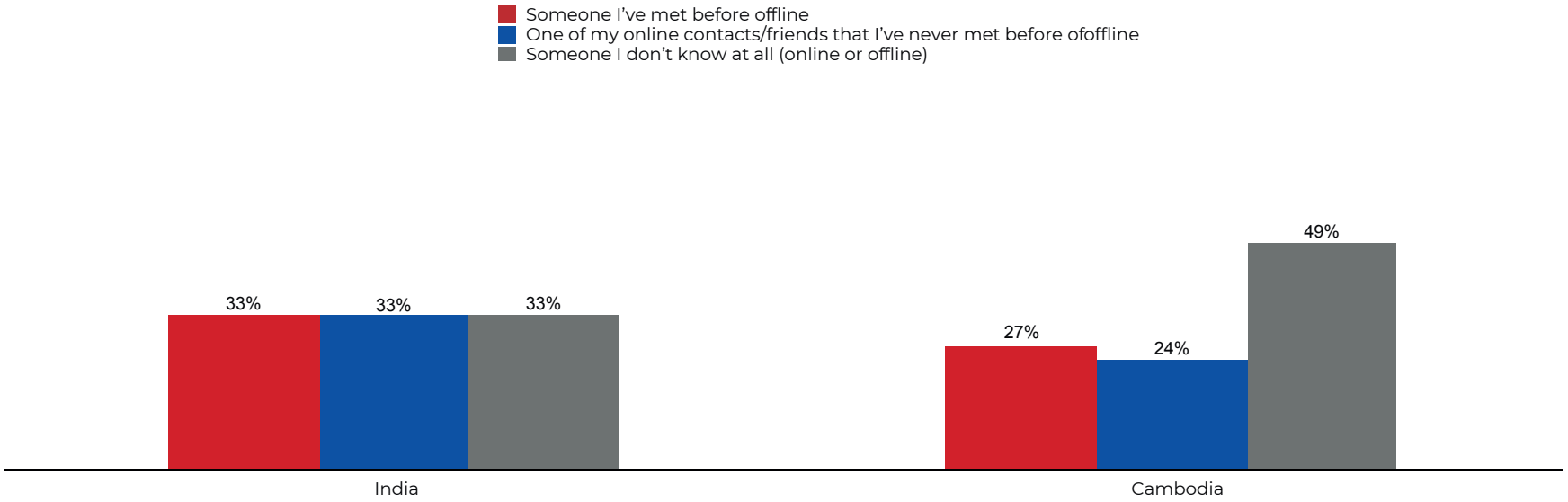


Q: On which type of platform did you experience this harassment?

Base	India	Cambodia
Respondents who faced online harassment	178	197

online harassment

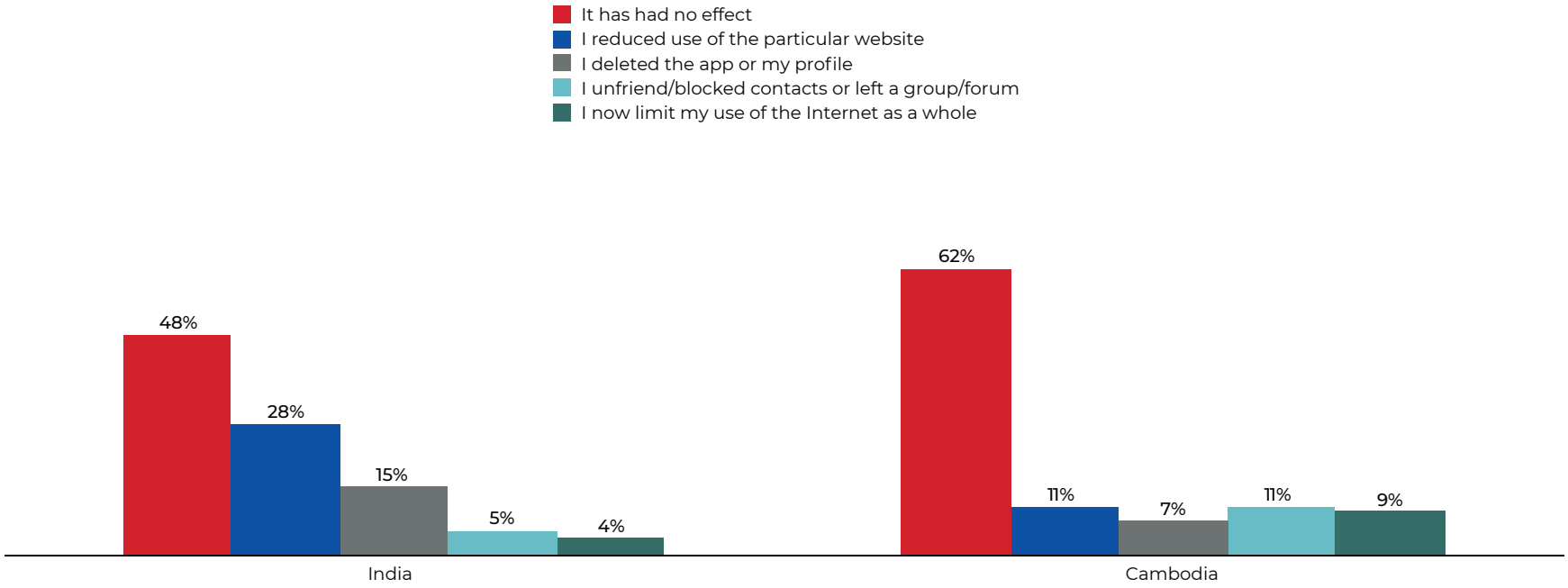
Figure 47: Source of harassment (% of Internet users who have experienced online harassment)



Q:Who was the source of this harassment?

