

Budget Telecom Network Model to drive broadband in South Asia

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Agenda

- South Asia's success in the mobile voice market
- What lessons for the “more-than-voice” markets/Internet?
- What are the appropriate policy and regulatory actions?

Success in the voice market: Evidence from Teleuse@BOP

- *Teleuse@BOP 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

2008 study: 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

2008 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

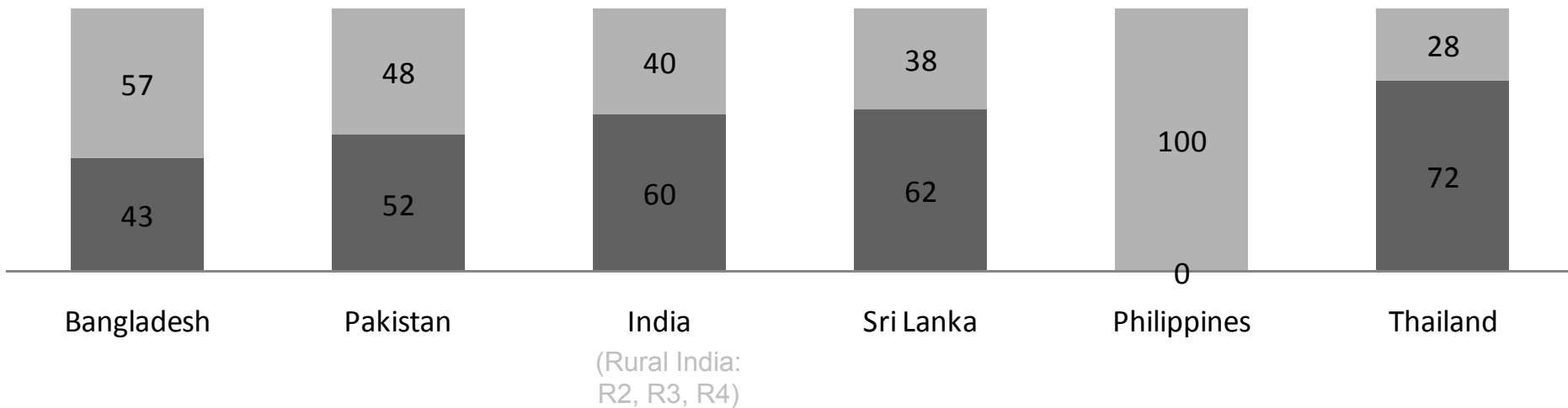
[4] Thailand: Excludes Bangkok as the SEC DE population in Bangkok is very small

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)

■ SECD ■ SECE



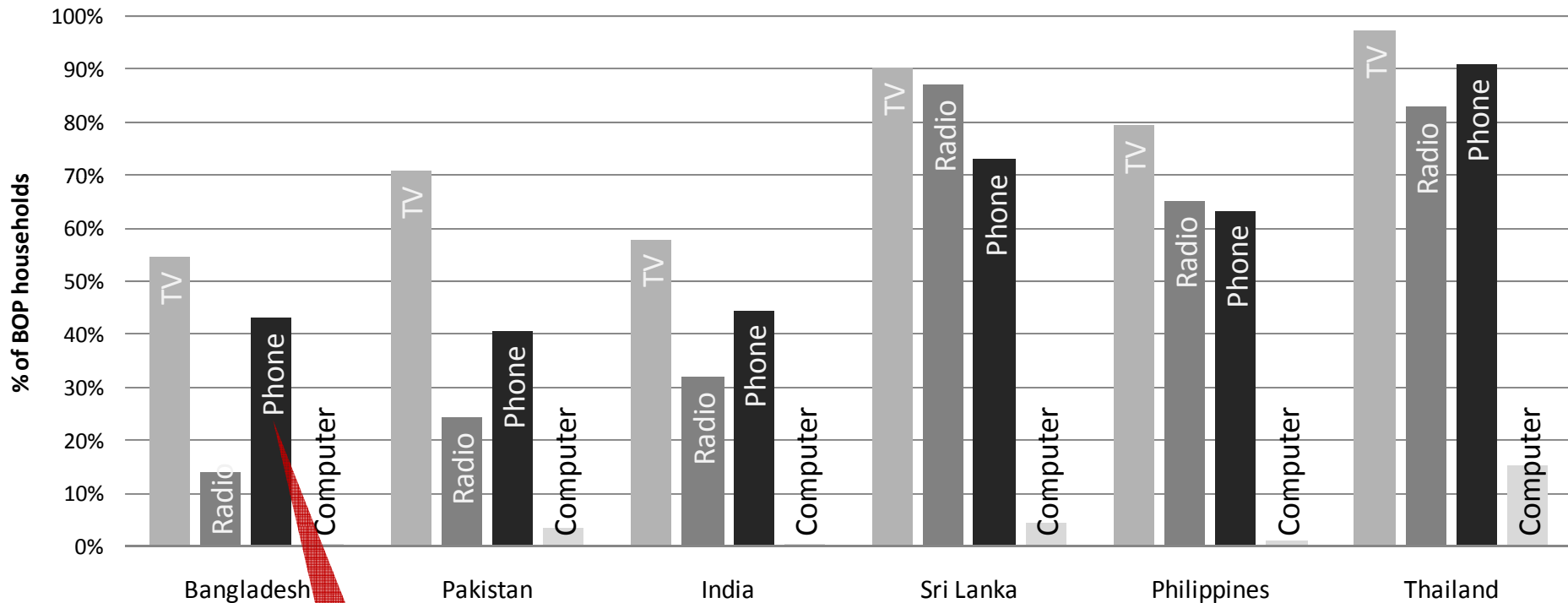
Link between SEC D+E and "\$2 per day" definition

