

# How the developing world may participate in the global "Internet Economy"

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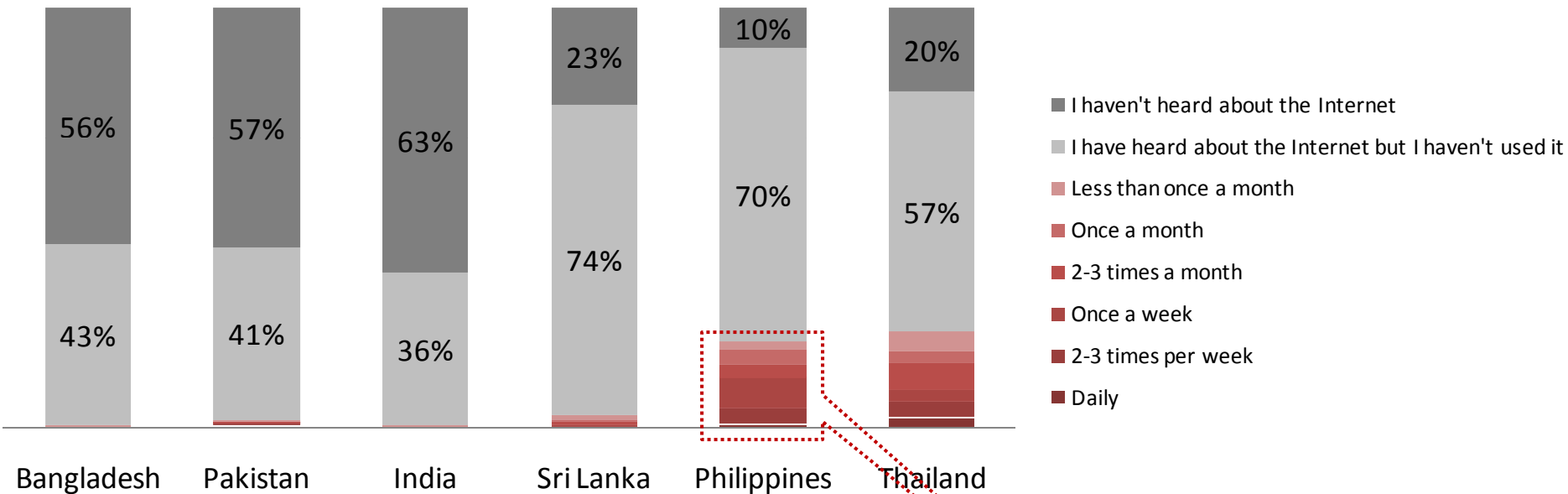
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# The problem

# After all these years: Internet use & awareness among the poor in Indo-Gangetic Plain in 2008, acc. to large-sample survey

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%

# What is the Internet?

A woman with dark hair, wearing a black sleeveless top, is sitting at a desk and looking at a computer monitor. She is typing on a white keyboard. The monitor displays a blue screen with some text. 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?**