Base	India	Cambodia
Respondents who faced online harassment	178	197

Figure 48: Effect of harassment on Internet use (% of Internet users who have experienced online harassment)



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

Base	India	Cambodia
Respondents who faced online harassment	178	197

e-commerce

71

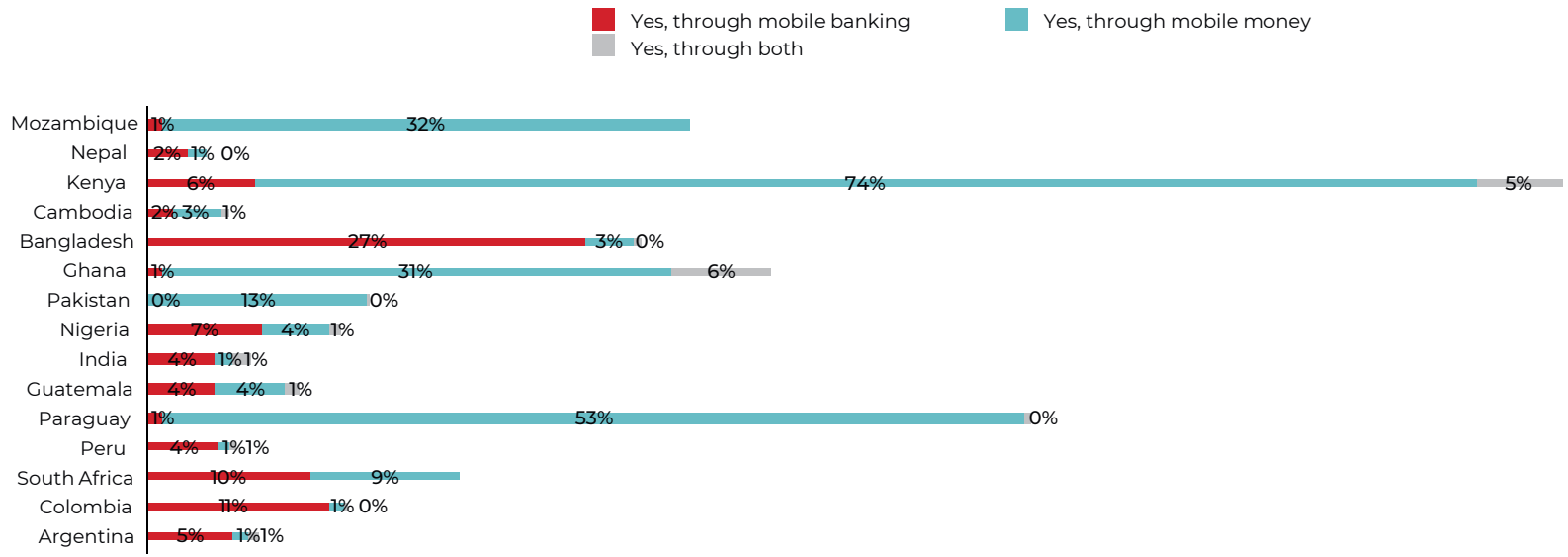
e-commerce

mobile money

On a percentage basis, the use of mobile money by mobile phone owners is very low. For example, of mobile phone owners in India, only 4% use mobile banking, 1% use mobile money and a further 1% use both (Figure 49). Despite large numbers of registered users reported in the media on major payment platforms, the country performs poorly in this respect, especially when compared to some of the other countries surveyed.

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. However, it is more likely that there is a measurement error, possibly due to the way the question was asked; when mobile phone owners were asked if they used any payment gateway apps, 15% which would equate to approximately 9% of the 15-65 population – said yes (Table 7).

Figure 49: 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	Guatemala	India	Nigeria	Pakistan	Ghana	Bangladesh	Cambodia	Kenya	Nepal	Mozambique
Mobile phone owners	1,116	1,297	1,398	1,234	1,209	1,214	3,252	1,123	1,208	901	1,531	1,526	1,054	1478	632

platforms*

using platforms for buying goods and services

Internet users were asked if they were aware of Internet websites or mobile apps to buy and sell goods or services that they need. 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 Indian Internet users had the highest levels of awareness among respondents from the Asian countries, with Cambodian respondents coming in second (Figure 50). In the former, awareness was high, particularly 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 India's Internet users were aware of these. When it came to actual use (Figure 51) as well, India had the highest number of users (out of those aware of the platforms) in Asia, mostly with respect to the same three types of platforms noted earlier (goods/products, transport services, tickets and appointments).

In Cambodia, awareness of hired help platforms particularly stood out, as well as platforms for buying/selling goods/products. One third of Internet users had heard of micro work/online freelancing platforms. As Figure 51 shows, awareness had barely translated into use for buying, with a mere 9% of those aware of hiring platforms actually using them to hire help.

In Pakistan, awareness of transport/taxi platforms was relatively high, but use for hiring transport services was very low.

Awareness in Bangladesh and Nepal was not particularly high, and usage (when looking at overall numbers) was negligible.

Convenience was a key driver of platform use for buying via platforms in India and Cambodia, while better pricing was a major driver in Pakistan, and to a lesser extent in India also (Figure 52).

Of Cambodian and Indian respondents who used platforms to buy goods / services in the three months leading to the survey, most had made less than five transactions: heavy use was not widespread (Figure 53).

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, 16% in India and 1% in Pakistan) completed the full transaction (search, order, payment and delivery) through the platform (Figure 54). 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.

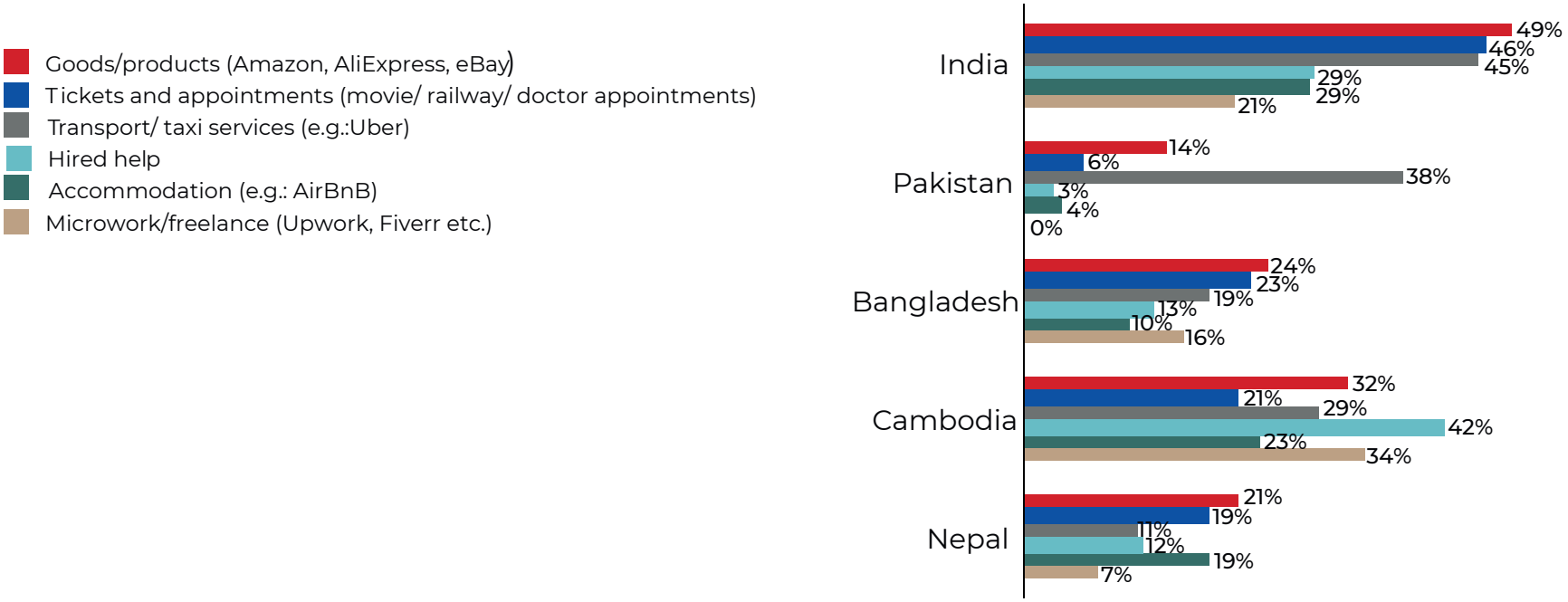
*Due to low bases (i.e.: low numbers of people who are aware of platforms as well as low numbers of those that use them), only where the base of users in a particular country is sufficient for meaningful analysis is the data presented.

