



# ICT access and use in Pakistan and the Global South

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5 November 2018  
Colombo, Sri Lanka



Who are we? A pro-poor, pro-market ICT policy and regulation think tank, active in the Asia-Pacific for 15 years



*“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”*

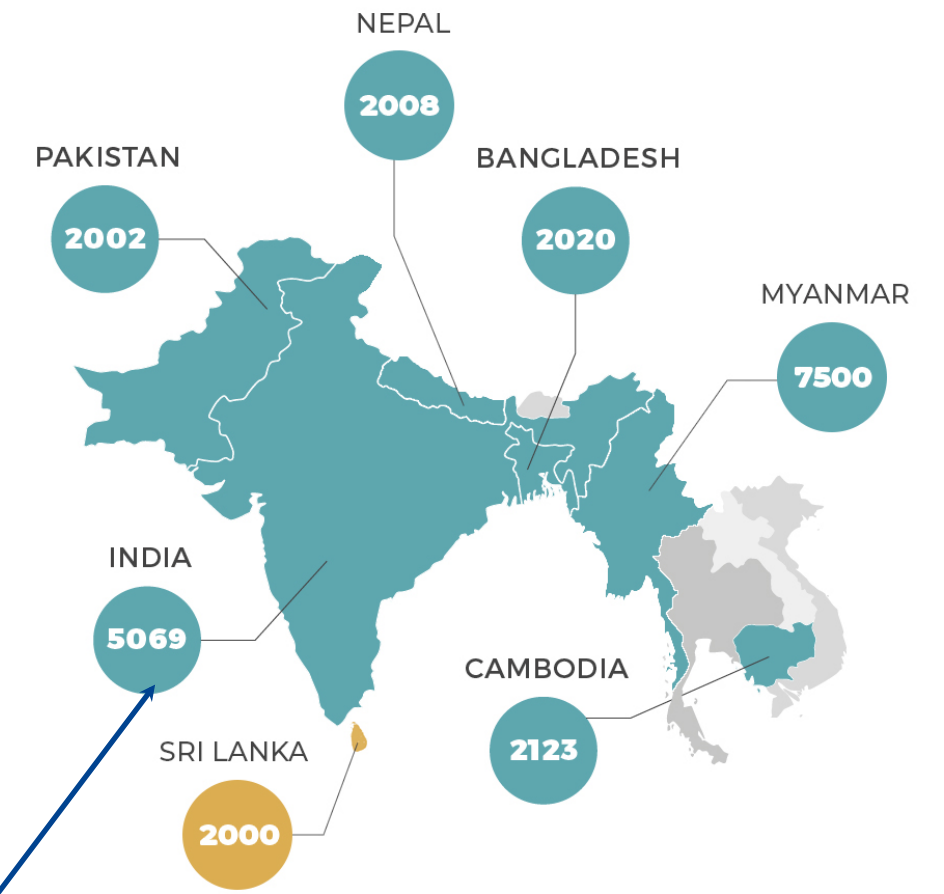
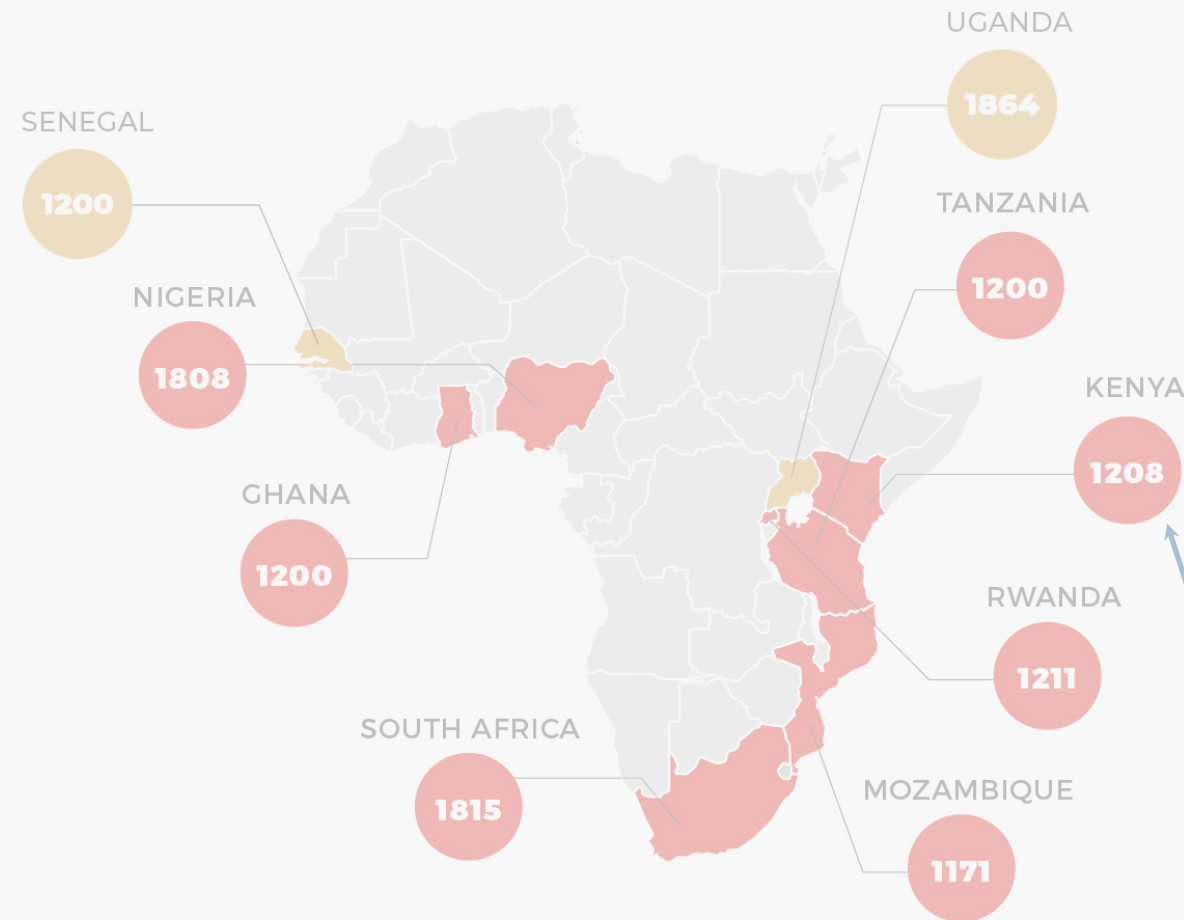
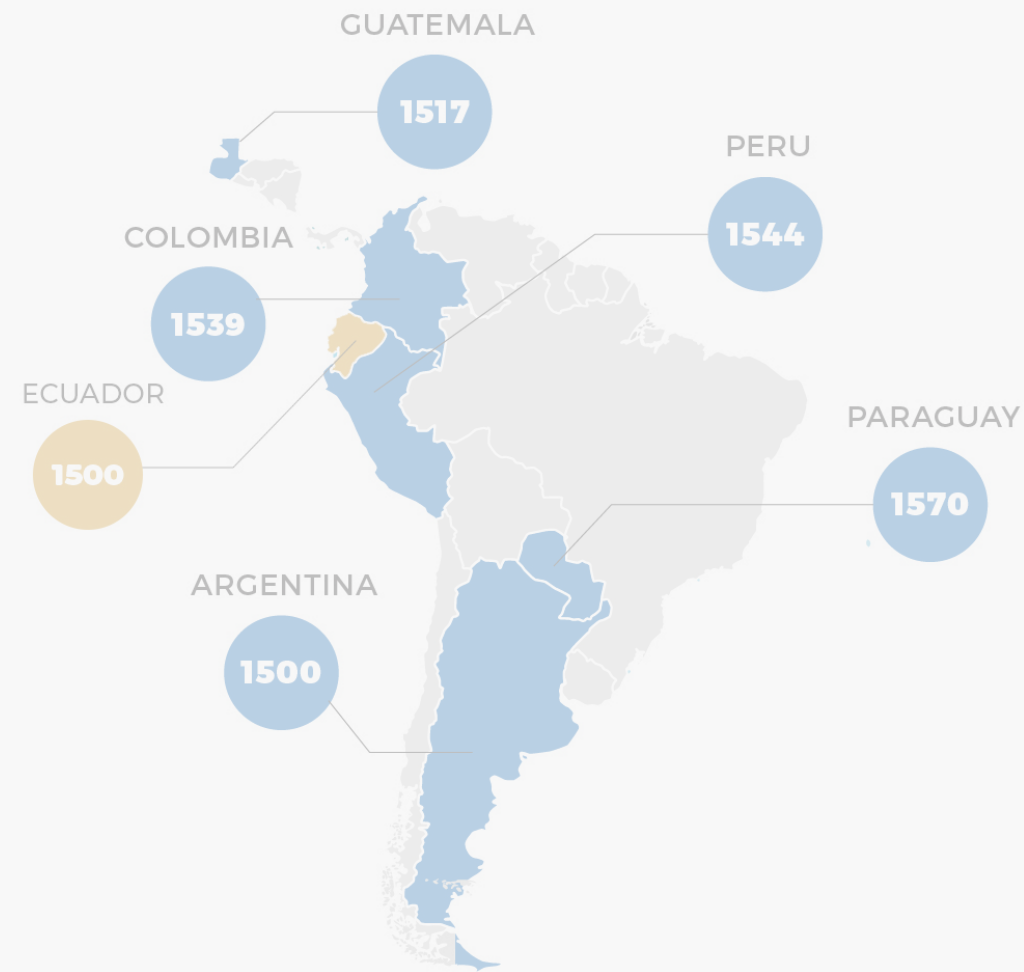
# We have been active in Pakistan since 2006

- Research
  - ICT sector and regulatory benchmarking (TRE, SPR)
  - Multiple rounds of user (demand side) research via surveys and qualitative methods
  - Broadband quality of service
  - Freedom of expression in the dissemination of mobile content
- Policy advocacy
  - Broadband pricing
  - Mobile number portability
  - Universal service
  - Broadband quality of service
  - VAS and telecom business models
- Capacity building
  - Training of PTA, and company staff at LIRNEasia training courses

- Nationally representative surveys of 15-65 population in 18 countries in Global South
  - Rigorous methodology
    - Random sampling at every stage of selection
    - Comparability across countries
    - Sample sizes, n=1,200-5,000
- Structured, closed-ended questionnaire administered face-to-face using mobile devices
- Funded by IDRC (Canada) and SIDA (Sweden)
  - Pakistan partners:
    - Pakistan Bureau of Statistics (sample frame)
    - The Dynamics Research (fieldwork)



To date 18 countries (covering >30% global population);  
38,005 face-to-face interviews; 22 countries by Dec 2018



Sample sizes

Notes: Pakistan excludes AJK, FATA, Gilgit-Baltistan (~2% of population)

Not shown in slides today:

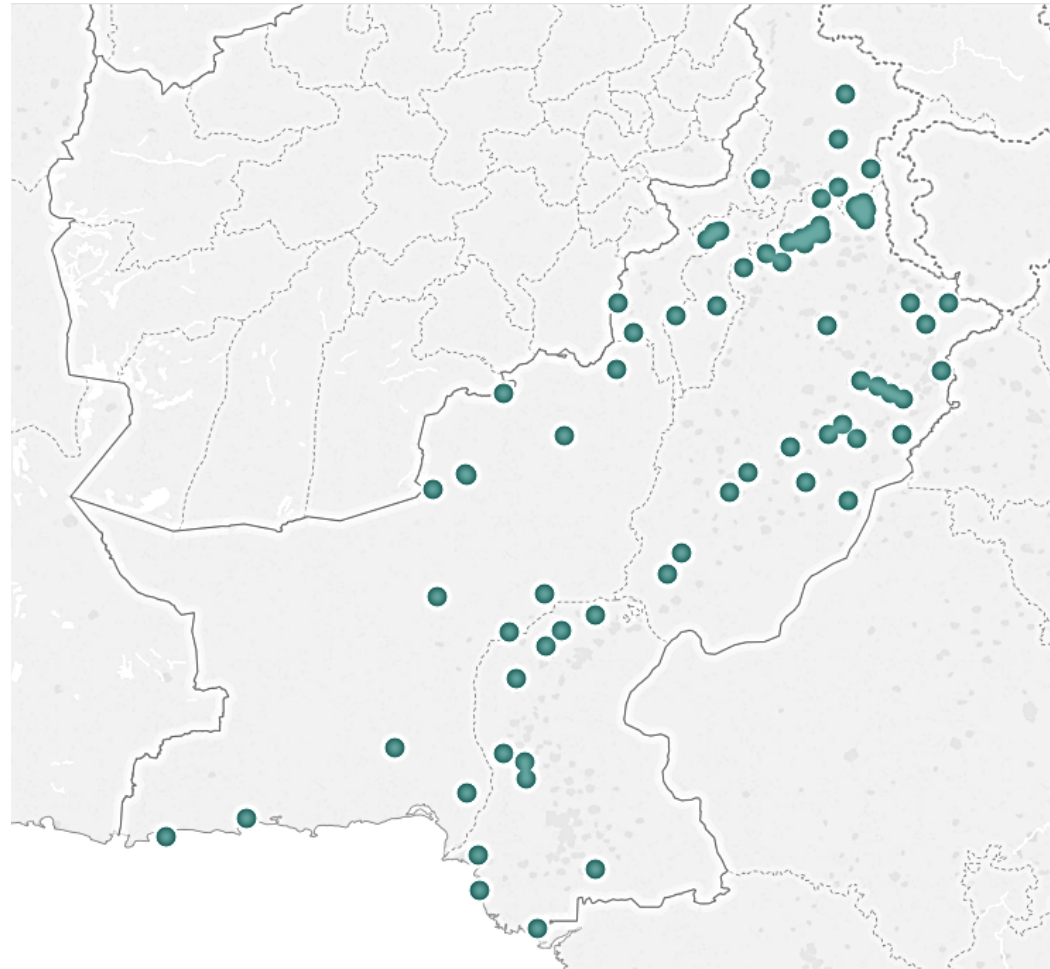
- Sri Lanka, Senegal, Uganda & Ecuador
- Surveys just completed/surveys about to start/data being analyzed

# Apples vs oranges: A note on comparison of AfterAccess data with supply-side

Supply side data as reported via operators/PTA	Demand side (household and individual survey we report)	Implication
Counts active SIMs Includes individual AND corporate users Includes SIMs inside devices (e.g. POS)	Counts USERS with one or more SIM cards Does not count corporate connections Does not count SIMs in other devices	Demand side data more accurate reflection of individuals and households who have access (counts multi-SIM owners as ONE user) Avoids inaccuracies with problematic SIM registrations Demand side result WILL be lower
Includes SIMs used by all users, without age restriction	Our survey only targeted those aged 15 -65 (64% of the population in Pakistan)	Below 14 or Over 66 years persons are not counted. Demand side estimate WILL be lower.

# METHODOLOGY

# Pakistan sample representative of 15-65 population (95% Confidence Interval; +/-3.3 margin of error)



**2,000** individuals from 2,000 households in  
100 census enumerator areas

Sample GPS locations recorded by CAPI device at time of survey

- Sample designed to be representative of 15-65 population at:
  - National level
  - Urban-rural level
  - Gender
  - SEC (Socio-economic classification: a proxy for income)
- The sample is not designed to represent at:
  - Province level
  - Division level
  - other

Notes: Pakistan excludes AJK, FATA, Gilgit-Baltistan (~2% of population)

# Sample size of 2,000 adequate to represent population at desired levels of disaggregation

## Sample size calculation

- Desired level of accuracy 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 (Lwanga & Lemeshow, 1991). The minimum sample size per tabulation group determined by (Rea & Parker, 1997):

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

$Z$  = Z value (e.g. 1.96 for 95% confidence level)  
 $p$  = percentage picking a choice  
 $C$  = confidence interval, expressed as decimal (e.g., .05 =  $\pm 5$ )

## Weighting

- Two weights constructed: for households and individuals, based on inverse selection probabilities  $\rightarrow$  data can be extrapolated to national level.

$$\text{Household weight: } HH_w = DW \frac{1}{P_{HH} * P_{EA}}$$

$$\text{Household Selection Probability: } P_{HH} = \frac{n}{HH_{EA}}$$

$$\text{Individual weight: } IND_w = DW \frac{1}{P_{HH} * P_{EA} * P_I}$$

Default value of 1.5 was used as the design effect for Pakistan. Actual sample size was increased beyond minimum requirement to compensate for clustering effects allow for urban/rural disaggregation of data, as well as gender-based disaggregation. Therefore, in Pakistan the sample size was increased to 2,000.



# Pakistan weights (detailed)

## Pakistan

Household weight:

$$HH\downarrow W = DW\downarrow 1 / P\downarrow EA * P\downarrow HH$$

Individual weight:

$$IND\downarrow W = DW\downarrow 1 / P\downarrow EA * P\downarrow HH * P\downarrow I$$

EA Selection Probability:

$$P\downarrow EA = m * HH\downarrow EA / HH\downarrow STRATA$$

Household Selection Probability:

$$P\downarrow HH = n / HH\downarrow EA$$

Individual selection Probability:

$$P\downarrow I = 1 / HH\downarrow m_{15-65}$$

**DW** = design weight compensation for over-sampling of urban EAs and under-sampling of rural EAs;

**HH<sub>EA</sub>** = number of households in selected EA based on information of last census or updated listing by field team;

**HH<sub>STRATA</sub>** = number of households in strata (urban, rural);

**HH<sub>m15+</sub>** = number of household members or visitors 15 years or older;

m = target number of Wards for each strata, (urban, rural);

n = target number of households in a EA;

# Sample designed to represent Pakistan as a whole; random selection at every stage of sampling



250 Villages and Wards covering  
19 States  
108 Districts  
Fieldwork time period : October 5 – November 30 (2017)



100 Enumerator Areas of the 2017 National census  
5 Provinces excluding FATA  
28 Divisions  
Fieldwork time period : October 21 – December 26 (2017)



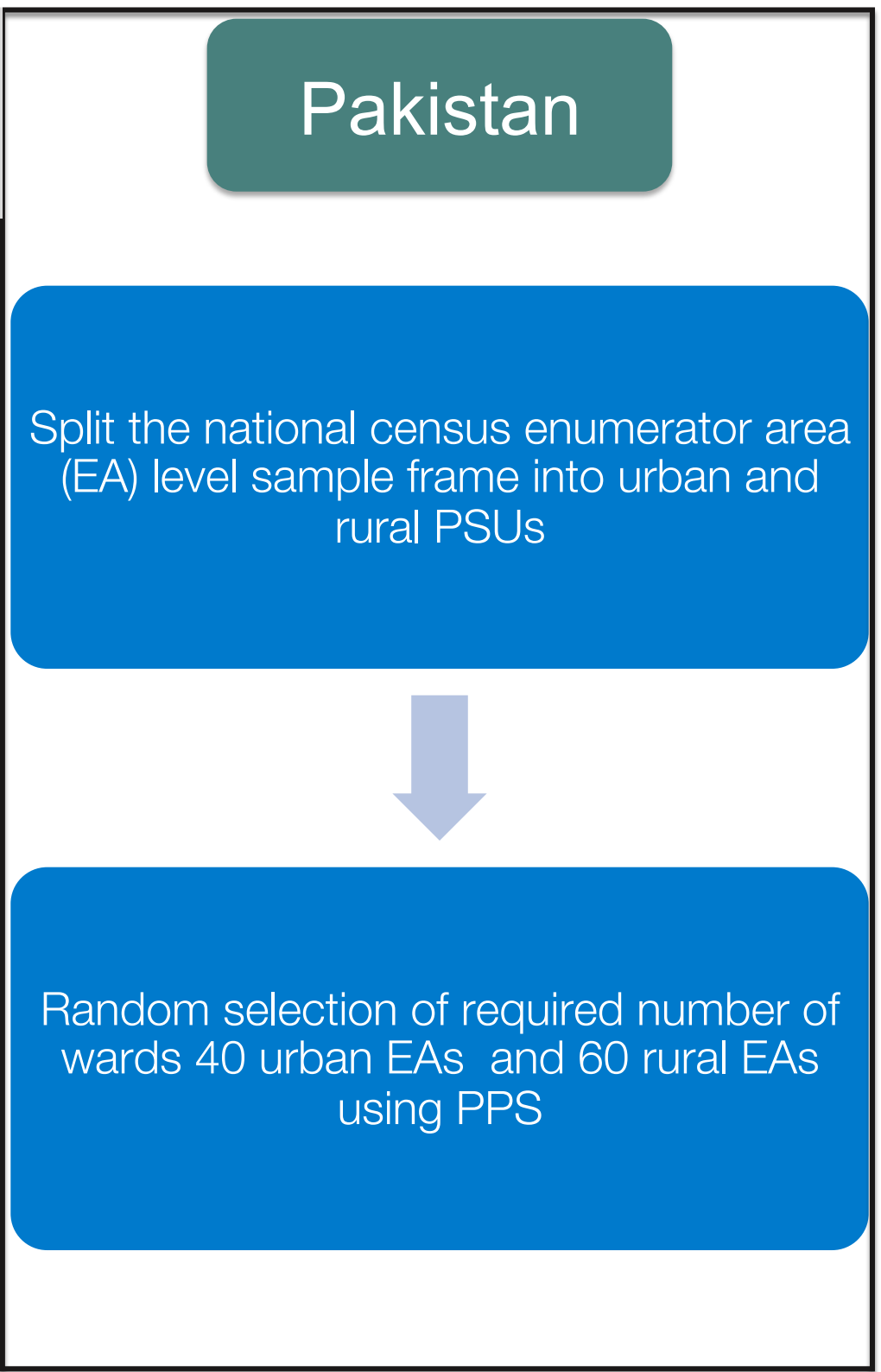
100 Villages and Wards  
40 Zilas  
92 Upazillas  
Fieldwork time period : October 8 – December 1 (2017)



100 Villages covering  
20 Provinces  
70 Districts  
Fieldwork time period : September 23 – October 12 (2017)



100 wards covering  
All Provinces  
48 Districts  
Fieldwork time period : April 23 – June 18 (2018)



**Stage 1:**

Stratified random sampling of the primary sample units (PSUs) with probability proportionate to size (PPS) sampling



## Obtaining PSU information (boundaries, households, etc.) from key informants

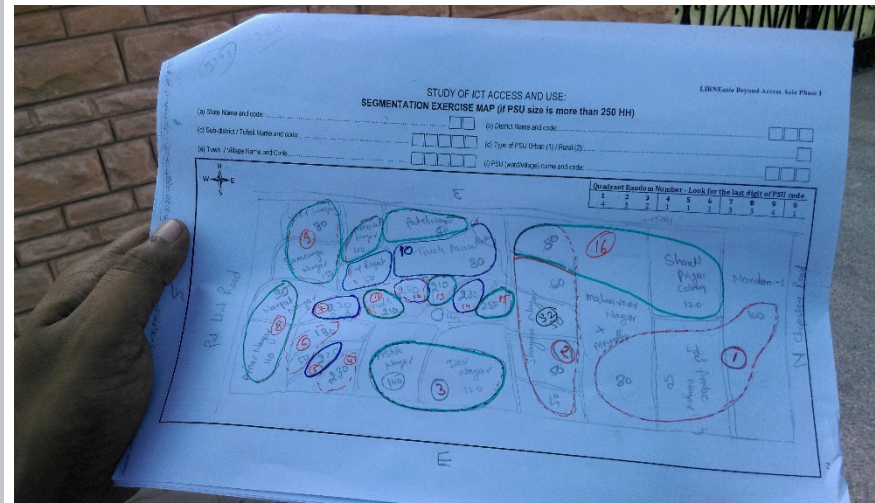


KI Interview in India

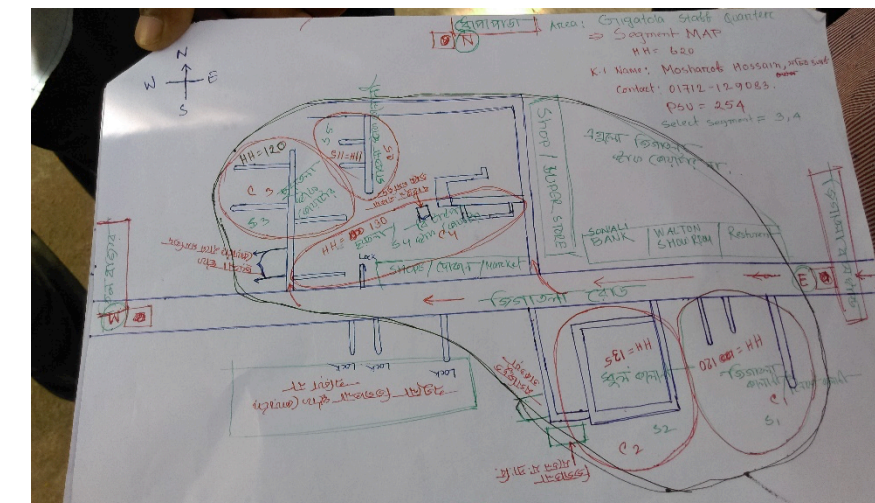


KI Interview in Cambodia

## Mapping & segmentation



Segmentation Map - India



Segmentation Map - Bangladesh

## Listing of households



Listing - Nepal



Listing - Pakistan

## Stage 2:

## Mapping and listing of selected PSUs

- Mapping of randomly selected village or ward with the help of the key informants
- Segmentation of wards and villages where the number of households exceeding 250
- For **Pakistan**: Using census enumerator area maps identify the PSU boundaries

- List of structures of the entire enumerator area identifying the eligible households



Random selection of households conducted systematic random sampling using the household lists collected during the listing

### Stage 3:

Random selection of listed households

Surfj	Surveyor	A4	A6	A7	HNO	House status	Address	HH Name	THH	Mem	Latitude	Longitude	Selected
17	14118883	Shabana B	FEROZABAD (440110404)	A	B	6	Successful / Living hour	Mehmoodabad - S - H - No - 1316/5 - T - 36	Muhsabat Khan	8	24.857200	67.081780	
18	14118883	Shabana B	FEROZABAD (440110404)	A	B	2	Successful / Living hour	Mehmoodabad - S - H - No - 1316/5 - T - 36	Imran	3	24.857200	67.081647	20

Random HH selection in PK

HH Name	Mem	Latitude	Longitude	Selected
Muhsabat Khan	8	24.857200	67.081780	
Imran	3	24.857200	67.081647	20

Random HH selection in KH

Interviews conducted on mobile devices



### Stage 4:

Household interview (with household representative) and individual interview (with randomly selected individual after listing eligible members in household roster)

- Random selection of 20-25 households for the main survey

- Listing all the household members in the household roster
- Randomly selecting one member from age 15-65 from the list



# CONNECTIVITY and DEVICE OWNERSHIP



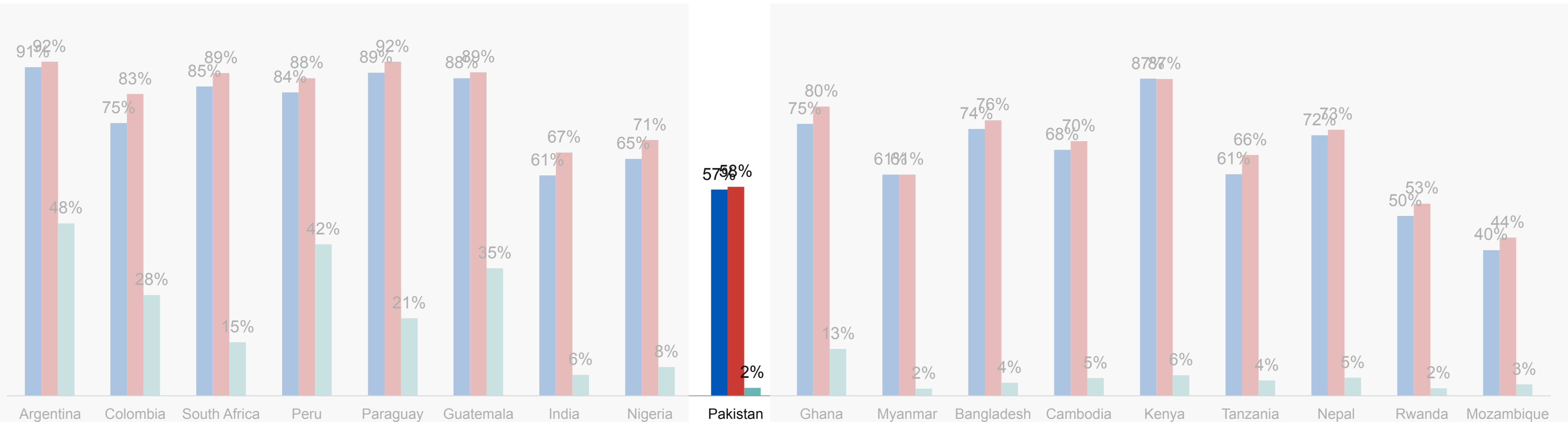
## CONNECTIVITY AND DEVICE OWNERSHIP

- Pakistan could be doing better; mobile ownership stands at 57%
  - Urban-rural gap in mobile closed, but gender gap persists
    - Smartphone ownership very low; relevance, a barrier
  - More than half still using basic phones (no Internet capability)

# 57% of Pakistanis aged 15-65 have a mobile phone of some type. Negligible computer ownership

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

■ Mobile phone ■ SIM card ■ Desktop/Laptop



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?