# Alternatively, is the Internet a metamedium that allows one to engage in . . .

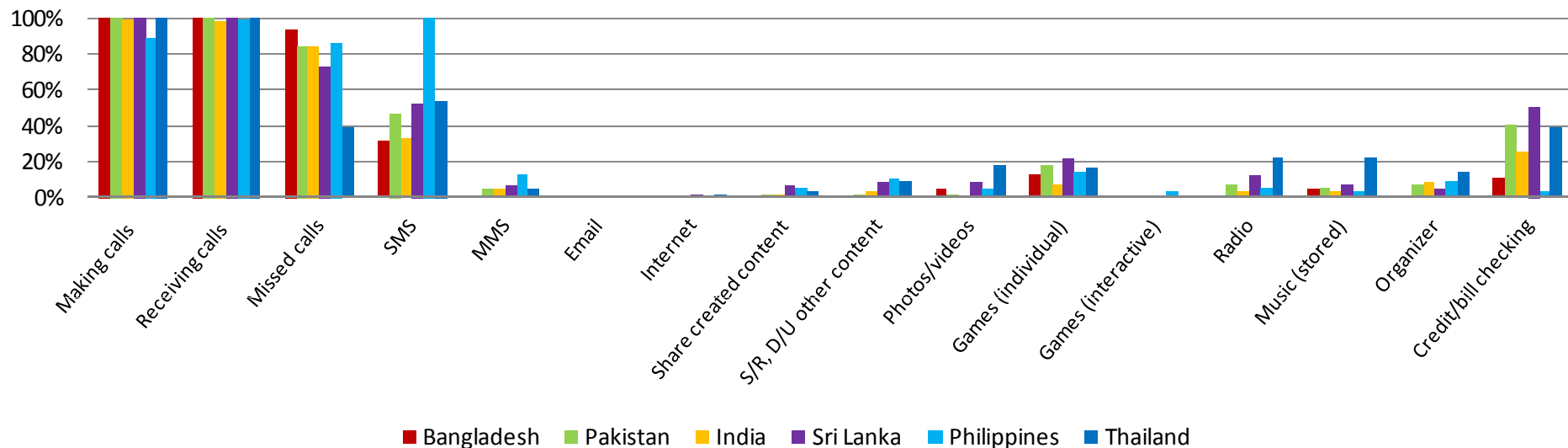
- Communication in multiple forms, synchronous/asynchronous, one-to-one/one-to-many, etc.
- Information retrieval
- Publication
- Transactions (including payments), and
- Remote computing??

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

# Poor are participating, according to teleuse@BOP survey . . . .

- If the answer is yes, millions of poor people in the Indo-Gangetic Plain are beginning to participate in the Internet Economy through the mobile networks and handsets
  - Inchoate, but understandable as services are just beginning to be offered & business models are being worked out
  - The dongle/netbook surge had not yet occurred in 2008

What mobiles are used for (% of BOP mobile owners)



# 10,000-sample, 6-country Teleuse@BOP survey in 2008 found that most poor people had . . .

## 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

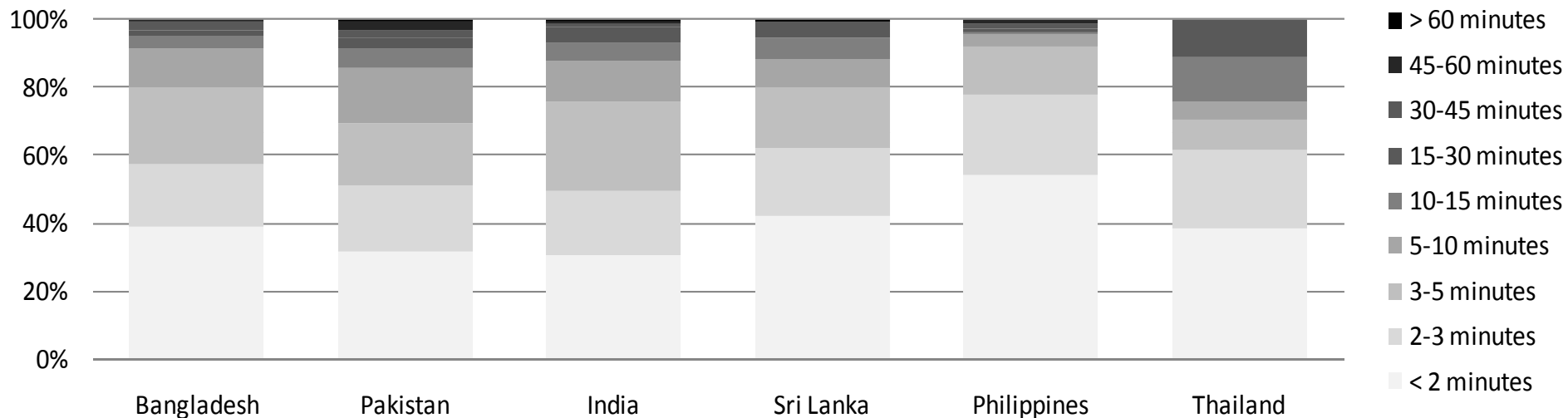
	Bangladesh	Pakistan	India	Sri Lanka	Philippines	Thailand
% of BOP (outer sample)	82%	66%	65%	77%	38%	72%

Caused by SMS reliance



# Among non-owners, ~80% can get to a phone in under 5 minutes

Time to reach the nearest phone (% of BOP non-owner teleusers)



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?
  - Despite or because of policy and regulatory actions?
- How can the lessons be applied to Internet access?

