

How the poor use ICTs: Findings from multi-country studies of Teleuse at the Bottom of the Pyramid

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What can telecommunications do for agriculture?

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Understanding how the poor (those at the bottom of the pyramid) use ICTs through **Teleuse@BOP** studies

- Multi-country studies conducted in 2005, 2006, 2008, 2011
 - Bangladesh, Pakistan , India, Sri Lanka, Indonesia (Java), Philippines, Thailand
 - Quantitative (representative survey) and qualitative research conducted
- Target group: BOP teleusers aged 15-60
 - BOP defined as Socio-Economic Classification (SEC) groups D and E
 - Teleusers defined as having used any phone in previous three months
- Different methodology and target group (USD1.25/day group) in Java

SEC D+E vs. USD2/day comparison

Actual population proportions

	Bangladesh	Pakistan	India	Sri Lanka	Thailand
SEC D+E (% of population)	73	59	69	44	33
Less than USD2 per day (% of population)	84	80	74	43	25
Year	2000	2004	2002	2003	2002
Source: World Resources Institute					

Java study used a different method. Represents those making less than USD 1.25/day

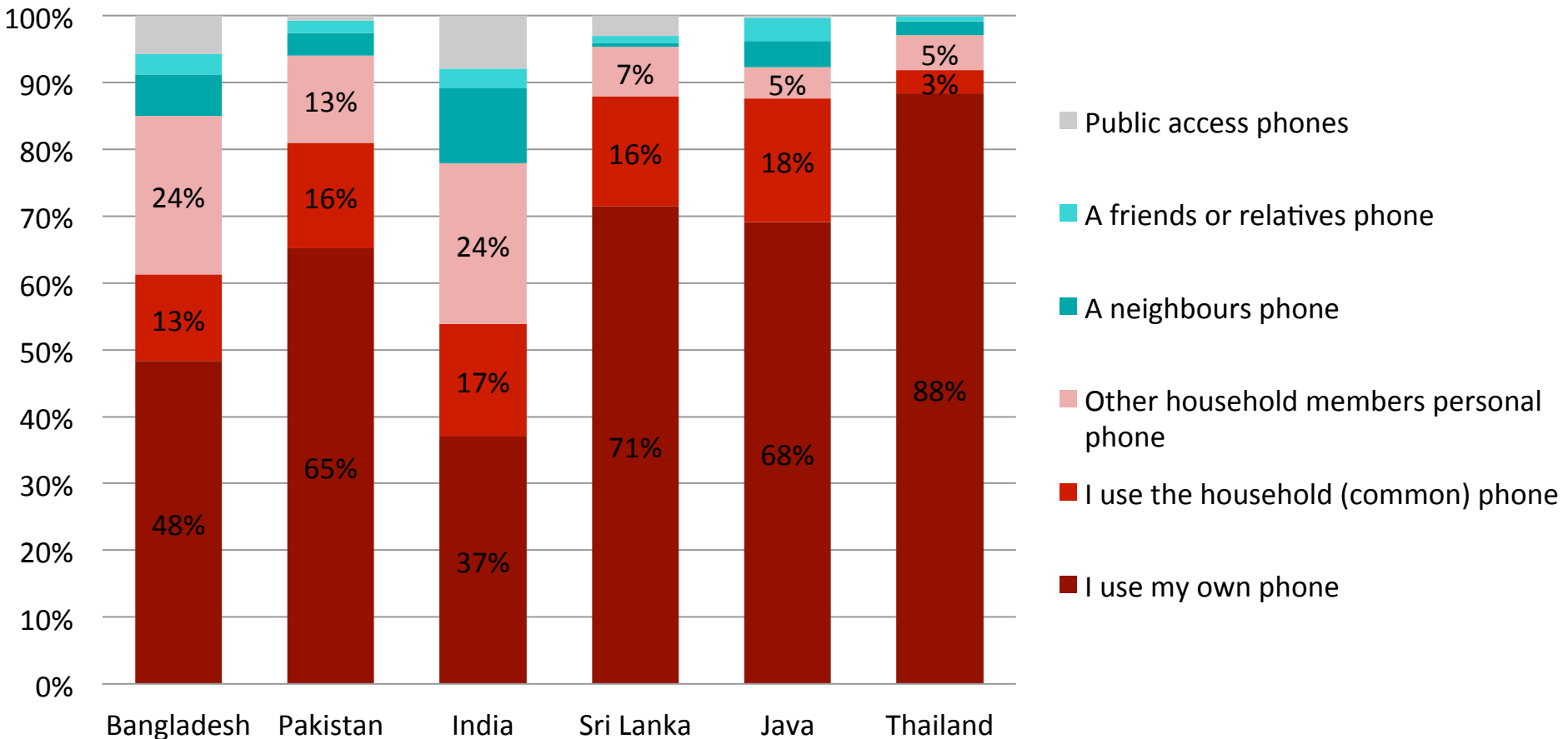
In 2011, 89-99% of BOP had used a phone in previous 3 months

Used a phone in the last 3 months (% of BOP)

	Bangladesh	Pakistan	India	Sri Lanka	Java	Thailand
2008	95%	96%	86%	88%	-	77 %
2011	99%	96%	89%	90%	90%	91%

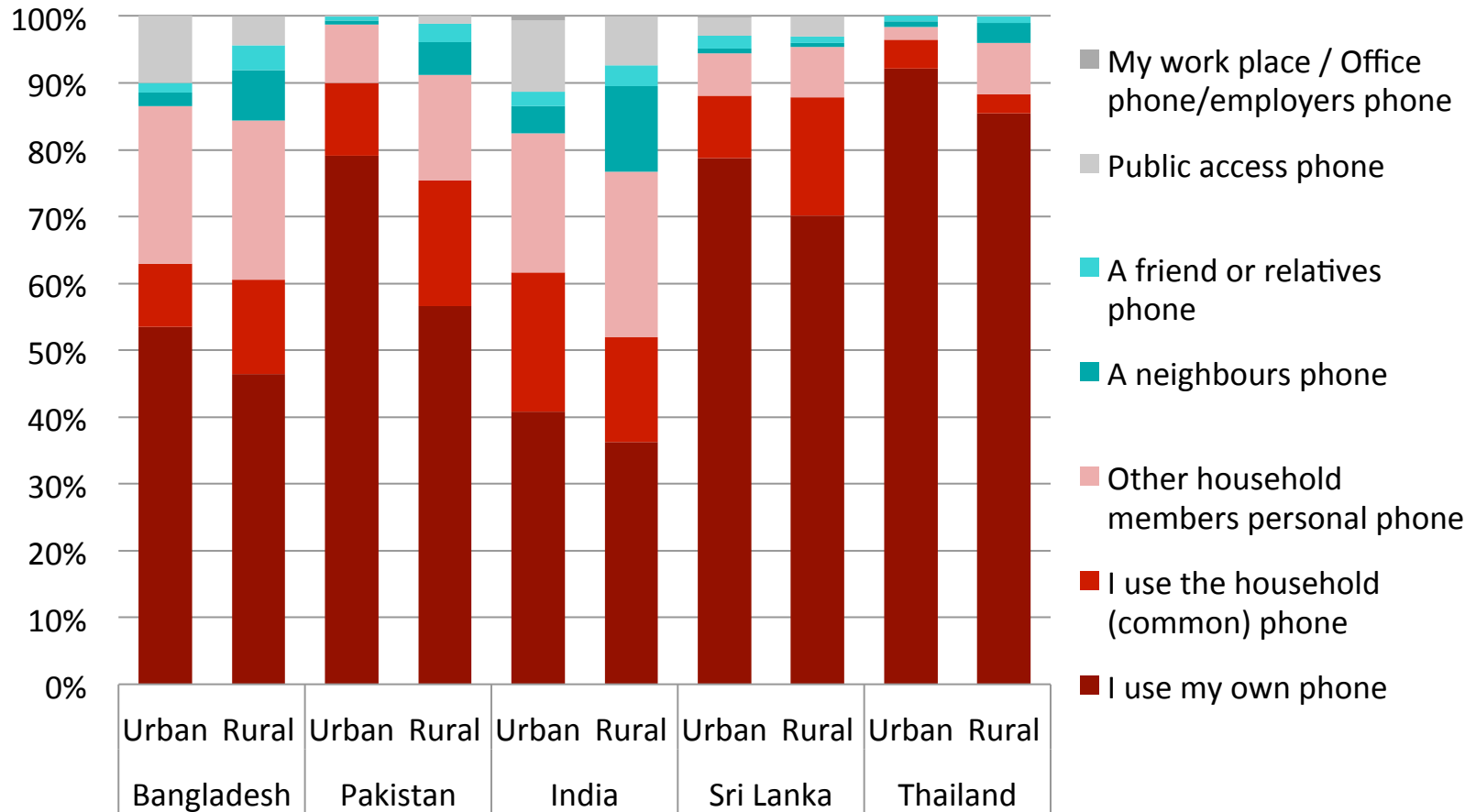
Access within household: ~90% in Pakistan

Most frequently used phone (% of BOP teleusers)