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

More phones than radios in BOP households in BD, PK and IN

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



Mobile or fixed phone

Almost all in the BOP had used the phone

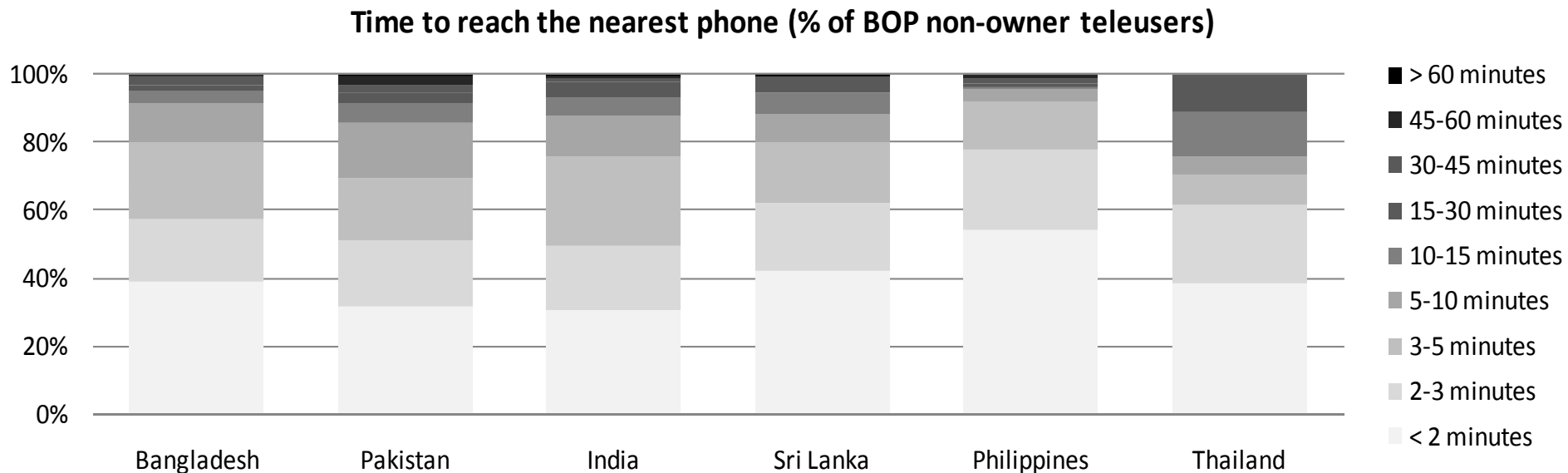
Used a phone in the last 3 months

	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% can get to a phone in under 5 minutes