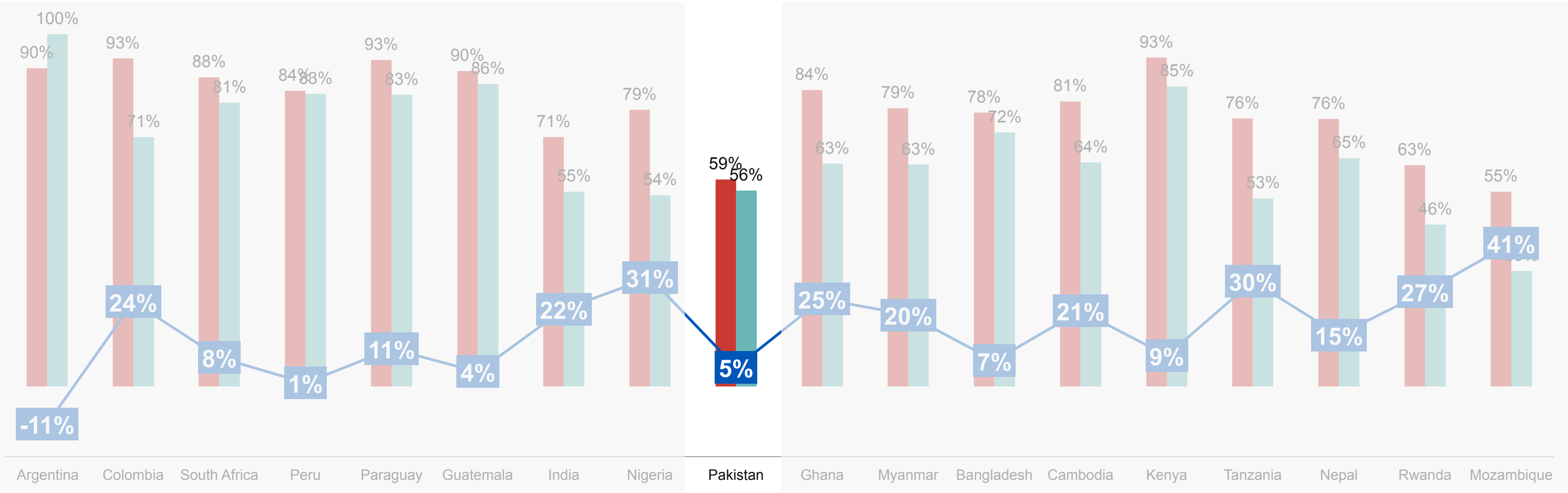
Base	Argentina	Colombia	South Africa	Peru	Paraguay	Guatemala	India	Nigeria	Pakistan	Ghana	Myanmar	Bangladesh	Cambodia	Kenya	Tanzania	Nepal	Rwanda	Mozambique
All respondents	1,240	1,425	1,610	1,478	1,357	1,407	5,069	1,706	2,002	1,145	7,204	2,020	2,123	1,179	1,102	2,008	1,118	1,091

# Slightly lower ownership among rural Pakistanis: Rural dwellers 5% less likely to own a mobile compared to urban

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

Urban Rural Gap

$$\text{Urban rural gap in ownership (\%)} = \frac{\text{Urban mobile phone owners (\% of urban population)} - \text{Rural mobile phone owners (\% of rural population)}}{\text{Urban mobile phone owners (\% of urban population)}}$$



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		
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



# How we calculate the gaps

$$\text{Urban-rural gap in ownership (\%)} = \frac{\text{Urban mobile phone owners (\% of urban population)} - \text{Rural mobile phone owners (\% of rural population)}}{\text{Urban mobile phone owners (\% of urban population)}}$$

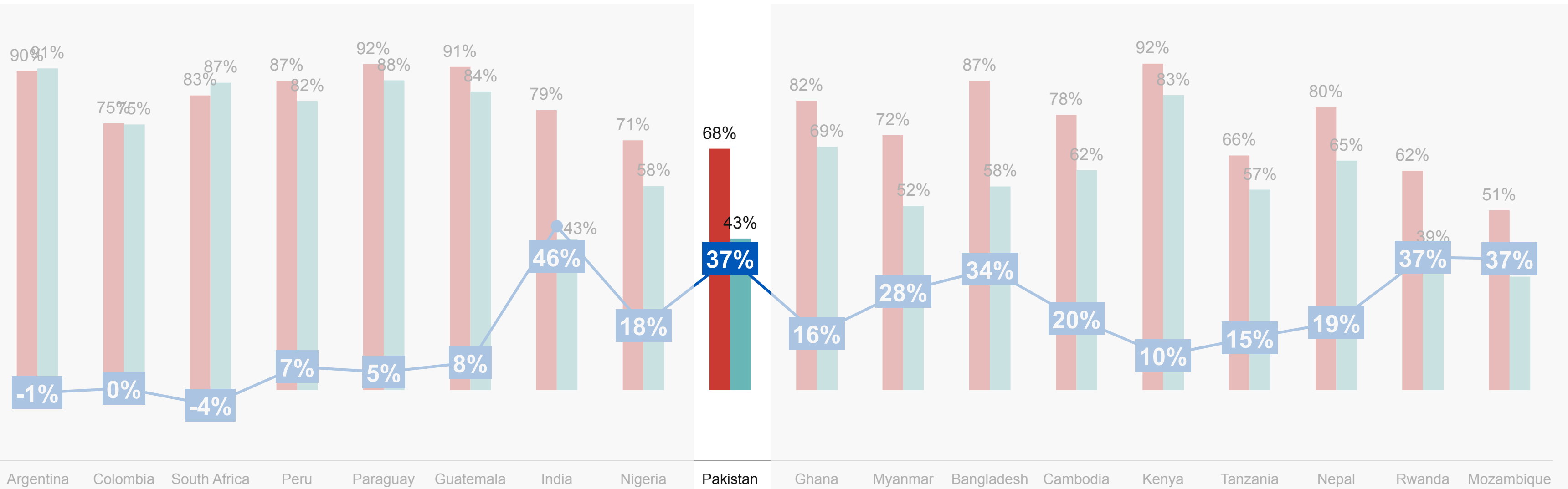
- How much *less* likely a rural dweller is to own a mobile than an urban one
- Same logic applied to gender gap, income group gap, etc.

# Significant gender gap in Pakistan; Women in Pakistan 37% less likely to own a mobile than men

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

Male Female Gap

$$\text{Gender gap in ownership (\%)} = \frac{\text{Male phone owners (\% of male population)} - \text{Female phone owners (\% of female population)}}{\text{Male phone owners (\% of male population)}}$$



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		
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

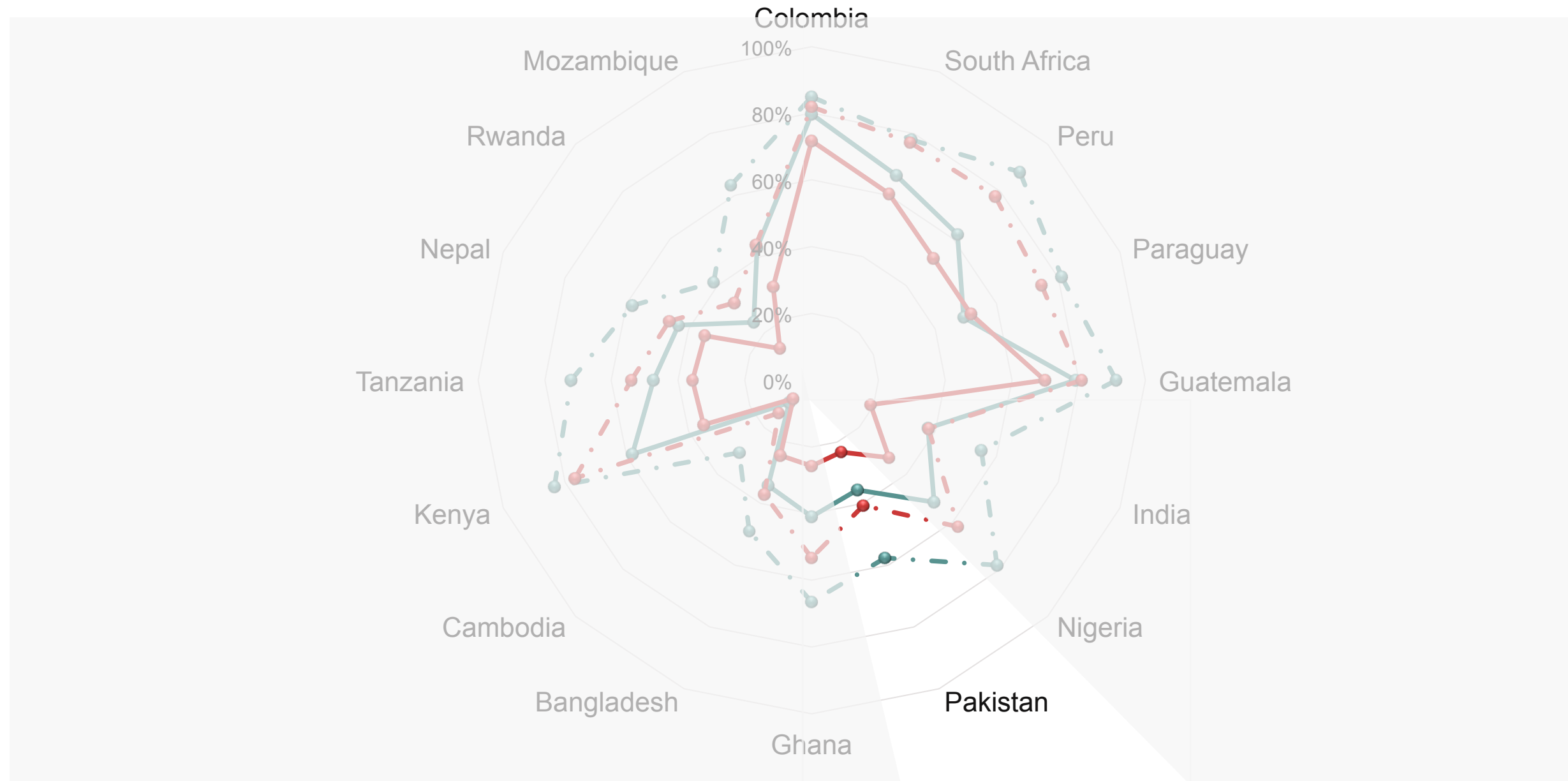




# Rural women have lowest level of mobile ownership in Pakistan

Internet awareness (% of aged 15-65 population)

Urban men Rural men Urban women Rural women



Q: Do you own a mobile phone?

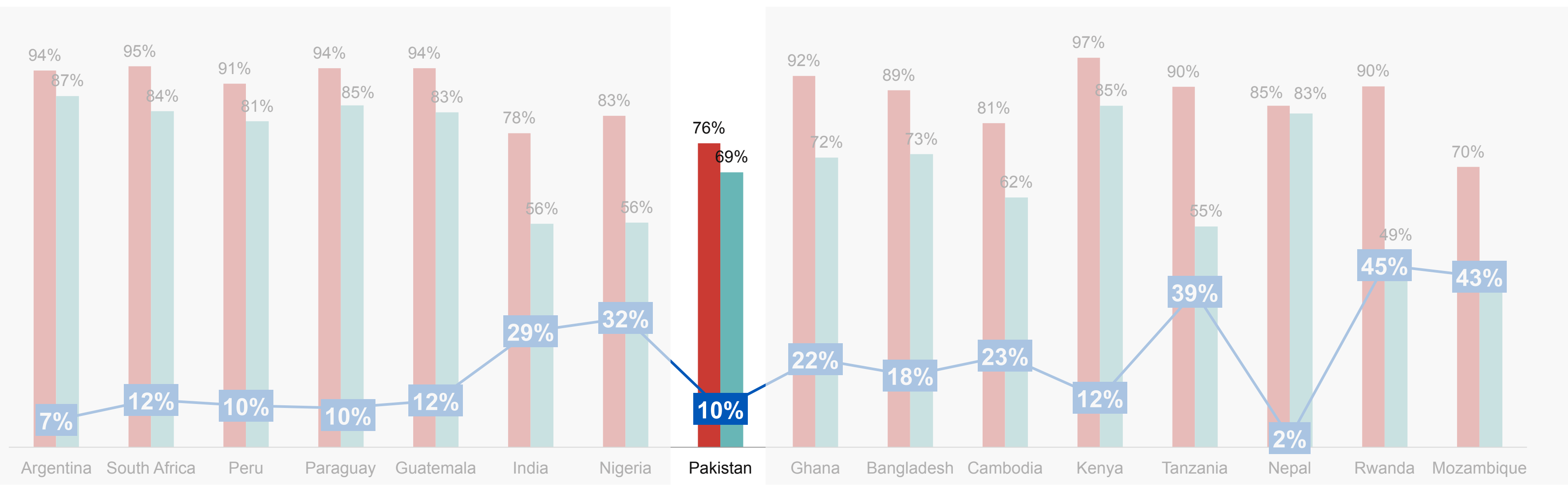
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# Low gap in phone ownership between high and low income earners in Pakistan

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

■ Above average income ■ Below average income ● Gap

$$\text{Income gap in ownership (\%)} = \frac{\text{Above average income phone owners(\%)} - \text{Below average income phone owners(\%)}}{\text{Above average income phone owners (\%)}}$$



Q: Do you own a mobile phone?

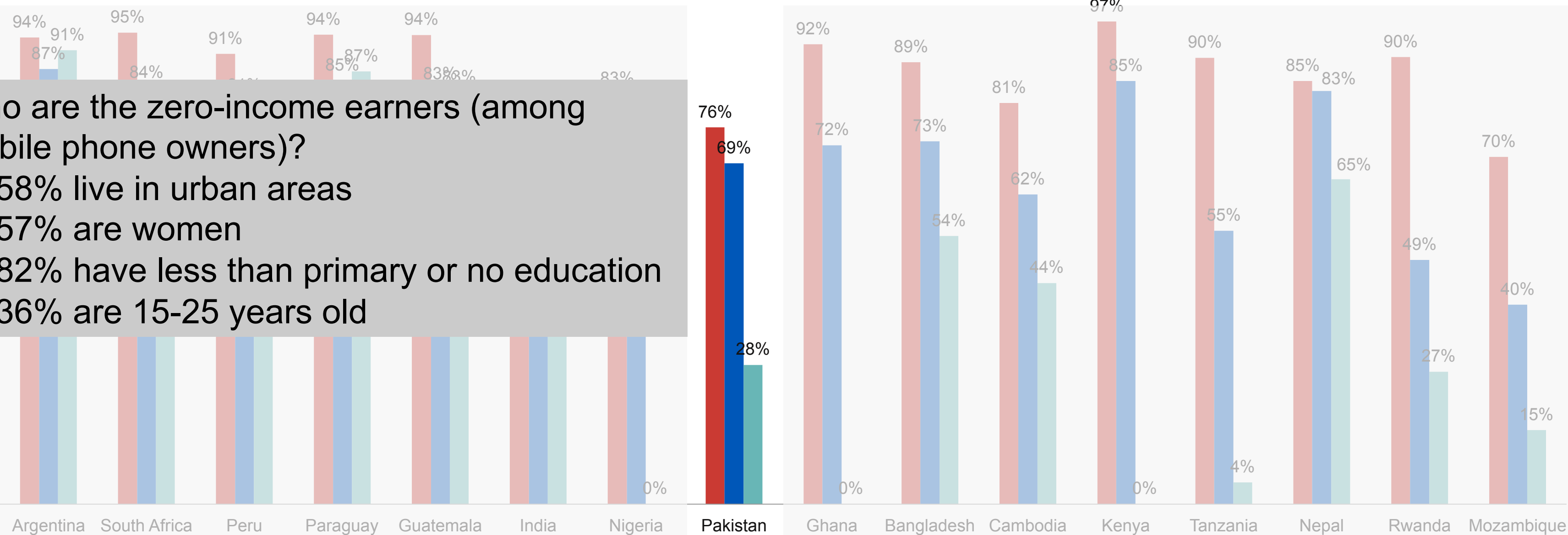
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# In Pakistan more than 25% of the zero income earners own a mobile phone

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

■ Above average income ■ Below average income ■ Zero income



Who are the zero-income earners (among mobile phone owners)?

- 58% live in urban areas
- 57% are women
- 82% have less than primary or no education
- 36% are 15-25 years old

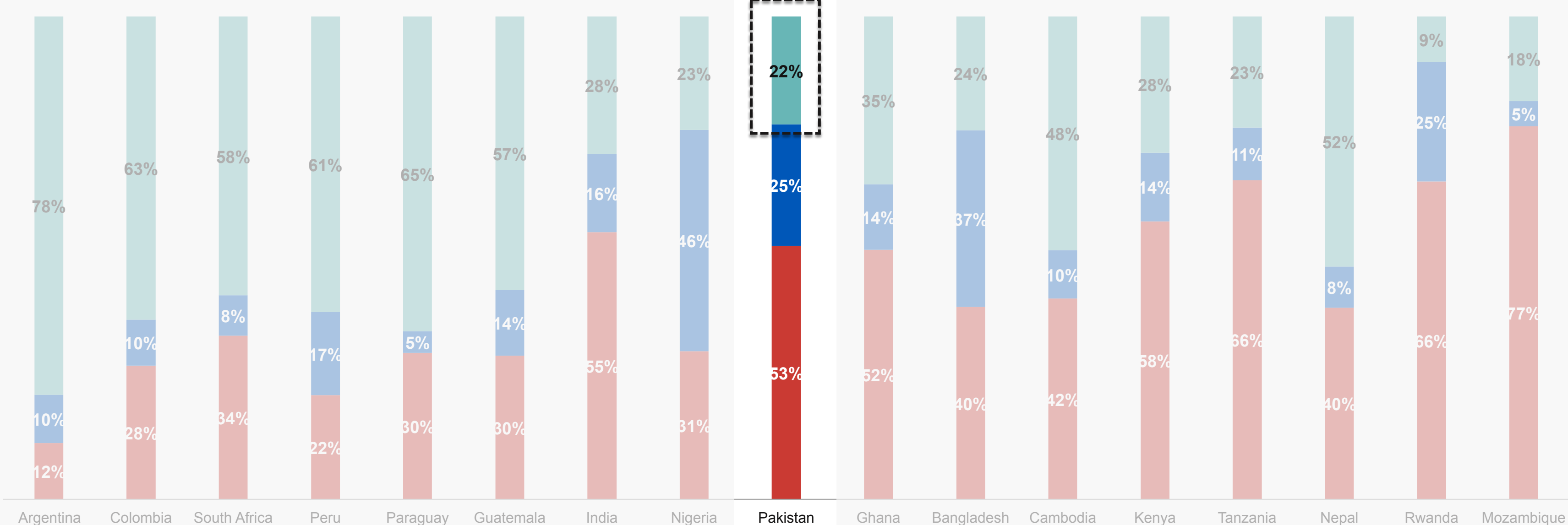
Q: Do you own a mobile phone?

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Only 22% of phone owners use a smart phone as the primary device; 53% still have basic phones (that are not internet enabled).

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



Basic Phone Feature Phone Smartphone



Q: What type of mobile is it?

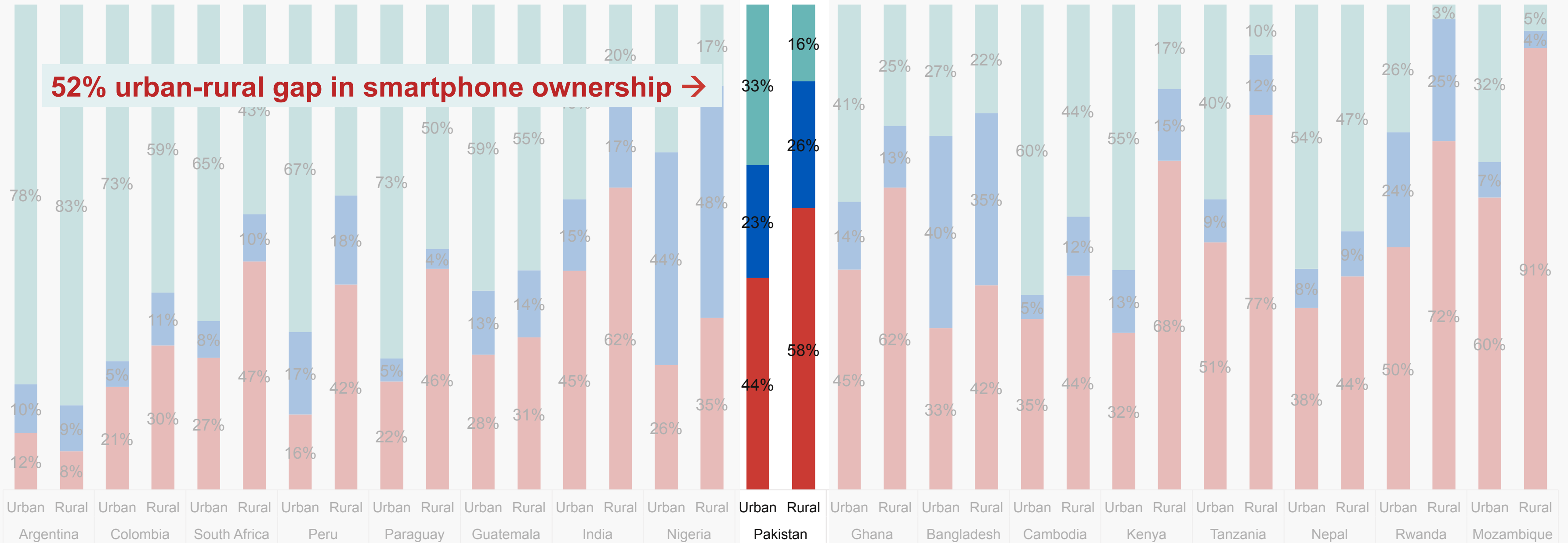
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Mobile phone owners	1,116	1,297	1,398	1,234	1,209	1,214	3,252	1,123	1,208	901	1,531	1,526	1,054	761	1,478	635	632

# Smartphones not caught on in rural yet

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

Basic phone Feature phone Smartphone

**52% urban-rural gap in smartphone ownership →**



Q: What type of mobile is it?

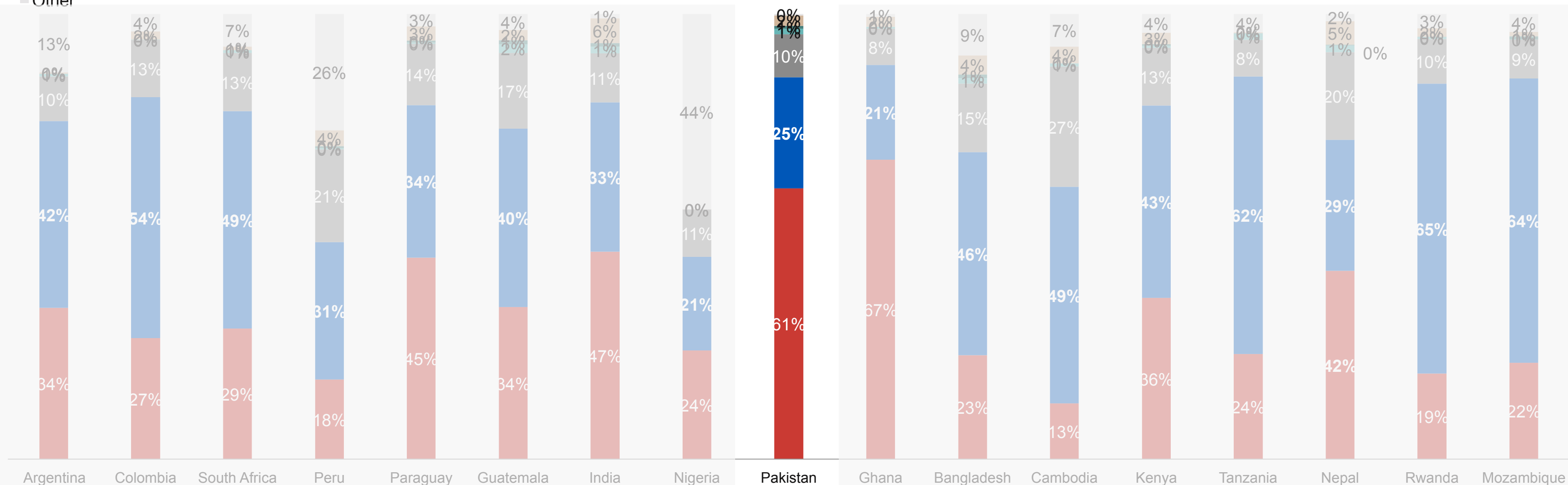
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# Lack of need is main reason for not owning a smartphone (61%); 26% cite affordability as a barrier; 10% don't know how to use one

Reason for not owning a smartphone (% of aged 15-65 basic or feature phone owners)

- I do not need one (a feature/basic phone is sufficient for me)
- I cannot afford one/it is too expensive
- It is too complicated for me/I do not know how to use one
- I was not allowed to get one
- They are not available where I live
- I do not know what that is
- Other



Q: Please tell me the primary reason why you have chosen not to obtain a smartphone or touch phone handset?