ecommerce

Payments were most often done through debit cards (India and Pakistan) and cash-on-delivery (Cambodia, India, Pakistan) among others, with some in India and Pakistan stating they used mobile and/or Internet banking (Figure 55).

Skills were a barrier to greater uptake. In Pakistan, Bangladesh and India, large proportions (87%, 59% and 49% respectively) of those who are aware of these platforms stated that they did not know how to use them. In Nepal, the biggest barrier was relevance (69%) (Figure 56).

Figure 50: Awareness of platforms* for buying/selling (% of Internet users aged 15-65)

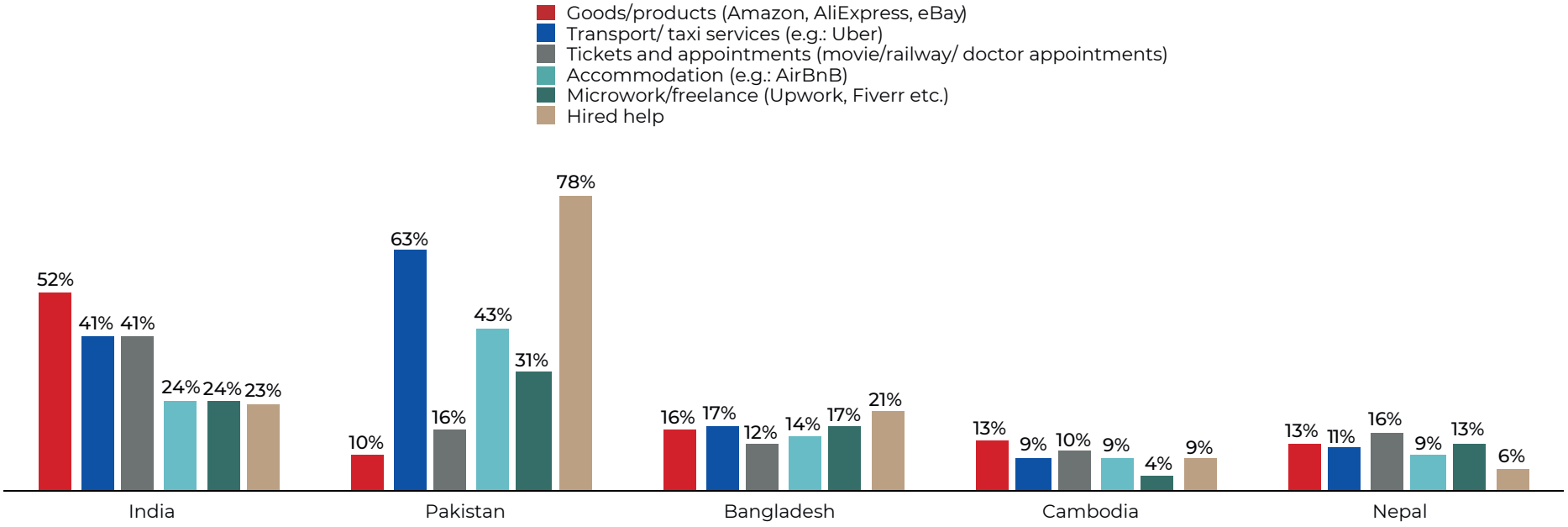


Q: Have you heard of these opportunities to buy/sell goods or services over the Internet or apps as just defined?

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

*"platforms" = via Internet or apps"

Figure 51: Use of platforms for buying (% of Internet users aged 15-65 that are aware of platforms)



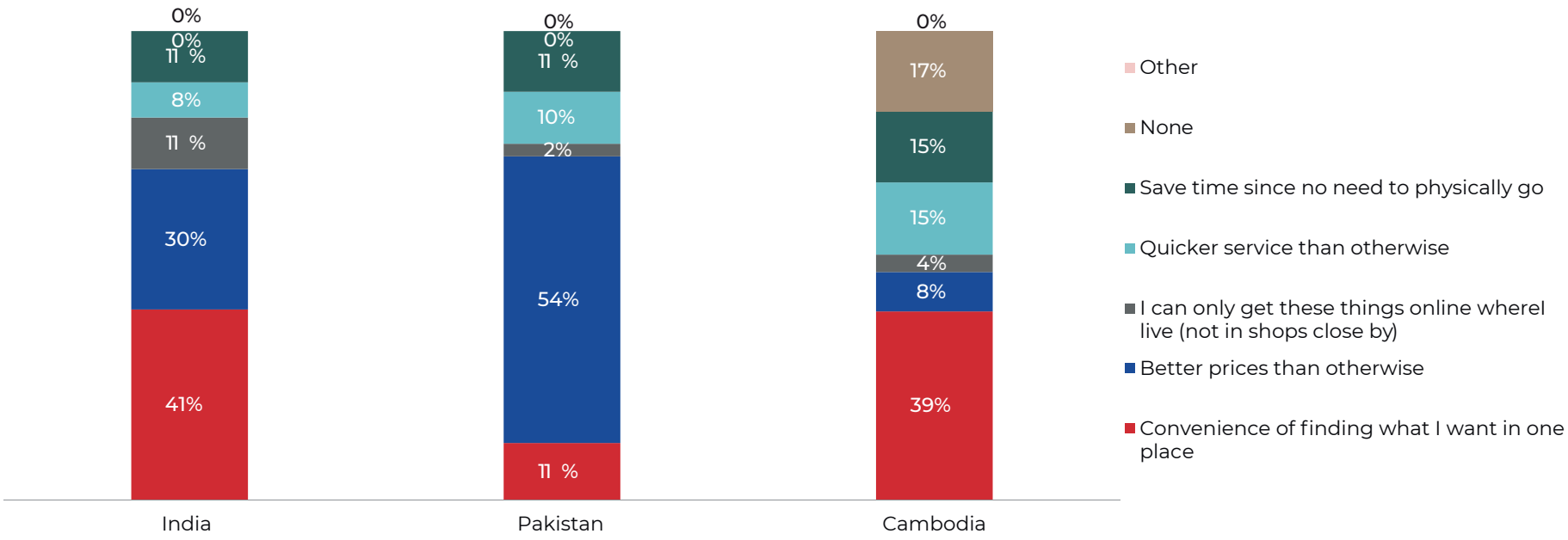
Q: Have you ever bought any of the following goods or services through the Internet or apps?

