Connecting the rural millions:

Findings from a multi-country study of Teleuse@BOP

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Learning Initiatives on Reforms for Network Economies

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Agenda

- The need to improve rural India's performance
- Teleuse@BOP: a five-country study by LIRNE*asia* with AC Nielsen
- Access@BOP
- BOP is value-conscious and strategic
- The *next billion*
- What is to be done?

The need to improve rural India’s performance

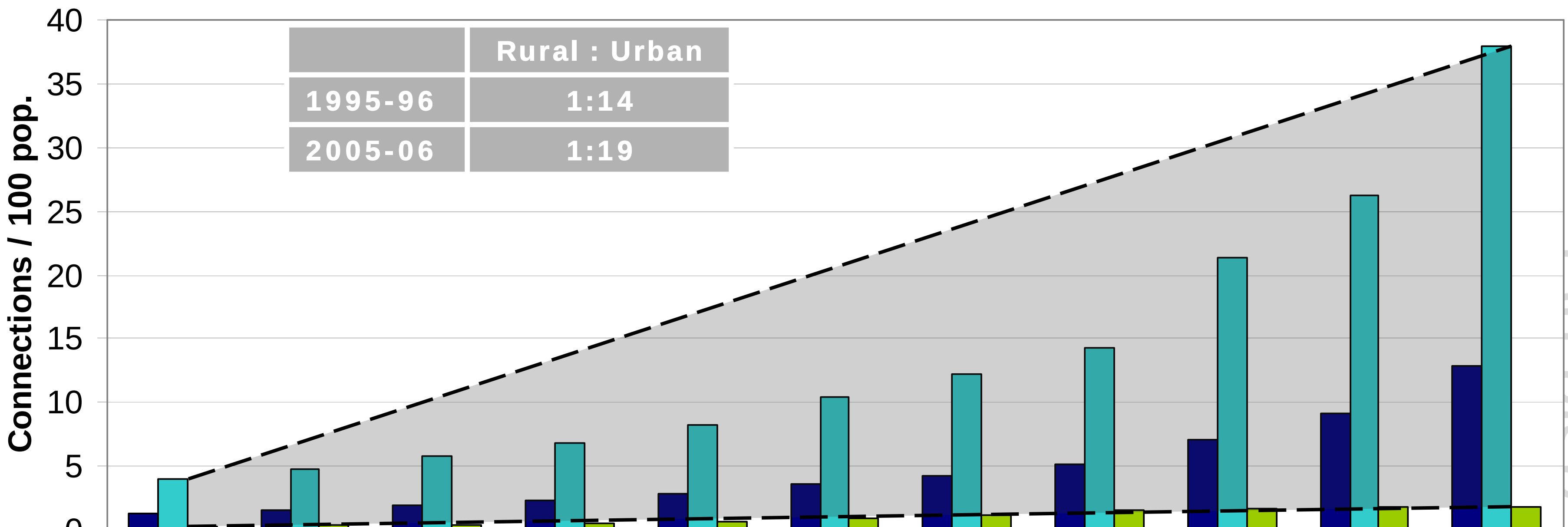
India is doing well

- Six million plus new connections a month

. . . But can do much better

. . . *Must* do better

Gap between rural & urban is widening . . .



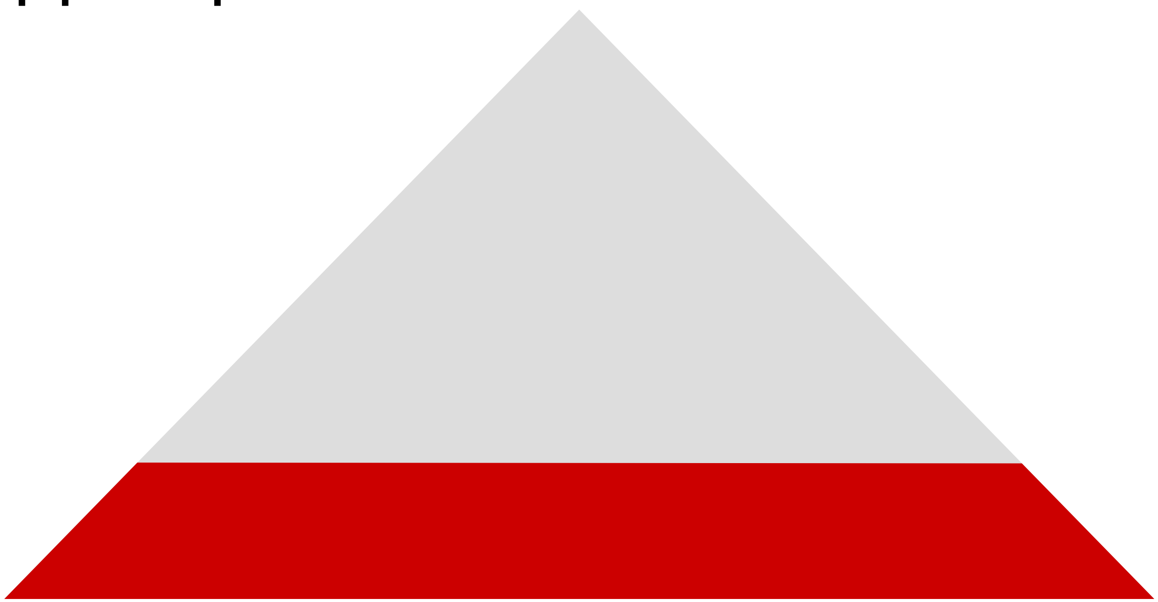
	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06
Total	1.28	1.56	1.94	2.33	2.86	3.58	4.29	5.11	7.04	9.08	12.86
Urban	3.95	4.76	5.78	6.87	8.23	10.37	12.2	14.32	21.3	26.2	37.99
Rural	0.29	0.34	0.43	0.52	0.68	0.93	1.21	1.49	1.7	1.74	1.86

Sustained high-growth

Rural connectivity

The *bottom of the pyramid*

- Untapped potential at the BOP



- Emerging markets are ‘where the action is’
  - The next billion…

Teleuse@BOP: a five-country study

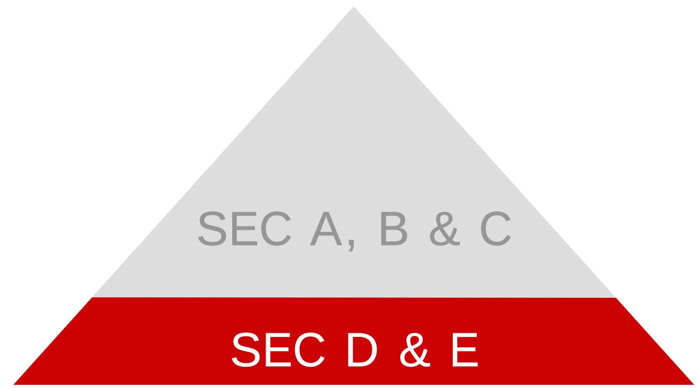
LIRNEasia research

Teleuse@BOP

- ~9,000 sample survey in five countries
  - India, Pakistan, Sri Lanka, Philippines & Thailand
- Understand telecom use at the BOP (= SEC Groups D &E) in Developing Asia
- Representative of target population
  - SEC D&E, ages 18-60

Bottom of the Pyramid defined

- Many definitions of poverty, but this study uses SEC D and E; between ages 18-60
  - SEC does not take into account income, but it is closely related to income levels



	Pakistan	India	Sri Lanka	Philippines	Thailand
Population (million)	165	1,095	20	89	64
Target population of study (million)	77*	**260**	4**	41	15

*excluding FANA/FATA – Tribal Areas; **excluding N&E Provinces

Country profiles

	South Asia			South East Asia	
	Pakistan	India	Sri Lanka	Philippines	Thailand
Population	165 million	1,095 million	19.6 million	89 million	64 million
GNI per capita (2005), USD (Atlas)	690	720	1,160	1,300	2,750
GNI per capita (2005), USD (PPP)	2350	3460	4,520	5,300	8,440
Population below Poverty Line	32% (est. 2001)	25% (est. 2001)	23% (est. 2005)	40% (est. 2001)	10% (est. 2004)
Fixed teledensity (2006)	4.16 (2006 Q4)	4.58 (2006 Q1)	9.50 (2006 Q4)	4.07 (2005 Q4)	10.25 (2005 Q4)
Mobile teledensity (2006)	25.22 (2006 Q4)	8.82 (2006 Q1)	27.1 (2006 Q4)	41.30 (2005 Q4)	46.45 (2005 Q4)
Internet Users	7.5 million	50.6 million	0.3 million	7.8 million	8.4 million

Notes: India on an April – March reporting period ; Pakistan on a July – June reporting period; Other countries follow Jan – Dec (calendar year) reporting periods. Sources: India-COAI, TRAI; Thailand–Company Reports; Pakistan–PTA; Philippines–NTC; Sri Lanka- TRC; 2000 onwards from company reports; World Bank (2006); CIA Fact Book (2005)

Quantitative sample

SAMPLE	South Asia			South East Asia		TOTAL
	Pakistan	India	Sri Lanka	Philippine s	Thailand	
TOP (SEC A, B & C)	685	800	250	120	200	2055
BOP (SEC D & E)	1125	3200	800	980	500	6605
Total	**1810**	**4000**	**1050**	**1100**	**700**	**8660**

- BOP segment is representative of the BOP population
    - Diary respondents also representative of BOP
- Small (non-representative sample) taken of SEC groups A, B & C

