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Taking e-Gov to the Bottom of the Pyramid in Asia: Dial-a-Gov?

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E-Gov: the benefits and goals

- Depending on the beneficiary, 3 types of service
  - G2C: targeting interactions between government and citizens
  - G2B: targeting interactions between government and businesses
  - G2G: interactions between different government organizations
- G2C e-Government initiatives promise to increase
  - Transparency
  - Efficiency
  - Citizen centric service delivery
  - To act as a media to facilitate citizen consultation, policy discussion & increased democratic input into policy process
- Challenge : to take e-Gov to the BOP (BOP = SEC D, E)
  - Like all other reforms, e-Gov tends to benefit the top of the pyramid (rich, urban)
  - Rural and the poor (often the same thing in Asia) left out

2 parallel strategies for the back end re-engineering and front end delivery of e-Gov to citizens

- 2 parallel strategies
  - @ the Back-end: the re-engineering and automating of government services so that they are accessible online, and
  - @ the Front-end: give access to the services online
- In Asia, internet access and PC ownership is low relative to income
  - Broadband access even lower. Affordable/reaching the urban rich
- Community Access Model promoted in an attempt to bridge the gap in income and geography
  - Telecenters targeting the lower income/bottom of the pyramid or BOP : Rational response
- **So in Asia, the strategy for the BOP to access e-Gov is:**
  - **@ the Back-end: the re-engineering and automating of government services so that they are accessible online, and**
  - **@ the Front-end: the installation of telecenters (community Internet access centers) for citizens to access reengineered government e-Gov services via the Internet**
- E.g. World Bank funding for e-SriLanka: $ 32MM for e-Gov, $ 7.5MM for telecenter network

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Government presence online (supply of services) evolves over time: from inform → interact → transact

INFORM → **INTERACT** → **TRANSACT** → **TRANSFORM**

INFORM

Information about government services made available via government websites

94% of UN member countries have some kind of online presence (UNPAN,2005)

INTERACT

Govt. presence online allows citizens to send/receive information (e.g. email govt. office, receive response)

88% of UN member countries offer interactive services for citizens

TRANSACT

Full govt. transactions (including payment) completed online

24% of UN member countries offer online payment on certain govt. services

TRANSFORM

Govt. uses online presence to as a tool to improve governance

15% of UN member states encourage participatory deliberative decision-making & engage with citizens in open debate online

Level of Sophistication of e-Government

Low → **High**

Ease of Implementation

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Re-engineering and automation is difficult, and often fails

- Sequence: engage in Business Process Re-engineering, then install large IT systems to automate all or parts of the newly designed process
- Takes a long time
- Requires radical changes in existing process, work methods and incentives
  - Faces significant resistance from government employees
  - Specially if some employees are benefiting from inefficiencies in the existing (manual) system
- Re-Engineering is extremely difficult, and project have a high failure rate
  - Over 85% of e-Gov projects fail: (35% classified as total failures; 50% partial failures (Heeks, 2003)
  - Larger the gap between existing (manual) system, and new (re-engineered and automated) system, larger he chances of failure
- Failure poses "future costs"
  - "*The failure of e-Gov today increases the barrier to e-Gov projects in the future in two main ways. First, through loss of morale of stakeholders, particularly e-government champions who may 'defect' to private sector or overseas. Second the loss of credibility and trust in e-Gov as an approach to change"* (Heeks, 2003)

In developing Asia, additional barriers exist

- Transacting online requires credit cards. The BOP have none
  - E.g. Less than 4% of the TOTAL population of India and Sri Lanka have a credit card
- Cost benefits analysis for government automation unproven in the developing world
  - It works for the West – sometimes: cost of investment in ICT more than off-set by savings in labor cost (Stanforth, 2006)
  - In the developing world, labor is ten times cheaper, and software+hardware much more expensive
- But developing countries, specially developing Asia, have undertaken LARGE re-Gov initiatives along with telecenter programs
  - E.g. Sri Lanka (national level – *e-Sri Lanka*), India (state and now federal level), Nepal, the list goes gone

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Telecenters are popular and growing in numbers, as shown by examples in Pakistan, India and Sri Lanka

Country	Organization	Number of telecenters to be deployed or already deployed
Pakistan	Pakistan State Oil Pakistan Telecom Authority Post Office Telecenters Agha Khan Rural Support Program Karakoram Development Authority Allama Iqbal Open University Telecard, Mobilink,Telenor Entrepreneurs	3,500 400 12,000 200 100 2,000 200 Several 100
India	MS Swaminathan Research Foundation ITC (E-Choupal) Drishtee Tarahaat Gyandoot N-Logue Gramdoot	95 20,000 1,020 196 21 6,000 200
Sri Lanka	USAID Sarvodaya E-Sri Lanka/ICTA	500 189 1,000

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In Asia, telecenters come in various forms, and provide a range of services: some “tele” services, others are not

- Some services dependent on having some telecommunication facilities
  - Telecommunication services (voice, fax, internet)
  - Information (e.g. agricultural information for farmers) obtained via the internet to telephone, disseminated locally
- Some services that benefit from connectivity but not dependent on it
  - Capacity building for rural communities
  - E.g. language training, training trade skills for farmers
  - (often via CD’s that are available or through instructors who physically visit the center).
- Often a host of services NOT dependent on telecommunications
  - Telecenter operator collect bills from villagers, travels to town and pays them. Charges INR5 per bill
  - “Telecenter” as village meeting house (simply providing a common facility/space).