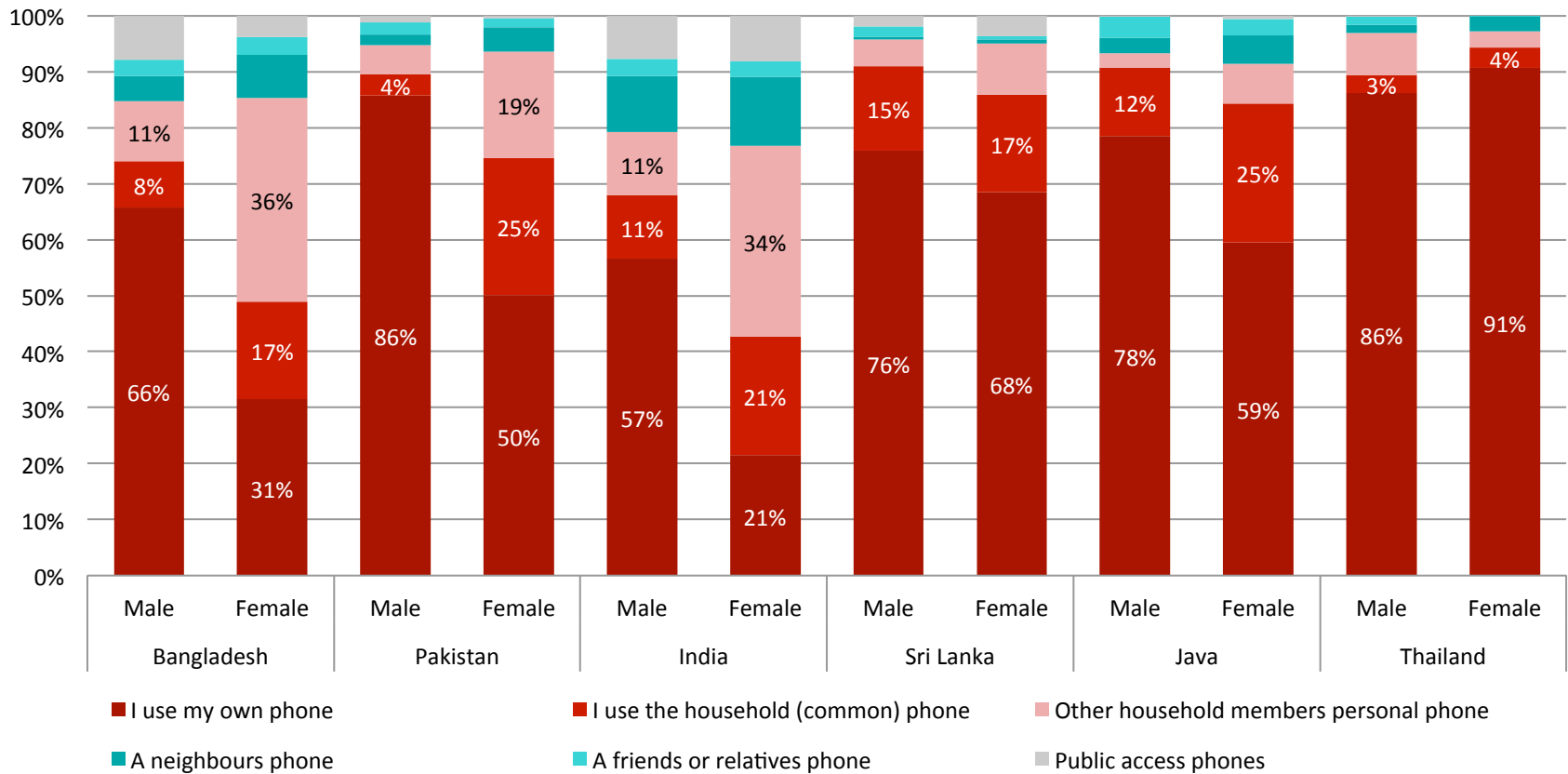
Access within household: Urban > rural in Pakistan

Most frequently used phone (% of BOP teleusers)



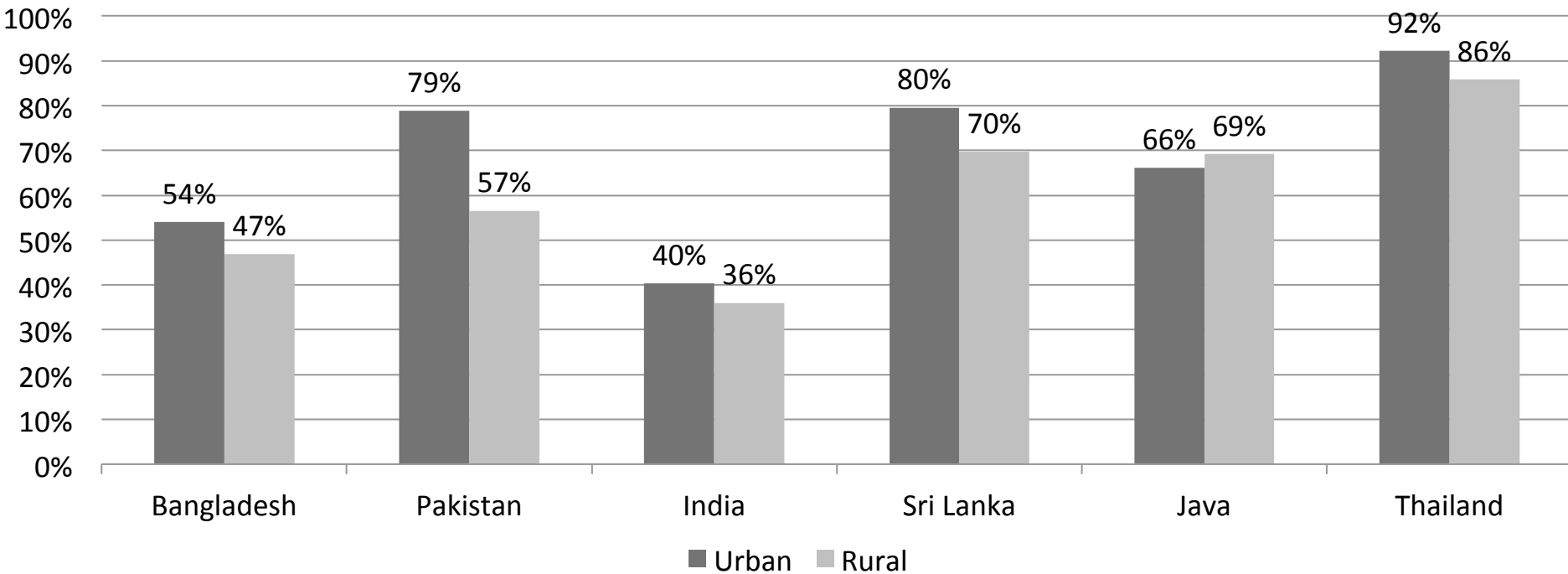
Access within household: BOP females depended more on household & household members' phones, except in Thailand

Most frequently used phone (% of BOP teleusers)



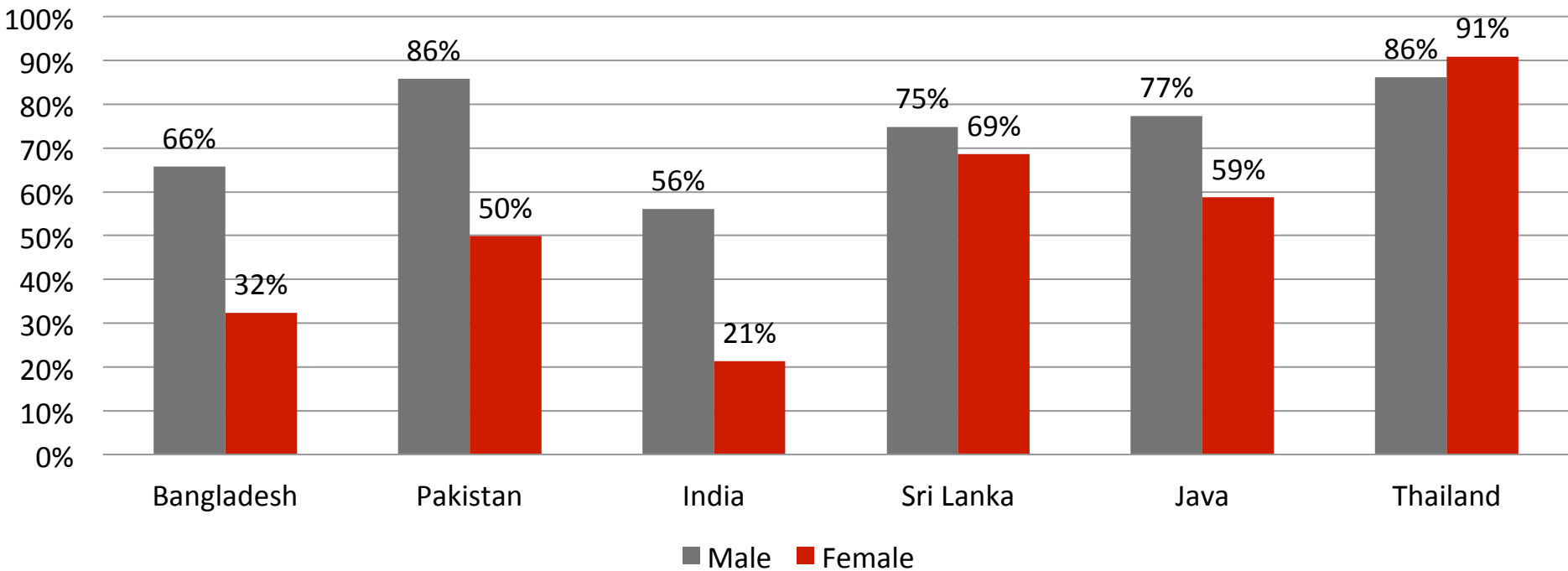
Ownership: Urban-rural gap significant in PK

Mobile ownership - individual (% BOP teleusers)



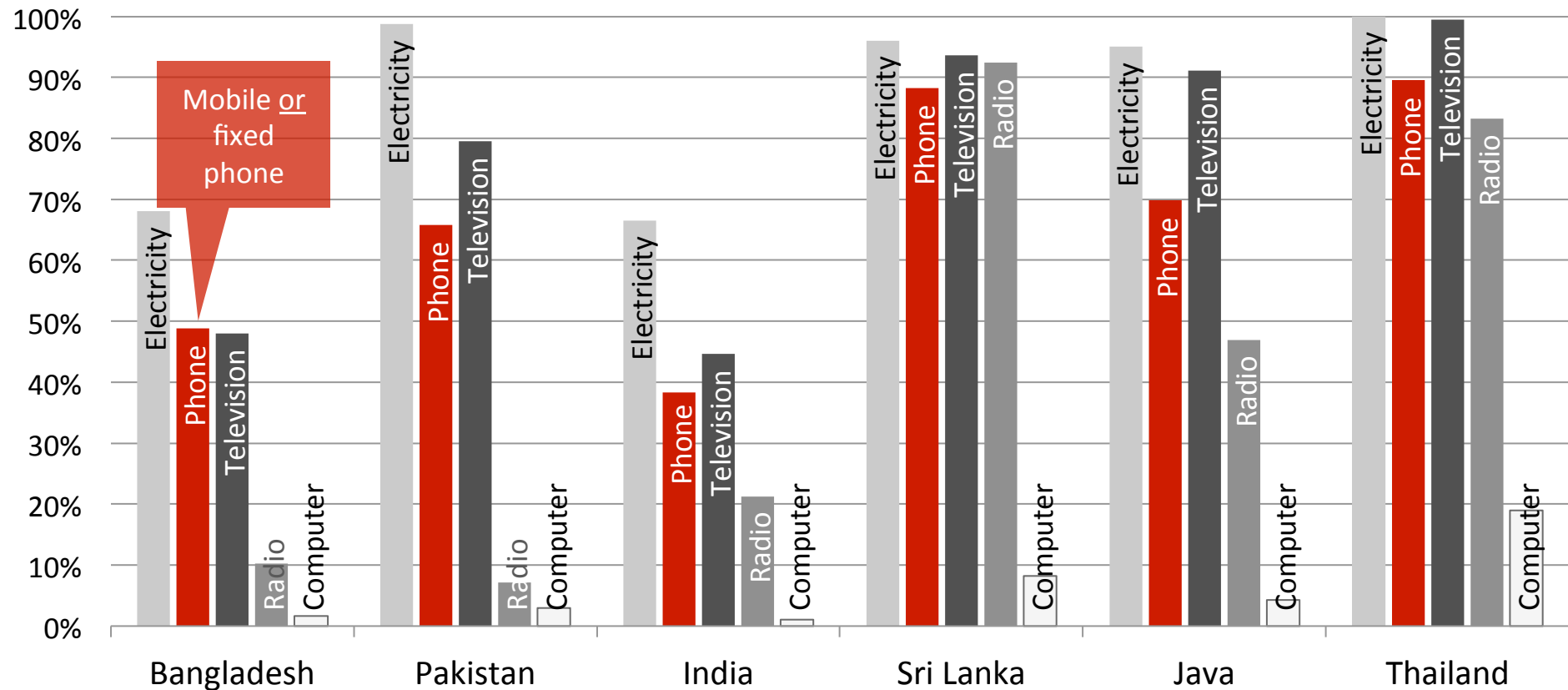
Ownership: Significant gender gap amongst BOP in BD, IN and PK