Access@BOP

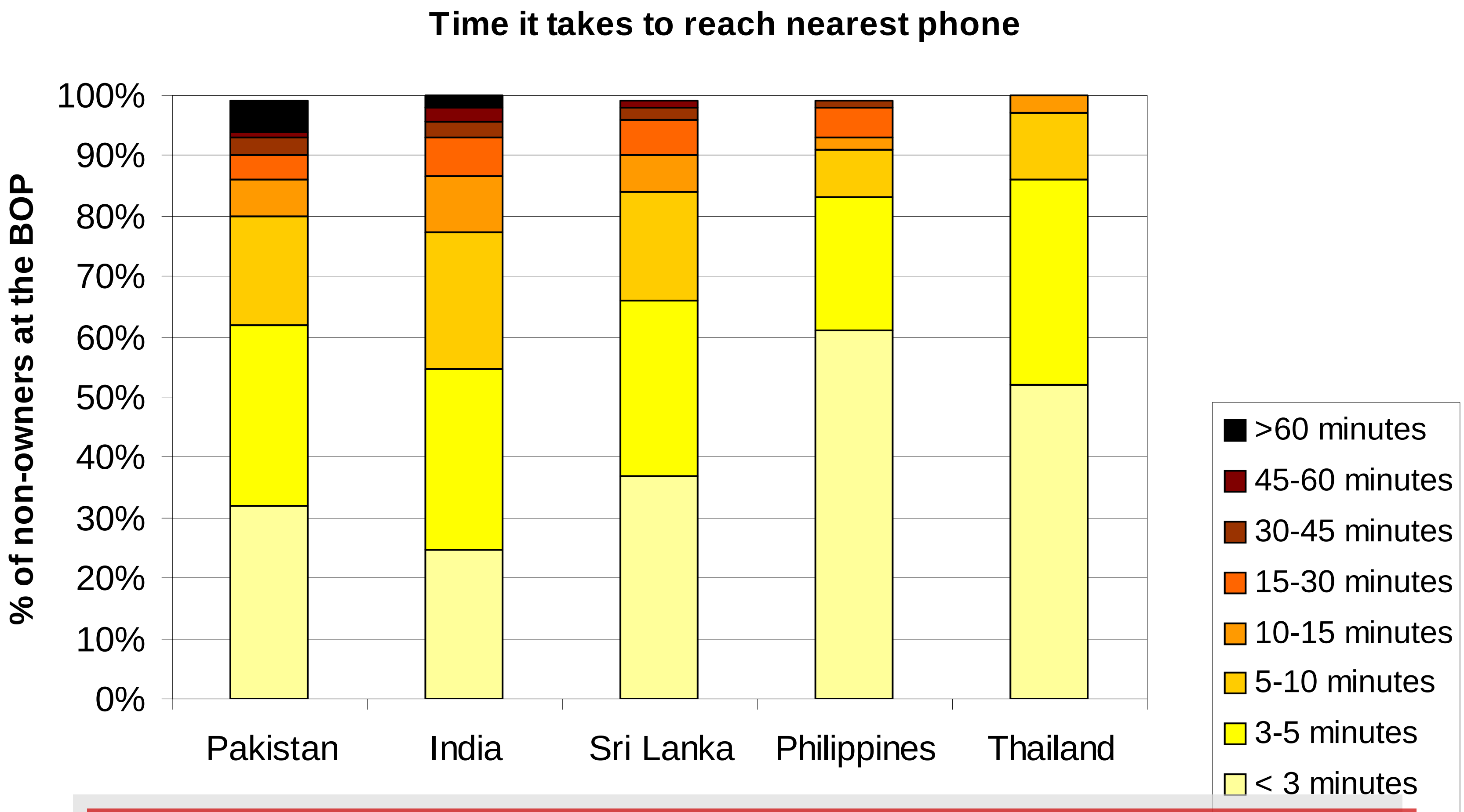
Everyone has access, but not ownership

Overall access is very high

- Most have used a phone in the last 3 months

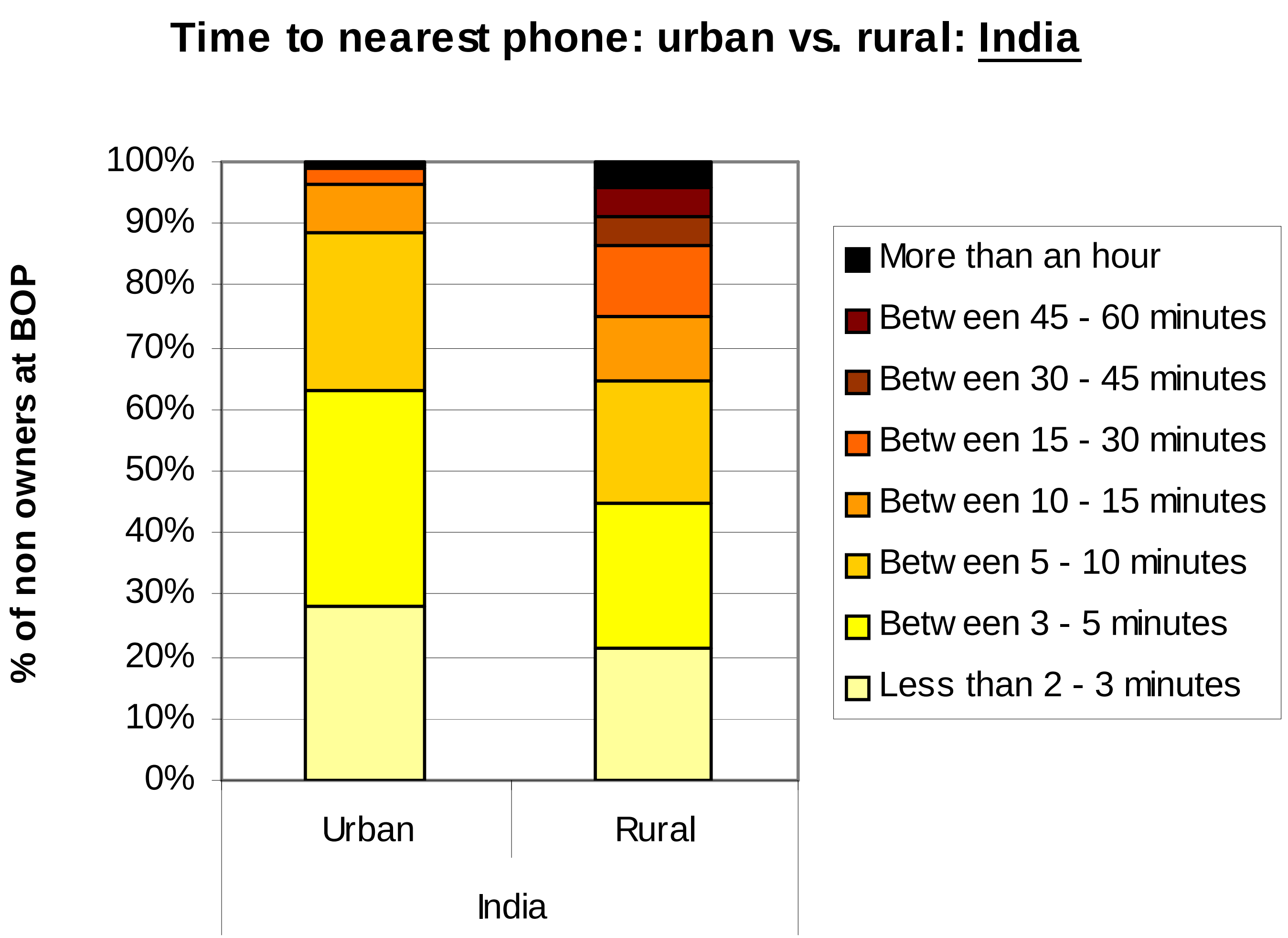
	South Asia			South East Asia	
	Pakistan	India	Sri Lanka	Phil.	Thailand
Accessibility (% of those randomly approached (all SEC groups) who have used a phone in the preceding 3 months)	98%	94%	92%	93%	95%

Most non-owners can reach a phone within minutes

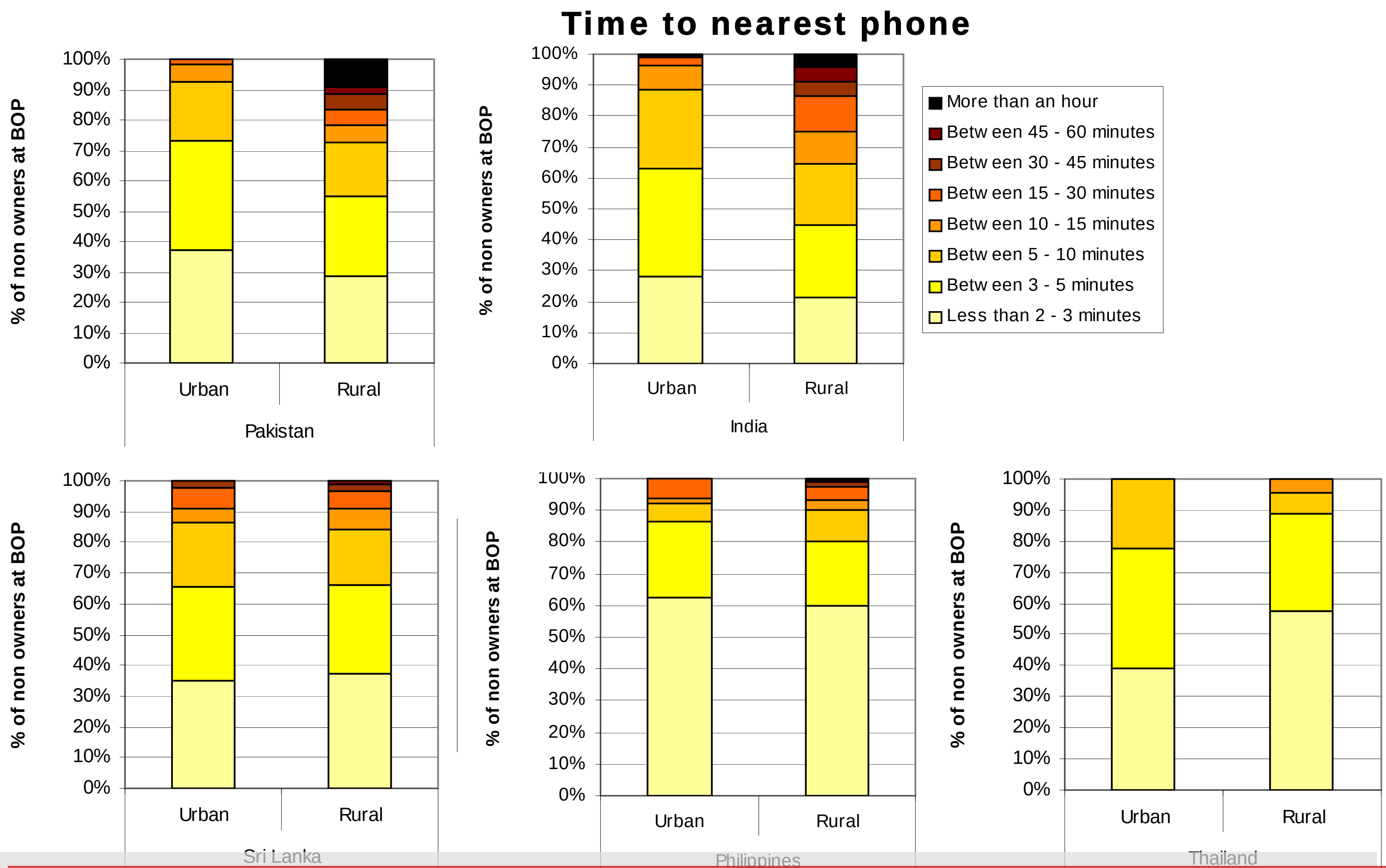


Around 60% at BOP in all countries can get to a phone in less than 5 minutes

Phones are closer in Urban India



Urban-rural differences

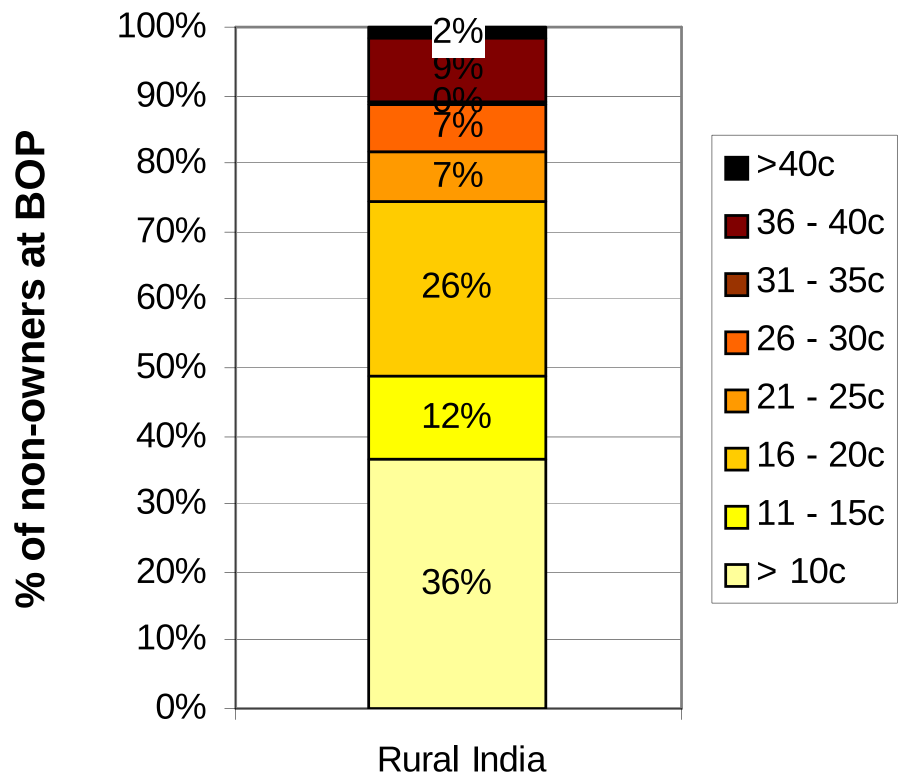


Urban-rural Differences in time to phone in Pakistan & India

Additional transport cost incurred to reach a phone?

- *Yes:*
  - Urban: 4%
  - Rural: 13%

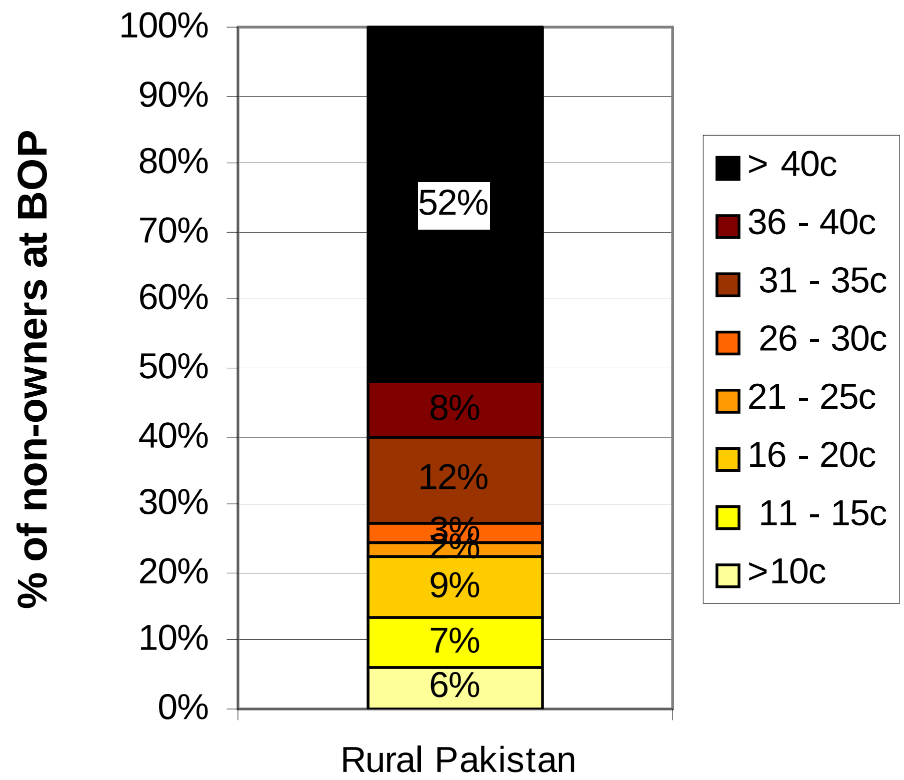
Transport cost incurred to make a call among non-owners in rural India (US cents)