Most non-owners walk to the nearest phone

Clearly, success has been achieved with mobile voice in South Asia

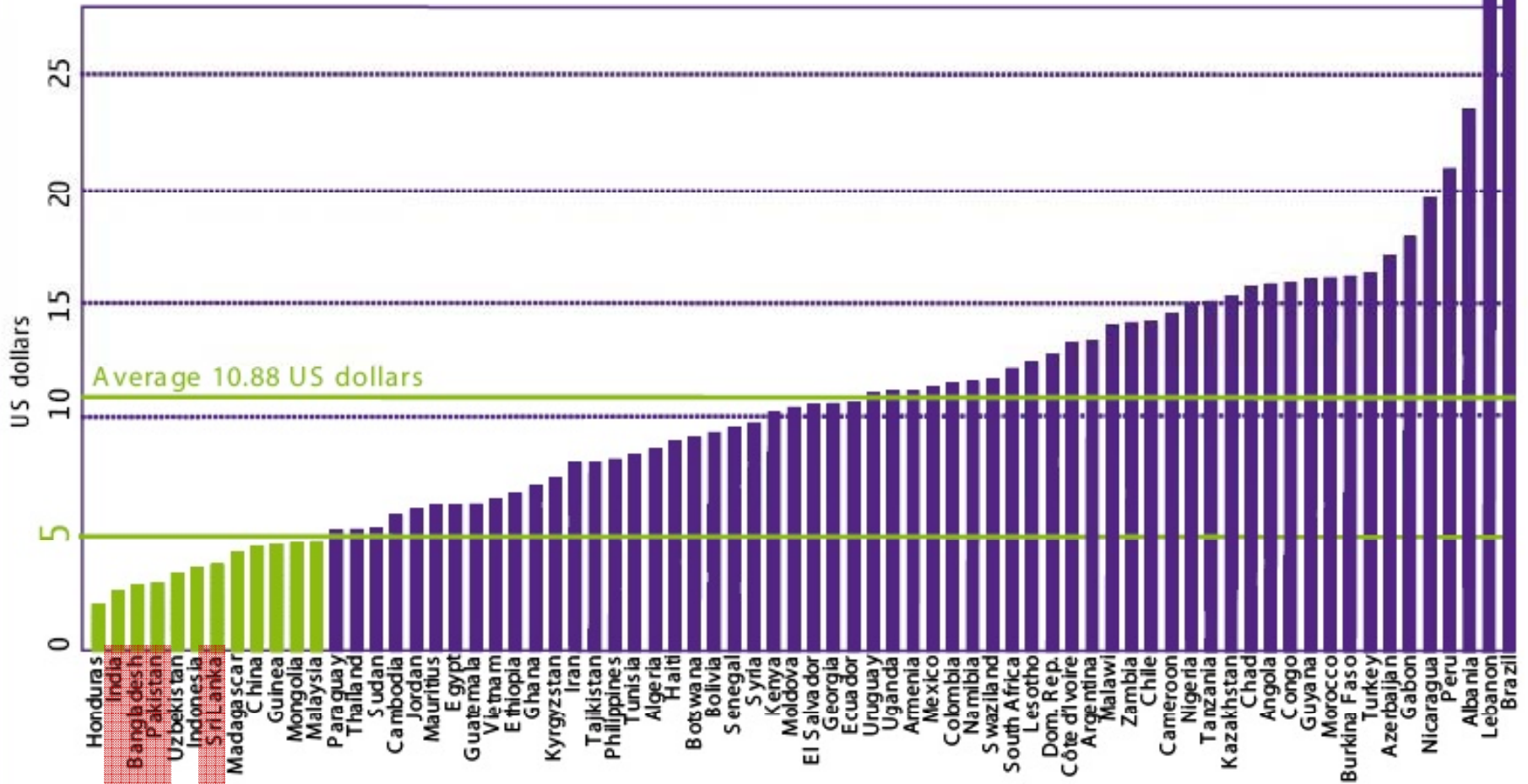
- How has this region which has a large concentration of poor people (world's largest is in the Indo-Gangetic Plain), achieved this?
- How has this been achieved? Despite or because of policy and regulatory actions?
- How can the lessons be applied to Internet access?

How were this many poor people connected electronically?

- “Budget Telecom Network Model” that allowed South Asian telcos since 2005-06 to make excellent (if volatile) returns by serving “long-tail” markets of poor people by
 - Dramatically reducing transaction costs primarily through prepaid
 - Allowing poor people to pay for services when they need it and when they have money (as opposed to fixed monthly payments)
 - Controlling operating expenses through business-process innovation
 - Focusing on revenue-yielding minutes rather than ARPUs
- Akin to Budget Airline Model that allows RyanAir to make profits while Alitalia flounders
- Downsides
 - Patchy quality of service for consumers
 - Volatile returns; increased risks for suppliers

