

Measuring Progress: Towards Information Societies in Emerging Asia

Findings from a six-country study of Teleuse at the Bottom of the Pyramid

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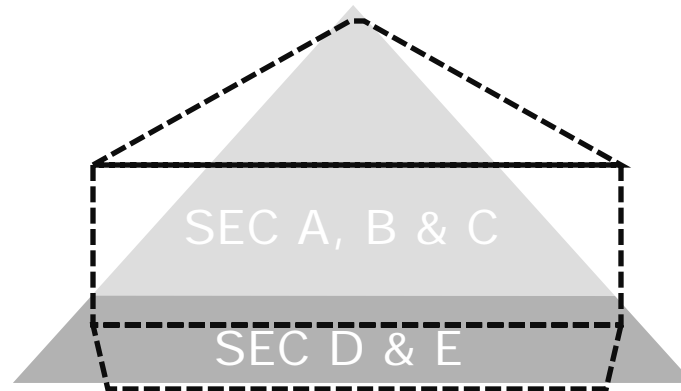
ITU 7th World Telecom Indicators Meeting

Cairo, 5 March 2009



Teleuse@BOP: background

- **Objective: To understand how BOP interacts with ICTs (mostly phones) to better inform policy**
 - Large surveys of 'BOP' conducted in 2005, 2006, 2008
 - It's not exactly a pyramid, but combining D&E as BOP makes it so.
 - Almost **20,000 face to face interviews** in **6 countries** since 2005
 - Bangladesh (2008)
 - Pakistan
 - India
 - Sri Lanka
 - Philippines
 - Thailand
- Funded by the International Development Research Center (IDRC) of Canada with contributions from Telenor Research and Innovation



Why worry the BOP?

- Because if the access and usage problems for BOP can be solved, it can be solved for the TOP
- Because TOP is less of a challenge
 - closer to gaining Universal Access already
 - through market forces
 - less likely to need public sector subsidies/funding
- BOP is where policy challenges are

Samples

	Bangladesh	Pakistan ^[1]	India	Sri Lanka ^[2]	Philippines ^[3]	Thailand ^[4]	Total
BOP teleusers	2,050	1,814	3,152	924	800	800	9,540
Margin of error @ 95% CL (%)	± 3%	± 2%	± 2%	± 3%	± 4%	± 4%	
Diary Sample	1,025	900	1,600	450	400	400	4,775
Migrant workers	350	300	400	200	200	100	1,550

[1] Pakistan: Excludes tribal regions

[2] Sri Lanka: Excludes North and East

[3] Philippines: Survey was undertaken only among SEC E

[4] Thailand: Excludes Bangkok as the SEC DE population in Bangkok is very small

Methods

Quantitative

- 9,950 face-to-face interviews
- 1 week usage patterns via diary method (50% of sample)
- Sep-Oct 2008

Qualitative

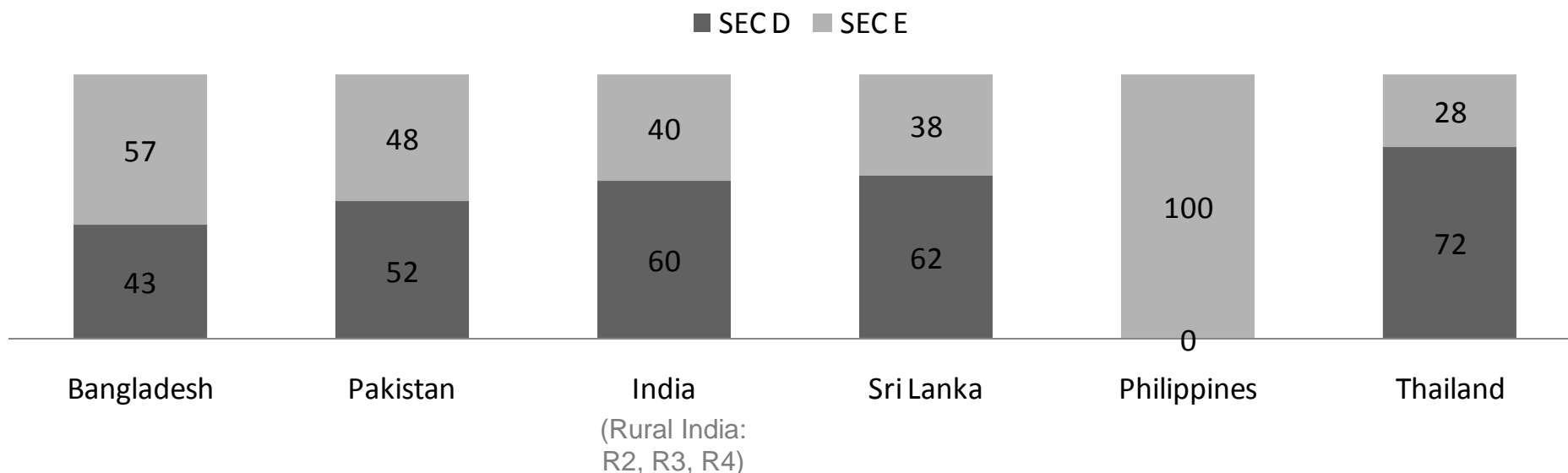
- Focused group discussions
- Mini-ethnographies
- Depth interviews with migrant teleusers
- Feb-Mar 2009

- Multi-stage stratified sampling, random selection of households and individuals
- Migrant worker teleusers at “bottom of the pyramid”
 - SEC groups C** + D + E*
 - “internal” and “external” migrants that send money home
 - Findings available in March 2009

Representing around 518 million BOP citizens aged 15-60 in the 6 countries surveyed.

- **Teleusers** at “bottom of the pyramid”
 - SEC groups D + E
 - Aged 15-60

Socioeconomic group classification (% of sample)



Individuals earning USD38 per month, on average

Mean monthly income (USD)

	Bangladesh	Pakistan	India	Sri Lanka	Philippines	Thailand
Personal	36	37	38	54	45	79
Household	117	127	99	151	127	172

Link between SEC D+E and "\$2 per day" definition

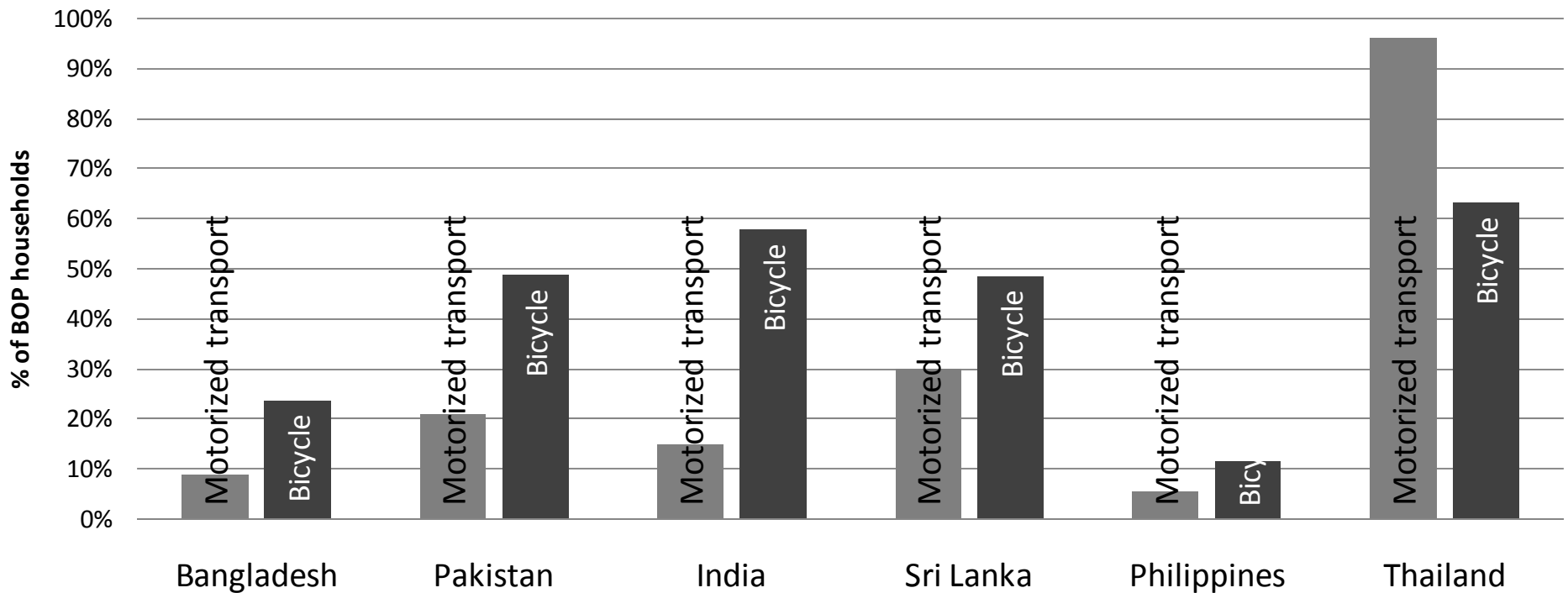
Actual population proportions

	Bangladesh	Pakistan	India	Sri Lanka	Philippines	Thailand
SEC D+E (% of population)	73	59	69	44	38 [SEC E]	33
Less than \$2 per day (% of population)	78	85	86	45	40	28

PROFILING THE BOP

Access to transport: mostly bicycles

Access to transport within the household (% of BOP teleusers)

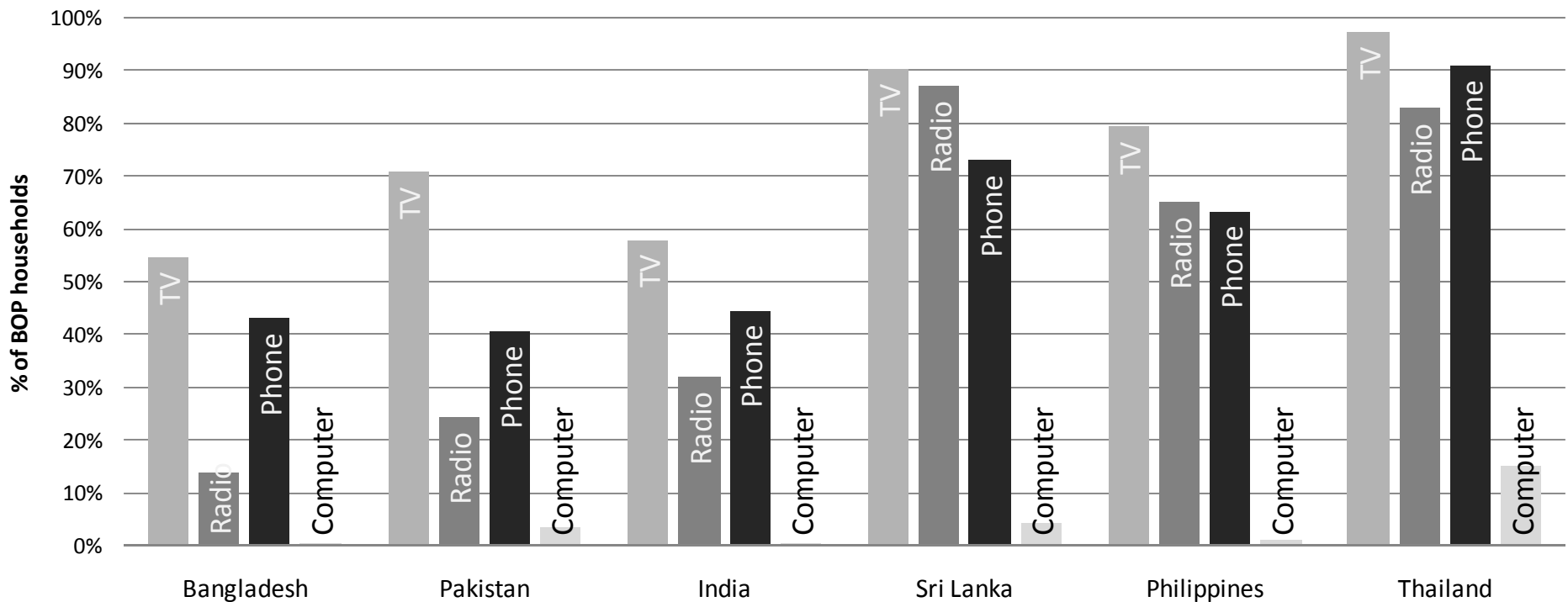


Note: "motorized transport" includes: motorbike, three-wheeler (trishaw), scooter, tractor, "jeepney" (Philippines), "Qingqi" (Pakistan) + other kinds of auto-rickshaws