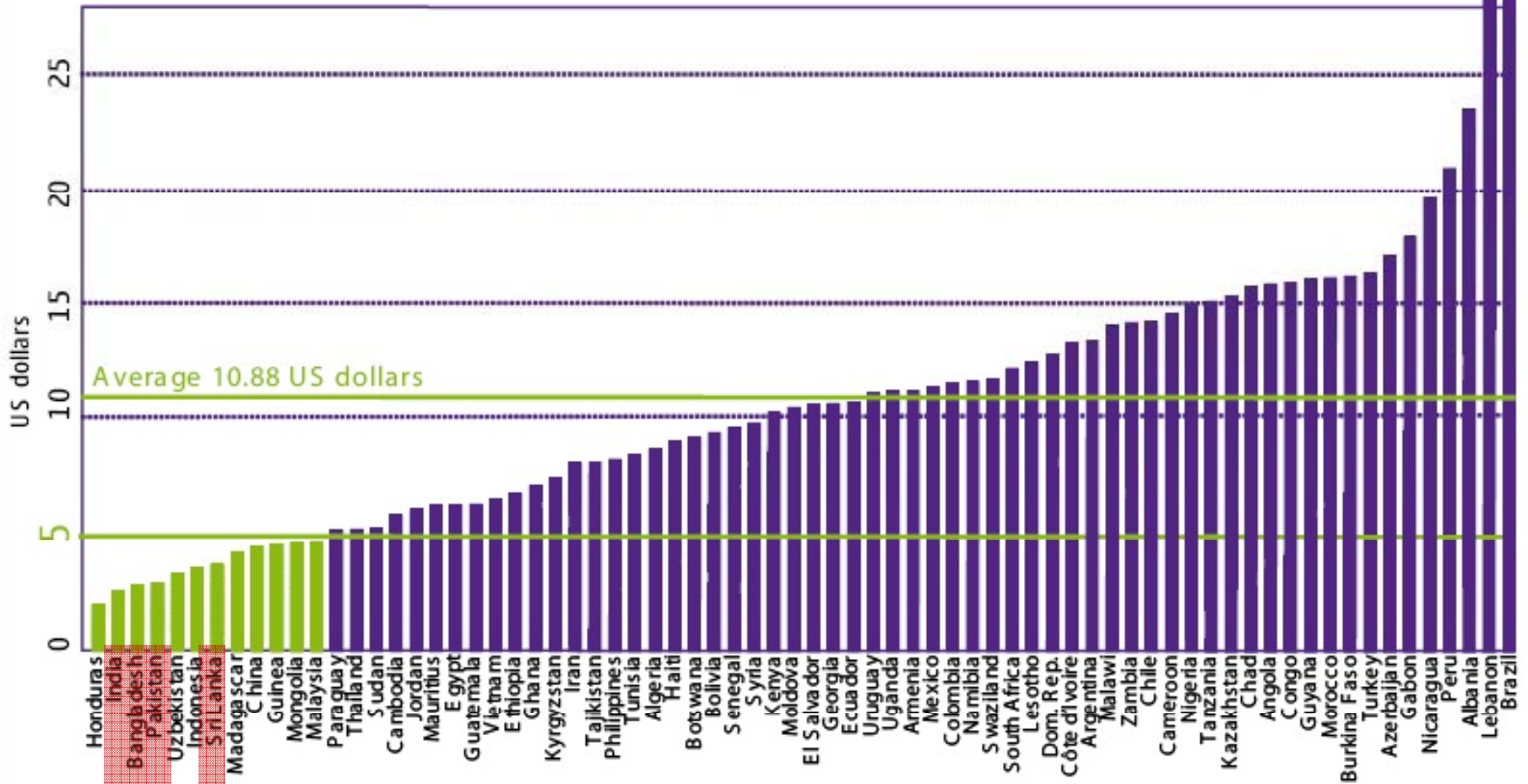
# **Budget Telecom Network Business Model**

# How were this many poor people connected electronically?

- “Budget Telecom Network Model” that allowed South Asian telcos since 2005-06 to make excellent (if highly 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 Air Asia to make profits while conventional airlines flounder
- 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



