

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

Telease@BOP3

A six-country study of Telease at the Bottom of the Pyramid: Bangladesh findings

26 June 2009



This work was carried out with the aid of a grant from the International Development Research Centre, Canada and the Department for International Development, UK, with contributions from Telenor Research & Development Centre Sdn. Bhd., Malaysia.

IDRC
International Development
Research Centre



CRDI
Centre de recherches pour le
développement international

DFID Department for
International
Development

Teleuse at the Bottom of the Pyramid: 3

TELEUSE@BOP 3

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
 - 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, the Department for International Development (DFID), UK with contributions from Telenor Research and Innovation, Malaysia

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
 - Overseas and domestic migrants that send money home

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

Sampling logic

- Multi-staged stratified sampling by probability proportionate to size
 - Regions (states/provinces/districts) randomly selected in 2006; kept the same for comparison in 2008 (except BD)
 - Stratification of cities within state, province etc
 - Geographical ordering of cities, villages
 - PPS selection of cities, villages
- Within PSU
 - Random starting points
 - 10 HH per starting point; right hand rule
 - KISH grid to select respondent in HH

Agenda

WHO ARE THE BOP?

BOP TELECOM EXPANSION

ACCESS

OWNERSHIP

MARKET POTENTIAL

WHAT THOSE AT BOP DO WITH THEIR MOBILES?

POTENTIAL FOR MOBILE 2.0?

BENEFITS?

THE UNCONNECTED...

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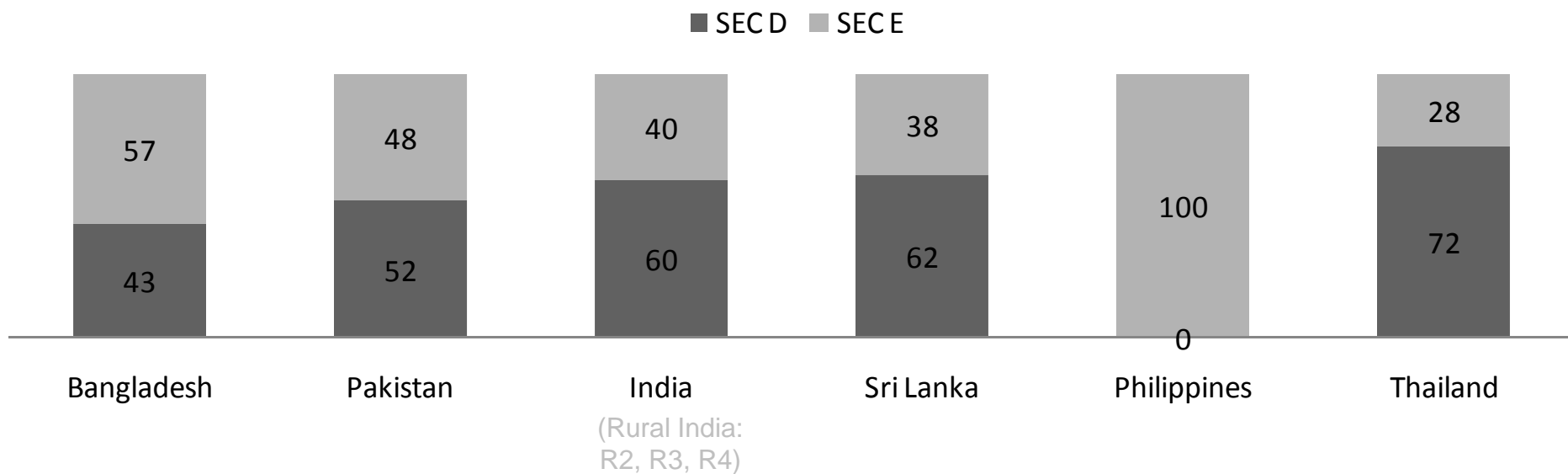
BENEFITS?

THE UNCONNECTED...

The study represents approx. **62 million** in Bangladesh

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

Socioeconomic group classification (% of sample)



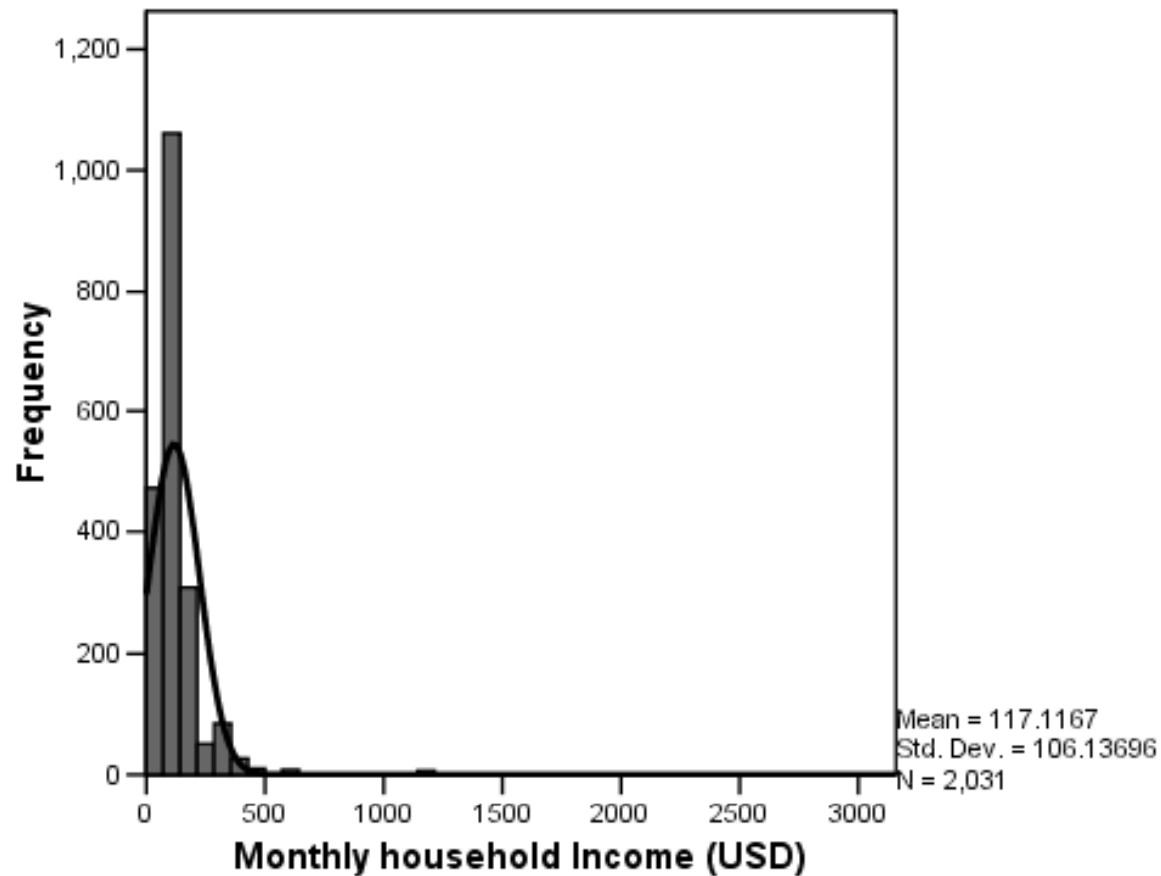
Link between SEC D+E and "\$2 per day" definition

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 |

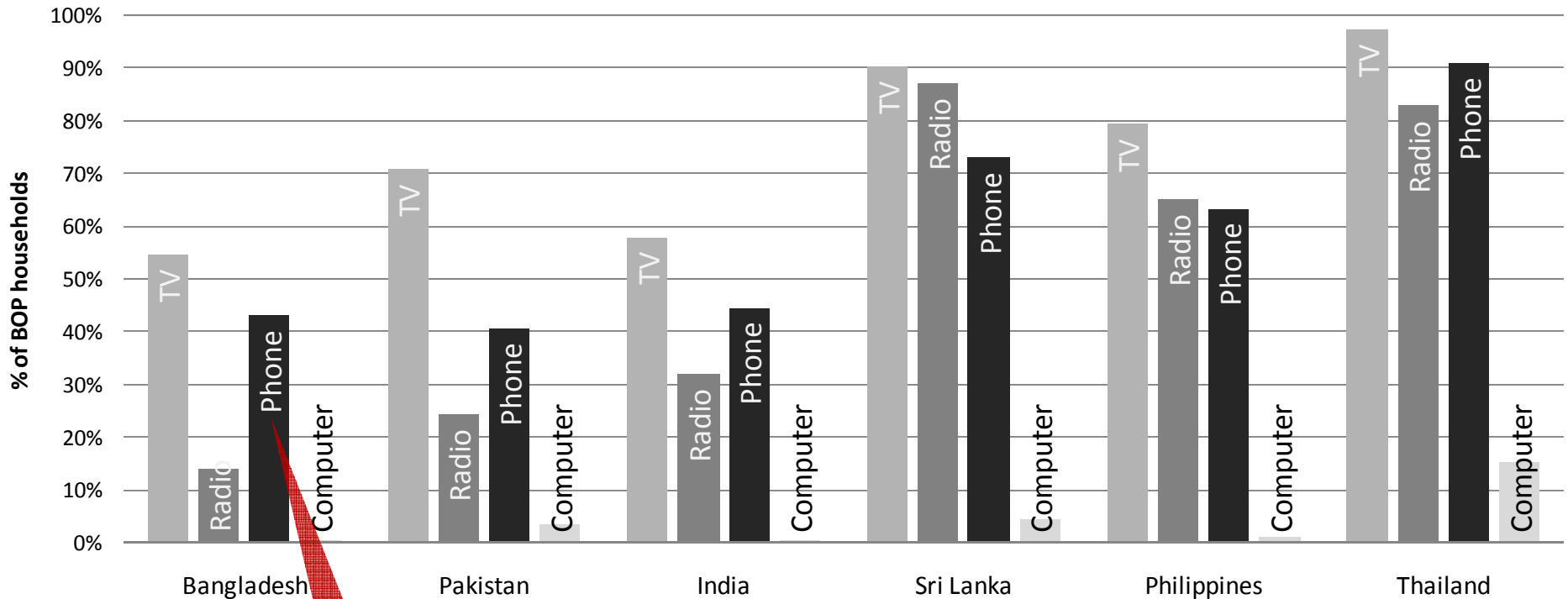
Households earning ~USD71-143 per month (on average)

Monthly household income (USD) Bangladesh



More phones than radios at BD BOP

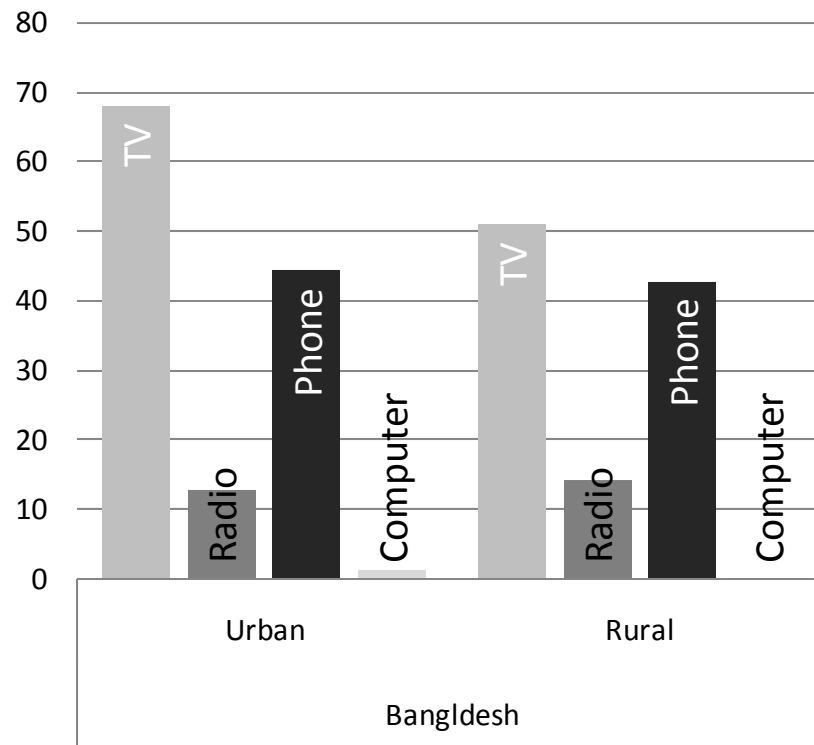
Access to communication technologies within the household (% of BOP teleusers)



Mobile or fixed phone

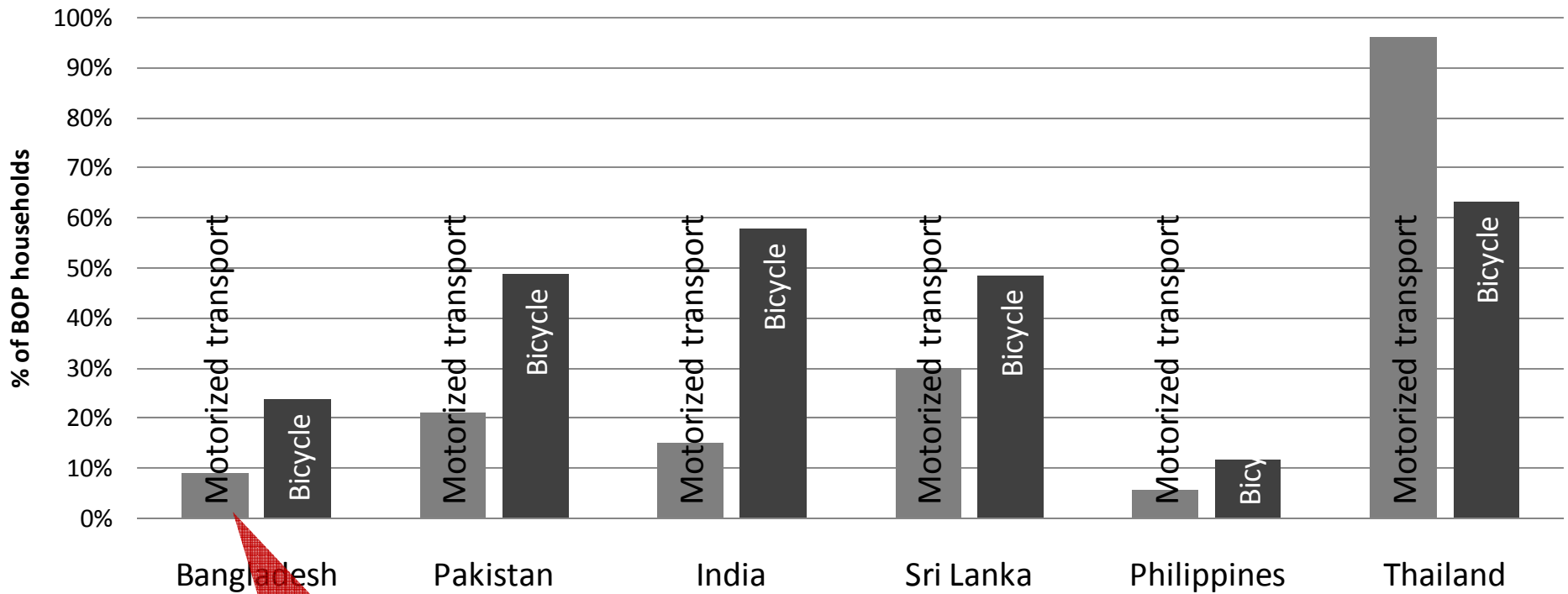
No difference between urban and rural Bangladeshi BOP

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



Access to transport

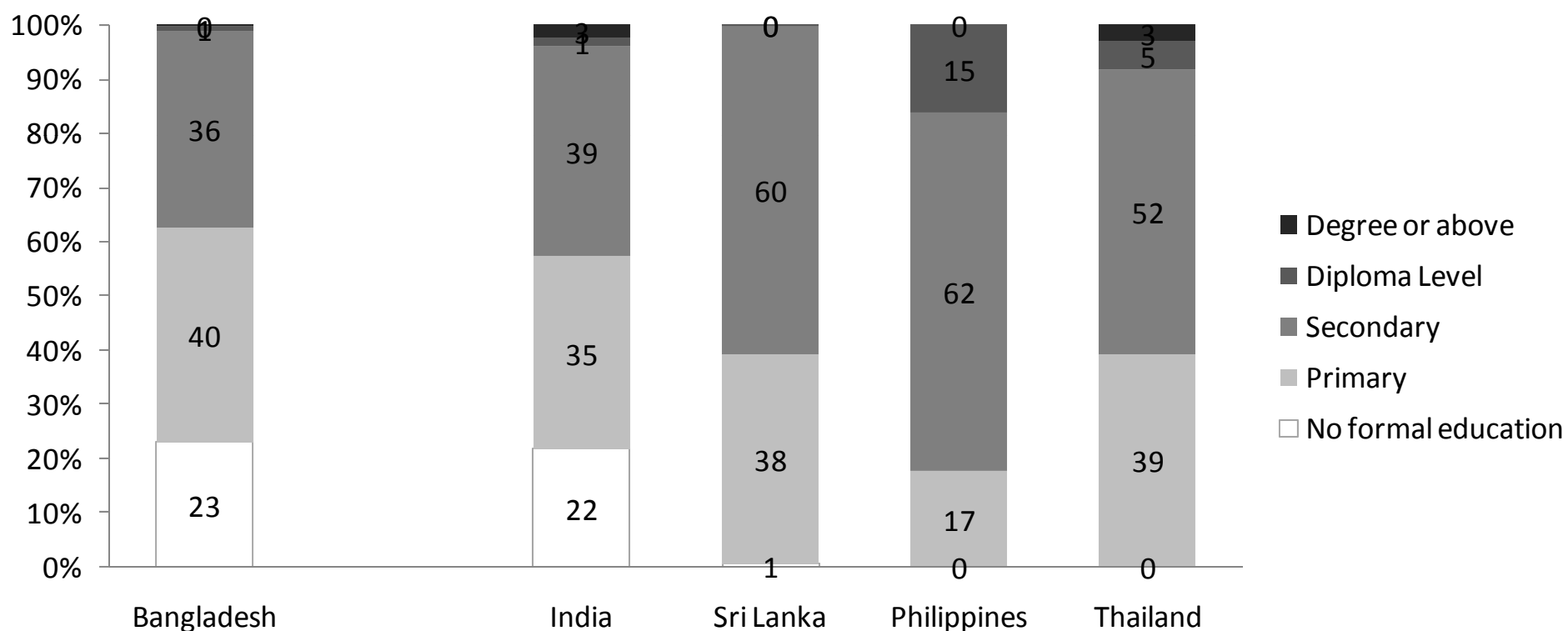
Access to transport within the household (% of BOP teleusers)



Incl. motor bike, trishaw, scooter, tractor, etc

Educational attainment does not exceed primary or secondary education

Educational attainment (% of BOP teleusers)



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THE UNCONNECTED...