Total cost of mobile ownership in 77 emerging economies

Monthly TCO by country



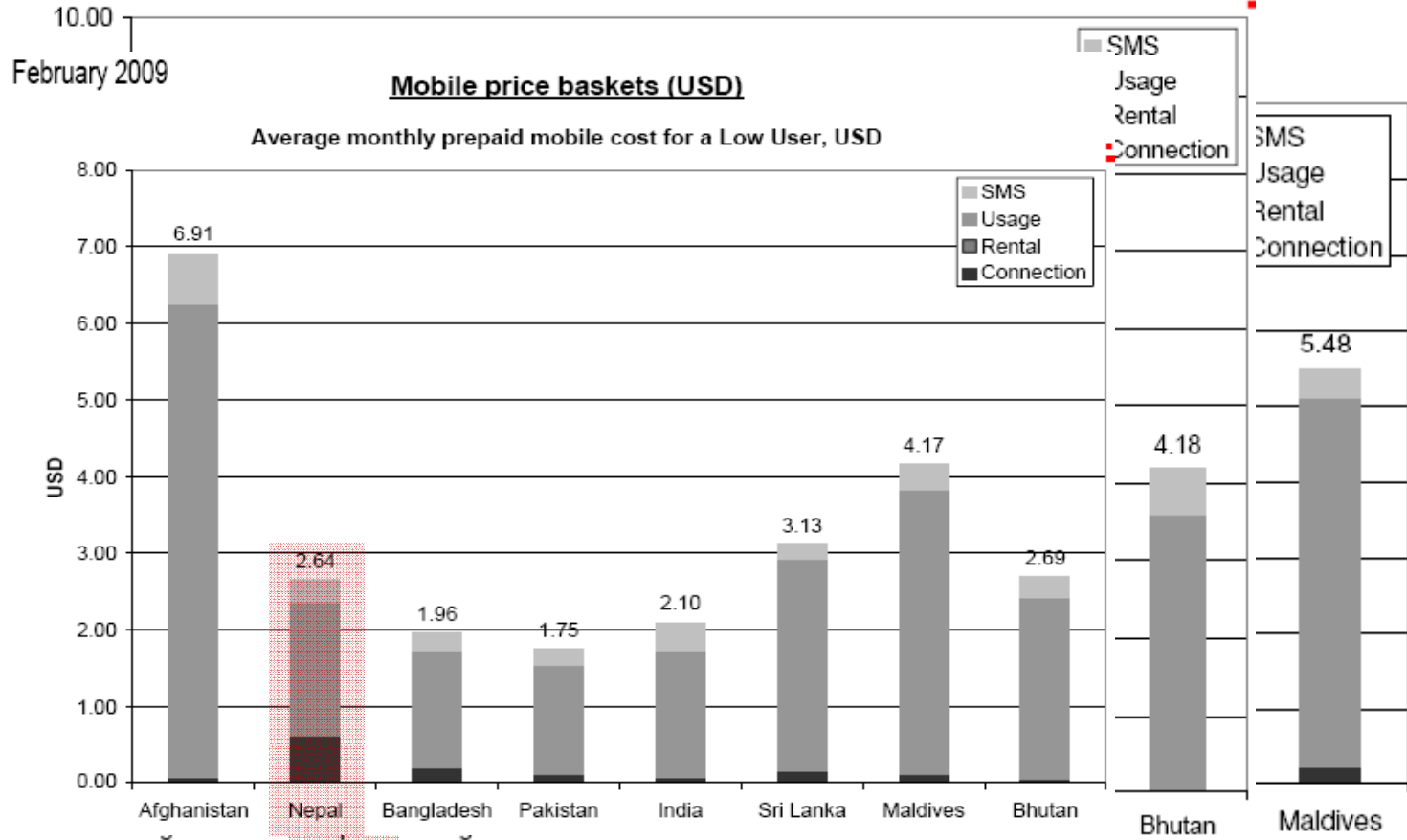
Competition as the necessary condition

- Despite being similar to Bangladesh, India, Pakistan and Sri Lanka, Nepal had high prices until 2009
 - Backdoor entry to mobile space by “fixed” CDMA operators was the explanation for prices dropping in 2009