Among BOP teleusers

Access to other forms of communications: phones bypassing radio in South Asia. Access to computers still low everywhere

Access to communication technologies within the household (% of BOP teleusers)



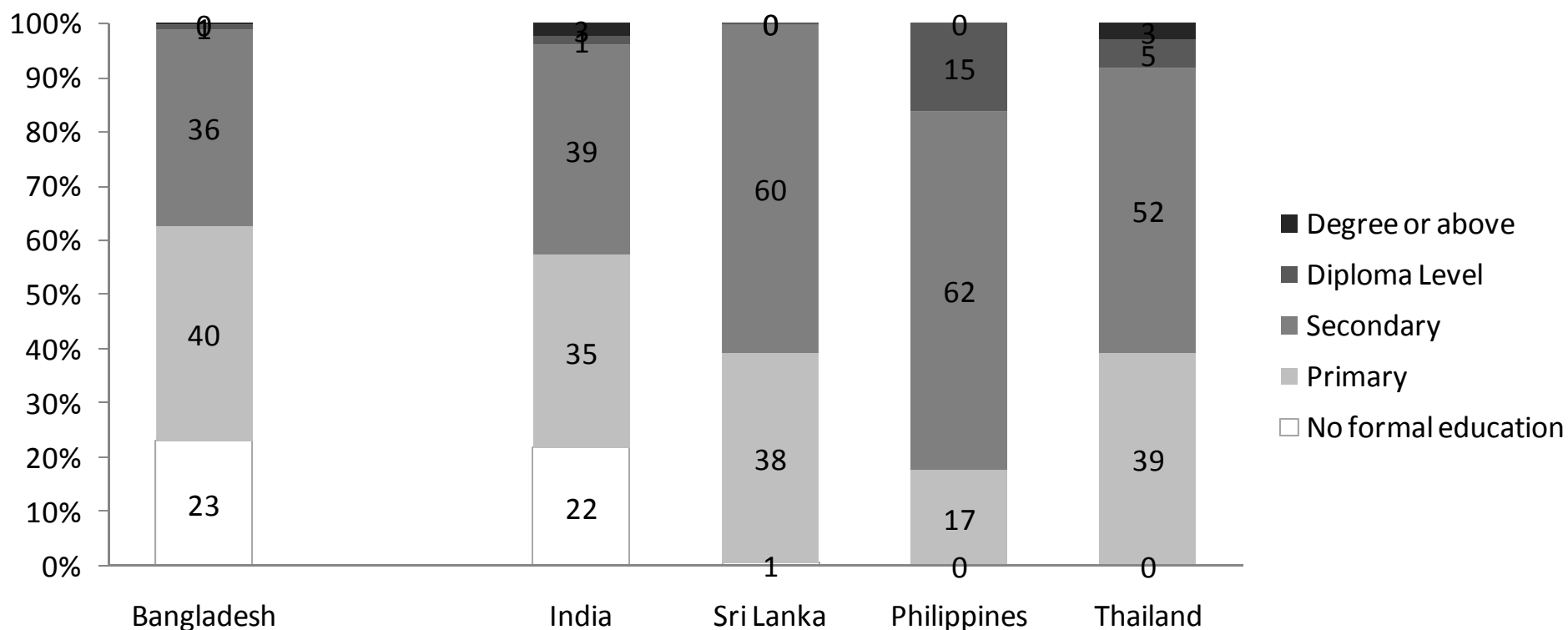
41% of Indian BOP teleusers' households have access to a "bank account" (broadly defined)

Access (either own or within household) to a bank account or credit card (% of BOP teleusers)

	Bangladesh	Pakistan	India	Sri Lanka	Philippines	Thailand
Bank account	31%	11%	41%	93%	13%	84%
Credit card	3%	2%	3%	10%	1%	11%

Educational attainment does not exceed primary or secondary education

Educational attainment (% of BOP teleusers)



BOP = HIGH ACCESS & USE . MODERATE OWNERSHIP

Most have used a phone in the last 3 months to make and receive calls. Many had used in last week

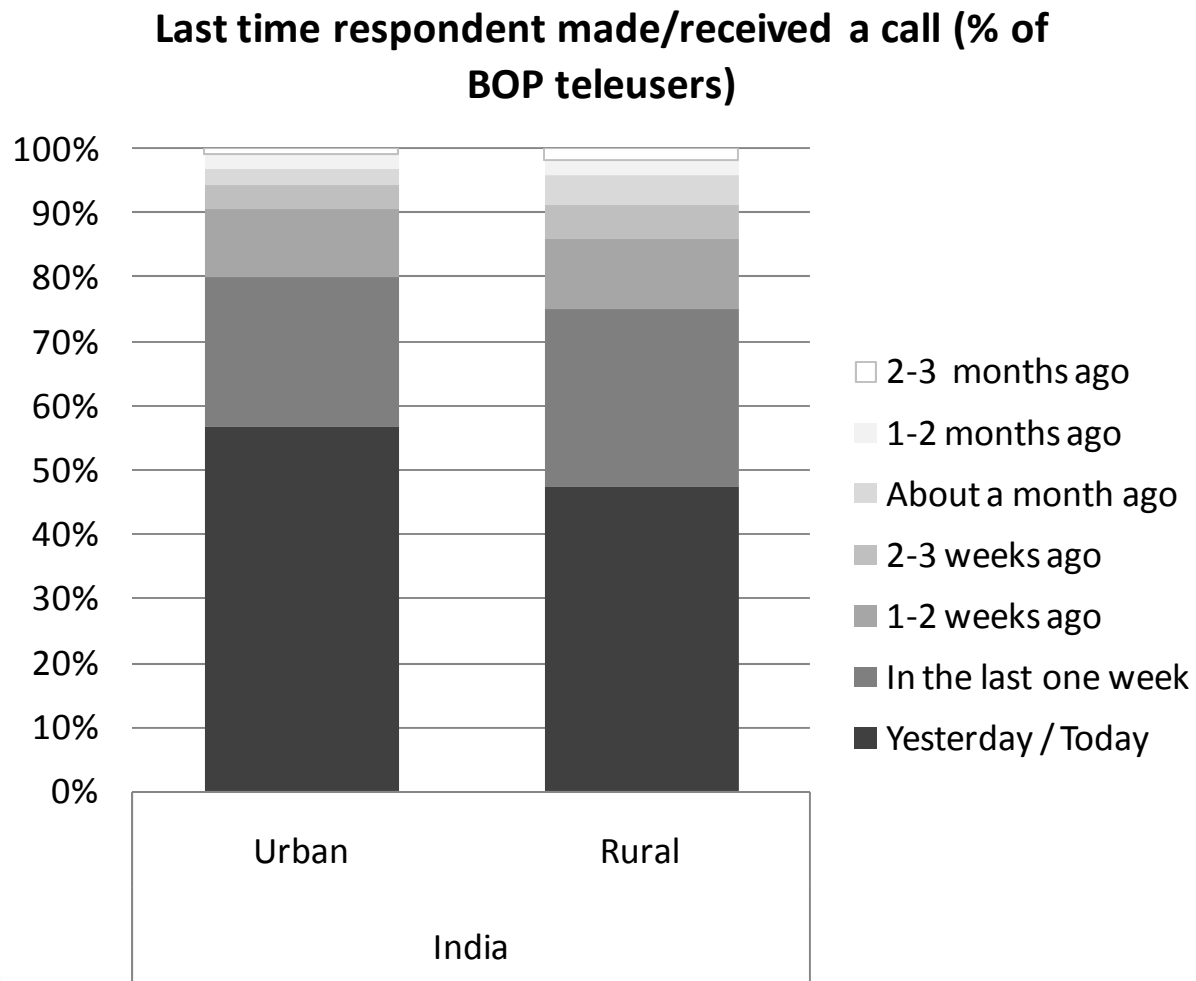
Used a phone in the last 3 months

	Bangladesh	Pakistan	India	Sri Lanka	Philippines	Thailand
% of BOP (outer sample)	95%	96%	86%	88%	79%	77 %

Used a phone in the last week

	Bangladesh	Pakistan	India	Sri Lanka	Philippines	Thailand
% of BOP (outer sample)	82%	66%	65%	77%	38%	72%

Rural useage also high: e.g. More than **two thirds of rural BOP teleusers in India** used a phone in the last week



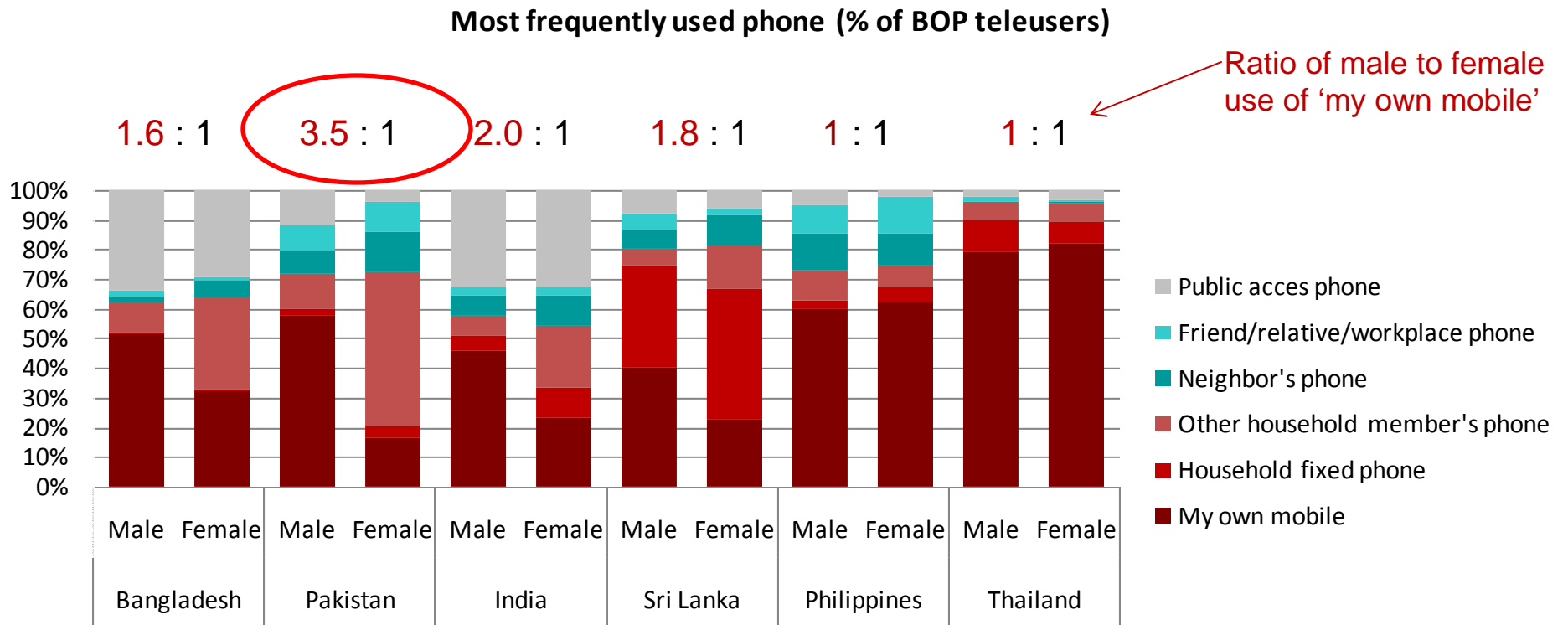
Mobiles are used most as the primary phone; public phones in second place