Mobile ownership - individual (% BOP teleusers)



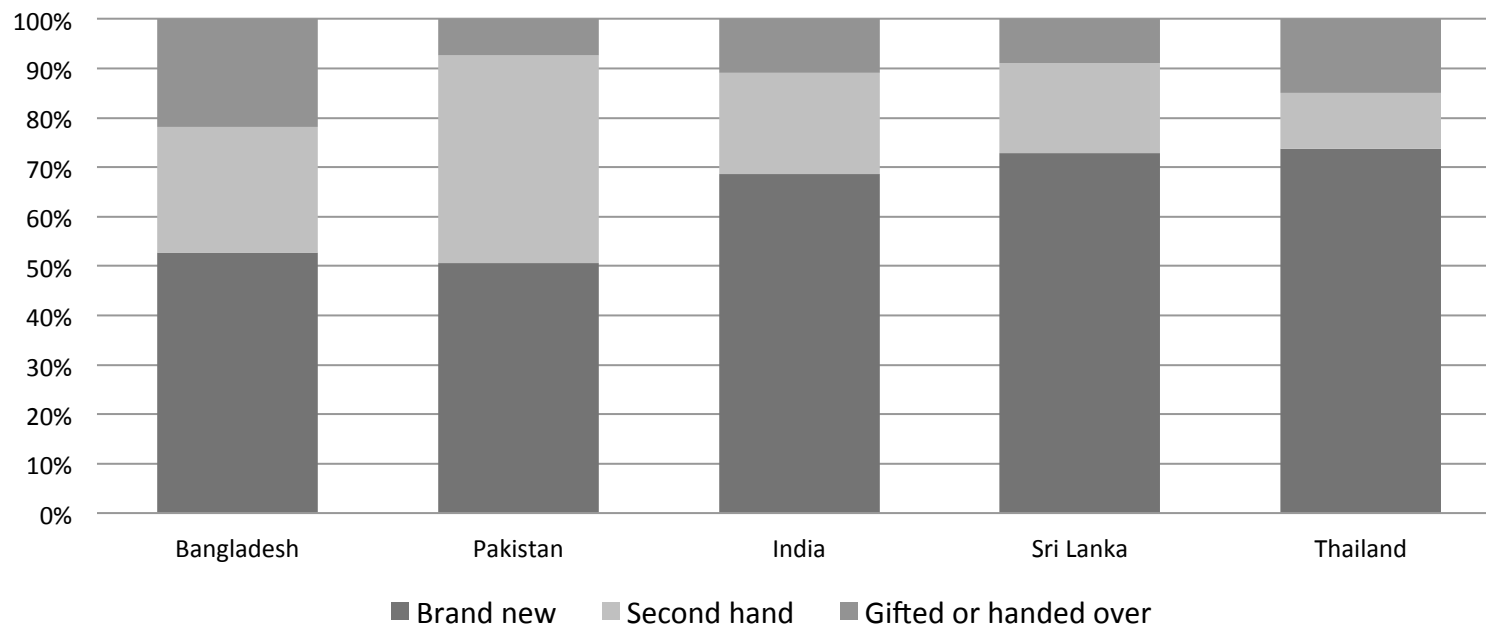
Phones have overtaken radio at BOP everywhere except LK (but some mobiles are used as radios)

Household access (% of BOP teleusers)



Over 50% of BOP handsets brand new when obtained (PK BOP had highest secondhand use)

How handsets were obtained (%BOP mobile owners)



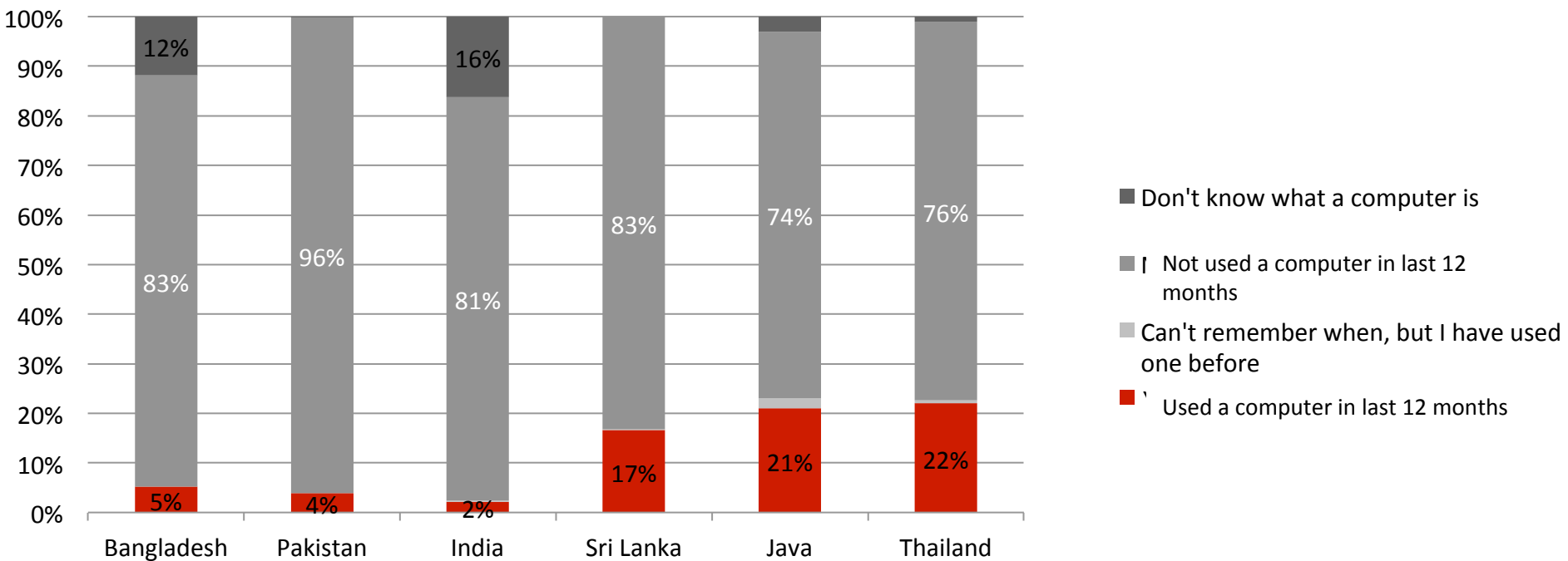
Thais spend the most on handsets

	Brand new		Second hand	
	Mean	SD	Mean	SD
Bangladesh	44	25	23	12
Pakistan	50	72	23	31
India	51	68	24	15
Sri Lanka	56	31	28	28
Thailand	100	85	47	44

High prices indicate presence of smartphones

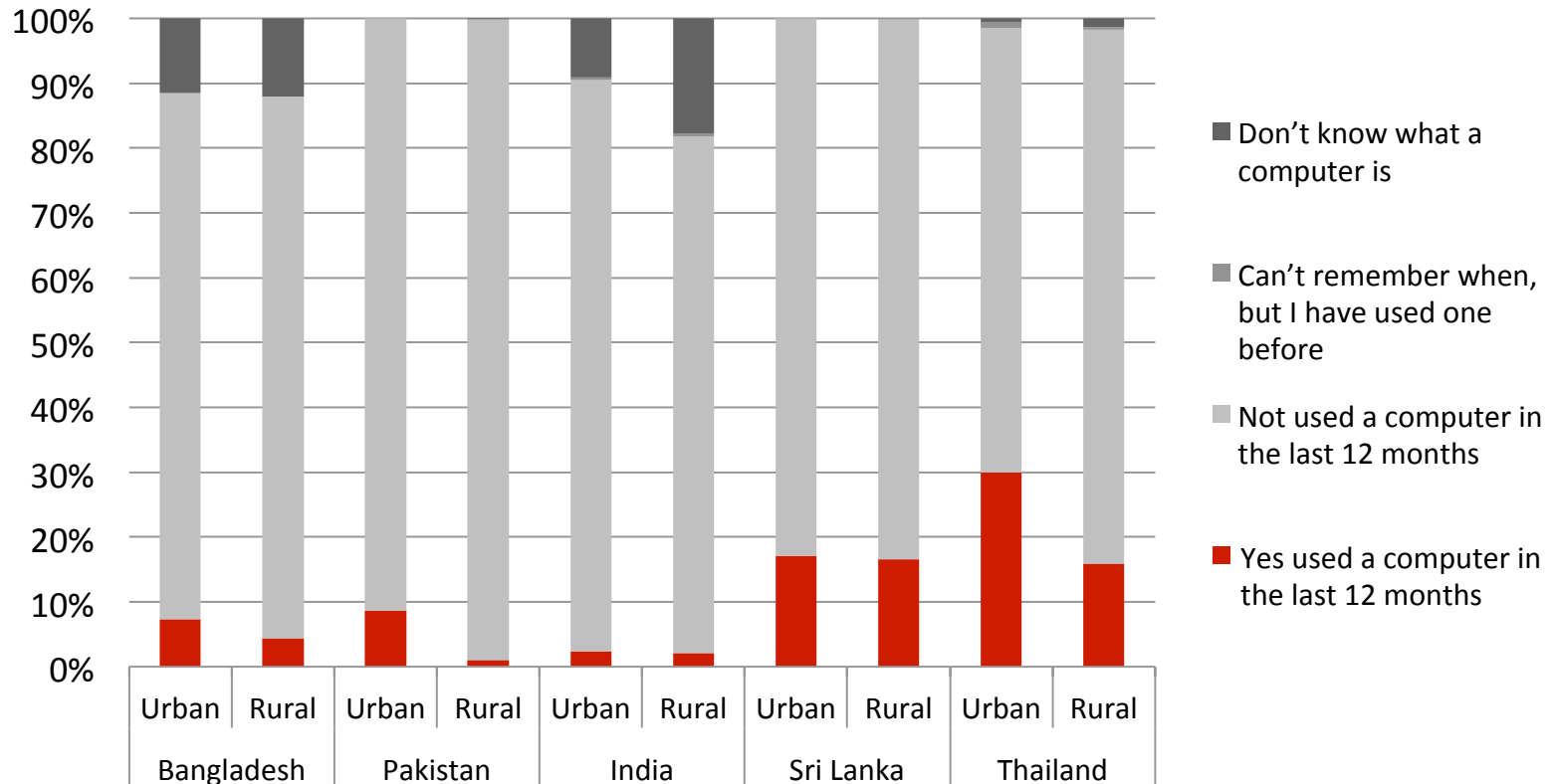
Computer use at BOP low overall

Use of computers (% of BOP teleusers)