Base	Argentina	Colombia	South Africa	Peru	Paraguay	Guatemala	India	Nigeria	Pakistan	Ghana	Bangladesh	Cambodia	Kenya	Tanzania	Nepal	Rwanda	Mozambique
basic or feature phone owners	246	433	633	476	456	537	2378	20	872	1186	595	780	646	513	701	506	448

# 27% of got connected to mobile networks in last 3 years; 51% in the last 5 years

Country	Number of years since first ever mobile connection (% of aged 15-65 mobile phone owners)															
	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%
<b>Pakistan</b>	<b>9%</b>	<b>10%</b>	<b>8%</b>	<b>3%</b>	<b>6%</b>	<b>6%</b>	<b>10%</b>	<b>4%</b>	<b>8%</b>	<b>3%</b>	<b>3%</b>	<b>7%</b>	<b>3%</b>	<b>2%</b>	<b>3%</b>	<b>13%</b>
Ghana	14%	9%	7%	9%	6%	6%	9%	6%	5%	9%	3%	4%	3%	1%	4%	4%
Bangladesh	8%	11%	7%	7%	11%	6%	11%	6%	8%	5%	3%	5%	1%	1%	1%	4%
Cambodia	<b>Mostly rural, women, low income and zero income earners</b>					4%	8%	3%	3%	12%	3%	5%	2%	3%	4%	8%
Kenya						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 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
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# 22% of Pakistanis aged 15-65 mobile owners have more than 1 SIM

Number of SIM cards (% of aged 15-65 mobile phone owners)

	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%
<b>Pakistan</b>	<b>77%</b>	<b>19%</b>	<b>3%</b>	<b>1%</b>	<b>0%</b>	<b>0%</b>
Ghana	57%	38%	3%	1%	0%	1%
Myanmar	73%	25%	1%	1%	0%	0%
Bangladesh	66%	30%	2%	1%	1%	0%
Cambodia	71%	26%				0%
Kenya	80%	18%				0%
Tanzania	59%	36%				0%
Nepal	72%	28%				0%
Rwanda	58%	37%	5%	0%	0%	0%
Mozambique	76%	21%	3%	0%	0%	0%

**Slightly skewed towards smartphone owners, urban, men, high income earners and below 25 years**

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

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



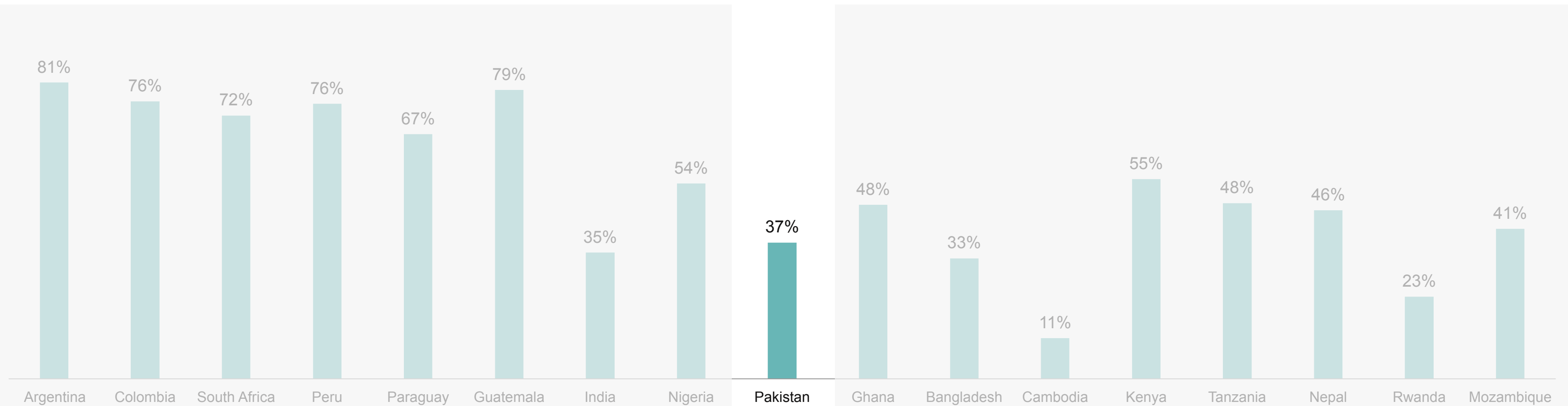
## INTERNET

- Many unaware of what the Internet is
- Pakistan could be doing better on Internet (and social media use)
  - The majority of those online came online in the last year
- Women (especially rural women), less educated and the poor are lagging behind

# Only 37% of Pakistanis 15-65 know of/have heard of the Internet

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

■ Internet awareness



Q1: Do you know what the Internet is?

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

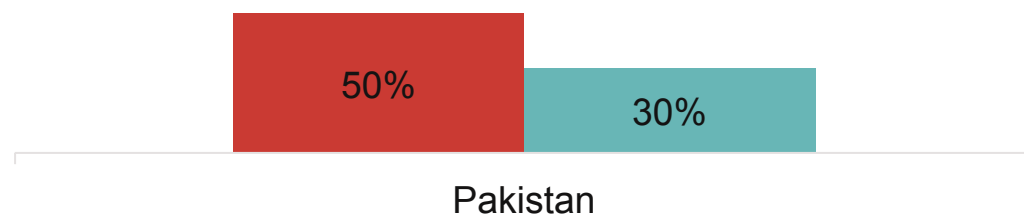
# Awareness low among rural, female, less educated, lower income, basic phone owners and among older people

Pakistan

Internet awareness (% of aged 15-65 population)

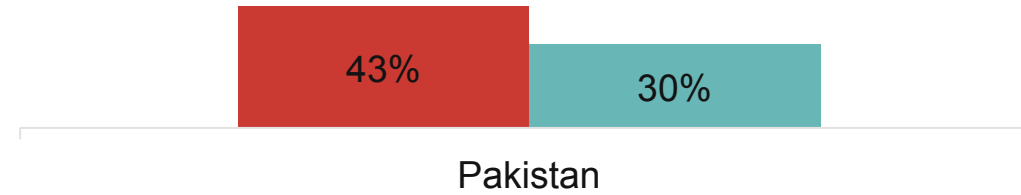
## Urban-rural

Urban Rural



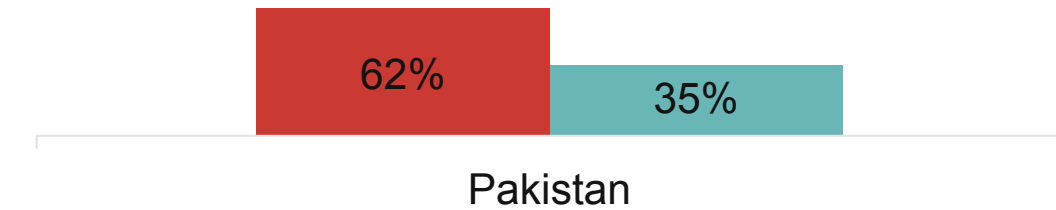
## Gender

Male Female



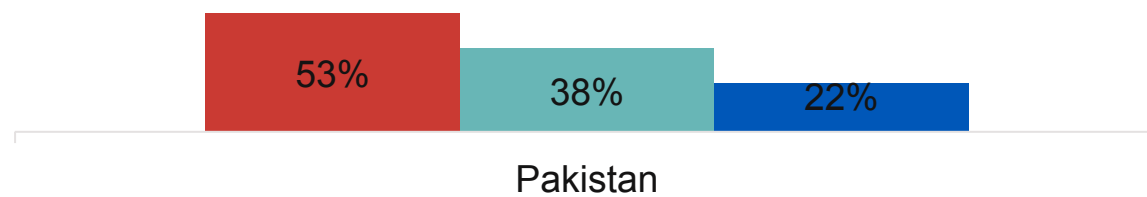
## Education

Secondary or higher education  
Primary or no education



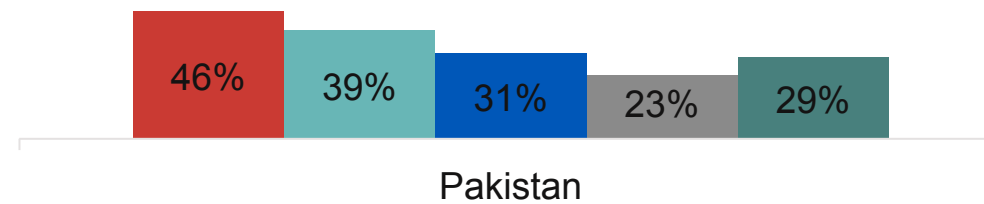
## Income

Above average income Below average income  
Zero income



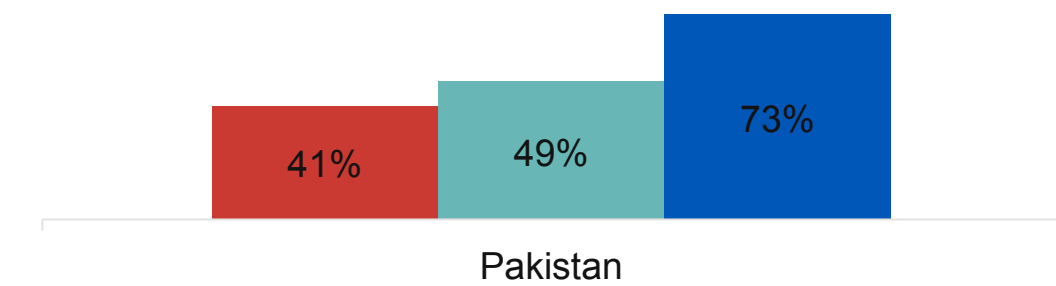
## Age

15-25 26-35 36-45 46-55 56-65



## Phone type

Basic phone Feature phone Smartphone



Q: Do you know what the Internet is?

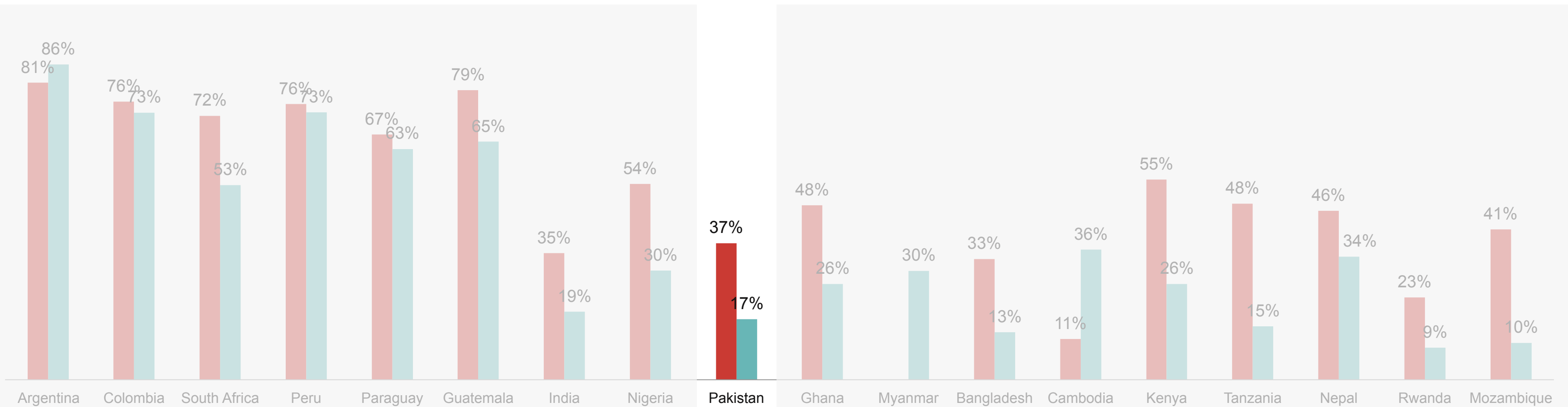
Base	Pakistan
All respondents	2,002



# Moderate Internet awareness and use among Pakistanis compared to neighboring Asian countries

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

■ Internet awareness ■ Internet use



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

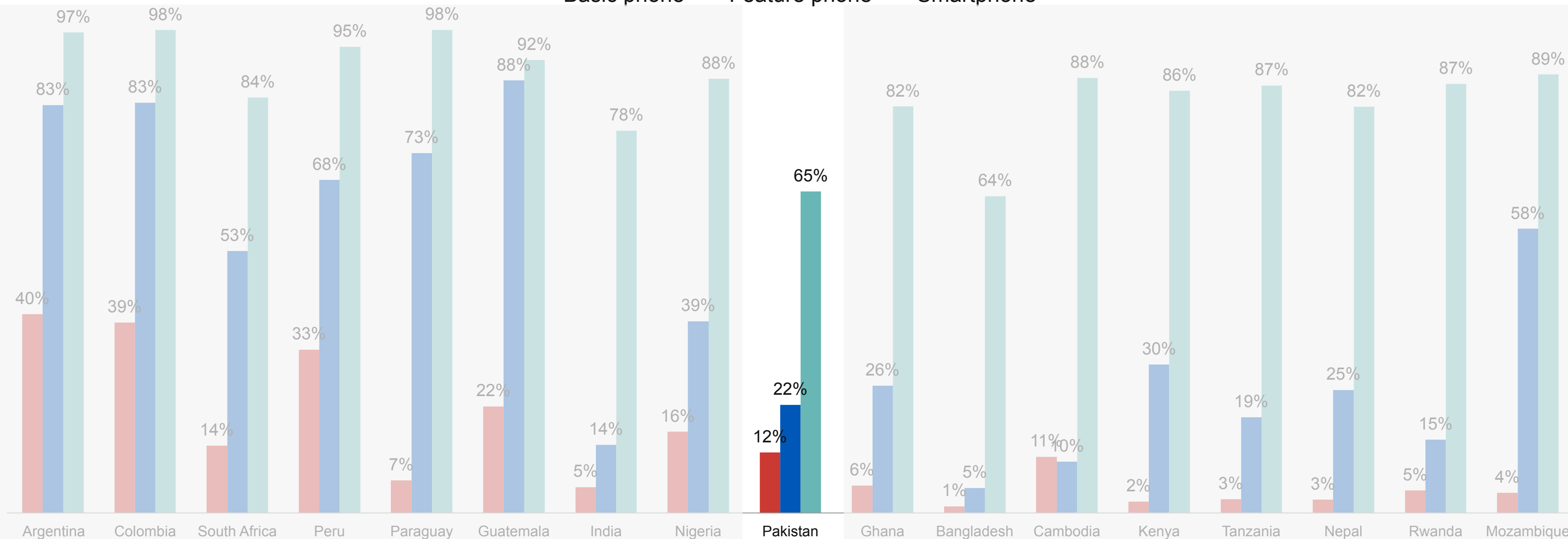
Base	Argentina	Colombia	South Africa	Peru	Paraguay	Guatemala	India	Nigeria	Pakistan	Ghana	Myanmar	Bangladesh	Cambodia	Kenya	Tanzania	Nepal	Rwanda	Mozambique
All respondents	1,240	1,425	1,610	1,478	1,357	1,407	5,069	1,706	2,002	1,145	7,204	2,020	2,123	1,179	1,102	2,008	1,118	1,091



# Smartphone owners are the highest users of the Internet

Internet usage (% of aged 15-65 mobile phone owners)

■ Basic phone ■ Feature phone ■ Smartphone



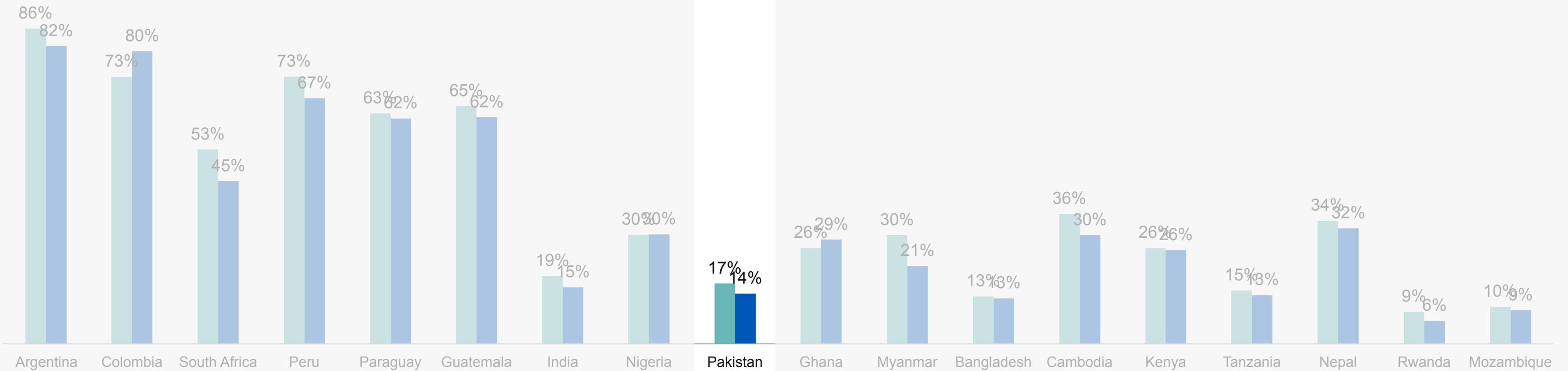
Q: Have you ever used the Internet (Gmail, Google, Facebook, email)?

Base	Argentina	Colombia	South Africa	Peru	Paraguay	Guatemala	India	Nigeria	Pakistan	Ghana	Myanmar	Bangladesh	Cambodia	Kenya	Tanzania	Nepal	Rwanda	Mozambique
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 use ≈ social media use

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

■ Internet use ■ Social media use



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

Q2: Do you use social media like Facebook, Whatsapp, Twitter etc?

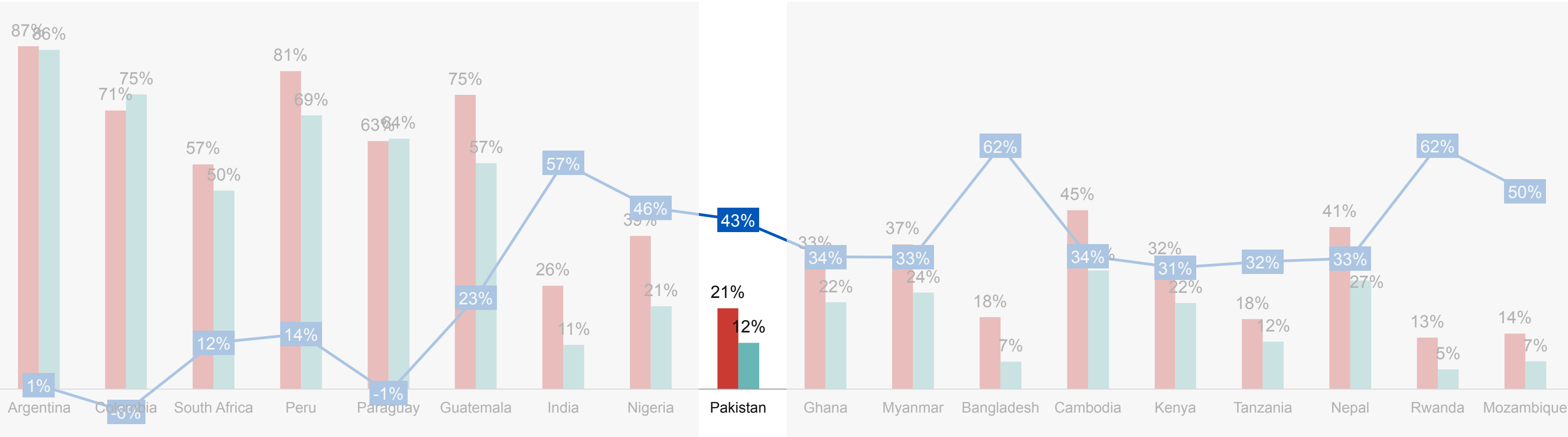
Base	Argentina	Colombia	South Africa	Peru	Paraguay	Guatemala	India	Nigeria	Pakistan	Ghana	Myanmar	Bangladesh	Cambodia	Kenya	Tanzania	Nepal	Rwanda	Mozambique
All respondents	1,240	1,425	1,610	1,478	1,357	1,407	5,069	1,706	2,002	1,145	7,204	2,020	2,123	1,179	1,102	2,008	1,118	1,091

# High gender divide in Internet use in Pakistan

Internet use (% of aged 15-65 population)

Male Female Gap

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



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

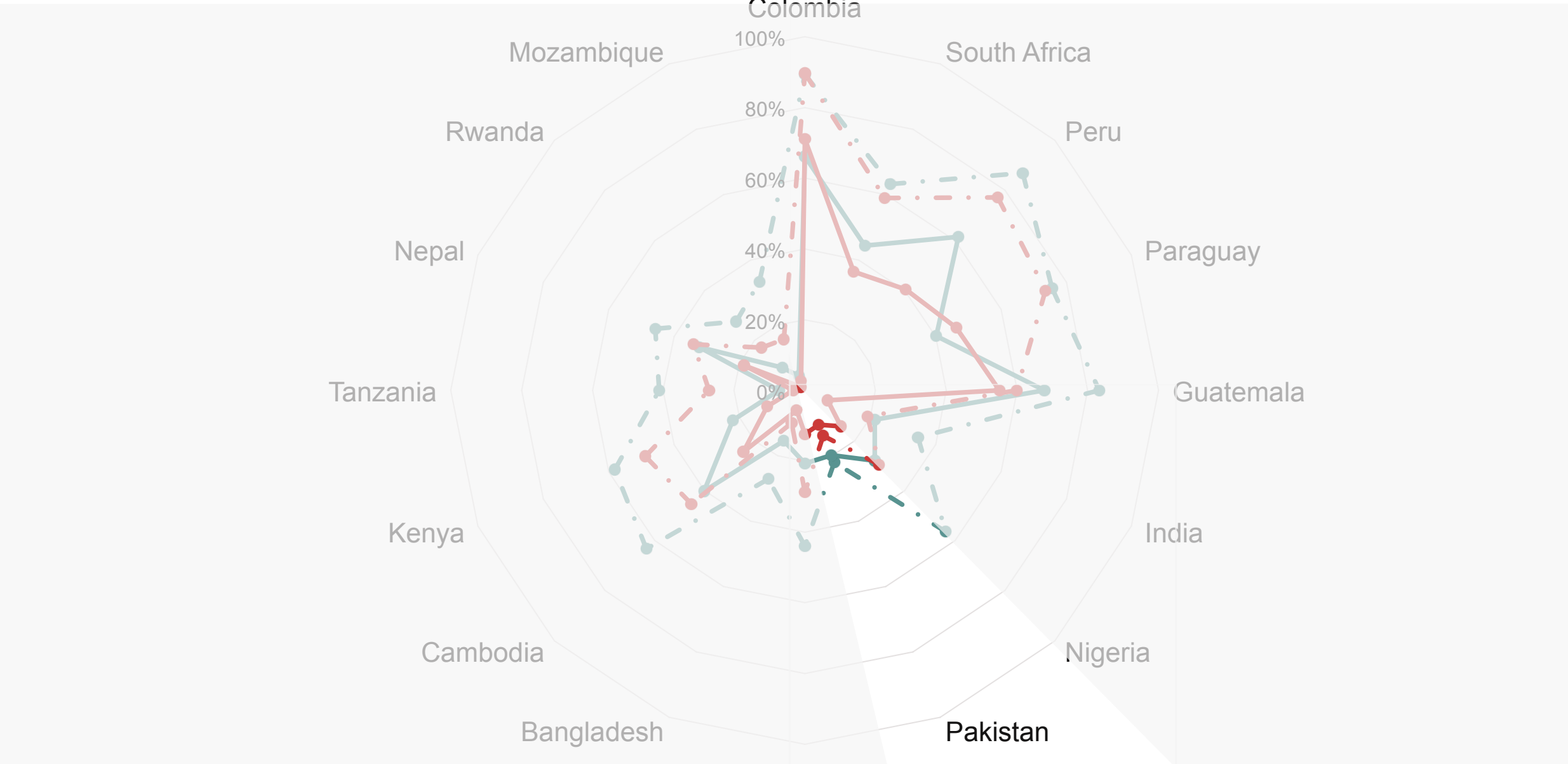
Base	Argentina		Colombia		South Africa		Peru		Paraguay		Guatemala		India		Nigeria		Pakistan		Ghana		Myanmar		Bangladesh		Cambodia		Kenya		Tanzania		Nepal		Rwanda		Mozambique	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female		
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



# Lowest level of Internet use among the rural women

Internet use (% of aged 15-65 population)

Urban men Rural men Urban women Rural women



Q: Do you own a mobile phone?

Base	Colombia	South Africa	Peru	Paraguay	Guatemala	India	Nigeria	Pakistan	Ghana	Myanmar	Bangladesh	Cambodia	Kenya	Tanzania	Nepal	Rwanda	Mozambique
All respondents	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

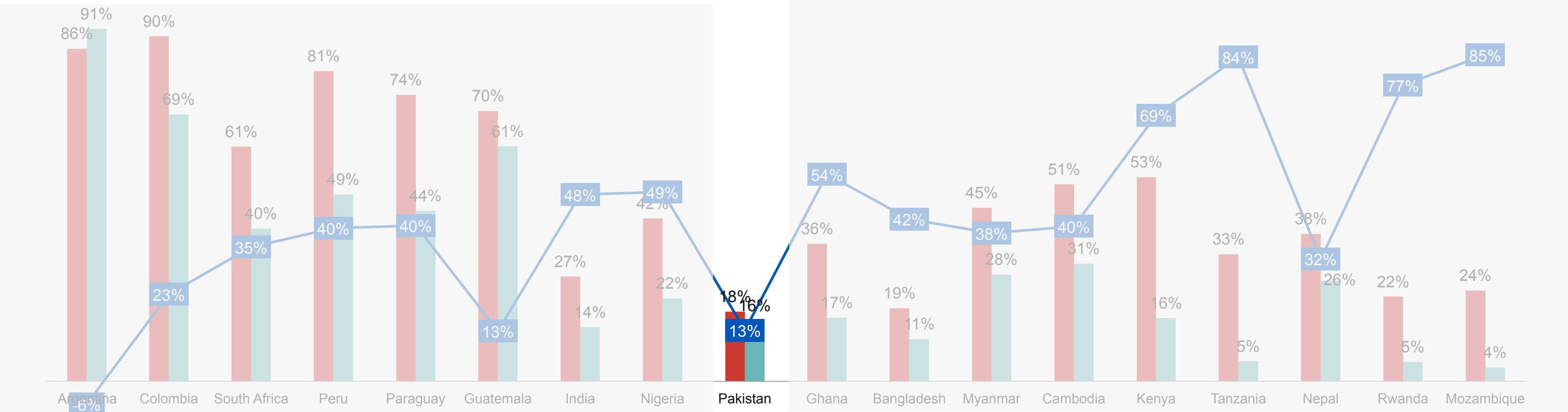


# Rural dwellers 13% less likely to be online compared to urban

## Internet use (% of aged 15-65 population)

Urban Rural Gap

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



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



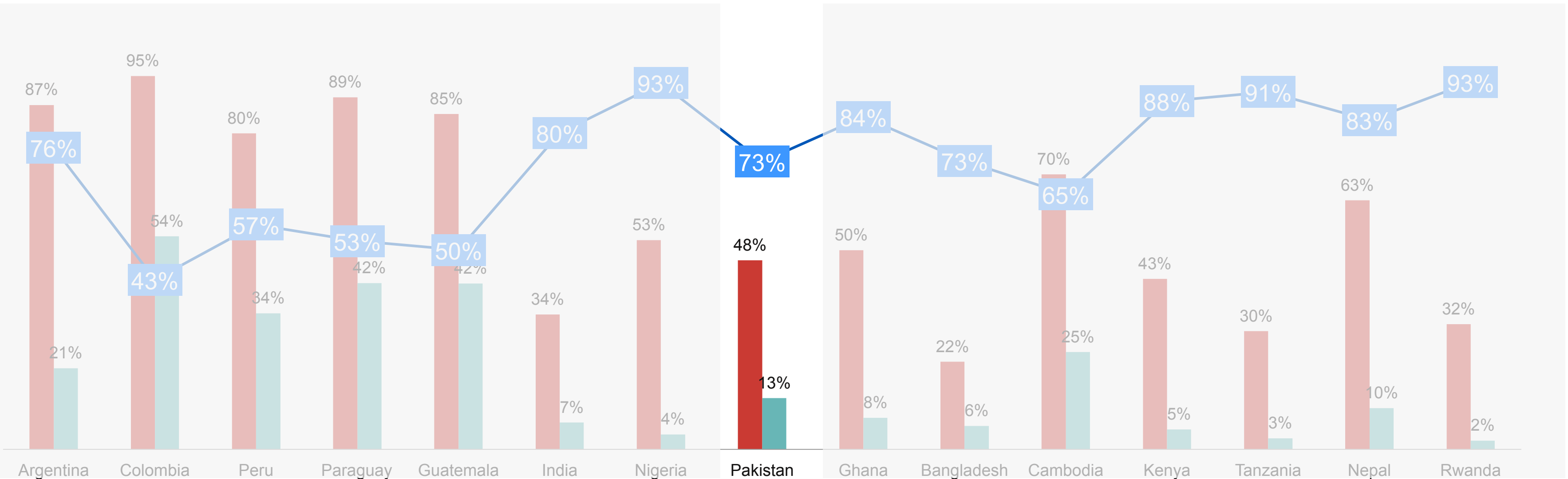


# Significant difference in Internet use between high educated among less educated in Pakistan

## Internet use (% of aged 15-65 population)

■ Secondary or higher education ■ Primary or no education ● Gap

$$\text{Education gap in Internet use (\%)} = \frac{\text{Internet users among users with secondary or higher education (\%)} - \text{Internet users among users with primary or no education (\%)}}{\text{Internet users among users with secondary or higher education (\%)}}$$



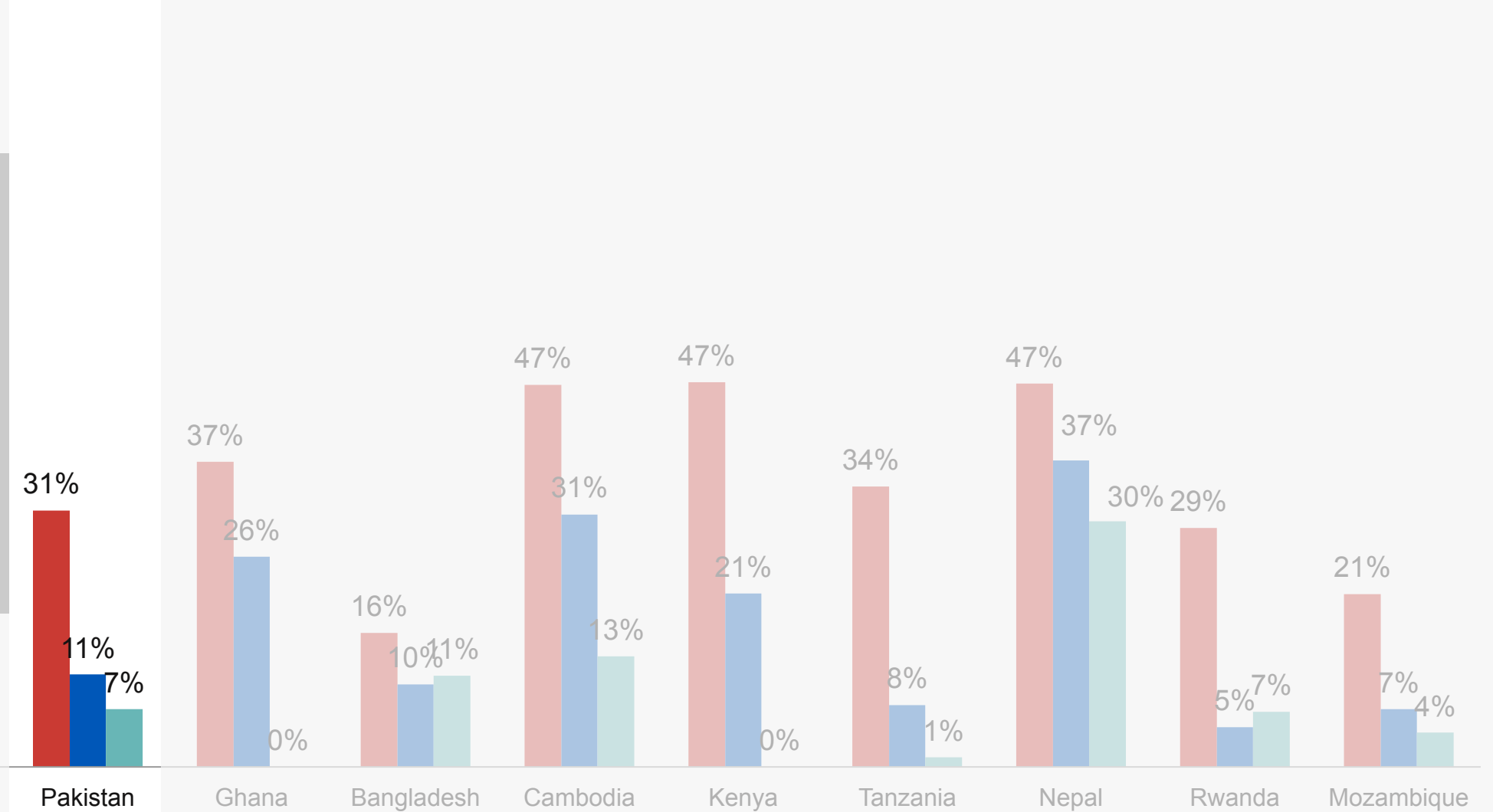
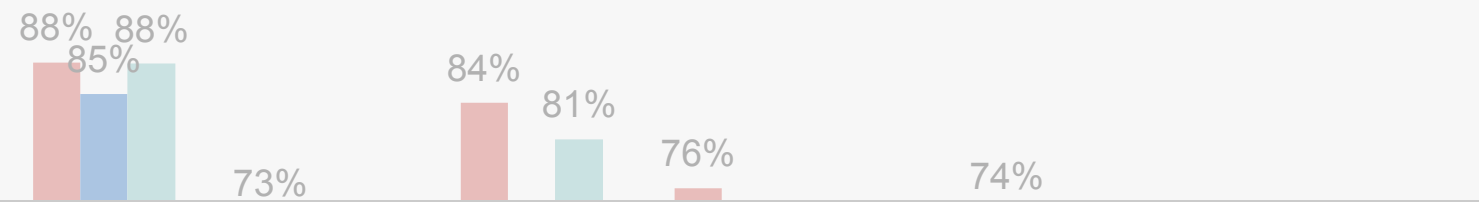
Q: Have you ever used the Internet (Gmail, Google, Facebook, email)?