Most frequently used phone (% of BOP teleusers)



Access within the household

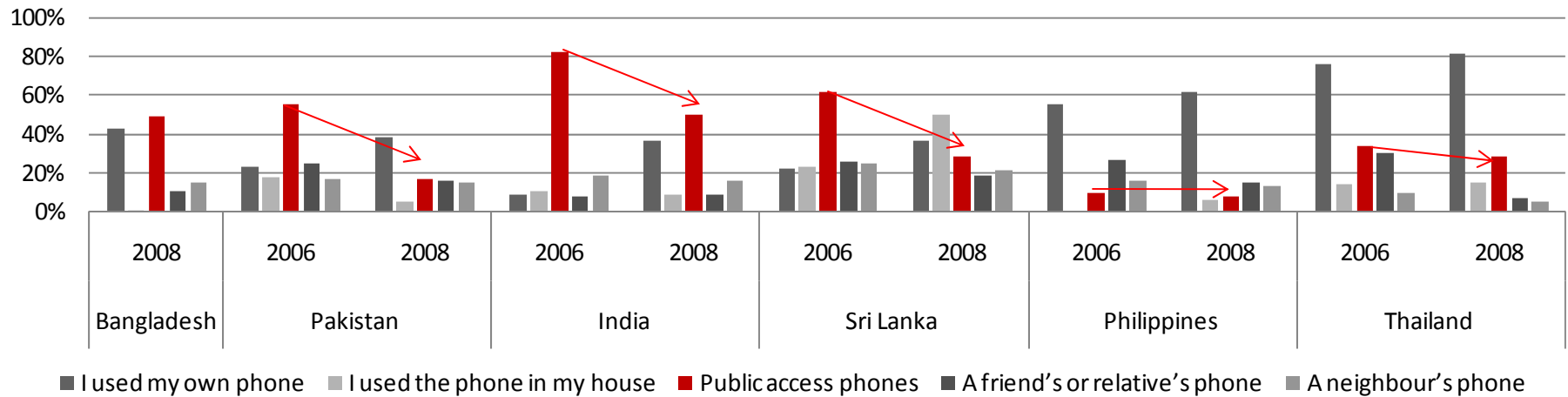
Fewer women in South Asia use public phones. No gender difference in S E Asia



- Women less likely to use their own mobile or public phones; more likely to use other peoples' phones

Public access has fallen since 2006

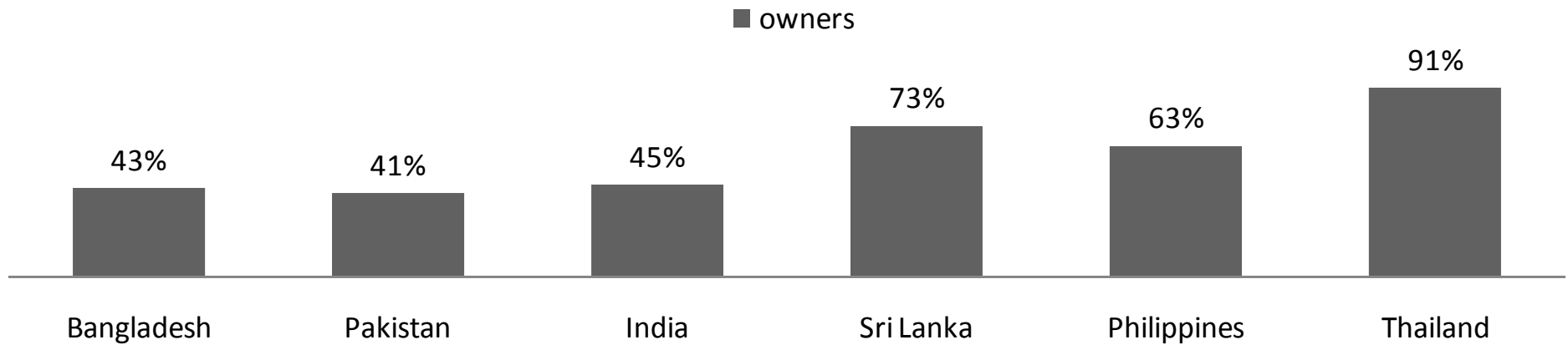
Modes of telecom used (% of BOP teleusers)



BOP = MODERATELY HIGH PHONE OWNERSHIP

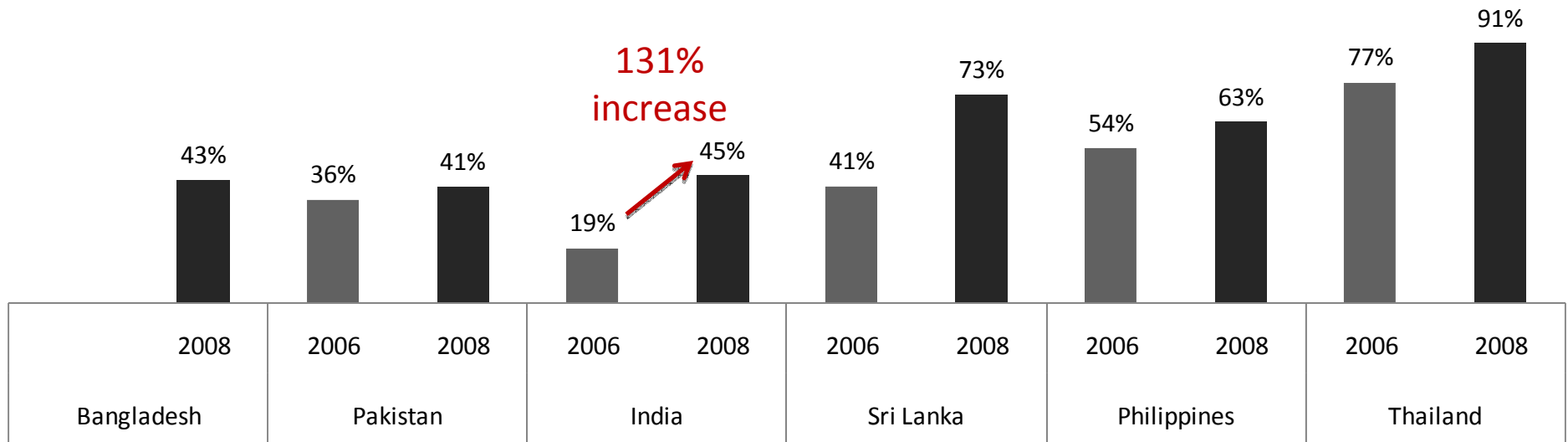
Ownership (fixed + mobile) is high, but has room for growth

Total phone ownership (% of BOP teleusers)



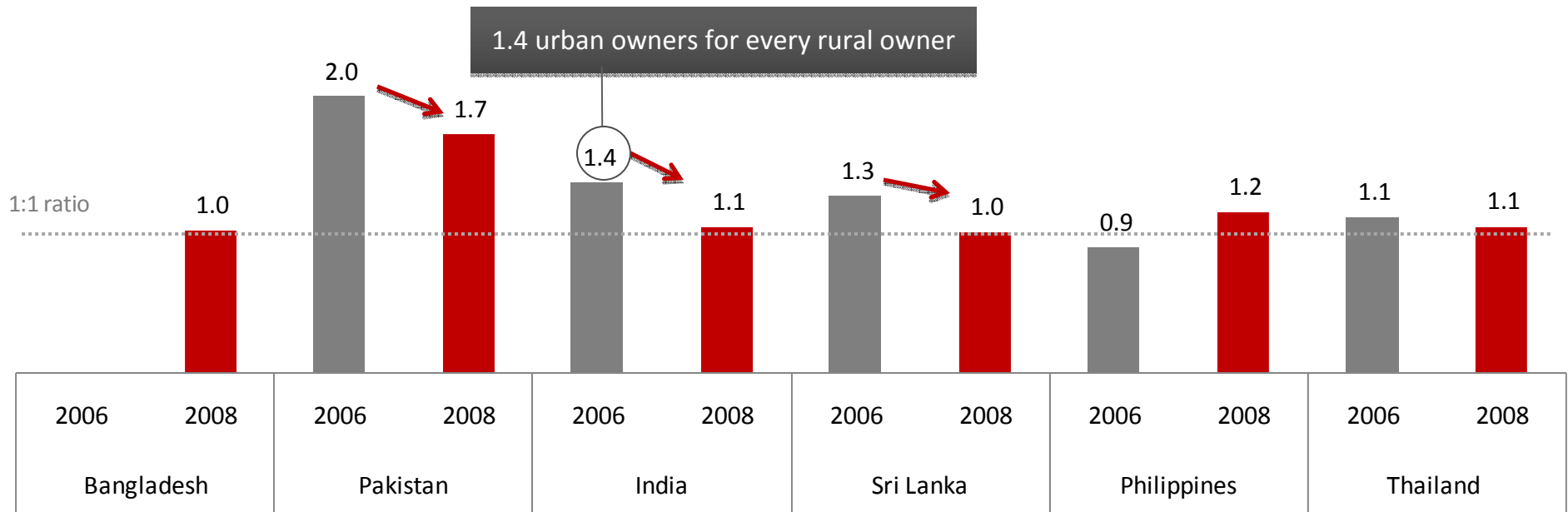
Largest % growth in phone ownership in India

Total BOP phone ownership: 2006 vs 2008 (% of BOP teleusers)

