

Social Inclusion Policies for BB Access

Stories from South Asia

Brasilia, Brazil
November 16 2009

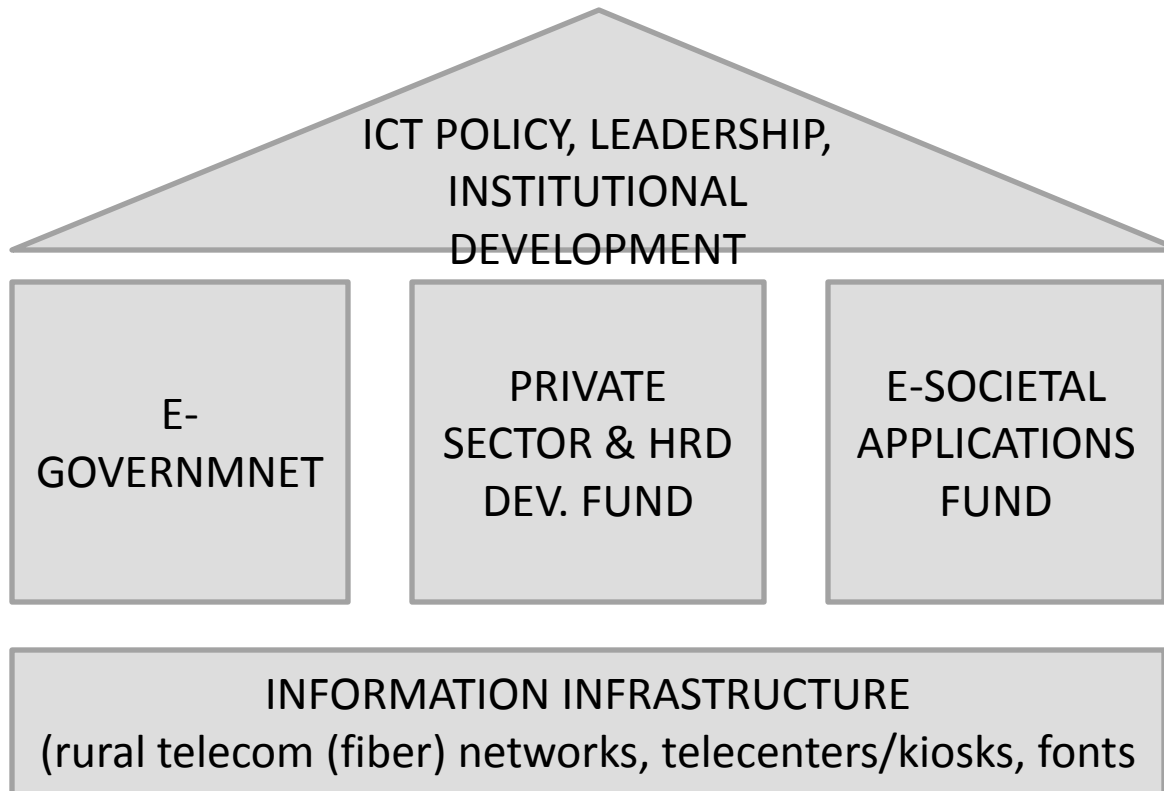


Agenda

- e-Sri Lanka: the ultimate social-inclusion program
- What happened while the government was planning and implementing e-SL
- Role of Universal Service Policies
- Conclusions

**e-Sri Lanka: the plan that was, the
reality that is**

e-Sri Lanka: a comprehensive e-development plan. Driven by the Executive. Centrally planned



- USD 83 million funding
 - IDA, Korea, GoSL
- “smart island, smart people”
- 2003 onwards
- Well rounded:
 - Access
 - Demand
 - Enabling infrastructure

E-leadership and Policy: developing the regulatory framework for ICT-inclusion and adoption

- Legal instruments and related implementation
 - E-Transaction law
 - Data protection act
 - Intellectual property rights related rules, laws
 - Cyber crime
 - Etc.
- Partially done (e.g. e-transactions legislation passed).

E-Government: prioritized by impact, reach, feasibility

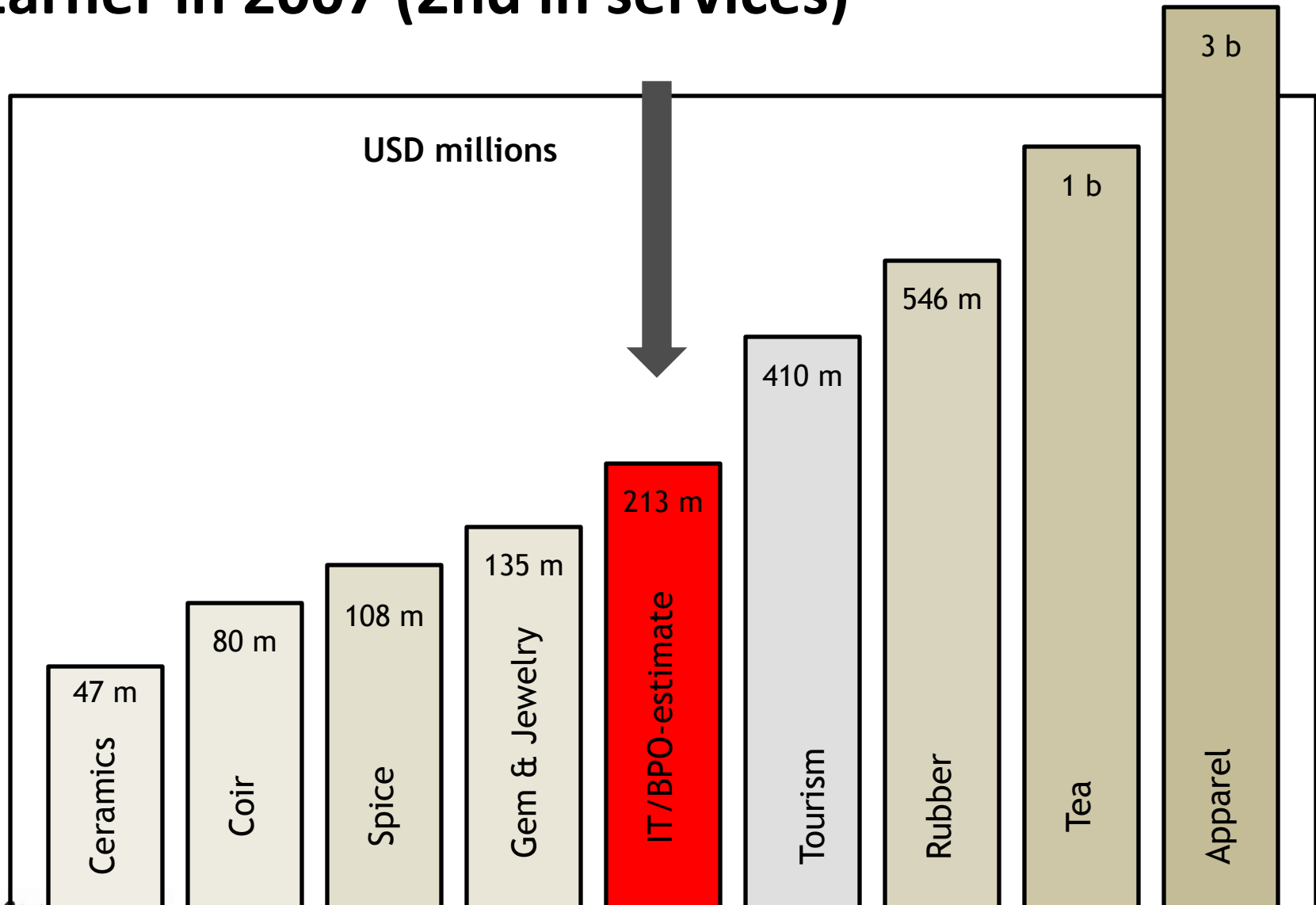
- Focus on G2G, G2B and G2C
 - Many “foundation” projects: e.g. citizen registry, govt. data network, data centers
- Significant re-engineering of processes prior to automation
- Computer + BB Connection: channel to reach citizens
 - Telecenters (kiosks) for the poor
 - Computer and internet @ home or @ work for rich/middle-class
- Today: only one (the Government Information Center) fully implemented
 - Everything else delayed, but under implementation