Many tele- services provided for free, as part of a larger social objective

- Many services provided for free
- Voice/fax are the among the few services routinely “sold”
  - Citizens expect to pay for phone calls made at telecenters
- Willingness to pay for Internet at times untested
  - Lack of content?
- But all of this s seen as “OK”
  - Most telecenters are donor funded and services nearly fully subsidized
  - Many are implemented as pilots, without concrete scale-up plans
  - Seen to provide other larger social objectives
- “*Telecenters are a highly visible, powerful and inexpensive political tool. They generate much fanfare during early planning and inauguration stages of the programs, but interest in their programs wane shortly afterwards”* (Proenza, 2003)

Most telecenters are already not financially sustainable; those that are depend on voice (phone calls) for large portion of revenue

- Systematic studies on telecenter sustainability not available
  - South Africa exception (Peter Benjamin PhD thesis and ITU Africa,2001)
- We DO know that a telecenter needs to be run “like a business” to ensure financial sustainability (Amin, 2003)
- Peter Benjamin’s 4 year evaluation of South African telecenters
  - The entrepreneurial model successful; government operated ones not
- Voice is the only service that is providing steady stream of revenue (not internet)
  - E.g. e-Sri Lanka’s (planned) 1000 telecenters depend on voice calls to make up 60% of the revenues (World Bank,2003)
  - Many get 100% of revenues from voice (other services are funded by donors, NGOs etc)

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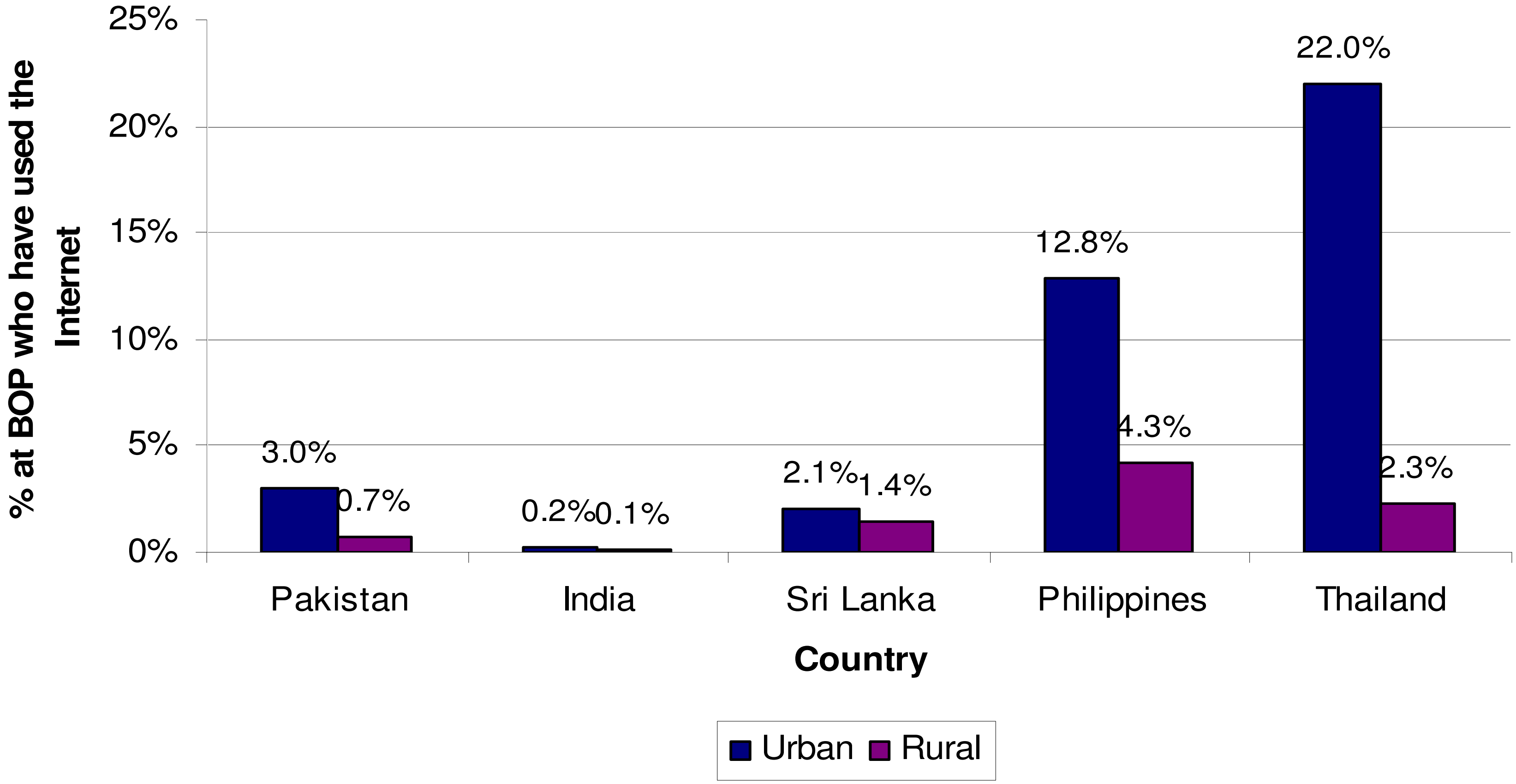
What have telecenters delivered? So far, not much: internet use @ the BOP is low, urban/rural divide persists