Additional transport cost incurred to reach a phone

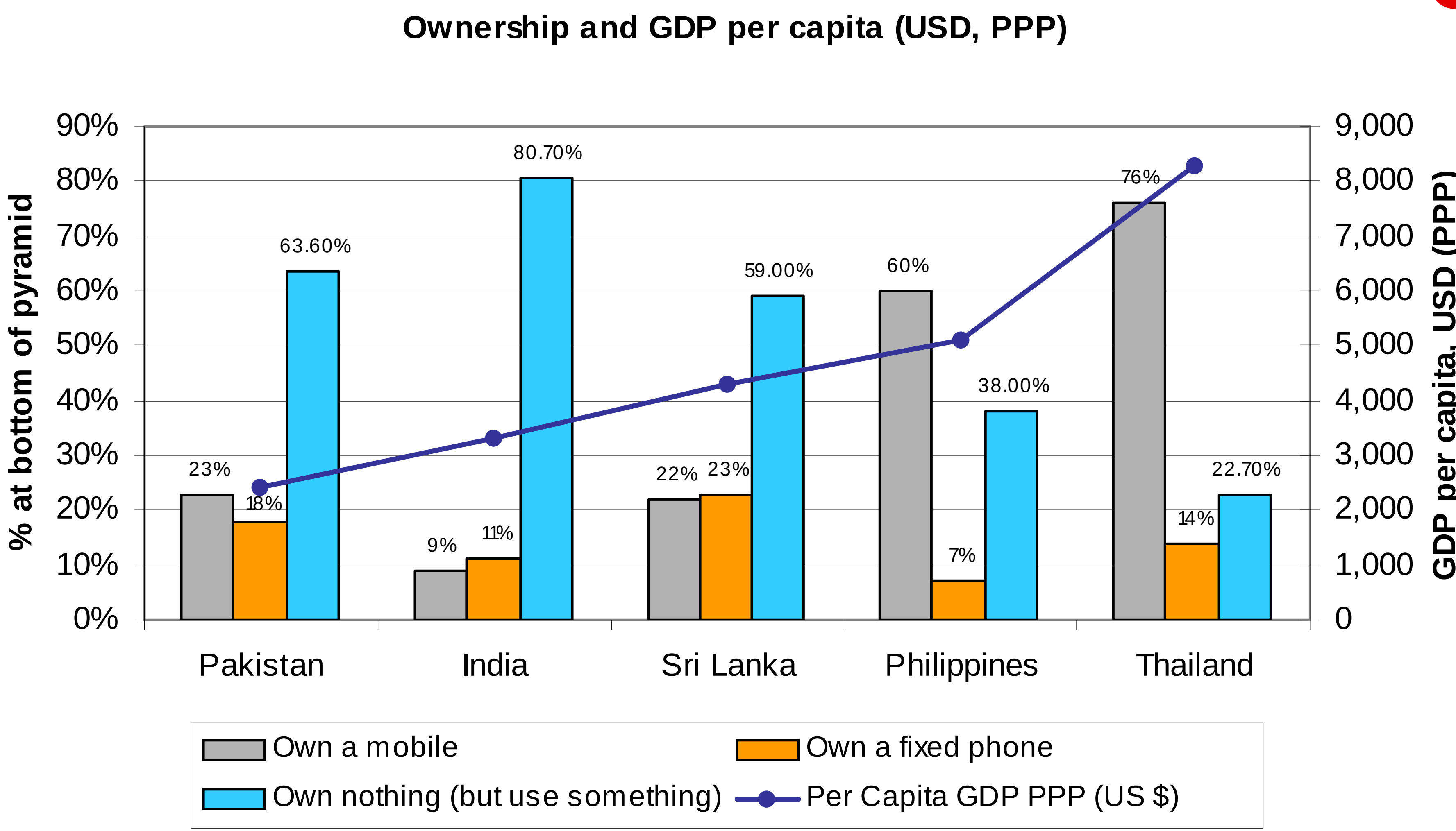
- Rural India better than rural Pakistan

Transport cost incurred to make a call among non-owners in rural Pakistan (US cents)

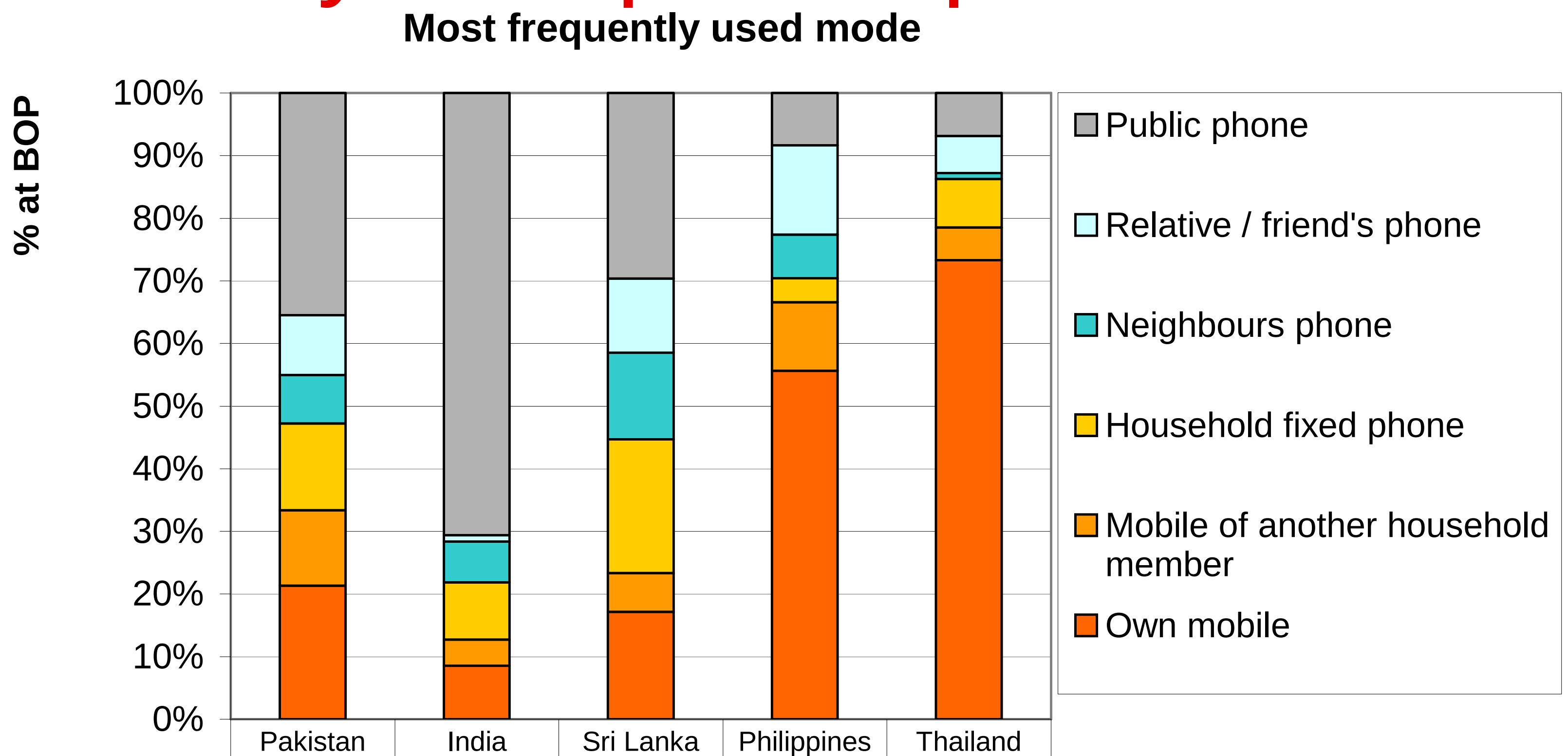


NB, Base = 64

But ownership is low



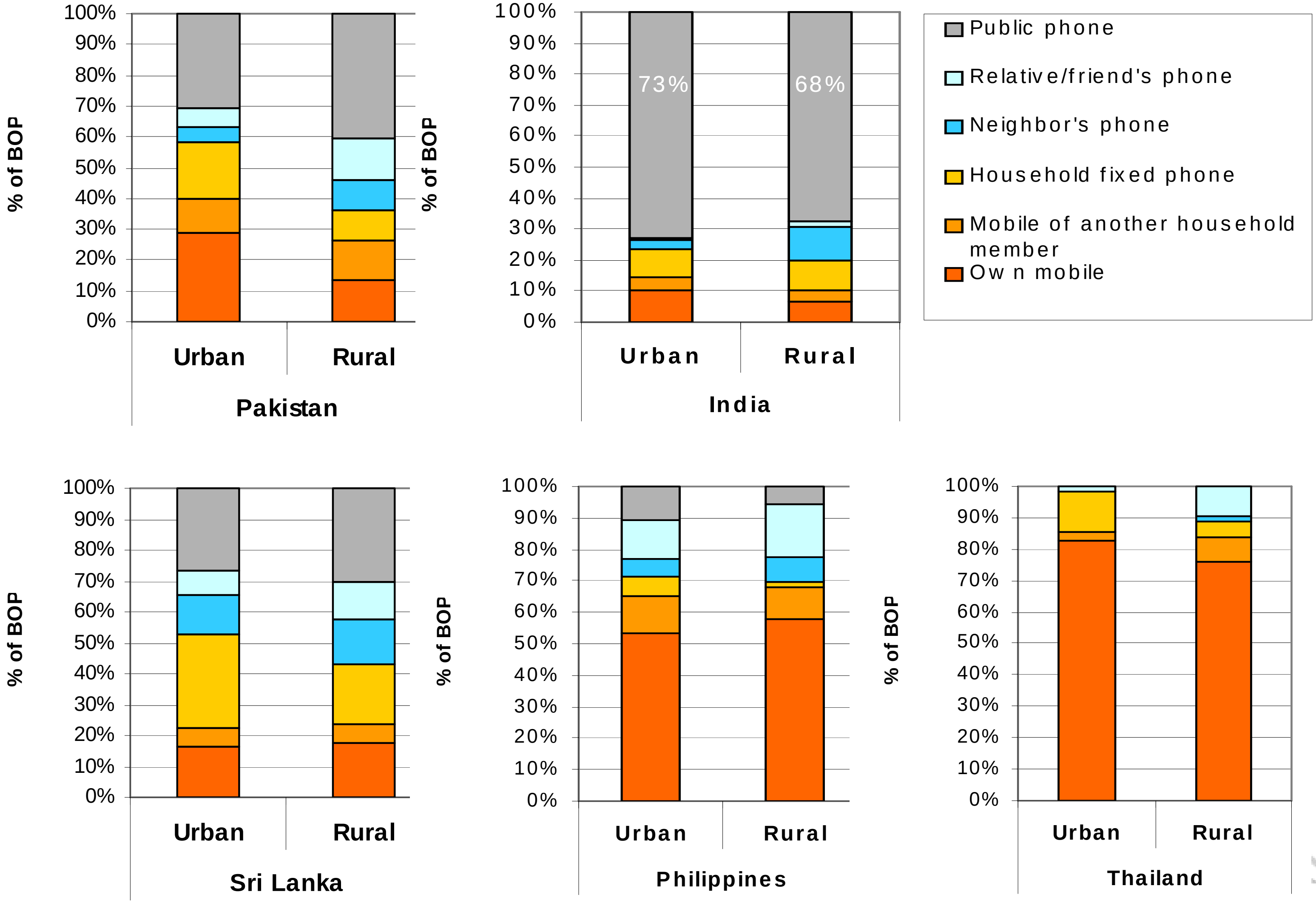
So, mainly use public phones



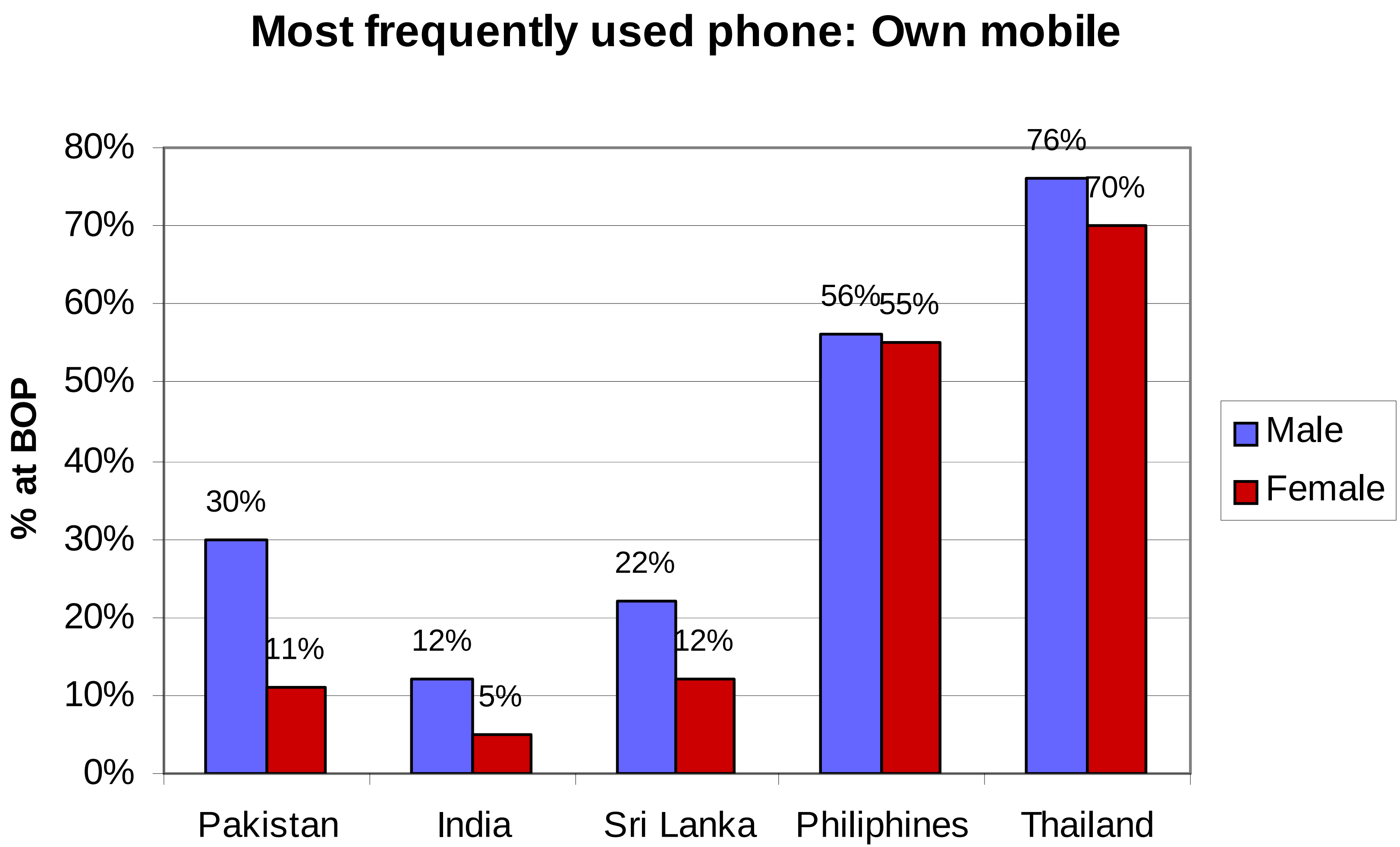
	Pakistan	India	Sri Lanka	Philippines	Thailand
Public phone	35%	71%	30%	8%	7%
Relative / friend's phone	10%	1%	12%	14%	6%
Neighbours phone	8%	7%	14%	7%	1%
Household fixed phone	14%	9%	21%	4%	8%
Mobile of another household member	12%	4%	6%	11%	5%
Own mobile	21%	9%	17%	56%	73%