Development of the IT/ITeS sector in Sri Lanka.

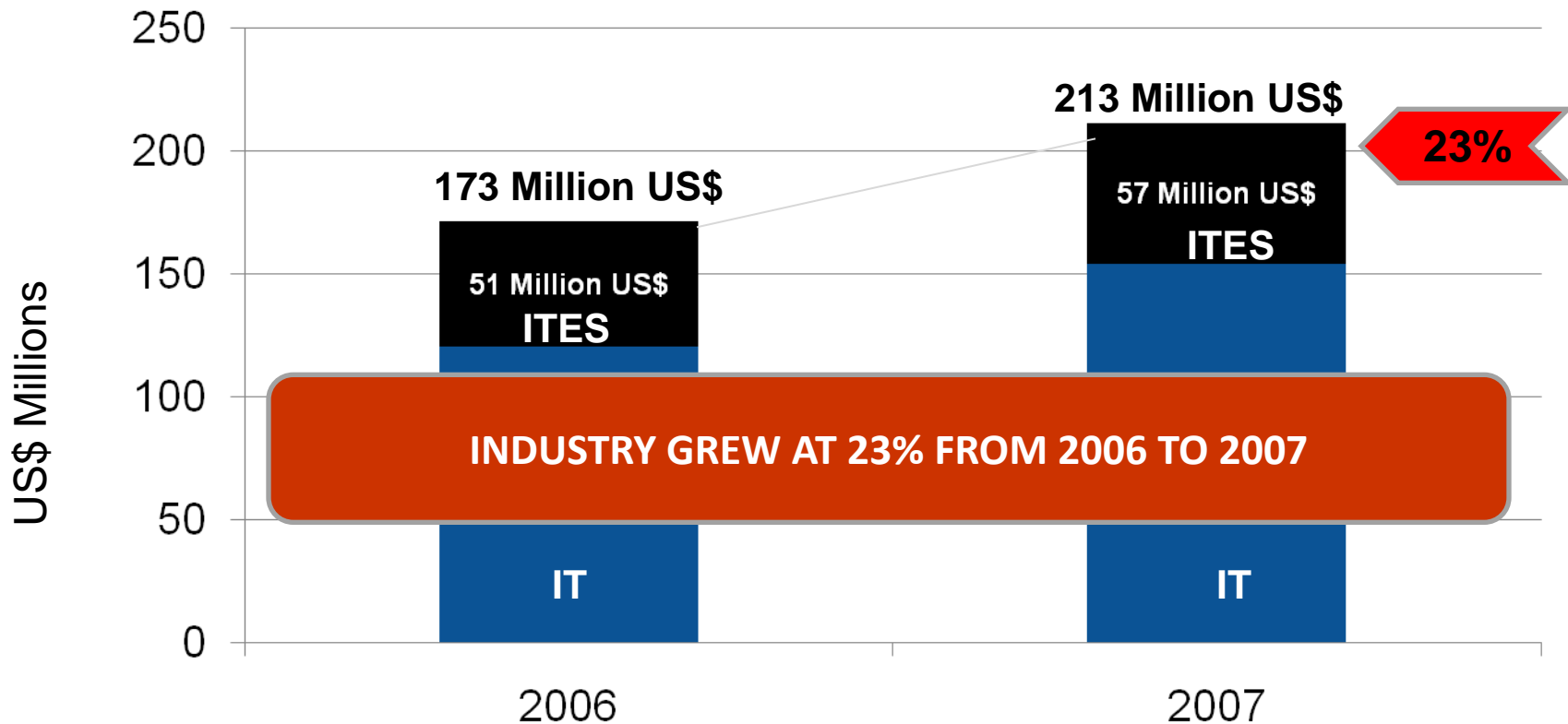
Key driver of BB demand

- Government leading the strategy, creating a focus :
 - Identifying core competencies (highest # of Chartered Accountants per capita outside of EU)
 - Focus on high-value added Accounting & Fin. Services
 - Positioning Sri Lanka as back-up to India
- Industry (& country) promotion, market creation
 - At the right trade shows, road shows in countries
 - Ad campaign. Coordinating with other govt agencies
- Workforce development
- Grants for demand-driven activities (private sector demanded)
 - E.g. for training, for developing industry-wide applications etc.

Results: IT/ITES: 5th Highest Export Revenue Earner in 2007 (2nd in services)



IT & ITES Industry Growth 2006 to 2007



Industry	2006	2007	Growth
IT	120 Million US\$	154 Million US\$	28 %
ITES	51 Million US\$	57 Million US\$	13 %
Both	1.675 Million US\$	1.875 Million US\$	12 %

Employment creation from IT and ITES industries in Sri Lanka

- Total IT industry, including exports, employed 11,564 (2005) → 13,870 (2006) → 70,000 est. (2014)
 - Estimated that each direct job generates 3-4 indirect jobs:
35,000 indirect (2005) → 52,000 indirect (2006) → 210,000 indirect (2014)
- Export-only employment estimated to be 8,400 in 2007
- ITES employment was estimated to be 3,700 in 2005, with 30% growth expected in 2006-07

When conditions in Sri Lanka were so similar to Bangalore/Hyderabad, why did IT & ITES sector take off only after e Sri Lanka?