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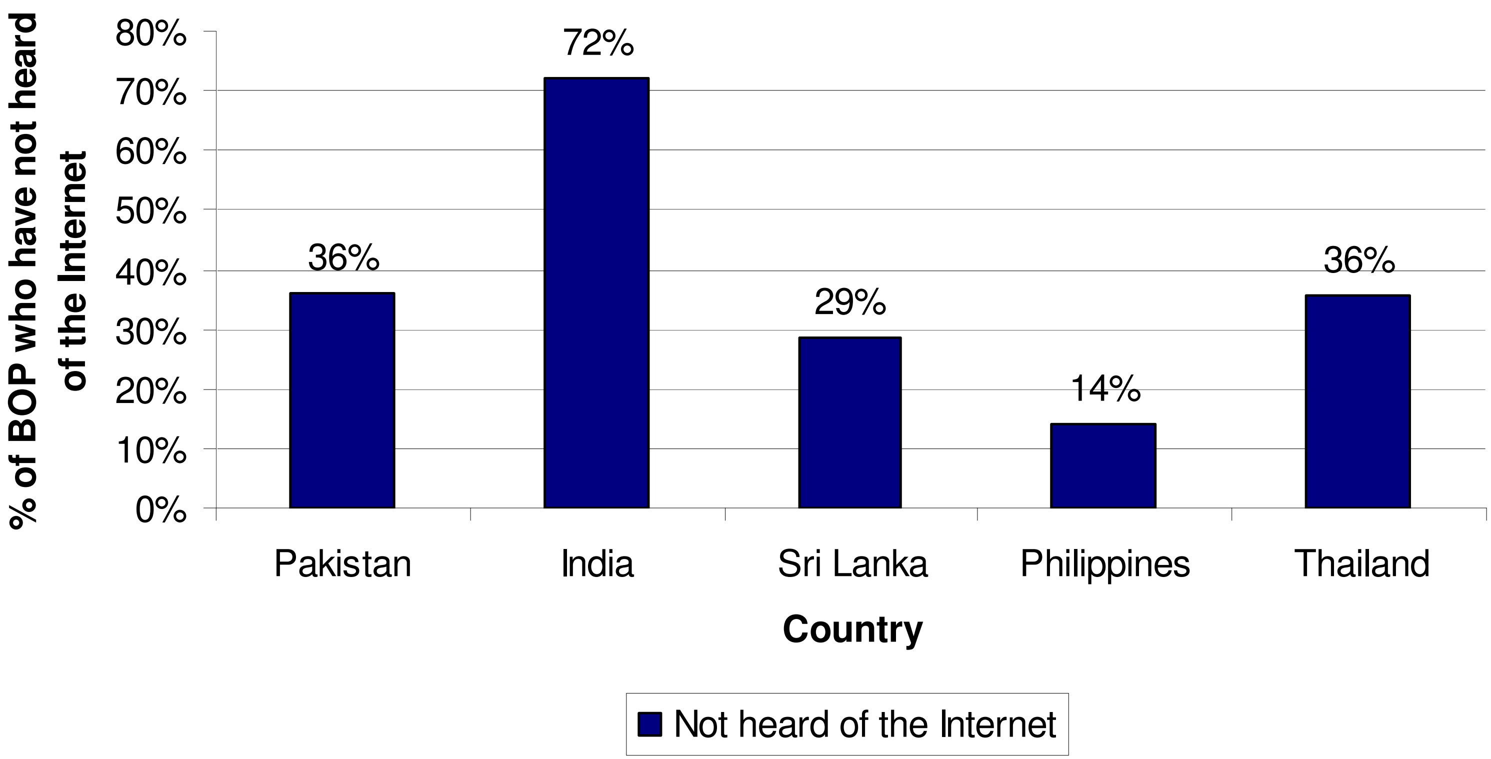
Most people at the BOP have not heard of the internet….



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…. let alone have access to it

	Pakistan	India	Sri Lanka	Philippines	Thailand
Target BOP population of study in millions	77*	260	4**	41	15
BOP population as % of total population	46.67%	23.74%	20.00%	46.07%	23.44%
% at BOP who have accessed the internet	**1.90%**	**0.30%**	**1.50%**	**8.80%**	**10.40%**

So far, E-Gov is depending on an unsustainable, barely used channel (front–end) to reach the BOP…

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

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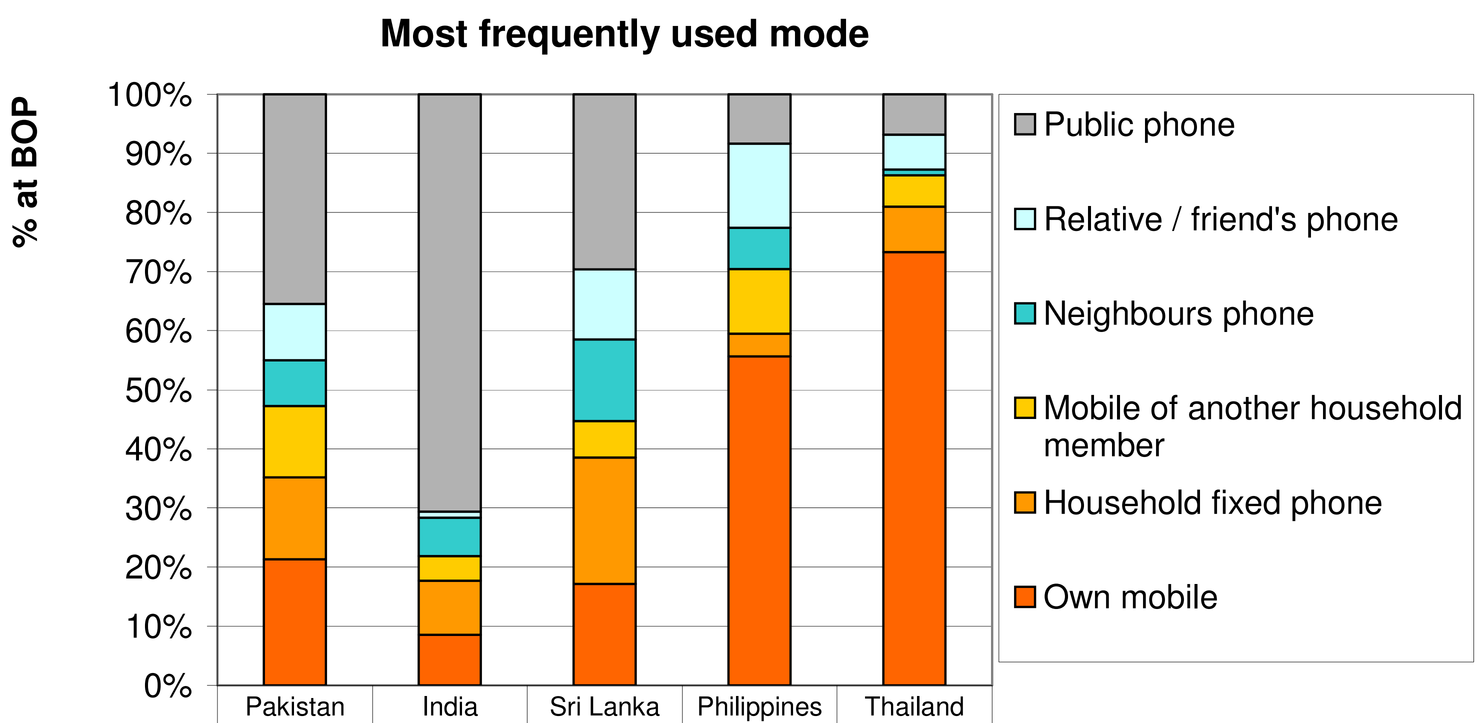
Majority @ the BOP have access to and use phones