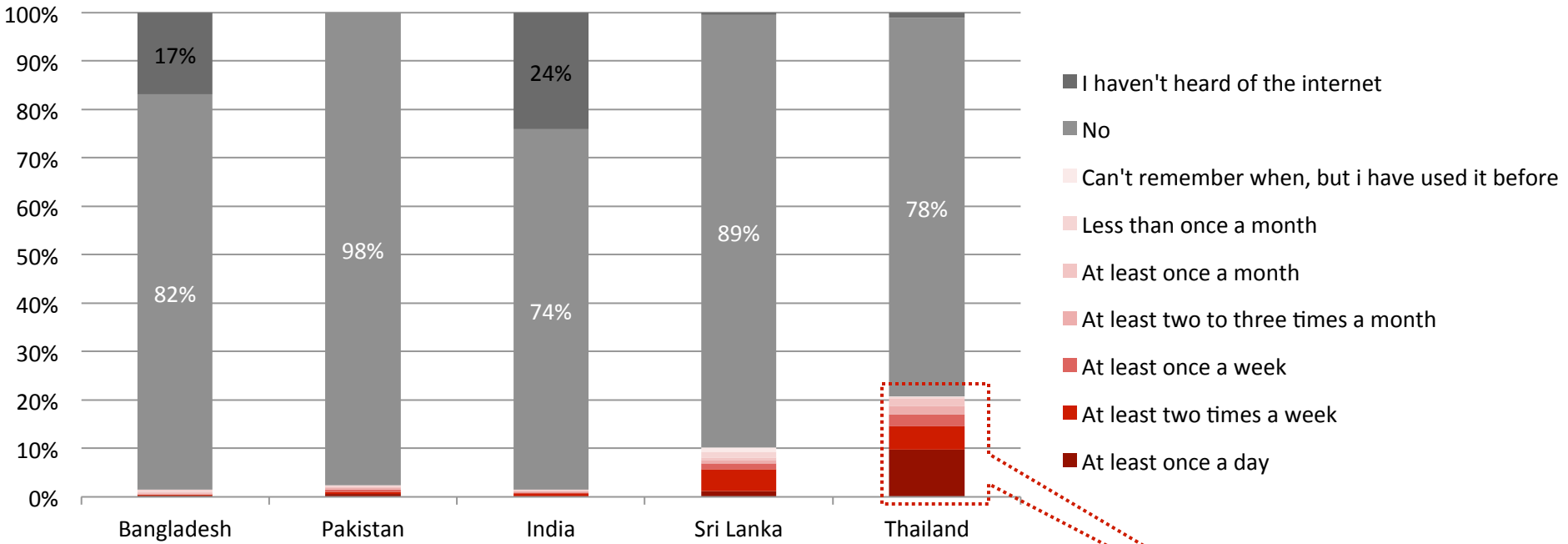
Computer use: Not much urban-rural difference; low throughout

Usage of computers (% of BOP teleusers)



Internet use at BOP similarly low; significant lack of awareness at Bangladeshi & Indian BOP

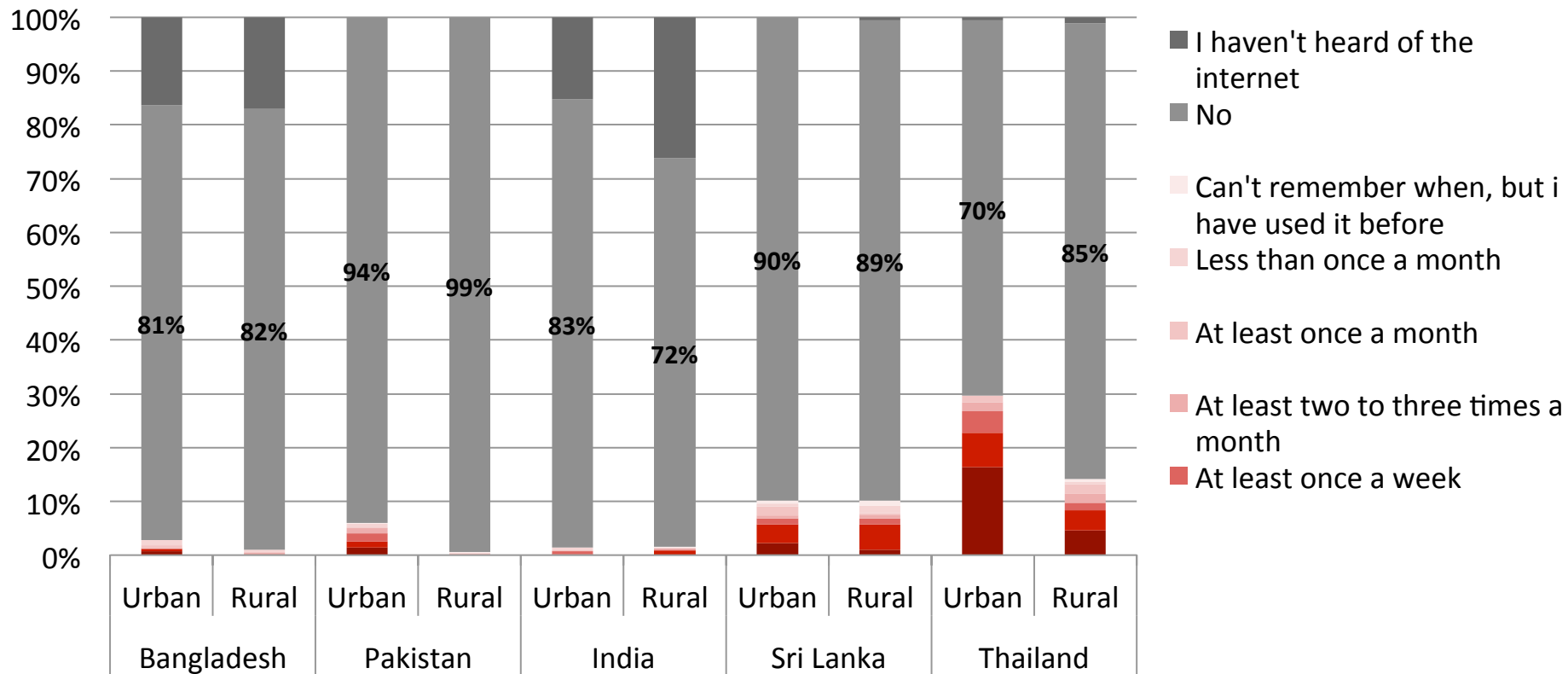
Internet use (% of BOP teleusers)



	Bangladesh	Pakistan	India	Sri Lanka	Thailand
Use the Internet (% of BOP teleusers)	2%	2%	1%	9%	21%

Internet use: Virtually non-existent amongst rural BOP in BD and PK

Internet use (% of BOP teleusers)



What BOP does with mobile phones

Among BOP mobile owners

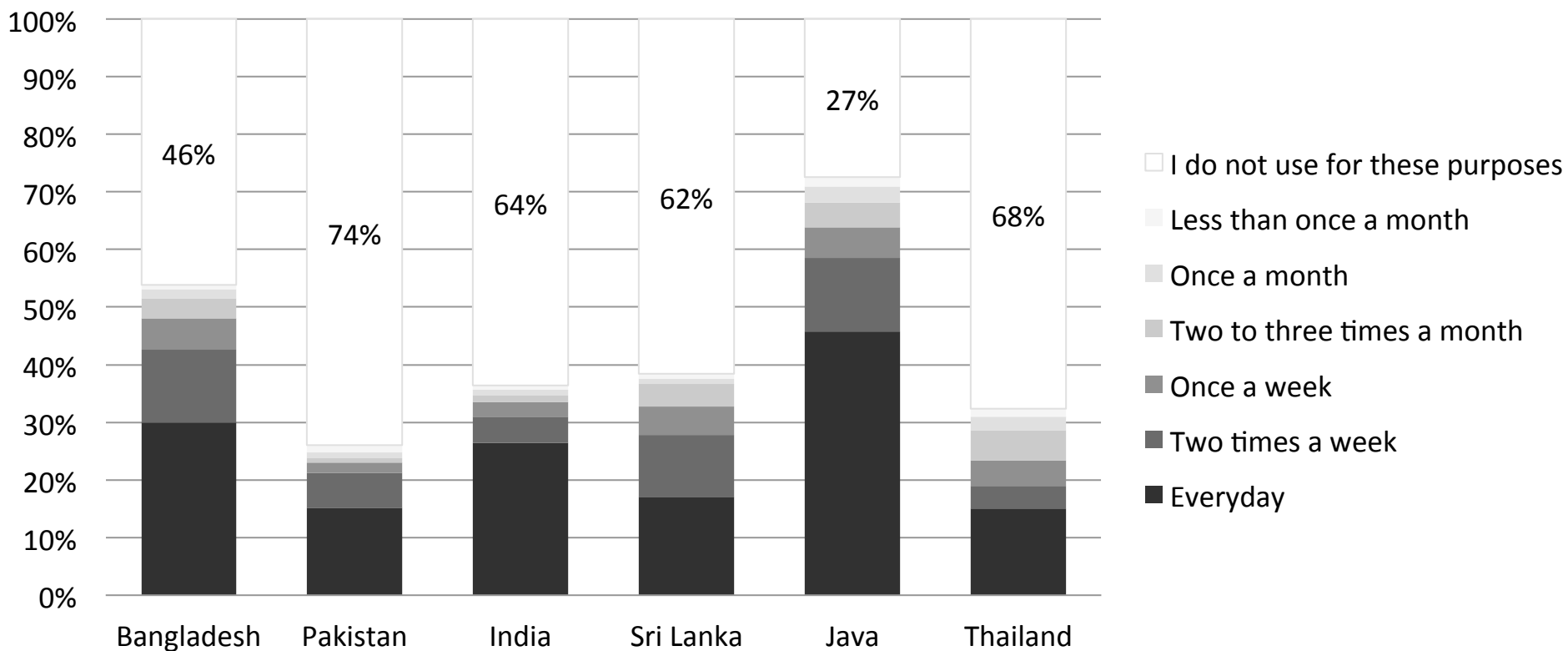
	% of BOP mobile owners					
	B' desh	Pakistan	India	S' Lanka	Java	Thailand
Make phone calls	100	99	100	99	96	100
Receive phone calls	100	95	99	100	94	99
Send/receive missed calls	86	71	78	65	54	24
Send/receive SMS	19	38	23	55	89	37
Send/receive MMS	1	2	3	5	14	8
Send/receive e-mail				1	3	2
Browse the Internet	3		1	1	10	5
Take photos/video	19	7	8	14	26	19
Play games	27	21	18	11	31	16
Listen to radio	13	15	12	17	26	18
Listen to music	25	5	15	8	26	30
Share that you have content created	1	1	3	2	8	3
Send/receive or download/upload other content	1	1	2	2	6	3
Use as an organizer	7	5	8	2	15	8
Check my bill/credit	13	20	11	18	16	3
Send/receive talk time/load	10	5	2	2	35	0
Access facebook	1			1	7	2
Access other social networking or blog applications					2	1