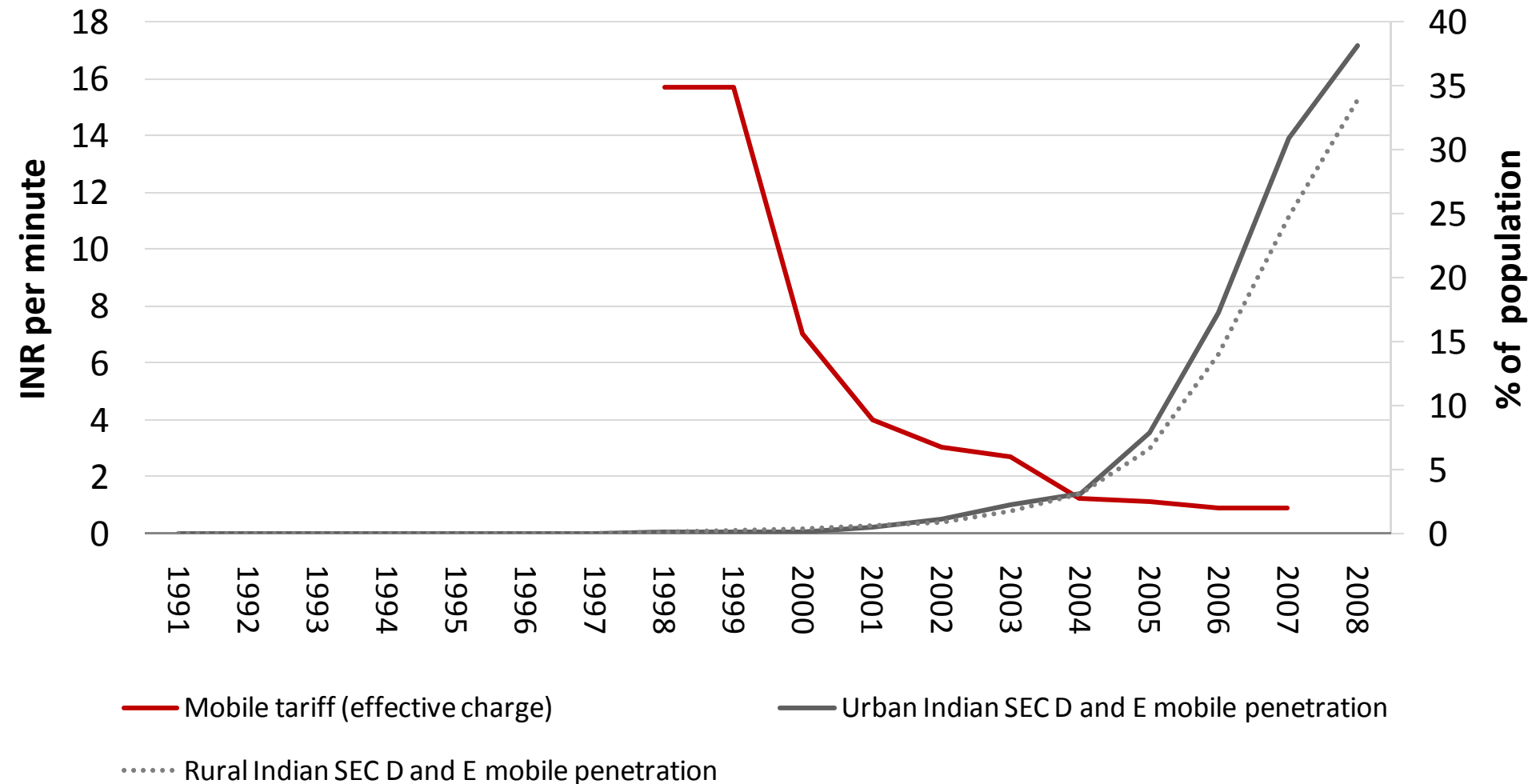
October 2008

Mobile price baskets (USD)

Average monthly prepaid mobile cost for a Low User



Low prices → greater participation by the poor (urban and rural)



What is the Internet?

A woman with dark hair, wearing a black sleeveless top, is sitting at a desk and typing on a white keyboard. She is looking at a large, silver computer monitor. The monitor displays a blue screen with some text and graphics. A black mouse is on the desk in front of her. The background is a plain, light-colored wall.

Is it this? And this only?