Larger % of BD BOP used the phone in recent past

Used a phone in the last 3 months

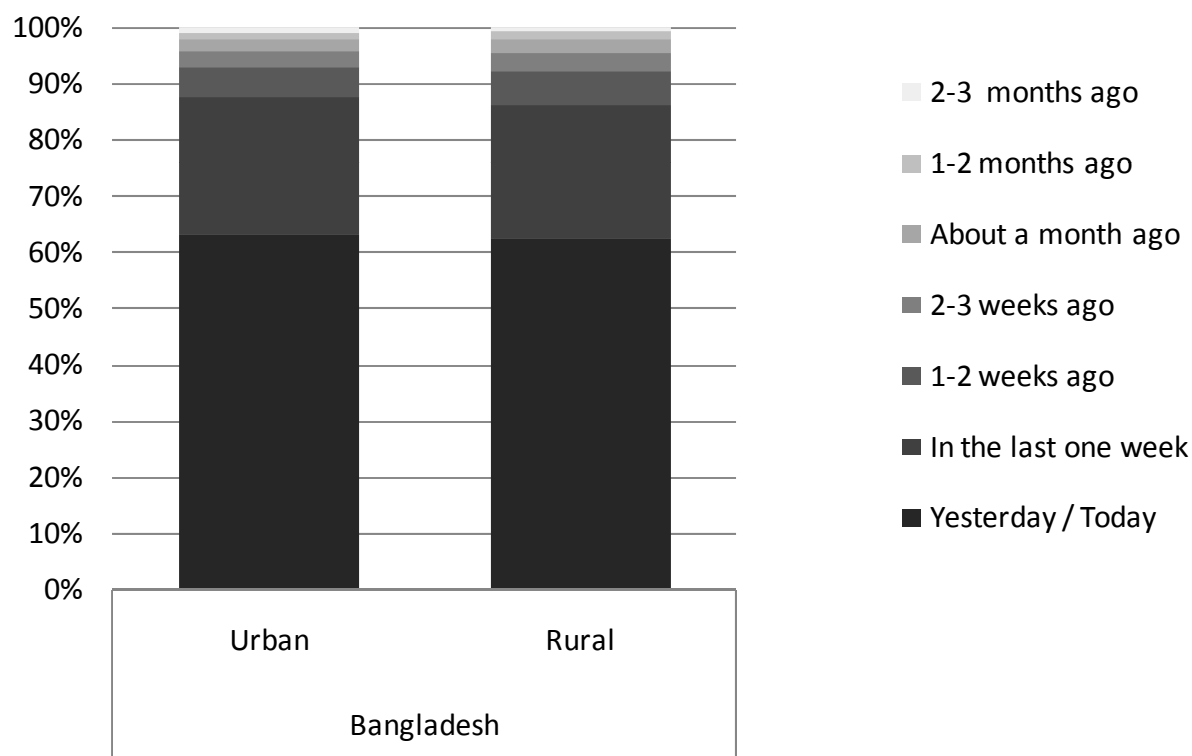
| | Bangladesh | Pakistan | India | Sri Lanka | Philippines | Thailand |
|-------------------------|------------|----------|-------|-----------|-------------|----------|
| % of BOP (outer sample) | 95% | 96% | 86% | 88% | 79% | 77% |

Used a phone in the last week

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

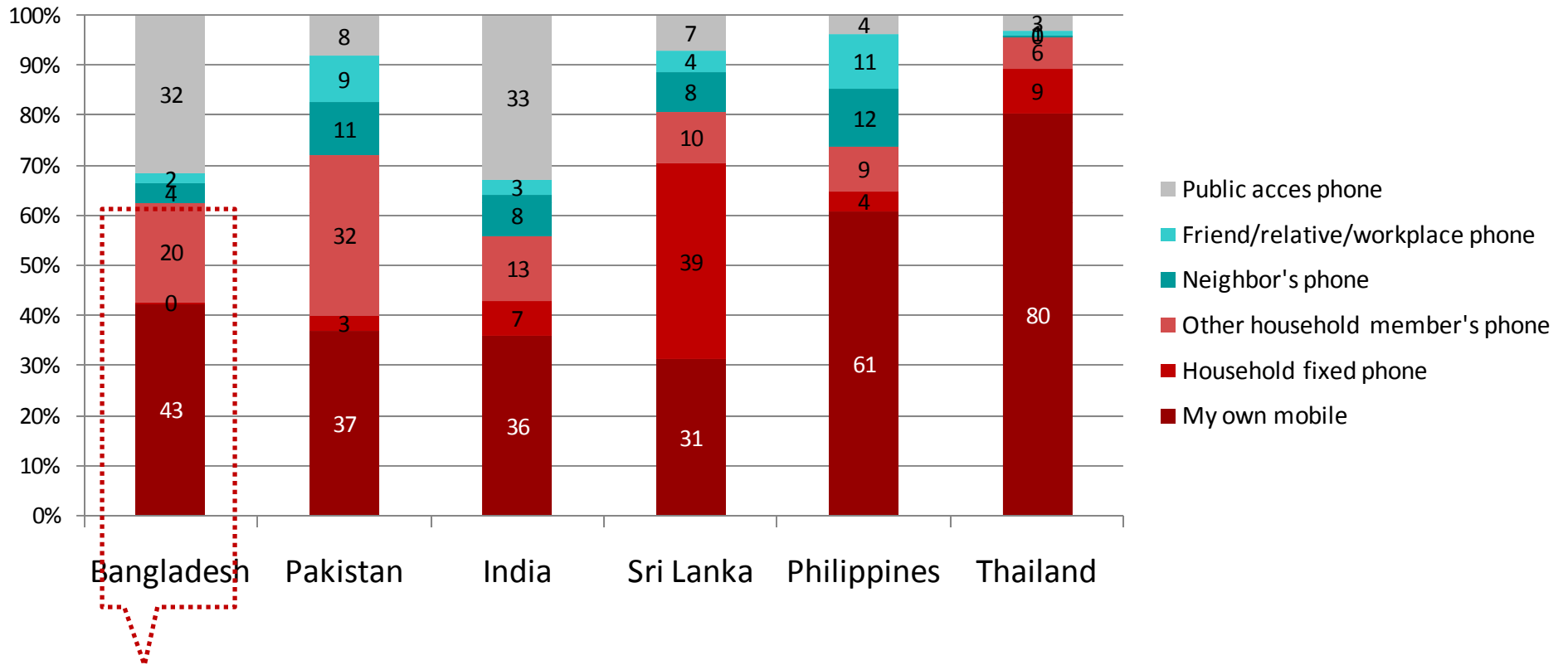
> 80% rural BOP teleusers in Bangladesh used a phone in the week before the study

Last time respondent used a phone (% of BOP teleusers)



32 percent of BD BOP rely on public phones

Most frequently used phone (% of BOP teleusers)



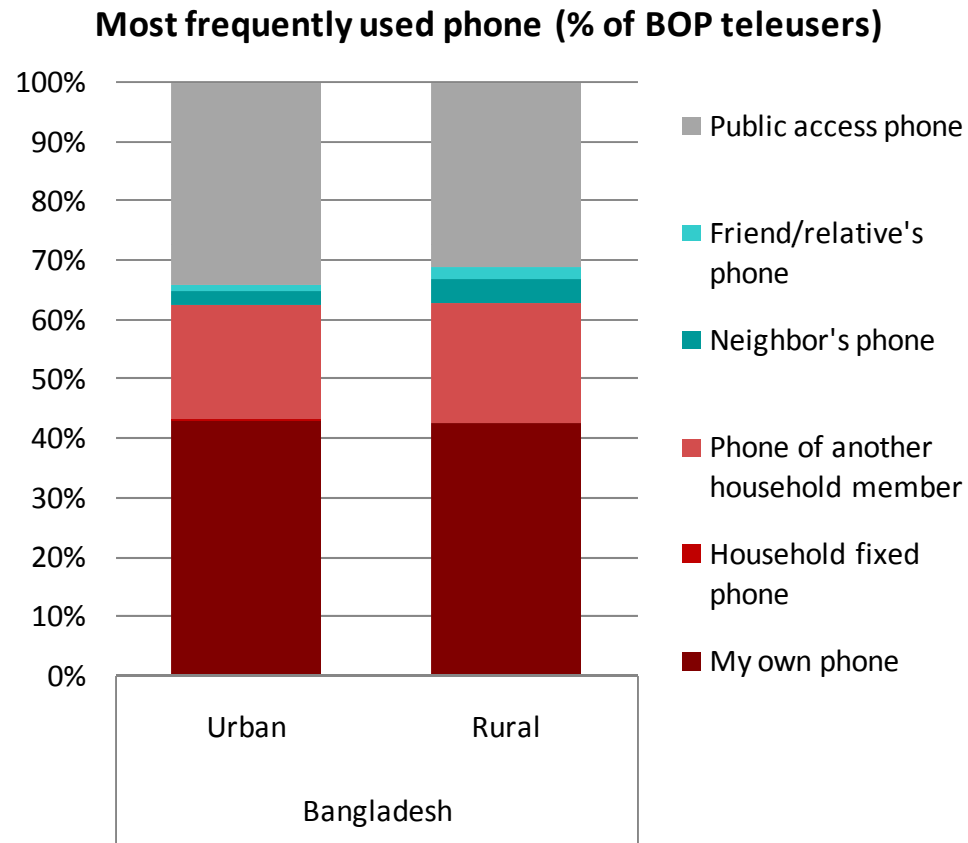
Access within the household

- 25% of BD mobile owners also use public phones; mostly when they run out of credit on their mobiles

100% of BD BOP public phone users say the public phone is a mobile

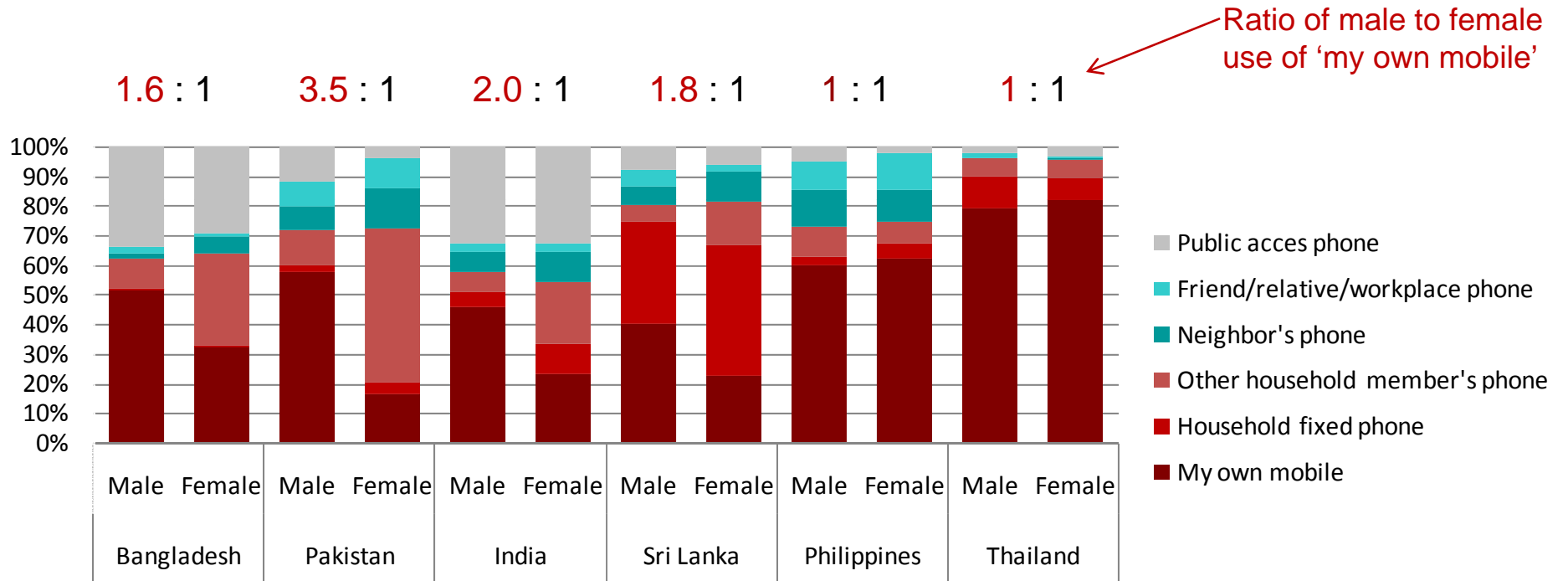
| | Bangladesh | Pakistan | India | Sri Lanka | Philippines | Thailand |
|--|------------|----------|-------|-----------|-------------|----------|
| % of BOP teleusers that use public phones as a primary phone | | | | | | |
| Fixed | | 67 | 91 | 100 | 96 | 90 |
| Mobile | 100 | 33 | 9 | | 4 | 10 |

Little difference between BOP in urban and rural Bangladesh



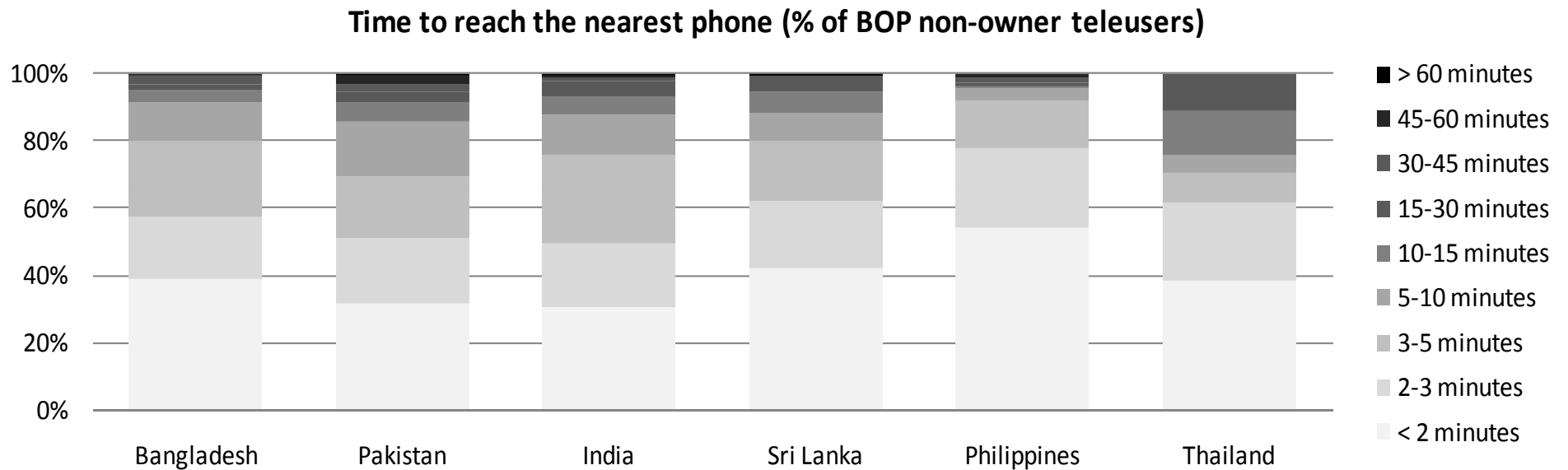
Bangladeshi BOP women less likely to use own mobiles, more likely to use other people's phones

Most frequently used phone (% of BOP teleusers)



- 18% of BD female mobile owners said a male member of the household made the decision for them to get connected

~80% can get to a phone in under 5 minutes



Most non-owners walk to the nearest phone

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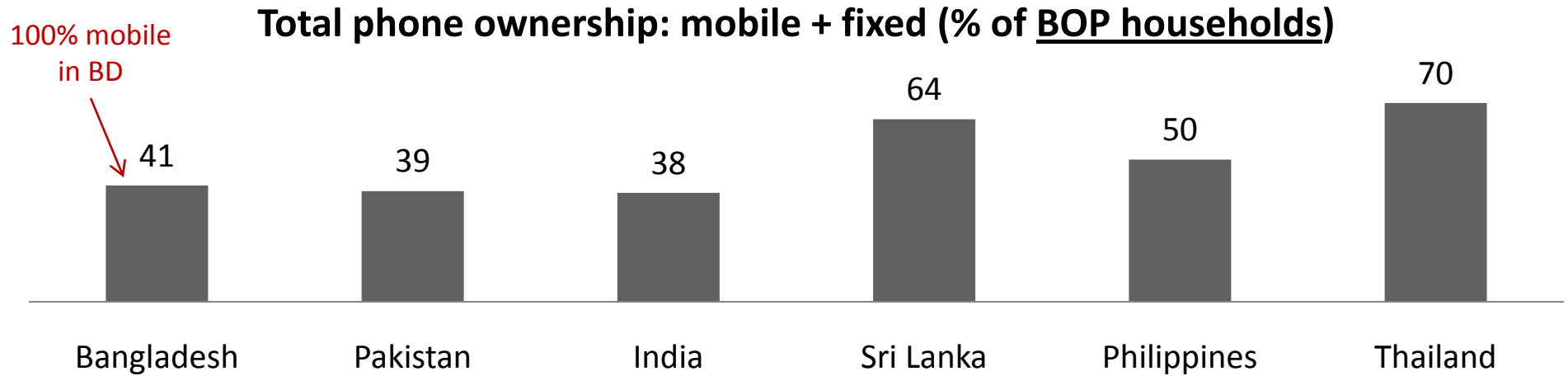
POTENTIAL FOR MOBILE 2.0?