Base: Internet users who are aware of the Platforms	India	Pakistan	Bangladesh	Cambodia	Nepal
Goods/products (Amazon, AliExpress, eBay)	430	56	70	276	152
Transport/ taxi services (e.g.:Uber)	396	146	59	259	81
Tickets and appointments (movie/railway/doctor appointments)	409	20	70	185	135
Accommodation (e.g.:AirBnB)	265	16	32	209	136
Microwork/freelance (Upwork, Fiverr etc.)	202	7	43	288	54
Hired help	258	13	40	355	86

*Bases are low for Pakistan and Bangladesh

ecommerce

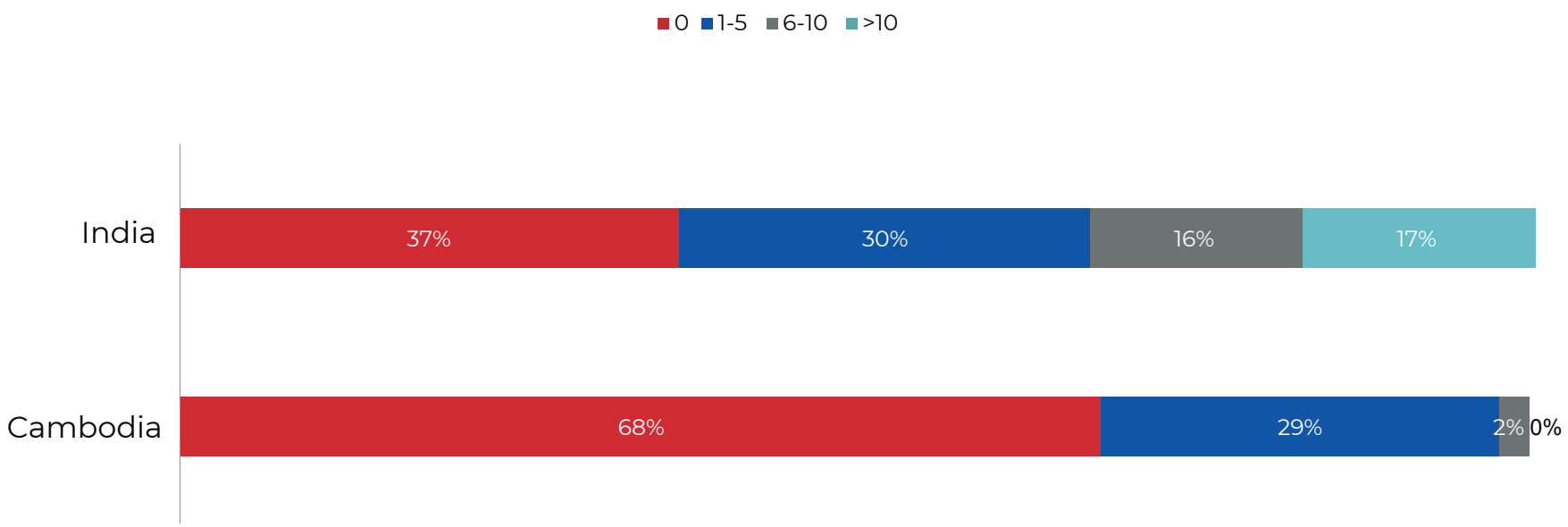
Figure 52: Reason for using platforms for buying (% of Internet users aged 15-65 that make purchases/hires via platforms)



Q: Why do you usually choose to use these kinds of websites/apps to search/buy goods and services?

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

Figure 53: Frequency of buying via platforms during last 3 months (% of Internet users aged 15-65 that made purchases/hires via platforms)



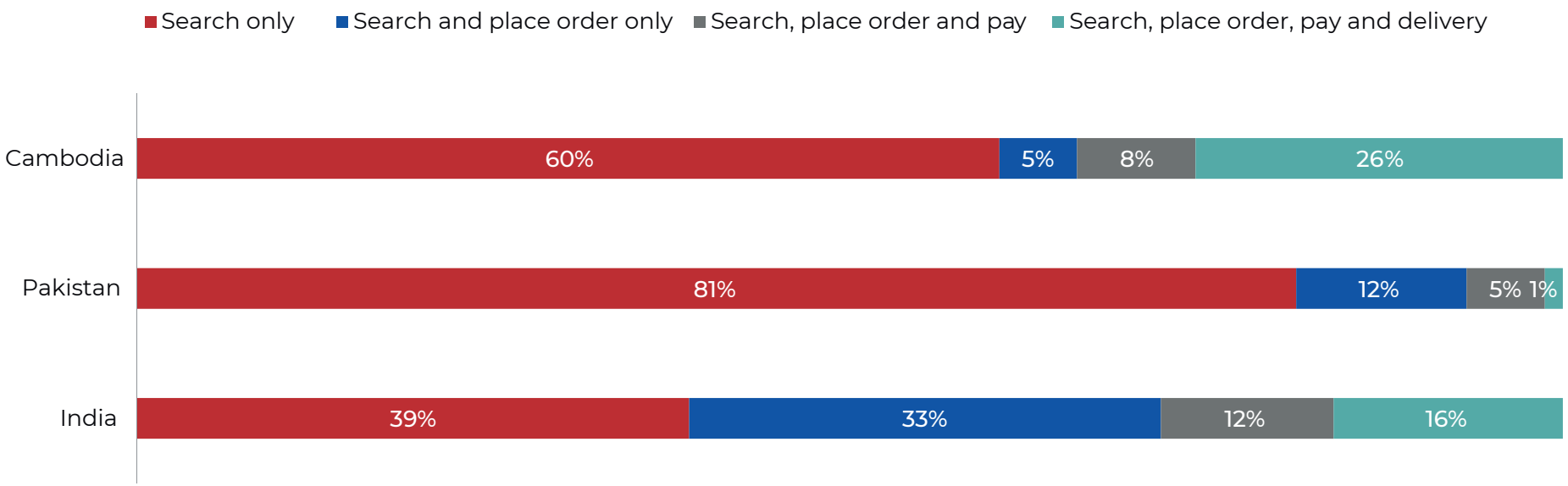
Q: Now, thinking about the last three months, please tell me how many times you have bought or hired a good or service using the Internet?