- Key actions were
 - Liberalizing international gateway (1 → 33 licenses; price competition) to allow IT and ITES industry redundancy of suppliers and media plus low prices and high quality
 - Attracting a marquee captive BPO, HSBS Group Service Centre, to serve as the answer to the question “can BPOs work in Sri Lanka?”

8 HSBC Group Service Centers in India: Bangalore (2); Hyderabad (2); Kolkata (2); 1 each in Vizag & Gurgaon



Wanted to reduce dependency on India, but insisted on an alternative to SLT; Closed only in 2004 as a result of liberalization. HSBC came and went in 2002 and 2003. Now connected through SLT and Tata (VSNL).

Access: 500+ telecenters in rural areas.

Delivery channel for e-Gov, other applications

- Local entrepreneur awarded contract
 - Technical support/training by established larger firm
 - Subsidized capital + declining subsidy for connectivity
- Location: near a school, close to a fixed market
 - not near established internet café; villages under 5,000 ppl
- Voucher scheme to stimulate demand among the young
 - non-market distorting (price changes based on local price for internet access)
- Politicization, significant changes to structure
 - Entrepreneur model eliminated; free services; next to existing
- Roughly 6 or so sustainable/with best practices

Infrastructure: 2 fiber optic rings in previously unconnected areas

- To previously unserved areas
- Telecenters + government offices as anchor clients to guarantee sustainability
- Least-cost subsidy scheme to award contract
- Winner also given license + CDMA frequency to operate access network
- Results:
 - Existing operators take the govt to court.
 - Auctions never happen

Other elements, taking a life of their own

- Incredibly vibrant blogsphere
 - In local language
- Digital content
 - E.g. for education
- Local Language Fonts
 - Many years in committees by govt.
 - Yet commercial fonts developed and working
- ICT in education: formally introduced as a subject

Score-card, so far:

e-SL component	Level of success	Role of govt.
Private Sector Development	Success, room to grow	Moderate (catalyst, funds)
E-Gov	A work in progress, only call-center implemented	Huge (implementer)
E-Society	Vibrant. Blogging (in local language), local content	Minimal (funder)
Backbone network	Utter failure (govt. as implementer) Great success (commercial)	Minimal (as implementer) High (through de-regulation)
Access network (kiosks)	Utter failure (kiosks) Great success (other access points)	Minimal (de-regulation)

The South Asian mobile success story

Access to basic voice services even to those at the Bottom of the Pyramid (BOP) in Asia

Used a phone in the last 3 months

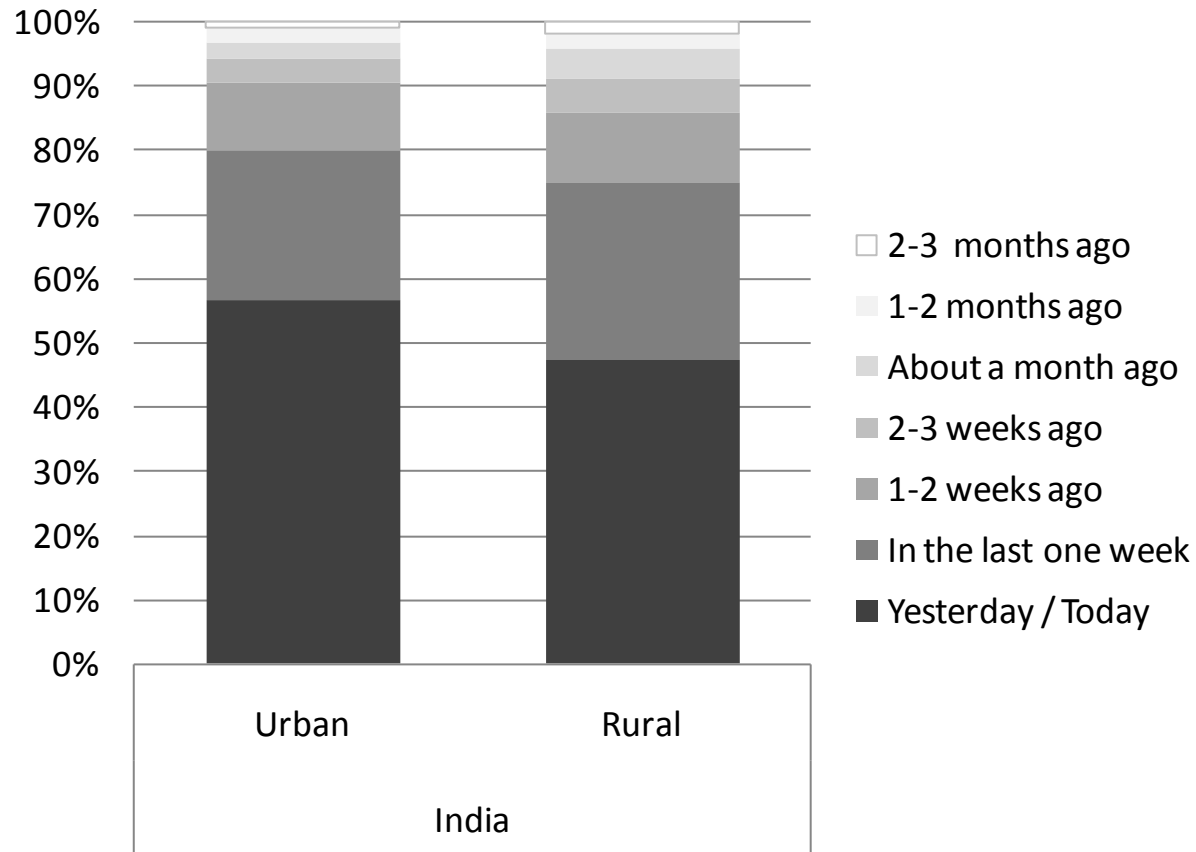
	Bangladesh	Pakistan	India	Sri Lanka	Philippines	Thailand
% of BOP (outer sample)	95%	96%	86%	88%	79%	77 %

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

- Sample of over 11,000 BOP (SEC D and E) citizens. Indian sample size over 3,500.