Base	Argentina	Colombia	Peru	Paraguay	Guatemala	India	Nigeria	Pakistan	Ghana	Myanmar	Bangladesh	Cambodia	Kenya	Tanzania	Nepal	Rwanda
All respondents	1,240	1,425	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

# In Pakistan, high income earners use the Internet most

Internet use (% of aged 15-65 population)

■ Above average income ■ Below average income ■ Zero income



Who are the zero-income earners (among internet users)?

- 70% live in urban areas
- 66% are female
- 50% have secondary or higher education
- 72% are 15-25 years old

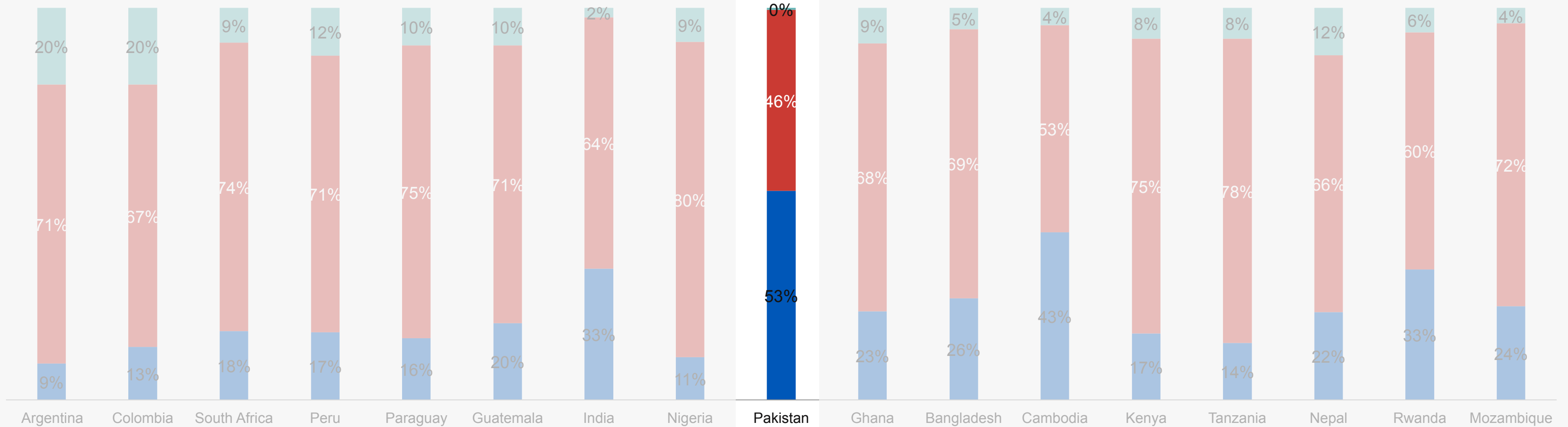
Q: Have you ever used the Internet (Gmail, Google, Facebook, email)?

Base	Argentina	Colombia	South Africa	Peru	Paraguay	Guatemala	India	Nigeria	Pakistan	Ghana	Myanmar	Bangladesh	Cambodia	Kenya	Tanzania	Nepal	Rwanda	Mozambique
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

# 53% of Internet users in Pakistan, came online less than a year before survey

Number of years since first Internet use (% of aged 15-65 Internet users)

■ Less than one year ■ 1-5 years ■ More than 5 years

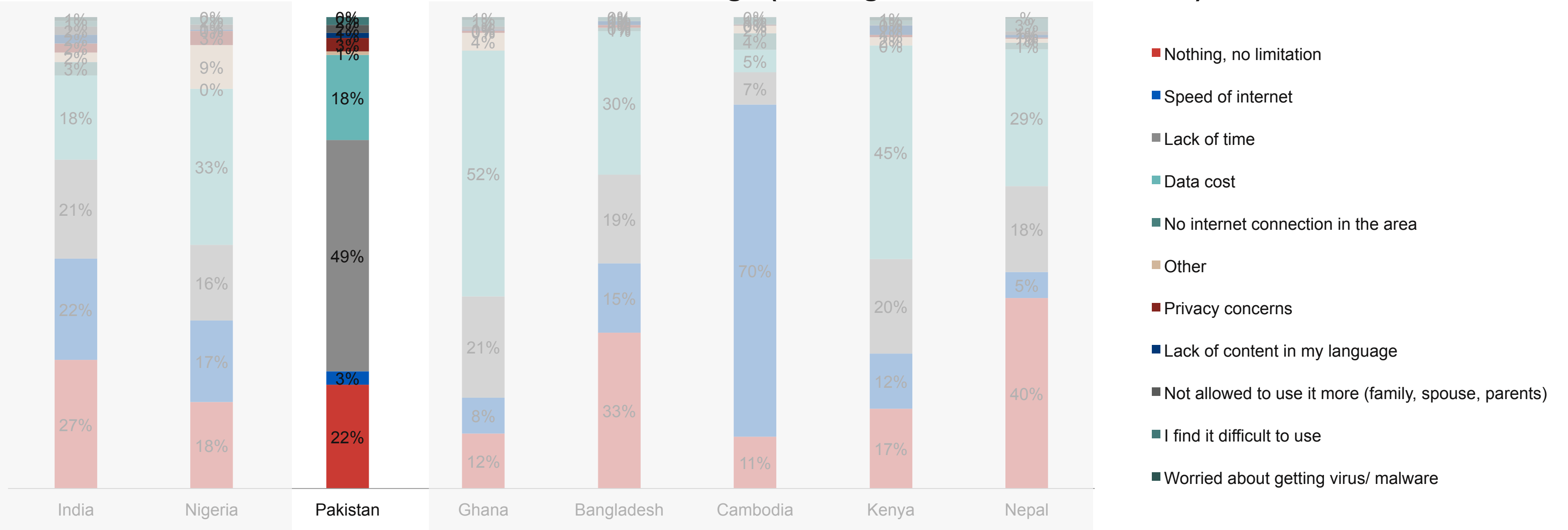


Q: For how many years have you been using the internet? (1 also for less than a year)

Base	Argentina	Colombia	South Africa	Peru	Paraguay	Guatemala	India	Nigeria	Pakistan	Ghana	Bangladesh	Cambodia	Kenya	Tanzania	Nepal	Rwanda	Mozambique
Internet users	1,006	1,192	829	1,120	886	1,104	919	537	427	311	266	804	440	266	692	172	238

# What limits more use among current users? Lack of time and data cost

Limitations for Internet usage (% of aged 15-65 Internet users)



Q: What is your main limitation for 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

**WHAT DO USERS DO WHEN ONLINE?**

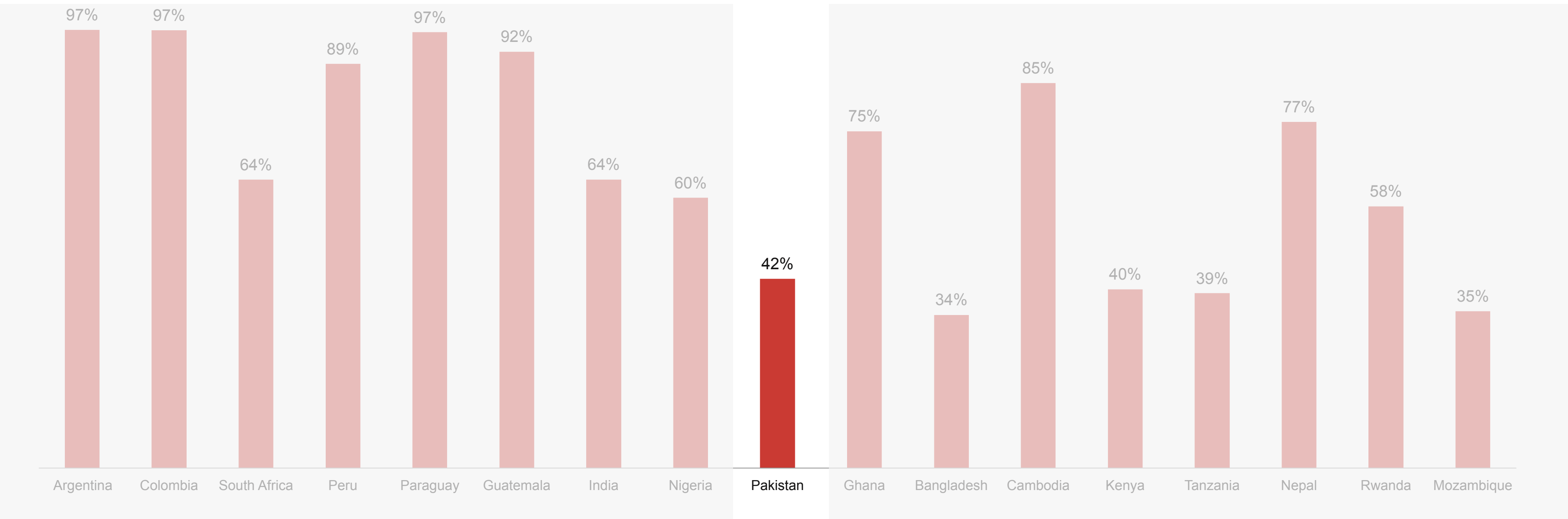


## WHAT DO USERS DO WHEN ONLINE?

- Online use fairly limited by the low smartphone penetration
  - App use could be better (level and variety)
  - Women, less educated, poor (and rural) lag behind

# App use; could be doing better?

App use (% of aged 15-65 feature or smartphone owners)



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	Rwanda	Nepal	Mozambique
Feature or smartphone owners	982	1,020	1,552	972	809	846	1,397	795	571	458	936	878	1,074	789	660	903	667

# Low app use

## App use (% of aged 15-65 feature or smartphone owners)

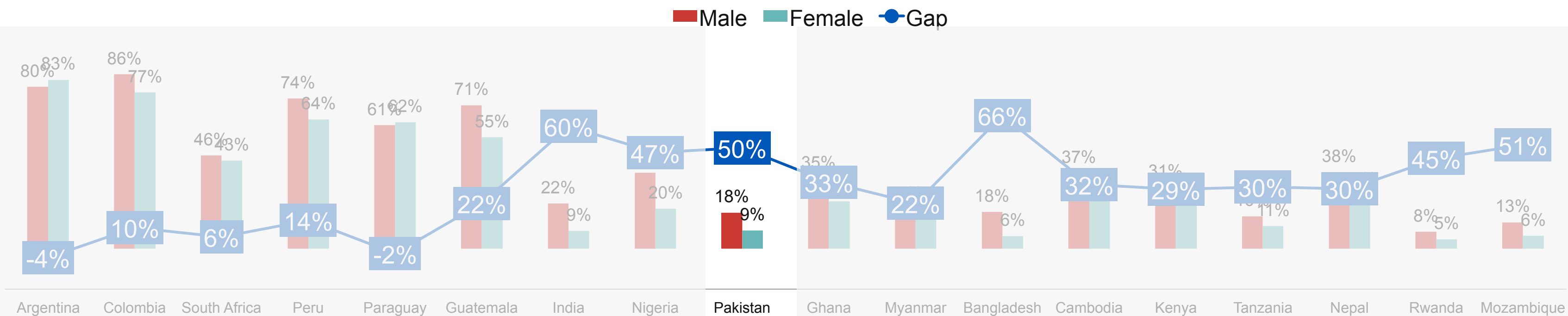
	Argentina	Colombia	South Africa	Peru	Paraguay	Guatemala	India	Nigeria	Pakistan	Ghana	Bangladesh	Cambodia	Kenya	Tanzania	Nepal	Rwanda	Mozambique
<b>Social networking apps (Such as Facebook, WhatsApp, Instagram, Snapchat, Twitter, LinkedIn, line)</b>	95%	94%	52%	82%	88%	87%	48%	52%	<b>25%</b>	68%	19%	71%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

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

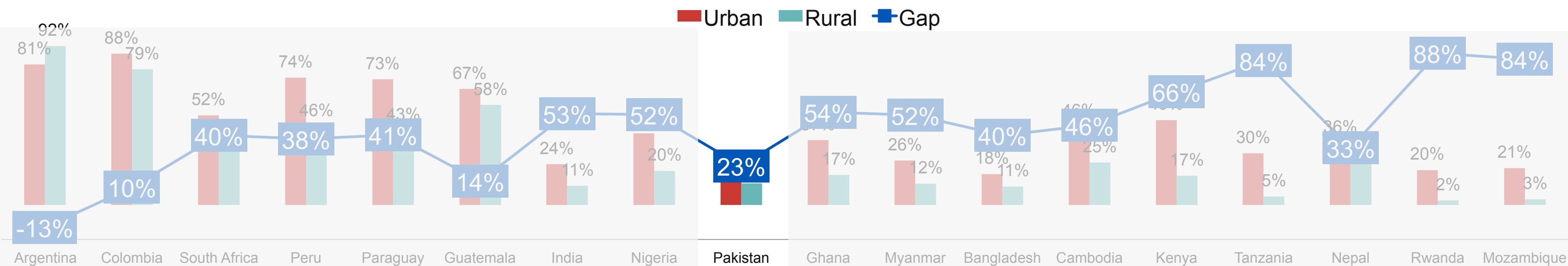
Base	Argentina	Colombia	South Africa	Peru	Paraguay	Guatemala	India	Nigeria	Pakistan	Ghana	Bangladesh	Cambodia	Kenya	Tanzania	Rwanda	Nepal	Mozambique
Feature or smartphone owners	982	1,020	1,552	972	809	846	1,397	795	571	458	936	878	1,074	789	660	903	667

# High gender gap in social media use in Pakistan

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



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



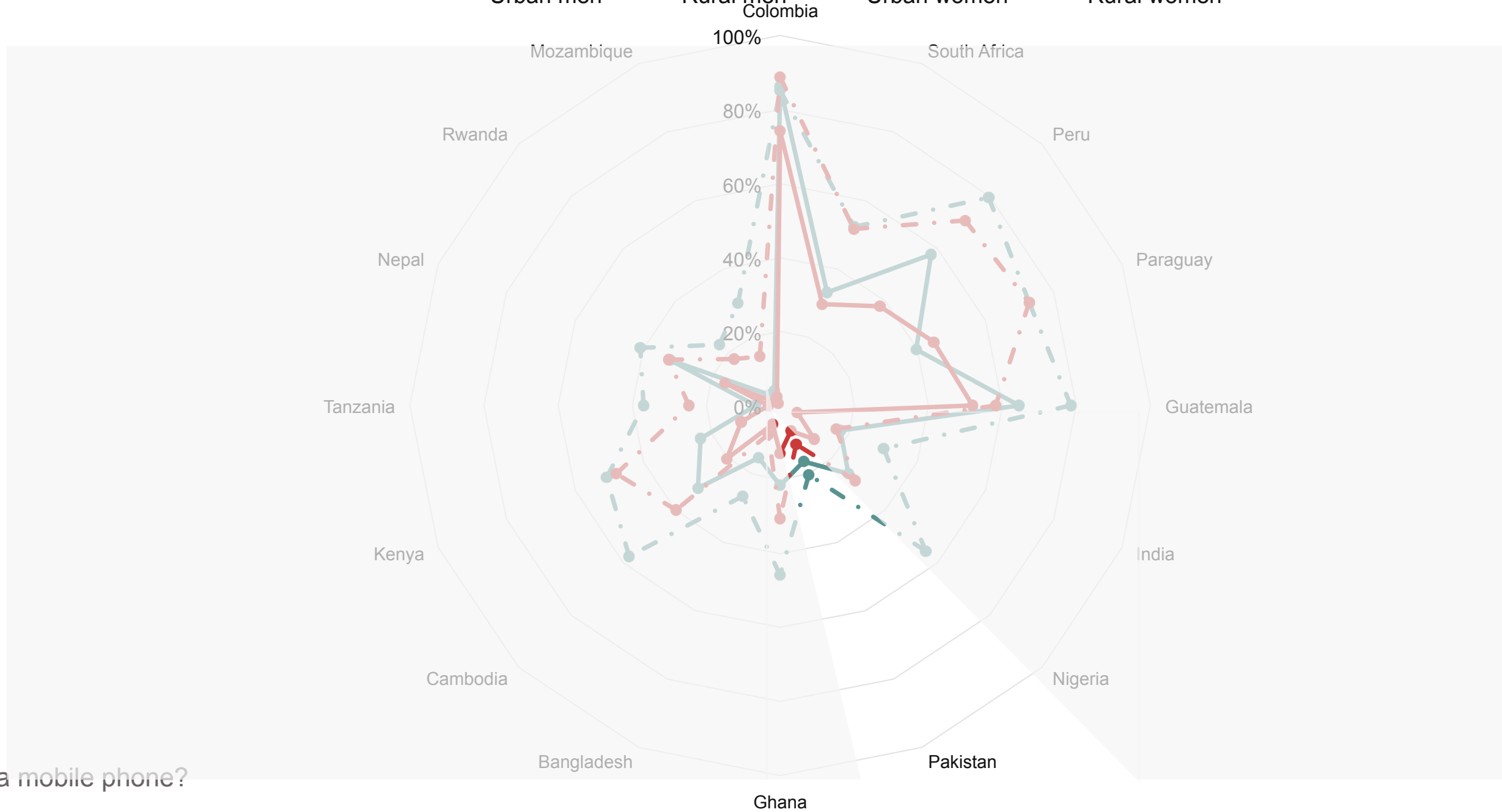
Q: Do you use social media like Facebook, Whatsapp, Twitter etc?

Base	Argentina	Colombia	South Africa	Peru	Paraguay	Guatemala	India	Nigeria	Pakistan	Ghana	Myanmar	Bangladesh	Cambodia	Kenya	Tanzania	Nepal	Rwanda	Mozambique
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

# Lowest level of Internet awareness among the rural women

## Social media use (% of aged 15-65 population)

Urban men Rural men Urban women Rural women



Q: Do you own a mobile phone?

Base	Colombia	South Africa	Peru	Paraguay	Guatemala	India	Nigeria	Pakistan	Ghana	Myanmar	Bangladesh	Cambodia	Kenya	Tanzania	Nepal	Rwanda	Mozambique
All respondents	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



# PAKISTAN BBQoSE

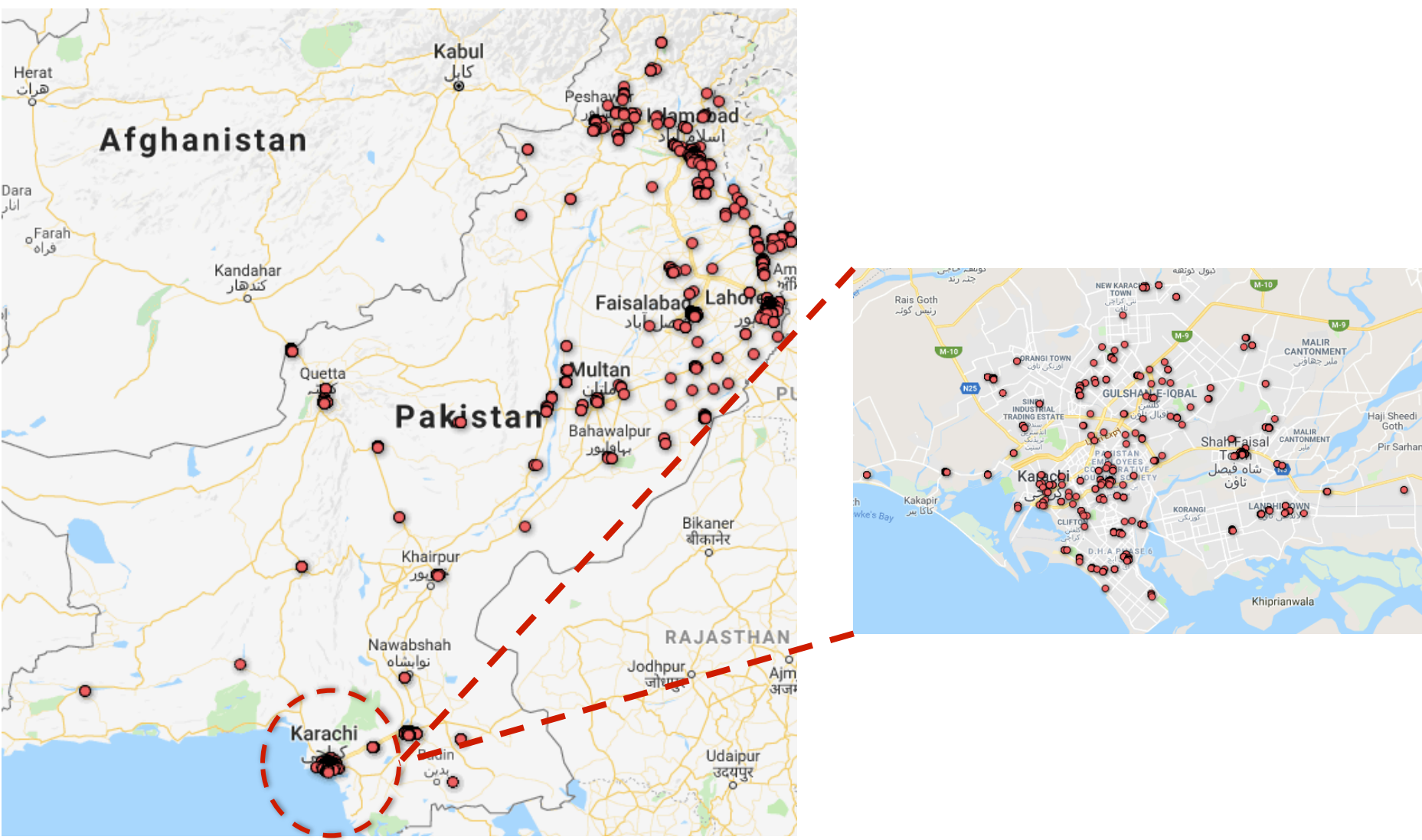
## PAKISTAN BBQoSE

- Pakistan performs poorly on quality of service experience
  - Lower speeds, higher latency

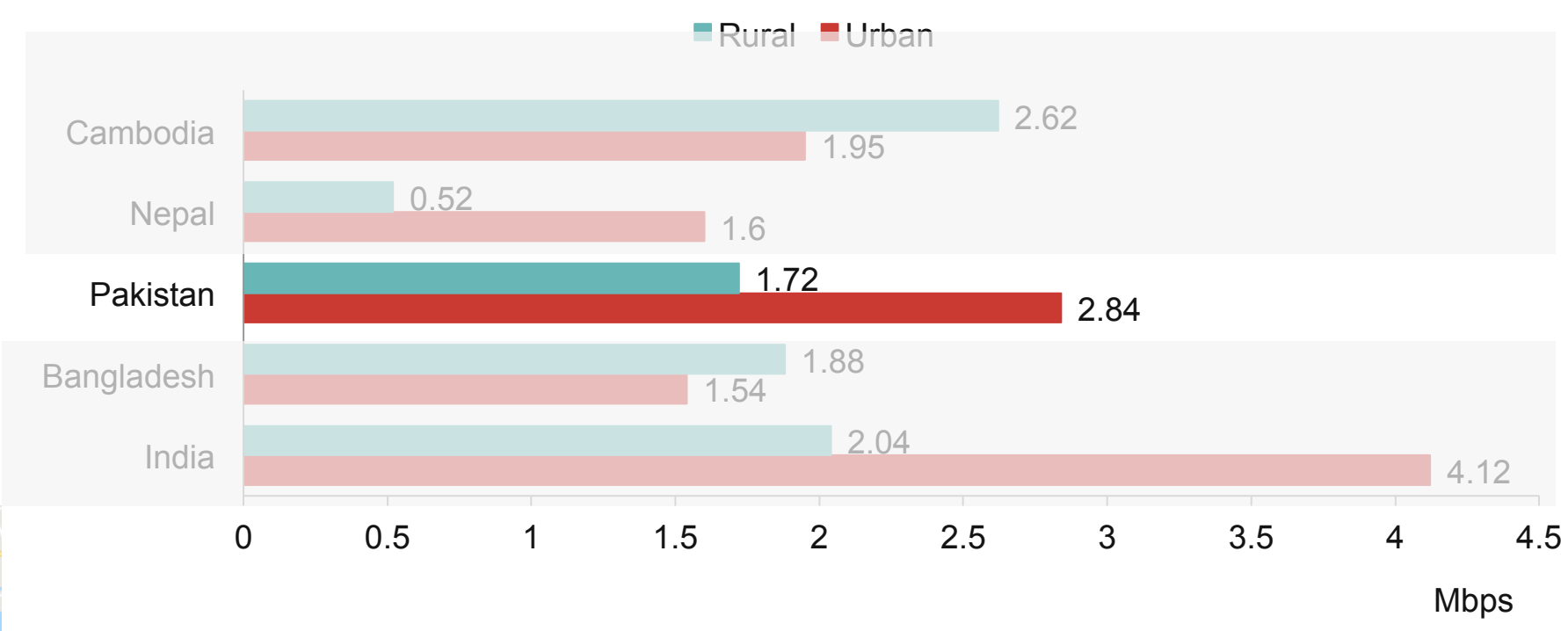
# Over 100k diagnostics across Pakistan show that broadband quality of service is poor; performance on broadband measures significantly worse in rural locations