Base	India	Cambodia
Platform users who purchased through platforms	239	102

The question was administrated differently in Pakistan and is not comparable with the other three countries.
*Low base for Bangladesh

ecommerce

Figure 54: Transaction components completed via platforms: buying (% of Internet users aged 15-65 that made purchases/hires via platforms)



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

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

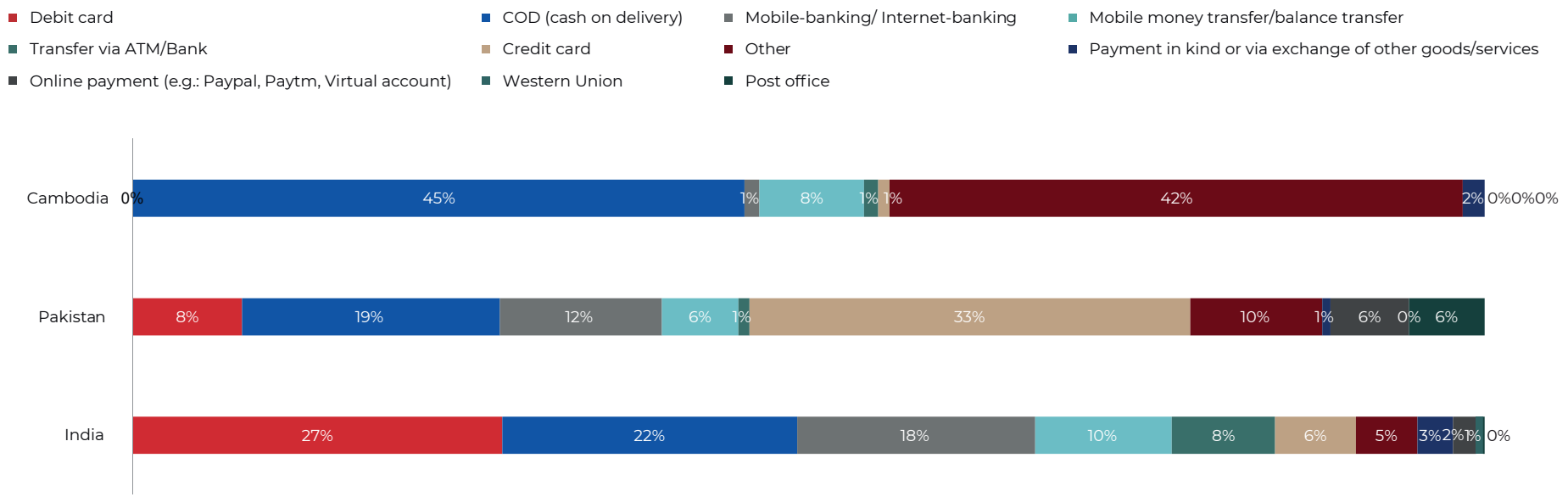
Table 11: Reasons why platform customers didn't place orders and make payments (i.e.: stop at search) via platforms (% of Internet users aged 15-65 that made purchases/hires via platforms)

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

Q: In your most frequent online purchase or hire, what are the reasons you usually don't place the order or do the payment through the Internet or mobile apps?

Base	India	Pakistan
Platform users didn't place or pay for the most recent purchase	175	110

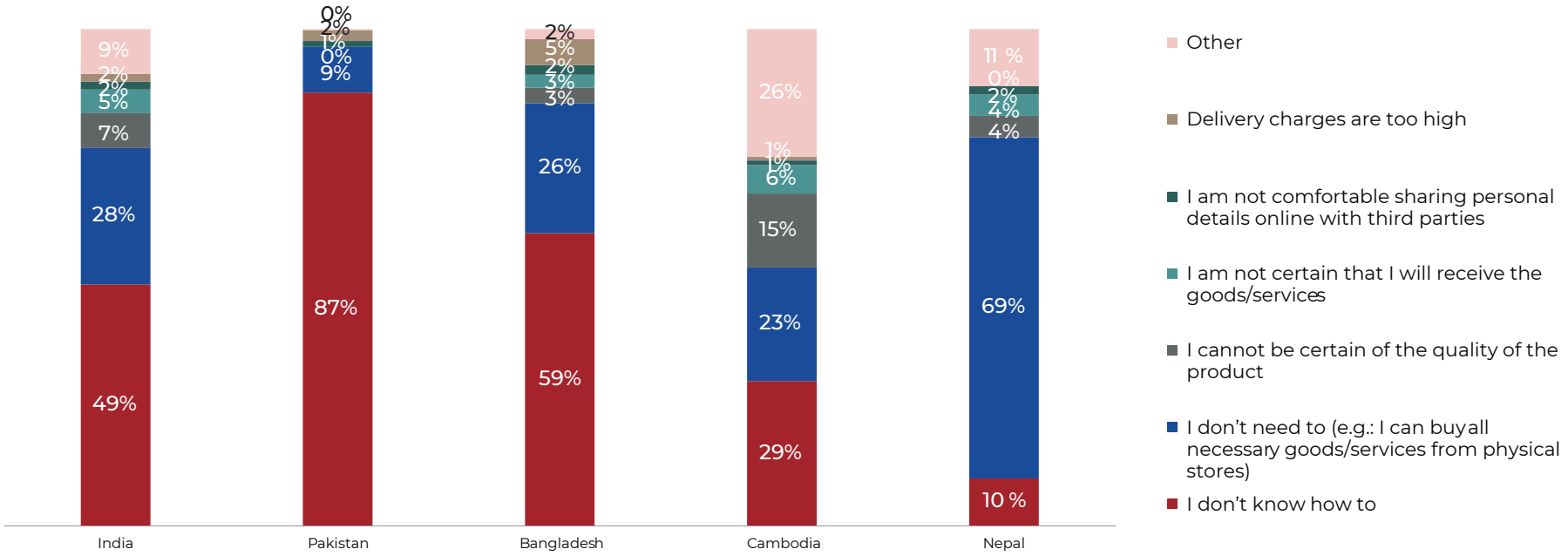
Figure 55: Usual method of paying (% of Internet users aged 15-65 that made purchases/hires via platforms)



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

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

Figure 56: Reason for not using platforms for buying (% of Internet users aged 15-65 who were aware of but didn't use platforms)



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

Base	India	Pakistan	Bangladesh	Cambodia	Nepal
Respondent who were aware of platforms but didn't using them	586	302	227	421	158

using platforms for selling goods and services

There was low use of platforms to sell products or services across all Asian countries surveyed (Figure 57)[8]. It is interesting to note the number of 15-65 Internet users that sell services on micro work / online freelancing platforms is negligible, even in India.