	Pakistan	India	Sri Lanka	Philippines	Thailand
% of those approached who have used a phone in the preceding 3 months	**98%**	**94%**	**92%**	**93%**	**95%**
Target BOP population of study in millions	77*	260	4**	41	15
BOP population as % of total population	46.67%	23.74%	20.00%	46.07%	23.44%

*excluding FANA/FATA – Tribal Areas;
**excluding North &East Provinces (conflict zone)

The BOP use public phones when a (fixed or mobile) phone is not owned



	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%
Mobile of another household member	12%	4%	6%	11%	5%
Household fixed phone	14%	9%	21%	4%	8%
Own mobile	21%	9%	17%	56%	73%

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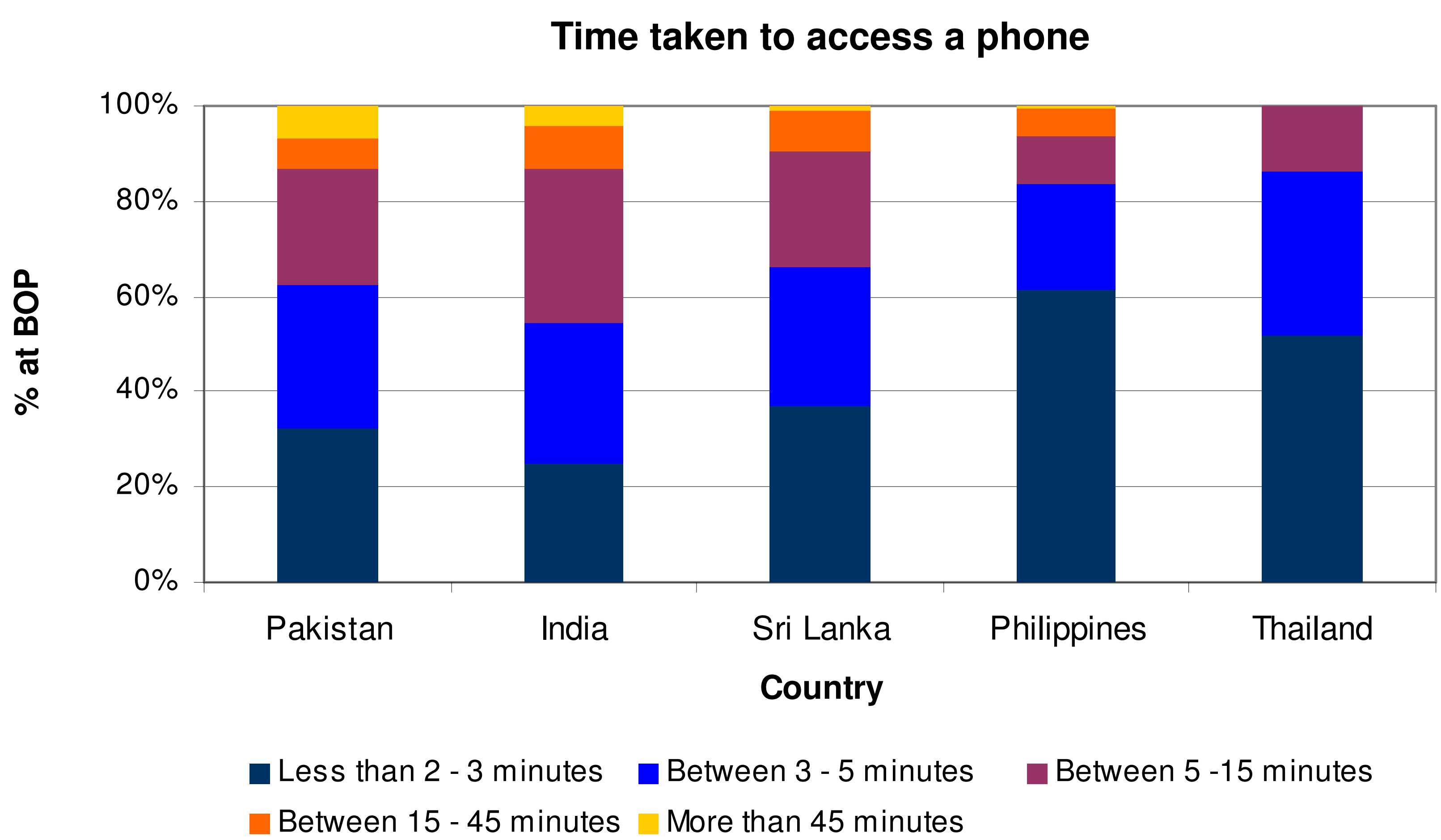
Even for those who do no own a phone, one is accessible quickly