SMS and entertainment more popular among those below 35

	B' desh		P' tan		India		S Lanka		Thailand	
	35 or less	Above 35	35 or less	Above 35	35 or less	Above 35	35 or less	Above 35	35 or less	Above 35
Taking phone calls	100%	100%	99%	99%	100%	99%	100%	98%	100%	100%
Receiving phone calls	100%	100%	95%	95%	99%	99%	100%	100%	99%	99%
Sending/receiving missed calls	87%	84%	74%	65%	82%	71%	77%	49%	32%	17%
Sending/receiving SMS	25%	5%	46%	20%	29%	10%	73%	32%	50%	23%
Sending/receiving MMS	2%	0%	3%	0%	4%	1%	8%	1%	14%	2%
Sending/receiving e-mail	0%	0%	0%	0%	0%	0%	1%	0%	3%	1%
Browsing the Internet	4%	0%	0%	0%	1%	0%	2%	0%	9%	1%
Taking photos/video	24%	7%	8%	5%	10%	4%	20%	7%	29%	9%
To play games	35%	9%	24%	13%	23%	8%	15%	5%	26%	6%
To listen to radio	16%	4%	17%	12%	15%	6%	20%	12%	25%	12%
To listen to music	31%	11%	7%	2%	18%	8%	11%	3%	46%	14%
To share that you have content created	1%	0%	2%	0%	4%	1%	3%	1%	5%	1%
To send/receive or download/upload other content	2%	0%	2%	0%	3%	1%	2%	1%	5%	1%
As an organizer	8%	4%	6%	5%	9%	7%	3%	1%	10%	6%
To check my bill/credit	13%	12%	23%	12%	11%	10%	20%	16%	4%	3%
Sending/receiving talktime/load	11%	9%	6%	3%	2%	1%	2%	2%	0%	1%
To access facebook	1%	0%	0%	0%	0%	0%	2%	0%	4%	0%
To access other social networking or blog applications	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%

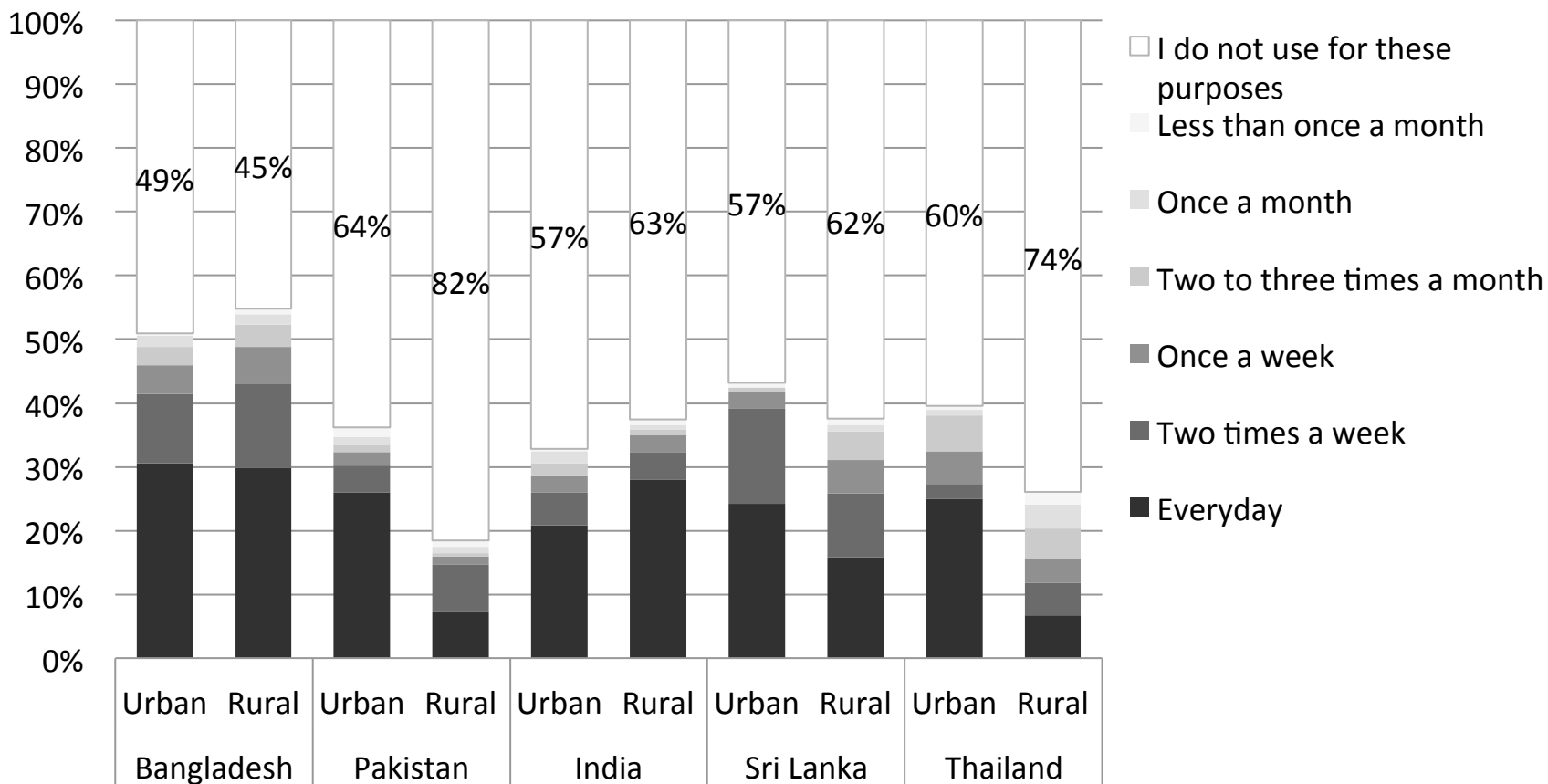
Use of mobiles for financial, business or work communication highest in Java

Use of phone for financial, business or work related communications (% of phone owners)



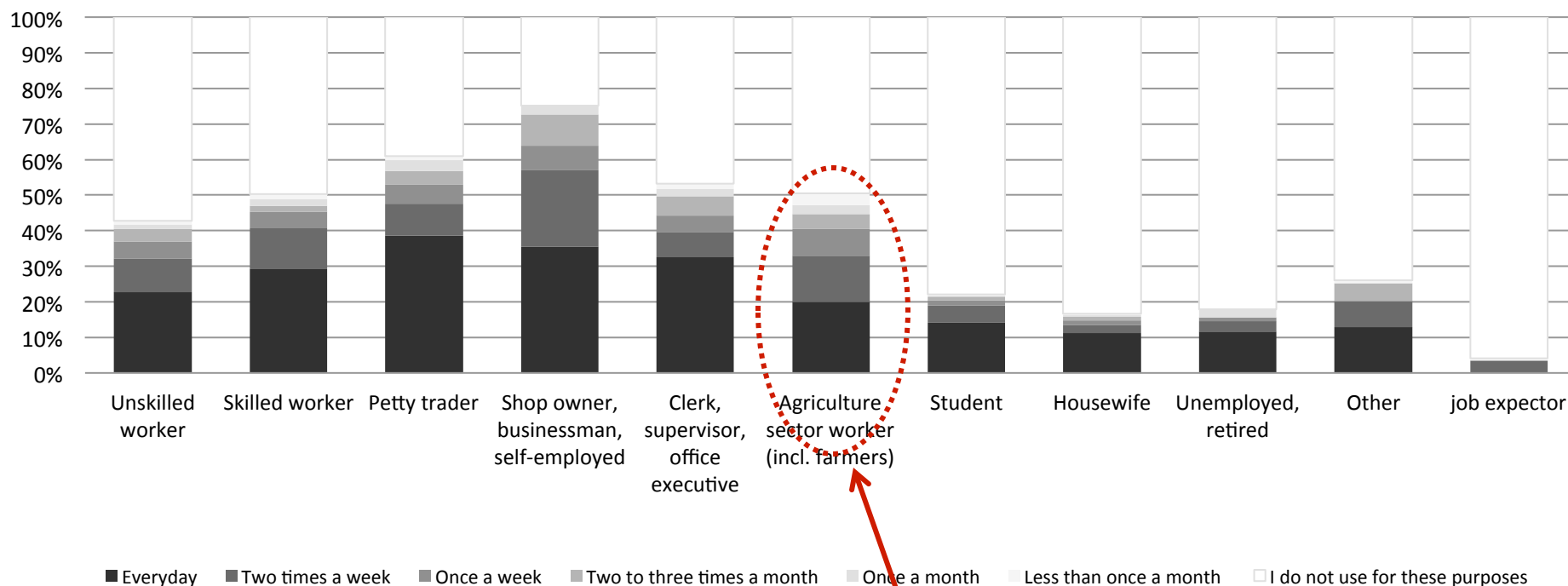
Use of mobiles for financial/ work related communication: Low among rural BOP in PK

Use of phone for financial, business or work related communications (% of phone owners)



Business people and petty traders use ICTs for livelihood-related purposes the most

