Success in voice ➔ success in data

Voice & Data SAARC Operators' CEO Conclave

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15 November 2010

Agenda

- The challenge of catching up, if the problem is defined conventionally
- The opportunities, if defined otherwise
- What conditions must be satisfied?
  - Handsets
  - Networks
  - Services
  - Literacy
  - Affordability
- Who must do what?

Internet subscriptions per 100 & Internet users per 100 (OECD)

Legend: ■ Internet subscriptions per 100   ■ Internet users per 100

Source: ITU, 2009
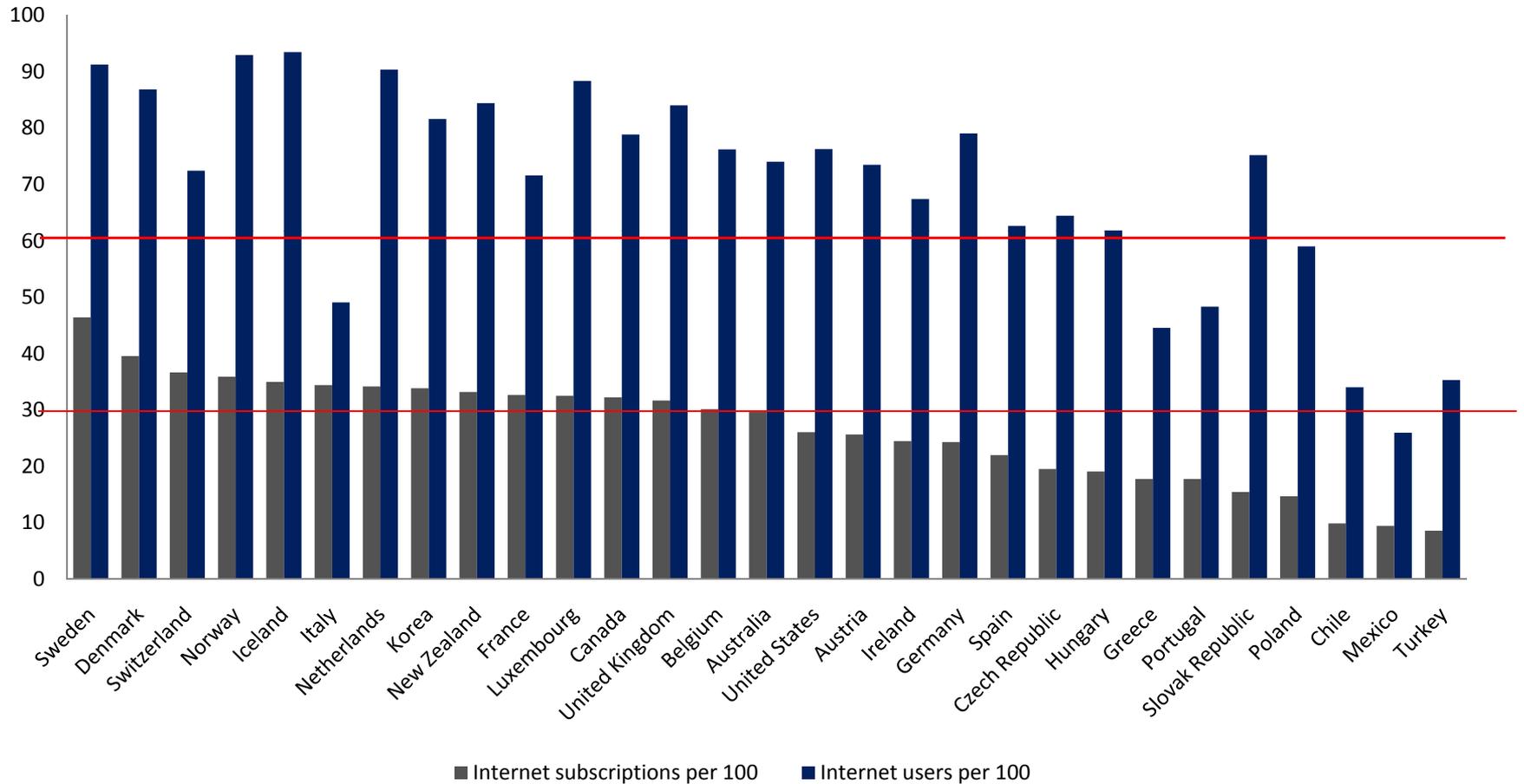
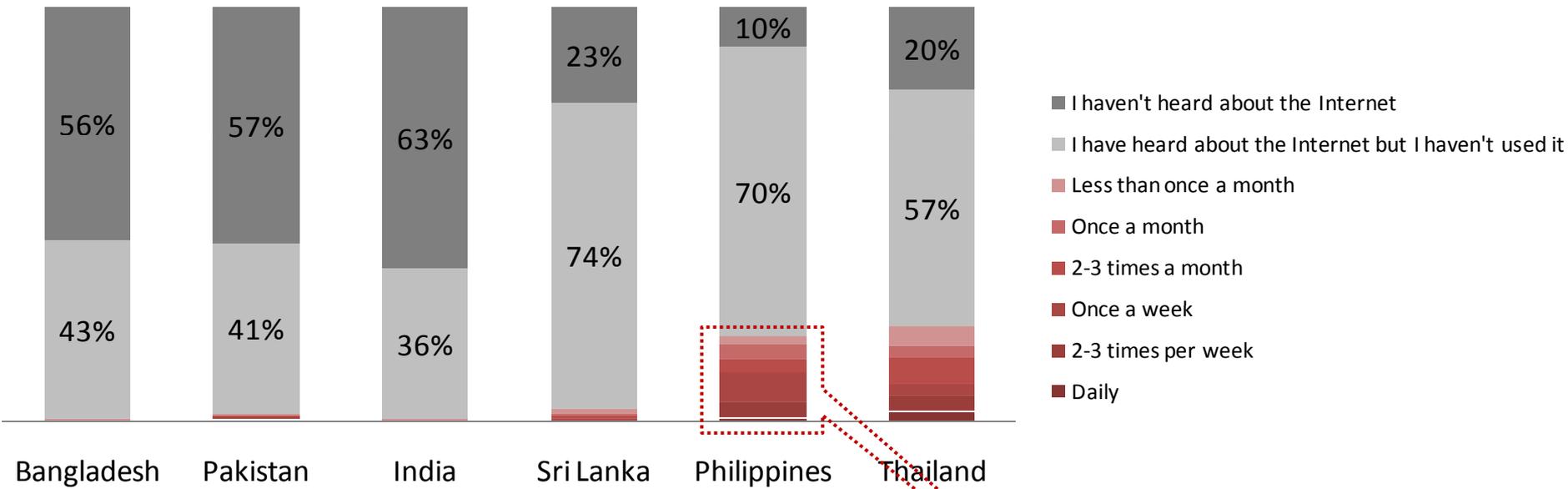# Internet subscriptions per 100 vs. Internet users per 100 (SAARC + China)
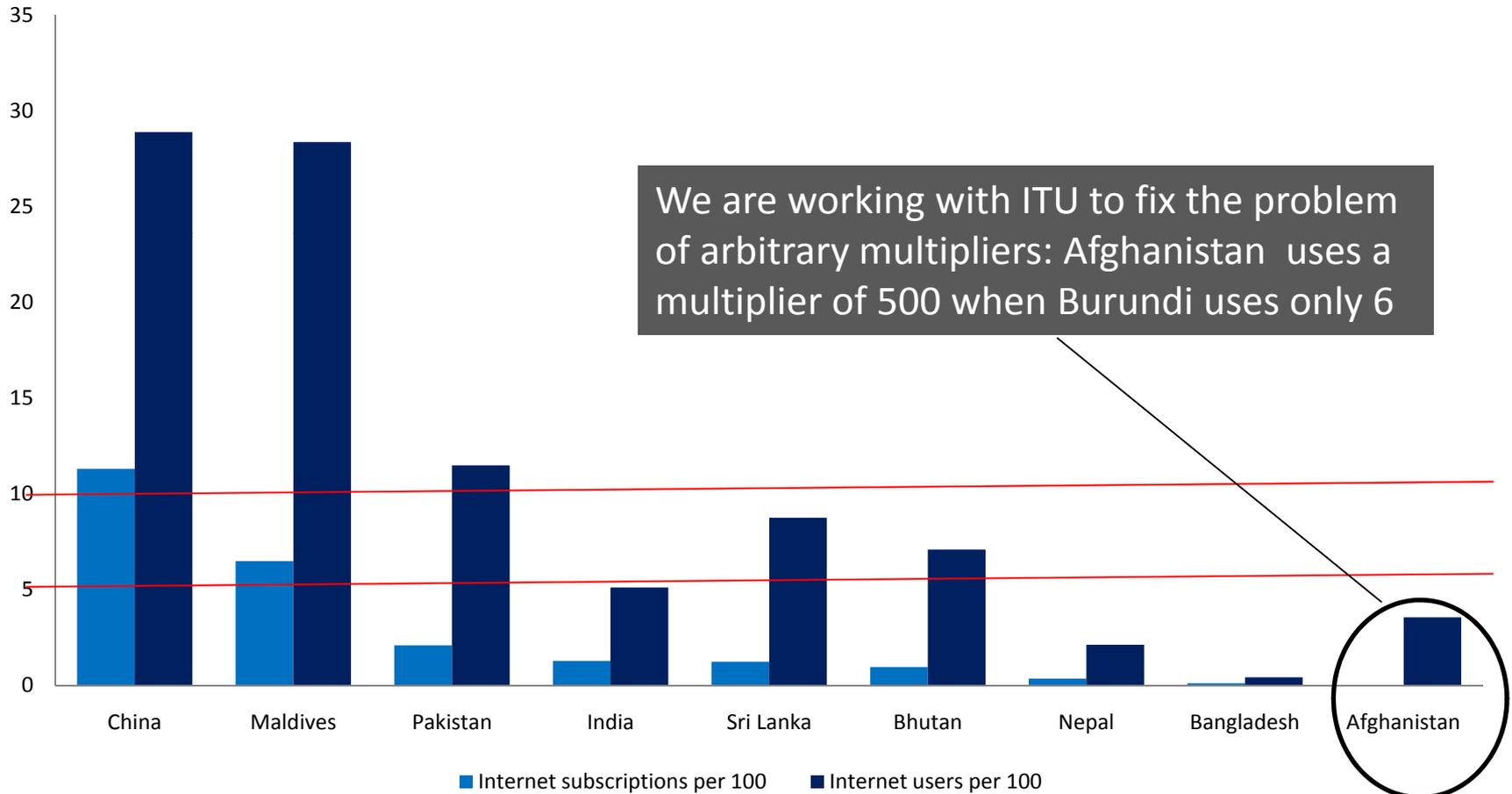
We are working with ITU to fix the problem of arbitrary multipliers: Afghanistan uses a multiplier of 500 when Burundi uses only 6