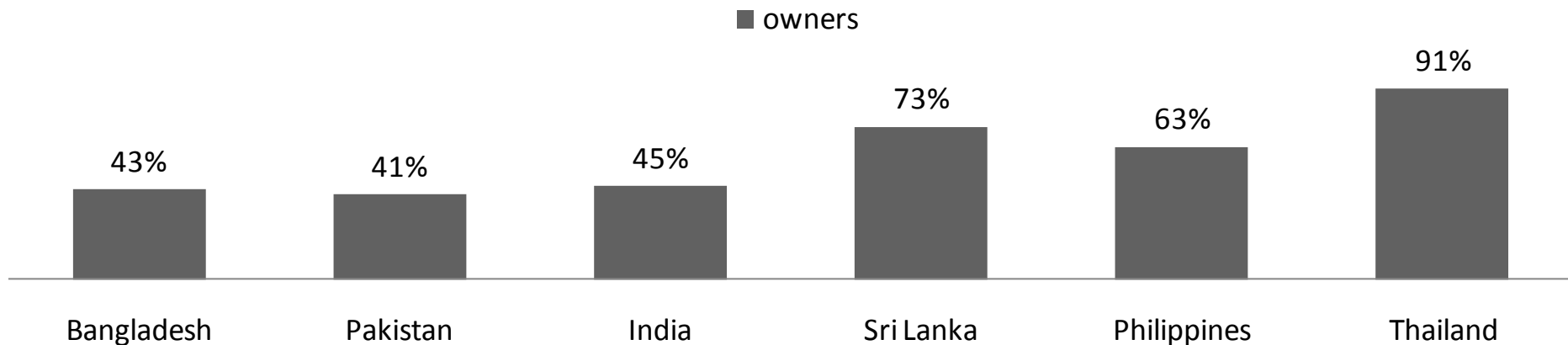
Even to the BOP Rural Areas in India

Last time respondent made/received a call (% of BOP teleusers)



Ownership is less impressive, but high...

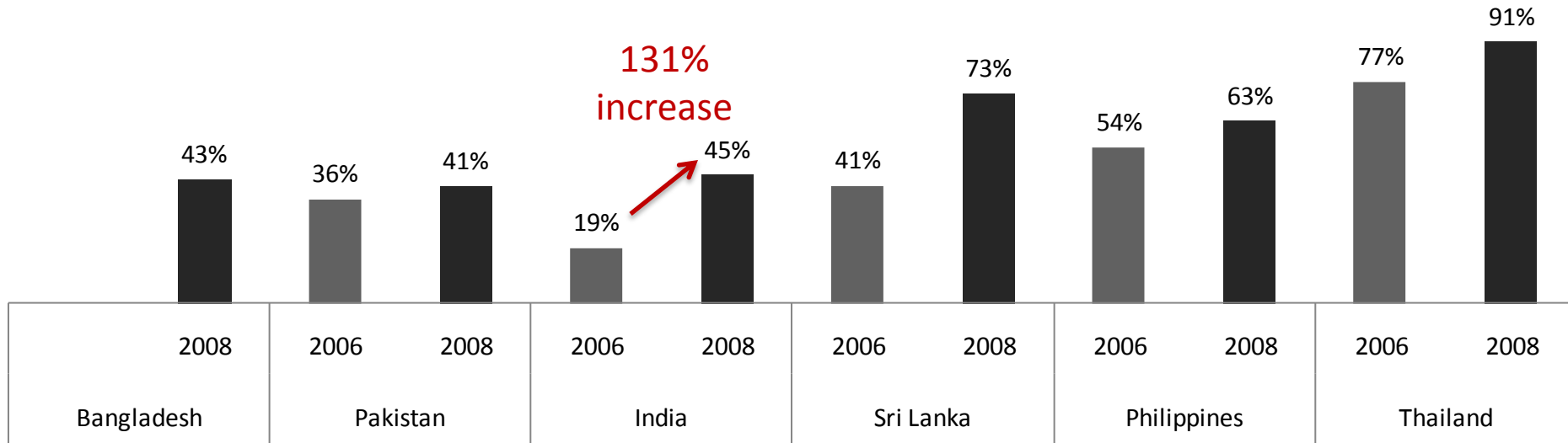
Total phone ownership (% of BOP teleusers)



- Most choose to own a phone (rather than use others' phones) for **convenience**; cost is secondary