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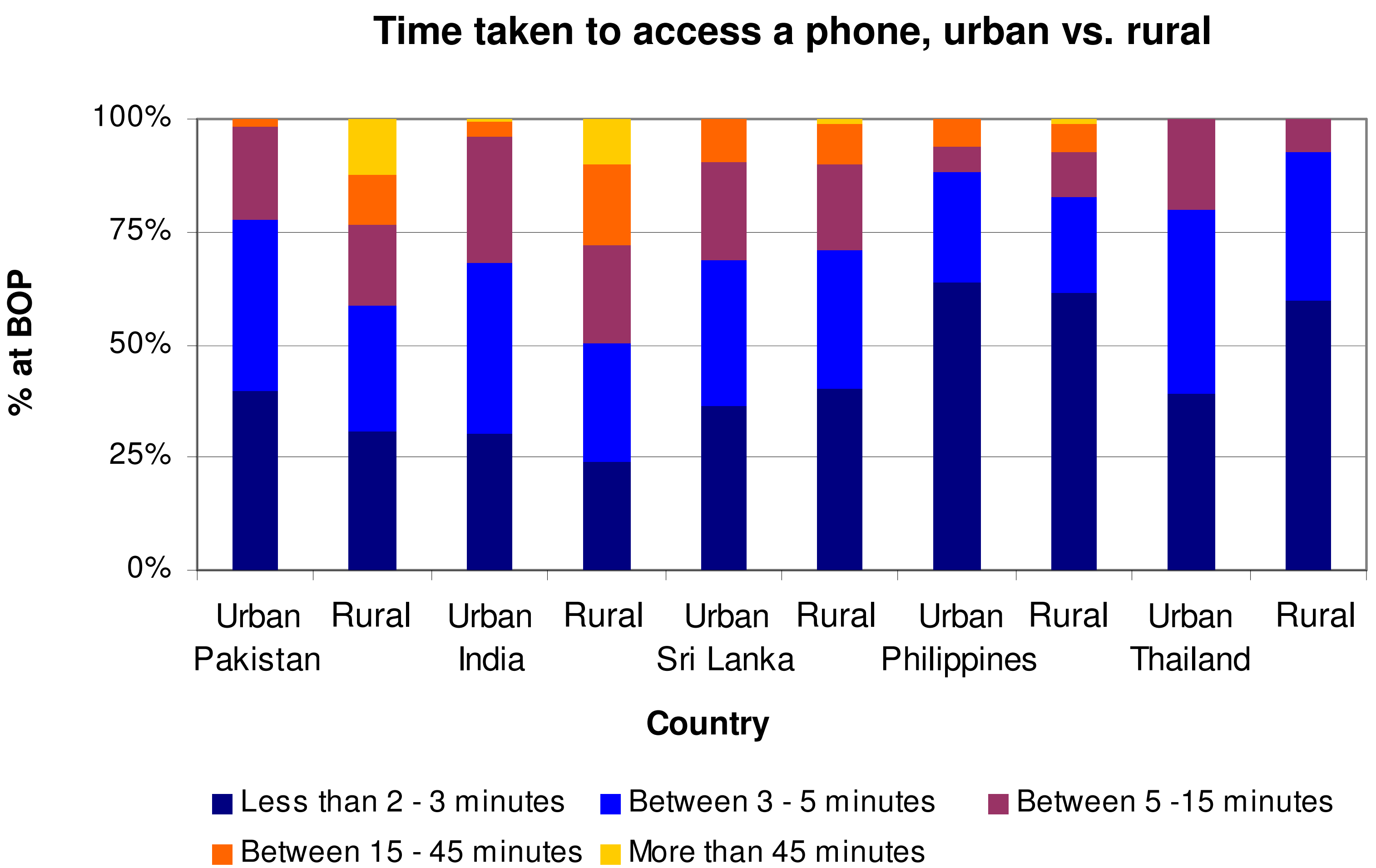
Phones are accessible, even in rural areas