Chart categories: China, Maldives, Pakistan, India, Sri Lanka, Bhutan, Nepal, Bangladesh, Afghanistan

Legend: ■ Internet subscriptions per 100   ■ Internet users per 100

Source: ITU, 2009

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Internet use & awareness at the Bottom of the Pyramid (BOP) in 6 Asian countries in 2008, acc. to 10,000-sample representative survey
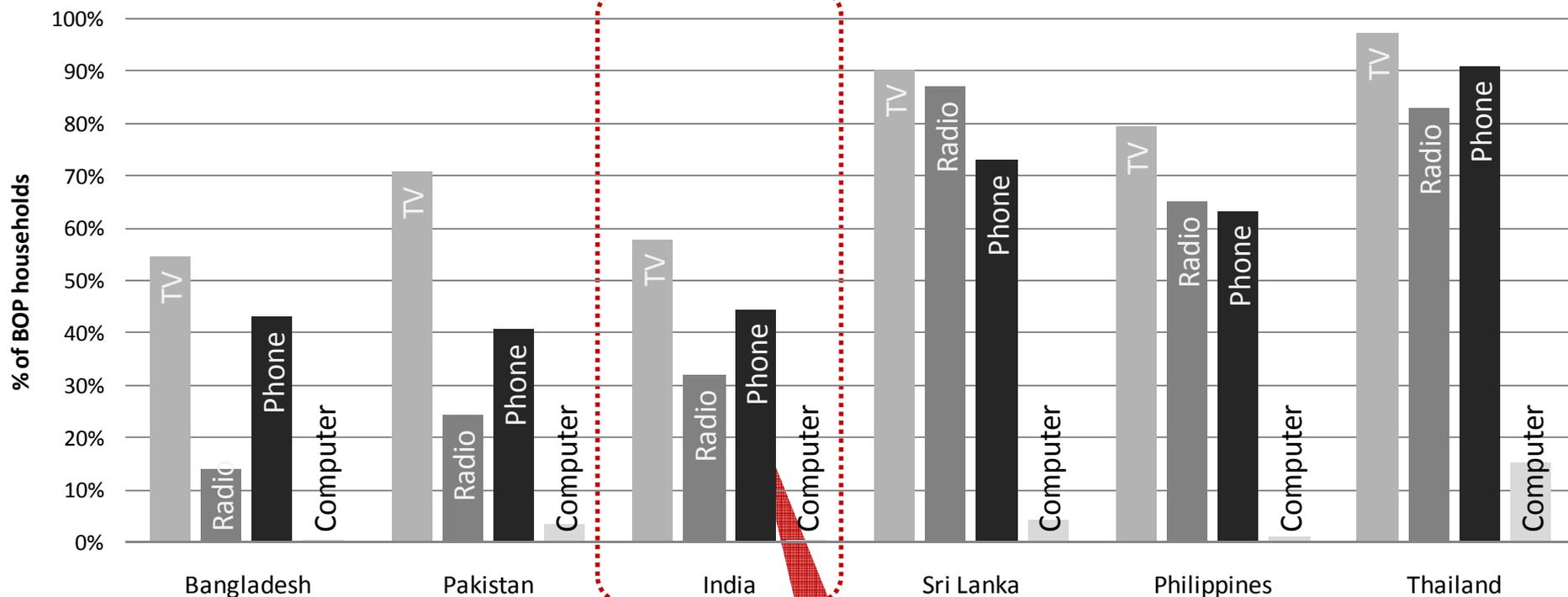
Internet use (% of BOP teleusers)