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.

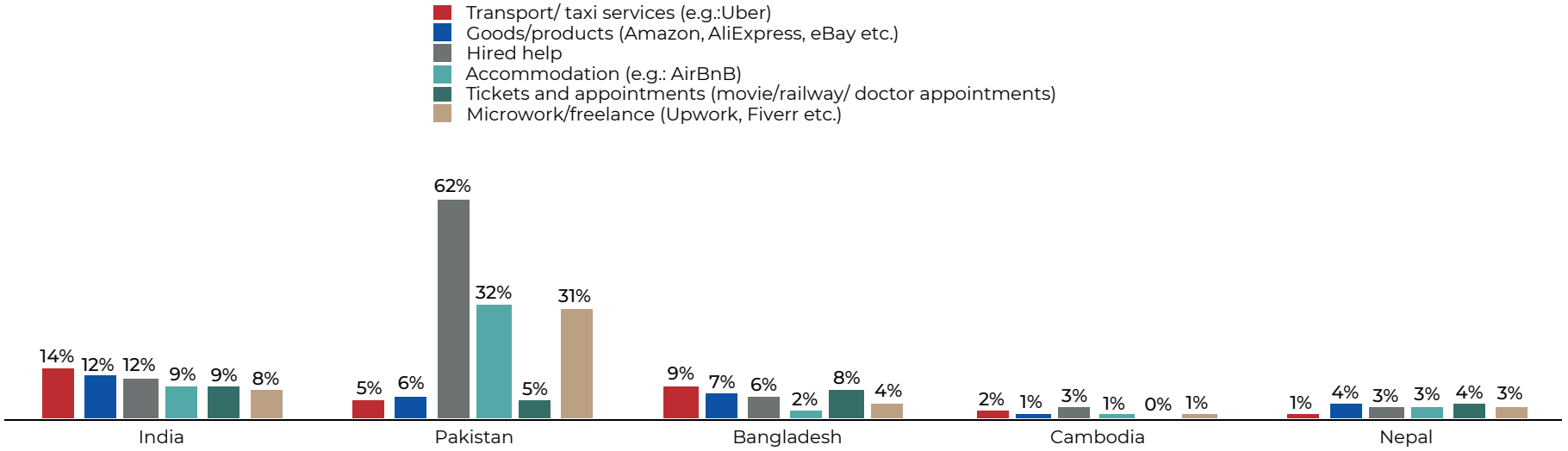
Better job rates/prices and getting access to a larger number of customers were the key drivers for use (Figure 58). Only 27% of sellers in India had sold more than five products or services over the last three months (Figure 59). Only 12% of those who used platforms to sell goods / services completed the full transaction (search, order, payment and delivery) within the platform – many only used the platform to search for and accept jobs (Figure 60). 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/services were also problems for some.

Most of those who used platforms for selling goods / 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 61).

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. The second most common reason was lack of knowledge (especially in Cambodia; Figure 62).

[8]Even though there is a peak in Pakistan for the hired help category, it indicates 62% of the 3% of 15-65 Internet users who are aware, therefore is not of much significance.

Figure 57: Use of platforms for selling (% of Internet users aged 15-65 that were aware of platforms)



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

Base : Internet users who are aware of Platforms	India	Pakistan	Bangladesh	Cambodia	Nepal
Transport/ taxi services (e.g.:Uber)	96	146	59	259	154
Goods/products (Amazon, AliExpress, eBay etc.)	30	56	70	276	159
Hired help	258	13	40	355	141
Accommodation (AirBnB)	265	16	32	209	88
Tickets and appointments (movie/railway/doctor appoinments)	410	20	70	185	139
Microwork/freelance (Upwork, Fiverr etc.)	202	7	43	288	55