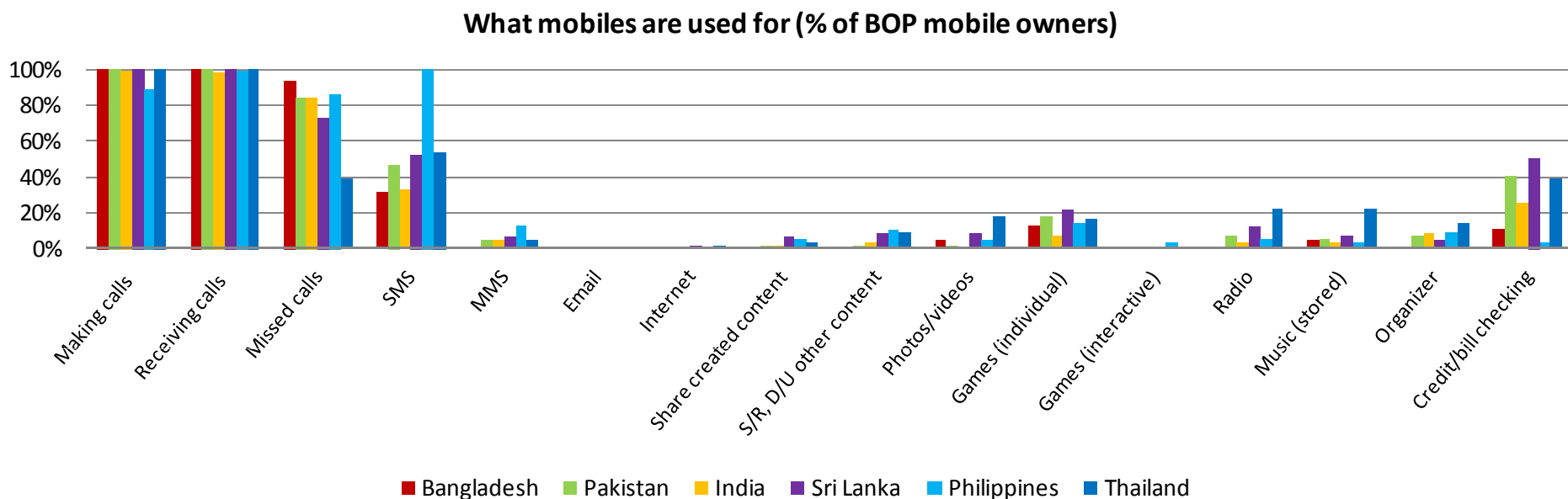
Or is it a metamedium that allows one to engage in

- Communication in multiple forms, synchronous/asynchronous, one-to-one/one-to-many, etc.
- Information retrieval
- Publication
- Transactions (including payments), and
- Remote computing??

And does using **some** of these functions over distance, using electronic means, constitute participation in the Internet Economy?