Many at BOP in South Asia use public phones

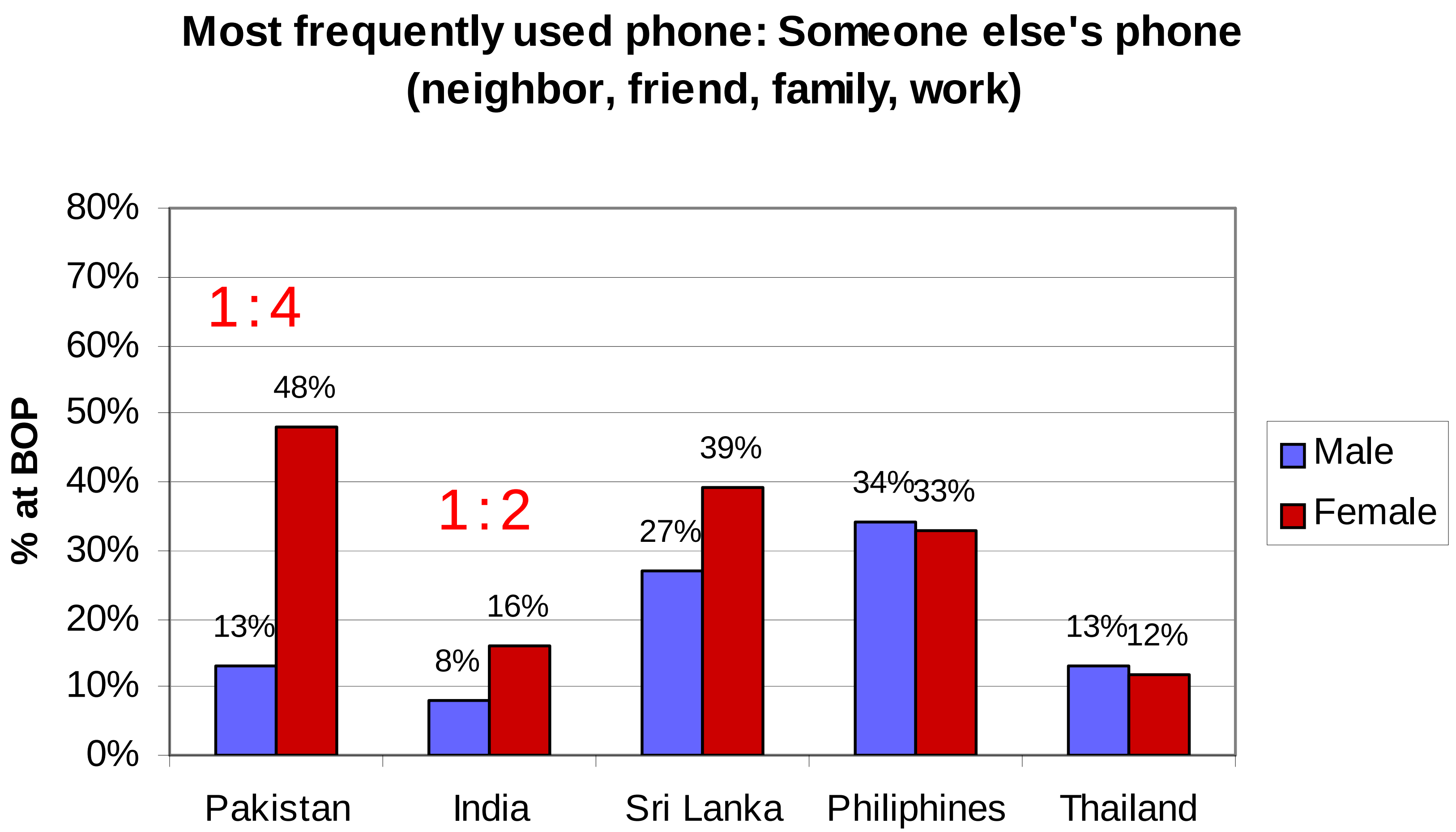
Urban-rural differences



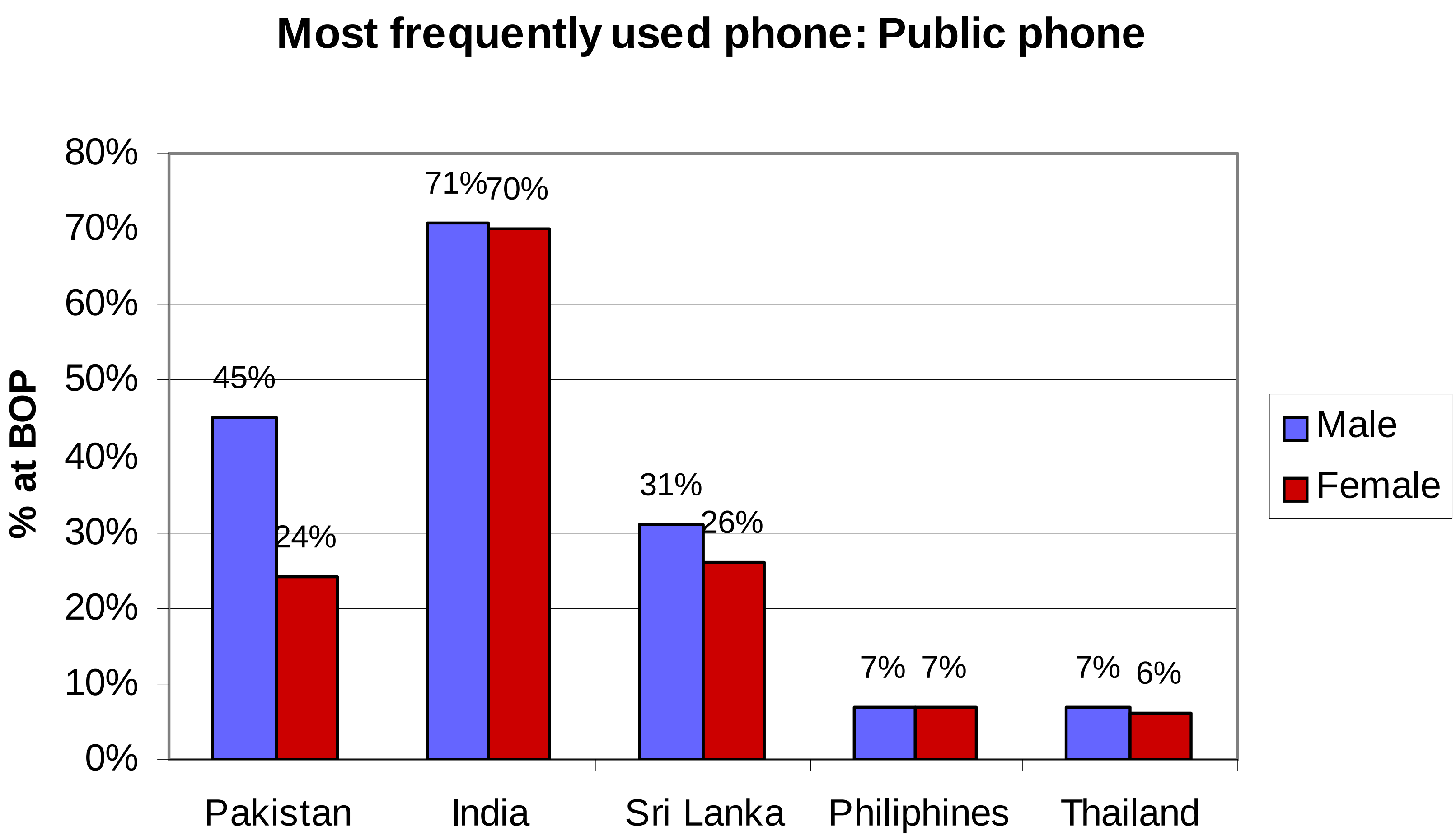
Mobiles used more often by males at BOP in South Asia



Females more reliant on others' phones at BOP in PK and IN



Public phones equally used by IN females and males at BOP



BOP is value-conscious and strategic

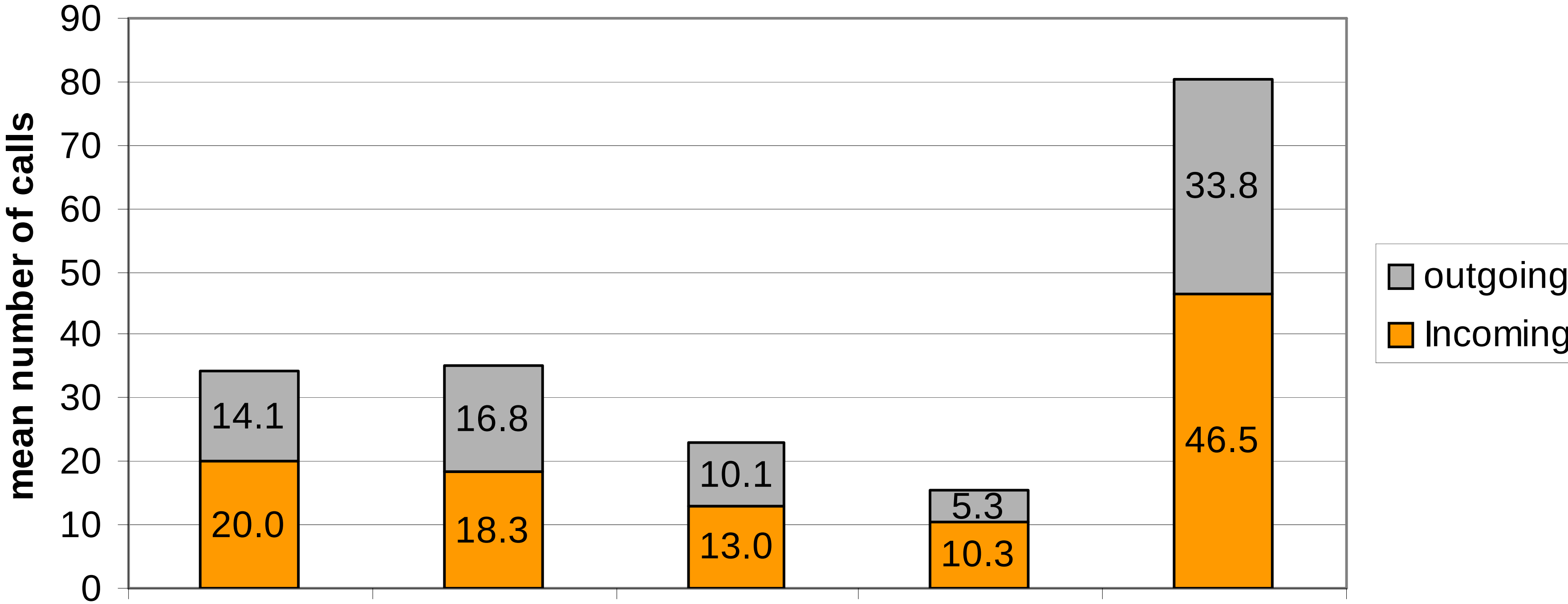
BOP is prepaid, *mobile*

	Pakistan	India	Sri Lanka	Philippines	Thailand
Pre Paid	99%	95%	92%	99%	96%
Post Paid	1%	4%	8%	1%	4%

To control expenditure; no monthly rental charge; lower basket cost in IN

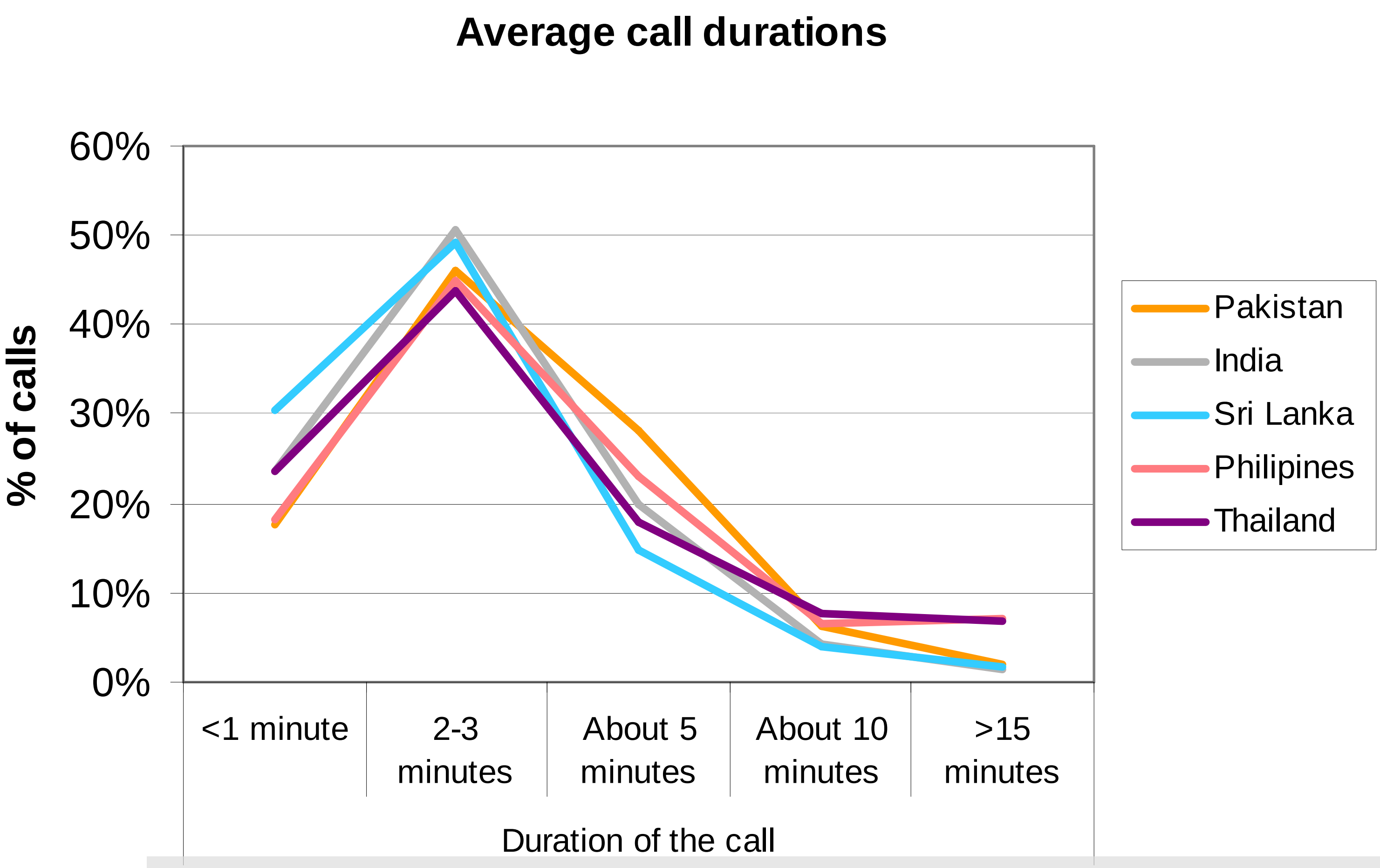
BOP makes/receives around 1 call per day in S Asia