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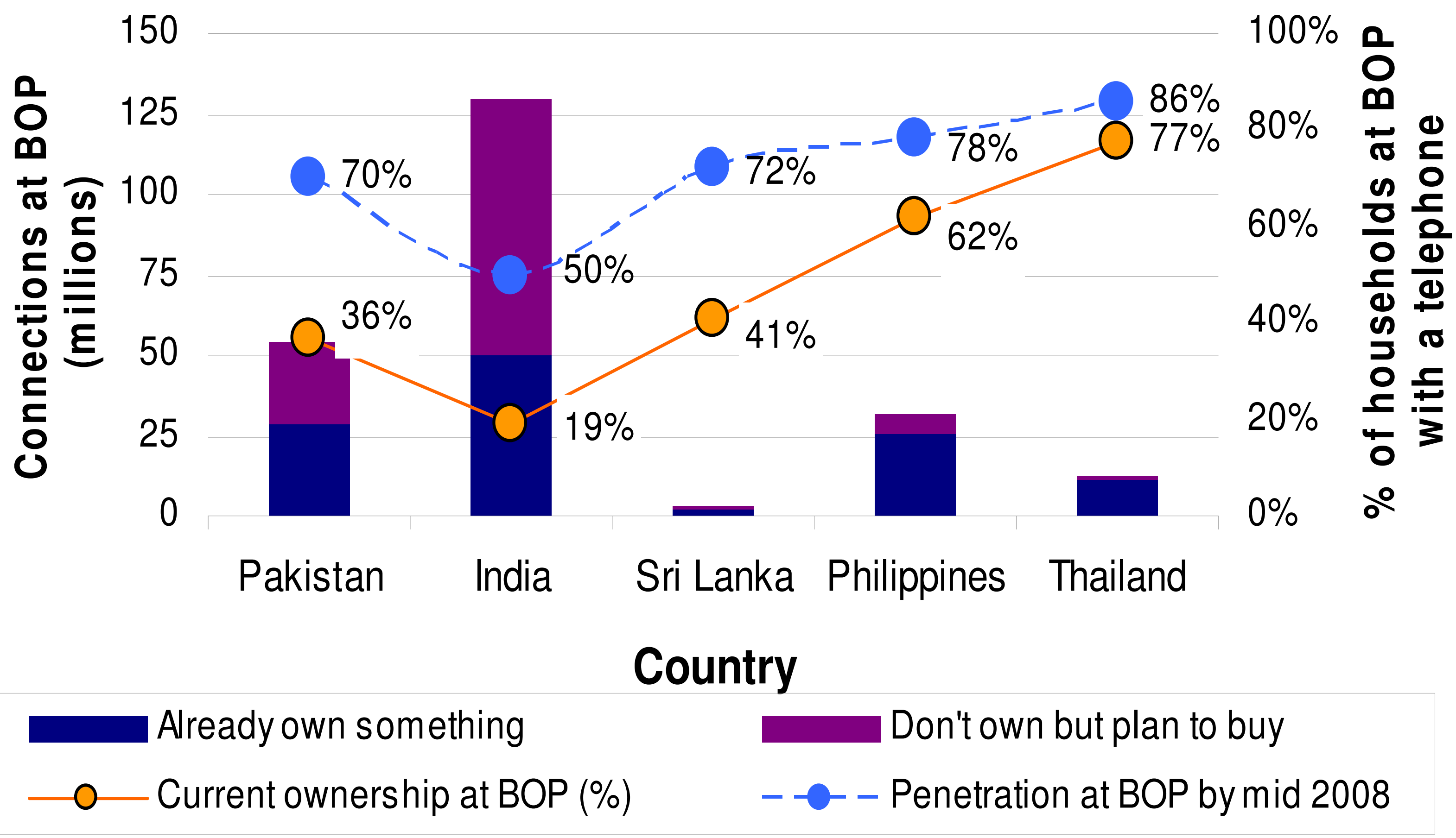
And ownership is likely to increase: 232 million at the BOP will own phones by mid 2008



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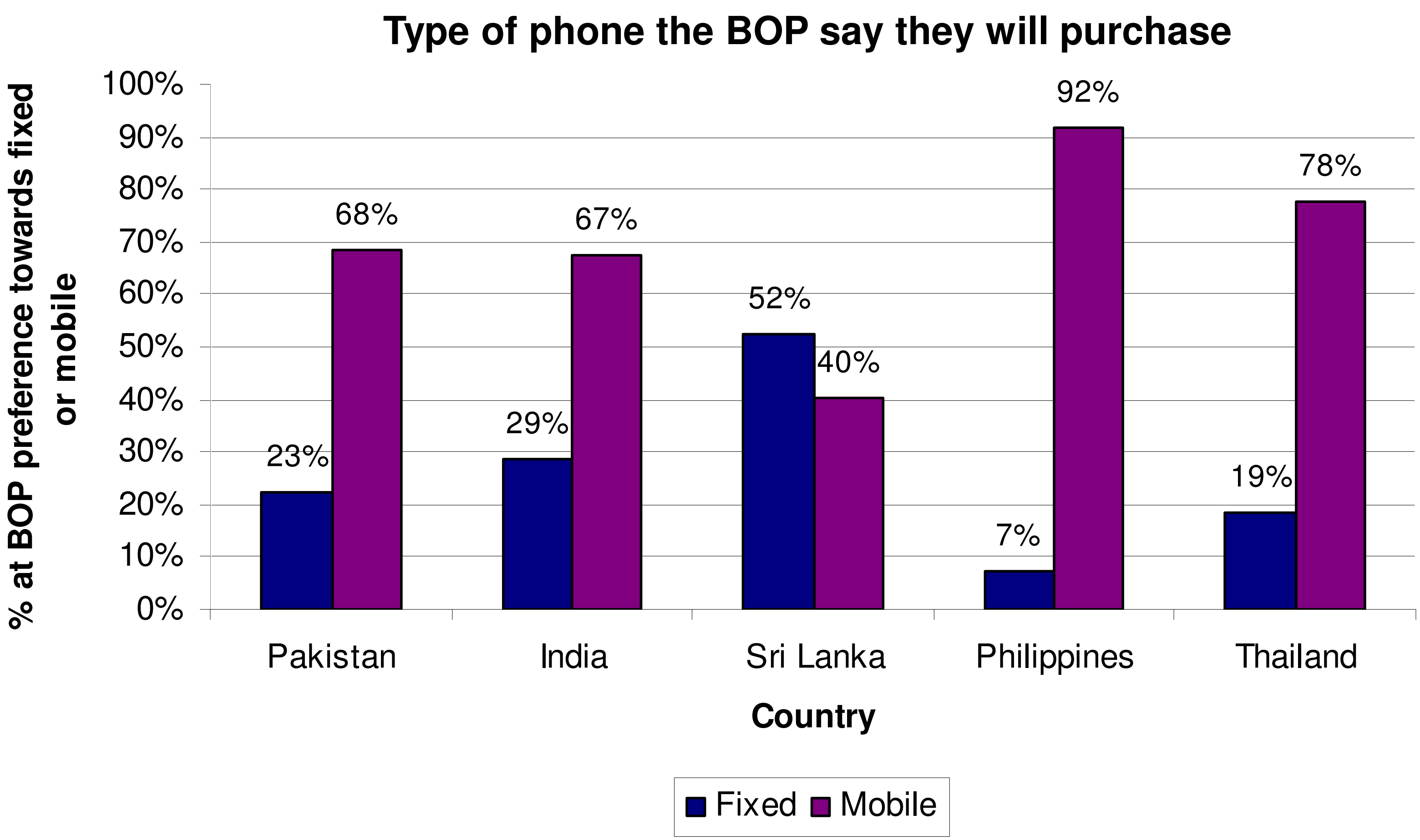
…they will mostly purchase mobile phones or those with mobile-like capabilities (e.g. CDMA phones)