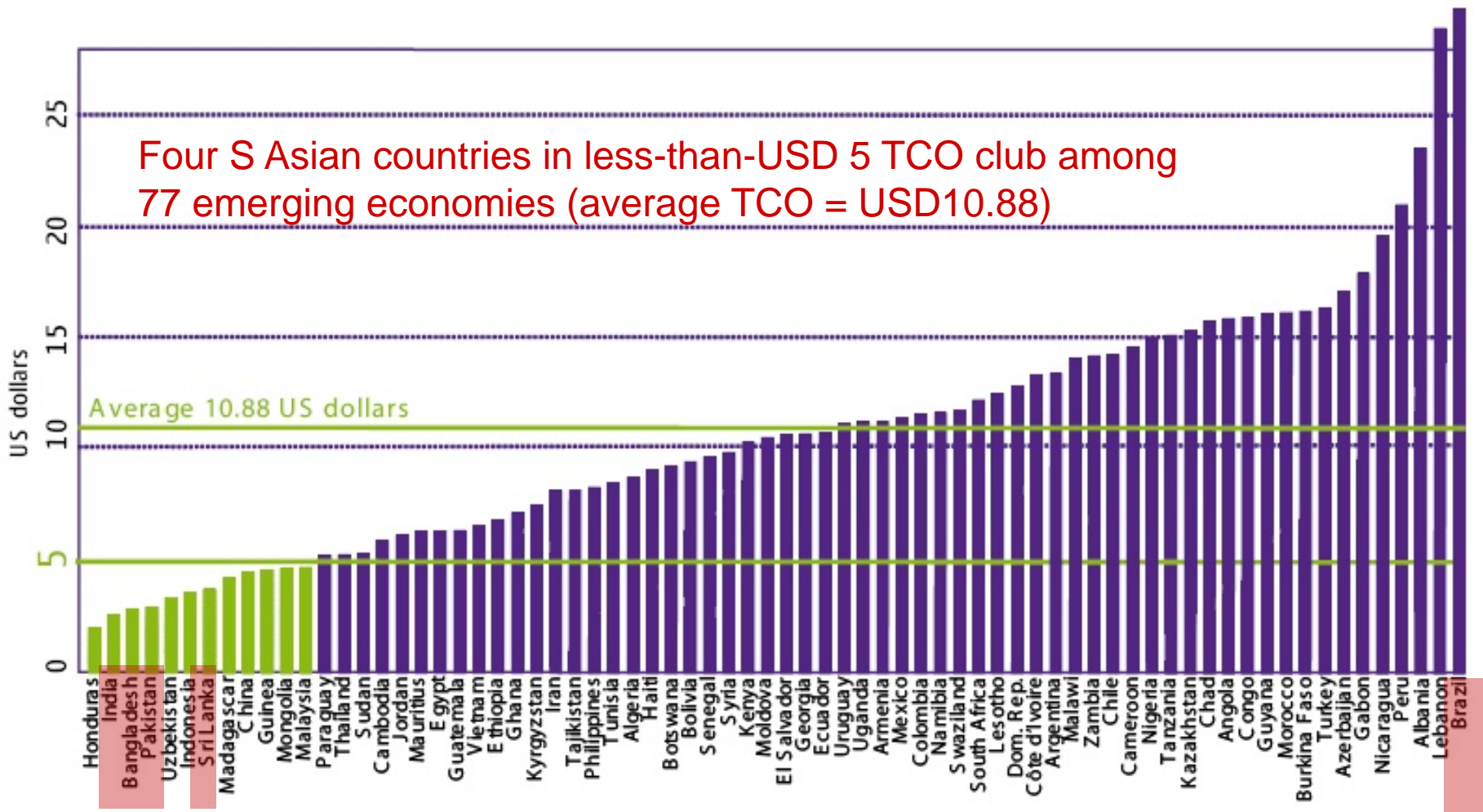
...and growing. Highest growth in India

Total BOP phone ownership: 2006 vs 2008 (% of BOP teleusers)



Lowest Total Cost of Ownership in the world in South Asia

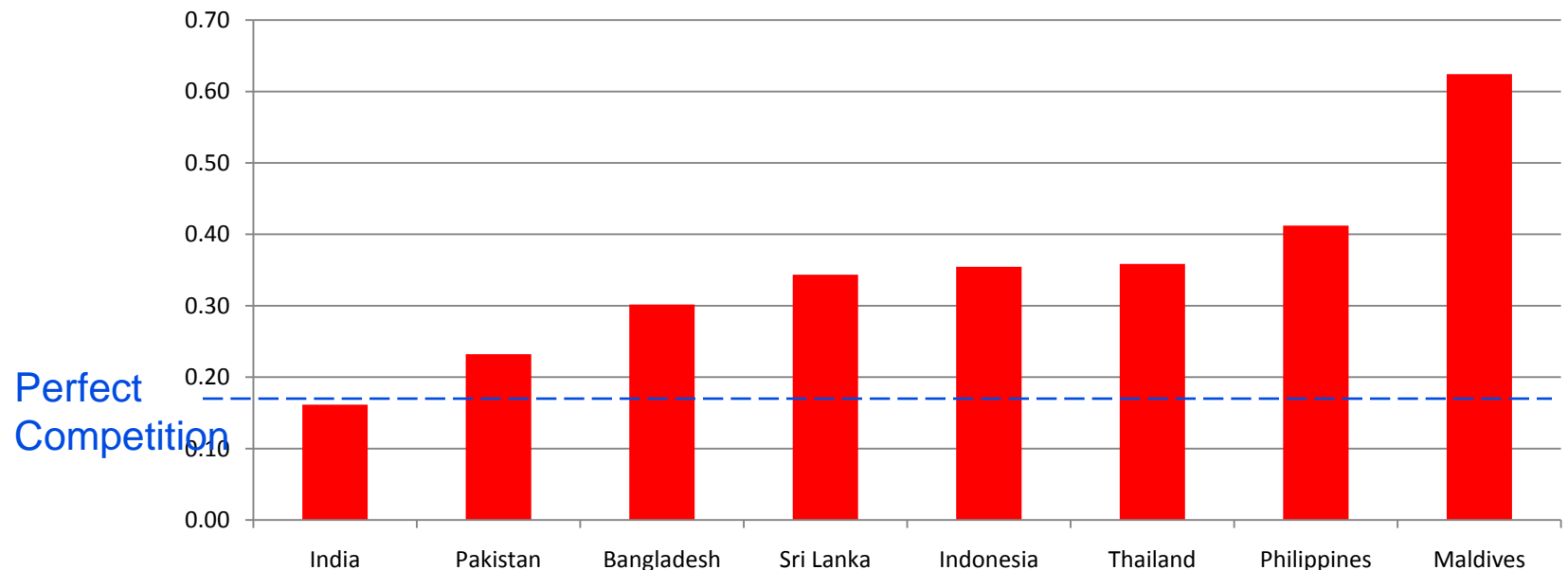
Monthly TCO by country



Regulation isn't great – but necessary condition (market entry) satisfied by regulator