BENEFITS?

THE UNCONNECTED...

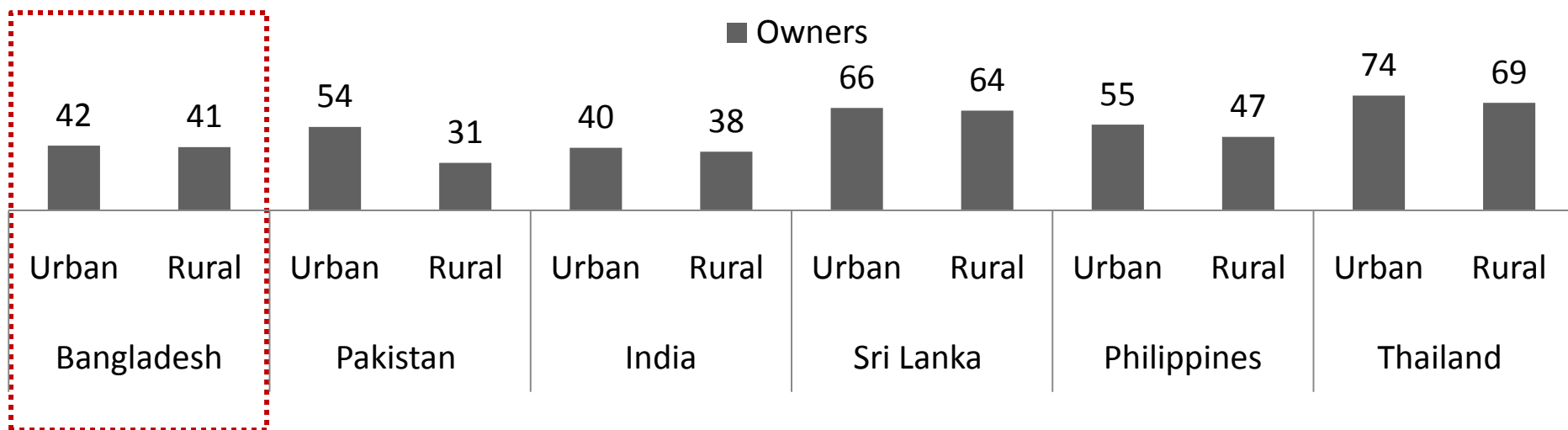
Almost all of BD BOP uses a mobile, but only 41% own one

41% BOP = 43% of BOP teleusers



No difference between rural and urban phone ownership

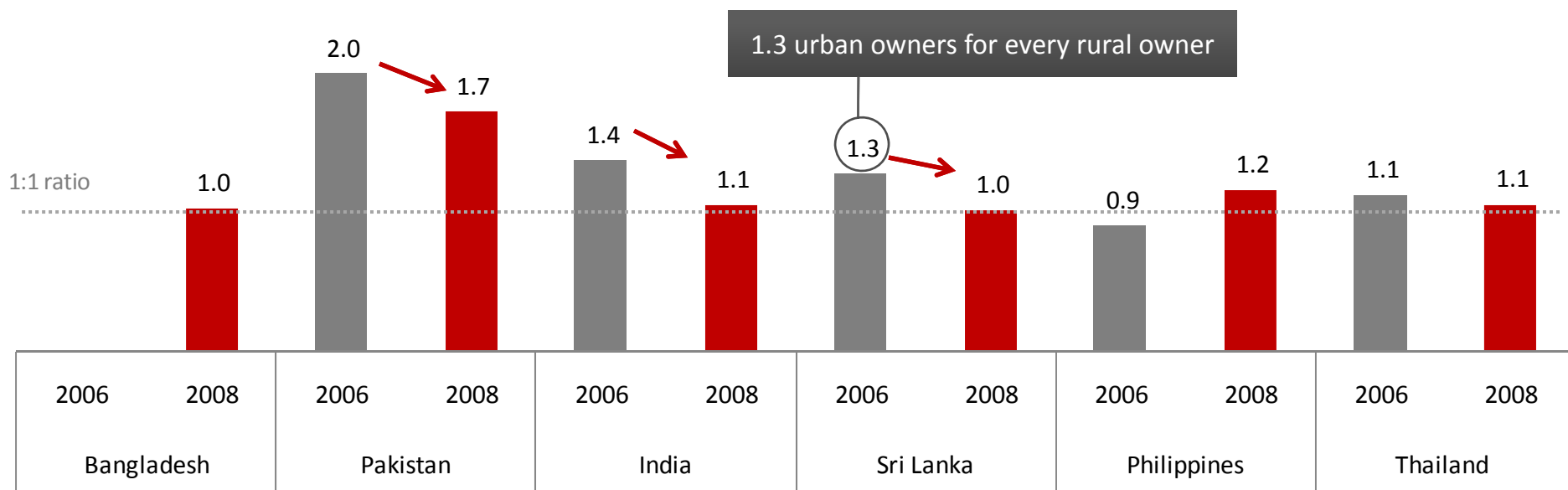
Total phone ownership: mobile + fixed (% of BOP)



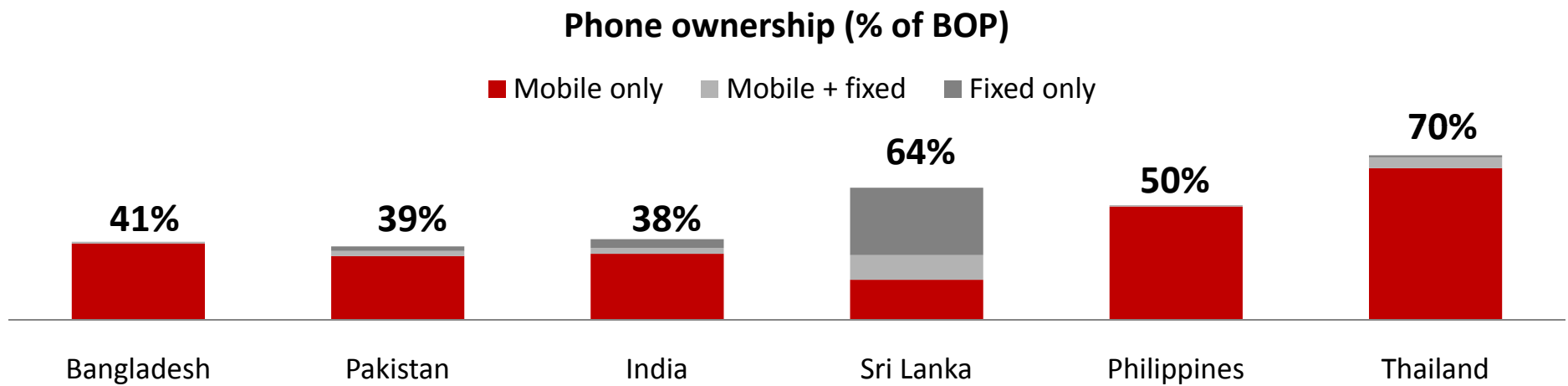
Urban-rural divide in total BOP phone ownership **declining** in other South Asian countries; BD has closed the gap

no trend data for BD available

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

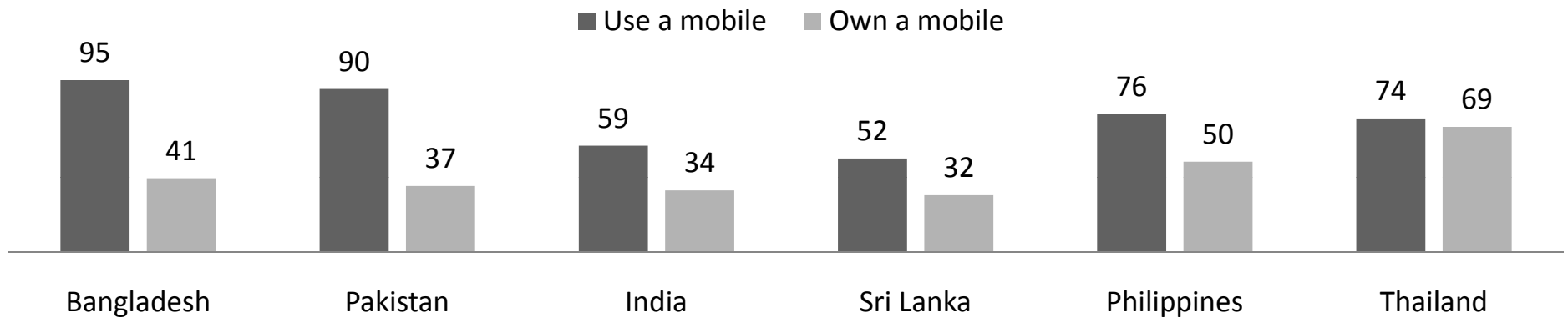


BD BOP is 99% mobile



95% of BD BOP use a mobile, even if they don't own one

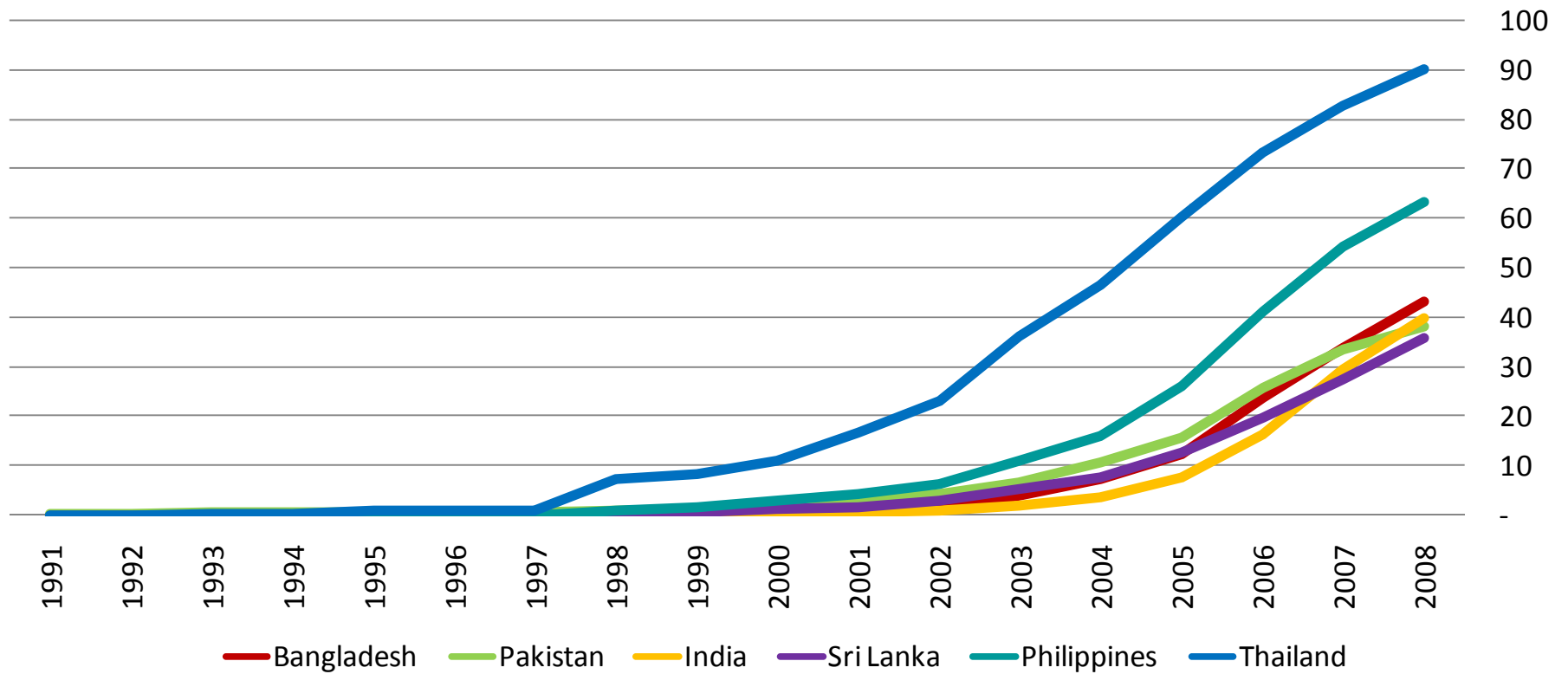
Mobile use and ownership (% of BOP)



When did the BOP get connected to **mobile**?

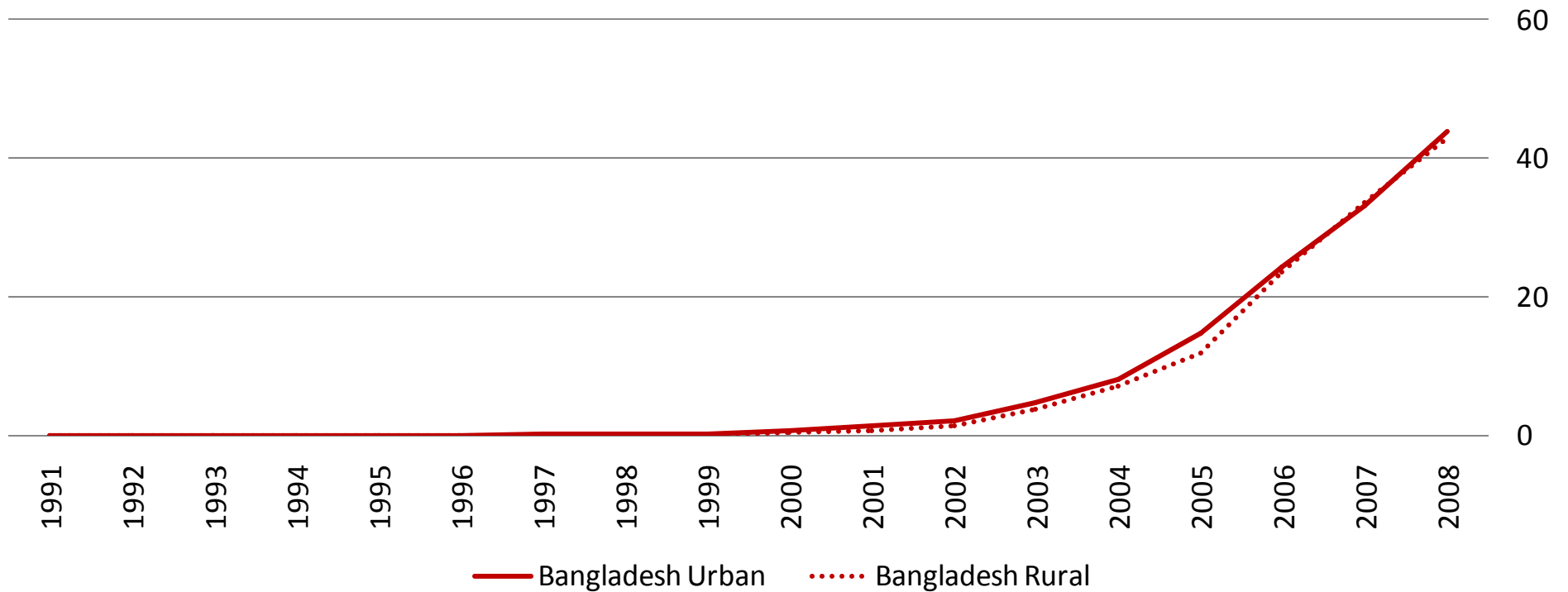
Overview

Growth in mobile ownership (% of BOP teleusers)