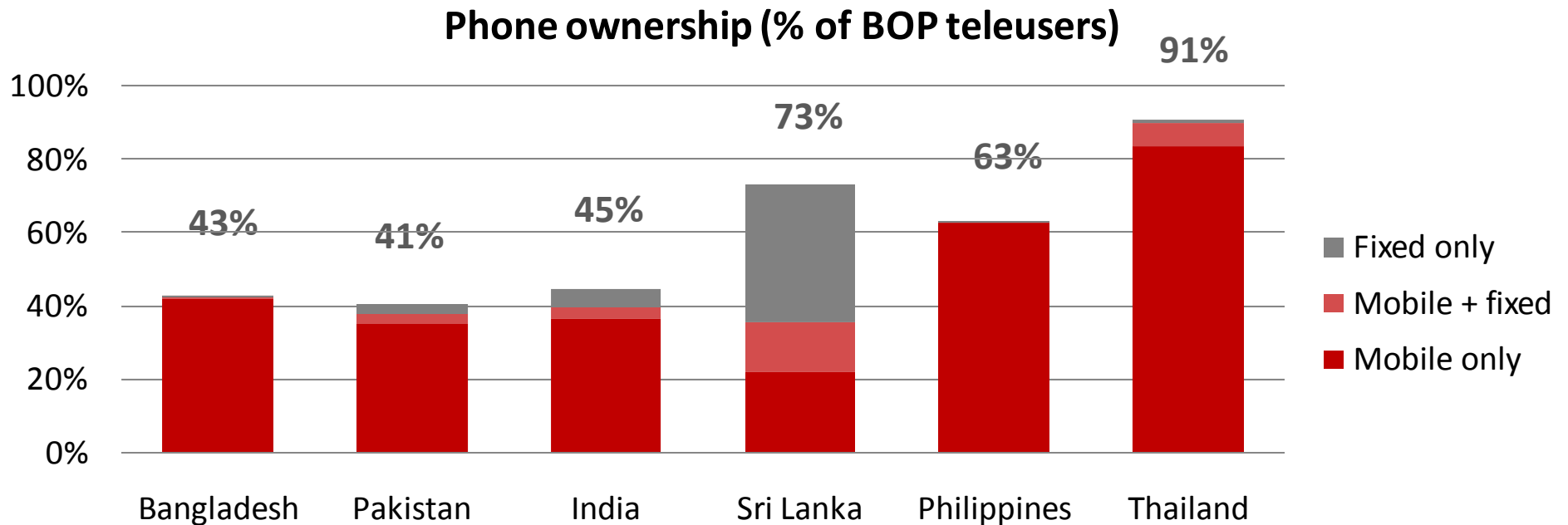


Urban-rural divide in total BOP phone ownership **declining**

Urban-rural divide in phone ownership (urban:rural)



Mostly **mobile**: 90% BOP phone owners own a mobile



Mobile adoption determined by: **demographics, household amenities and network effects**

LOGIT model for mobile adoption:

1

$$1 + e^{-3.98 + 0.50A - 0.60B + 0.36C + 0.79D + 1.30E - 0.01F - 0.01G + 1.70H - 0.20I - 0.79J - 0.87K - 0.31L + 1.13M + 0.38N + 2.76O - 0.62P + 0.81Q}$$

Where

- A = ln (personal income)
- B = female (1 if true)
- C = primary education (1 if true)
- D = secondary education (1 if true)
- E = tertiary education (1 if true)
- F = walking time to nearest town
- G = age * age
- H = percentage of top five contacts with mobiles
- I = Bangladesh
- J = Pakistan
- K = Sri Lanka
- L = Philippines
- M = Thailand
- N = Electricity in the house (1 if true)
- O = percentage of household members with mobiles
- P = Fixed phone in the house (1 if true)
- Q = TV in the house (1 if true)

$R^2 = 0.23$

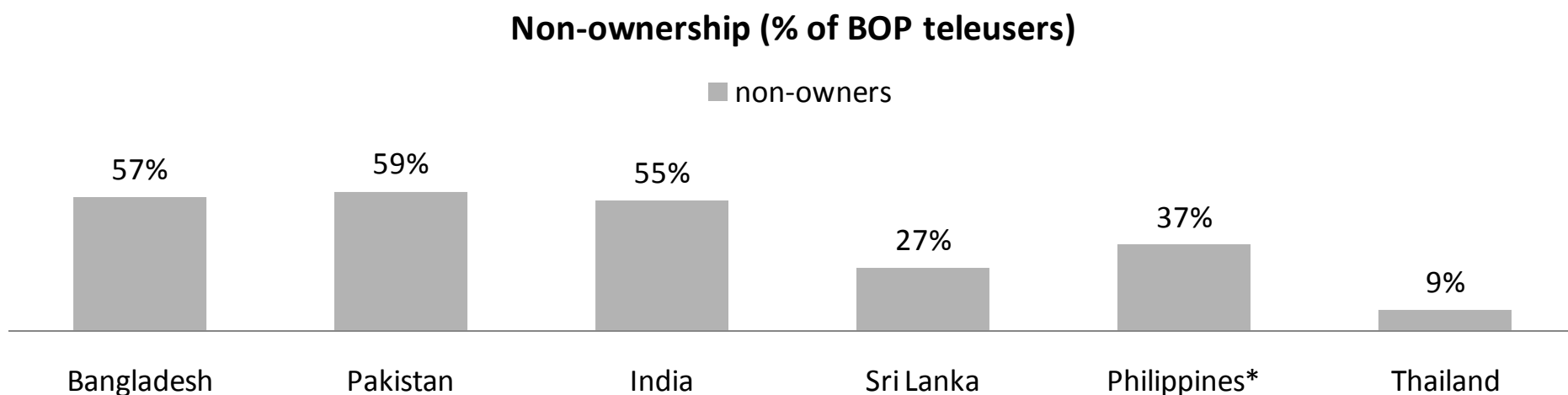
Mobile adoption determined by **demographics, household amenities and network effects**

- Significant variables :
 - Demographics: Personal income, gender, education, age, proximity to nearest town
 - Household amenities: electricity, fixed phone ,TV
 - Network effects: % of contacts who already have mobiles, no. of household members who already have mobiles
- Insignificant variables:
 - Urban/Rural, perceptions of benefits from phone access occupation

Own more than one (active) SIM

	Bangladesh		Pakistan		India		Sri Lanka		Philippines		Thailand	
	2008	2006	2008	2006	2008	2006	2008	2006	2008	2006	2008	
More than 1 SIM	10%	12%	23%	5%	9%	9%	16%	9%	19%	1%	13%	

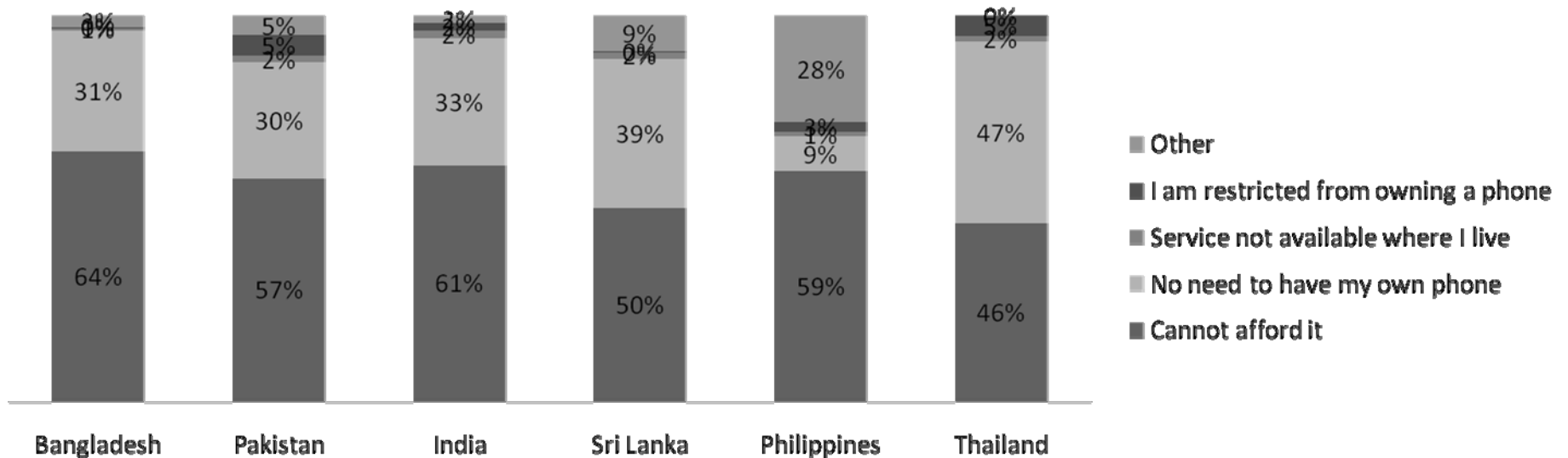
But non-owners are still a significant proportion of users



- 76% of these non-owners can reach a phone in under 5 minutes

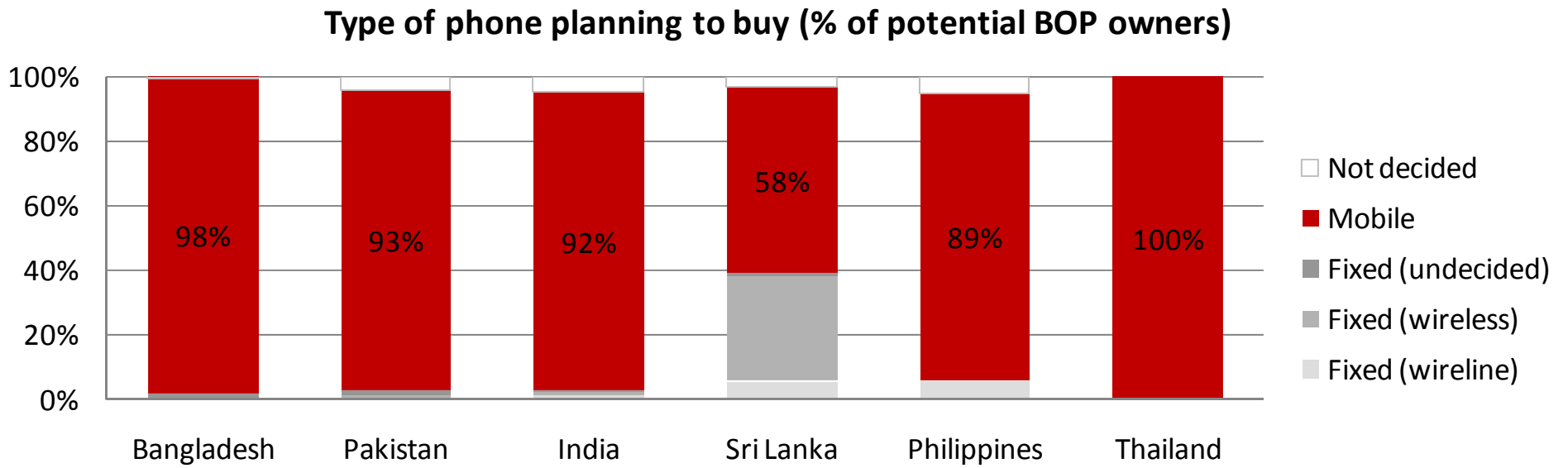
Main reasons for not owning are affordability and the lack of a need

Primary reason for not owning a phone (% of BOP non-owner teleusers)



- Just 2% say that service is not available where they live → network rollout no longer an issue