## Pakistan test locations

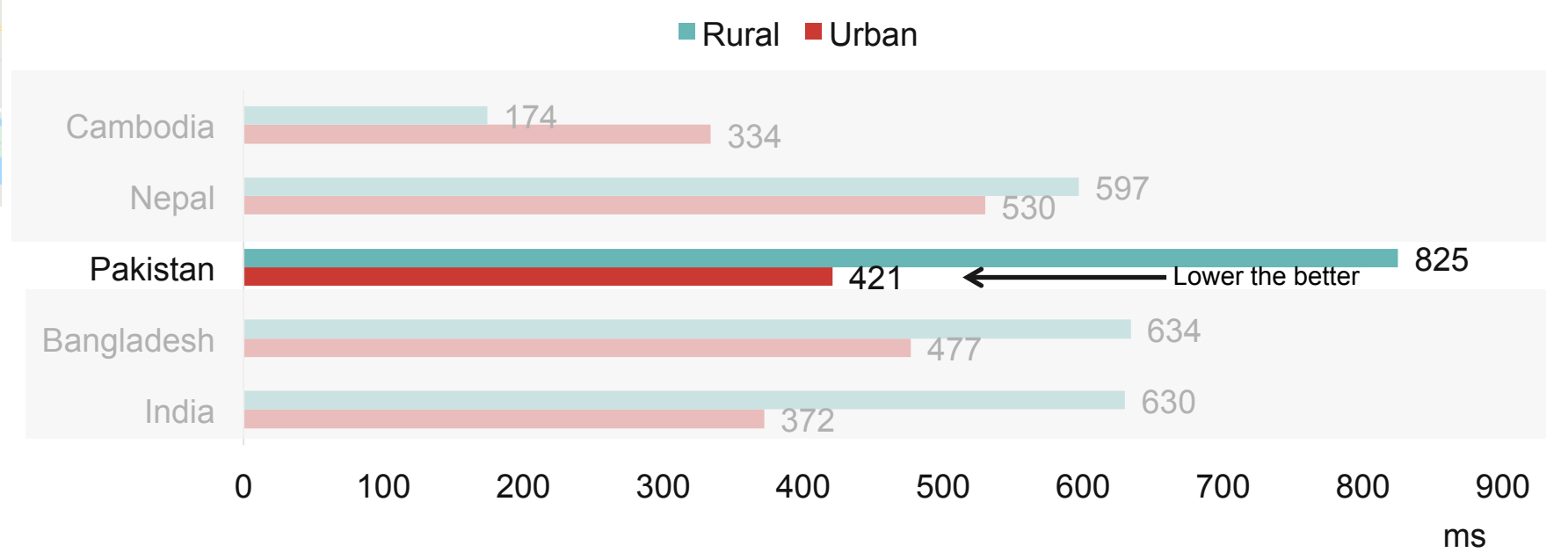
106,441 instances of Internet activity recorded from Pakistan; 15,000 unique geographical locations; across all Mobile Network Operators



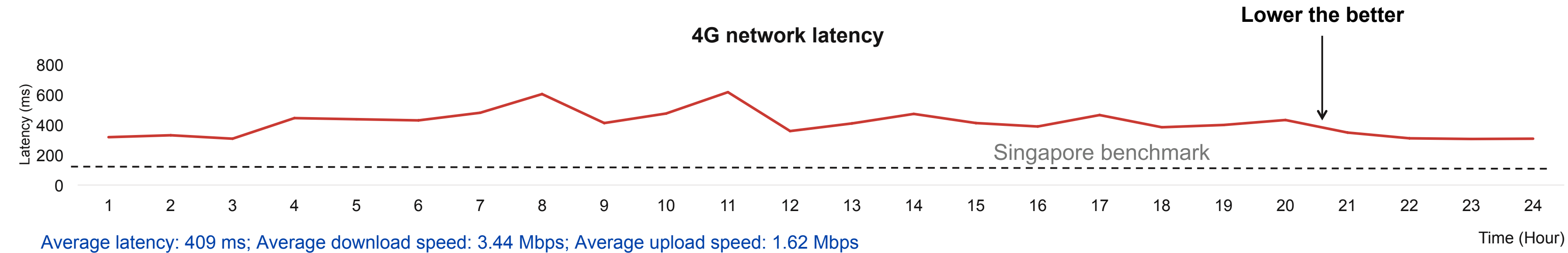
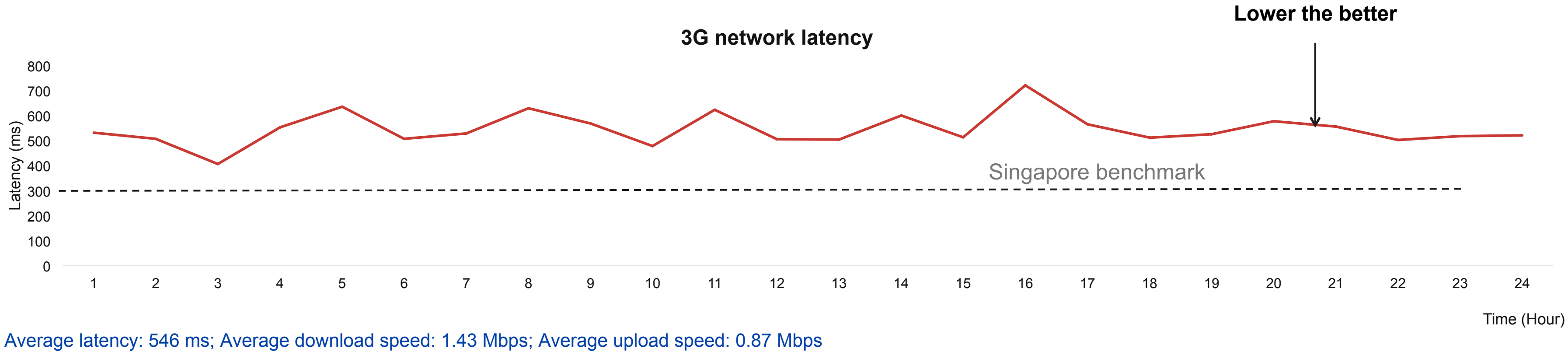
Average download speeds (Mbps), urban - rural



Average latency (ms), urban - rural



# Performance improvements visible on newer technologies, but even on 4G / LTE latency is still high



# NON-INTERNET USERS



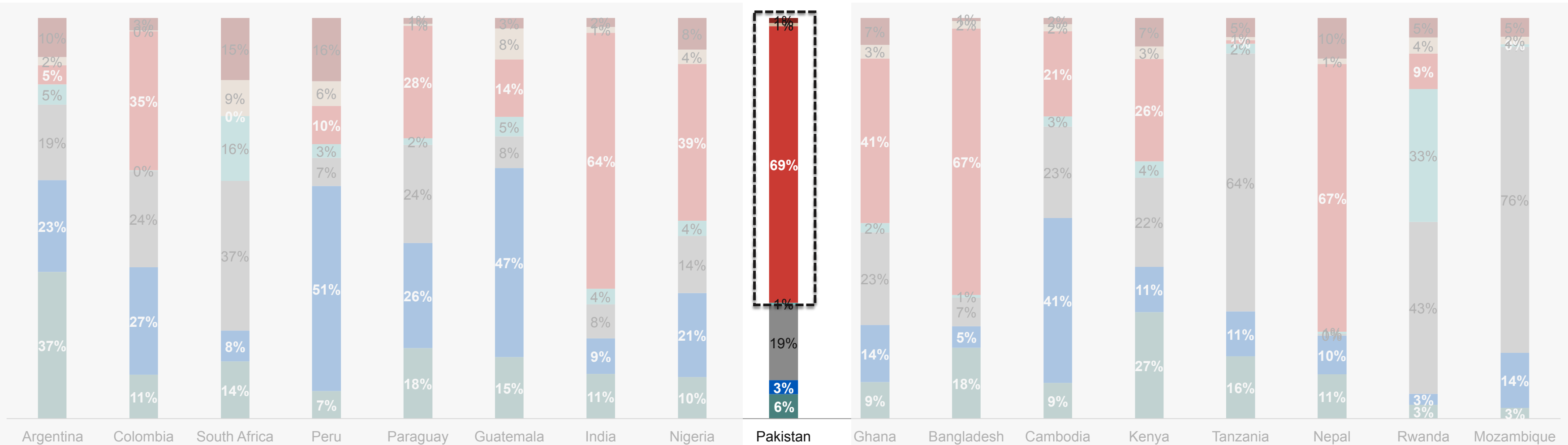
## NON-INTERNET USERS

- Awareness of what the Internet is, is the most pertinent barrier; device ownership next
  - Rural, women, less educated, the aged are among those lagging behind

# Why are people not using the Internet? 69% of non-users in Pakistan don't know what the Internet is; 19% due to lack of internet accessible devices

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

- No interest / not useful
- Too expensive
- I don't know how to use it
- I don't know what the internet is
- No access device computer /smartphone
- No time, too busy



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

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



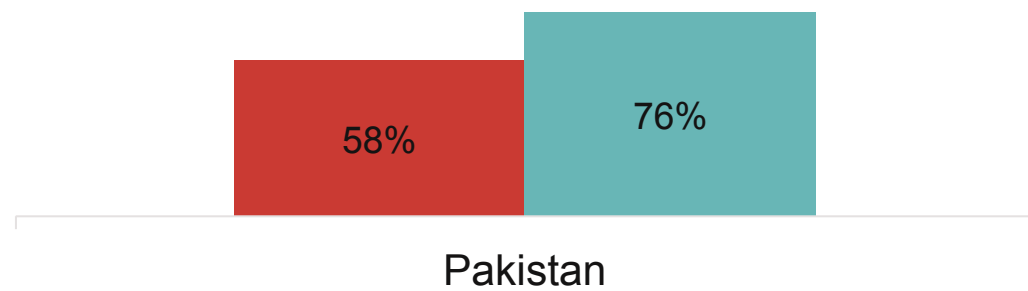
# More rural, women, the less educated and the old people don't know what the internet is

## Pakistan

Main reasons for not using the Internet (% of non-Internet users aged 15-65) - I don't know what internet is

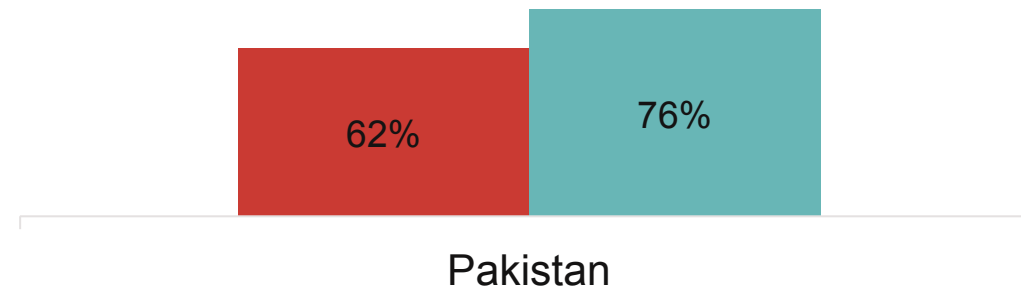
### Urban-rural

■ Urban ■ Rural



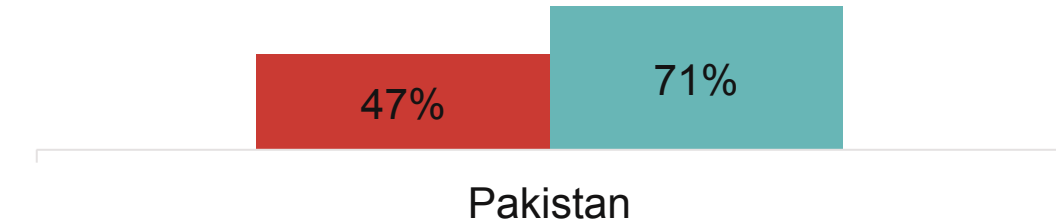
### Gender

■ Male ■ Female



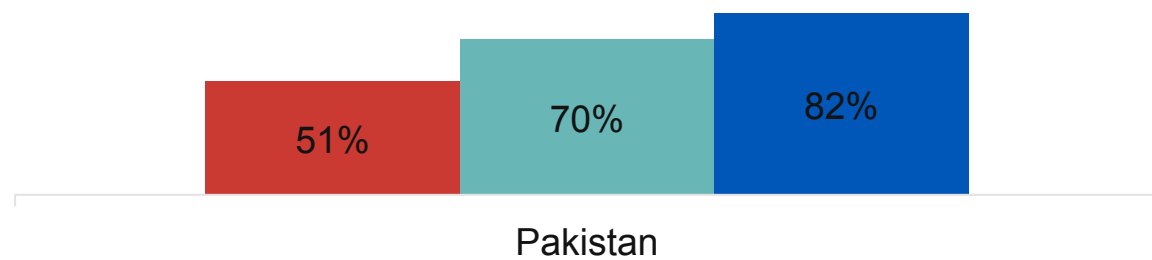
### Education

■ Secondary or higher education  
■ Primary or no education



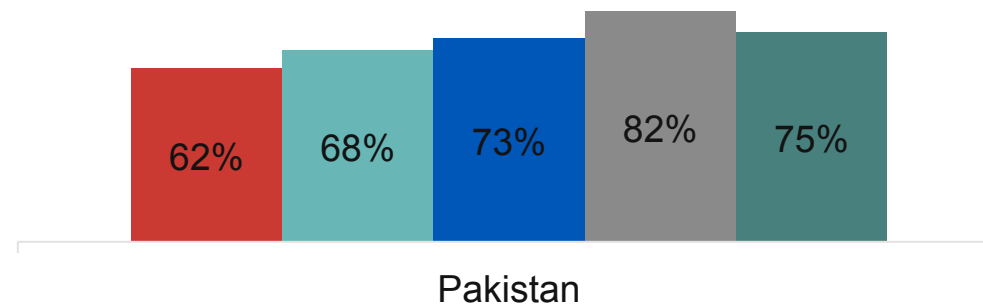
### Income

■ Above average income ■ Below average income  
■ Zero income



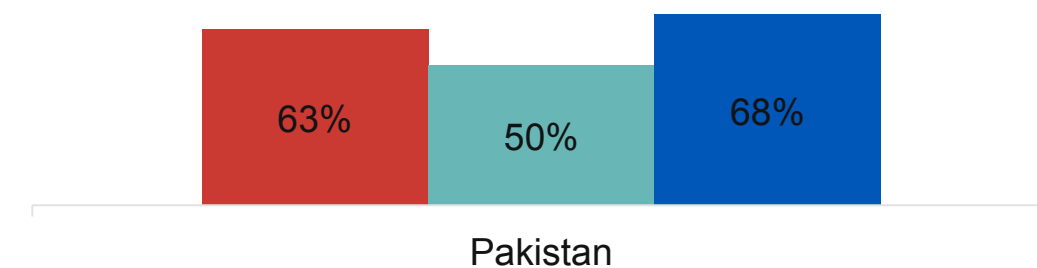
### Age

■ 15-25 ■ 26-35 ■ 36-45 ■ 46-55 ■ 56-65



### Phone type

■ Basic phone ■ Feature phone ■ Smartphone



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

Base	Pakistan
Non-Internet users	1,575

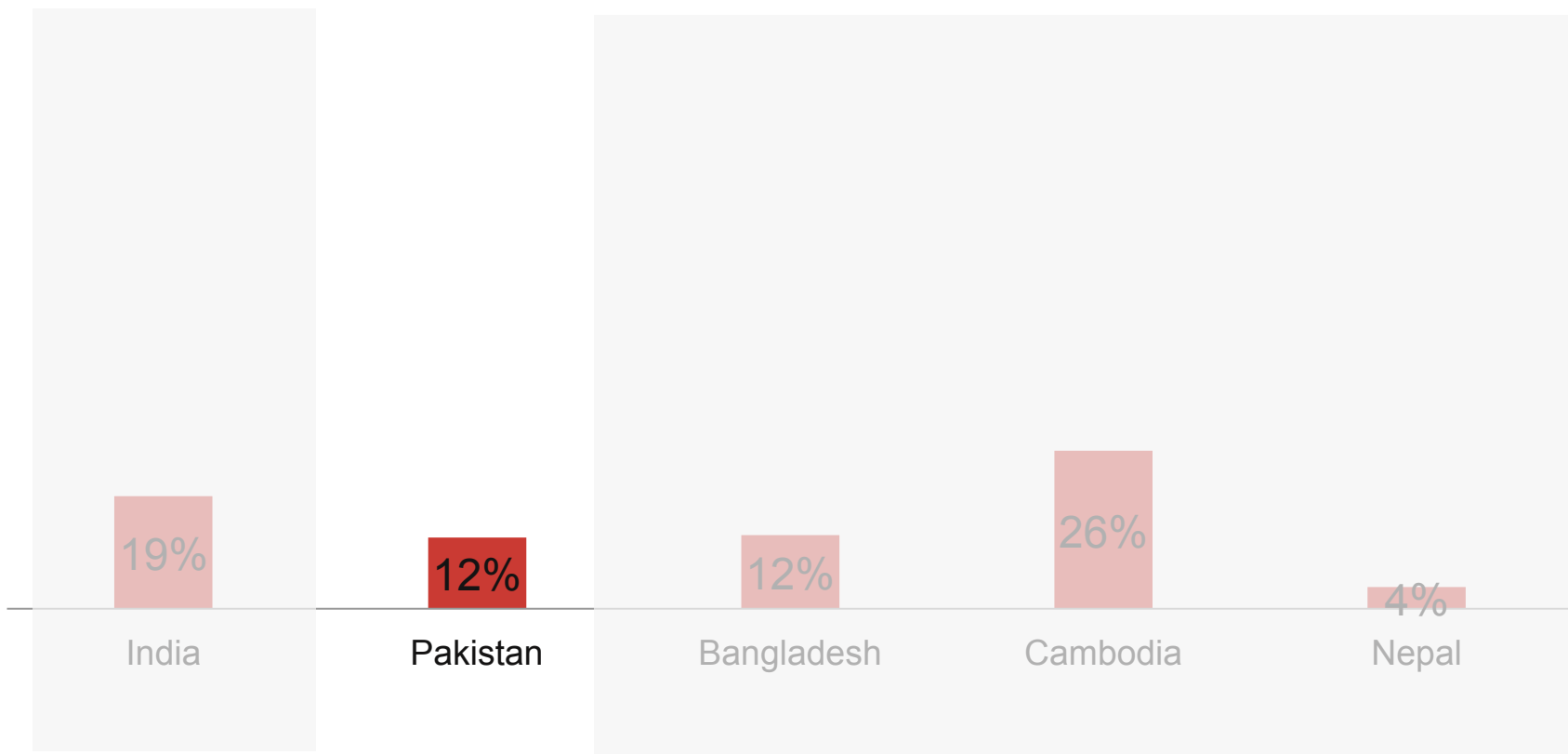
# ONLINE EXPERIENCE and RIGHTS

## ONLINE EXPERIENCE and RIGHTS

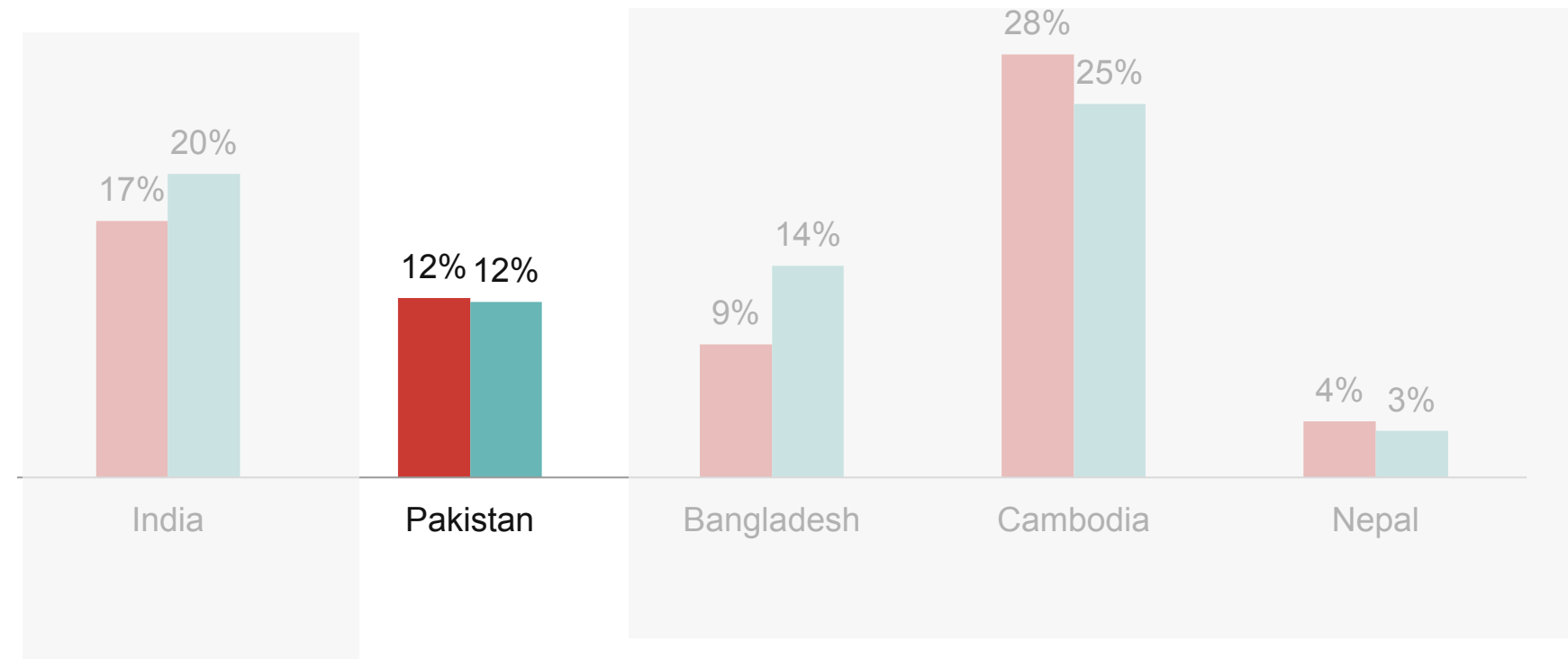
- Online harassment experienced by 12% of social media users
- Mainly being confronted with 'unwanted or offensive' material or being bullied on social media

# Only 12% of Internet or social media users in Pakistan have experienced some form of online harassment;

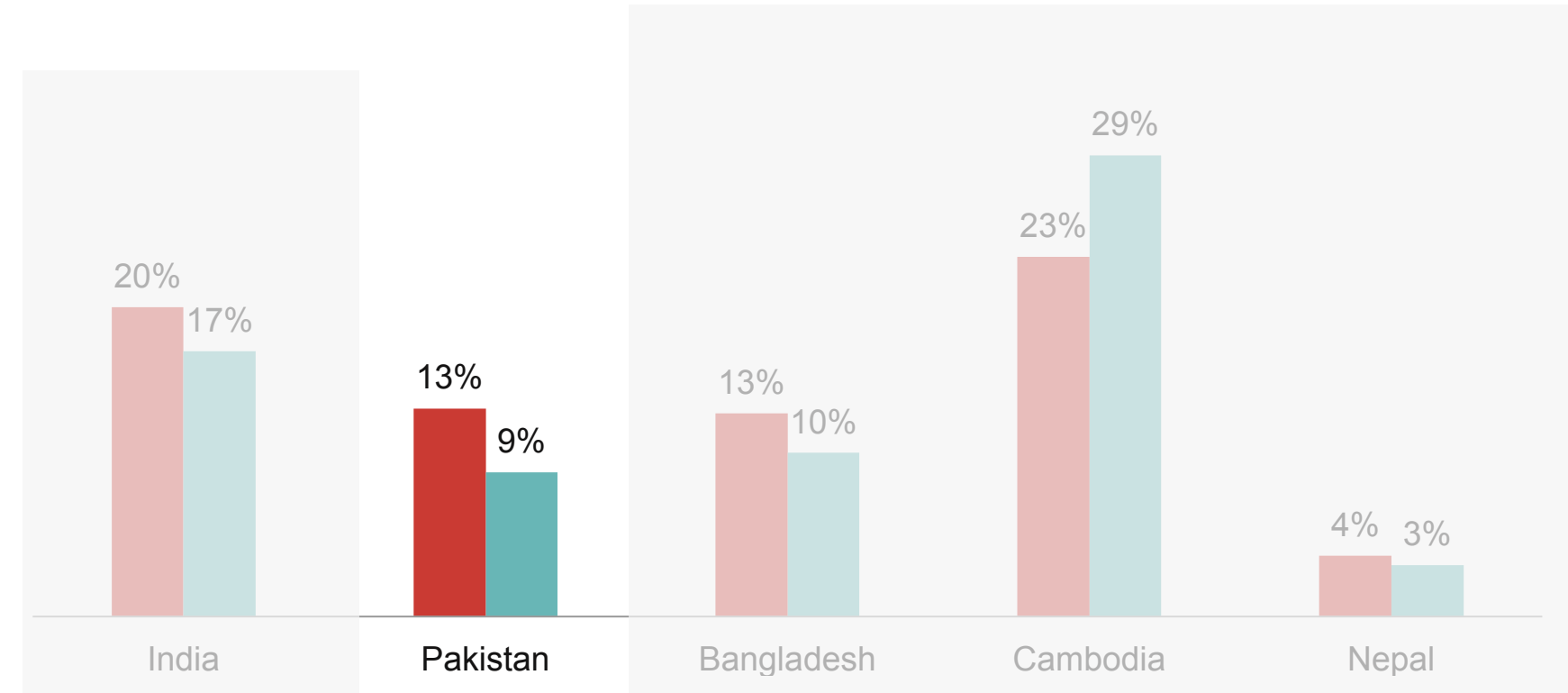
Experiencing online harassment (% of aged 15-65 internet users)



Urban Rural



Male Female



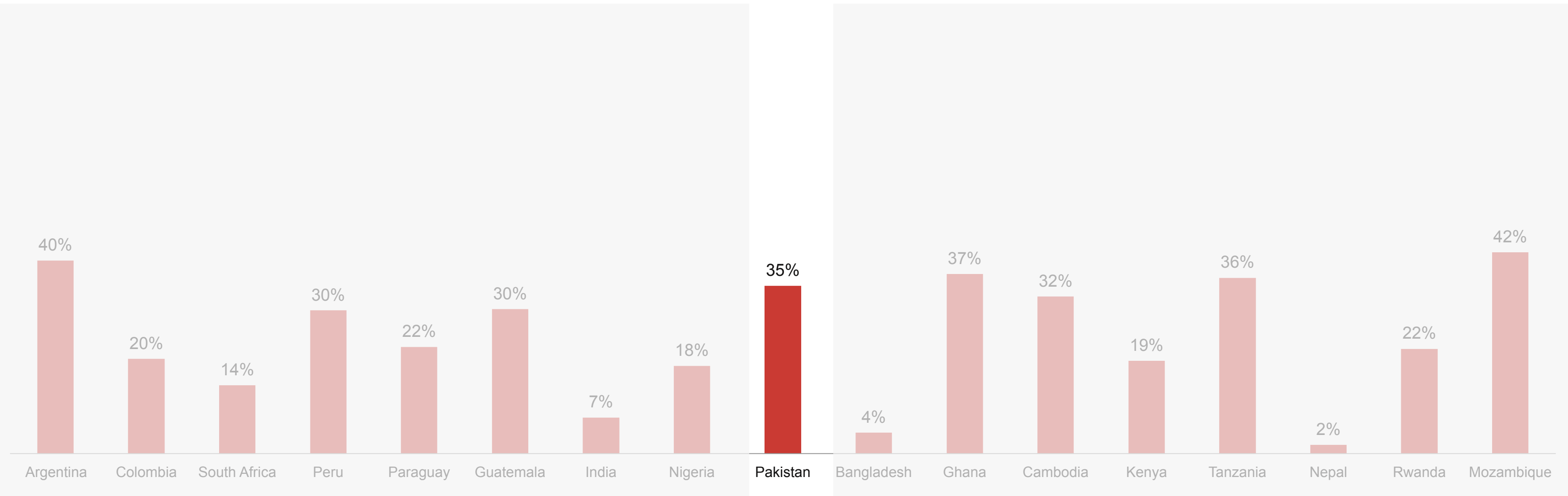
- Q1: Being called offensive names
- Q2: Being purposefully embarrassed or criticized in another way (besides being called offensive names)
- Q3: Being physically threatened
- Q4: Being sexually harassed
- Q5: Being approached repeatedly by unwanted contacts (cyber-stalked)

Base	India	Pakistan	Bangladesh	Cambodia	Nepal
Internet users	919	427	266	804	713



# Users confronted by “unwanted” material (not necessarily all illegal) in all countries.

**Confronted with unwanted offensive or inappropriate material (% of age 15-65 social media users)**



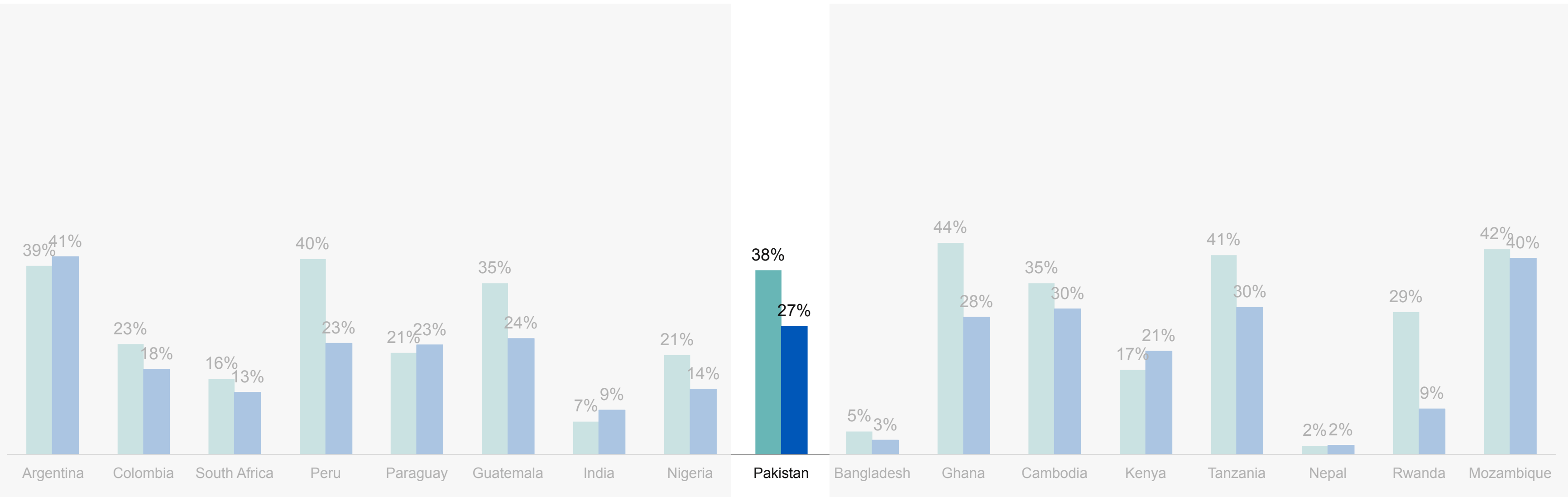
Q: While using social media were you ever confronted with unwanted offensive or inappropriate material (e.g. sexual content)?