BOP mobile has grown at same pace in urban and rural BD

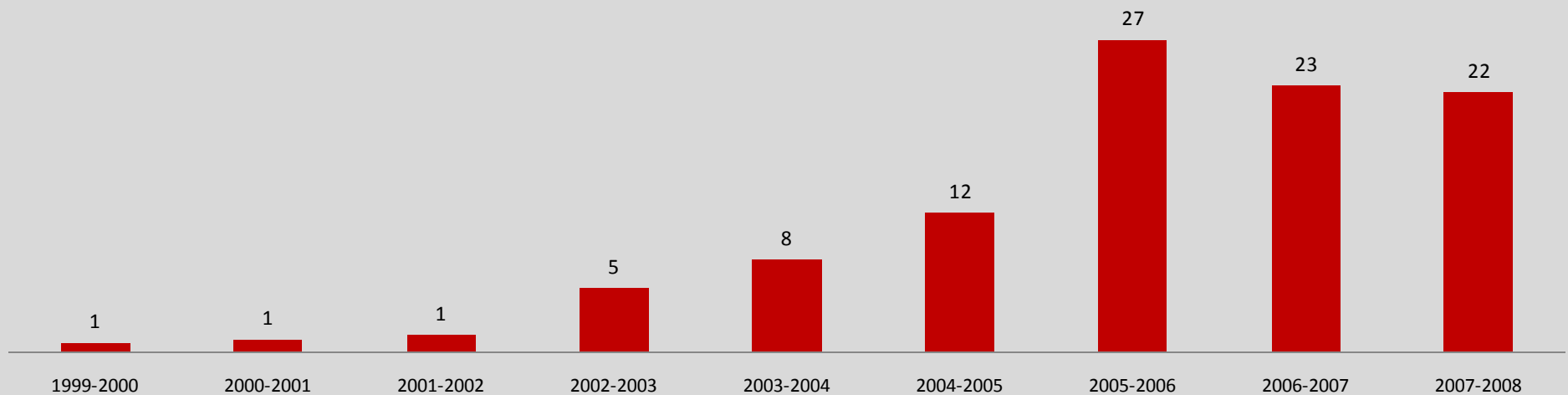
Growth in urban and rural mobile ownership (% of BOP)



Bangladesh: Most (72%) got connected after 2005

Bangladesh (% of BOP mobile owners)

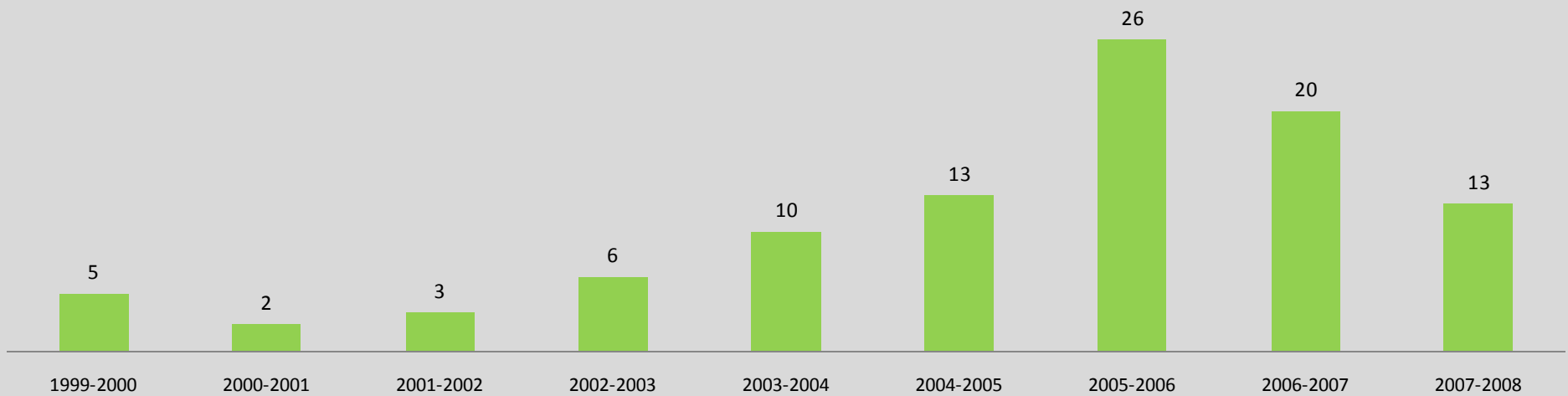
■ Bangladesh



Pakistan

Pakistan(% of BOP mobile owners)

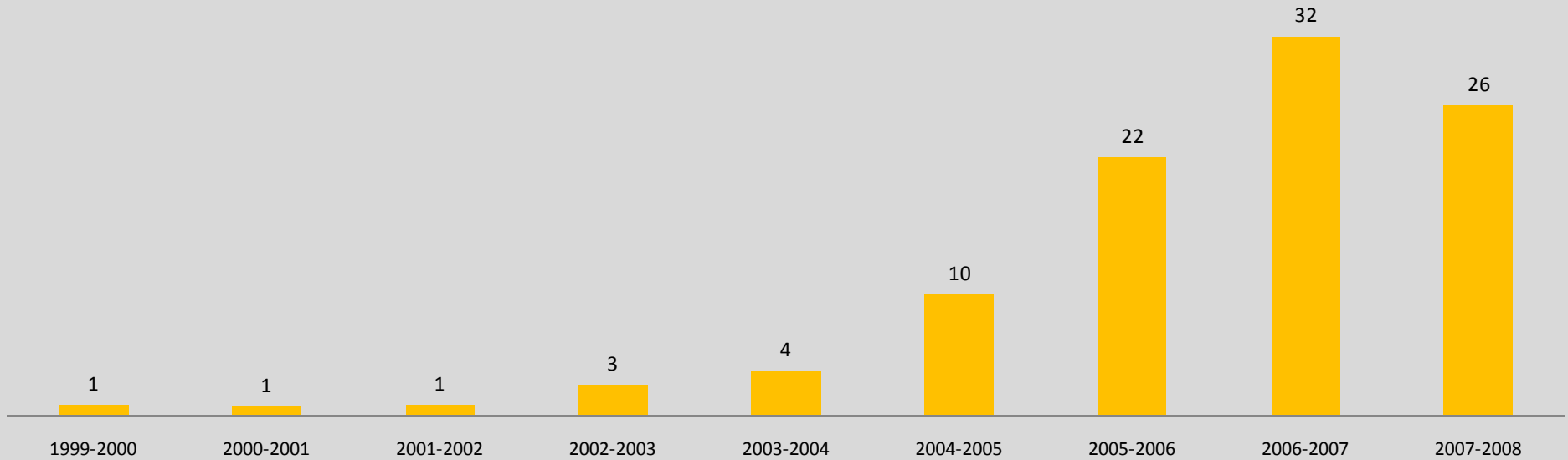
■ Pakistan



India

India (% of BOP mobile owners)

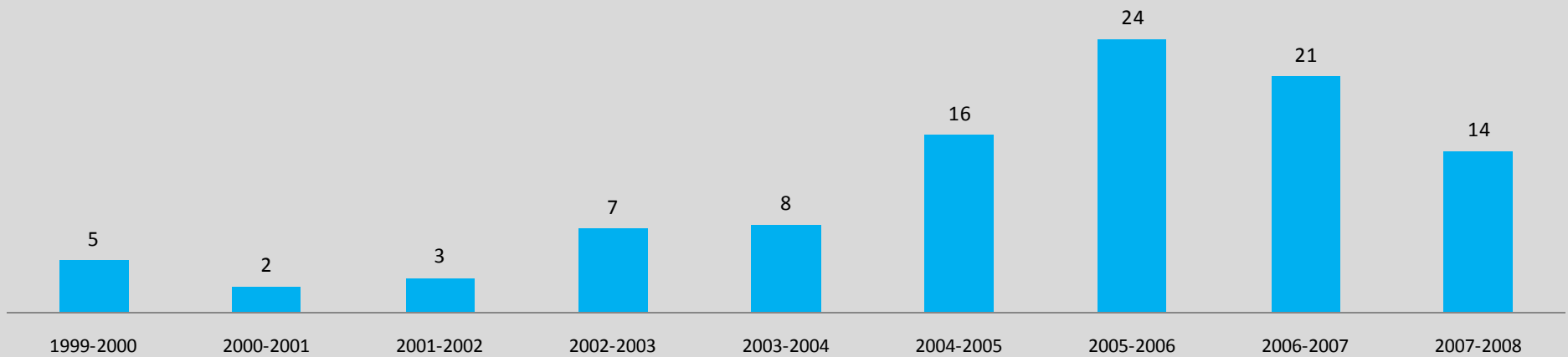
■ India



Philippines

Philippines (% of BOP mobile owners)

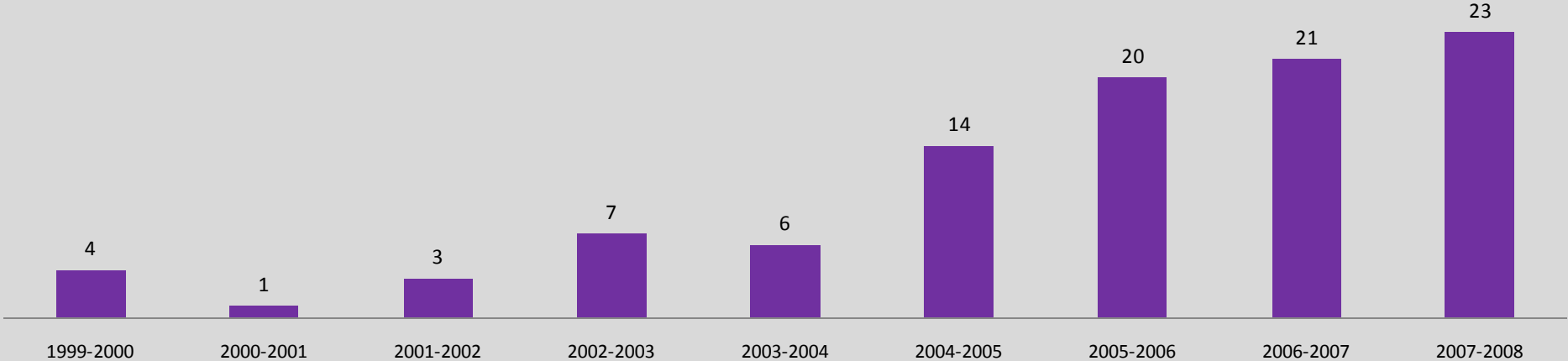
■ Philippines



Sri Lanka

Sri Lanka (% of BOP mobile owners)

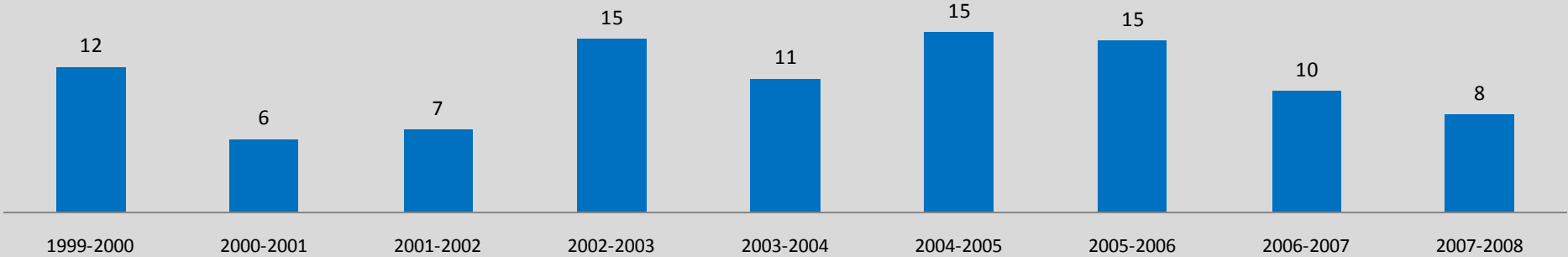
■ Sri Lanka



Thailand

Thailand(% of BOP mobile owners)

■ Thailand



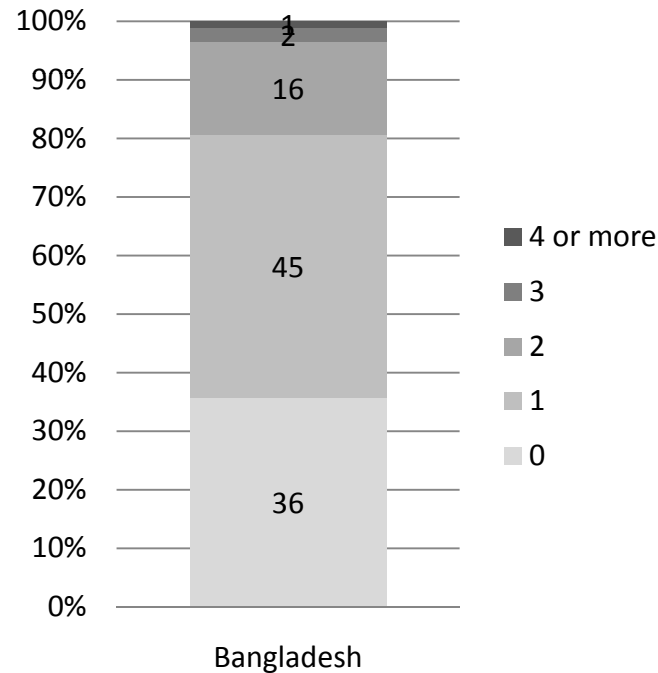
10% of BOP mobile owners have more than one (active) SIM

| | 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% | |

- Key reasons:
 - Minimizing communication expenditure (on-net calling)
 - Poor network coverage on some networks
 - To keep contact lists separate (e.g., boyfriends/girlfriends, etc)

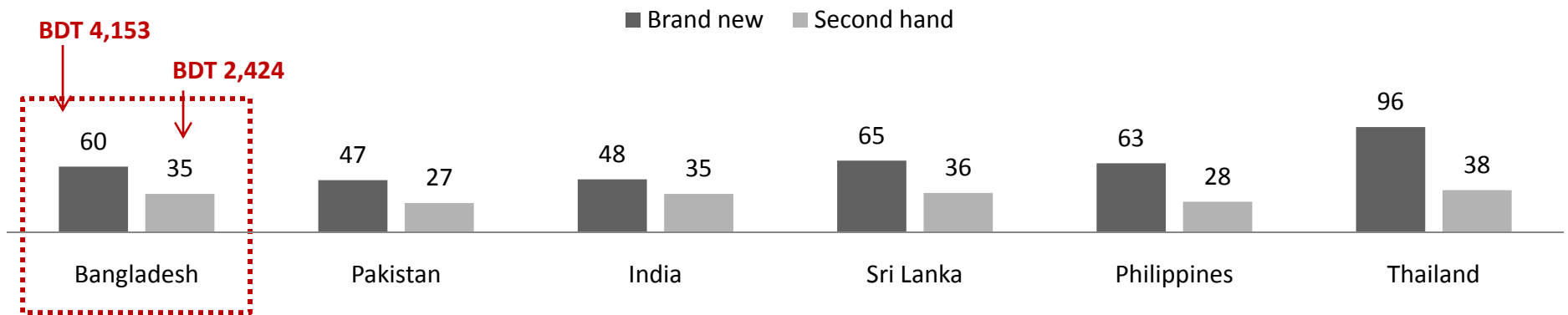
19% of Bangladeshi BOP teleusers have more than 1 mobile in their households

Number of mobiles in the respondent's household, including own (% of BOP teleusers)



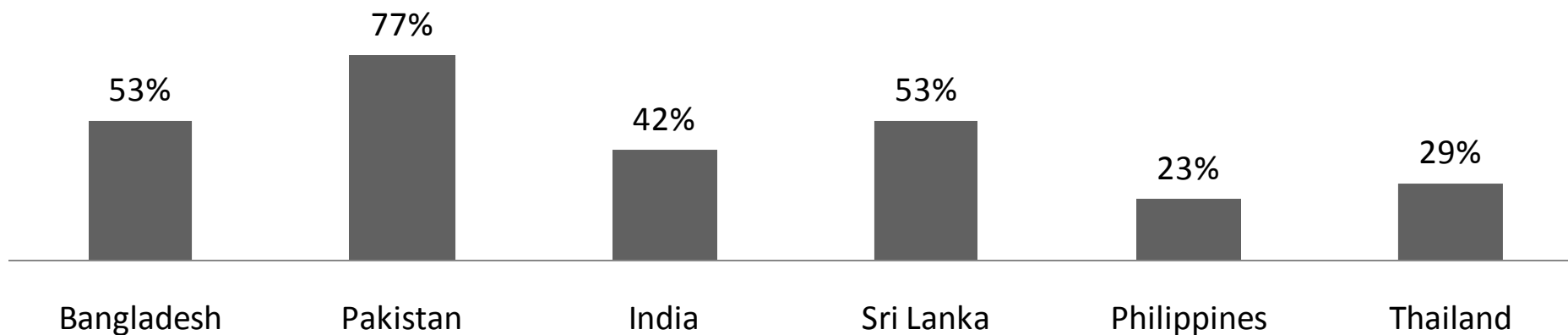
Second hand handsets bought for almost half the price of brand new handsets

Mean price paid by mobile owners for their handset (USD)



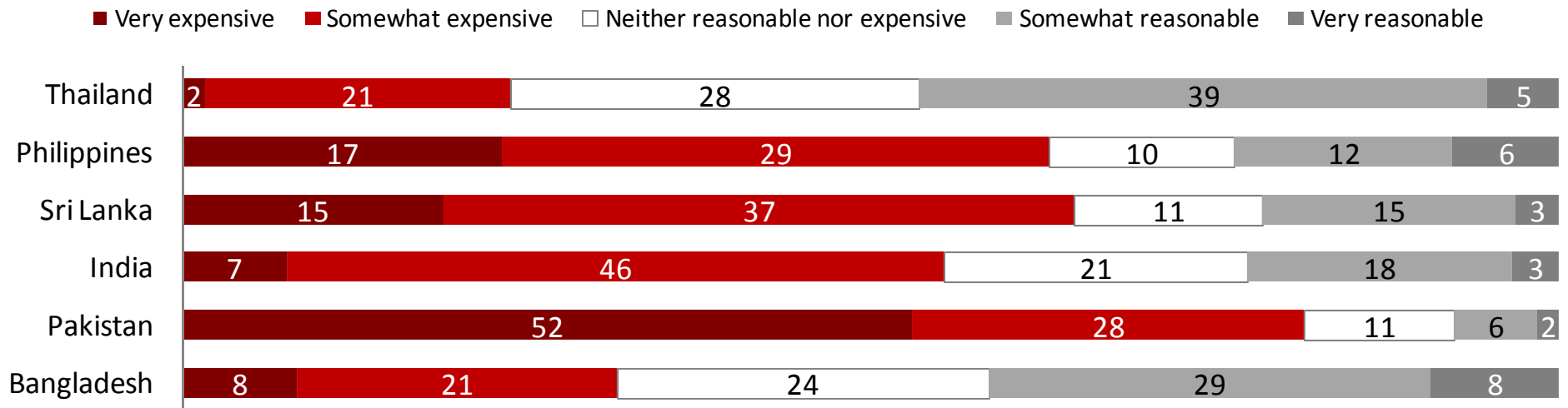
Just 53% are aware of the tax component on their phone use

Are aware of the tax component on their phone charges (% of BOP phone owners)



29% of those who are aware say it's expensive

How reasonable the level of tax is(% of those who are aware)



| Bangladesh | Pakistan | India | Sri Lanka (from 1 January 2009) | Philippines | Thailand |
|------------|----------------------------------|-------|------------------------------------|-------------|----------|
| 15% | 21% (prepaid); 33% (postpaid) | 12% | 27% | 12% | 7% |

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WHAT THOSE AT BOP DO WITH THEIR PHONES?