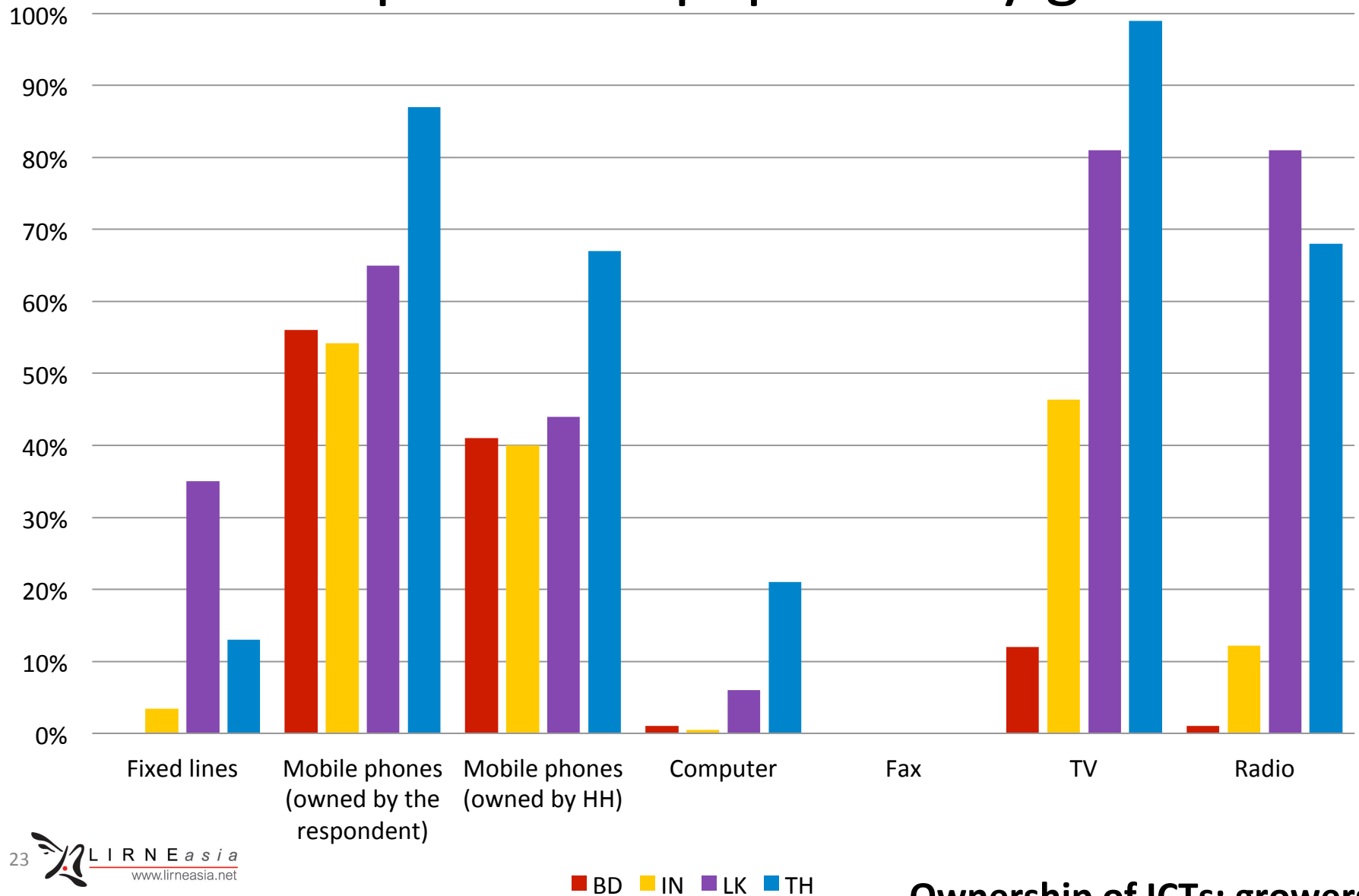
Use of the phone for financial, business or work-related purposes (% of BOP teleusers)



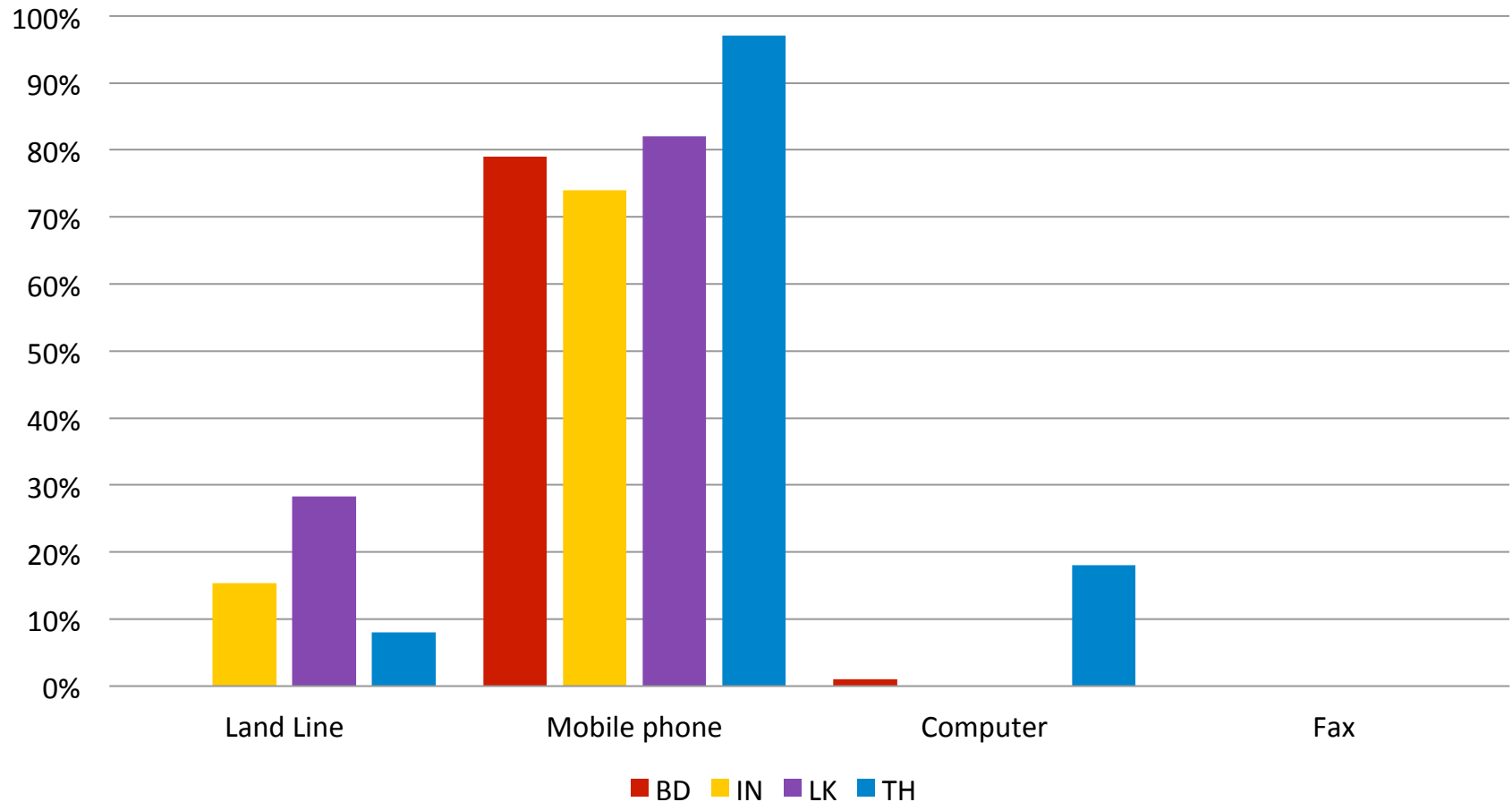
Agriculture sector workers are moderate users: Is it because appropriately designed applications are not available? Or . . .

DRILLING DOWN . . . NON-REPRESENTATIVE SURVEY OF AGRICULTURAL SECTOR

Ownership of ICT equipment by growers



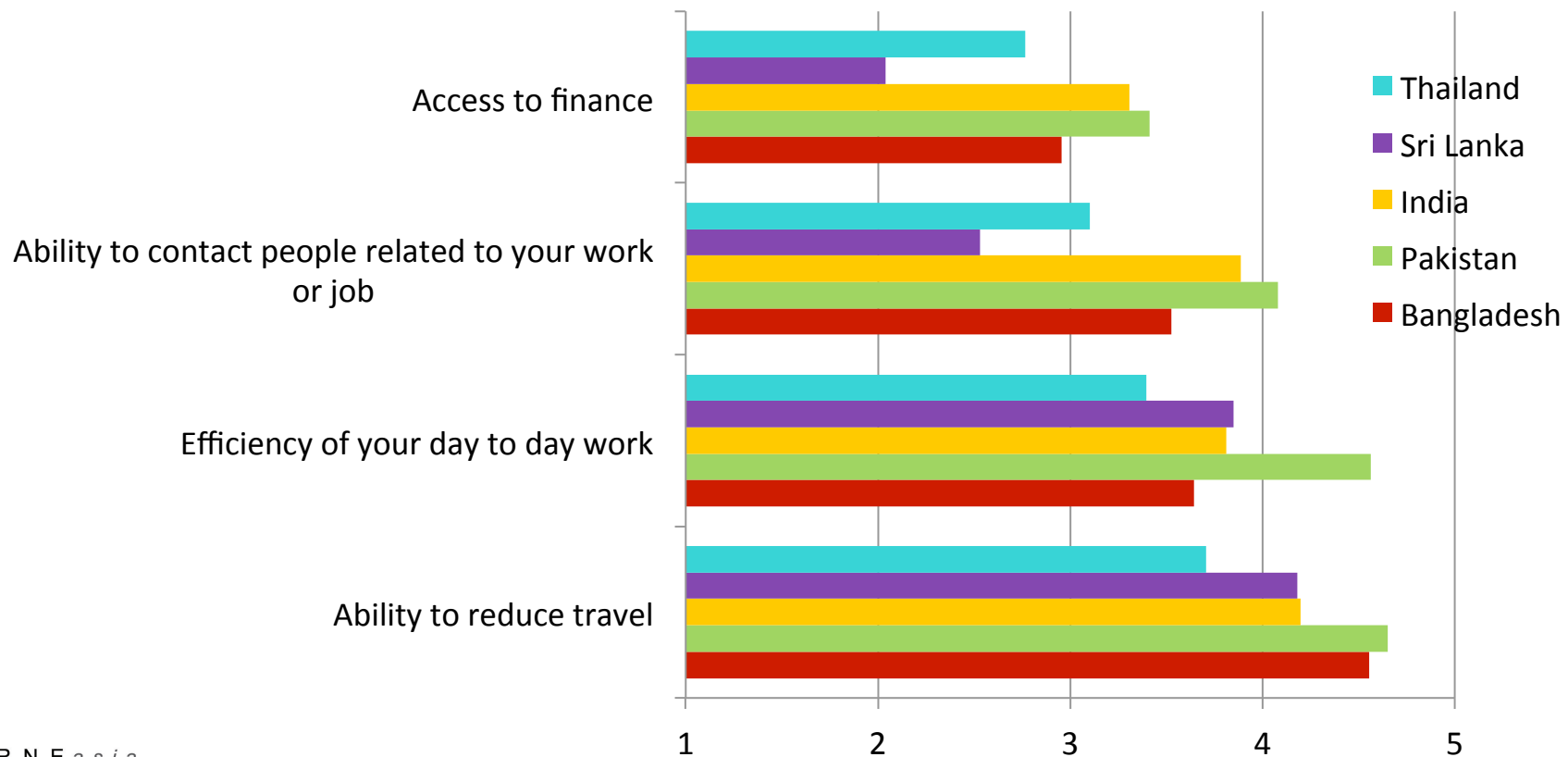
For non-growers it's all about the mobile...