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

# Men have confronted with unwanted offensive or inappropriate material

Confronted with unwanted offensive or inappropriate material (% of age 15-65 Social media users)

■ Male ■ Female

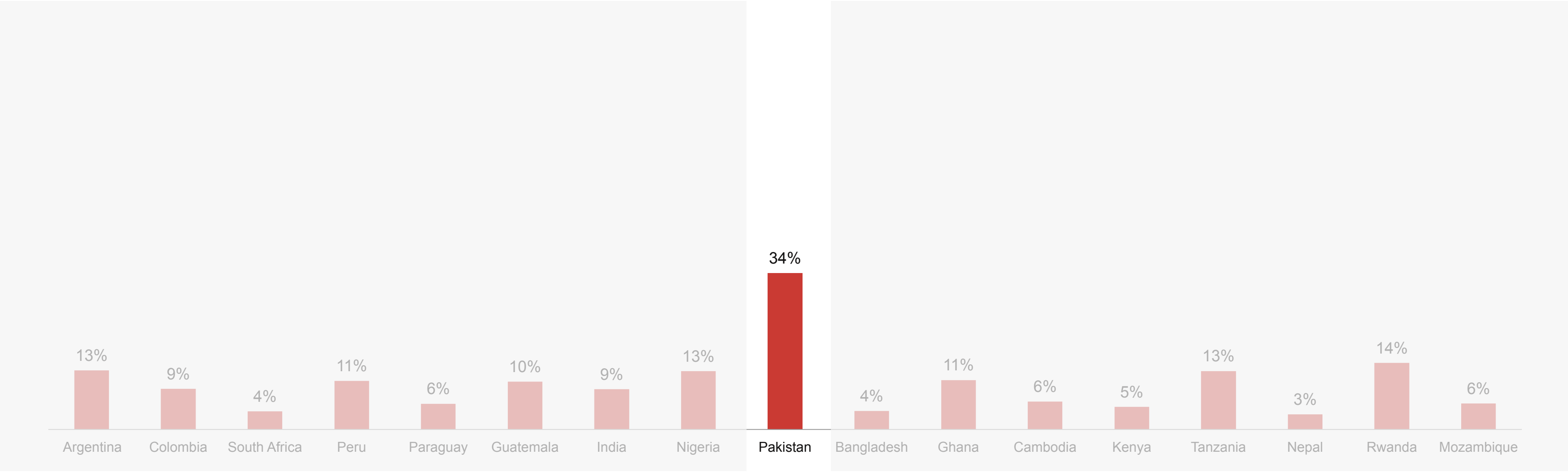


Q: While using social media were you ever confronted with unwanted offensive or inappropriate material (e.g. sexual content)?

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

# Incidence of online bullying is highest in Pakistan

Victim of online bullying (% of age 15-65 Social media users)



Q: Have You Ever Been A Victim Of On-Line Bullying (repeated offensive comments or emails)?

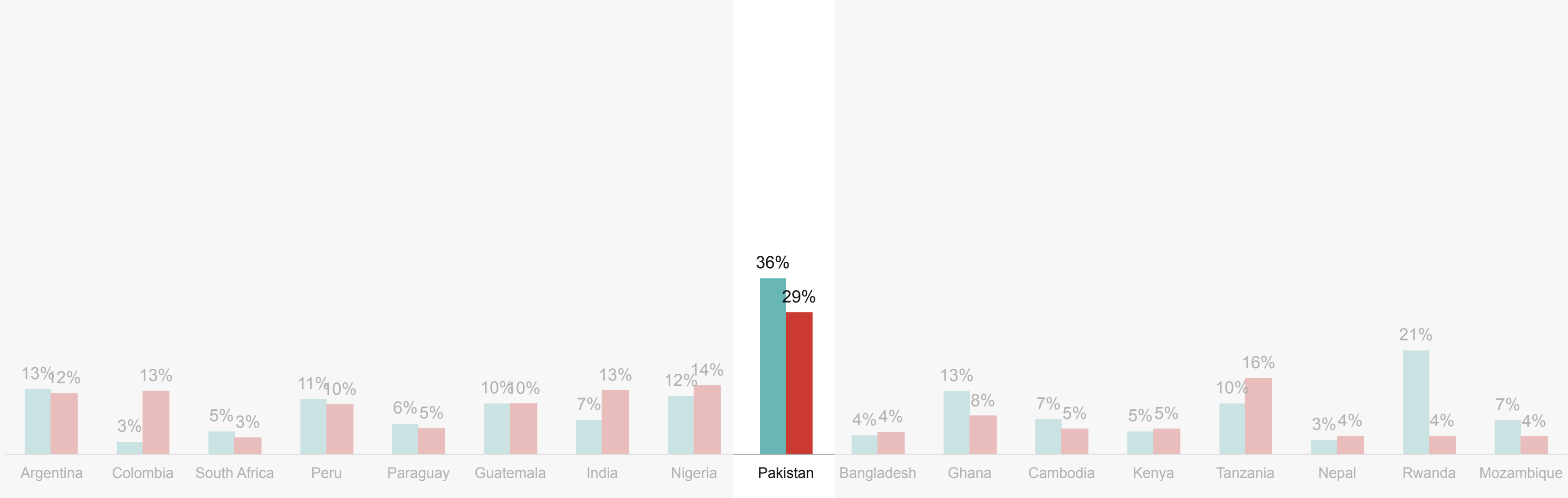
Base Social media users	Argentina	Colombia	South Africa	Peru	Paraguay	Guatemala	India	Nigeria	Pakistan	Ghana	Bangladesh	Cambodia	Kenya	Tanzania	Nepal	Rwanda	Mozambique
	993	1,246	669	999	802	878	754	496	369	323	251	680	423	241	648	156	230



# Online bullying: more men

Victim of online bullying (% of age 15-65 Social media users)

Male Female



Q: Have You Ever Been A Victim Of On-Line Bullying (repeated offensive comments or emails)?

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



# SOCIAL MEDIA BEHAVIOR

## **SOCIAL MEDIA BEHAVIOR**

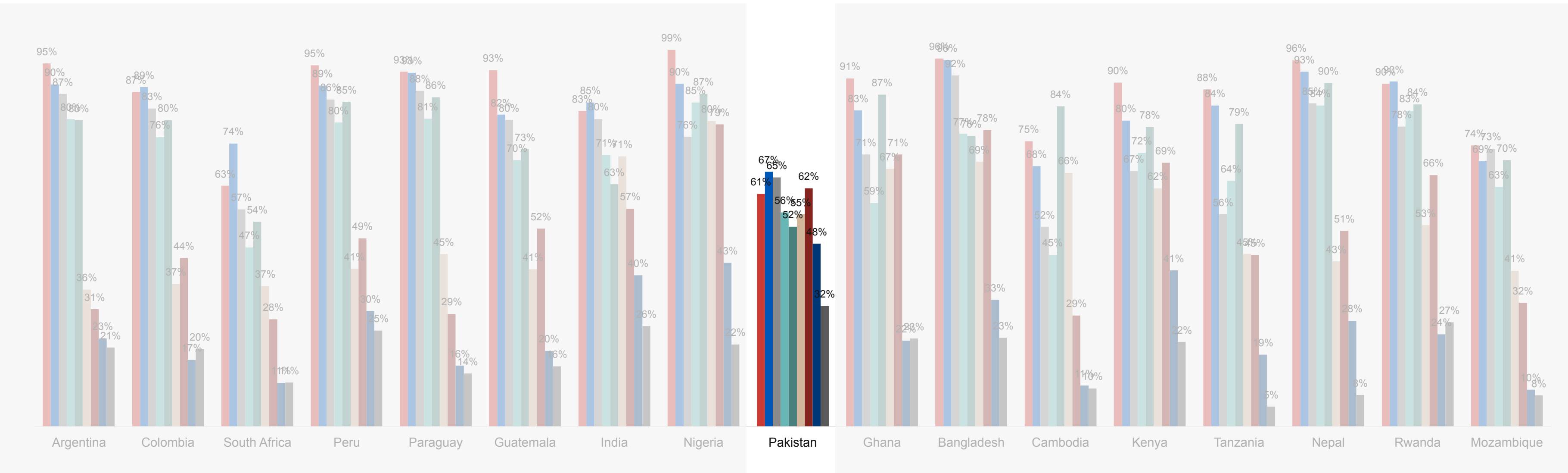
- Pakistani social media use still in its nascent stage
- Uses a little more cautious in their online/SM behavior, sharing less information on their profile pages and also more weary about trusting news and sharing content on social media



# Pakistani social media users less will (all the countries studied) to share their personal information on social media

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

Gender Real Name Age Marital status Pictures or videos you and your family and friends Mobile Number / Email address Religion Political views Sexual orientation



Q: What information do you share on social media ?

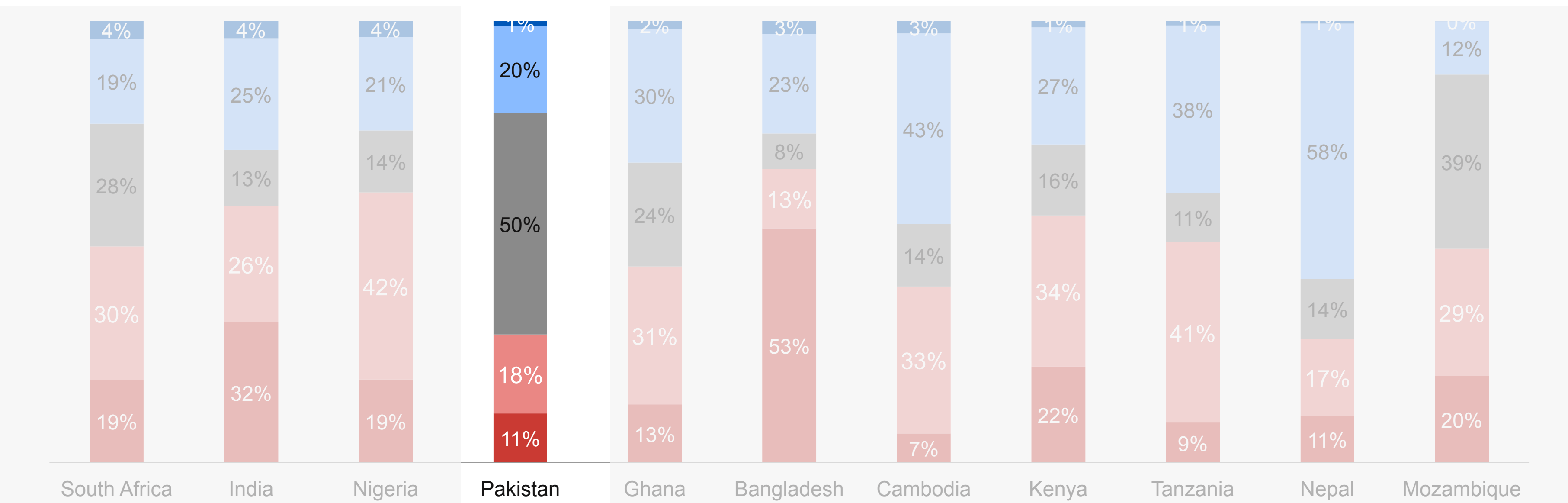
Base	Argentina	Colombia	South Africa	Peru	Paraguay	Guatemala	India	Nigeria	Pakistan	Ghana	Bangladesh	Cambodia	Kenya	Tanzania	Nepal	Rwanda	Mozambique
Social media users	993	1,246	669	999	802	878	754	496	369	323	251	680	423	241	648	156	230



# Low level of trust among countries studied

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

Strongly do not trust Do not trust Don't know Trust Strongly trust



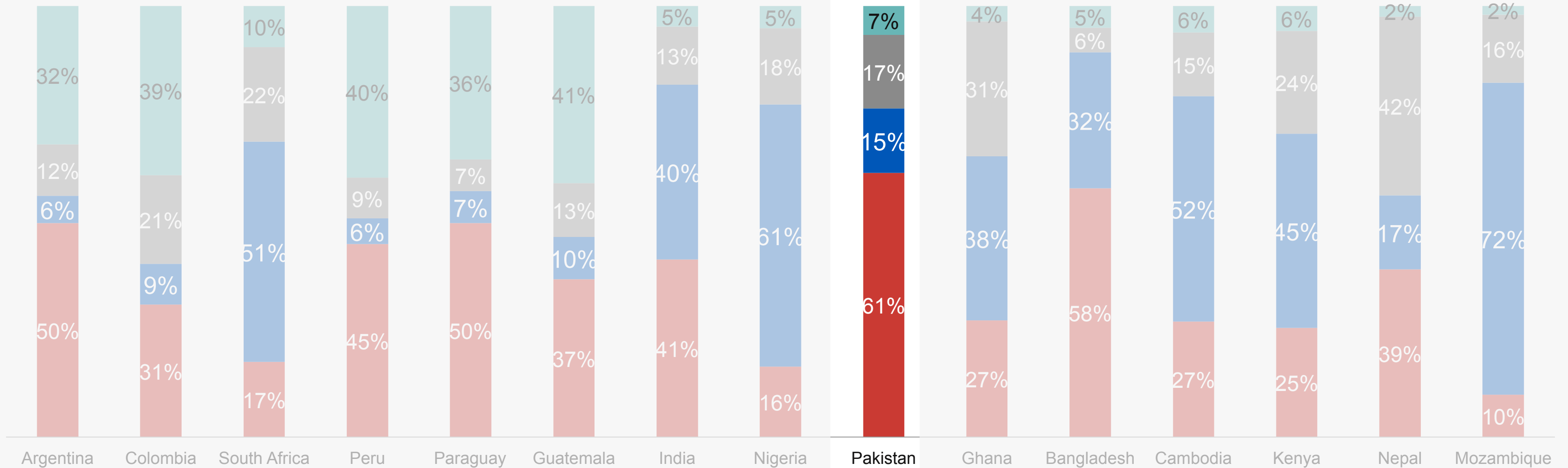
Q: Can you/do you trust the news you read on Social Media (Facebook etc)?

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

# 17% of Pakistani social media users share content if it from a trusted friend/ source; only 15% check for it's truthfulness; 61% doesn't share anything

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

- I don't share or forward messages
- I share it if it is from a trusted friend or source
- I always verify its truthfulness before sharing
- I share it without checking



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	Tanzania	Nepal	Mozambique
Social media users	993	1,246	669	999	802	878	754	496	369	323	251	680	423	241	648	230



**PERCIEVED IMPACTS OF THIS ACCESS and USE?**

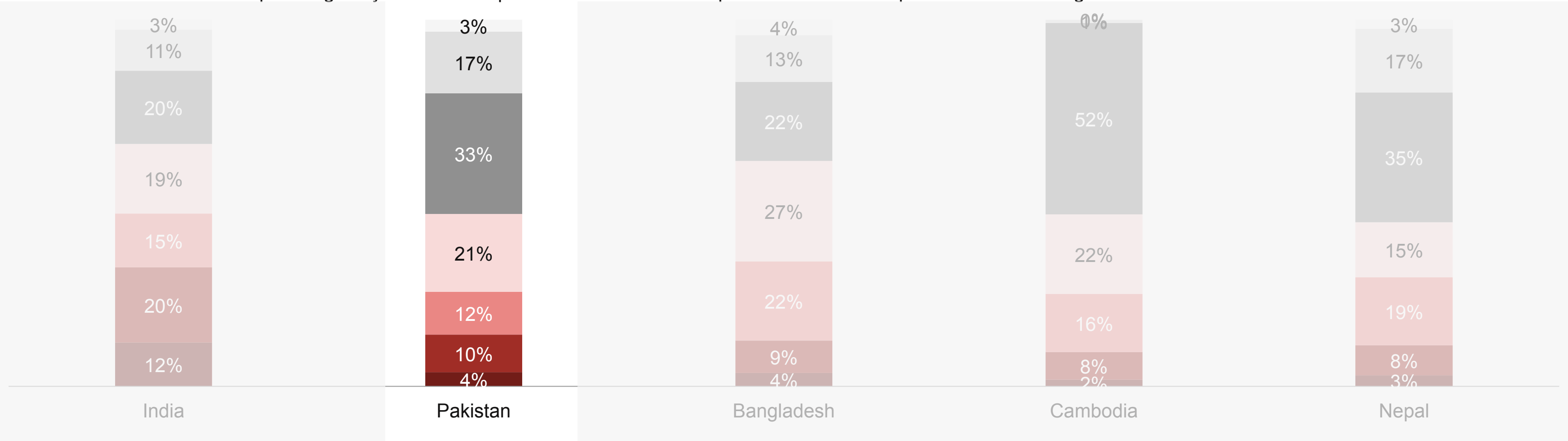
## PERCIEVED IMPACTS OF THIS ACCESS and USE?

- Some perceive benefits in terms of financial, social and emergency benefits
- Some negative perceptions/concerns also held: addiction, exposure (of children) to inappropriate content and privacy

# Many see their economic/financial status/well being has improved at least a little due to use of mobile phones; but few see it greatly improved

**Economic/financial status or well being (% of aged 15-65 mobile phone users)**

■ Improved greatly  
 ■ Quite improved  
 ■ Somewhat improved  
 ■ A little improved  
 ■ No change  
 ■ Don't know  
 ■ Refused



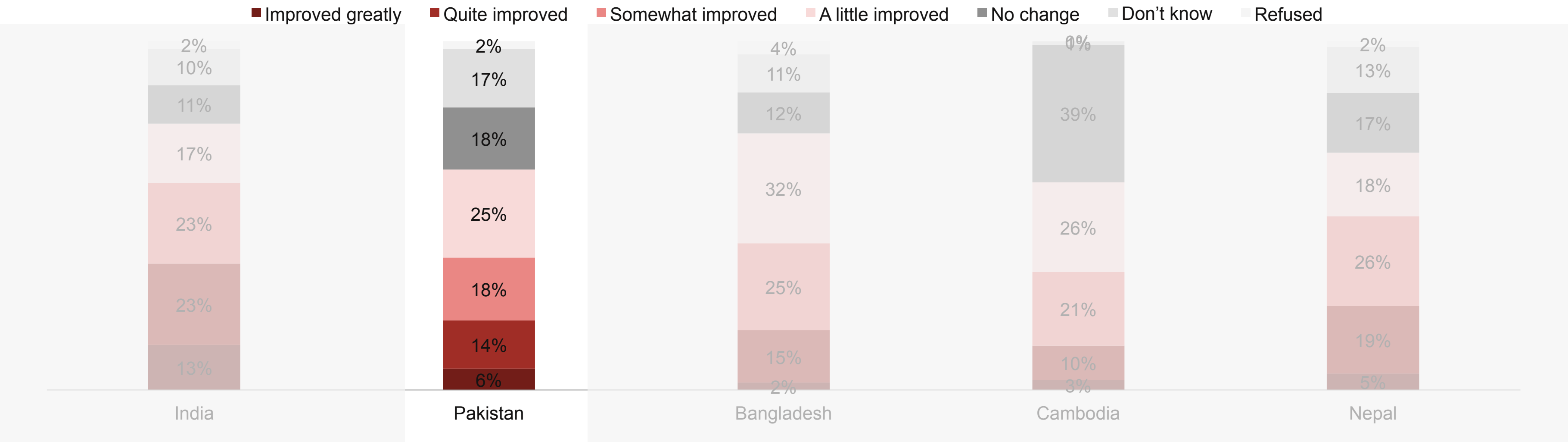
Q: Please tell me to what extent your usage and access of a mobile improved the following, if at all? This can include mobile use through voice or data, and need not have been your own mobile. Please give answer with the help of this scale: Your economic/financial status or well being

Base	India	Pakistan	Bangladesh	Cambodia	Nepal
Those who used a mobile phone in last three months	4,002	1,404	1,209	1,611	1,619



# Many see at least small improvements in their level of knowledge and skill due to the use of mobiles phones. But few feel very strongly +ve

**Level of knowledge and skills(% of aged 15-65 mobile phone users)**

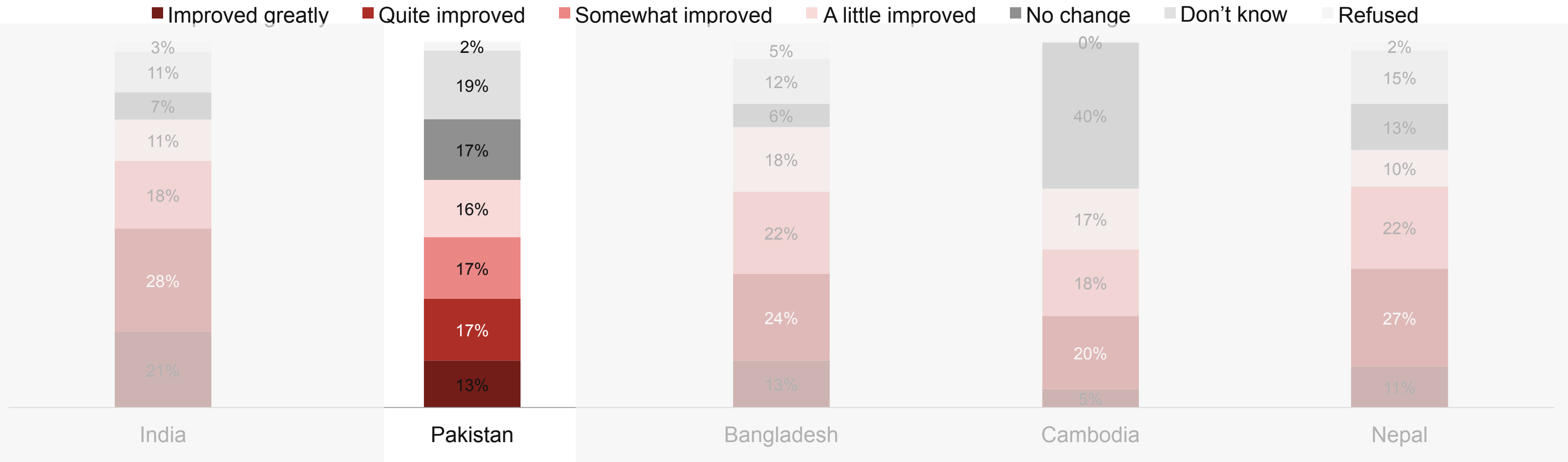


Q: Please tell me to what extent your usage and access of a mobile improved the following, if at all? This can include mobile use through voice or data, and need not have been your own mobile. Please give answer with the help of this scale: Your level of knowledge and skills?

Base	India	Pakistan	Bangladesh	Cambodia	Nepal
Those who used a mobile phone in last three months	4,002	1,404	1,209	1,611	1,619

# Social and family relations improved for 47% of mobile phone owners

**Social and familial relations and relationships(% of aged 15-65 mobile phone users)**

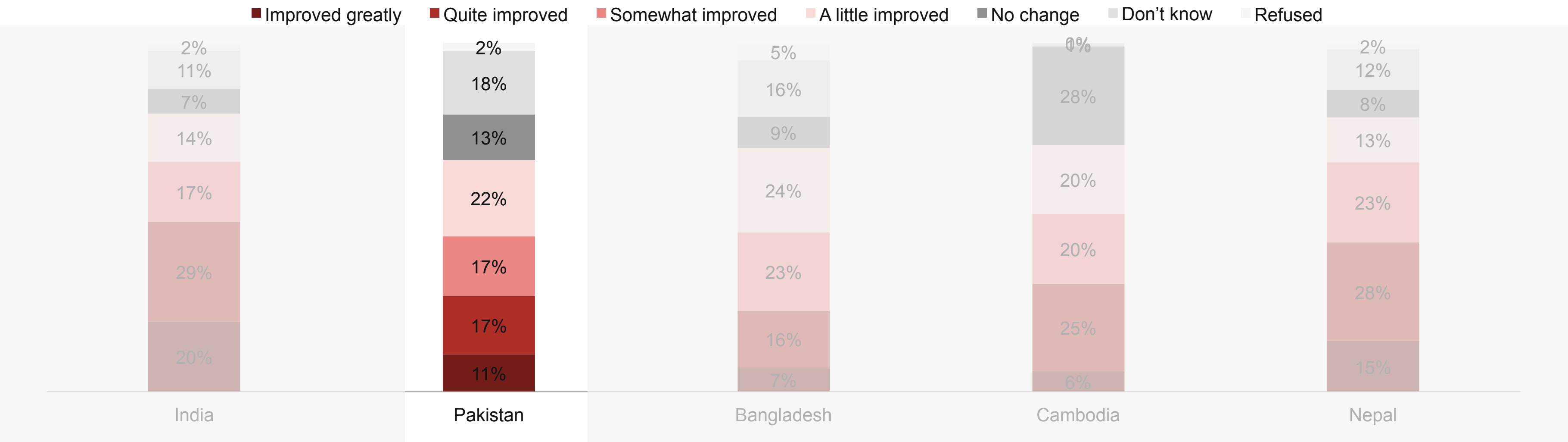


Q: Please tell me to what extent your usage and access of a mobile improved the following, if at all? This can include mobile use through voice or data, and need not have been your own mobile. Please give answer with the help of this scale: Your social and familial relations and relationships?