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BENEFITS?

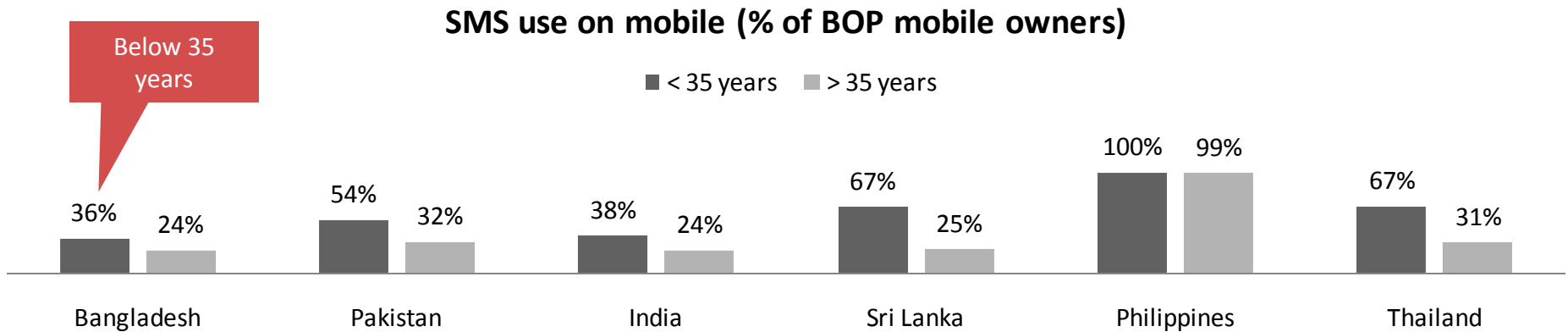
THE UNCONNECTED...

What the BOP does with mobile phones: 95% use missed calls

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% |

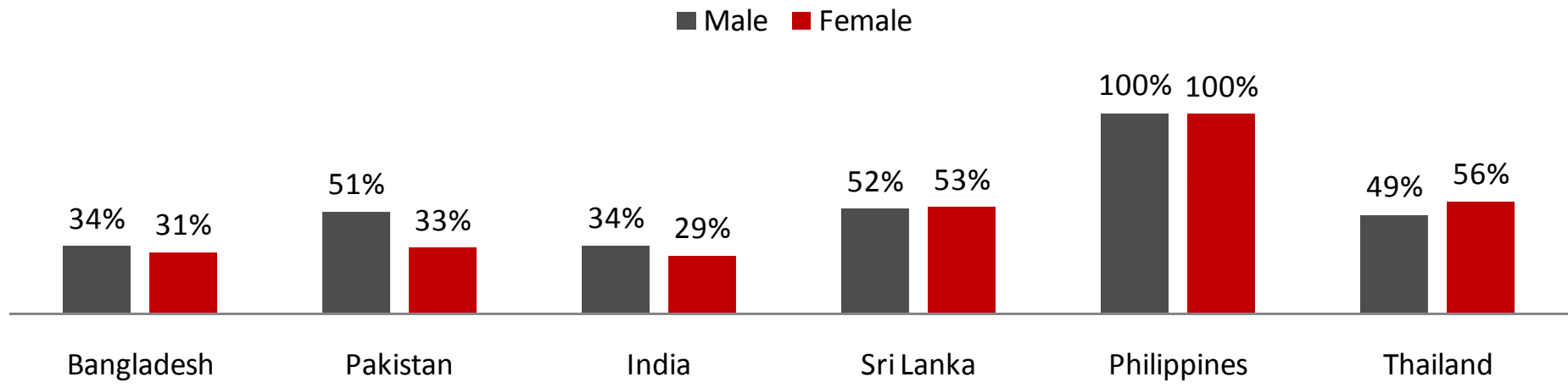
SMS popular among youth



- Similar pattern seen with regards to missed calls

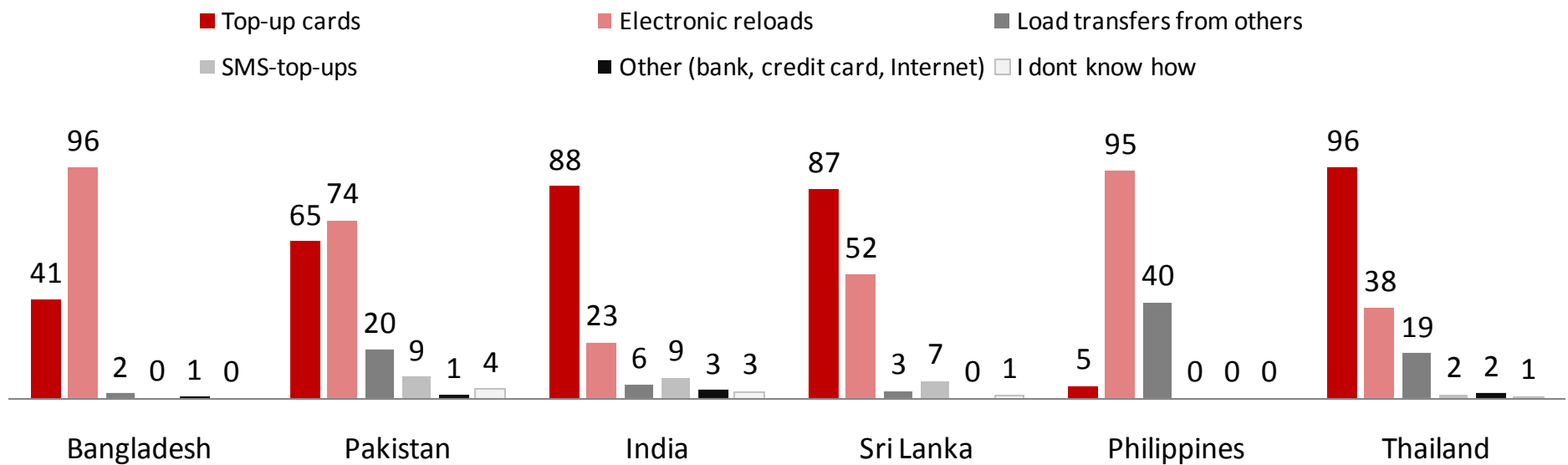
SMS more popular among males in Pakistan and India (literacy?); not much difference in Bangladesh

SMS use on mobile (% of BOP mobile owners)

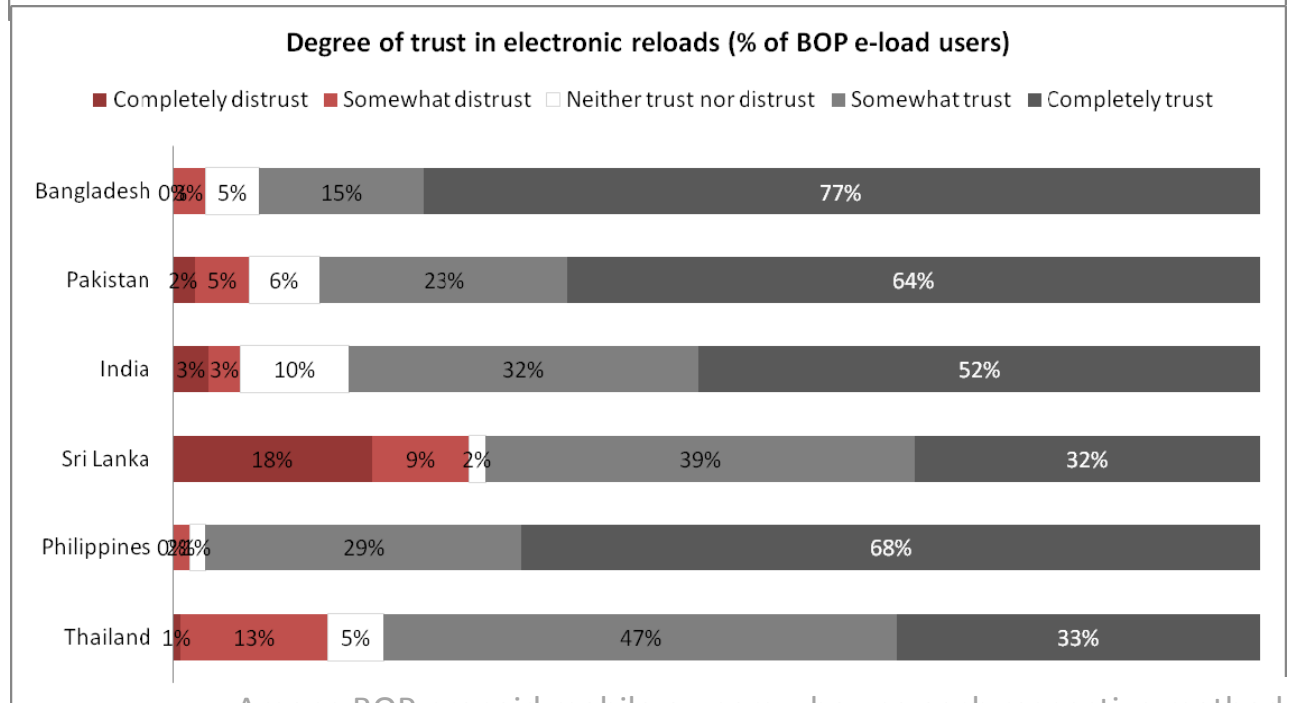
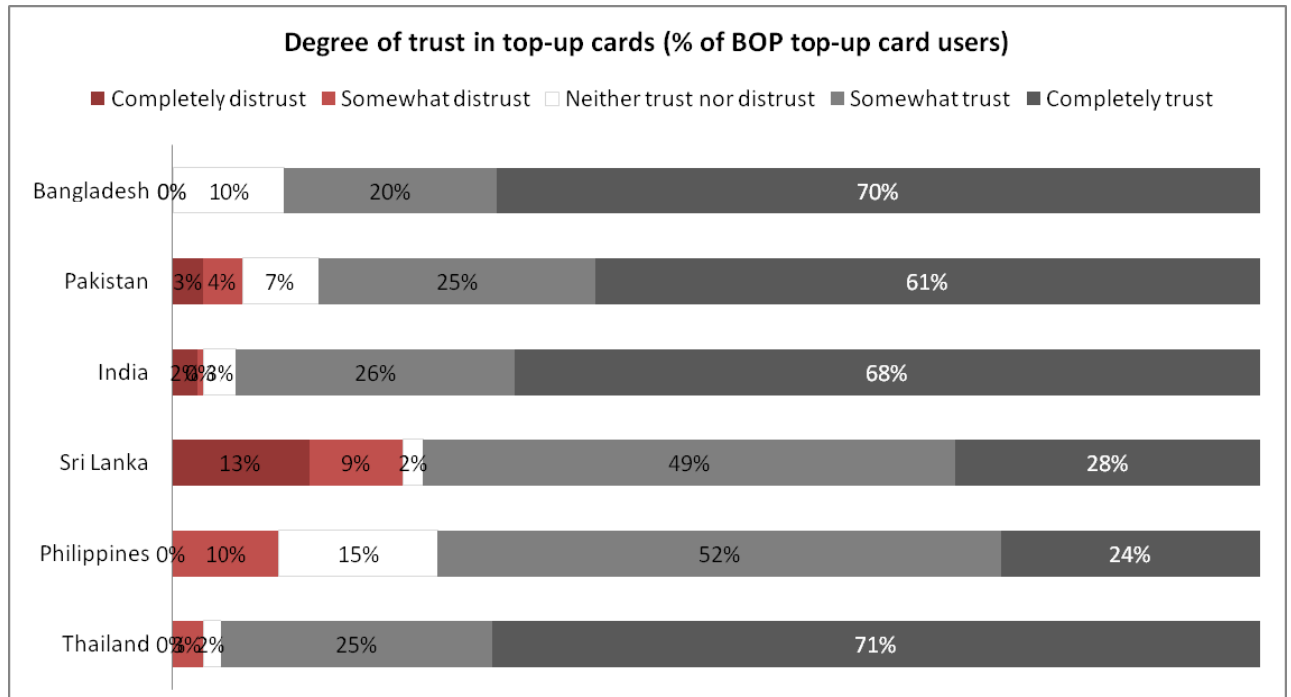


Electronic loads used most by BD mobile owners

Top-up method (% of BOP prepaid mobile owners)

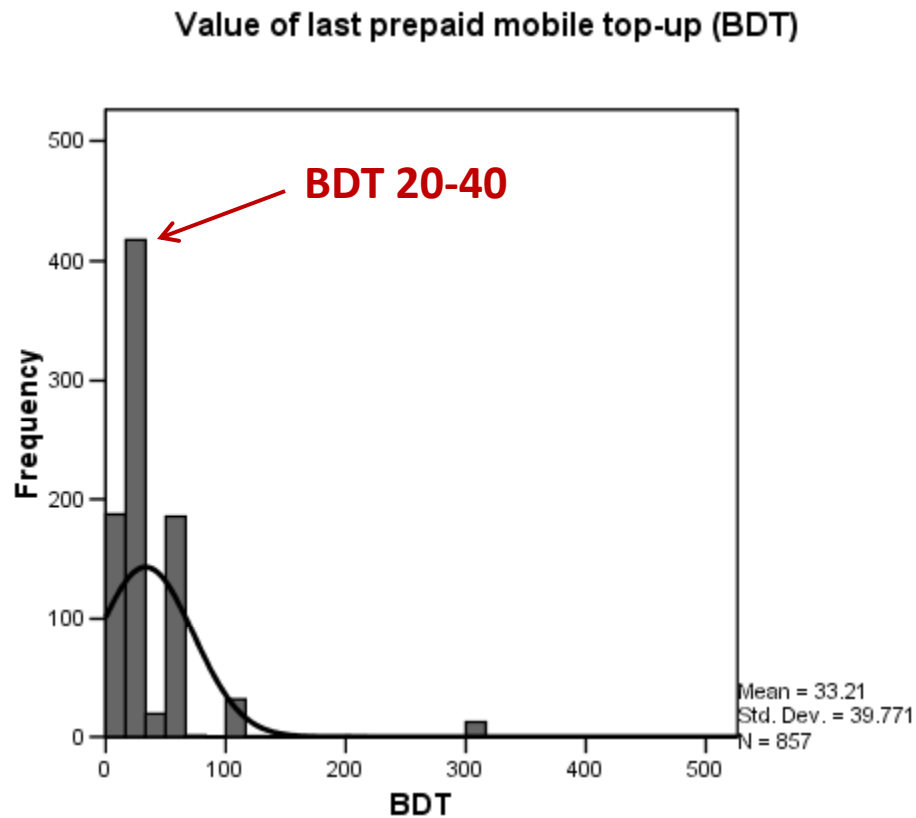


Bangladeshi BOP has high trust in top-up methods used



Among BOP prepaid mobile owners who use each respective method

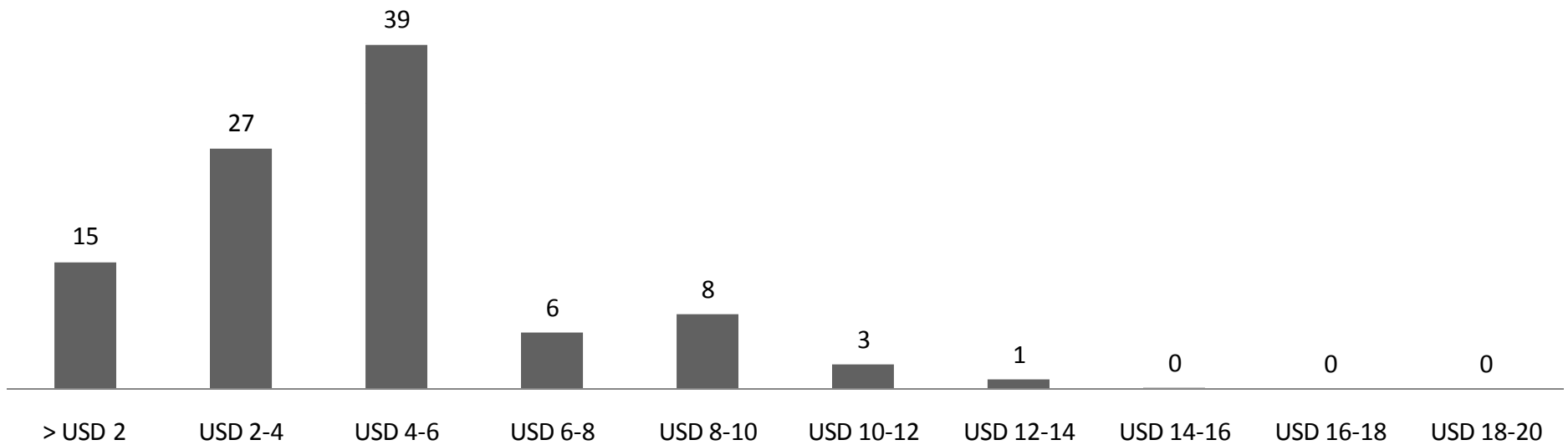
Mobile prepaid owners mostly top up for BDT20-40 at a time