Average number of calls (incoming + outgoing) for a month



	Pakistan	India	Sri Lanka	Philippines	Thailand
Average # of calls for **a month** (in+out)	34.2	35.1	23.2	15.6	80.3

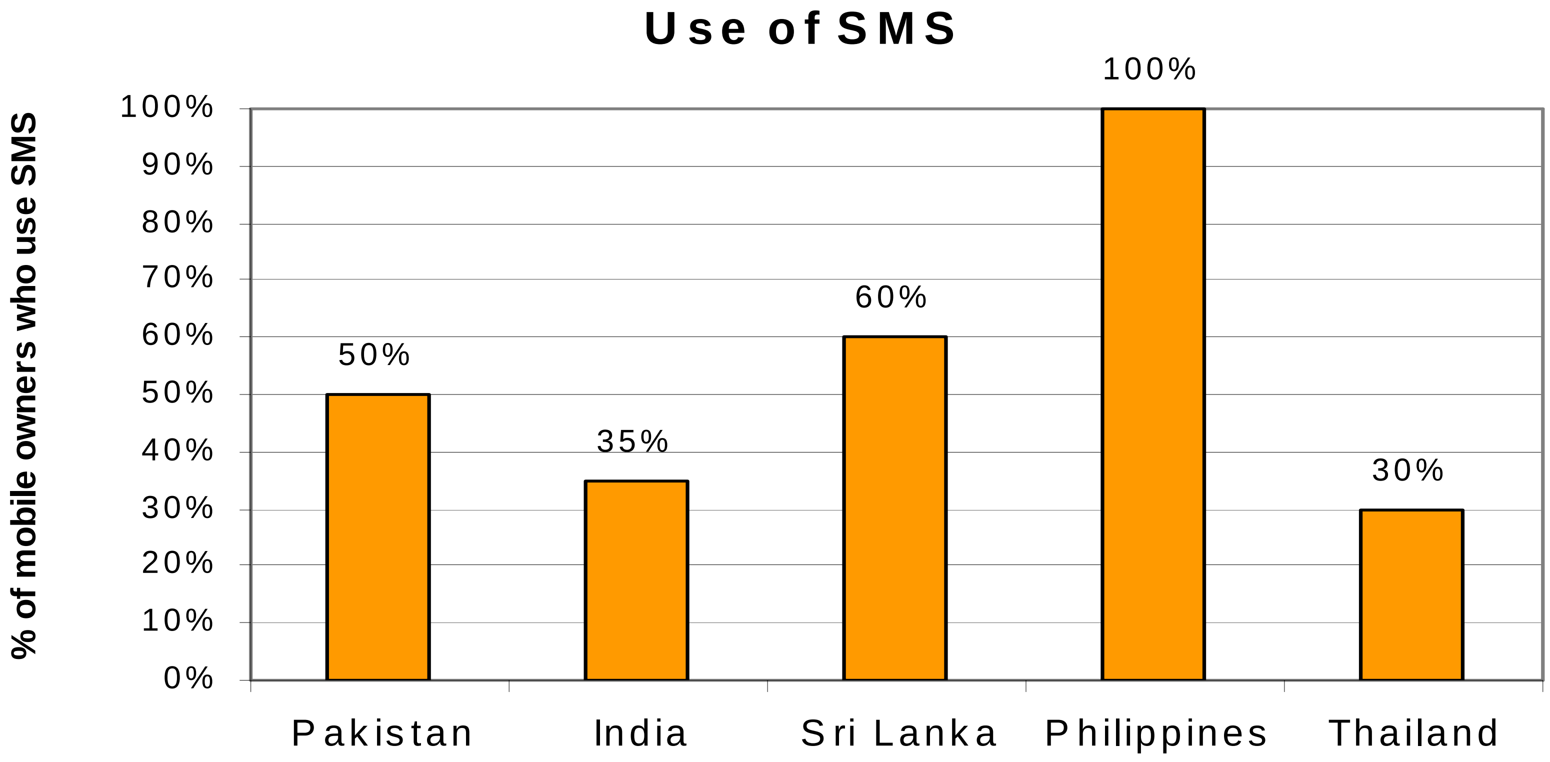
Calls are short



Calls are mostly local, and mostly to ‘keep in touch’

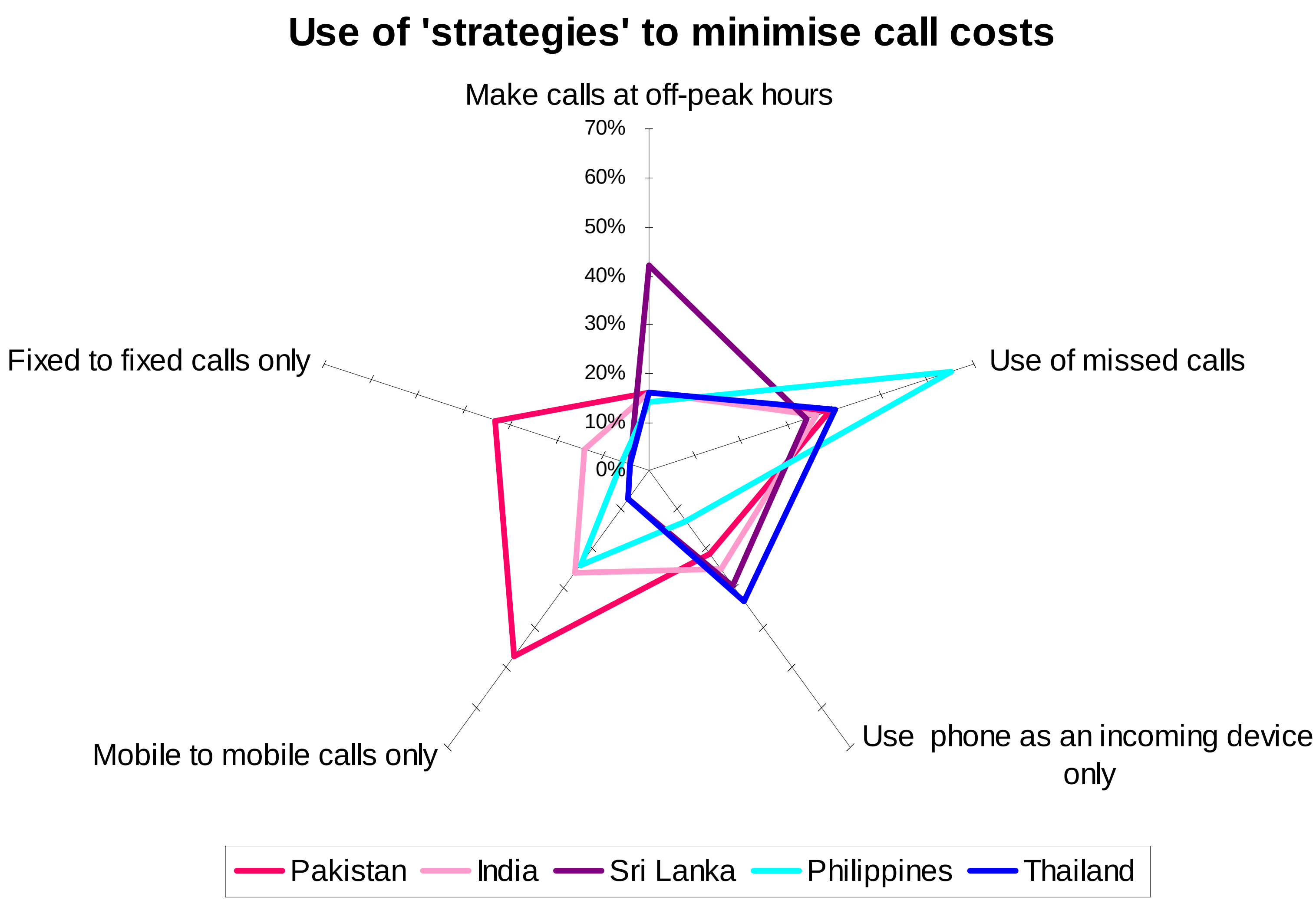
Source: Diary

‘Cost cutting’ via SMS, esp. in Philippines, but not India



	India	Sri Lanka	Philippines
	Bharti AirTel	*Dialog KIT*	*Smart TnT*
	USD	USD	USD
Charge per minute			
Outgoing on net	0.02	0.06	0.11
Outgoing off net / fixed	0.04	0.06	0.13
Charge per SMS	0.03	0.02	0.02
Ratio to SMS			
Outgoing on net	**0.7**	**3.5**	**5.5**
Outgoing off net / fixed	**1.3**	**3.5**	**6.5**

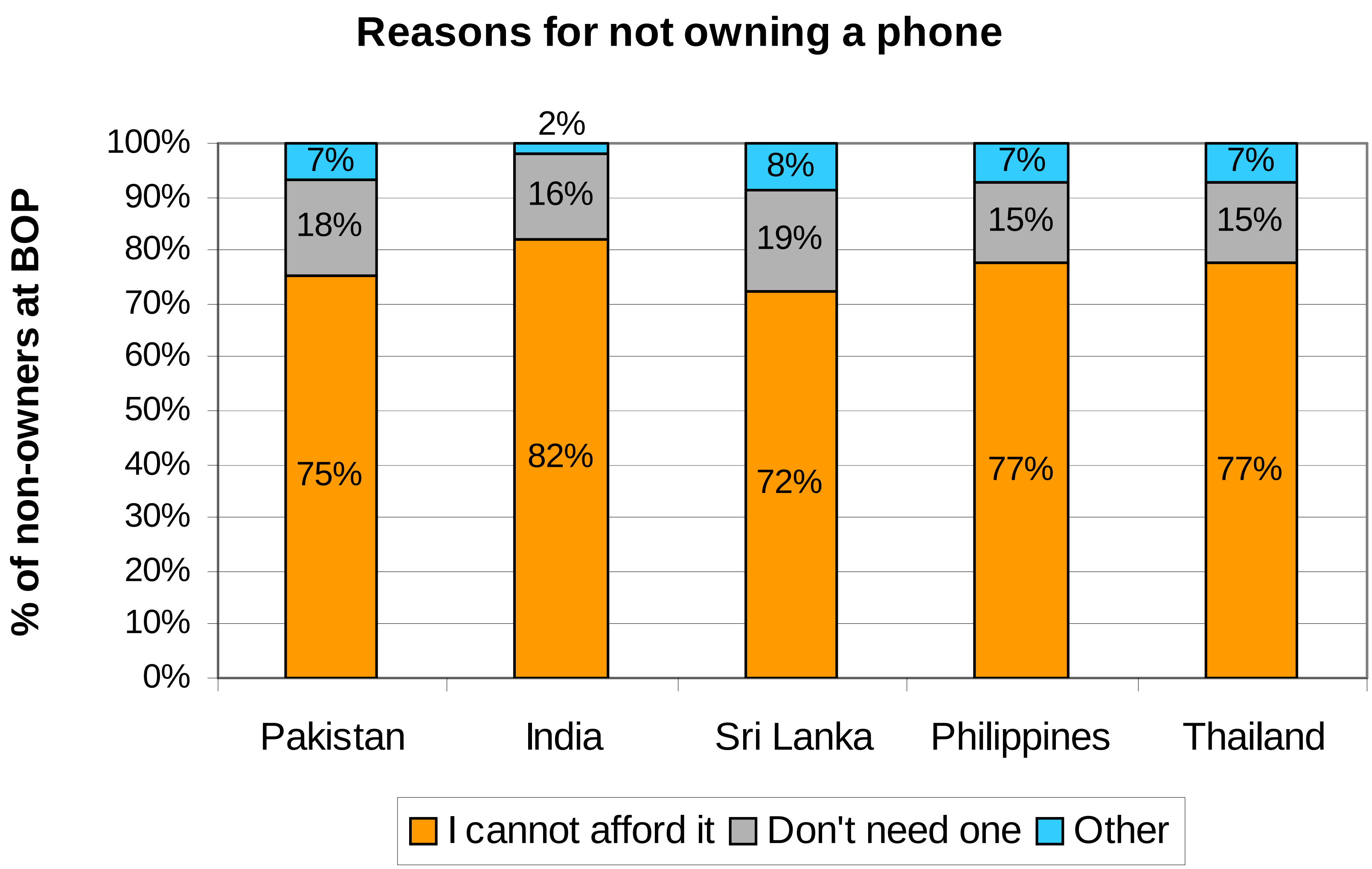
‘Cost cutting’ via missed calls, IN less than PH