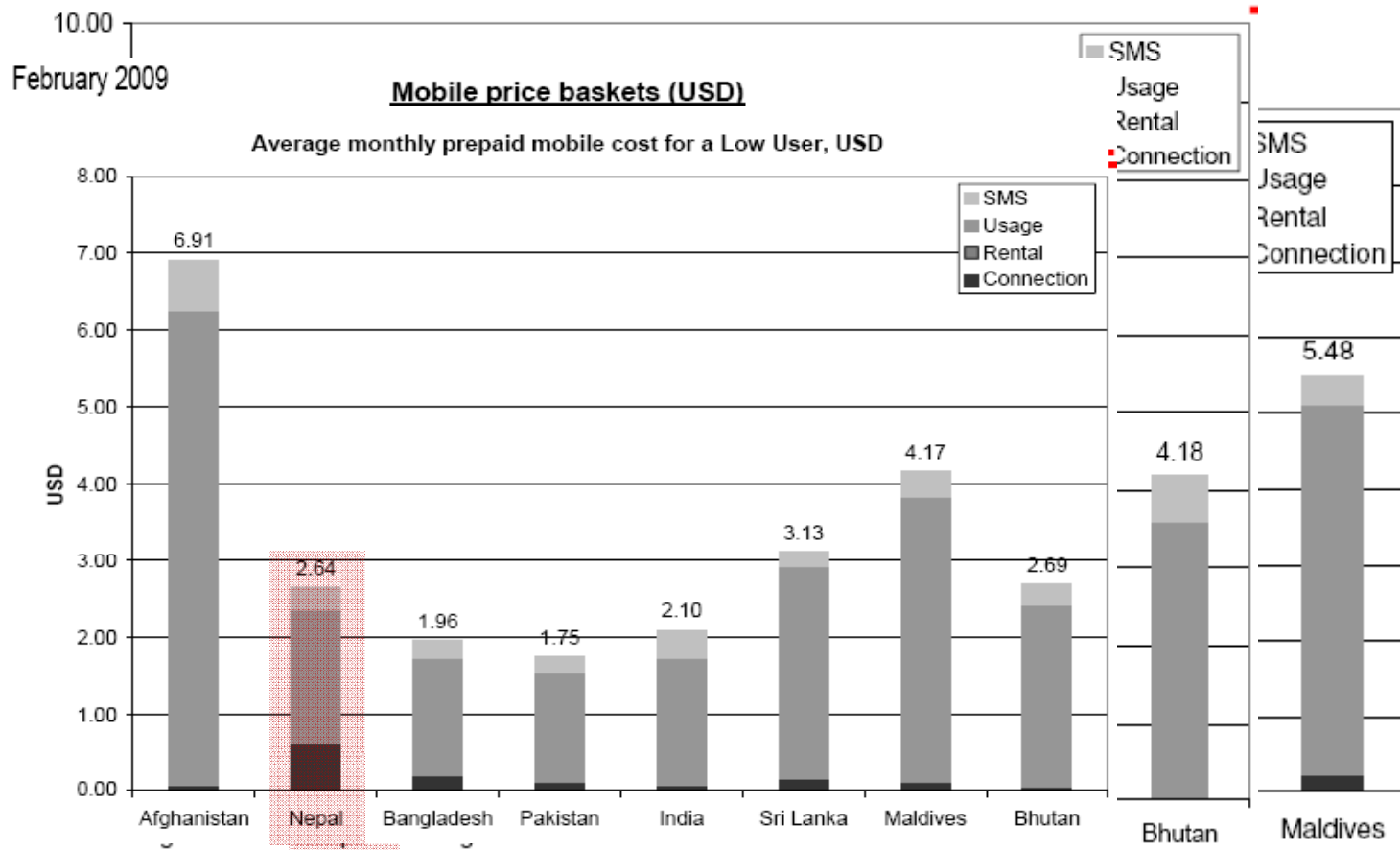
# Competition as the necessary condition