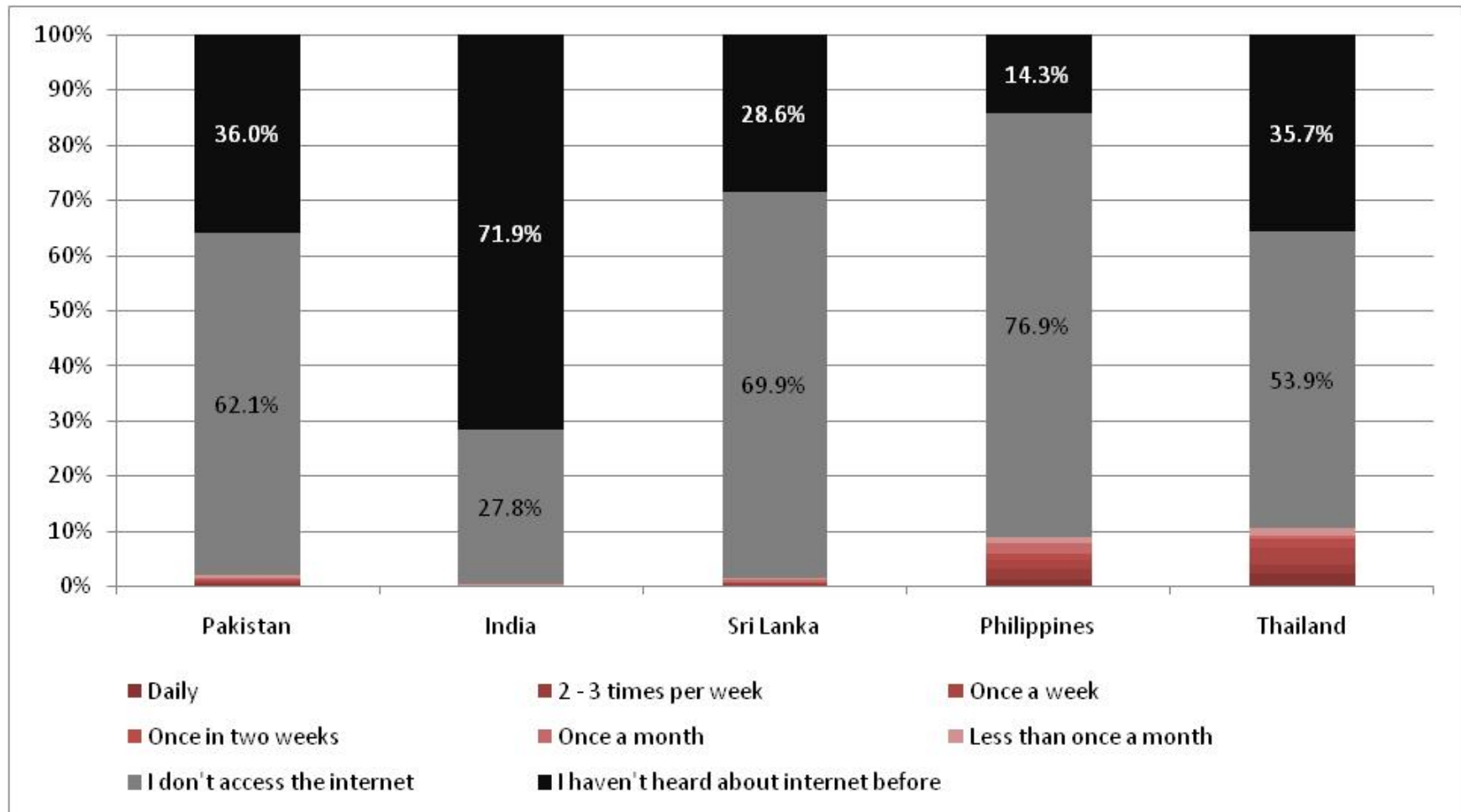
Of those planning to buy, 92% plan to buy a mobile phone/connection



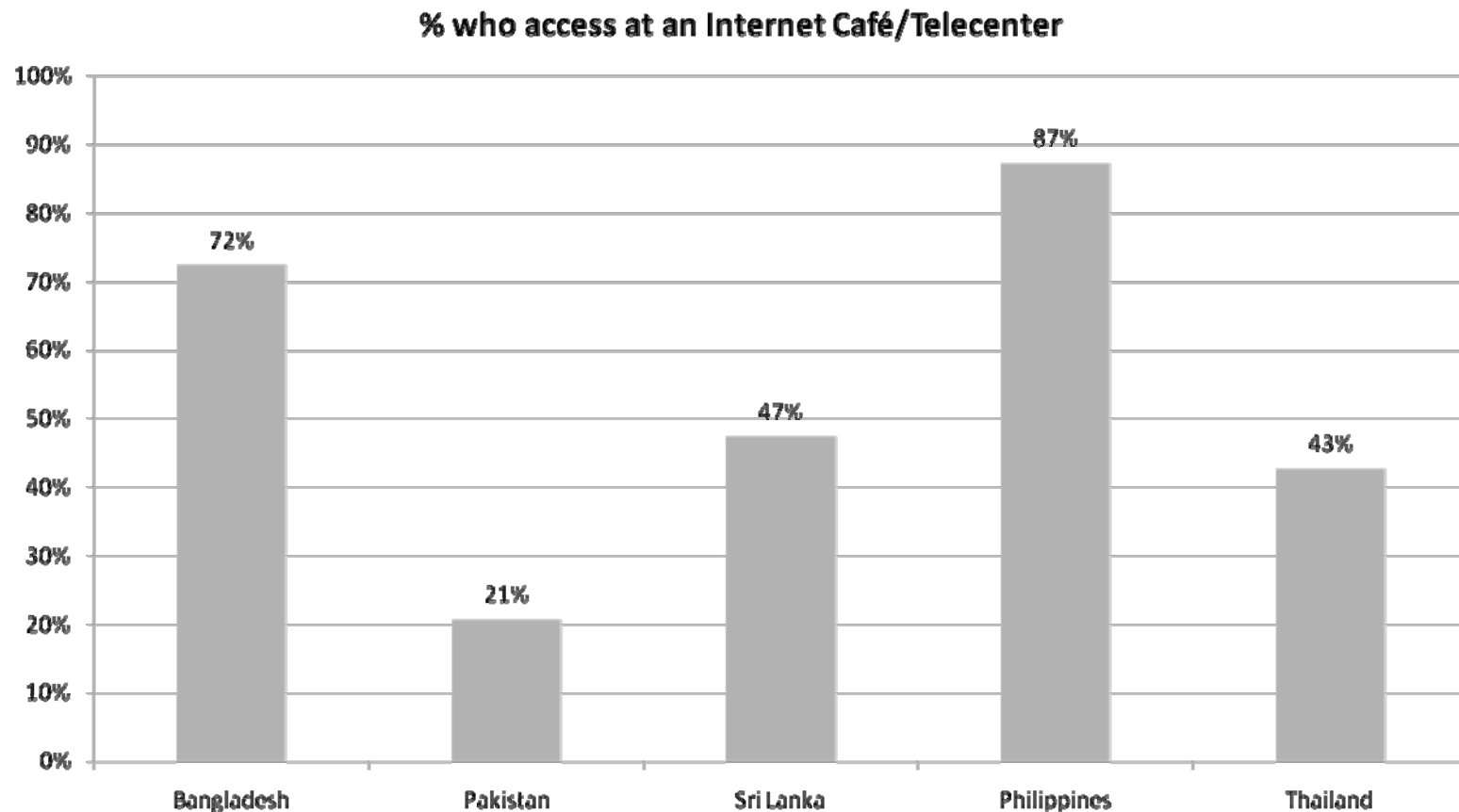
- Same picture in rural India

BUT WHAT ABOUT THE INTERNET?

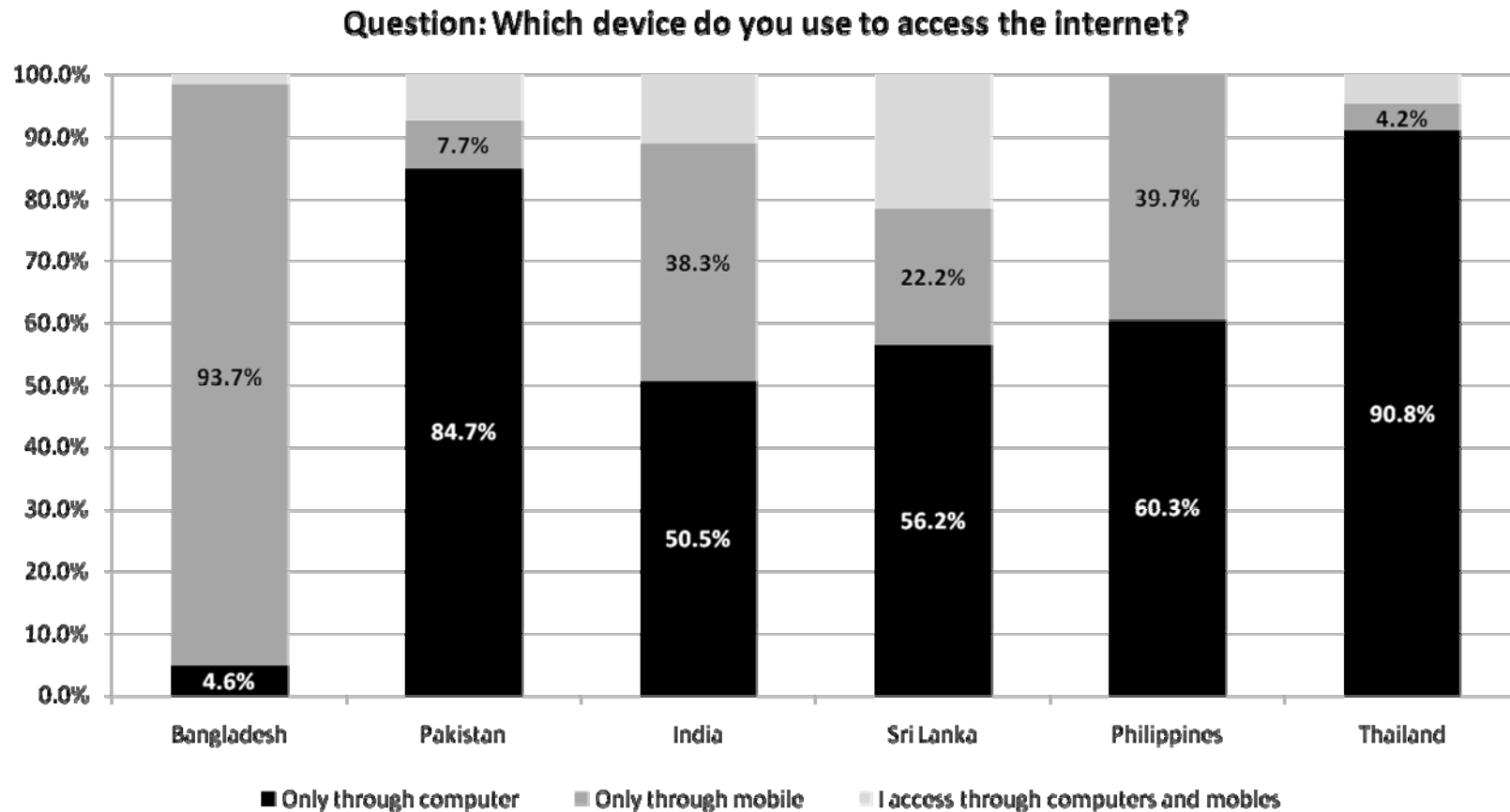
Most of the BOP either haven't heard of, or haven't accessed the internet



The few who DO use the internet depend on telecenters/internet cafes



Access device (computer vs. mobile phone) linked to GDP?