Base	India	Pakistan	Bangladesh	Cambodia	Nepal
Those who used a mobile phone in last three months	4,002	1,404	1,209	1,611	1,619

# The highest and most consistent +ve impact is the ability of mobile users to act in an emergency

Ability to act or contact others in an emergency (% of aged 15-65 mobile phone users)

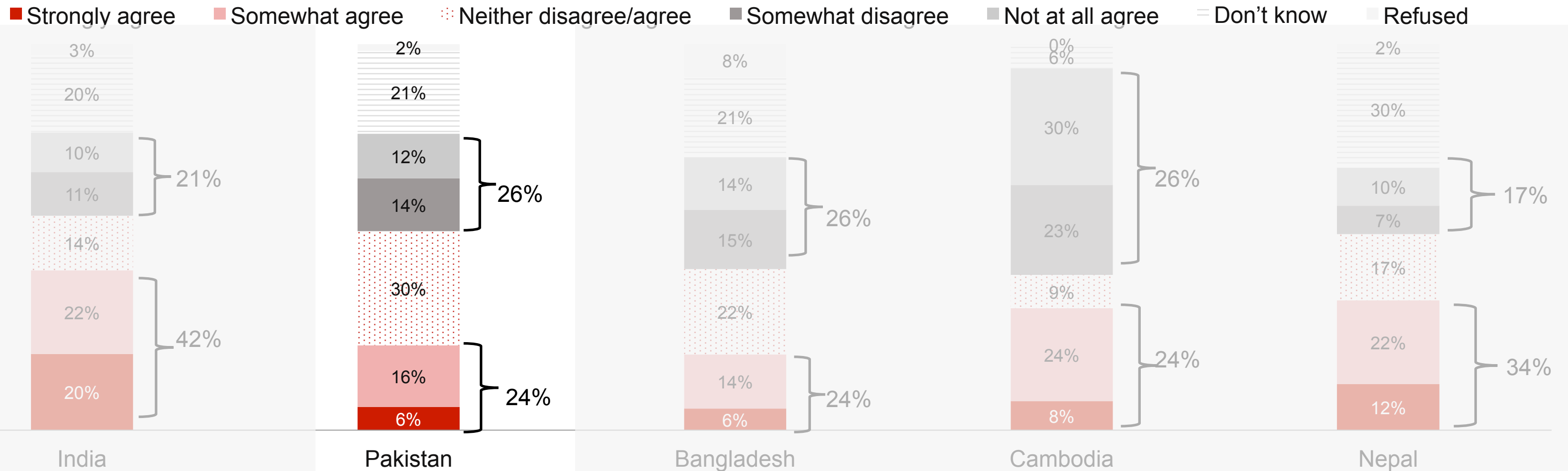


Q: Please tell me to what extent your usage and access of a mobile improved the following, if at all? This can include mobile use through voice or data, and need not have been your own mobile. Please give answer with the help of this scale: Your ability to act or contact others in an emergency?

Base	India	Pakistan	Bangladesh	Cambodia	Nepal
Those who used a mobile phone in last three months	4,002	1,404	1,209	1,611	1,619

# Opinion is split on the negatives, in all countries, many without a strong opinion.

They cause people to become divided, socially politically, etc..(% of aged 15-65 mobile phone users)

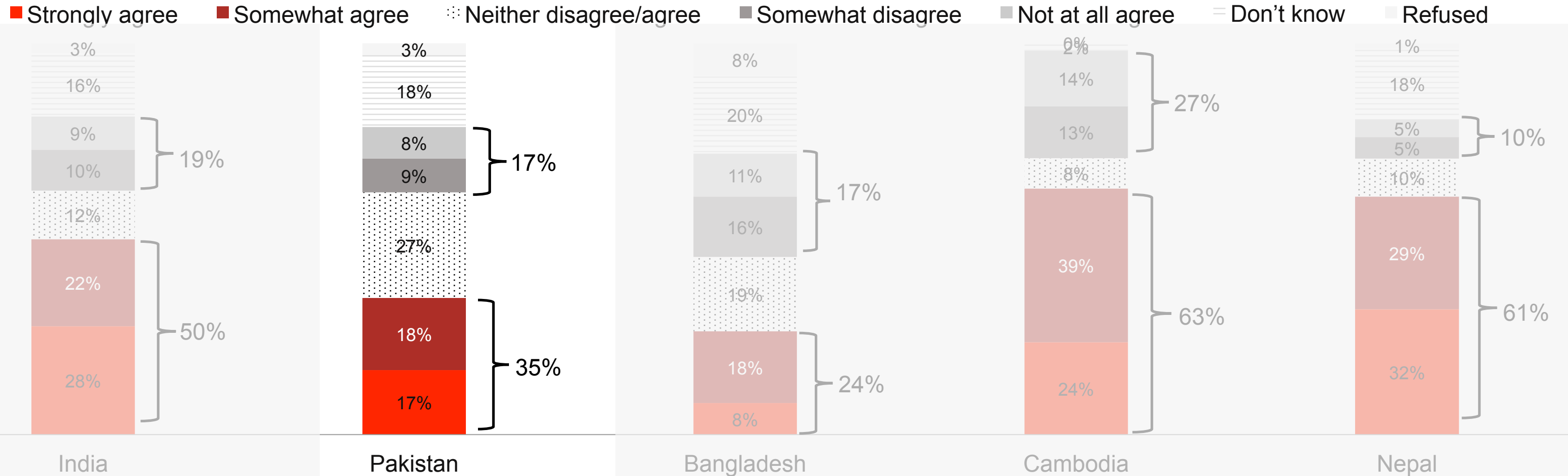


Q: Here are some of the concerns that people sometimes have about access to and use of mobiles and online/Internet services. Please tell me to what extent you think these are problems, with the help of this scale: They cause people to become divided, socially politically, etc..

Base	India	Pakistan	Bangladesh	Cambodia	Nepal
Those who used a mobile phone in last three months	4,002	1,404	1,209	1,611	1,619

# Addiction to mobiles + Internet is a concern for many

People get addicted to using them(% of aged 15-65 mobile phone users)

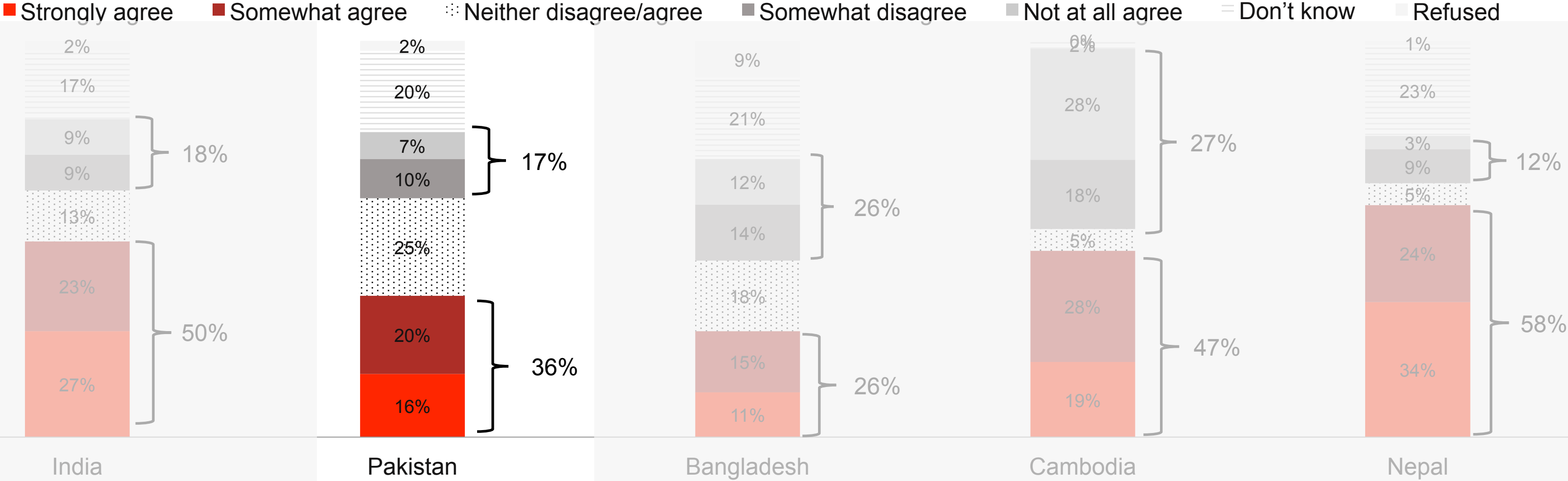


Q: Here are some of the concerns that people sometimes have about access to and use of mobiles and online/Internet services. Please tell me to what extent you think these are problems, with the help of this scale: People get addicted to using them

Base	India	Pakistan	Bangladesh	Cambodia	Nepal
Those who used a mobile phone in last three months	4,002	1,404	1,209	1,611	1,619

# Many also worry about children's exposure to inappropriate content

Children are exposed to inappropriate content(% of aged 15-65 mobile phone users)



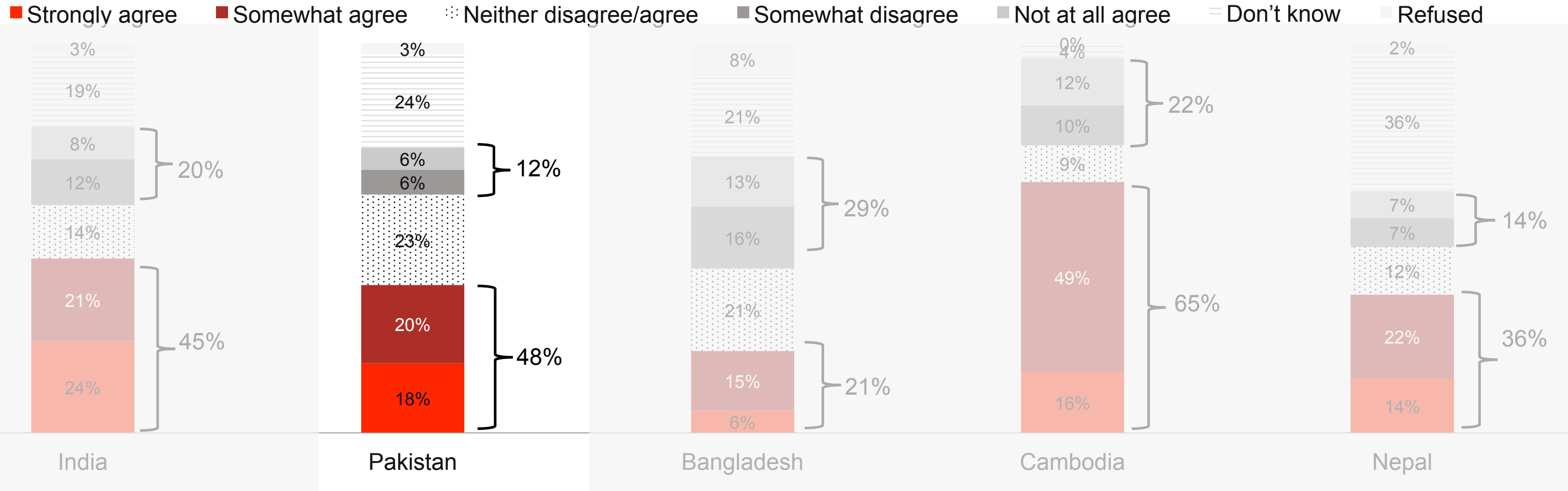
Q: Here are some of the concerns that people sometimes have about access to and use of mobiles and online/Internet services. Please tell me to what extent you think these are problems, with the help of this scale: Children are exposed to inappropriate content

Base	India	Pakistan	Bangladesh	Cambodia	Nepal
Those who used a mobile phone in last three months	4,002	1,404	1,209	1,611	1,619



# Majority worry about their private information being seen by others

Private information can be seen by others through the mobile and Internet (% of aged 15-65 mobile phone users)



Q: Here are some of the concerns that people sometimes have about access to and use of mobiles and online/Internet services. Please tell me to what extent you think these are problems, with the help of this scale: Private information can be seen by others through the mobile and Internet

Base	India	Pakistan	Bangladesh	Cambodia	Nepal
Those who used a mobile phone in last three months	4,002	1,404	1,209	1,611	1,619

# PUBLIC Wi-Fi USE

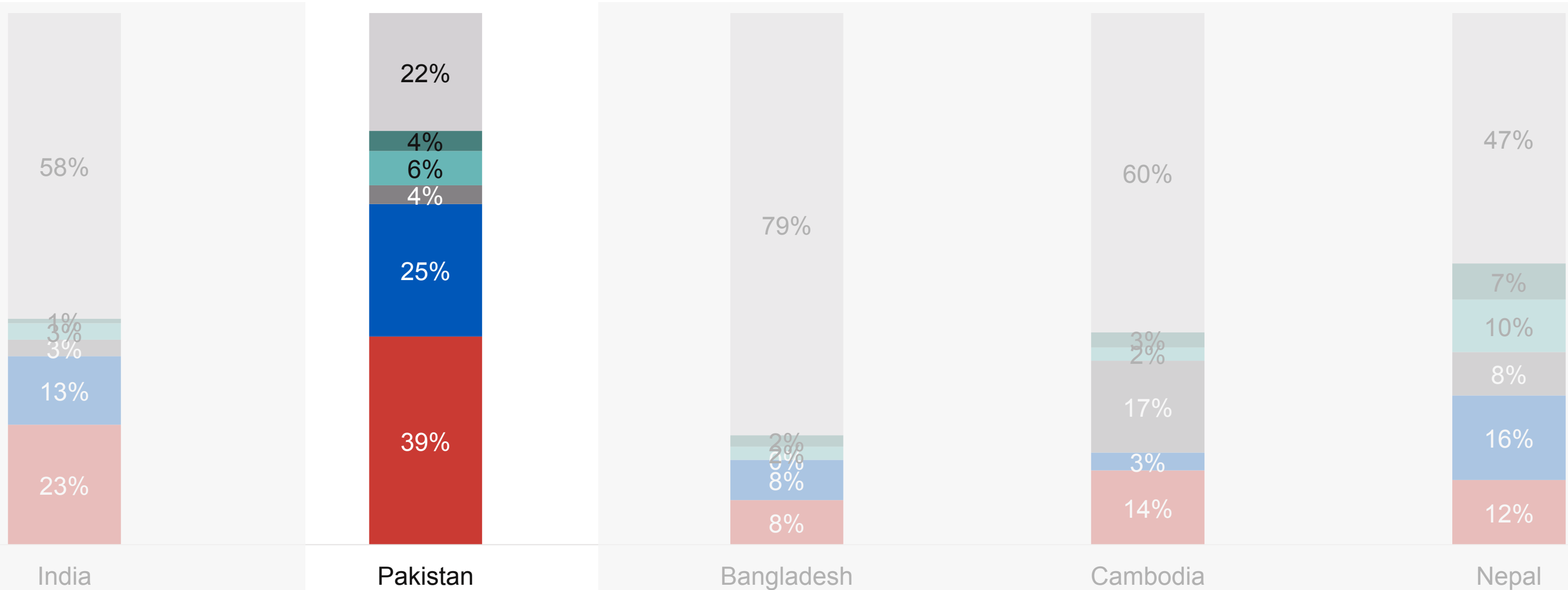
## **PUBLIC Wi-Fi USE**

- Highest user of public Wi-Fi in Asian survey countries seen in Pakistan

# 39% of 15-65 Internet users in Pakistan use free public Wi-Fi; 25% use paid WiFi

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

■ Free public Wi-Fi 
 ■ Paid Wi-Fi (hotspots) 
 ■ Conditional Wi-Fi (shops, cafes...) 
 ■ Combination of the above 
 ■ Other 
 ■ No, I don't use public Wi-Fi



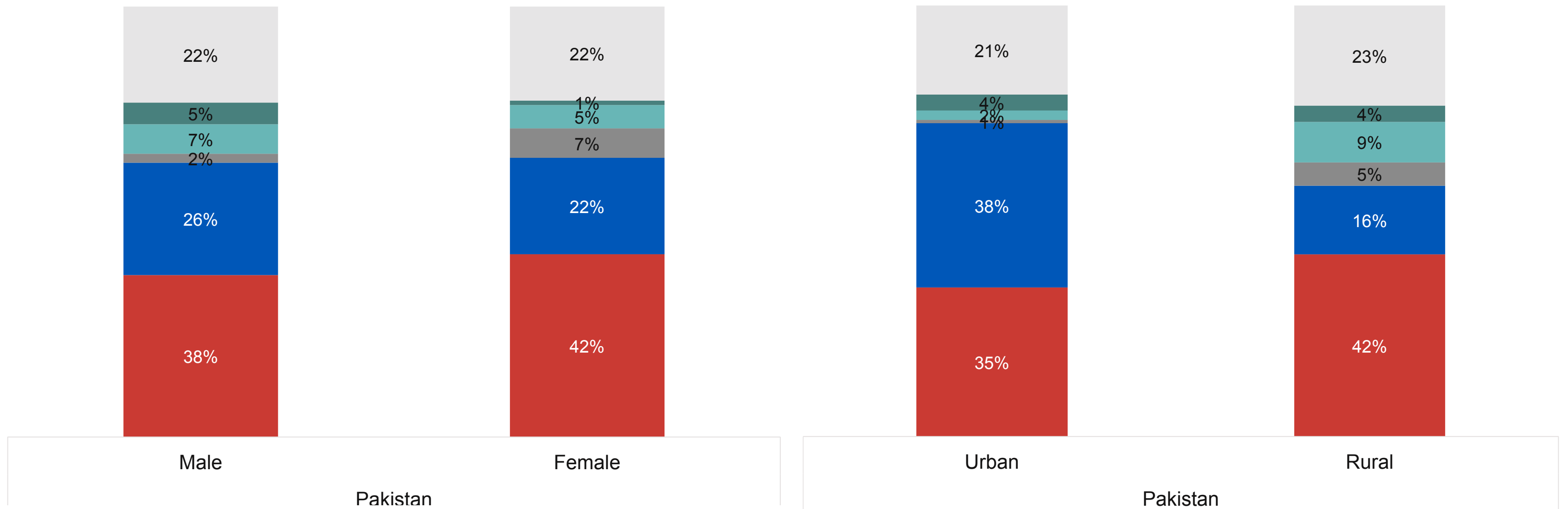
Q: Do you access the Internet through Public WIFI through the following means?

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

# Free Wi-Fi has higher use among men and in urban; paid Wi-Fi used more by males and urban dwellers

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

■ Free Public Wi-Fi 
 ■ Paid Wi-Fi (hotspots) 
 ■ Conditional Wi-Fi (shops, cafes...) 
 ■ Combination of the above 
 ■ Other 
 ■ No, I don't use public Wi-Fi



Q: Do you access the Internet through Public WIFI through the following means?

Base: Pakistan Internet users 692

## MOBILE EXPENDITURE

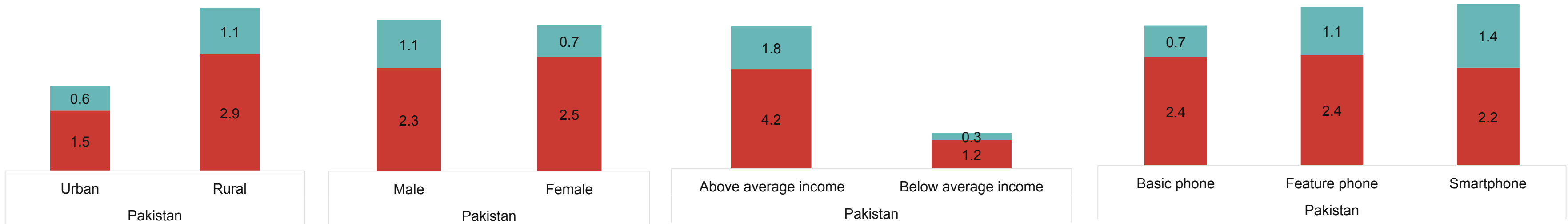
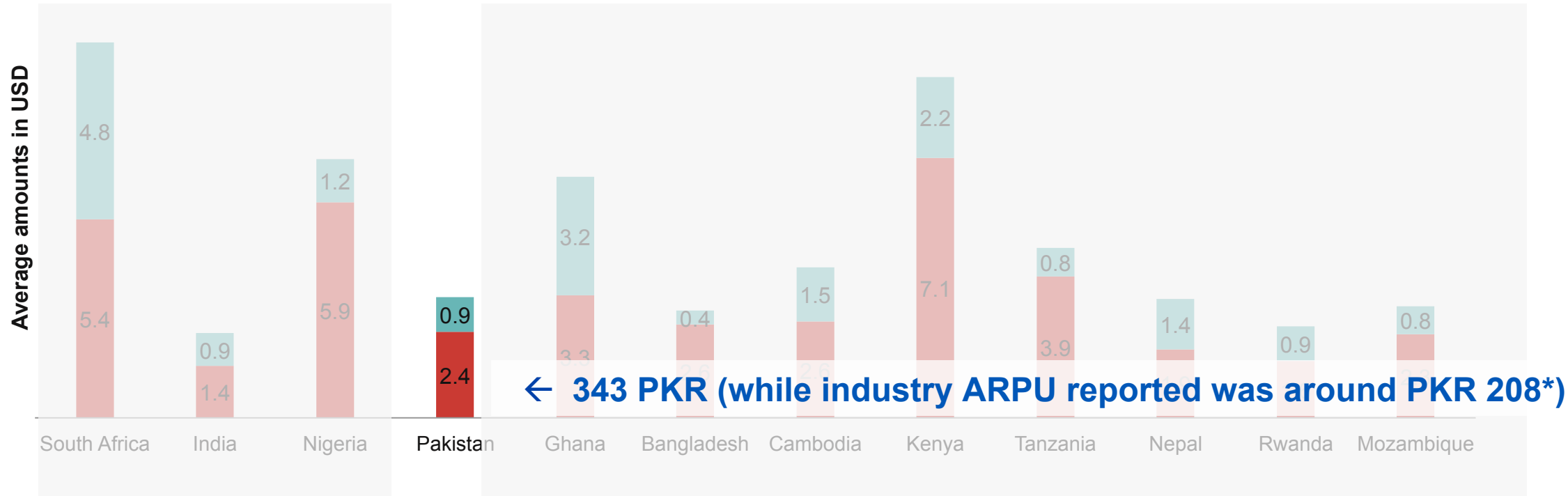
- On average Pakistani mobile owners spend PKR343 per month on voice and data services

# Average spend on voice+data is PKR343 per month; higher for the rural, women, young, high income earning, smartphone owning

Pakistan

Amount spent on mobile voice + SMS and on data (% of aged 15-65 mobile phone owners)

■ Amount spent on mobile voice + SMS ■ Amount spent on mobile data



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, 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	South Africa	India	Nigeria	Pakistan	Ghana	Bangladesh	Cambodia	Kenya	Tanzania	Nepal	Rwanda	Mozambique
Mobile phone owners	1,398	3,252	1,123	1,208	901	1,531	1,526	1,054	761	1478	635	632

\*<https://profit.pakistantoday.com.pk/2018/03/05/why-no-profit-still-makes-zong-happy/>

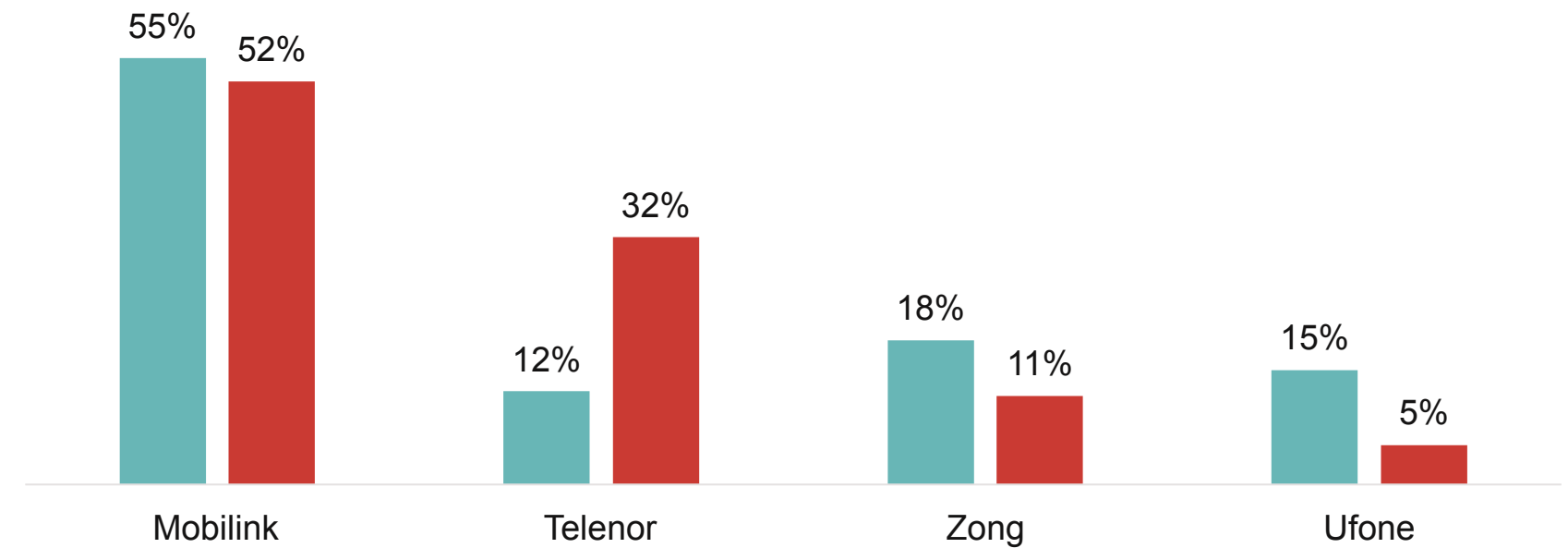


# Demand side data shows somewhat similar composition among the big three, compared to PTA published data

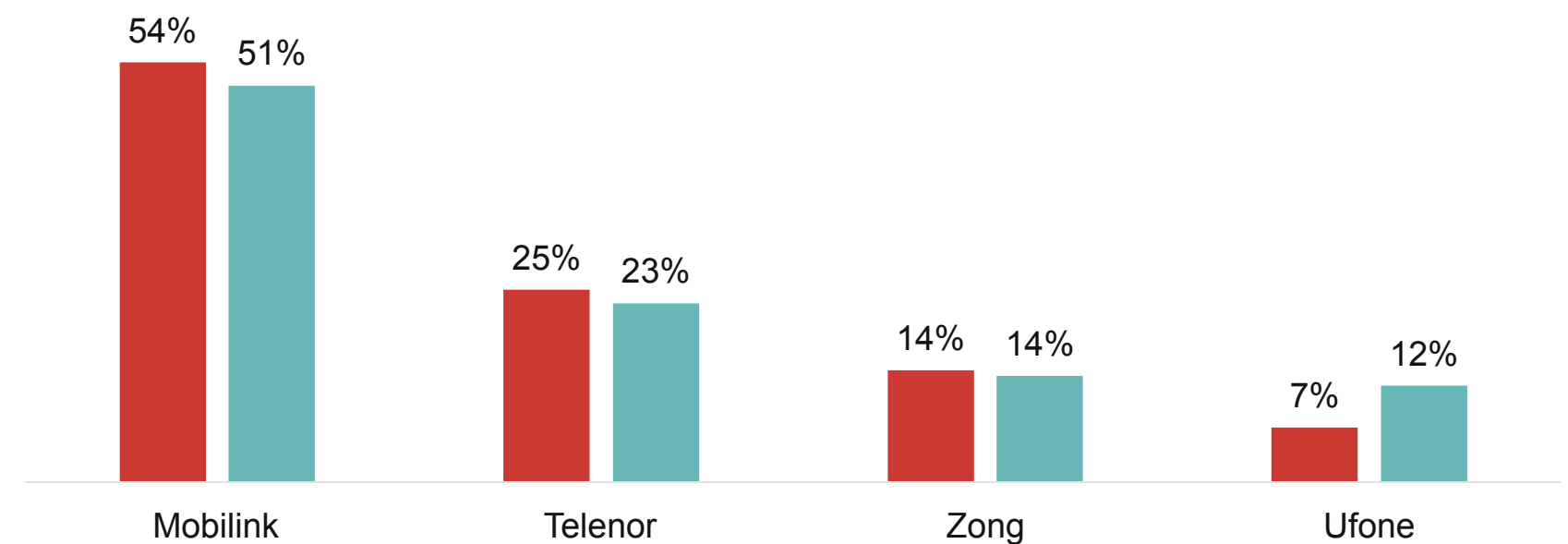
## Pakistan

% of users of each network operator (% of aged 15-65 mobile phone owners)