- 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

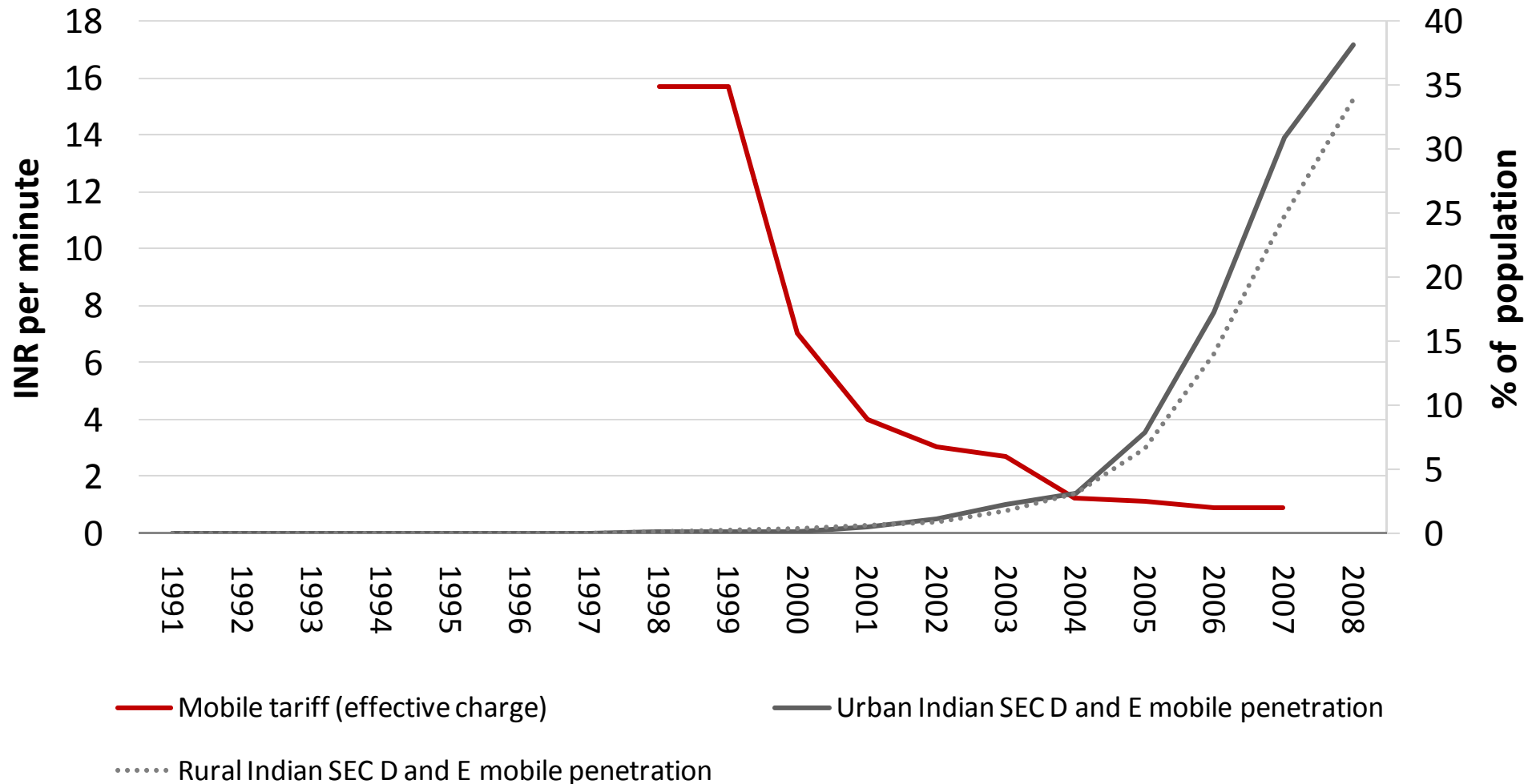
October 2008

**Mobile price baskets (USD)**

Average monthly prepaid mobile cost for a Low User



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







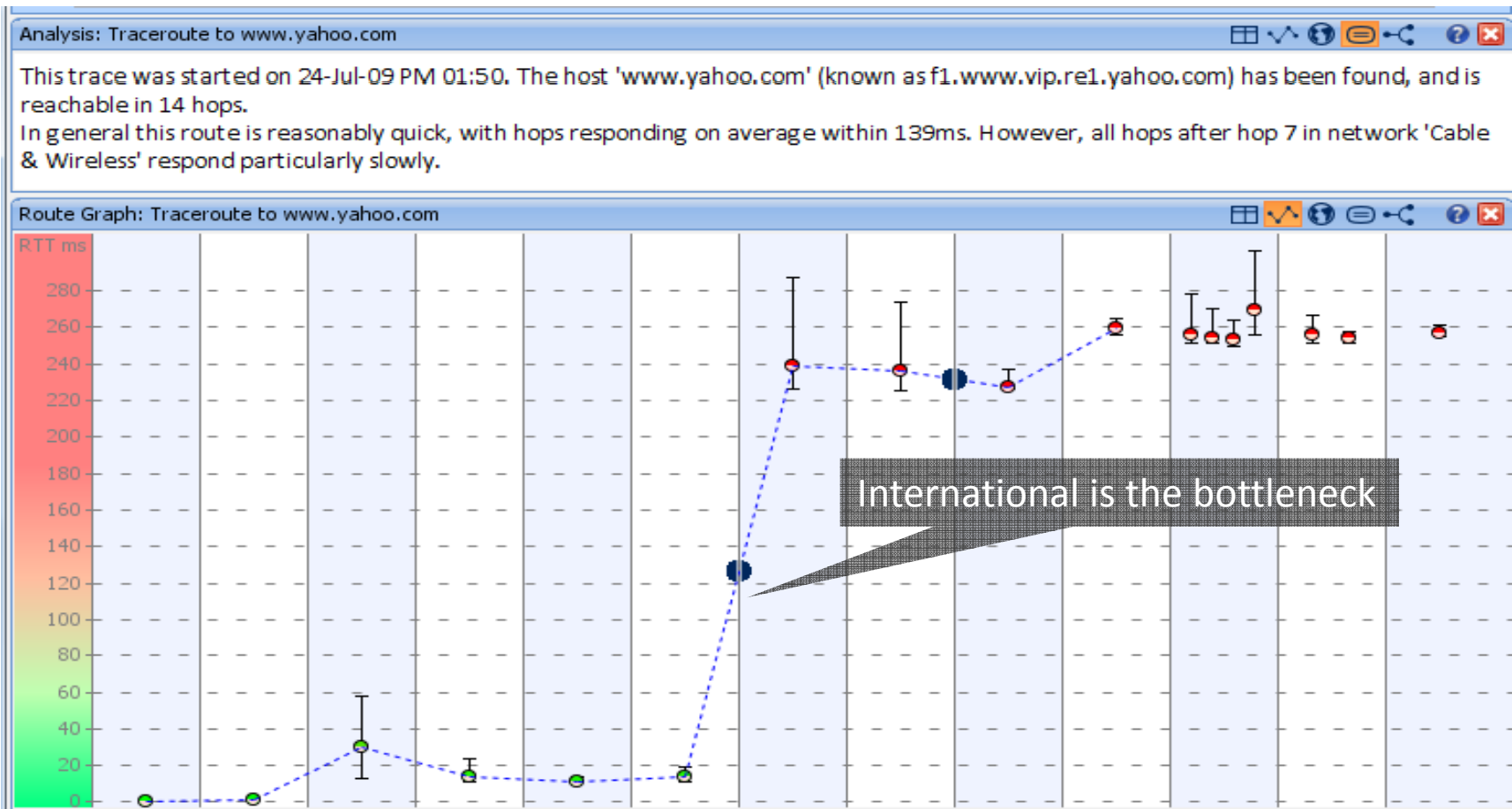
# Extending BTNM to broadband

# Investment, over all

- Mobile voice success was achieved because the conditions were created for massive investment in network buildout
- Building networks capable of broadband is not just incremental; it is the building of an overlay network that requires massive investment, but
  - Not enough cashflow from commodity voice business
  - Governments have gotten greedy and are extracting lots of taxes
  - Great Recession (tempered by Arab & other funds seeking non-US locations)
  - Regulation has become politicized with higher profile