USAGE OF TELEPHONES STILL BASIC – VOICE, SMS

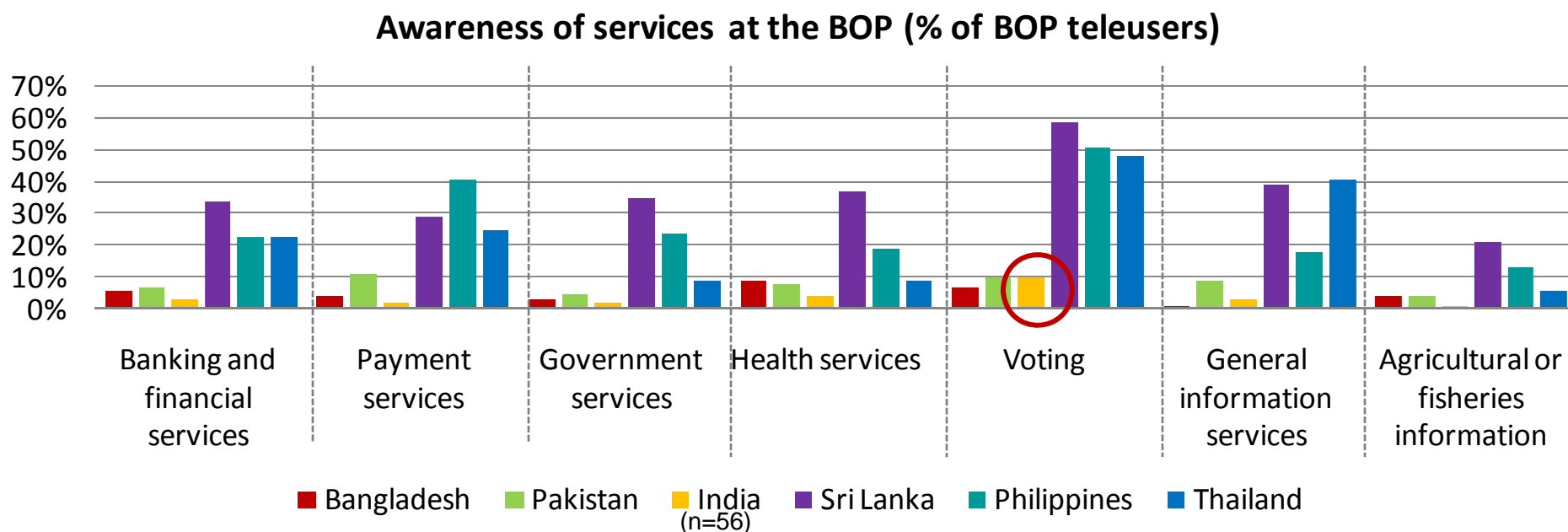
Mostly calls, SMS, missed calls, balance checking

Among BOP mobile owners

	B'desh	Pakistan	India	S' Lanka	Ph'pines	T'land
	% of BOP mobile owners					
Taking phone calls	100%	100%	99%	100%	89%	100%
Receiving phone calls	100%	100%	98%	100%	99%	100%
Sending/receiving 'missed calls'	94%	84%	84%	73%	86%	39%
Sending/receiving SMS (text messages)	32%	47%	33%	52%	100%	53%
Sending/receiving MMS (picture messages)	1%	4%	4%	6%	13%	4%
Sending/receiving emails	0%	0%	1%	0%	0%	1%
Browsing the Internet	0%	1%	1%	2%	0%	2%
Taking photos /video clips	4%	2%	1%	8%	4%	18%
To play games (individual)	13%	18%	7%	21%	14%	17%
To play games (interactive)	1%	1%	1%	1%	3%	1%
To listen to the radio	0%	7%	3%	12%	5%	22%
To listen to music (files which you have downloaded or been sent by others, not radio)	4%	5%	3%	7%	3%	22%
To share content that you have created (E.g. ringtones, wallpapers, pictures, games and video clips)	1%	2%	2%	6%	5%	3%
To send or receive or download or upload other content (E.g., ringtones, wallpapers, pictures, games and video clips)	0%	2%	3%	8%	10%	9%
As an organizer (keep appointments, reminders, alarm and clock)	1%	7%	8%	4%	9%	14%
To check my bill / credit balance	11%	40%	25%	50%	3%	39%

POTENTIAL FOR MORE-THAN-VOICE?

Poor awareness of More than Voice services in South Asia. Higher in SE Asia



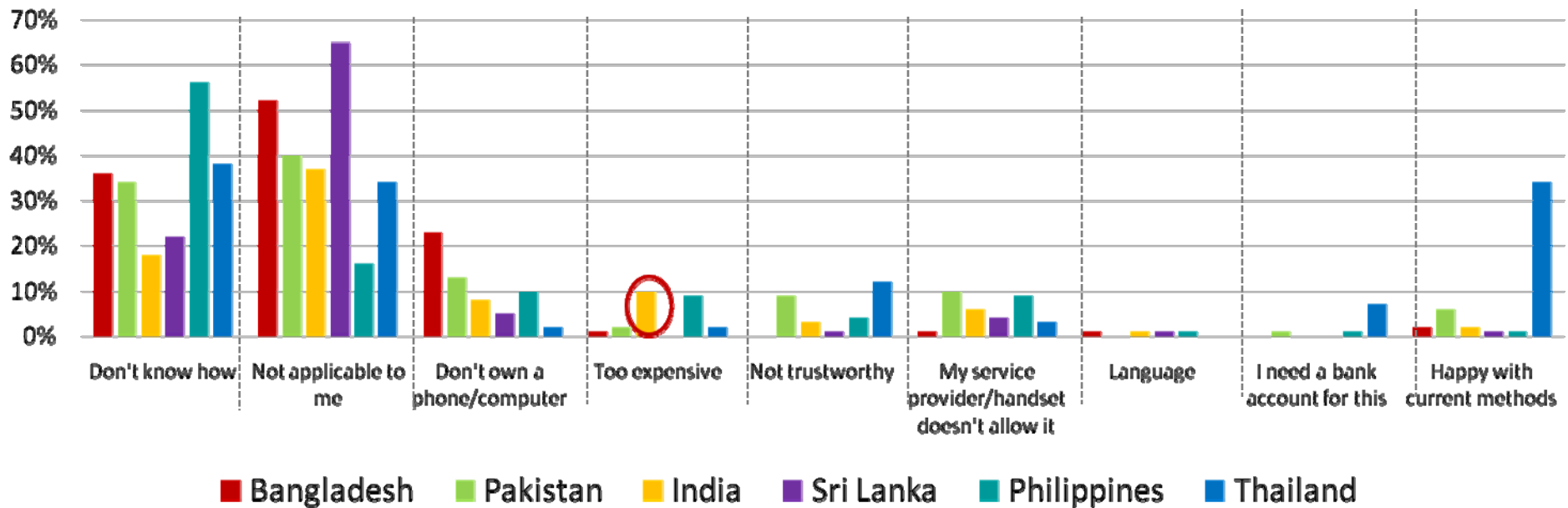
- E.g. 10% are aware of voting applications in India (competitions, real time polling, live participation in TV/radio programs, etc)

Usage is *even* poorer

	India (% of BOP teleusers who are aware of such services)	
	Use regularly	Use, but not regularly
Banking and financial services		1%
Payment services		
Government services		
Health services		1%
Voting	1%	1%
General information services		
Agricultural or fisheries information		

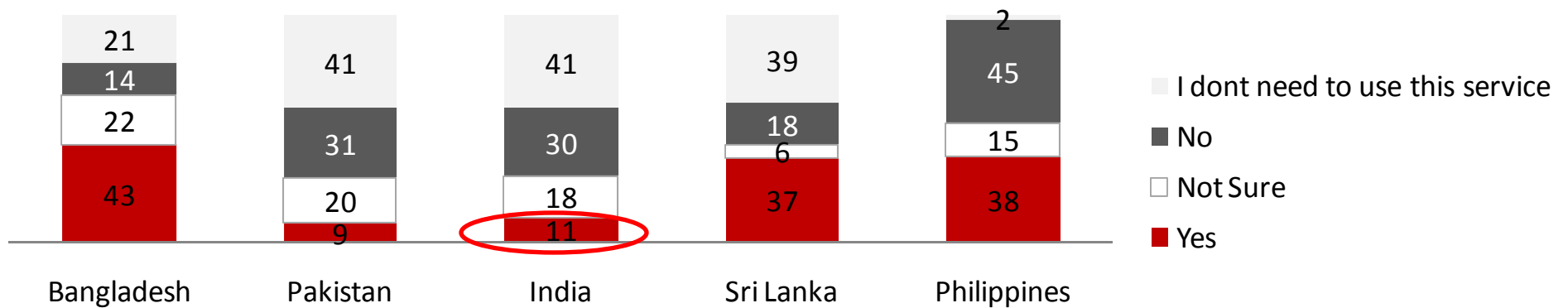
Payments: Most who are aware don't know how or don't feel the need to use it

Reason for not using payments (% of those that are aware but don't use)

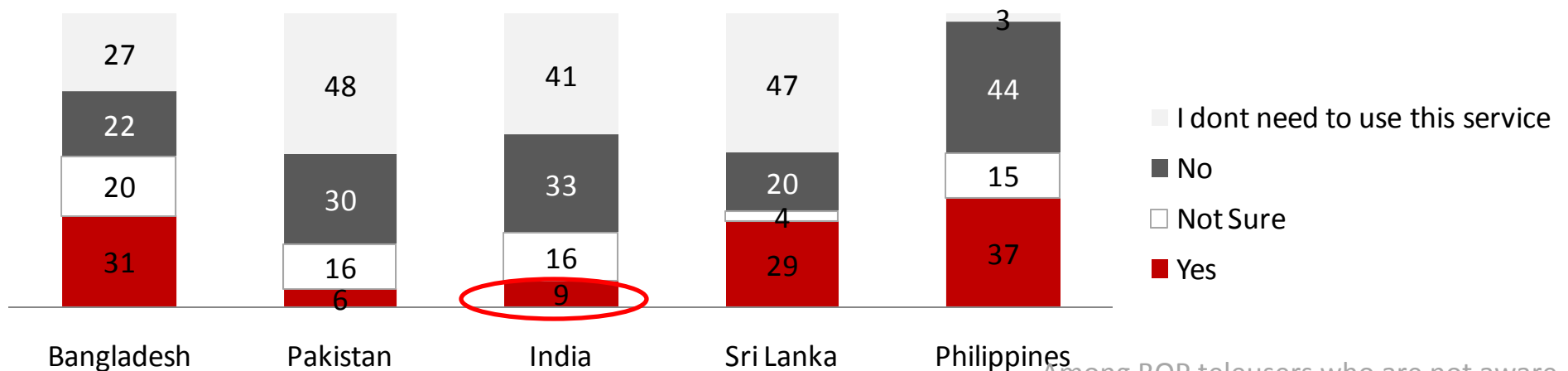


Few of those who aren't aware would be willing to use money transfer services and govt services via a mobile

Willingness to try **sending or receiving money** (% of BOP teleusers who are currently unaware of such services)