Mean monthly prepaid mobile expenditure USD 4.27(s.d. 2.54)

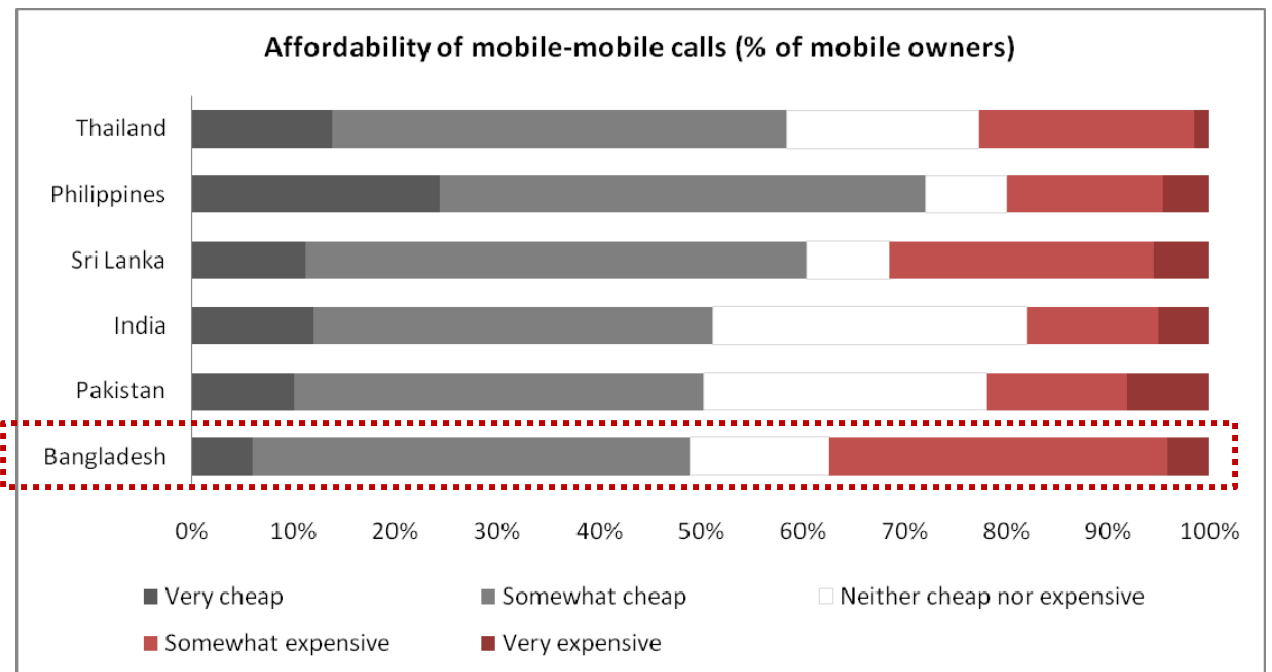
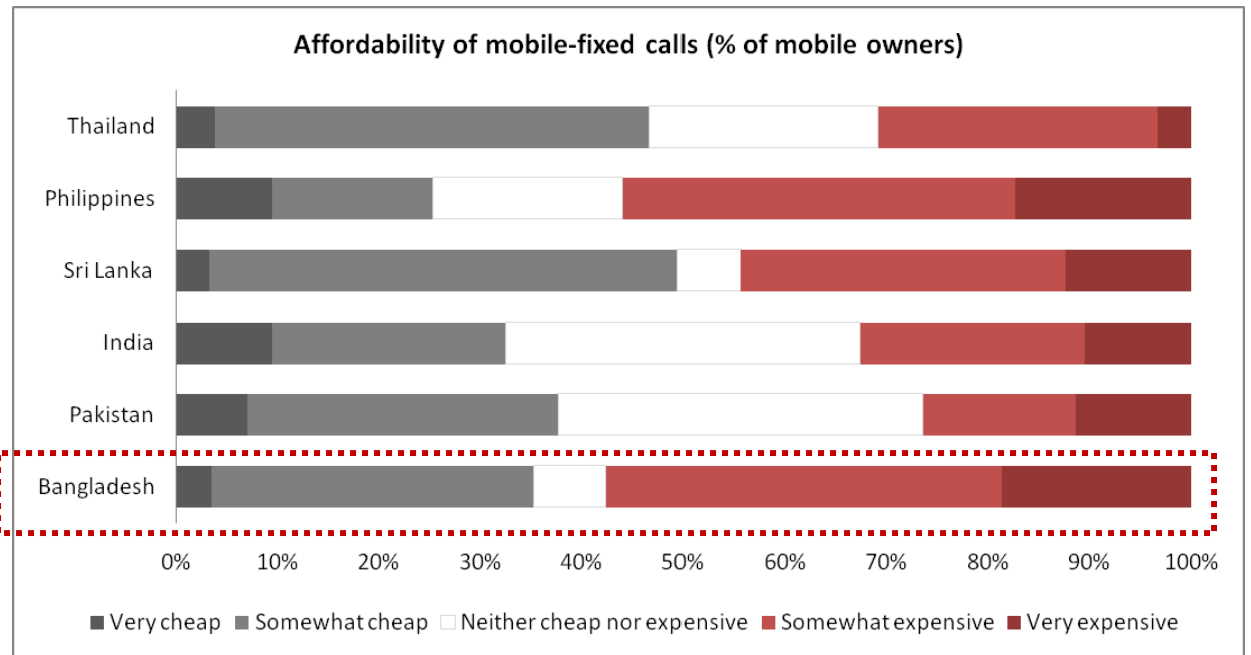
Mode: USD4.31

Distribution of monthly expenditure on prepaid mobile (% of BOP prepaid mobile owners)

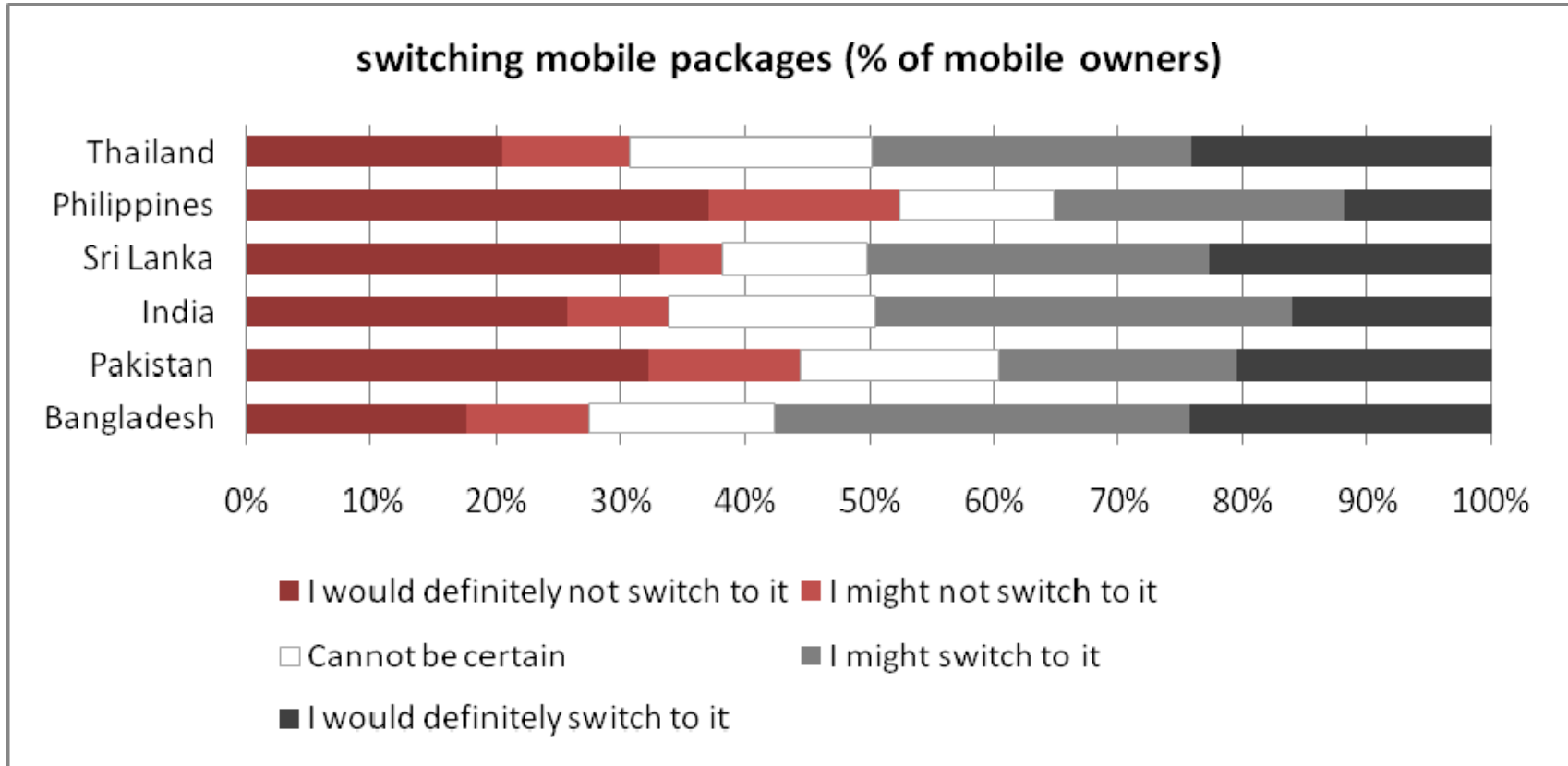


Based on amount of last top-up and how long they expect it to last

Significant numbers say calls are expensive



18% of BOP mobile owners in Bangladesh would *definitely not* consider switching to a cheaper package



- 55% of those unwilling to switch state that it is important to keep the number at present
 - Given MNP + cheaper package, 69% of BD mobile BOP owners will switch

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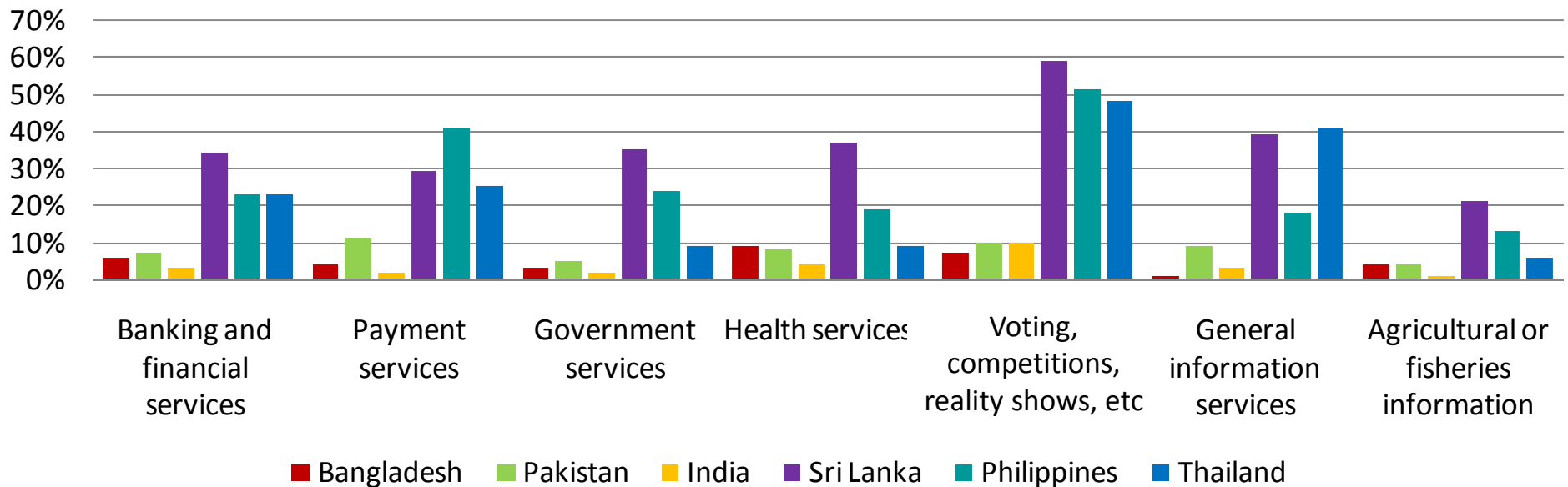
POTENTIAL FOR MOBILE 2.0?

BENEFITS?

THE UNCONNECTED...

Awareness among Bangladeshi BOP is poor

Awareness of services available on phones and computers (% of BOP teleusers)

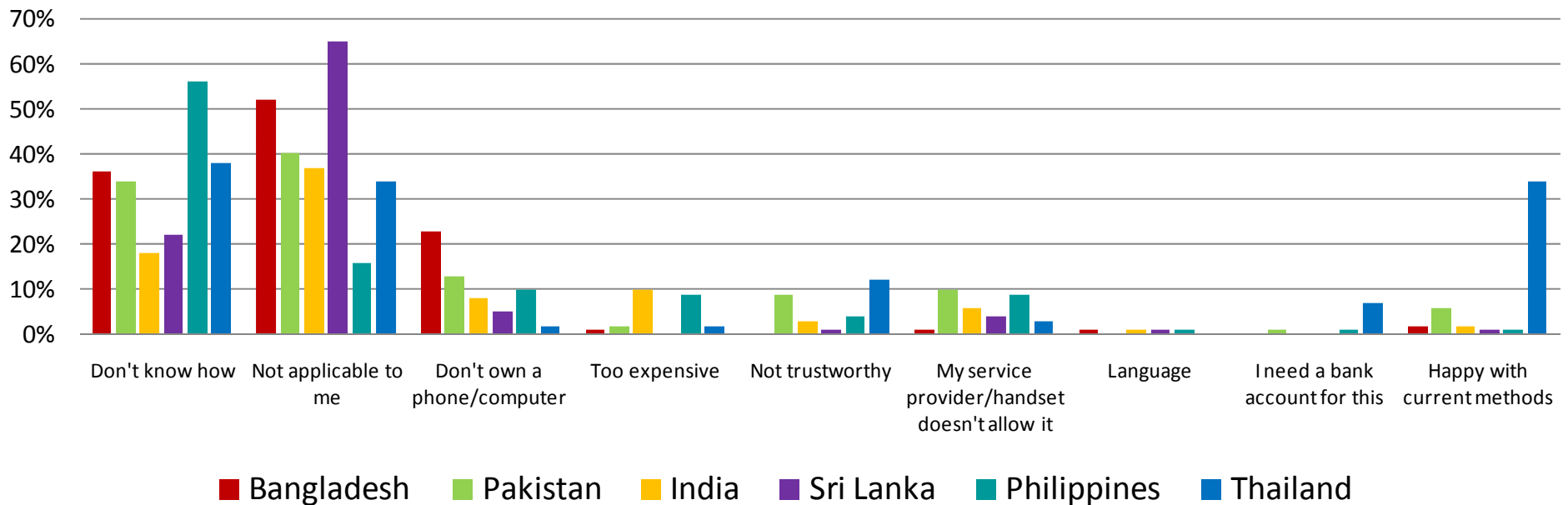


Almost zero-usage among those aware

| | BD | PK | IN | LK | PH | TH | | | |
|--|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-----|----|----|
| | Regularly regularly Not | Regularly regularly Not | Regularly regularly Not | Regularly regularly Not | Regularly regularly Not | Regularly regularly Not | | | |
| Banking and financial services | | | 1% | 2% | 1% | 3% | | | |
| Payment services | | | | 3% | 2% | 3% | 1% | 4% | |
| Government services | | | | 2% | 2% | | | | |
| Health services | 1% | | 1% | 8% | 1% | 2% | | | |
| Voting, competitions, reality shows, etc | | | 1% | 1% | 1% | 5% | 7% | 1% | 8% |
| General information services | 1% | 1% | | 3% | 2% | 5% | 11% | | |
| Agricultural or fisheries information | | | | 1% | | | | | |