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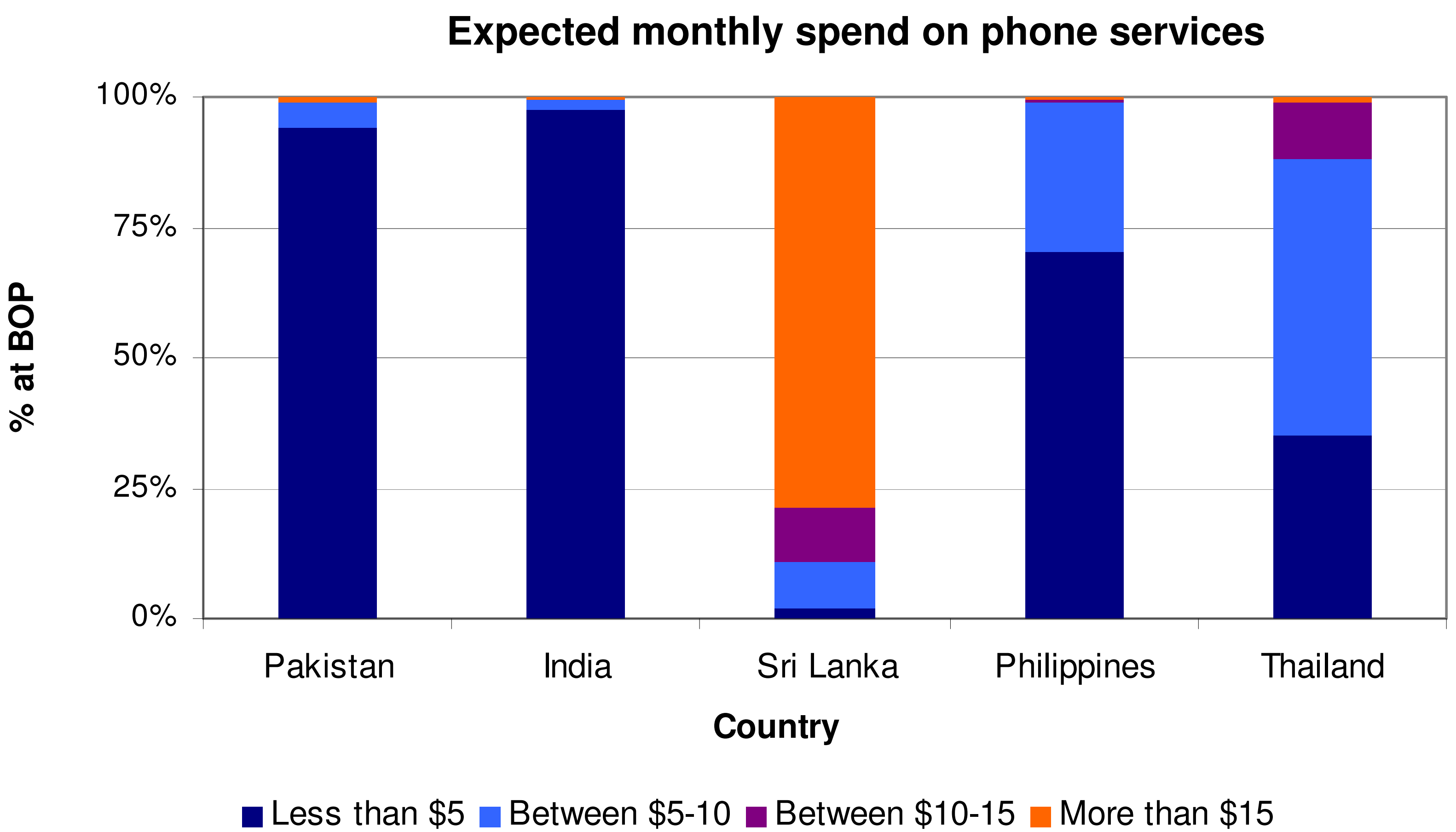
And they are willing to pay up to USD 5 per month for the service



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Voice is/was making telecenters sustainable. But the phone challenges telecenter sustainability

- The BOP is spending money at telecenters
  - But on voice
- But soon this money is now going to be spent on a phone they (or their family members) own
  - Money going to telecom companies, not telecenters
- Also resulting in less ‘traffic’ walking into telecenters
  - lowering even other revenue streams
- Already public access phone model under threat
  - Bangladesh mobile phone ladies losing over 50% of their income (Shaffer, 2007). Grameen hiring consultants to examine other alternative revenue generation models for the nearly 250,000 “phone ladies”.
  - Senegal's public call centers experiencing declining revenues (Le Soleil, 2007)