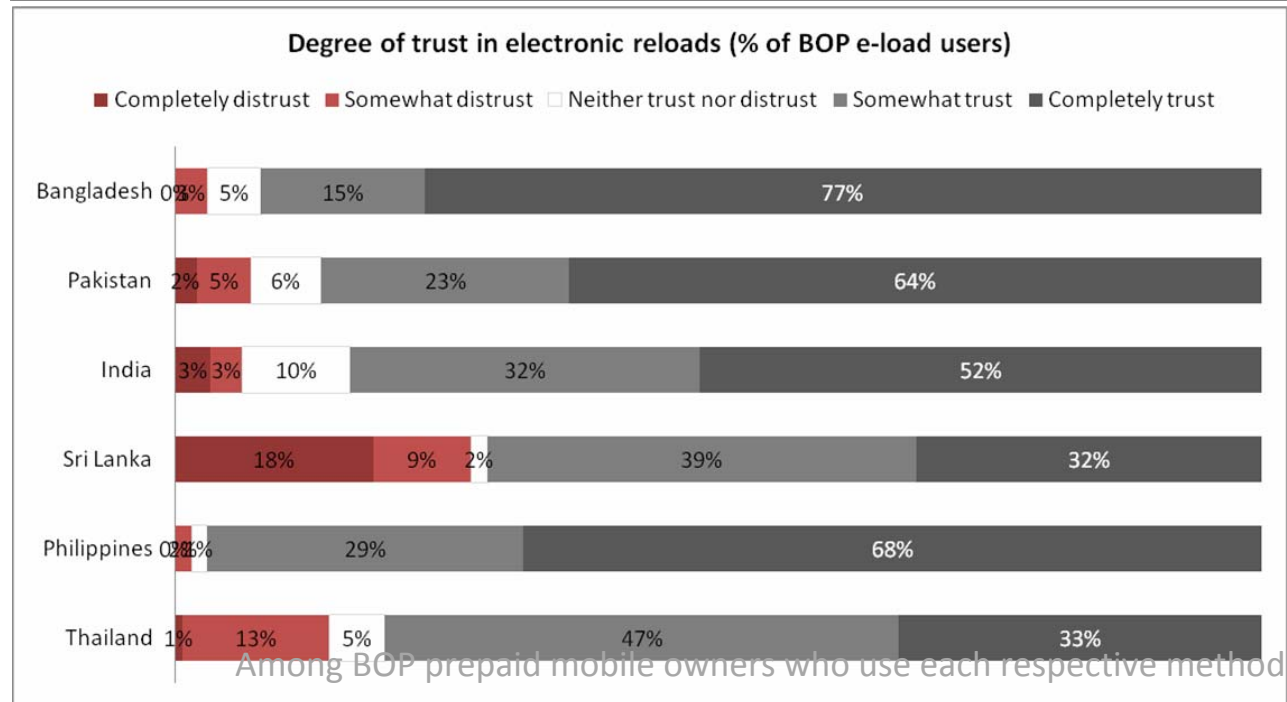
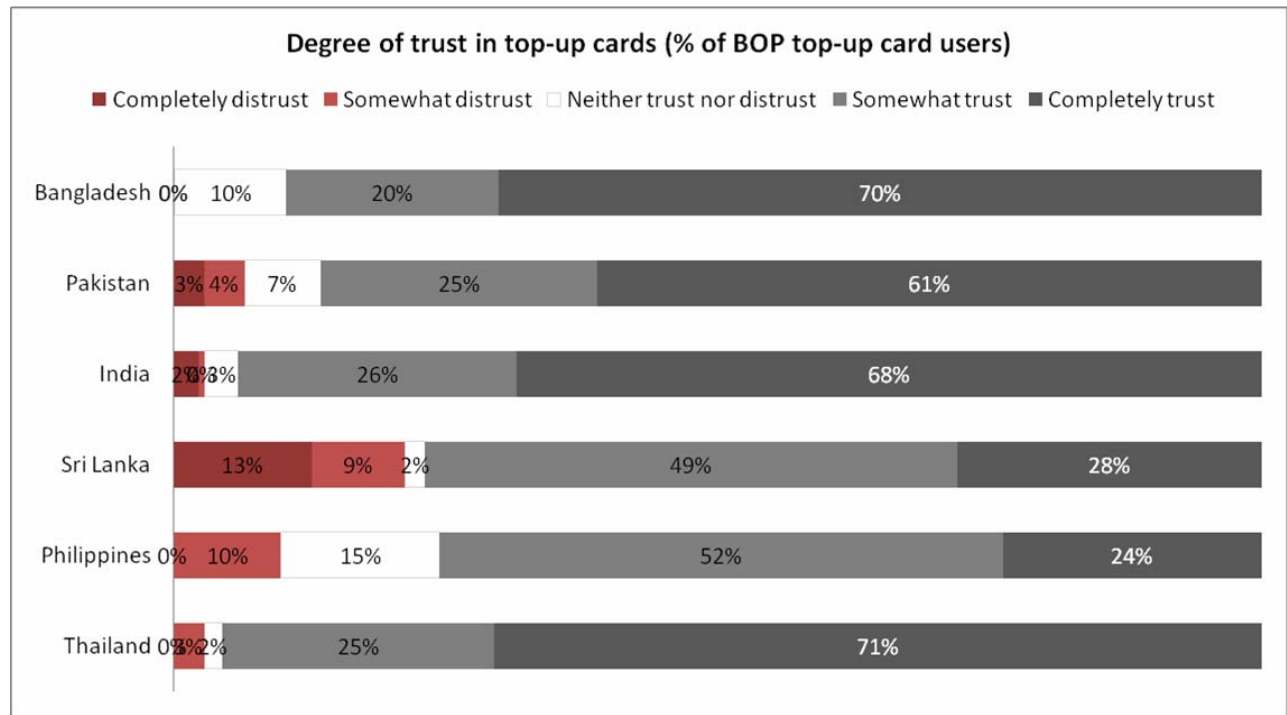
Willingness to try **accessing government services** (% of BOP teleusers who are currently unaware of such services)



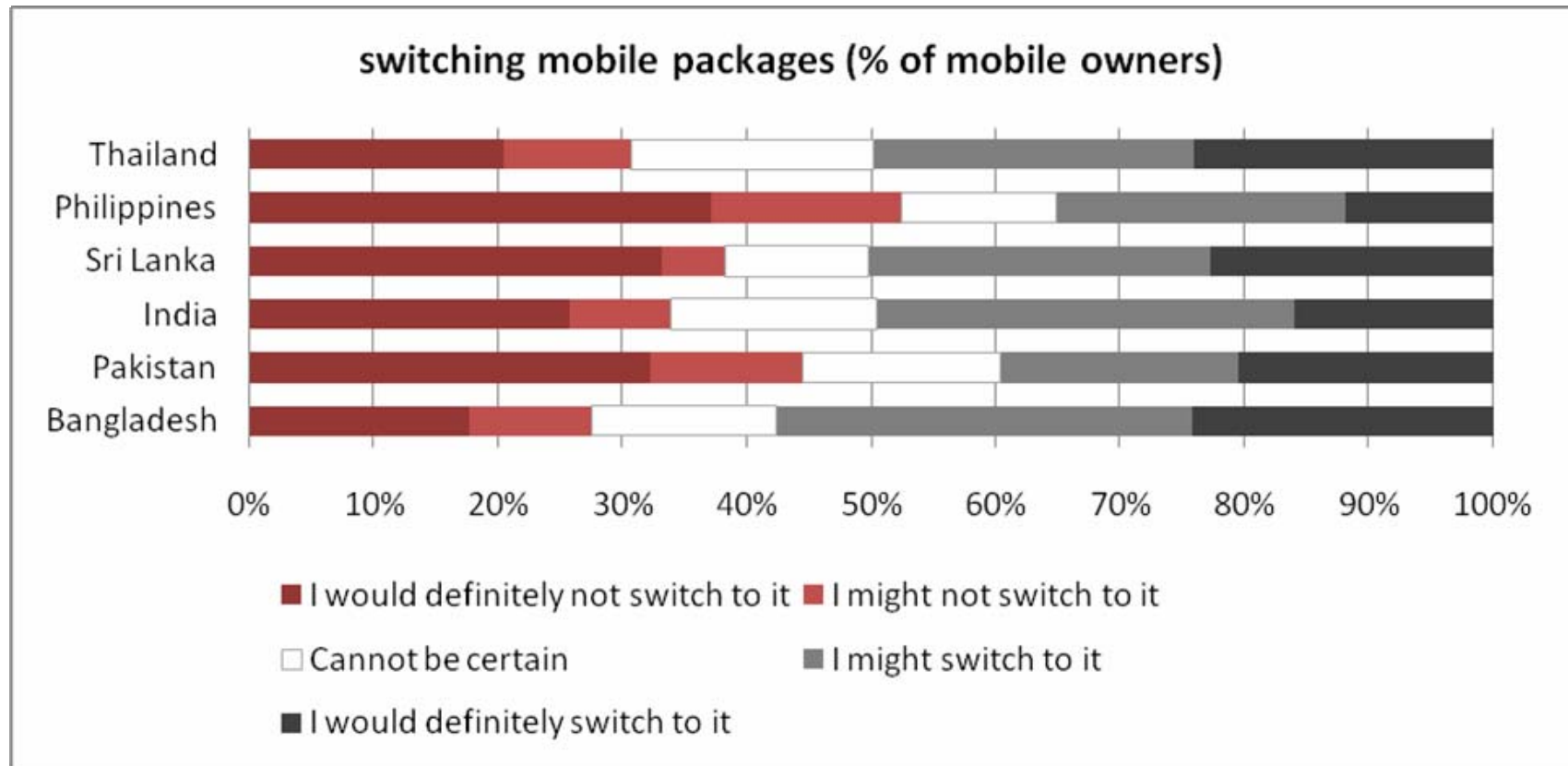
Among BOP teleusers who are not aware

High e-load use → potential for phone-based payments?

- 68% of Indian top-up card users “completely trust” their method
- 53% of Indian electronic reload users “completely trust” their method



Around 50% would not switch for cheaper package → phone has become a “personal” device

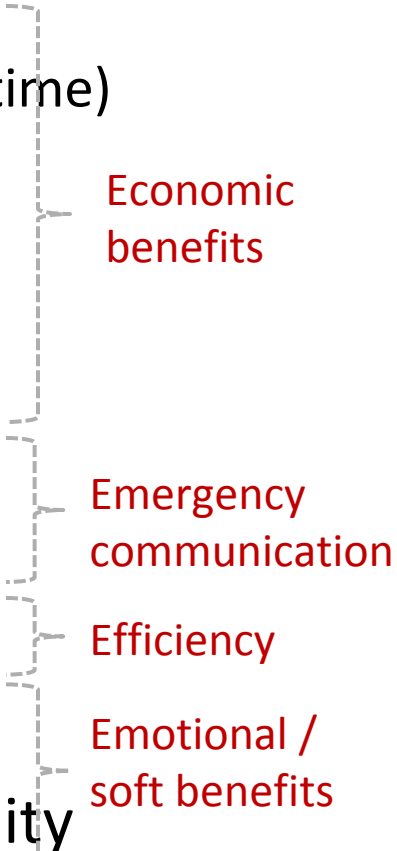


- 40% of those unwilling to switch state that it is important to keep the number at present → need for **mobile number portability + ability to tie in “personalized” services to phone**

Thank you

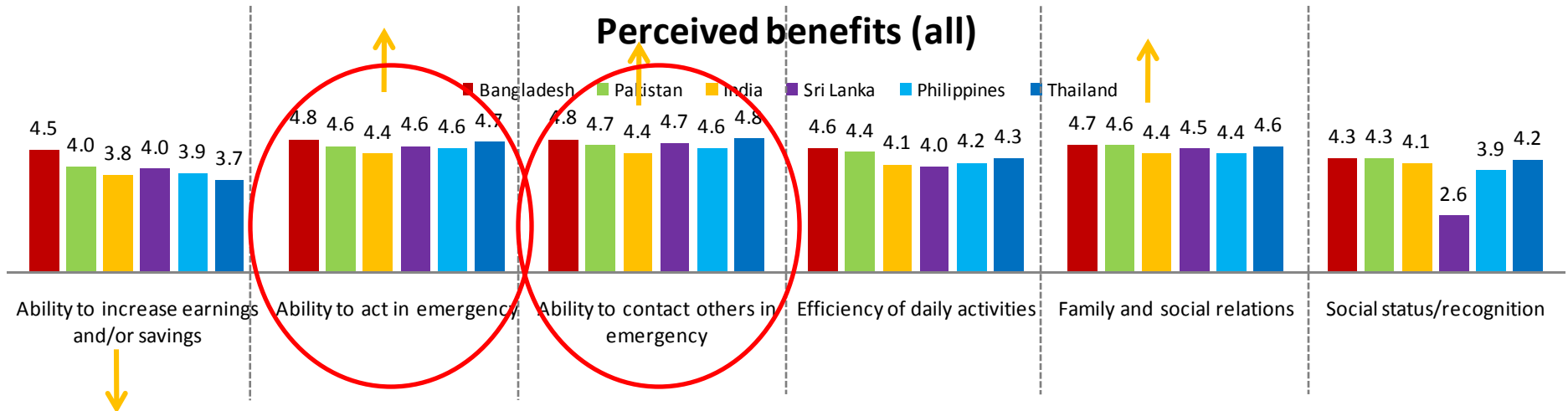
WHAT BENEFITS DO THEY GET AT PRESENT?