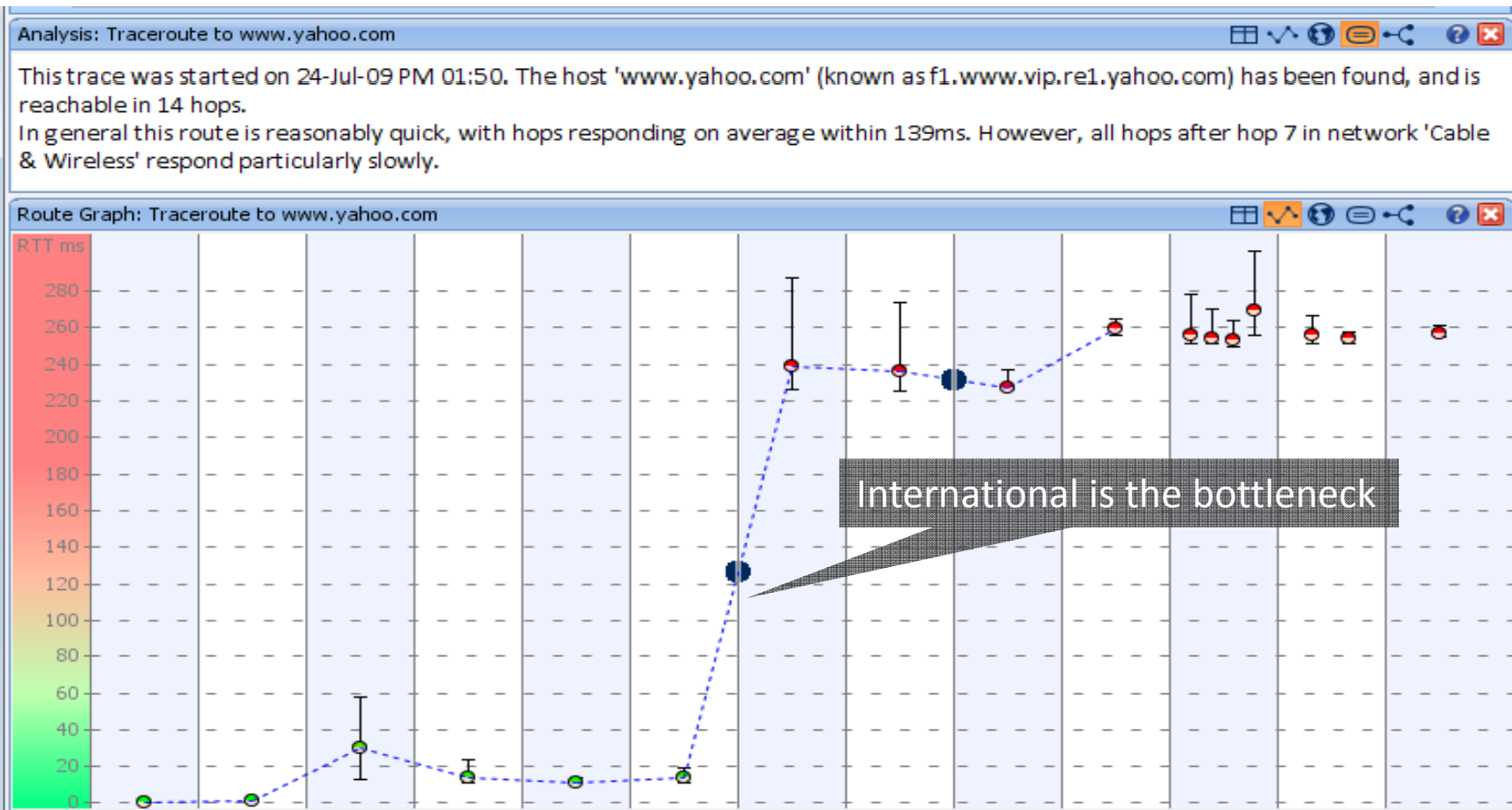
Poor are participating

- If the answer is yes, millions of poor people in the Indo-Gangetic Plain are already participating in the Internet Economy through the mobile phone
 - Inchoate, but understandable as services are just beginning to be offered & business models are being worked out



What lessons for broadband?

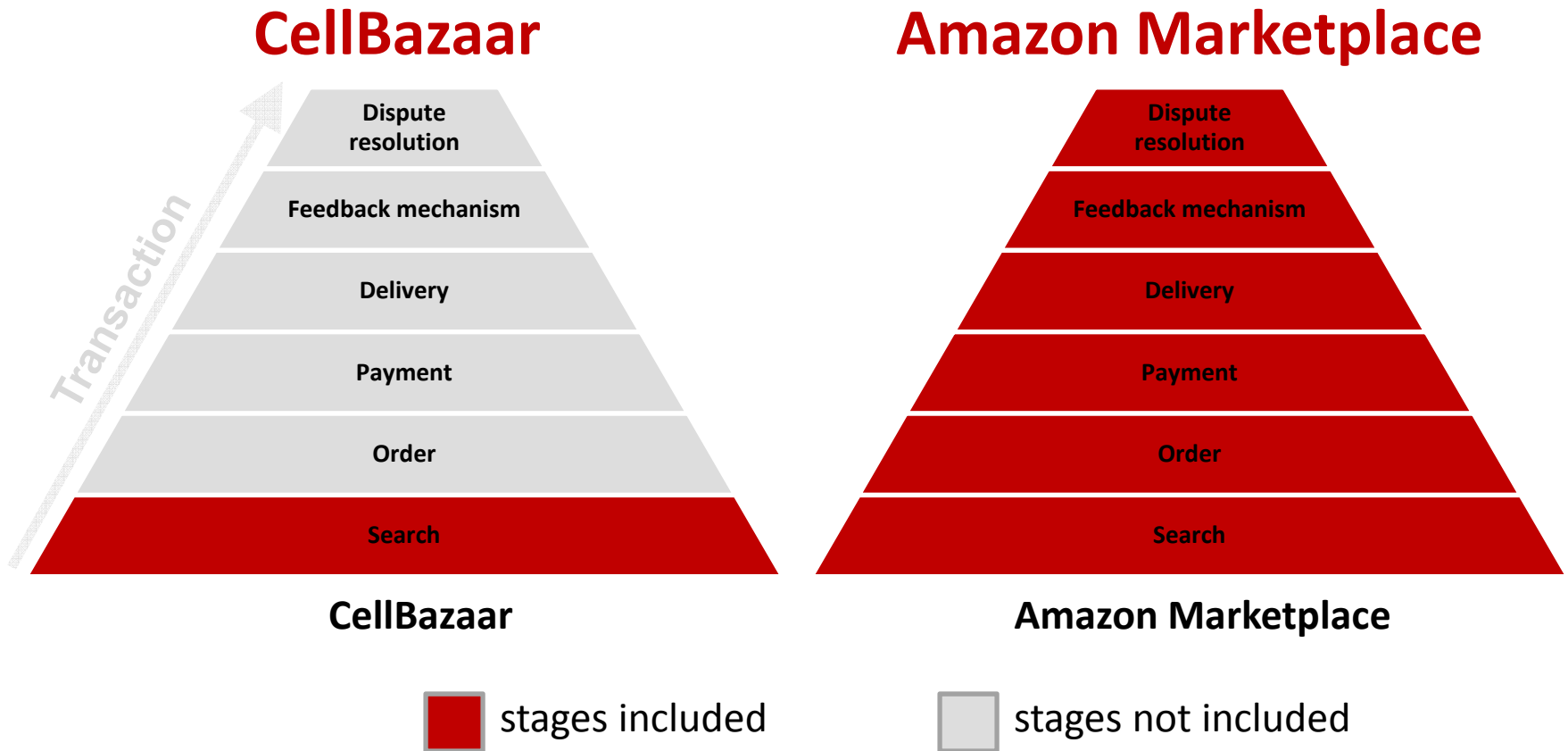
- Lower prices require lower costs
 - Reduce international backhaul costs