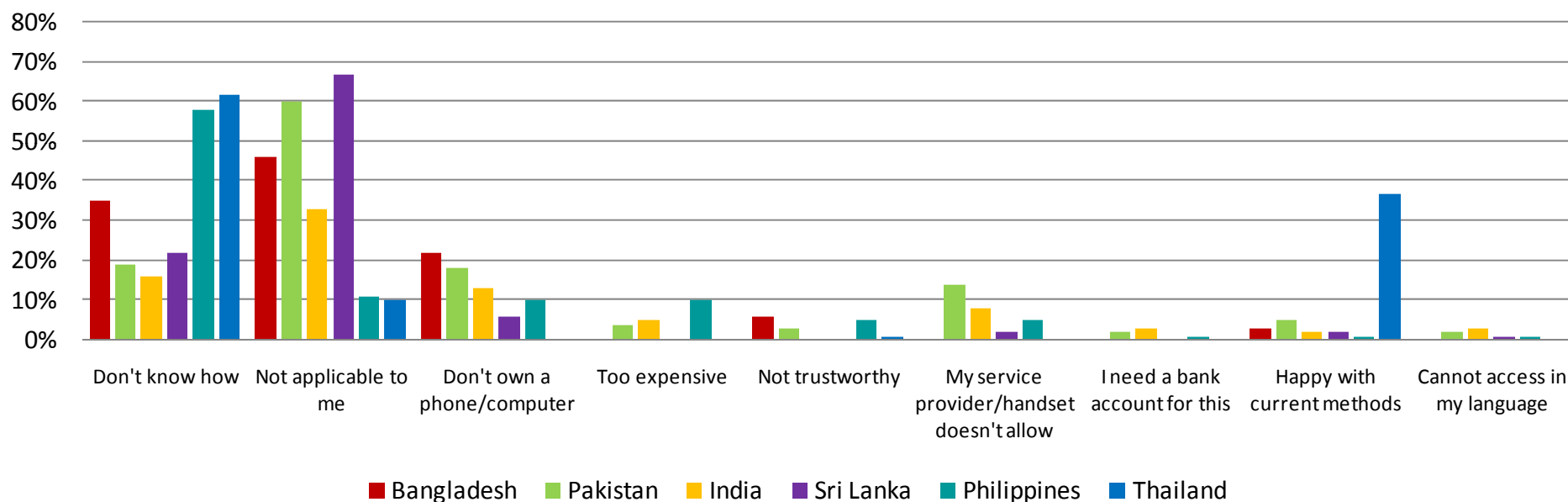
Payments: Most who are aware don't know how or don't feel the need to use it

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



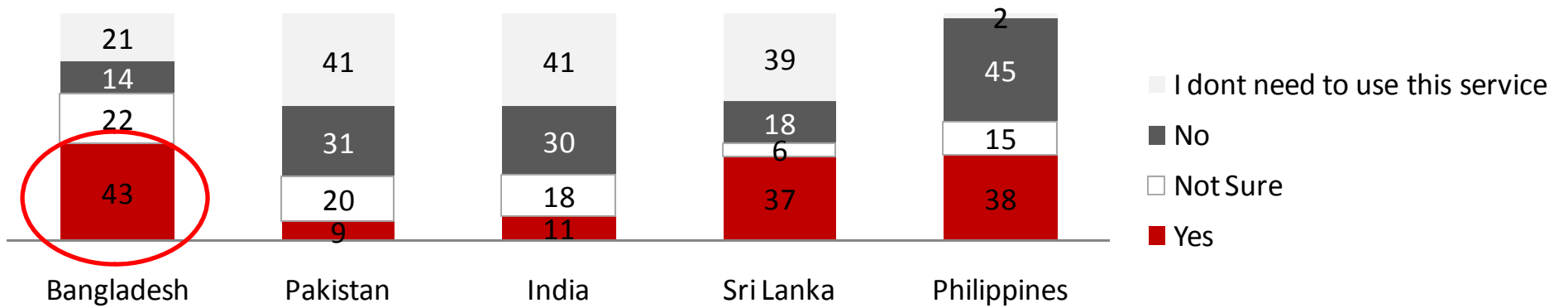
Government services: Most who are aware don't know how or don't feel the need to use it

Reason for not using government services (% of those who are aware but don't use)

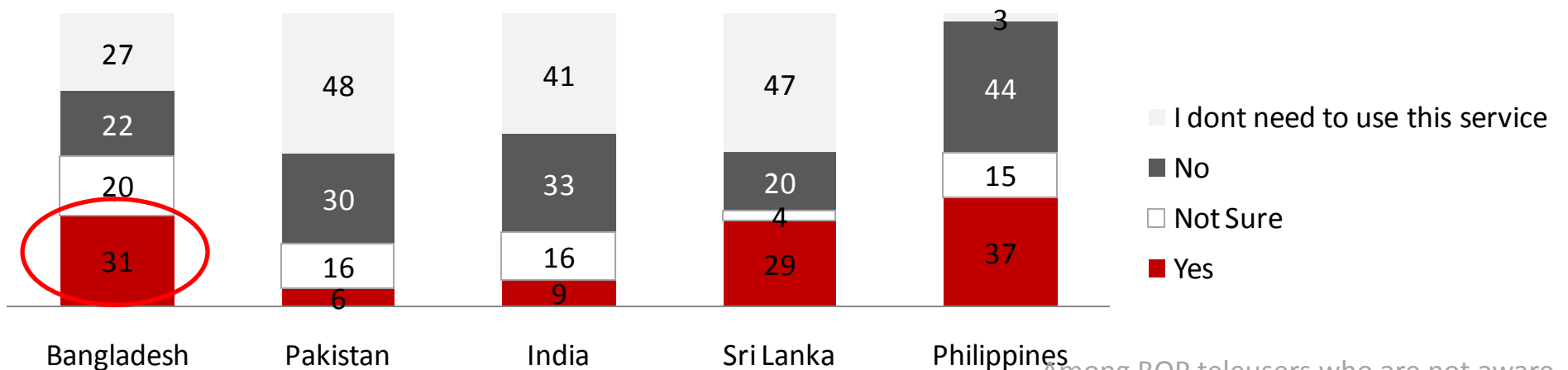


Willingness to try money transfer services and govt services via a mobile exists

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

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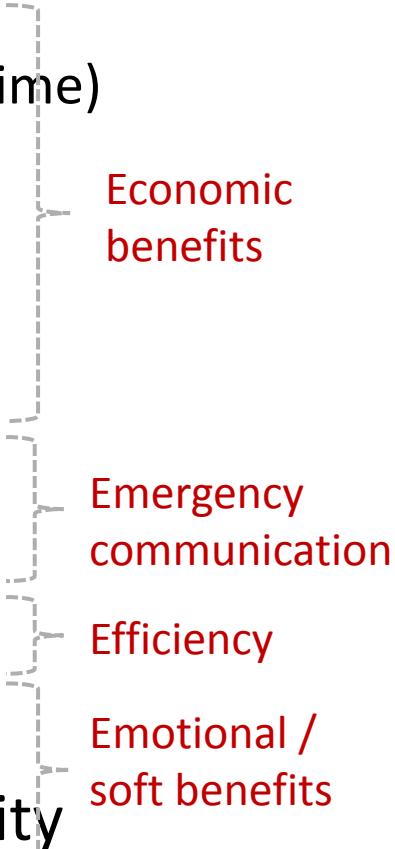
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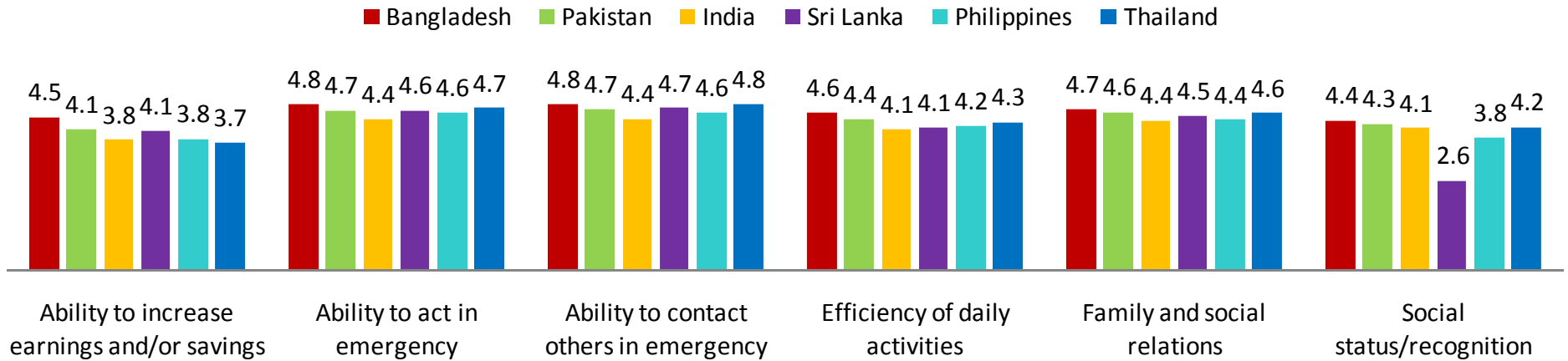
Survey asked about perceived benefits of telecom access: *how has telecom access improved ...*

- 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 benefits perceived in emergency communication and relationship maintenance

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

Perceived benefits of telecom access: General

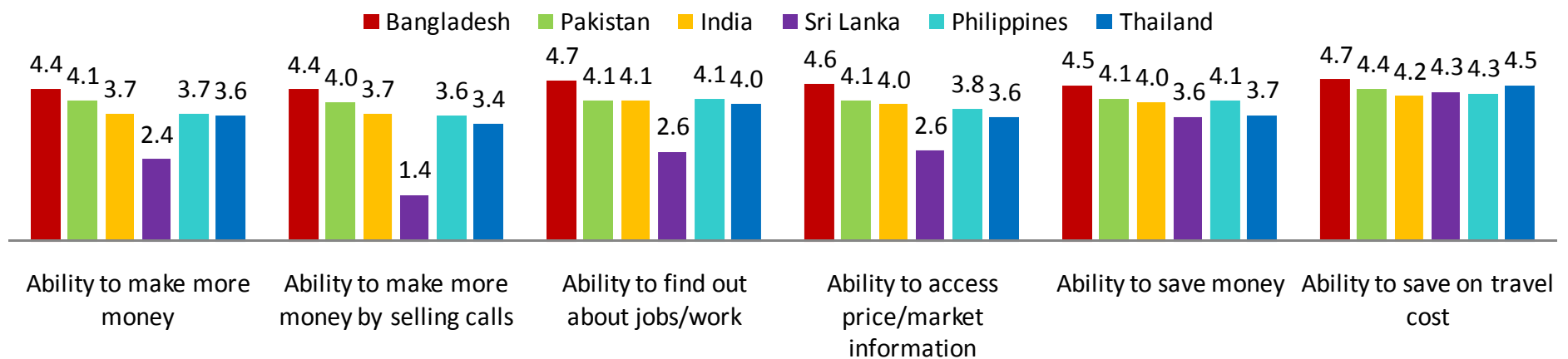


- Bangladeshis see greater benefits on average

Bangladeshi BOP sees the most economic benefits in phone use

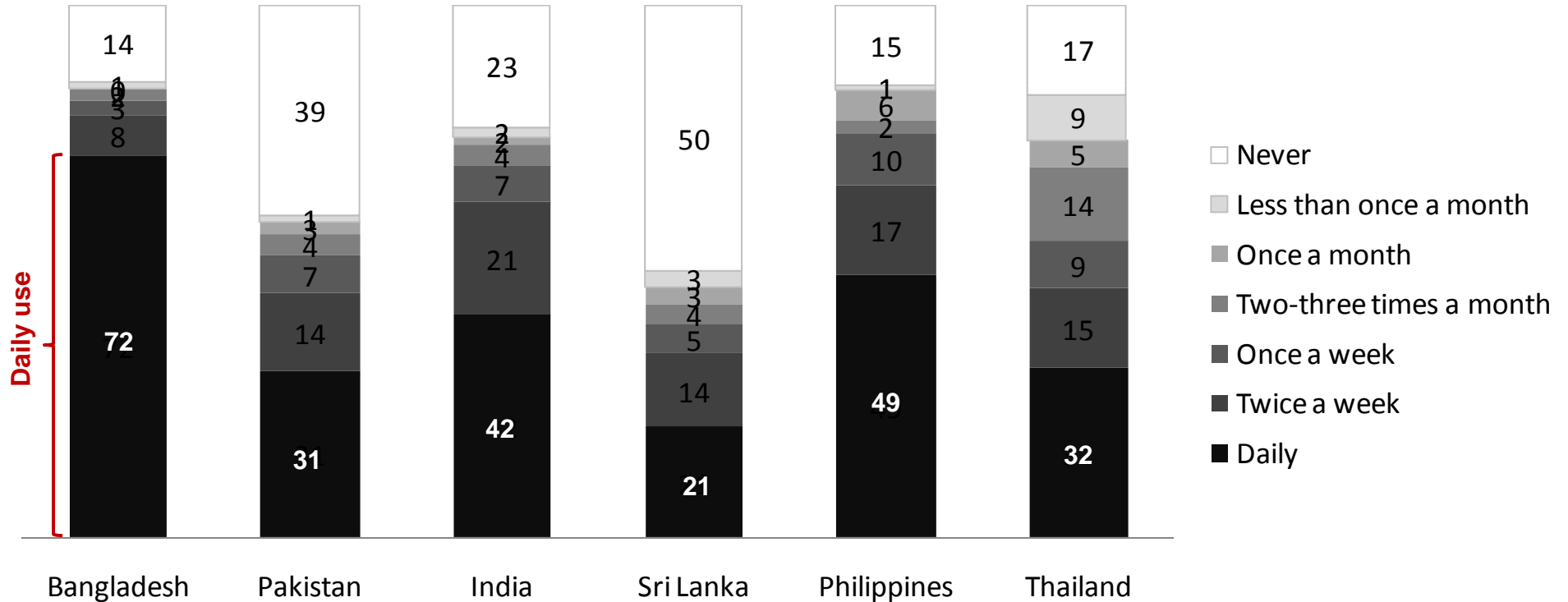
1=worsened 2 = slightly worsened 3=no change 4=slightly improved 5=improved

Perceived benefits of telecom access: Livelihood-related



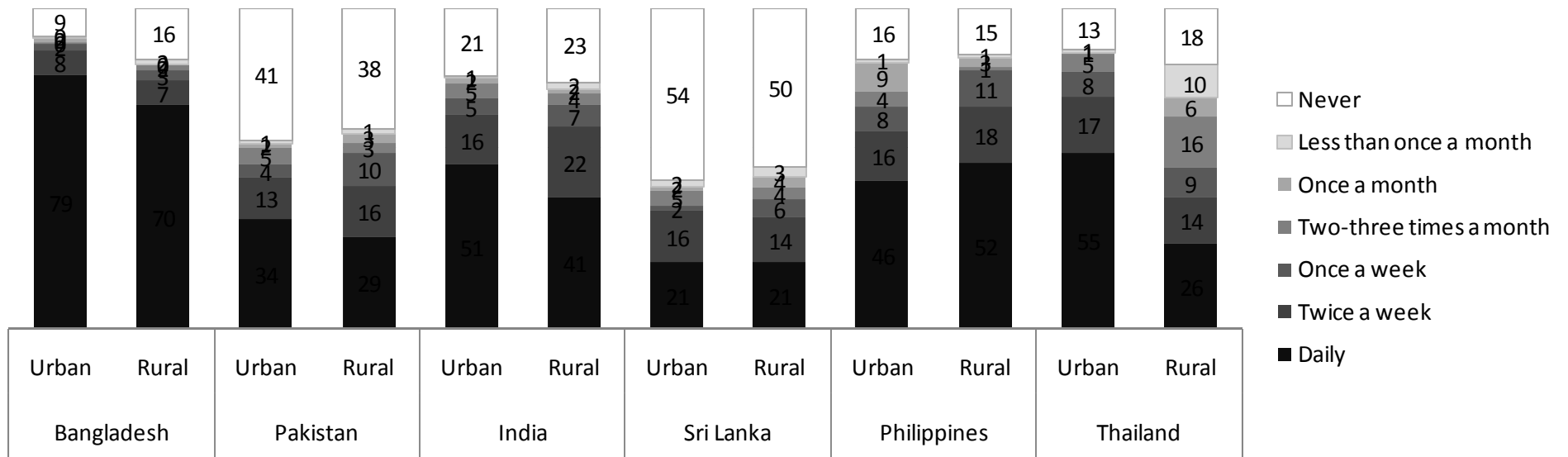
72% Bangladeshi mobile owners at BOP use their mobile for business, financial or work-related purposes; more than elsewhere

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



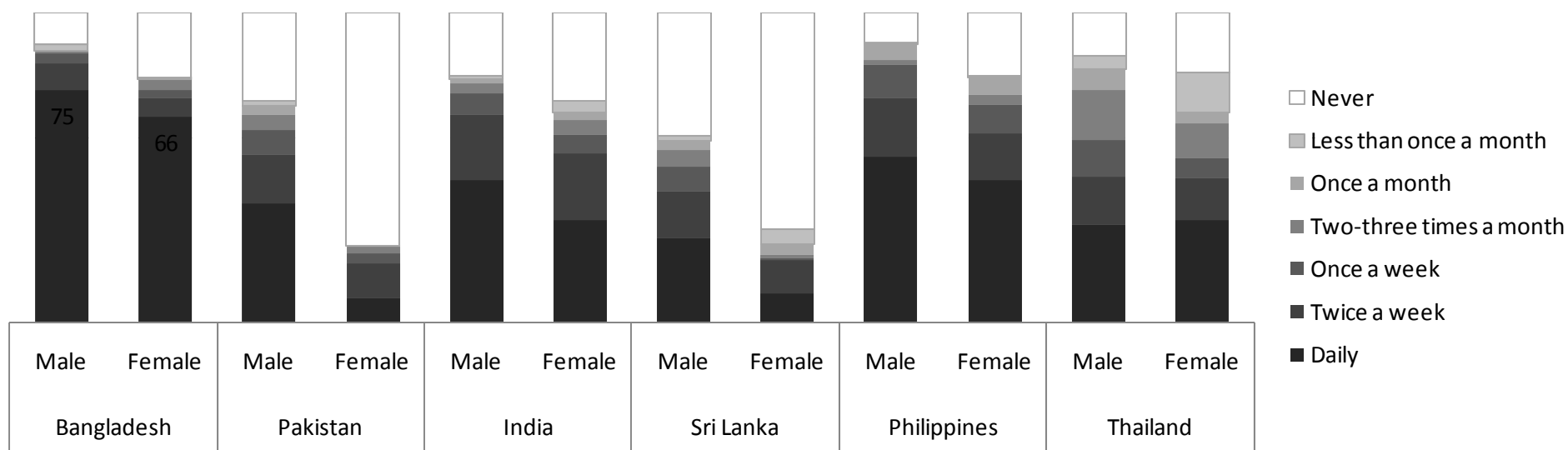
Little difference between urban and rural mobile owners

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



66% Bangladeshi BOP female mobile owners use their mobiles for these activities on a daily basis

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



Agenda

WHO ARE THE BOP?