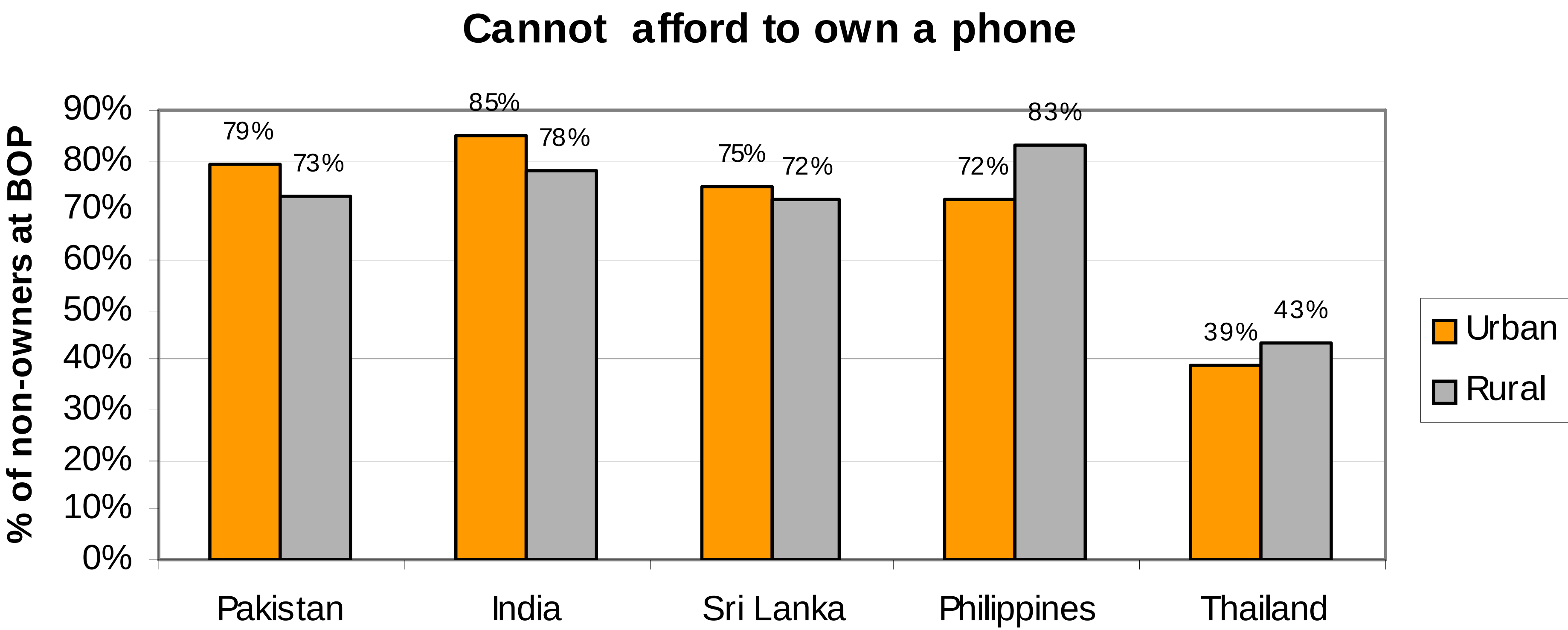
The unconnected

...the *next billion*

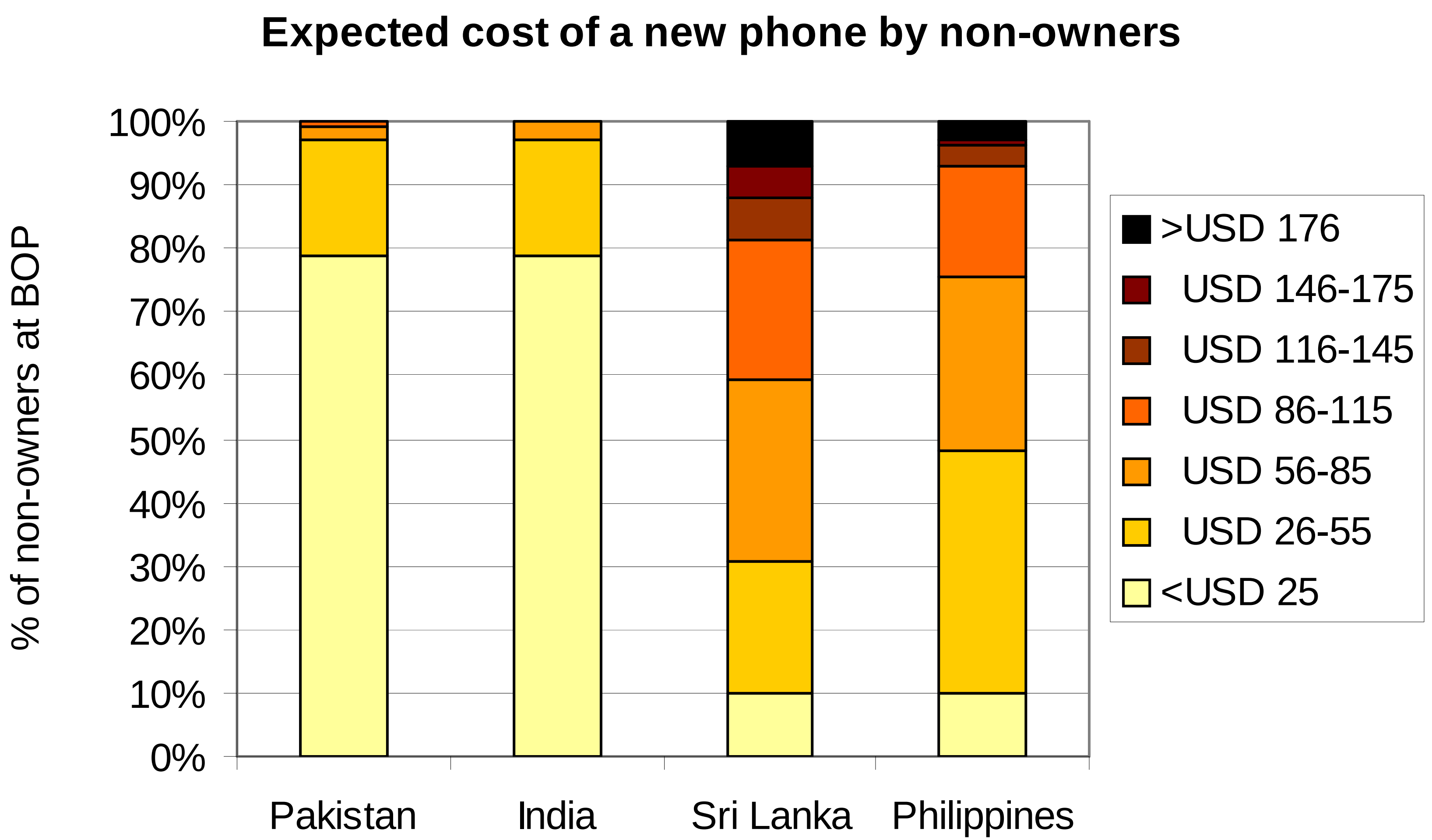
Key barrier to ownership is **affordability**



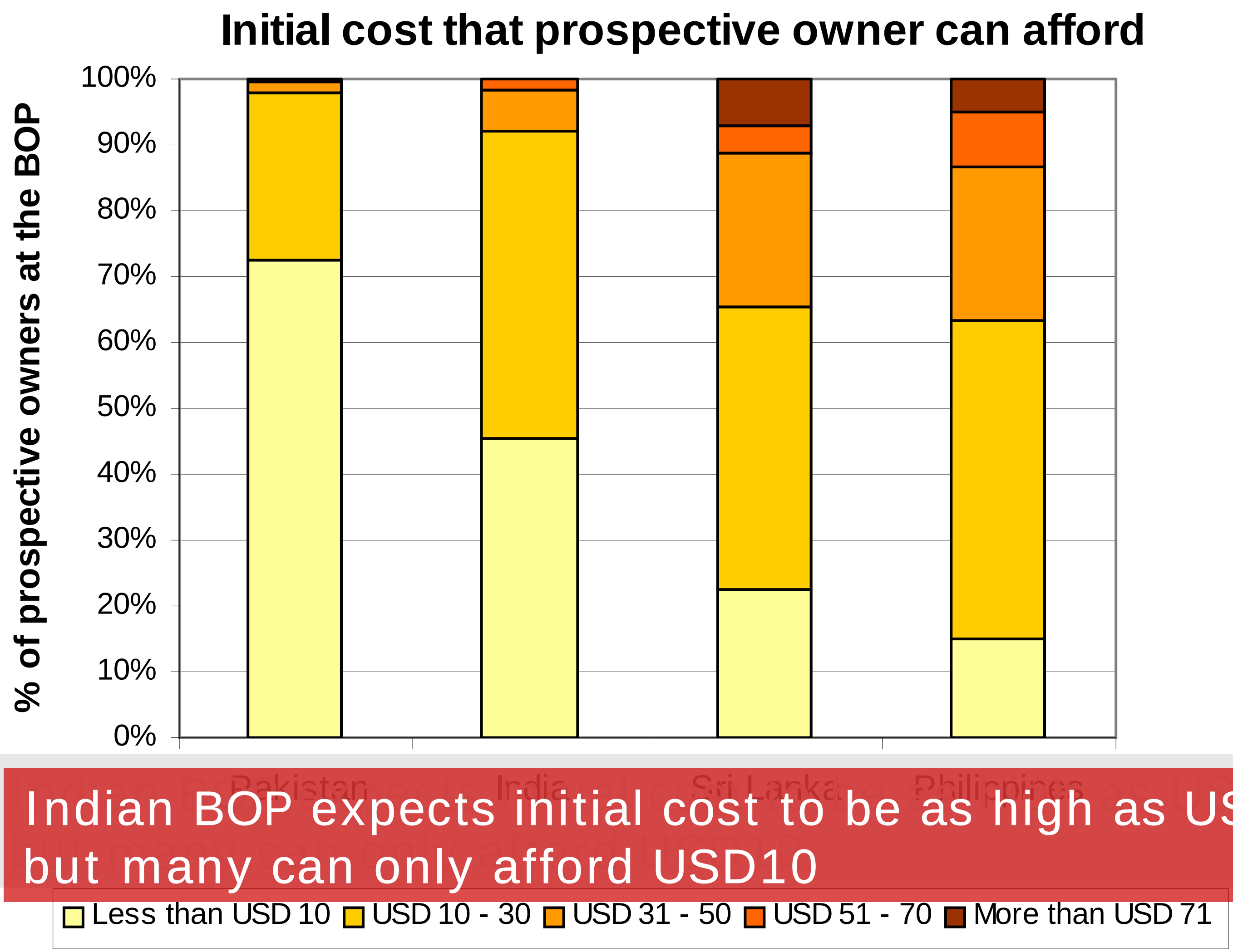
Affordability more of a problem in urban S Asia; need may be higher



The expected cost of getting connected...