Survey asked about perceived benefits of telecom access: *how has telecom access improved ...*

- Your ability to:
 - make more money (generally, and via sale of talk time)
 - find out about employment/work opportunities
 - access price or market information
 - save money
 - save on travel cost
 - act in an emergency
 - contact others in an emergency
 - The efficiency of your day to day work
 - Your relationships with family and friends
 - Your social status/ recognition in the community
- 
- Economic benefits
- Emergency communication
- Efficiency
- Emotional / soft benefits

Largest benefit in emergency communication and relationship maintainance.

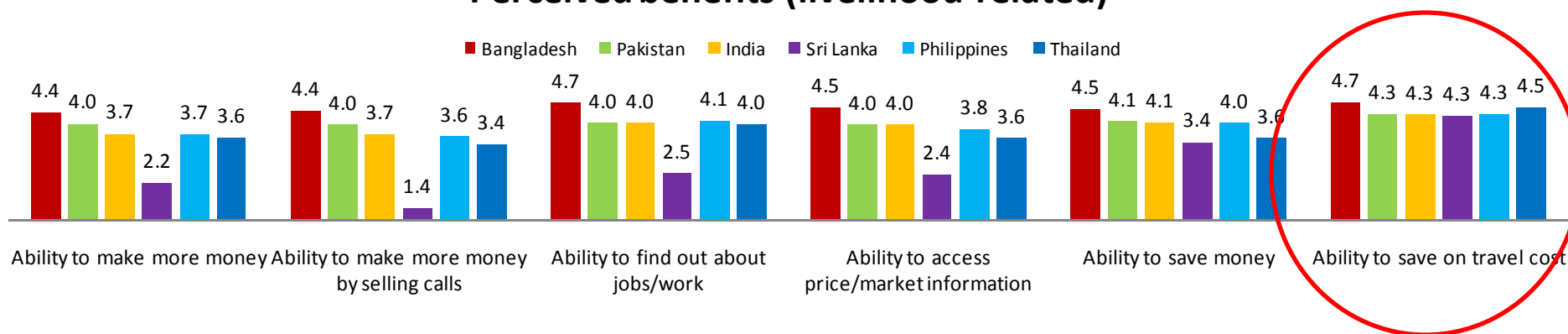
1=worsened 2 = slightly worsened 3=no change 4=slightly improved 5=improved



- Smallest benefit (though still positive) on economic factors

Among economic benefits, ability to save on travel costs most prominent

Perceived benefits (livelihood-related)

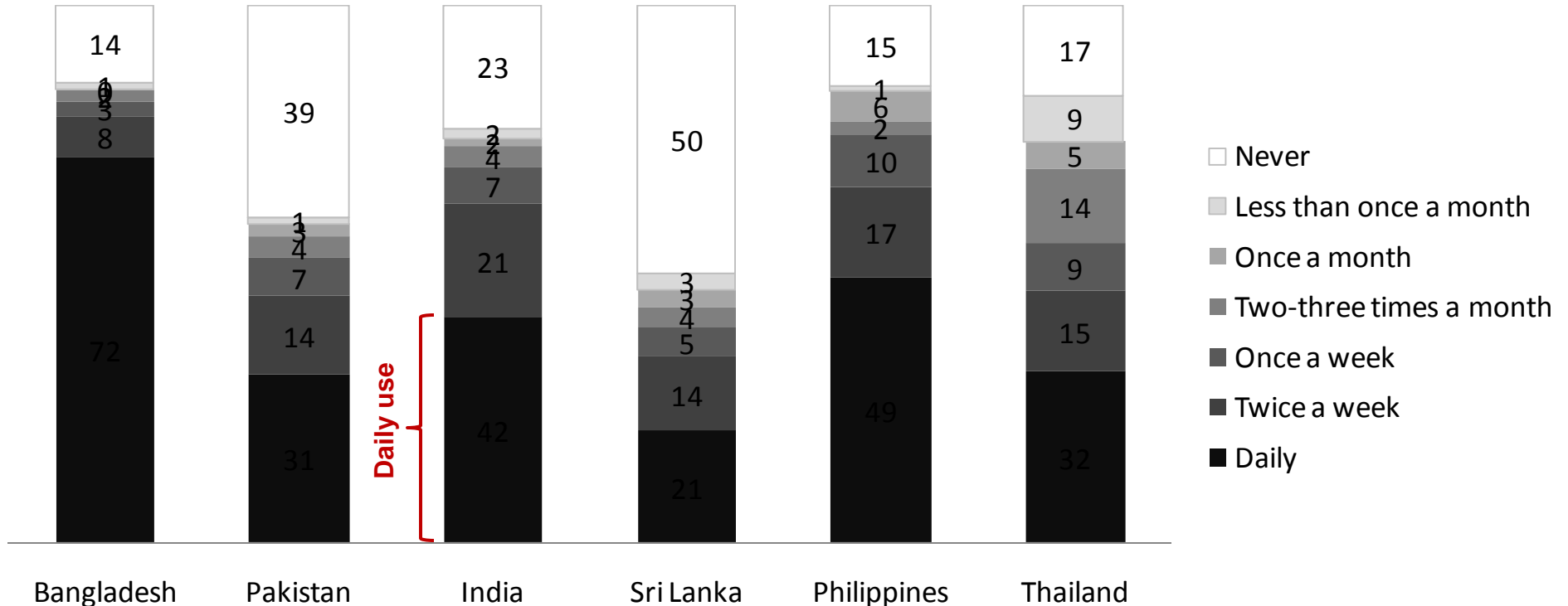


- Indian **males** see more benefit than females in:
 - finding out about employment opportunities

- Indian **females** see more benefit in:
 - saving money (in general, and in travel cost)
 - maintaining relationships

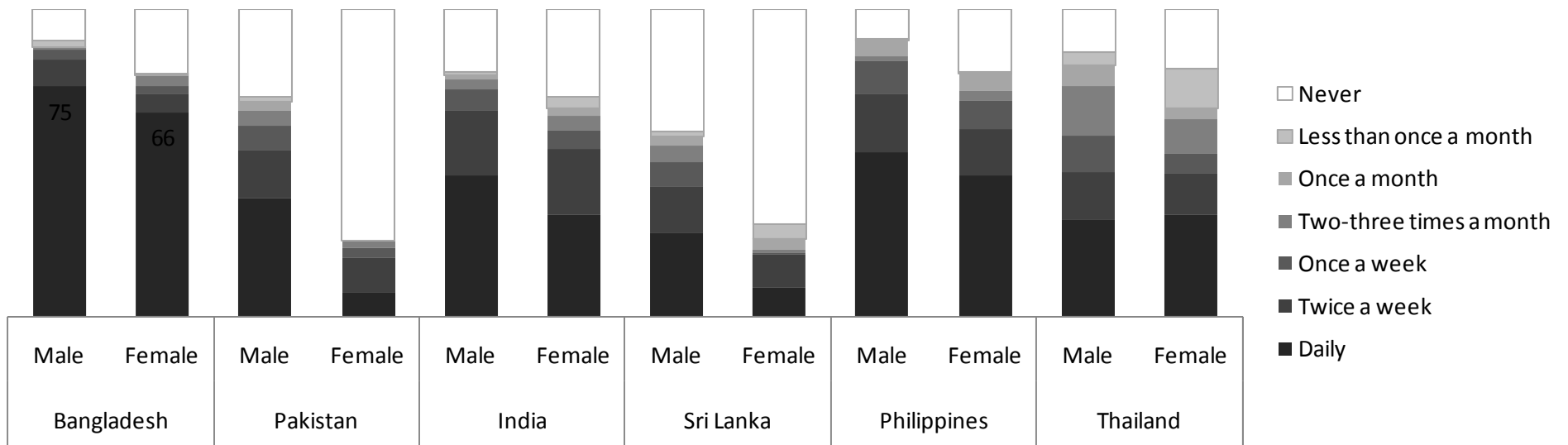
Phone for business? **77% of Indian teleusers at BOP** use their mobile for business, financial or work- related purposes

Use of the phone for financial, business or work-related purposes (% of BOP mobile owners)



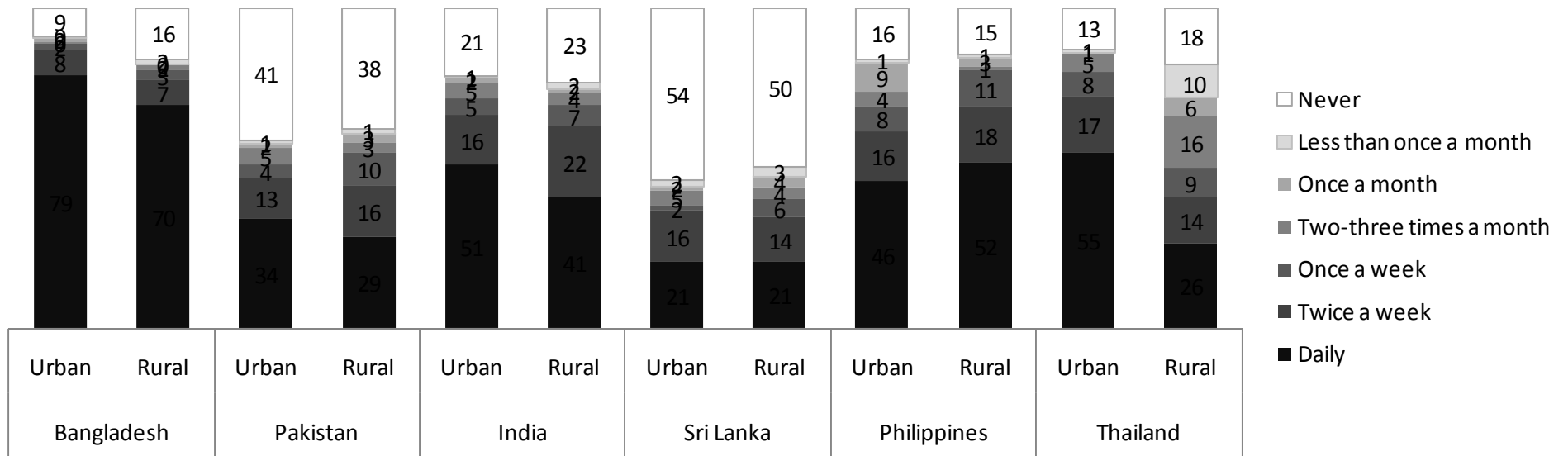
Males in Pakistan and Sri Lanka using the phone more for business/financial purposes.

Use of the phone for business, financial or work puposes (% of BOP mobile phone owners)



Most pronounced urban/rural gap in Thailand's BOP in using the phone for business/financial purposes

Use of the phone for business, financial or work puposes (% of BOP mobile phone owners)



OUR MISSION:

To improve the lives of the people of the emerging Asia-Pacific by facilitating their use of ICTs and related infrastructures; by catalyzing the reform of laws, policies and regulations to enable those uses through the conduct of policy-relevant research, training and advocacy with emphasis on building in-situ expertise

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