BOP TELECOM EXPANSION

ACCESS

OWNERSHIP

MARKET POTENTIAL

WHAT THOSE AT BOP DO WITH THEIR MOBILES?

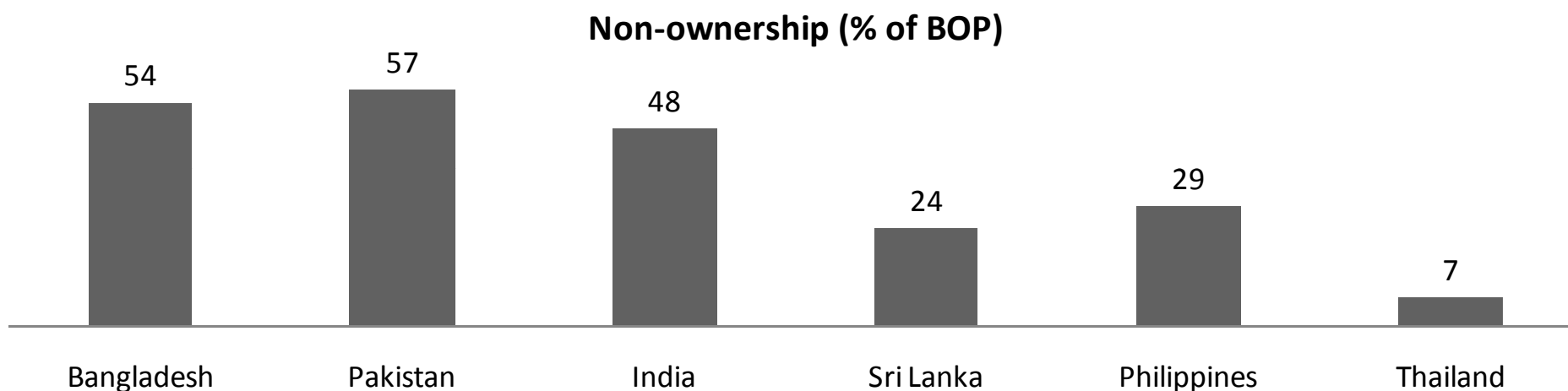
POTENTIAL FOR MOBILE 2.0?

BENEFITS?

THE UNCONNECTED...

54% of Bangladeshi BOP households don't own a phone

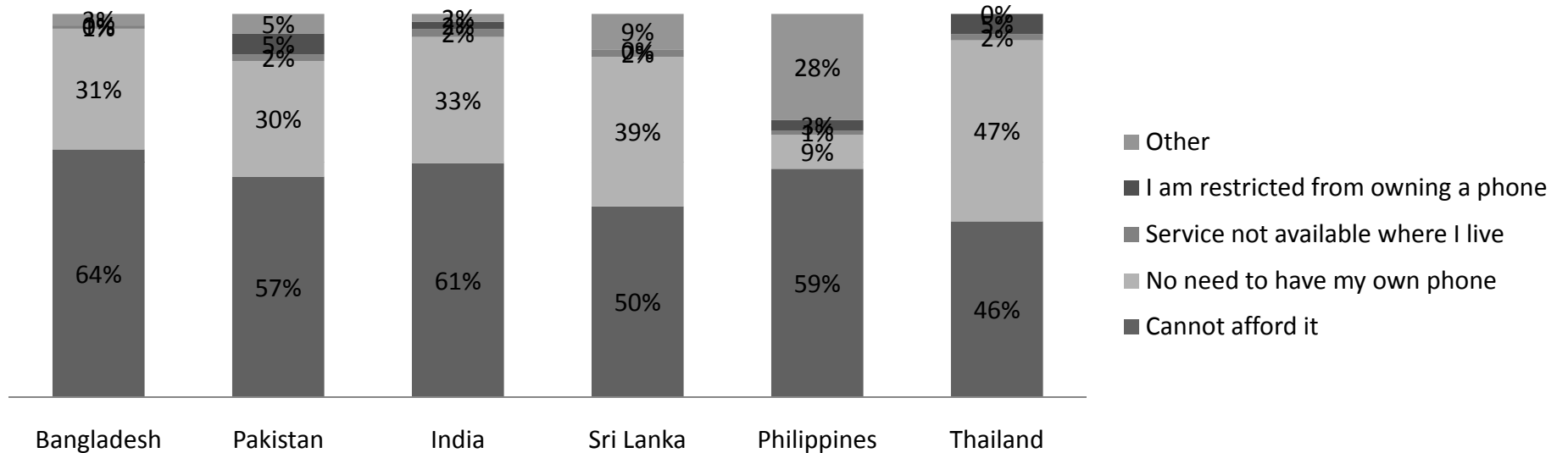
54% BOP = 57% of BOP teleusers



- 80% of these non-owners can reach a phone in **under 5 minutes**
 - Urban: 89% can reach a phone in under 5 mins
 - Rural: 78% can reach a phone in under 5 mins

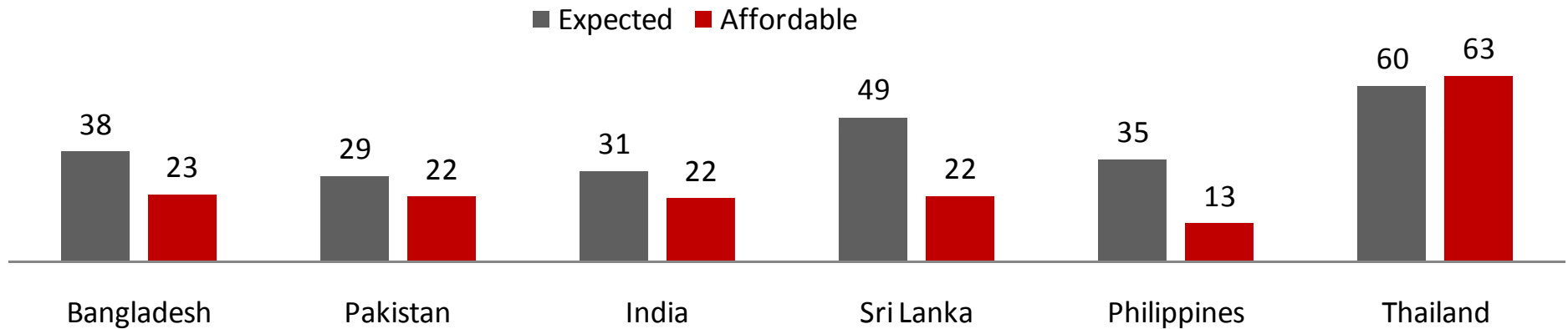
Main reasons for not owning are affordability and the lack of a need

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

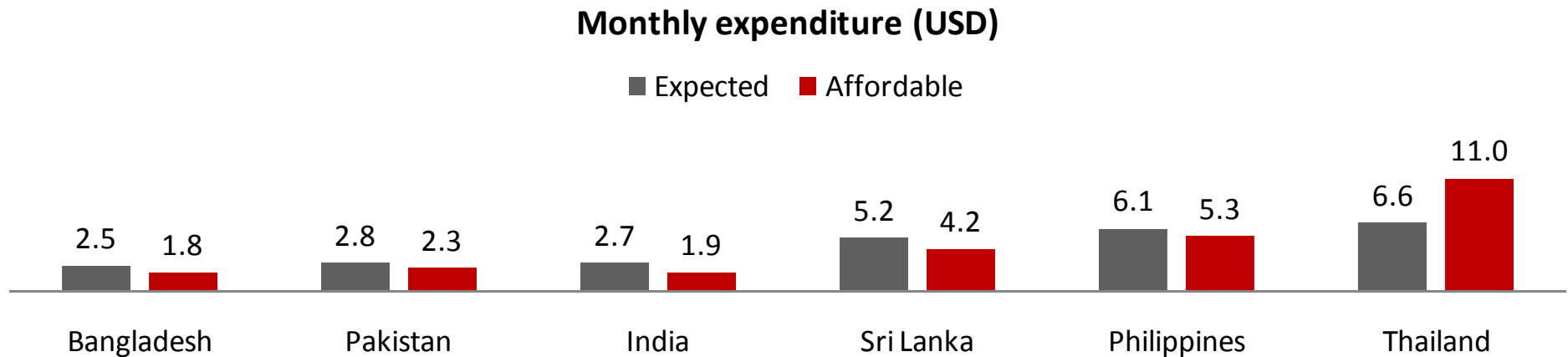


Bangaldeshi BOP can afford **USD23** to get connected, but think that it will actually cost them **USD38**

Initial cost of getting connected (USD)



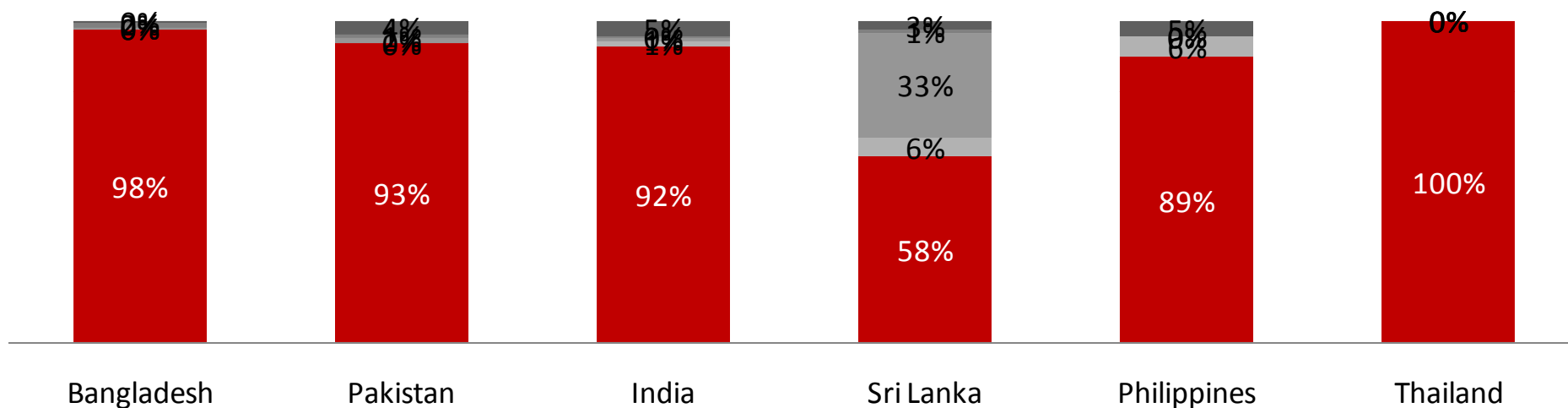
Once connected they can afford to spend USD1.80 per month on communication costs, while they think it will actually cost them USD2.50



31% of the current unconnected BOP in Bangladesh plan to get connected; 98% through a mobile

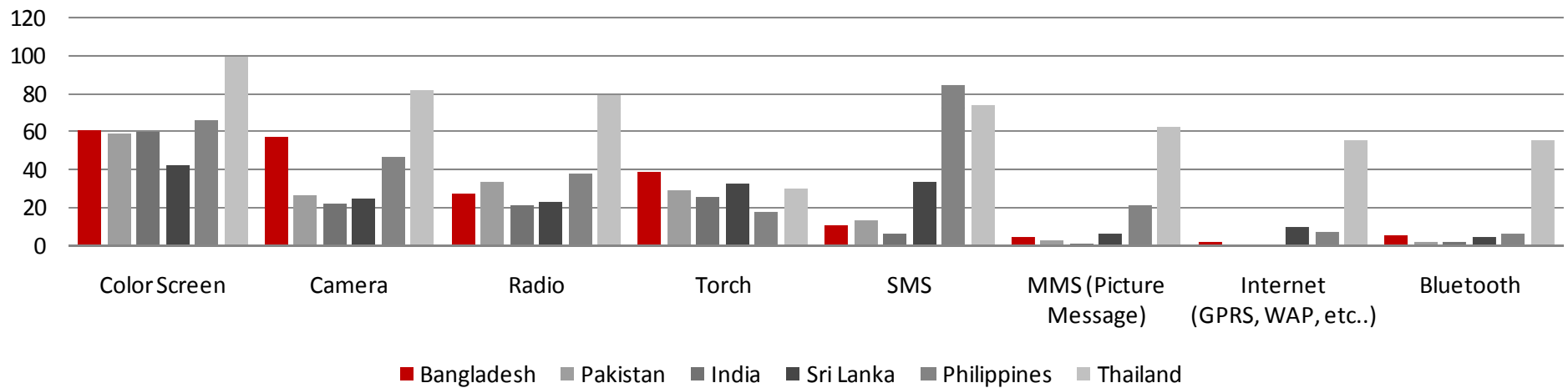
Type of phone planning to buy (% of potential BOP owners)

■ Mobile ■ Fixed (wireline) ■ Fixed (wireless) ■ Fixed (undecided) ■ Not decided



Color screen, camera & torch are the most sought after phone features

Desired phone features (% of potential owners)



Takeaways

- Bangladesh doing well on access; but could do better
 - Urban BOP and rural BOP are not that different
- Tariffs perceived to be high; only 53% know about taxes
- Heavy use of e reloads; high level of trust
- Low Mobile2.0 awareness, trial and use
- Willingness to try payments and government services
- High entrepreneurial orientation
- Cost expectations of getting connected vs. affordability vs. reality still out of line

www.lirneasia.net

search term: BOP

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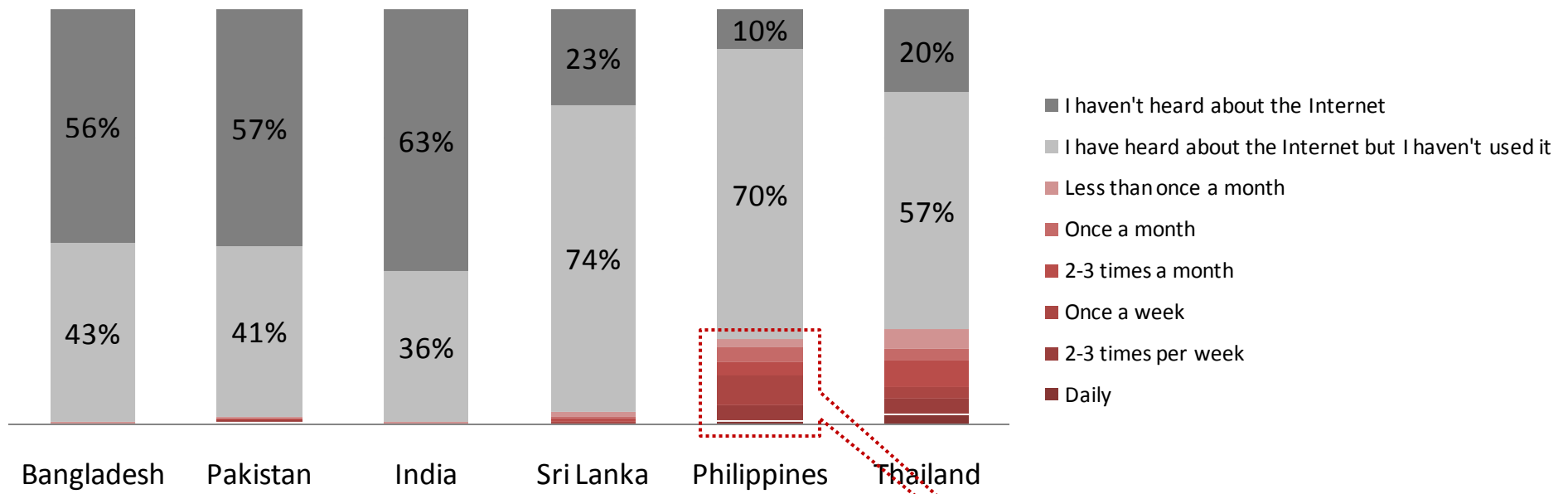
POTENTIAL FOR MOBILE 2.0?

BENEFITS?

THE UNCONNECTED...

The hardest problem: Internet use and awareness in 2008

Internet use (% of BOP teleusers)



| | Bangladesh | Pakistan | India | Sri Lanka | Philippines | Thailand |
|------------------|------------|----------|-------|-----------|-------------|----------|
| Use the Internet | 0.6% | 2.2% | 0.8% | 3.2% | 20.7% | 23.0% |