**BENEFITS, AS SEEN BY THE BOP
(REPRESENTATIVE SAMPLE)**

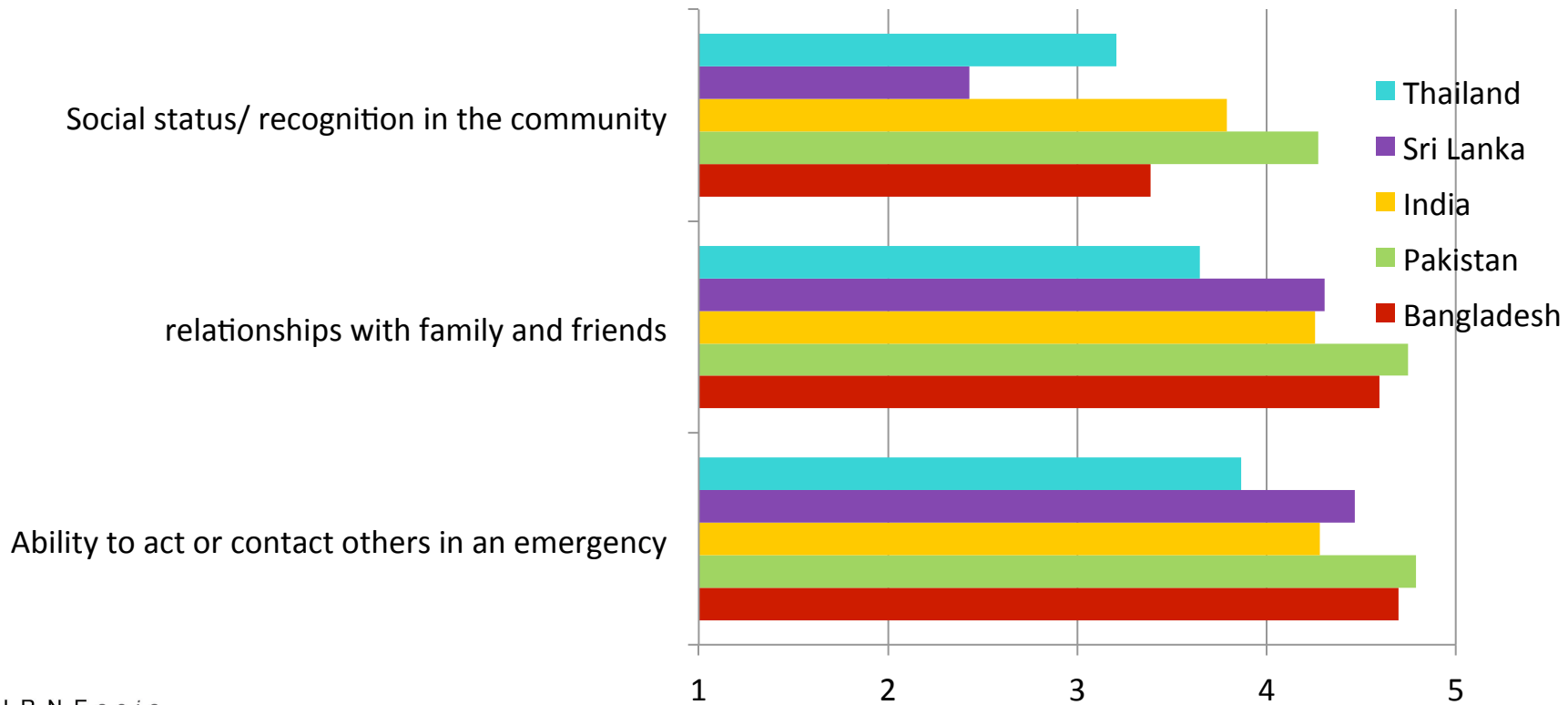
Main perceived economic benefit is reducing travel

Benefits of phones (%BOP teleuser)
1=No change 5=Improved greatly



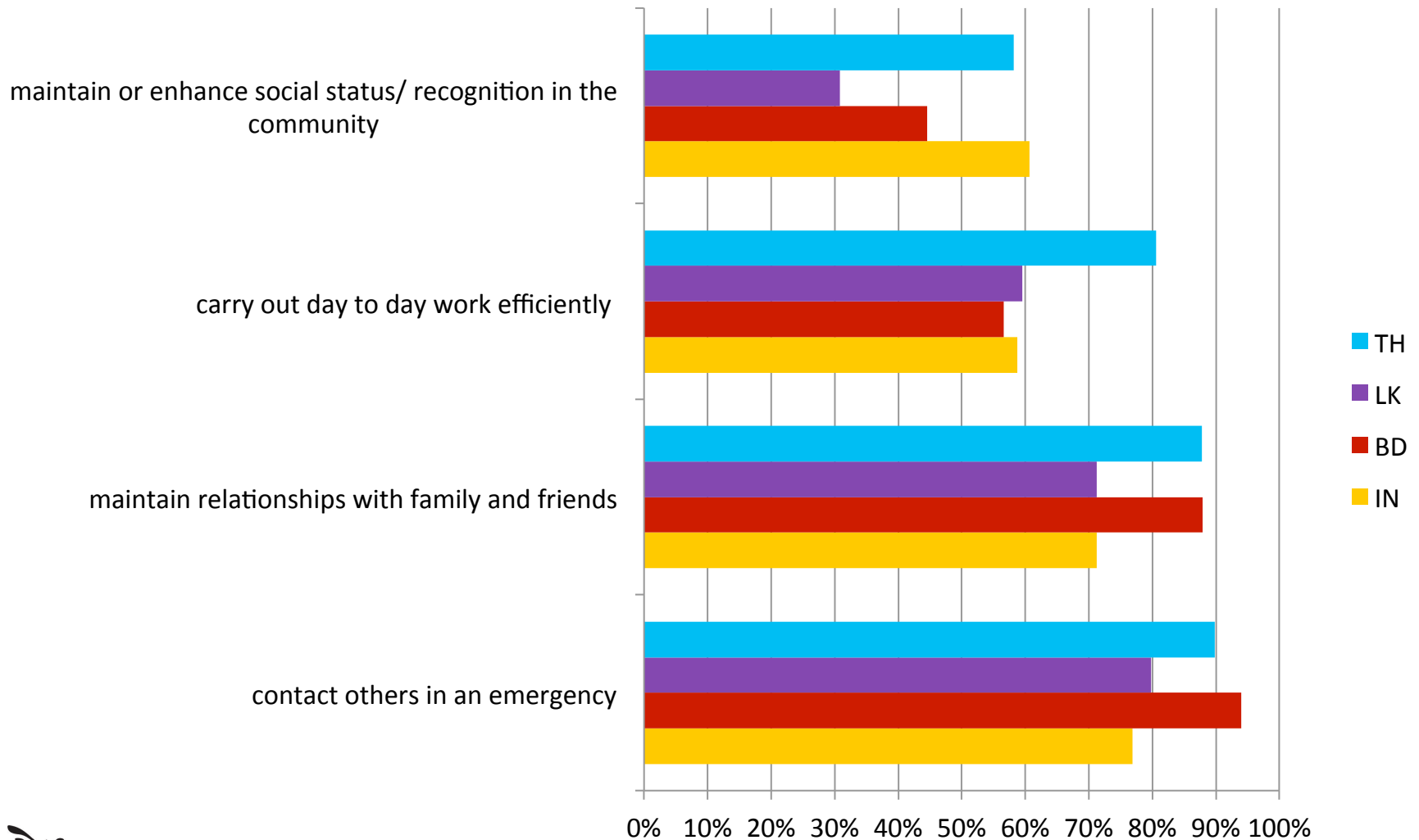
Voice telephony mainly benefits personal life