Low base for Pakistan and Bangladesh

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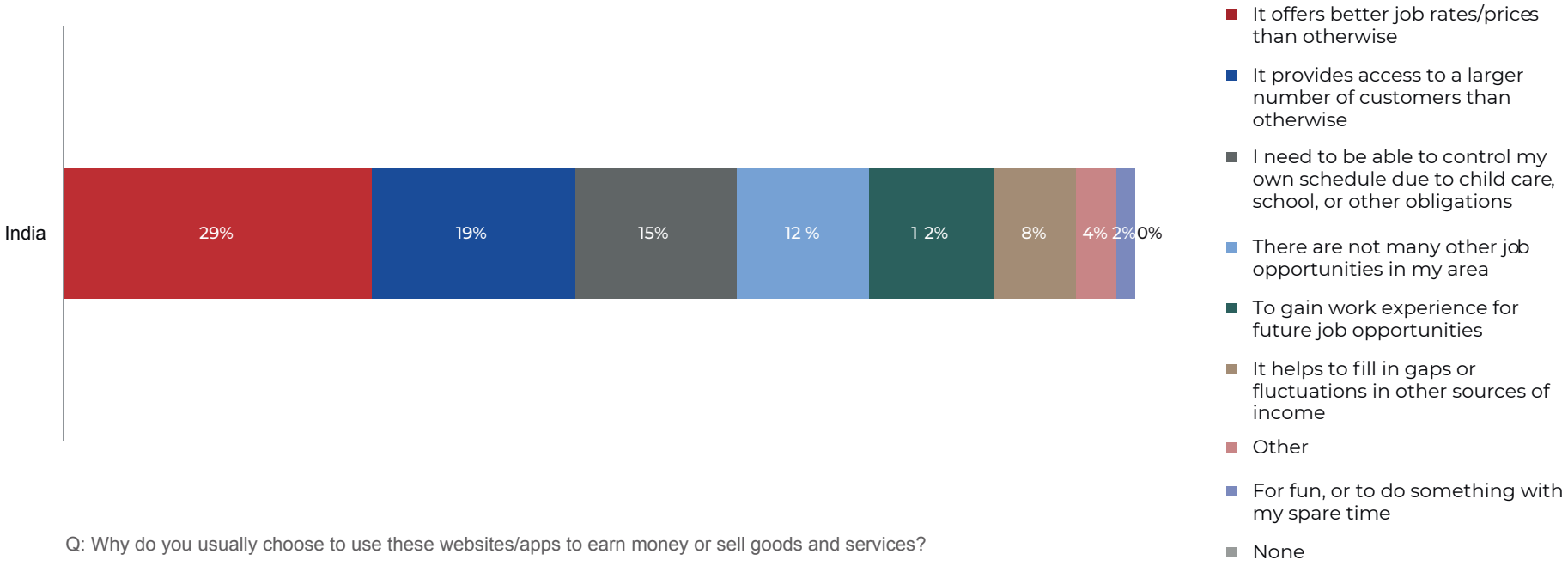
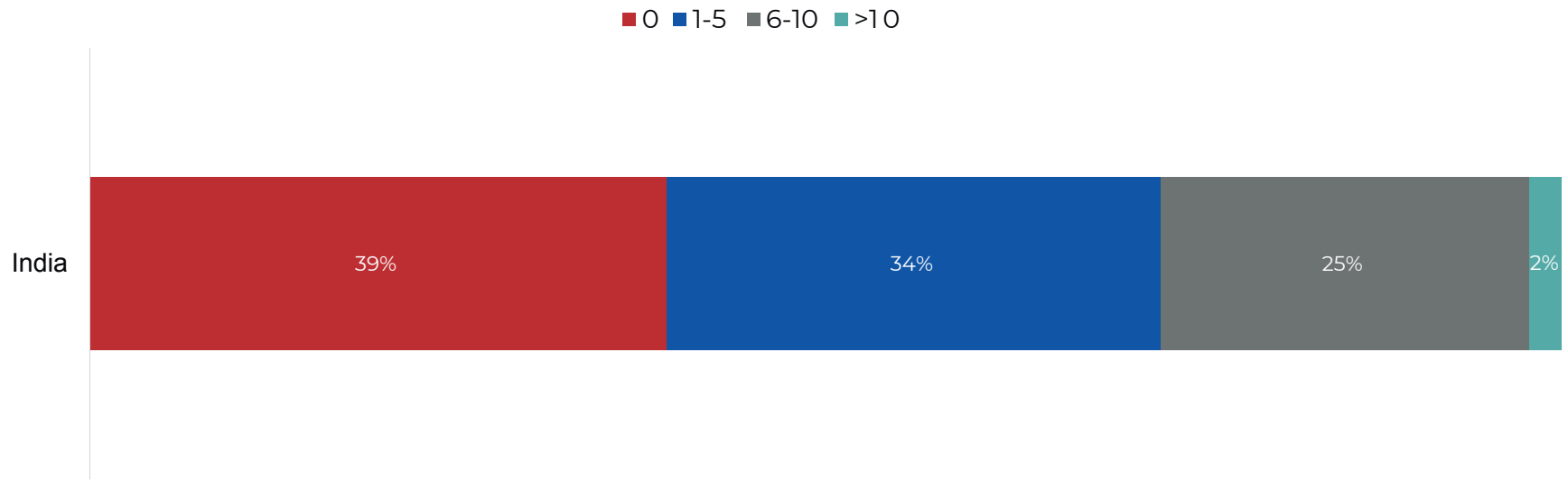
Figure 58: Reason for using platforms for selling (% of Internet users aged 15-65 that sold or took orders via platforms)



Q: Why do you usually choose to use these websites/apps to earn money or sell goods and services?

Base	India
Platform users who sell through platforms	106

Figure 59: Frequency of sales via platforms during last 3 months (% of Internet users aged 15-65 who sold or took orders via platforms)



Q: Now, thinking about the last three months, please tell me how many times you earned money by selling things or taking on jobs through the Internet.

Base	India
Platform users who sell through platforms	106

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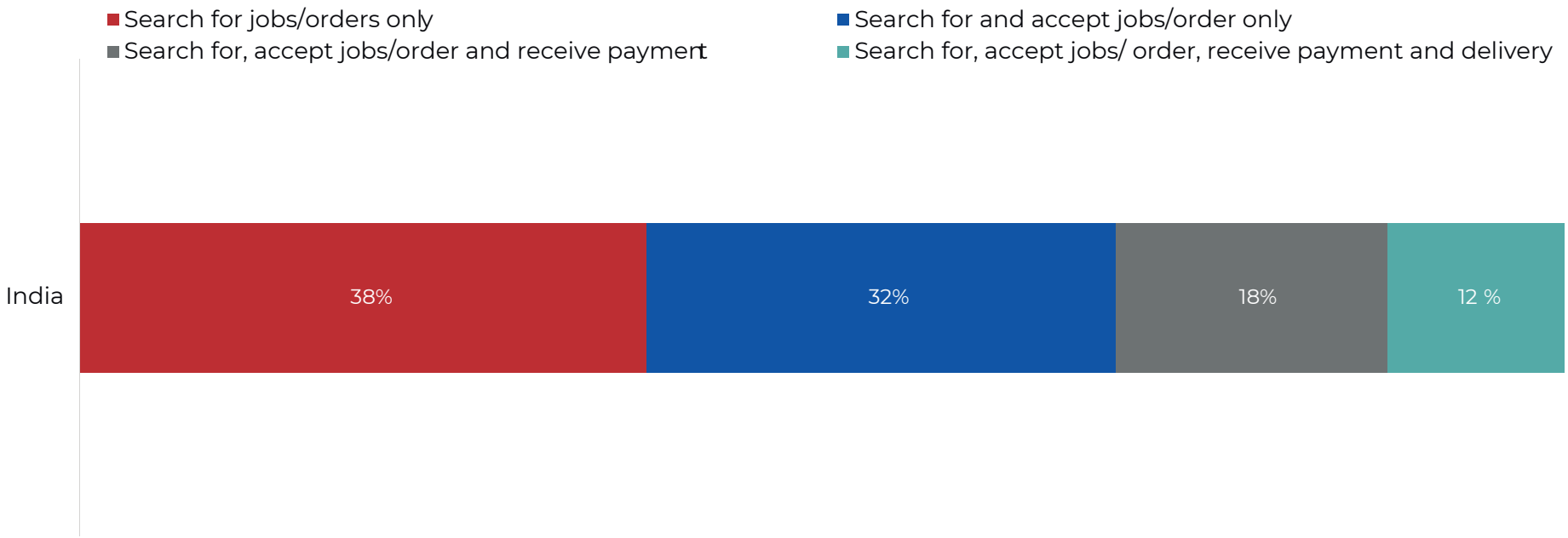
Figure 60: Transaction components completed via platforms: selling (% of Internet users aged 15-65 that sold/took orders via platforms)