- Large number of licenses
 - Not necessarily transparently granted

HHI in South Asian mobile markets, Sep '08

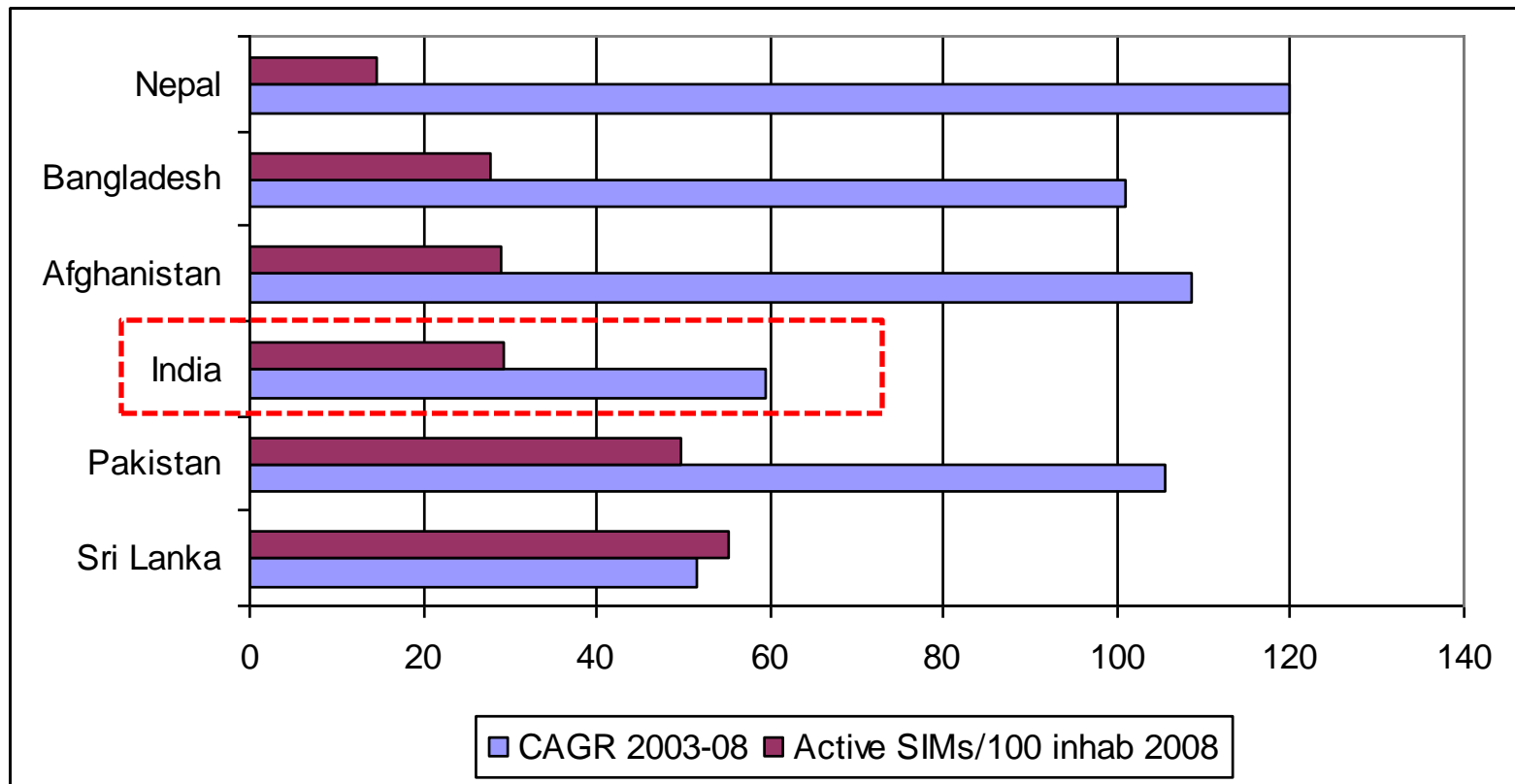


And barriers to entry/ownership eliminated → high investment

Foreign Direct Investment in Pakistan's Telecom Sector (in US\$ millions)			
Year	Total FDI	FDI in Telecom Sector	Telecom Sector's Contribution in Total FDI (%)
2001-02	484.7	6.1	1.26
2002-03	798	13.5	
2003-04	979.9	207.1	
2004-05	1524	494.4	
2005-06	3521	1905.1	
2006-07	5124.9	1824.3	
2007-08	5152.8	1438.6	

- **China Mobile** acquired 100% of Paktel
- **Orascom** increased stake in Mobilink to 100%
- **SingTel** purchased 30% Warid Telecom
- **OmanTel** purchased 60% of World Call

Result: high growth, driven by high level of competition



Source: ITU, data as of end 2008

EBITDA margins v. high previously (50%+). Now more in line with EU/USA. But still attractive

	EBITDA margin (2008)
Bangladesh ₁	35%
Sri Lanka ₂	28
India ₃	37

	EBITDA margin
T-Mobile Mobile (Europe) - 2008	35%
T-Mobile Mobile (USA) - 2008	28%

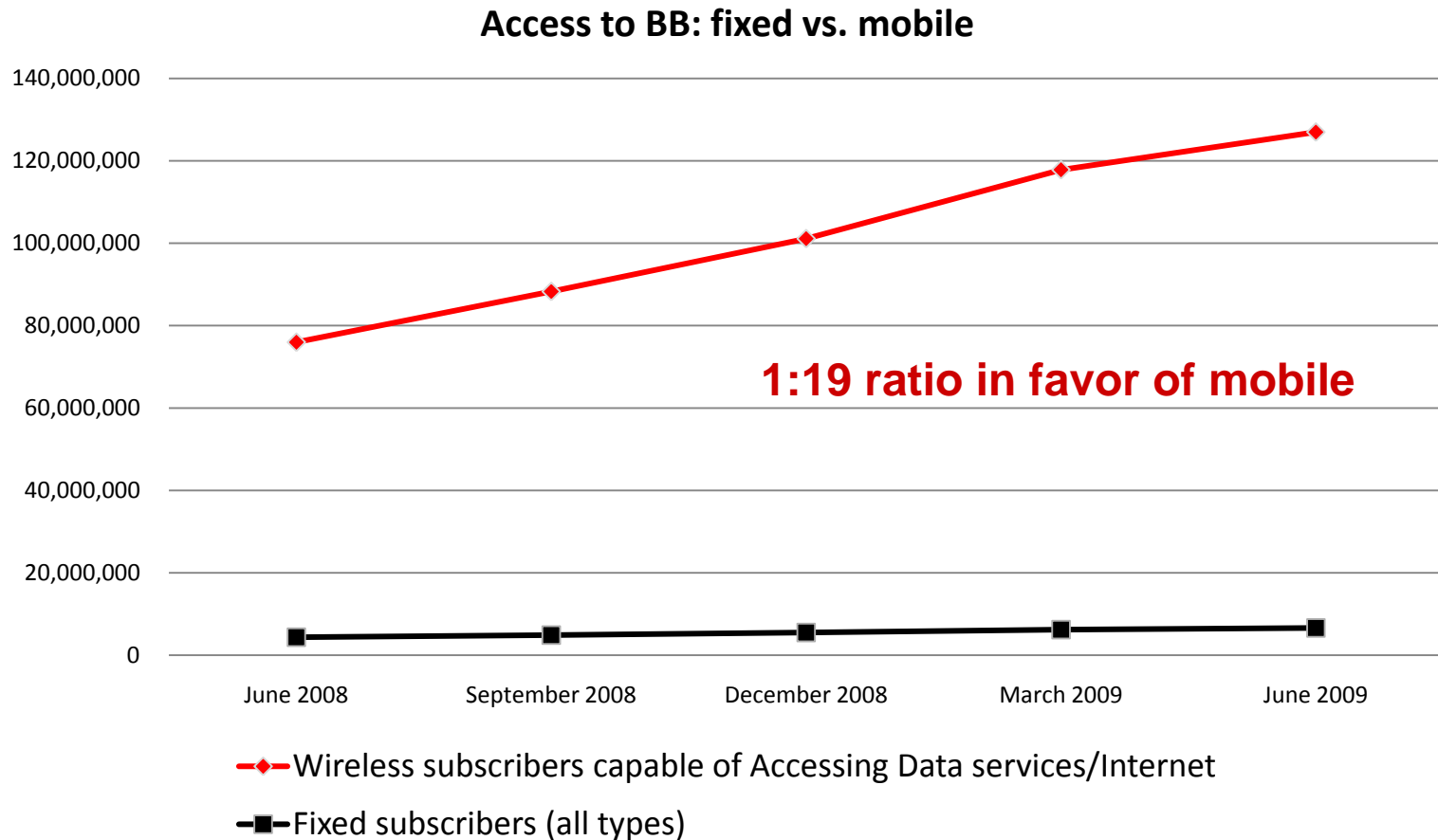
Helped by budget telecom model that is characterized by...