Benefits of phones (%BOP teleuser)
1=No change 5=Improved greatly

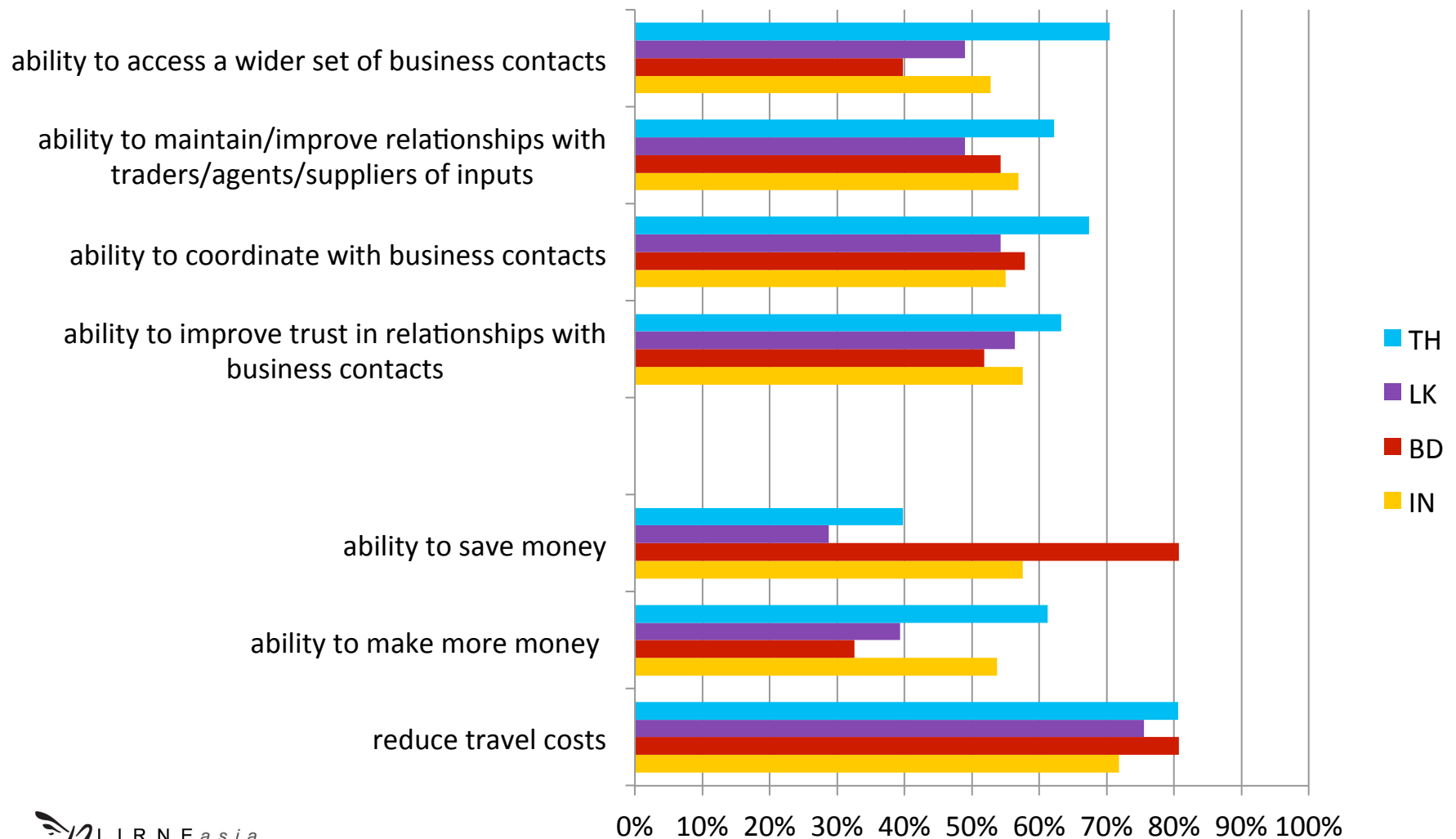


**BENEFITS NOT VERY DIFFERENT FOR
AGRICULTURAL MICRO ENTERPRISES**

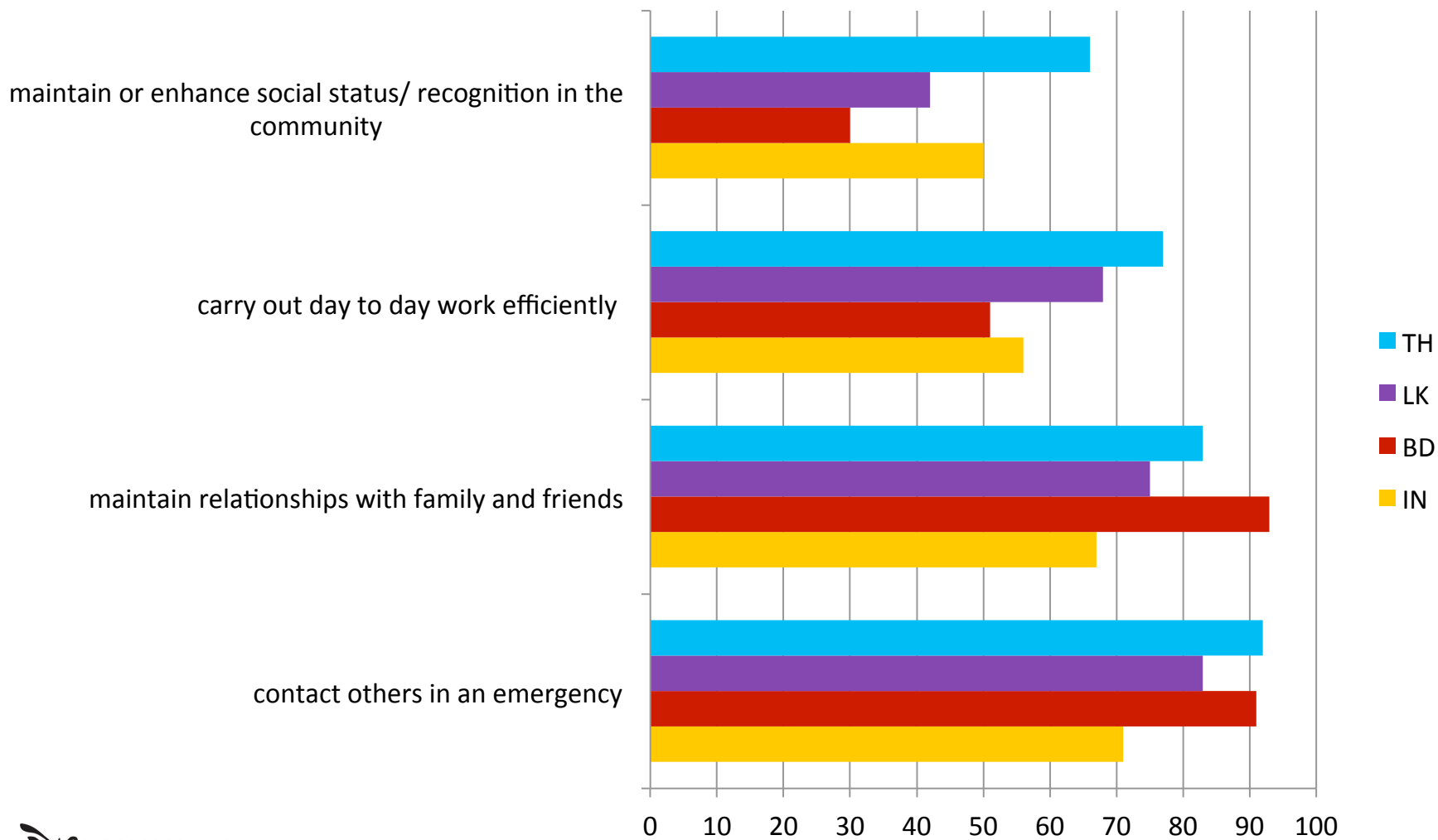
For growers, highest personal benefits: emergency use and relationship maintenance



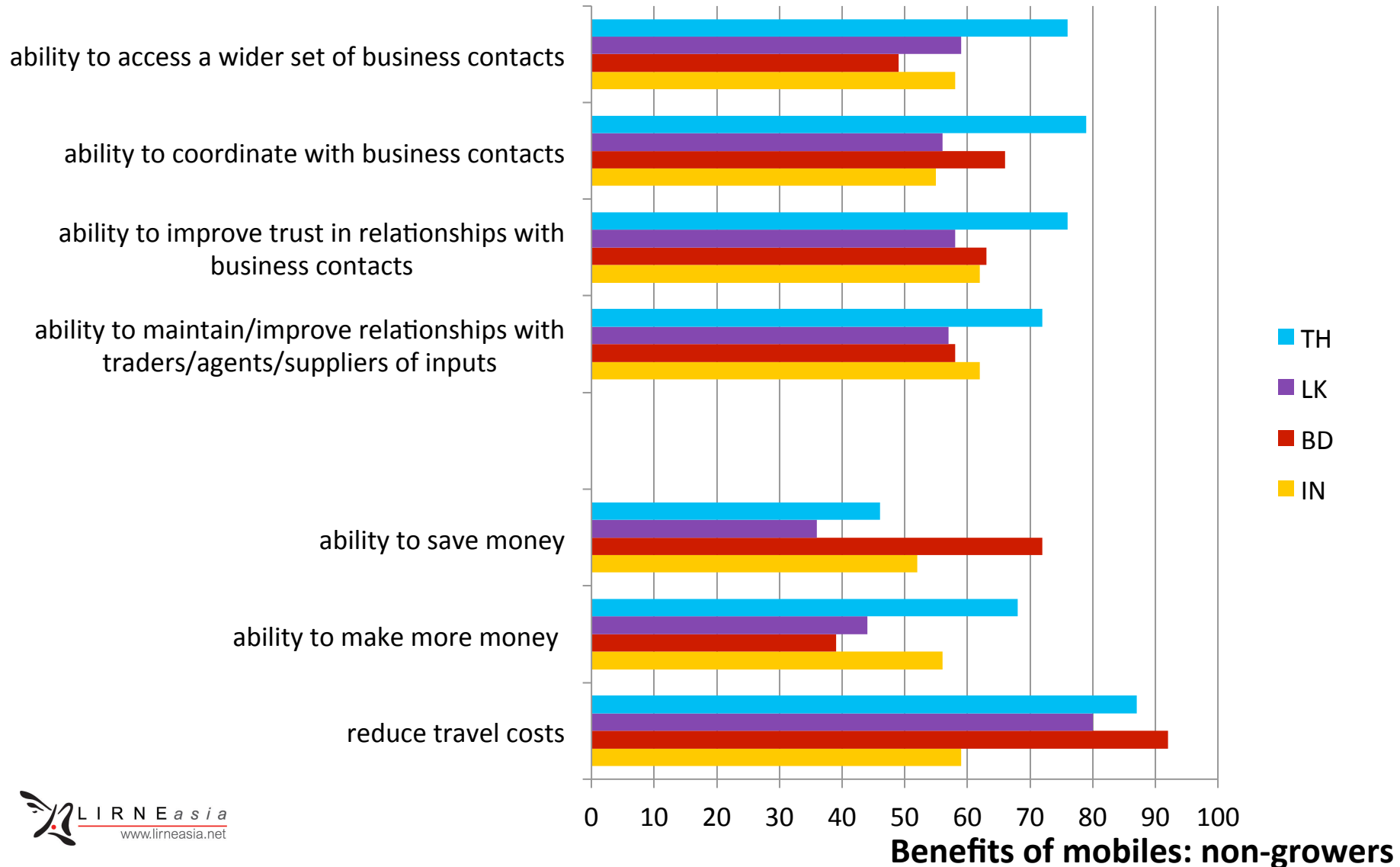
Followed by the ability to reduce travel costs...



For non-growers, highest personal benefits: emergency use and relationship maintenance



Ability to reduce travel cost, highest in terms of economic benefits



In sum

- Mobiles are the pre-eminent communication technology among the poor, and among smallholders & those who interact with them
- Yet, the use of mobiles for livelihood-related purposes is moderate in agriculture sector
- More mobile-based applications are needed
- Teleuse@BOP studies (qualitative, representative/non-representative, quantitative) since 2004 provide a rich base of data for those designing applications that will help smallholders use the potential of mobile connectivity to improve their lives