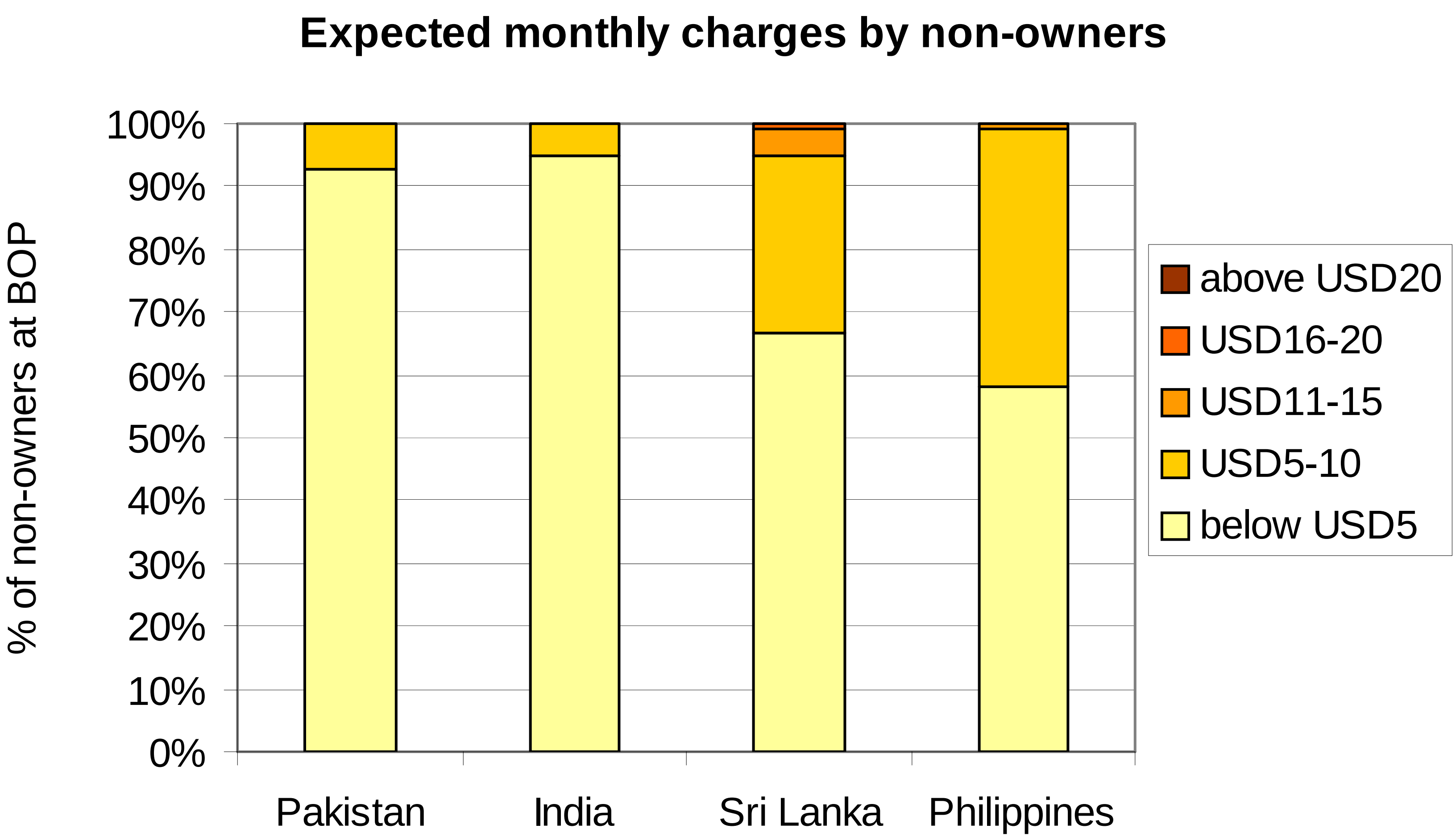


...compared to what can be afforded

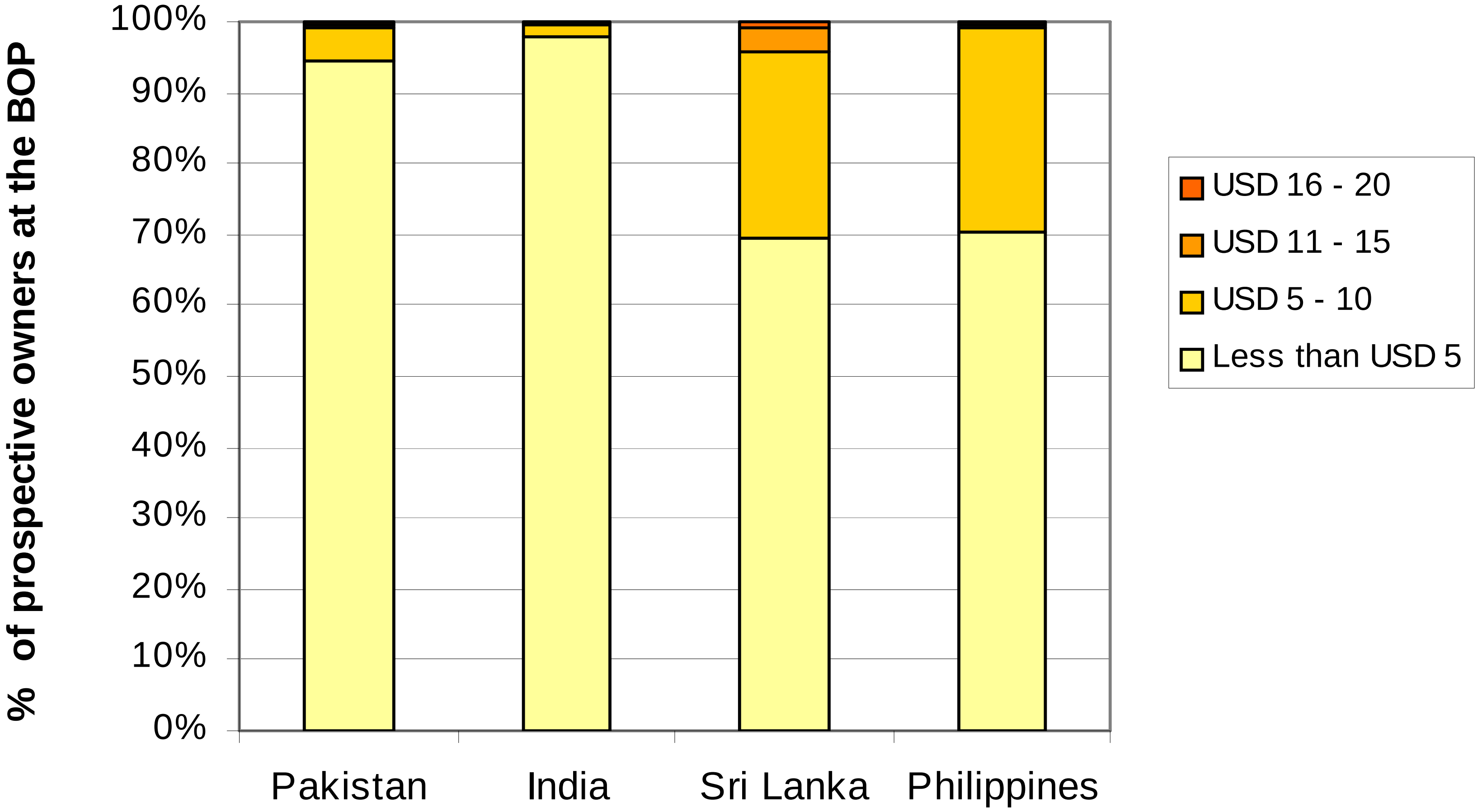


Indian BOP expects initial cost to be as high as USD25 but many can only afford USD10

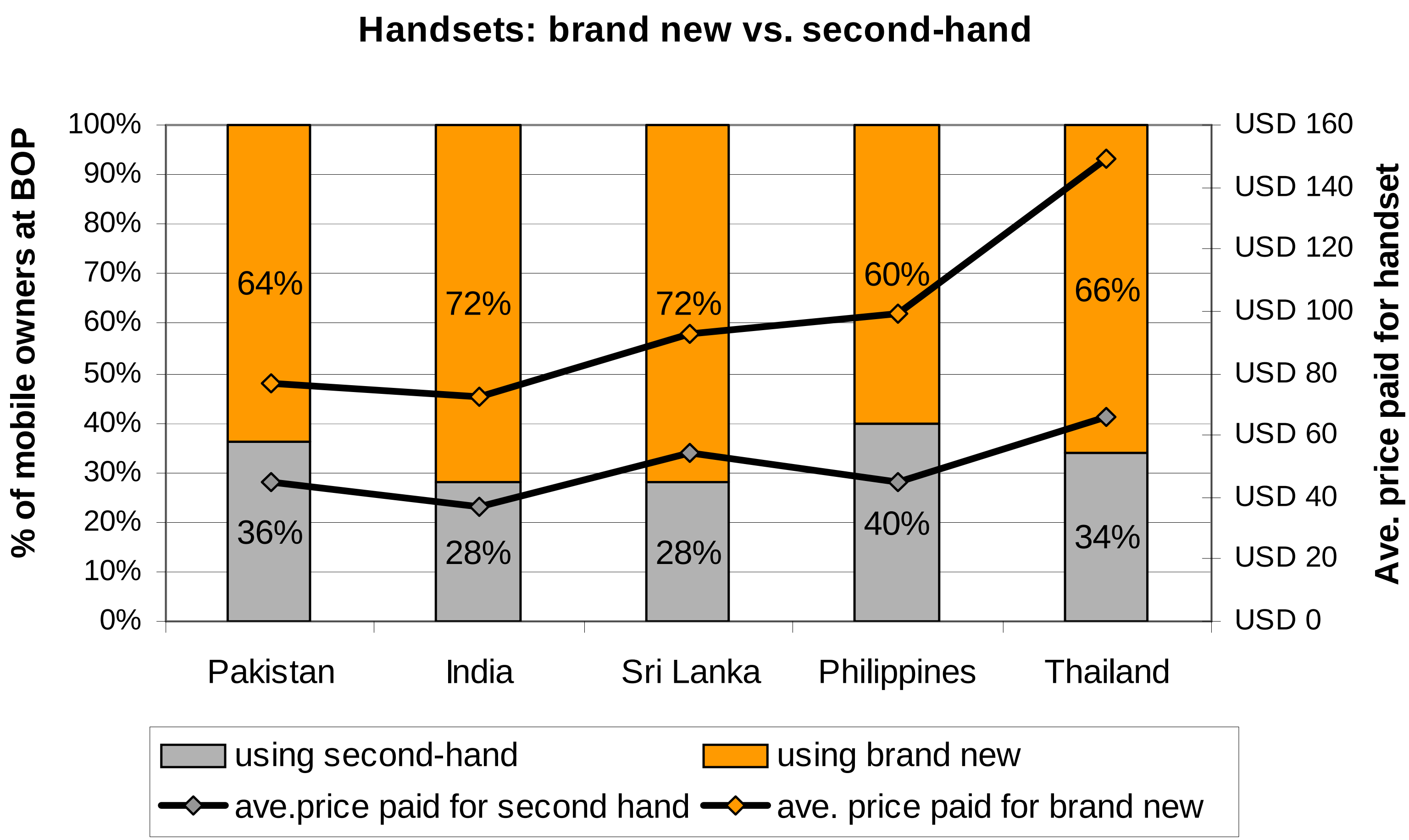
Expectations & affordability are more in-line re monthly charges



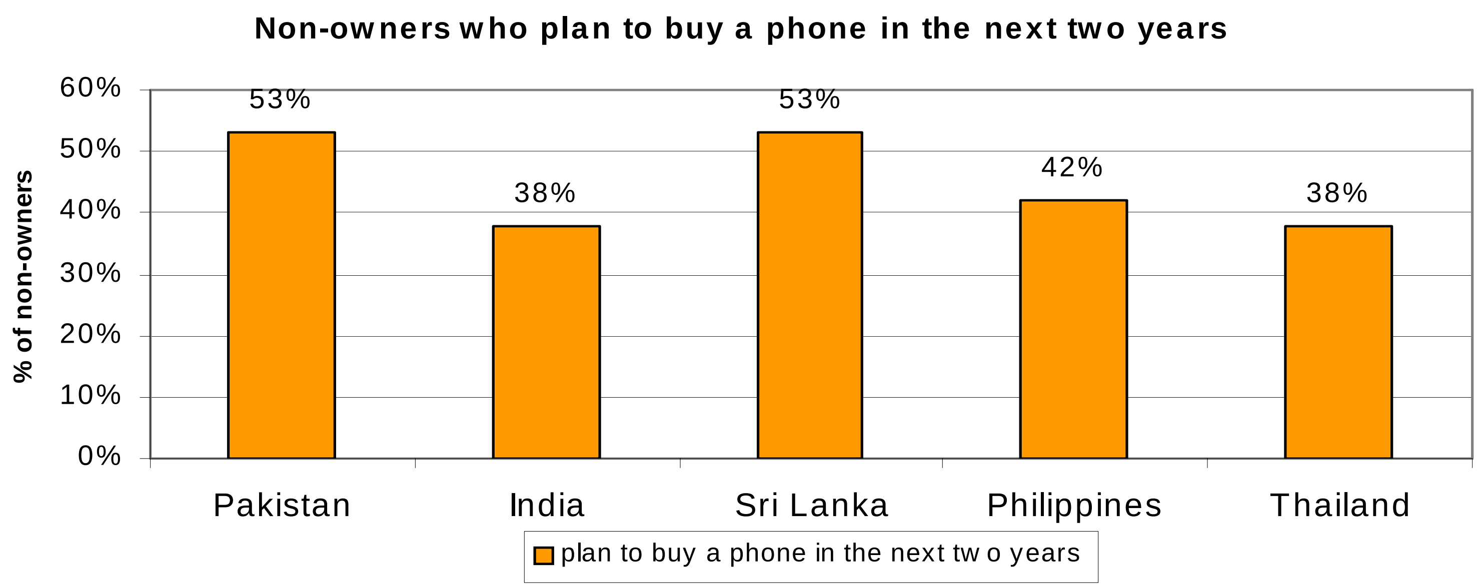
Monthly charges that prospective owners can afford



Second hand mobile handsets bought at half the price

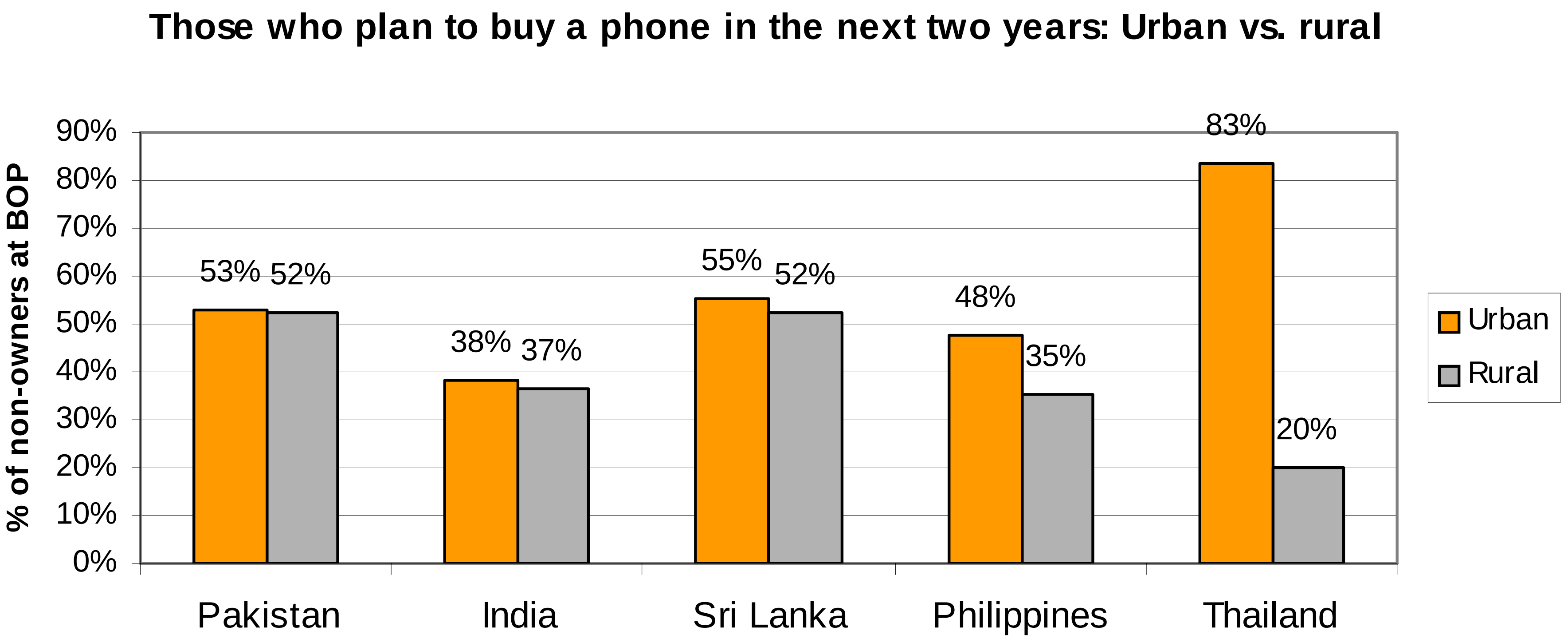


Adding up to the *next billion*?