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YES. Phones can Inform…..e.g. GIC (Government Information Center), Sri Lanka

- Dial 1919 from any phone to reach the GIC
  - Call picked up within 3 rings
- Speak in any of the 3 official languages: English, Sinhala, Tamil
- Ask questions about how to obtain a government services
  - E.g. "I've lost my National ID Card. How do I get a new one?
- Highest used e-Gov service in Sri Lanka; extremely high satisfaction levels revealed in surveys
  - The rest (USD 32MM worth of e-Gov projects) still in no customer-ready, after 4 years
- Used by citizens from EVERY district of the country, even the rural
  - Usage nearly proportional to household phone penetration in each district (Samarajiva, Galpaya, 2007)
- Capitalizing on economics that work well in Sri Lanka/India, similar countries
  - Booming call-center market with many world-class private sector call centers
  - Serving the US/UK markets; i.e. night time in Asia
  - Excess capacity (empty seats) at all call centers during the day time in Asia
  - Enabling very cheap service to be obtained by government
  - From already trained and experienced call centers/operators

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…Interact. E.g. passports in Gujarat

- Issuance of passports in the state of Gujarat, India
- Passport application has 7 stages.
  - Previously lack of information on how application is proceeding through the stages
- New SMS based service changes this
  - Citizen sends SMS
  - Receive an SMS back informing them of progress (or lack of) at each stage
- Reduced queues outside passport office reduced from 900 (previously) to 350. (Mukherjee, 2003)
  - Most came just to inquire about the state of their passport
- The overall passport process not re-engineered.
  - But a SMS capability added
  - Along with ability to keep track of where the application is at, at each stage

…..and Transact. E.g. tax payments in the Philippines

- SMS tax payment in Philippines via g-Cash "payBIR" service
- Pay multiple types of taxes and fees
  - income tax, fines, stamp duty
- Payments of up to P10,000 (about USD 180) can be done
- SMS a receipt sent to citizen for records
- Capitalizes on a "cultural phenomena"
  - Philippines in the SMS capital of the world (over 10 SMSs per person per day!)
  - Mobile ownership and use high
  - The BOP migrant population (e.g. housemaids) already use the SMS/mobile phones to send money from overseas
- Payment through mobiles are already happening, in large scale. The early adopters ARE the BOP
  - SMARTMoney (Philippines)
  - Wizzit (Africa)

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And it can do it now (not later), without discriminating against the BOP

- Telecenters a long way from rolling out in mass numbers; phones are here, now
  - Telecenters take time to roll out; require awareness campaigns to become popular
- Phone-based e-Gov unlikely to face sustainability issues in the end-delivery (people willing to pay for phone service. Not telecenters)
- Not just information service provision, but full transaction, without discriminating against the BOP
  - (0% of BOP with credit cards, vs. 124 million at the BOP who have transaction-capable mobile phones in Sri Lanka, India, Pakistan)
- E-Gov through phones benefit the BOP NOW, not at some distant point in the future
- The use of voice can help bridge the literacy barrier
  - But not always. Philippines saw poor citizens intimidated at the thought of
- Internet use requires BOP citizens to be trained; phone features being used even by those who don't speak English
  - Early research on phone use acting as "bridging" technology to later computer use

And it makes economic sense in Asia..as long as technocrats can avoid the "perfectly re-engineered" solution for now.

- Can be provided at reasonable prices
  - The supply of call center/AVR based e-Gov is cheap (use existing call centers and excess capacity where possible)
  - In addition Voice and SMS prices coming down constantly
  - The end-device (i.e. the phone) is already owned or accessible to most BOP citizens (so no extra cost to provide that)
  - Makes the service affordable to citizens, without requiring huge government subsidies'
- Focus on simple, quick solutions that avoids the pit-falls of large e-Gov initiatives
  - Successful (simple) phone applications likely to positively-dispose government employees toward further re-engineering (and "real automation")

Surprisingly governments in Asia are still insisting on large re-engineering initiatives & telecenters. Donors are supporting this

- Political motivations?
  - Telecenters = grand openings, publicity
  - E-Gov project = possible opportunities for making money during the grant of tenders/contracts
- Lack of awareness?
- Its time for governments, donors and civil society to re-think immediate ways to empower the BOP using mobile-centric models
  - Not just in e-Gov, but other initiatives (e.g. agriculture, fisheries)
- Private sector is getting it right
  - Most value added services via mobile ARE delivered through mobiles
  - Government should do the same (think of e-Gov as a VAS)

Does NOT mean internet (via telecenters) and re-engineering of Government services are not needed

- G2G (and maybe G2B) e-Gov services does requires re-engineering to reap benefits
  - E.g. online procurement is one of the huge cost-savers in government
- Some services will always need high-bandwidth
  - Uploading a picture + filling out an online passport application, then submitting online
- Certain types of services (and related economic/social benefits) need broadband
  - E.g. Rural Business Process Outsourcing, creating of jobs
- But these are for the future: at least 5 – 10 years to REALLY reach the BOP
- Question: Do we keep the BOP on the wrong side of the digital divide till then?
- Or do we find an interim solution?
- What is the final state of equilibrium? Probably a hybrid of phone AND fat-pipe internet

1. Do small changes to government process (not the ideal/perfect solution, but something that work now/soon)

2. Use to deliver the service

Because mobile phones are device that people at the Bottom of the Pyramid in Asia use. It represents the best hope for getting the benefits of e-Government to them NOW (not later)

Thank you.

- OUR Mission
  - To improve the lives of the people of Asia Pacific by facilitating their use of information and communication technologies; by catalyzing the reform of the laws, policies and regulations to enable those uses; by building Asia Pacific based human capacity through research, training and advocacy

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