# International bandwidth

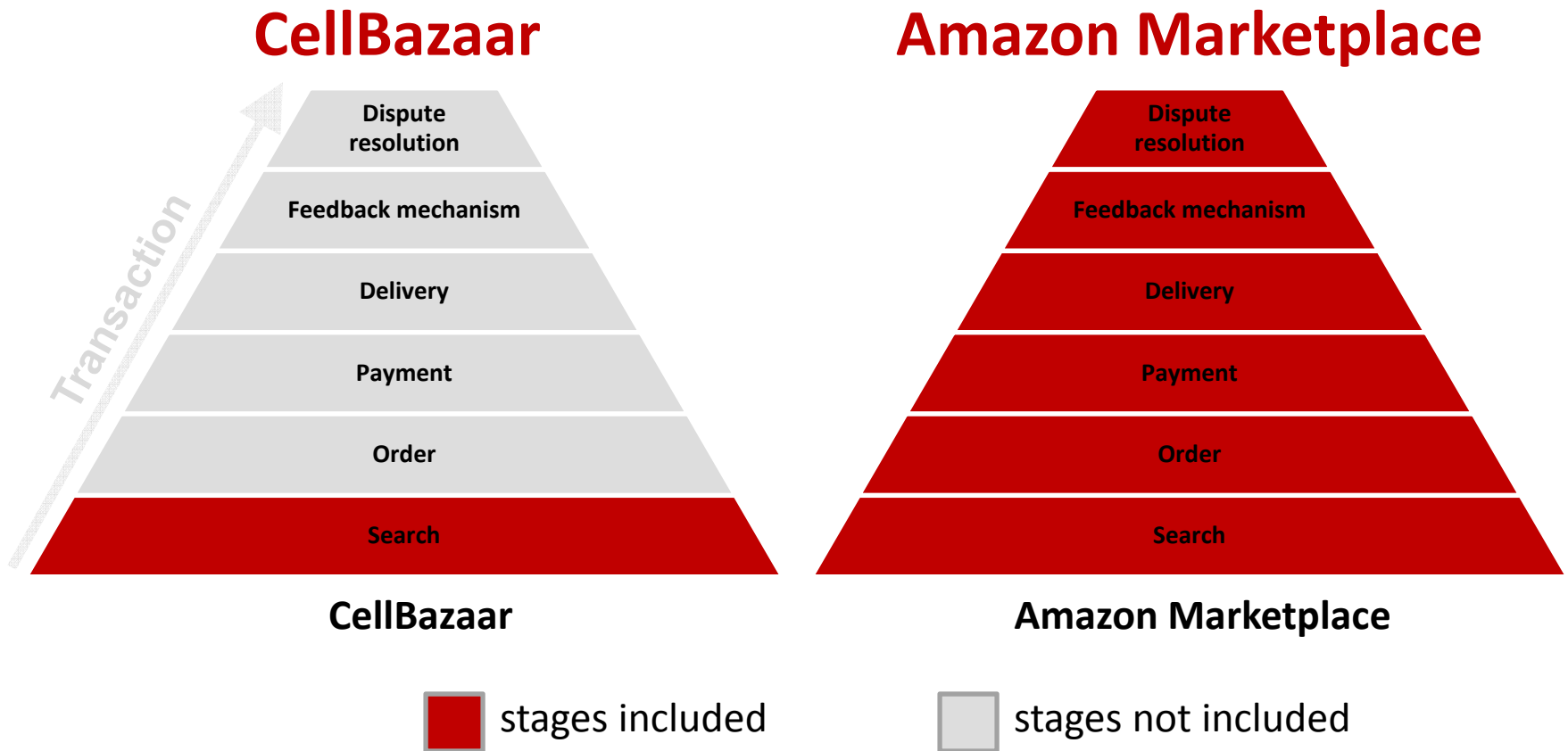
- Lower prices require lower costs
  - Reduce international backhaul costs



# Prepaid “sachet” pricing

- Same as with voice and shampoo, 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

# New services/applications needed



- Today CellBazaar can only do search; if payment policy firmed up they can add payments; if postal system improved they can start delivery, etc.

# Policy & regulation

# What role for policy and regulation?

- Restating the key point made by Levy & Spiller back in 1994: solutions must fit institutional conditions
- Institutional conditions include the operative business model → policy and regulation must support and leverage the business model, not work at cross purposes to it
- 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 such as greater Internet use

- Market entry and spectrum management, including refarming, have to be given highest priority; uncertainty caused by license terms ending needs to be reduced
- More emphasis on availability of, and wholesale access to, “fat pipes” than termination rates per se
- Attention to anti-competitive practices, especially vertical price squeeze
- 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 and rationalize taxes