Prepaid sachet pricing for broadband

- Same as with voice, poor people need to be able to pay when the need arises and when money becomes available
- Broadband use in HSPA+ networks, where the relation between the base station and users is in any case not fixed is conducive to this form of pricing
- Of course, sachet pricing can include “buckets” of minutes, MB, etc., and need not be seen as a taxi meter

And of course, new services/applications must be available . . .



- Today CellBazaar can only do search; if payment policy firmed up they can move up

Mobile applications may be better . . .



Maharashtran sugar farmer getting farm prices while in tractor, as part of Warana Unwired, a successor to Warana Wired

What role for policy and regulation?

- Restating the key point made by Levy and Spiller in 1994: solutions must fit the institutional conditions
- Institutional conditions include the operative business model → policy and regulation must support and leverage the business model, not work at cross purposes
- The question then is what can policy and regulation do to leverage the “Budget Telecom Network Model”?

Policy & regulation to leverage BTNM for public objectives

- Market entry and spectrum management, including refarming, have to be given highest priority
- More emphasis on wholesale access to fat pipes than on termination rates per se
- Competition issues, especially vertical price squeeze, become more important
- Old style price regulation to be replaced by forms of forbearance, if necessary bounded to address competition concerns
- Gentle on Quality of Service (QOS) regulation
- Phase out universal-service levies

Telecom Policy & Regulatory Environment in S & SE Asia

	BD	IN	ID	MV	PH	LK	TH	PK
Market entry	3.1	3.1	3.0	3.8	3.2	2.8	2.7	3.9
Access to resources	2.8	2.2	2.7	3.6	2.8	2.7	2.6	3.6
Interconnection	3.3	2.8	2.7	3.5	2.8	2.6	2.6	3.7
Tariff regulation	3.5	3.9	2.6	3.4	2.8	2.7	2.9	3.2
Anti-competitive practices	3.1	2.7	2.5	3.1	2.5	2.7	2.6	2.8
Universal service obligations	2.4	3.1	2.1	3.5	2.6	3.0	2.6	3.2
Quality of service	3.2	2.8	2.3	3.8	3.1	2.9	3.1	3.2

TRE conclusions

- Above-the-mid-point scores are in red
 - Market entry is where most countries are doing well, followed by QOS and tariff regulation
- Inter-country comparisons are problematic, but it is troubling that only PK has good scores on scarce resources
 - Spectrum is a serious problem in all countries

Key lessons

- Allow enough suppliers in to trigger the BTNM
- Make sure the inputs are available, primarily spectrum
- Create the conditions for BTNM by giving flexibility on tariff and QOS regulation
- Put more resources into regulating anti-competitive practices and wholesale access to fat pipes and cable stations
- Reduce taxes and levies, including universal service levies

Key lessons

- Old truth still applies: solutions must fit the circumstances, including the prevalent business model
- Leverage the BTNM to achieve public-policy objectives
- Better results from leveraging rather than working at cross purposes to the model