- Low ARPU's
 - Average ~USD 5 (Bangladesh USD 2 for some operators)
- Mostly (over 80%) prepaid
 - low cost of serving (no bills, electronic re-load, minimal 1-800 customer care)
 - low customer acquisition cost (~USD 3.5)
 - low/no credit risk (pre-paid and cash)
 - Regional negotiations for equipment; managed networks;
- Low(er) Quality → necessary feature in early stages
 - “acceptable” call drop rates x2 of US/EU
- Leapfrogging: Install newer (cheaper) technologies without legacy investment issues

Budget telecom model: now being applied to data

- Through mobile devices: NOT computers
- Growth from limited-download, pre-paid packages
 - Scratch cards or e-loading for top ups and
 - Highest sale of SIMs = “data only” SIMs in India
- Quality: lower than expected
 - 20% of what’s promised when going to international site
 - 80% of what’s promised when accessing in-country content
 - International bandwidth still a problem

Even in the absence of 3G/“real-mobile BB” speeds, appetite for Mobile BB is high, and growing



Even e-Gov happening via mobiles now. And not just for information provision, but for payments



- Zero-Mass Foundation and State Government Partnership
- Equipment:
 - Mobile phone
 - with near field communication
 - + finger print scanner
 - + script printer
 - Money box
- INR 22,000
 - Compared to IN 1,400,000 for a kiosk

Around 1.6 million pensioners (in 9,200 villages, 127 districts) receive payments this way

- No “leaking” of pension
 - Ghost pensioners (15 – 20%)
 - % kept by govt. official (about INR 20 – 50 out of every INR 400 payment each month)
- True Mobility (Disabled pension payments)
- Real financial inclusion eventually
- Here and now
 - Instead of waiting for the 100,000 planned kiosks (only 40,000 implemented so far)
 - How to cover a total 600,000+ Indian villages with kiosks?
- Possible because mobile network has extended to rural India
 - Deregulation, competition

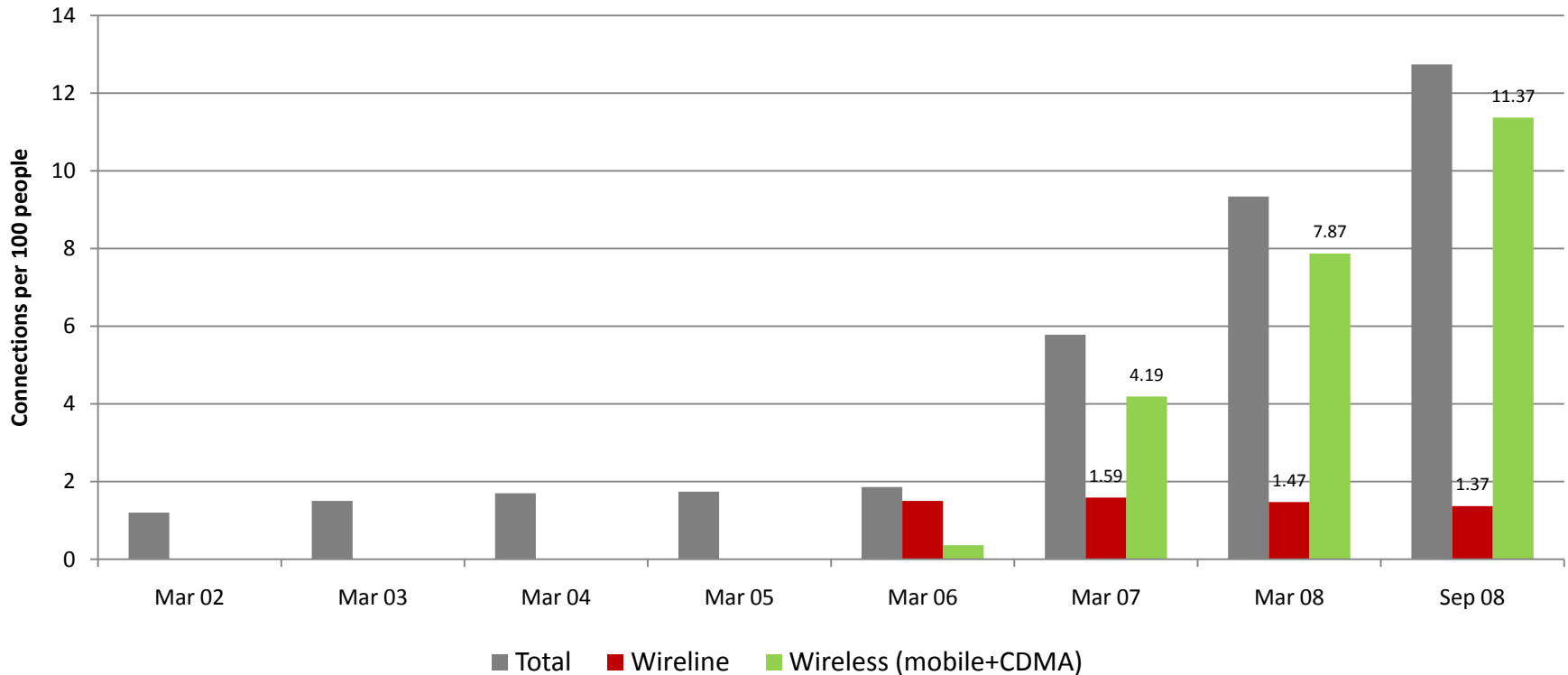
**Have policies on Universal Service
Helped?**

It's easy to get USO wrong. E.g. India

- USO policy (then)
 - Charge 5% of gross revenues from operators
 - Funds given to installing rural FIXED PHONES
 - Mobile not eligible for USF (conditions of auctions)
- But rural fixed penetration negligible (even declining recently)
 - But only mobile penetration growing rurally (without any help)
- By 2006, India has USD 4 billion in a undisbursed USF
 - Just second to Brazil!?