■ Urban ■ Rural



■ Male ■ Female



**AfterAccess survey:  
Primary SIM card of  
mobile owners aged  
15-65 (December  
2017)**

**PTA:  
Subscribers as at  
end of end of 2017**

	AfterAccess survey: Primary SIM card of mobile owners aged 15-65 (December 2017)	PTA: Subscribers as at end of end of 2017
Mobilink	53%	37%
Telenor	24%	29%
Zong	14%	21%
Ufone	9%	14%

Source:

<https://www.pta.gov.pk/en/telecom-indicators/1>

Q: What is the name of your main operator (SIM card you use most often)

# MOBILE BANKING and MONEY

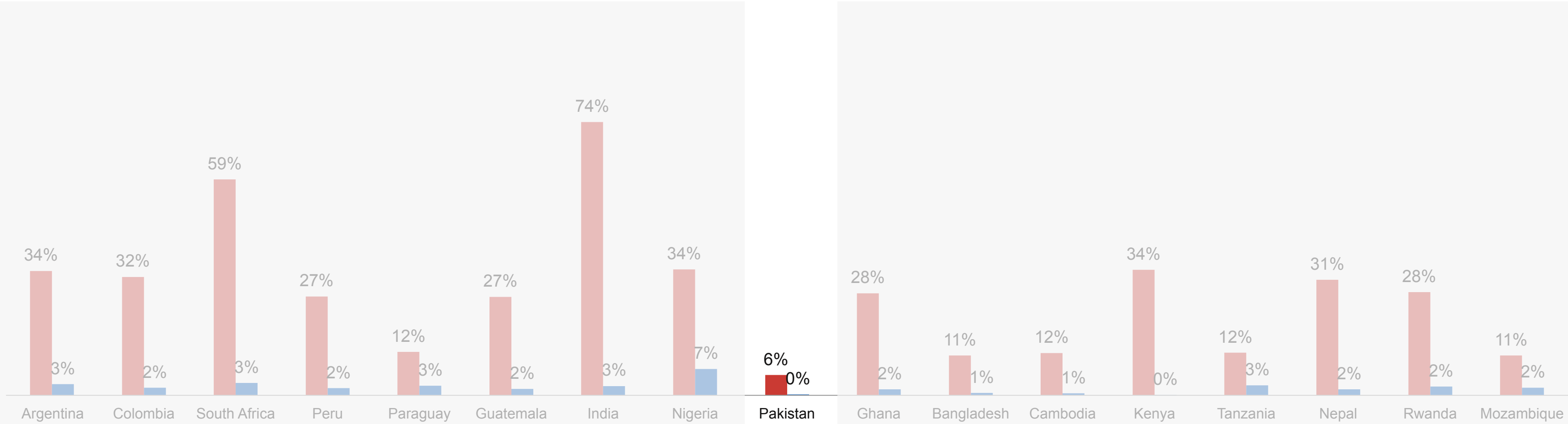
## **MOBILE BANKING and MONEY**

- Just 6% are banked; mobile money used by just 13%

# Only 6% of the aged 15-65 population have their own bank account

Access to bank accounts (% of aged 15-65 population)

■ I have my own bank account ■ I use someone else bank account

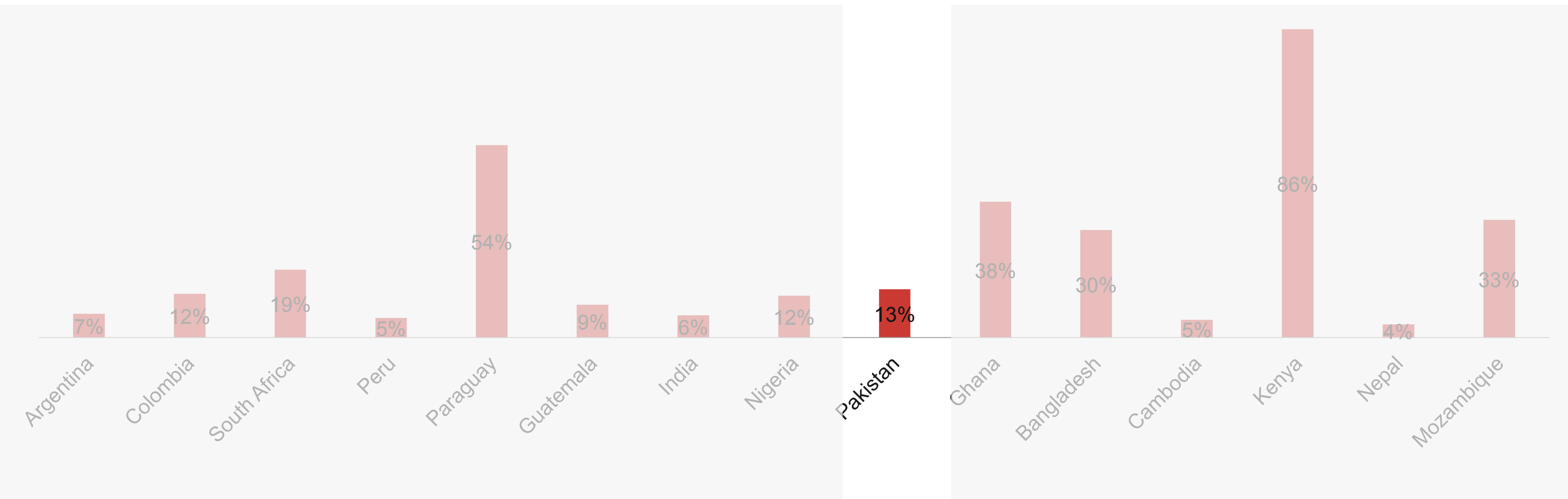


Q1: Do you have access to a bank account?

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

# Low use of mobile financial services among Pakistani mobile phone owners

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



Q: Do you ever use 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	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

E-COMMERCE: ARE PEOPLE **BUYING**?

## E-COMMERCE: ARE PEOPLE **BUYING**?

- There is some awareness and use of transportation/taxi (e.g., Uber, Careem, etc), as well as e-commerce platforms/websites/apps
  - Main barriers are is awareness, then skills

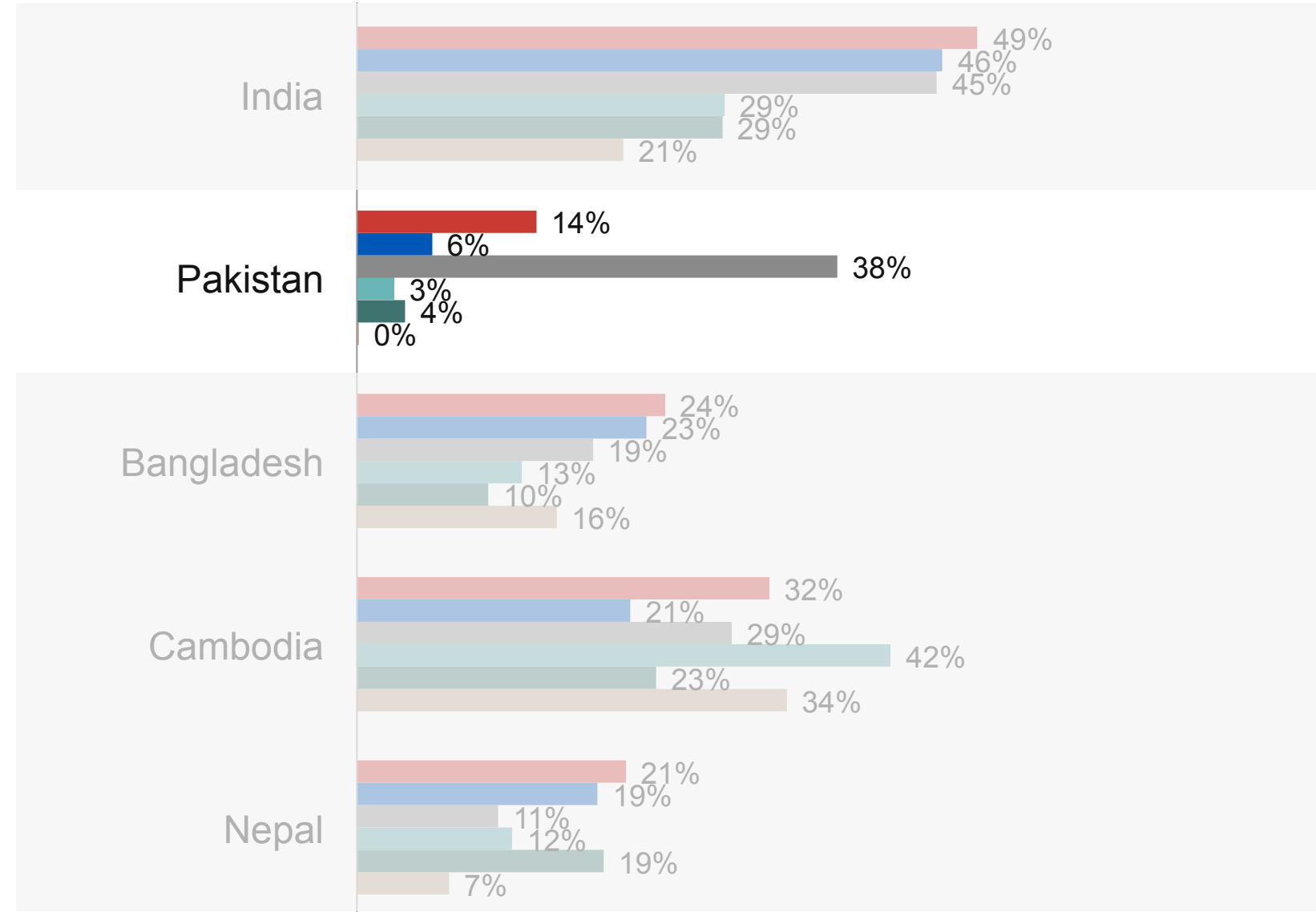


# Very low awareness of platforms in Pakistan

“platforms” = via internet or apps

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

- Goods/products (Amazon, Aliexpress, ebay)
- Tickets and appointments (movie/railway/ doctor appointments)
- Transport/ taxi services (Uber,)
- Hired help
- Accommodation (AirBnB)
- Microwork/freelance (Upwork, Fiverr)

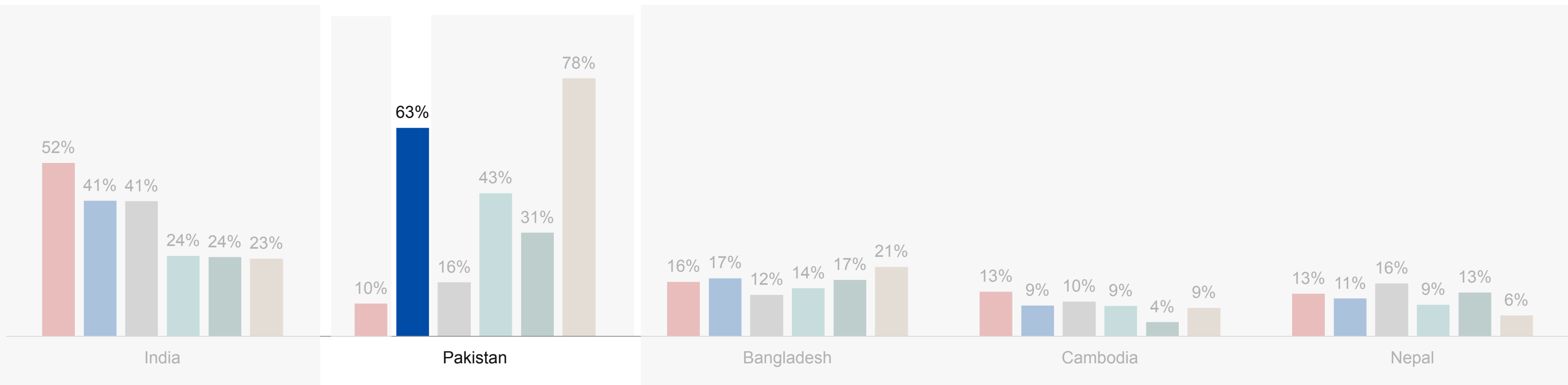


Q1: Have you heard of these opportunities to buy/sell goods or services over the internet or apps as just defined?

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

# Among those aware of the platforms for buying, transportation/taxi services is the only significant use

Usage of platforms: buying (% of aged 15-65 internet users aware of platforms)



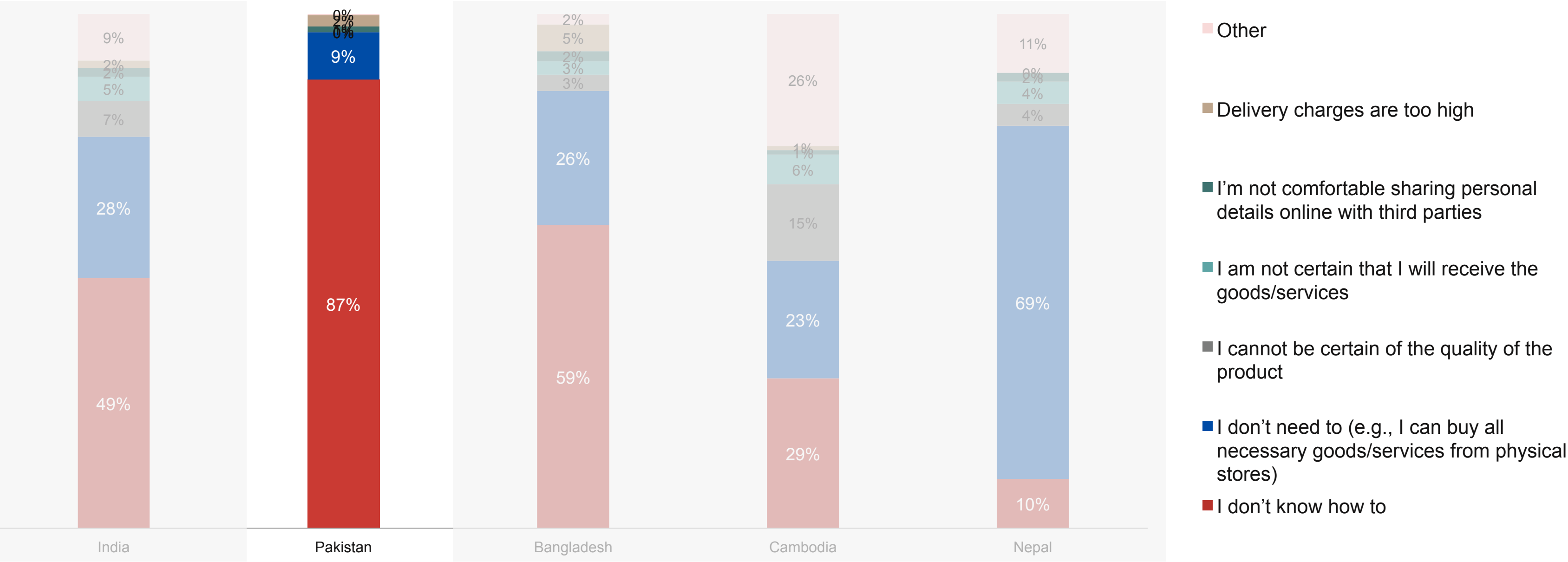
- Goods/products (Amazon, Aliexpress, ebay)
- Transport/ taxi services (Uber,)
- Tickets and appointments (movie/railway/ doctor appointments)
- Accommodation (AirBnB)
- Microwork/freelance (Upwork, Fiverr)
- Hired help

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 (Uber,)	396	146	59	259	81
Tickets and appointments (movie/railway/ doctor appointments)	409	20	70	185	135
Accommodation (AirBnB)	265	16	32	209	136
Microwork/freelance (Upwork, Fiverr)	202	7	43	288	54
Hired help	258	13	40	355	86

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

# Lack of knowledge is the key reasons for non use

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



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

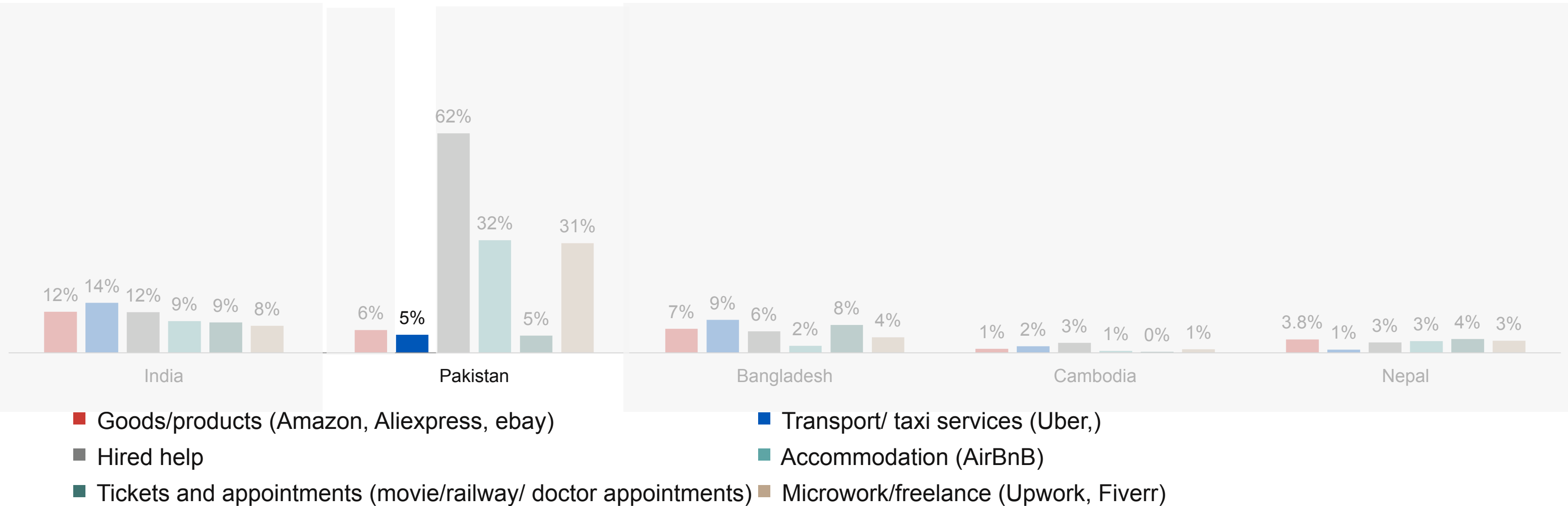
Base	India	Pakistan	Bangladesh	Cambodia	Nepal
Respondent who are aware of platforms but not using them	586	302	227	421	158



**E-COMMERCE: ARE PEOPLE MAKING MONEY  
SELLING GOODS AND SERVICES?**

# Very low use of platforms to **sell**

Usage of platforms: **selling** (% of aged 15-65 internet users who aware of platforms)

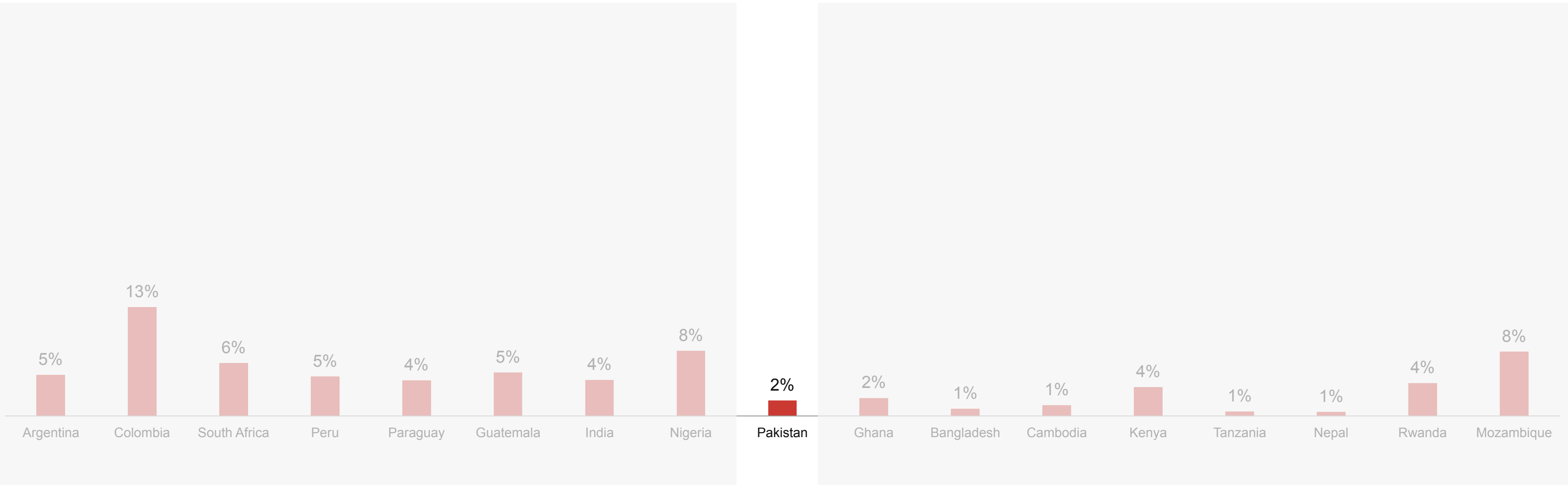


Base : Internet users who are aware of the Platforms	India	Pakistan	Bangladesh	Cambodia	Nepal
Goods/products (Amazon, Aliexpress, ebay)	430	56	70	276	159
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Accommodation (AirBnB)	265	16	32	209	88
Tickets and appointments (movie/railway/ doctor appointments)	410	20	70	185	139
Microwork/freelance (Upwork, Fiverr)	202	7	43	288	55

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

# Only 2% of aged 15-65 Internet users used a platform to **selling** labor and earn income via **digital work**

Usage of platforms: **selling** (% of aged 15-65 internet users)

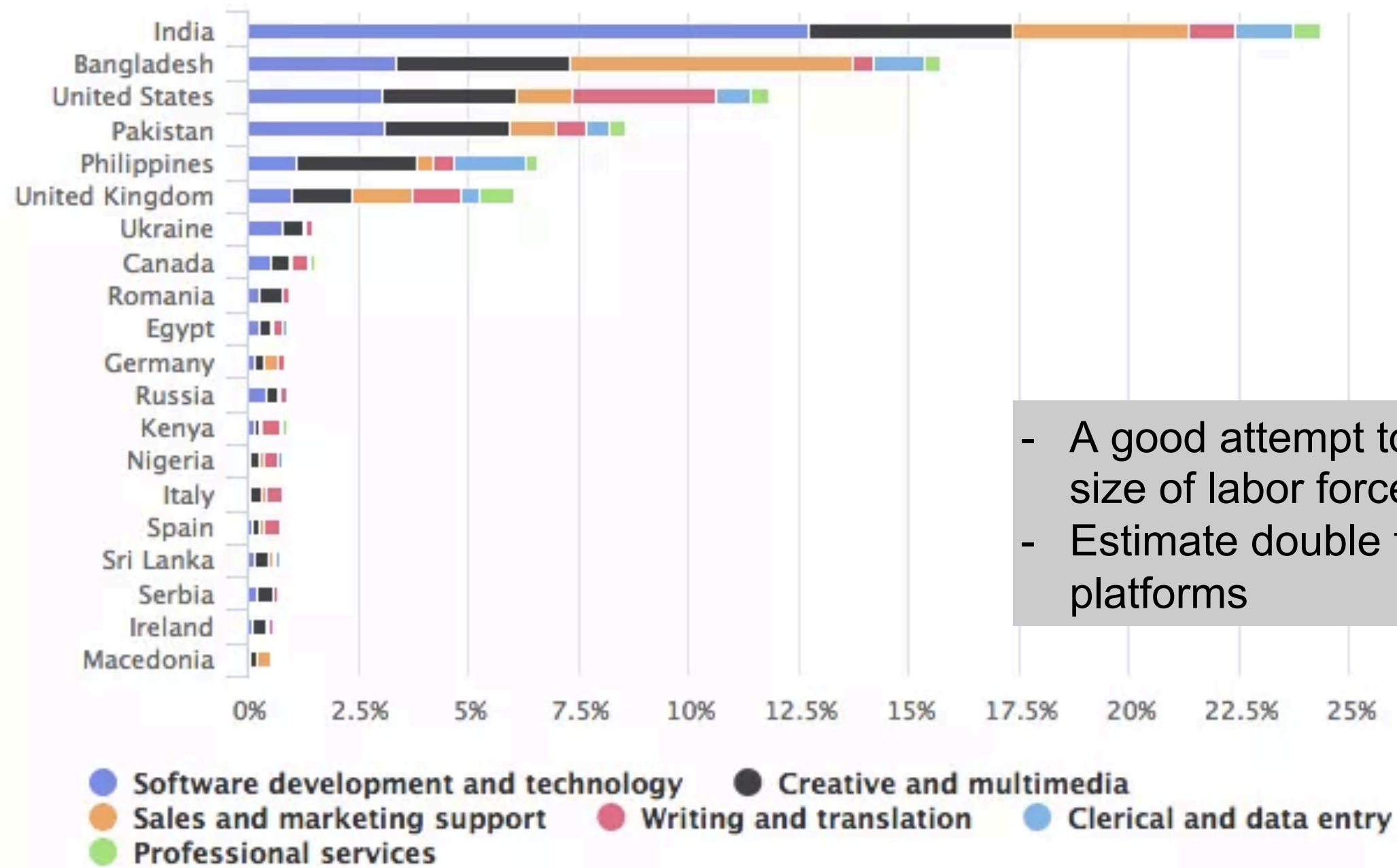


Q: Some people find paid jobs or tasks by connecting directly with people who want to hire them using a website or mobile app. In the last year, have you earned money by taking on jobs of this type?

Base	Argentina	Colombia	South Africa	Peru	Paraguay	Guatemala	India	Nigeria	Pakistan	Ghana	Bangladesh	Cambodia	Kenya	Tanzania	Rwanda	Mozambique
Internet users	1,006	1,192	829	1,120	886	1,104	919	537	427	311	266	804	440	266	172	238

# South Asia among largest supplier of labor to digital platforms; Pakistan 4<sup>th</sup> in the list

## Online Labor Index top occupation by country, 1-6 July 2017



- A good attempt to weigh and project actual size of labor force for these platforms
- Estimate double this number of all other platforms



# CONCLUSIONS

# Some implied needs

- Demand stimulation (only 14% of target population use Internet)
- Increased awareness and salience raising (Only 37% of the target population aware of the internet)
- Low network quality in rural areas
- Increase affordability of smart phones (25% of those who don't own a smartphone cite affordability as main barrier to ownership)
- Increase affordability of data (18% of current internet users would use the Internet more if data cost were more affordable)
- Increase digital literacy (lack of skills is the reason why 87% of those who know about platforms don't use them to buy goods or services)

# What can be done?

- **Literacy** - Start young. integrate digital literacy and ethics into school curriculum
- **Demand stimulation:** Use various schemes. E.g. Financial incentives for online applications for eGov services (invest in face-to face or counter service in targeted areas where Internet penetration and/or digital literacy is low).
- **Affordability of phones + services:** Balance policy objectives: between revenue generation vs economic stimulation from Internet growth and use
  - Tax burden on smart phones; get the basic phones out of circulation (“recycle” scheme?)
  - Uncertainty over license renewals (in 2019) → halting of investments
  - High (relative) spectrum costs → operators buy small chunks → also impacts poor quality
  - Rights of way: still a huge problem → slow network rollout

THANK YOU

**AFTER  
ACCESS**