	South Asia			South-east Asia	
	Pakistan	India	Sri Lanka	Philippines	Thailand
Vertical growth, millions (HH obtaining additional connections)	4	21	0.3	3	0.1
Horizontal growth, millions (non-owners joining market)	26	80	1	7	1
Possible new connections at BOP, millions, next 2 years	**30**	**101**	**1**	**10**	**1**

As many rural Indians plan to get connected as urban Indians



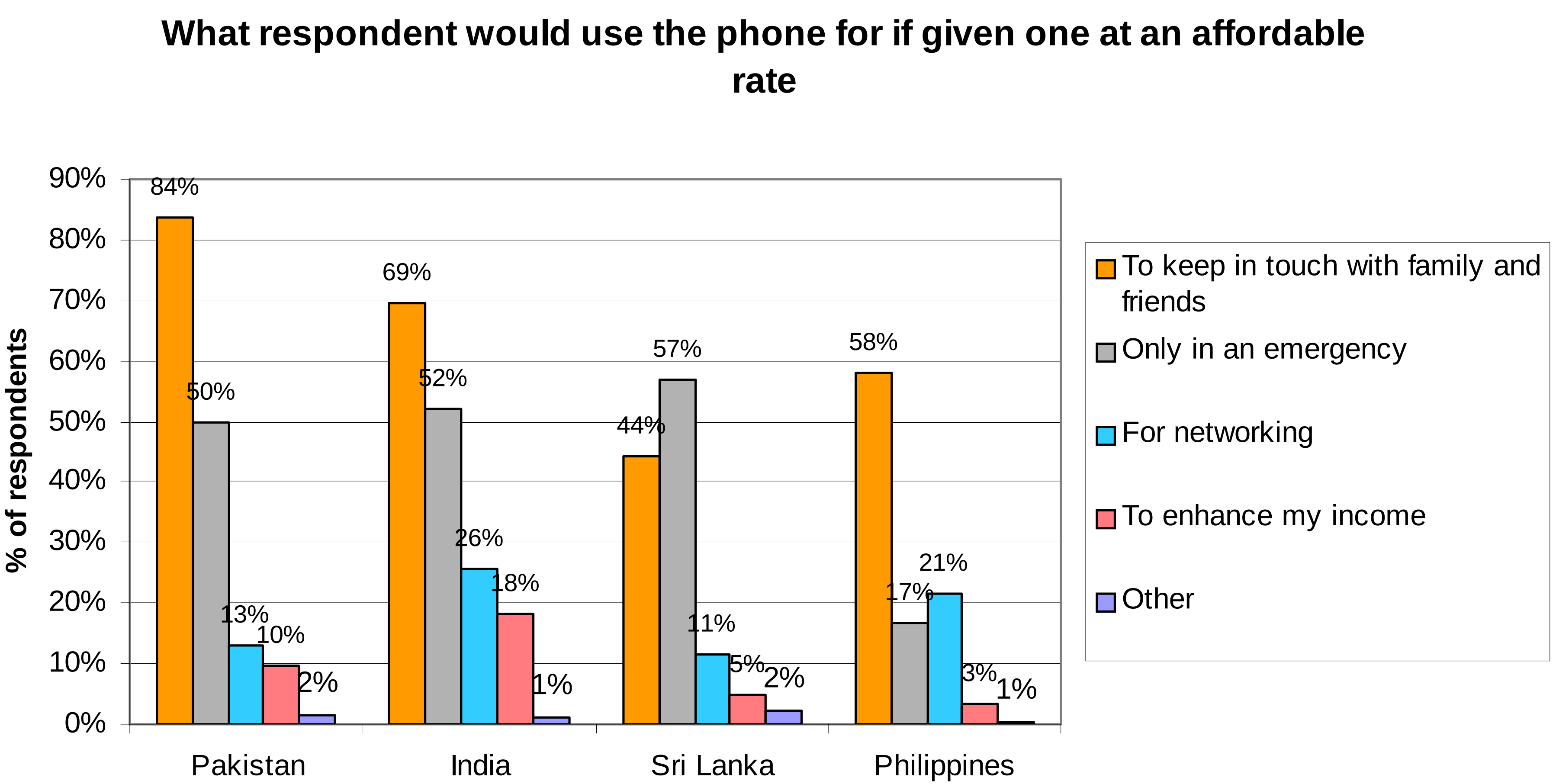
Prospective owners are heavier users

	Average number of calls (out + in) for the month	
	Planning to obtain phone	**Not** planning to obtain phone
Pakistan	21.6	16.3
India	40.0	31.6
Sri Lanka	15.0	8.7
Philippines	15.3	9.3
Thailand	30.4	35.8

Source: Diary

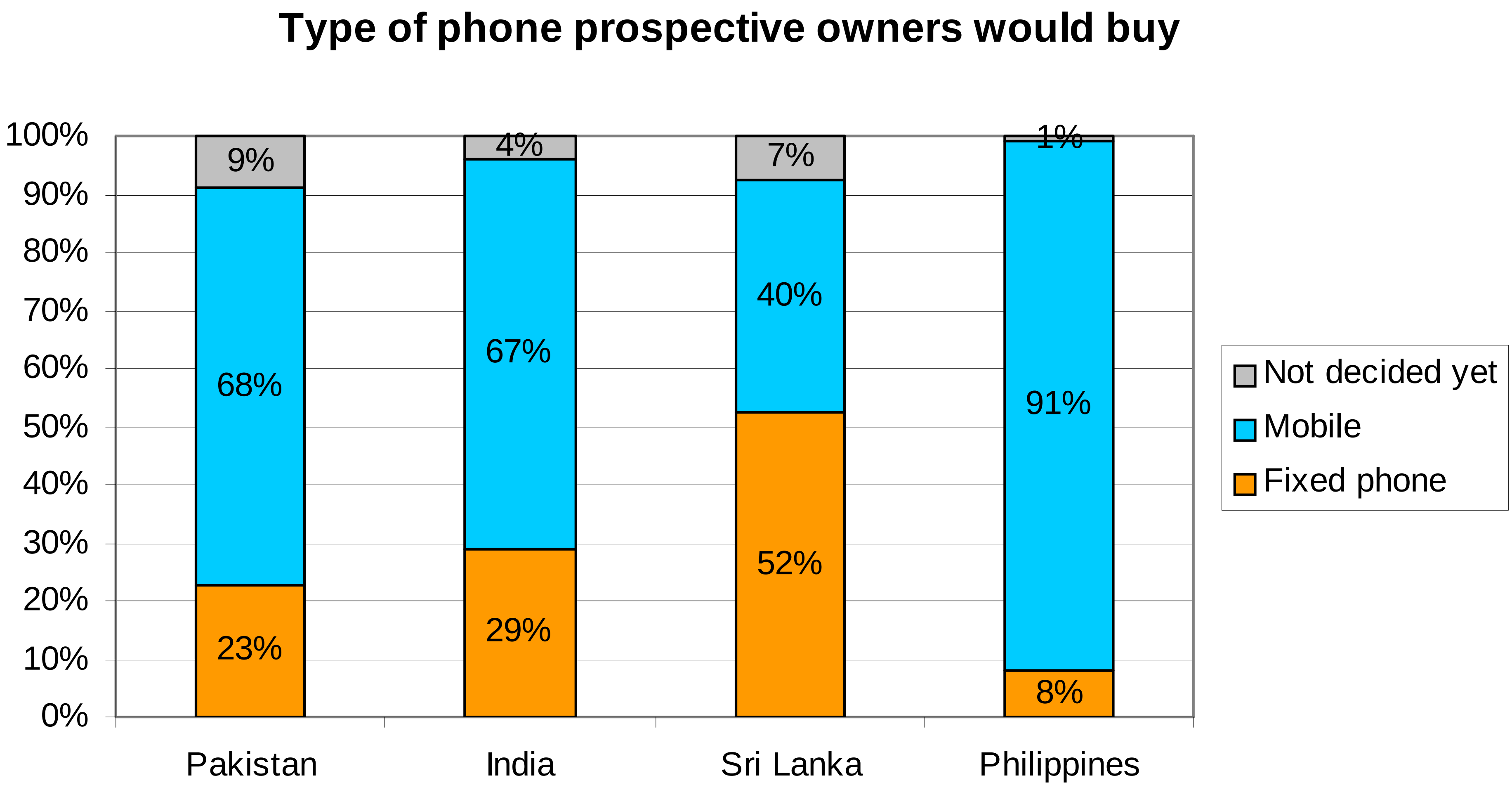
Except in Thailand

Most would use phone for keeping in touch & emergency communication

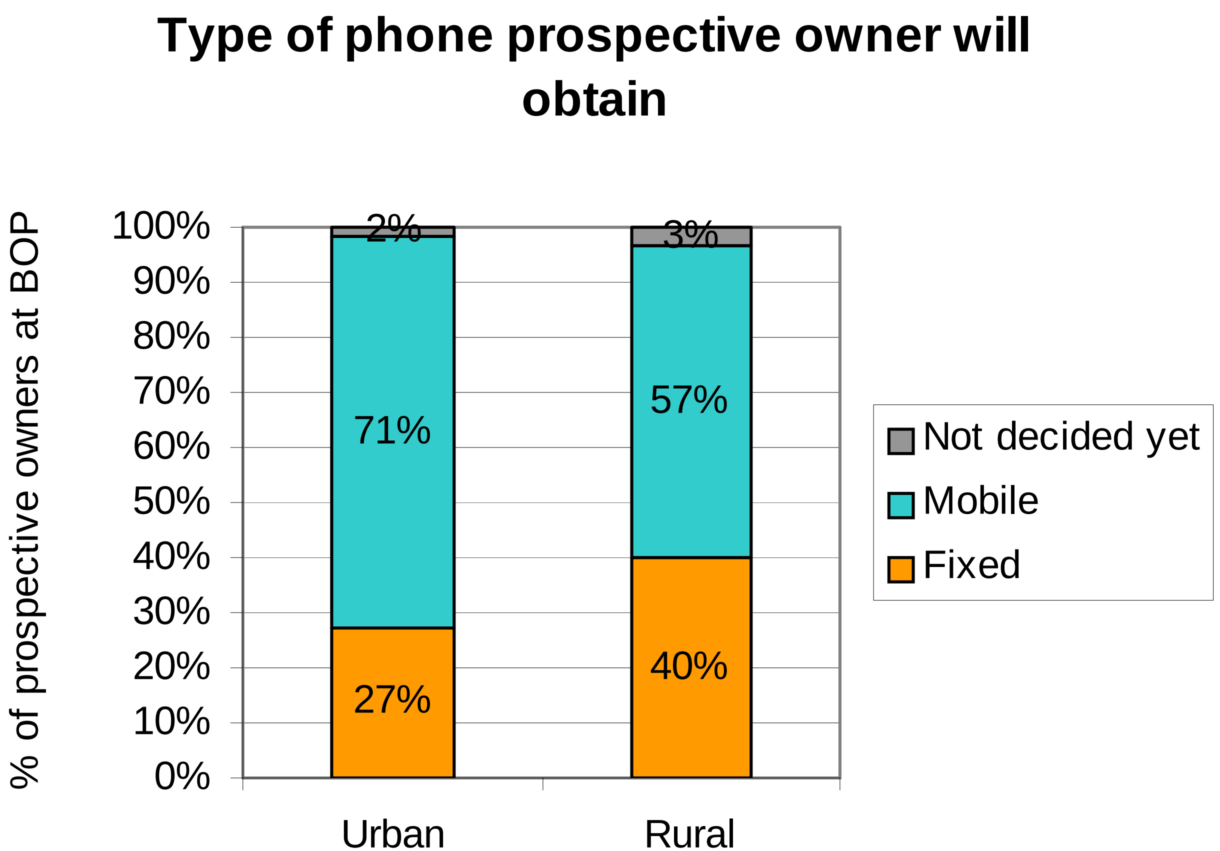


However Indian BOP state they would use it for increasing their network and enhancing their incomes

Growth mainly mobile



Affection for fixed higher in rural India . . .



Similar pattern seen in Pakistan, Sri Lanka and Thailand

What is to be done?

Mostly, **reduce entry costs** at the BOP

- Telecom operators
  - Leverage benefits of direct access: security, keeping in touch
  - Improve coverage
    - Infrastructure sharing is the right way to go
  - Solve the connection/use charge problem: installment plans?
  - Collaborate on meaningful content and applications for BOP
    - e.g., SMS-based remittances
- Handset manufacturers
  - Ultra low-cost phones with warranty
  - Affordable, functional handsets (e.g., with local language SMS capability)

Mostly, **reduce entry costs** for the BOP

- Policy makers/regulators
  - Sustain competitive conditions
    - India has lowest HHI concentration ratios
  - Improve regulatory environment on all fronts
    - Universal service and spectrum management seen as most problematic by stakeholders responding to TRE questionnaire
  - Encourage well-functioning second-hand market (e.g., Pakistan)
    - Exclude stolen sets by mandating equipment registration
  - Rethink tax regimes: move away from taxing handsets
  - Accelerate USO Fund disbursements and infrastructure sharing to increase rural coverage
  - India can show the world how to do it

In sum…

- BOP uses telecom, frugally but intelligently
- Many plan to get connected
- Industry as well as policy makers have roles to play

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