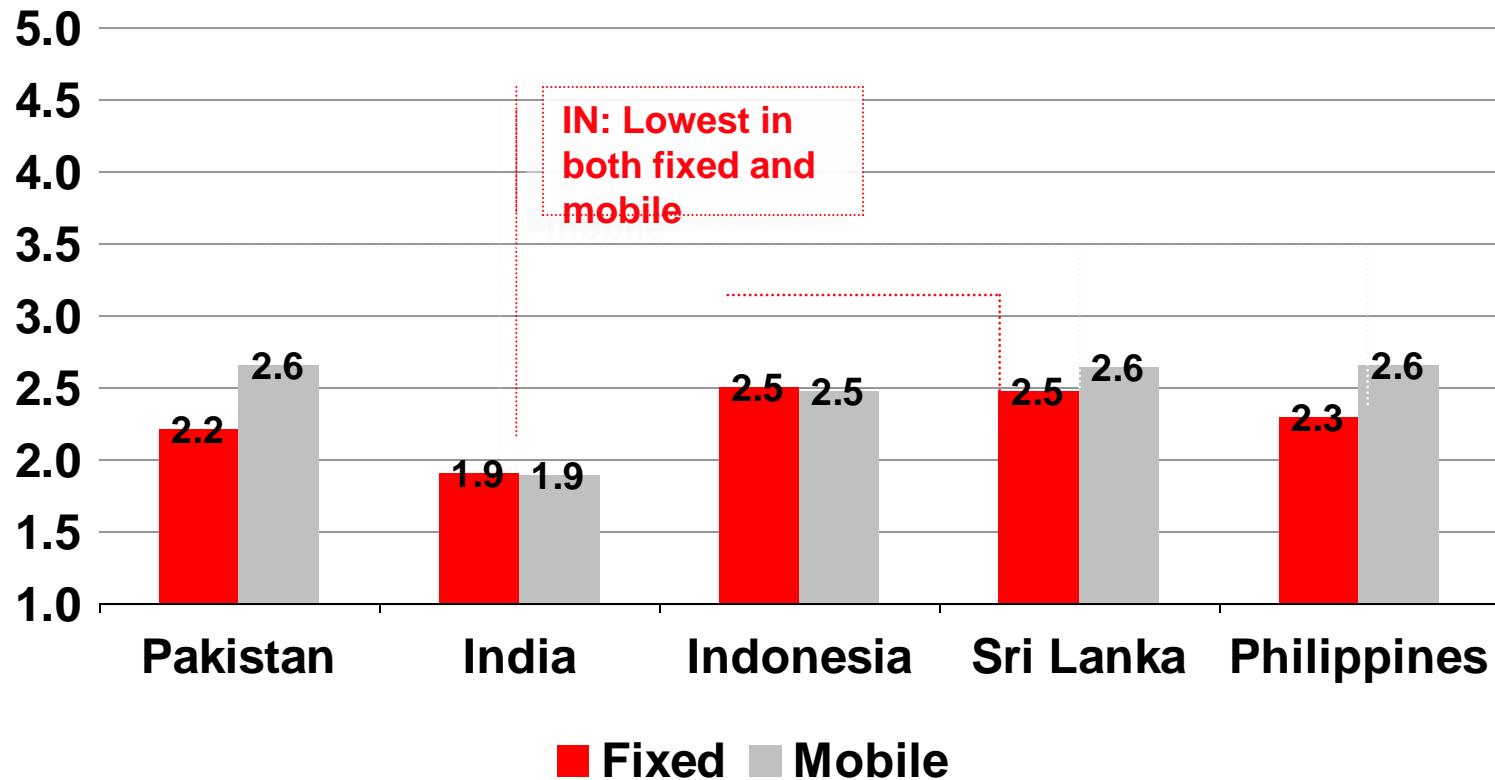
But rural penetration growing, and through mobiles

India rural penetration



Stakeholder unhappiness as revealed by LIRNEasia's TRE survey

TRE scores for Universal Service Obligation - 2006



- USO Policy changed in March 2007

- Mobiles made eligible to receive USO funds
- Perceptions improve (TRE jumps 64%)

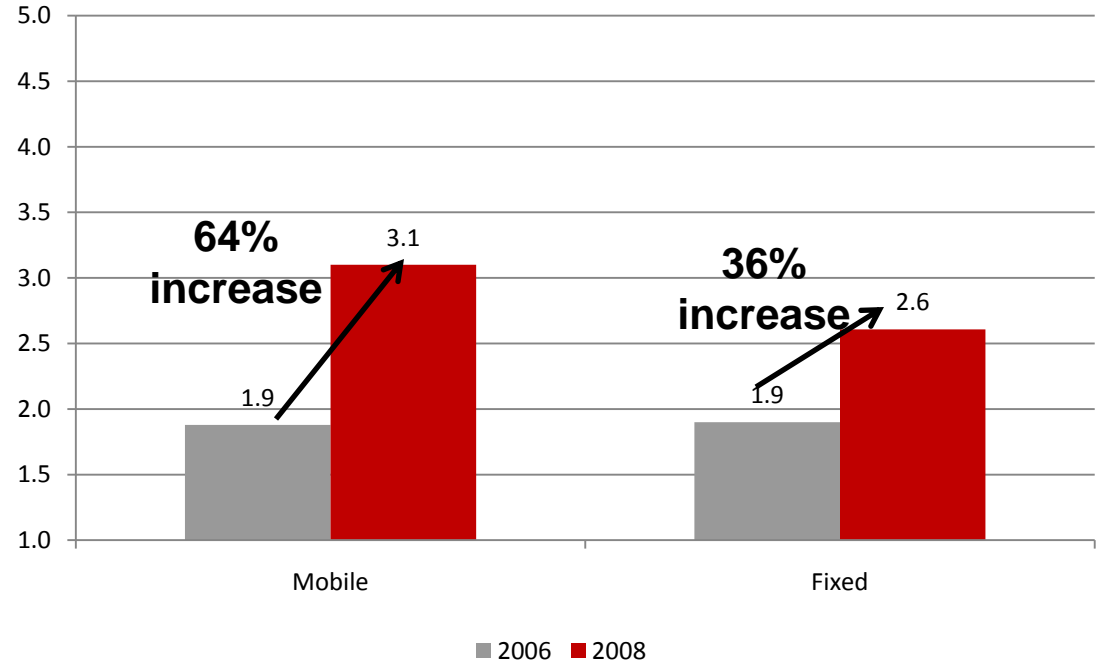
- BUT, still ~4 billion undisbursed

- TRE Scores barely above average of 3.0

- No subsidies needed?

- Passive infrastructure auctions

India - 2006 vs. 2008 TRE for USO



Similar examples elsewhere

- Philippines
 - 1 fixed line for every 10 mobiles: condition of license
 - Unused “installed” vs. “subscribed” fixed lines
- Nepal
 - Good least-cost subsidy auctions for backbone
 - But toothless regulator → winner unable to interconnect
 - Increase in price, not decrease
- India
 - Large amounts of un-lit fiber owned by incumbent
 - But USO not invested here
- Sri Lanka
 - No USO, but high penetration & low prices (through competition)

Final thoughts

- Telecom is KEY
 - Low cost (retail and whole-sale) is a MUST
 - High competition and high investment is the necessary condition
- The role of government as catalysis not to be underestimated (e.g. e-SL)
 - Even if it's just talk, with a little bit of funding (e.g. digital Bangladesh)
- Not just demand, but supply
 - De-regulation can change the supply of BB
 - But demand driven by content, applications
- USO: ok, but not in absence of weak regulation
 - Often substitutable by competition
 - USO a blunt tool. Competition a more optimal solution

About LIRNEasia

- *“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”*