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

Table 12: Reasons why platform customers didn't accept orders and payments (i.e.: stop at search) via platforms (% of Internet users aged 15-65 who sold/took via platforms)

Reason	India
I don't need to	50%
I don't know how to	42%
I am 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 am not comfortable sharing personal details online with third parties	11 %
I am not certain that I will receive payment from buyer	11 %
I have had a negative experience in the past	11 %
It takes too much time	9%
I have heard of people having negative experiences with these	4%
Service provider commission too high	2%
Other	0%

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

Base	India
Platform users didn't get paid via platform/Internet	101

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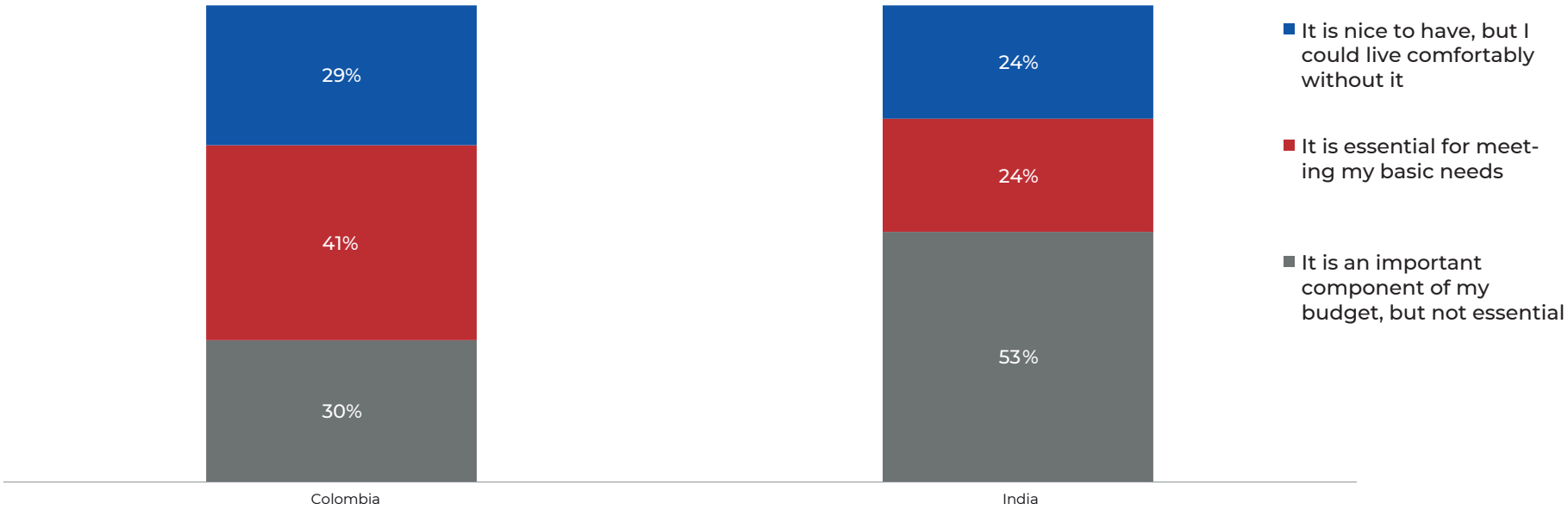
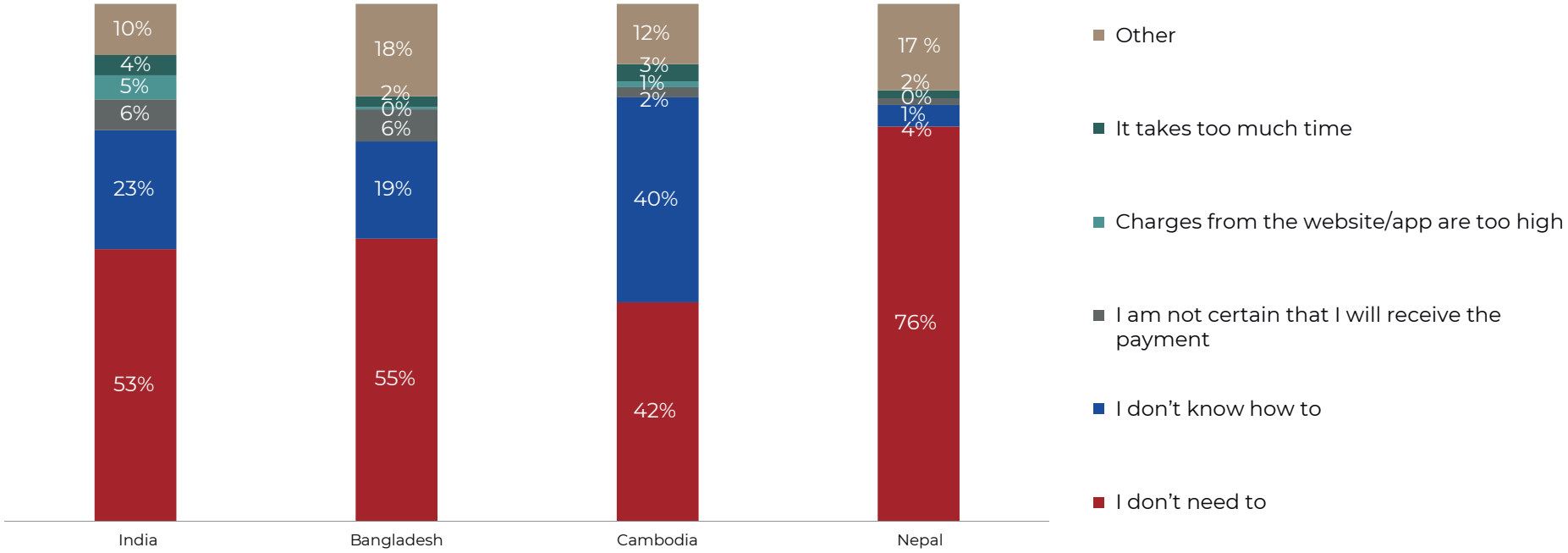
Figure 61: Importance of earnings from platforms (% of Internet users aged 15-65 that sold/took orders via platforms)



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

Base	Colombia	India
Platform users who sell through platforms	117	106

Figure 62: Reason for not using platforms for selling (% of Internet users aged 15-65 who were aware of but didn't use platforms)



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

Base	India	Bangladesh	Cambodia	Nepal
Platform users who didn't sell through platforms	356	80	506	157

*Pakistan data is not comparable with other three countries. Low bases for Bangladesh.

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