Legend:
- I haven't heard about the Internet
- I have heard about the Internet but I haven't used it
- Less than once a month
- Once a month
- 2-3 times a month
- Once a week
- 2-3 times per week
- Daily

Bar values:
- Bangladesh: 56%, 43%
- Pakistan: 57%, 41%
- India: 63%, 36%
- Sri Lanka: 23%, 74%
- Philippines: 10%, 70%
- Thailand: 20%, 57%

	Bangladesh	Pakistan	India	Sri Lanka	Philippines	Thailand
Use the Internet	0.6%	2.2%	0.8%	3.2%	20.7%	23.0%

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Among BOP teleusers

The conventional path to the Internet is too long

But, phones have overtaken radios in BOP households in the Indo-Gangetic Plain

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

% of BOP households

Bangladesh — TV, Radio, Phone, Computer
Pakistan — TV, Radio, Phone, Computer
India — TV, Radio, Phone, Computer
Sri Lanka — TV, Radio, Phone, Computer
Philippines — TV, Radio, Phone, Computer
Thailand — TV, Radio, Phone, Computer

Mobile or fixed phone

And computers are nowhere

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Among BOP teleusers

Use of phones to make/receive calls (not only owners; those using phones of others too)

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%

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Among BOP (OUTER SAMPLE)

Mobile-dominated mediascape in the developing world?

- Can mobiles play the role played by computers in the developed world?
  - Are screen and input limitations critical?
  - Is 3G enough?
    - Some developing countries yet to release 3G frequencies
  - Are services that people want available?
  - Is literacy a precondition?
  - Will there be demand?

Second hand handsets bought for almost half the price of brand new handsets

Mean price paid by mobile owners for their handset (USD)

■ Brand new   ■ Second hand

	Bangladesh	Pakistan	India	Sri Lanka	Philippines	Thailand
Brand new	60	47	48	65	63	96
Second hand	35	27	35	36	28	38
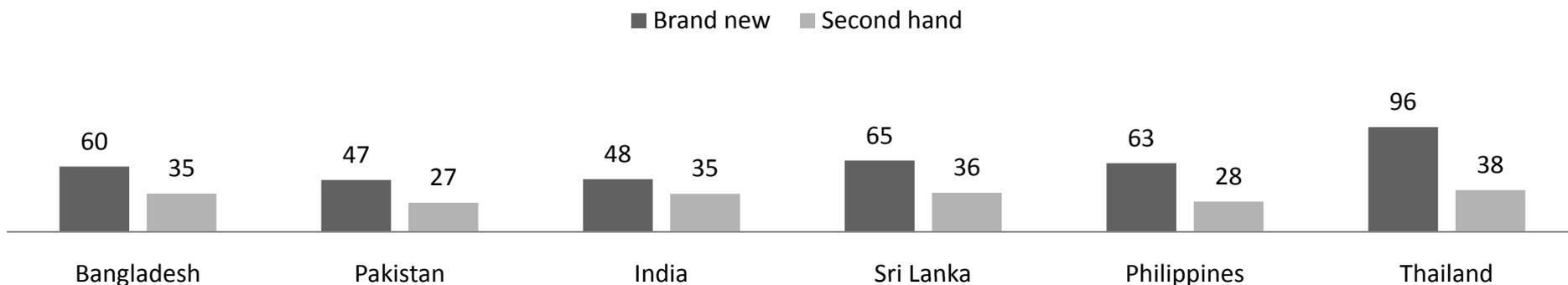
2008 figures were lower than those for 2006, now even lower

Netbooks converging with smartphones in functions and price

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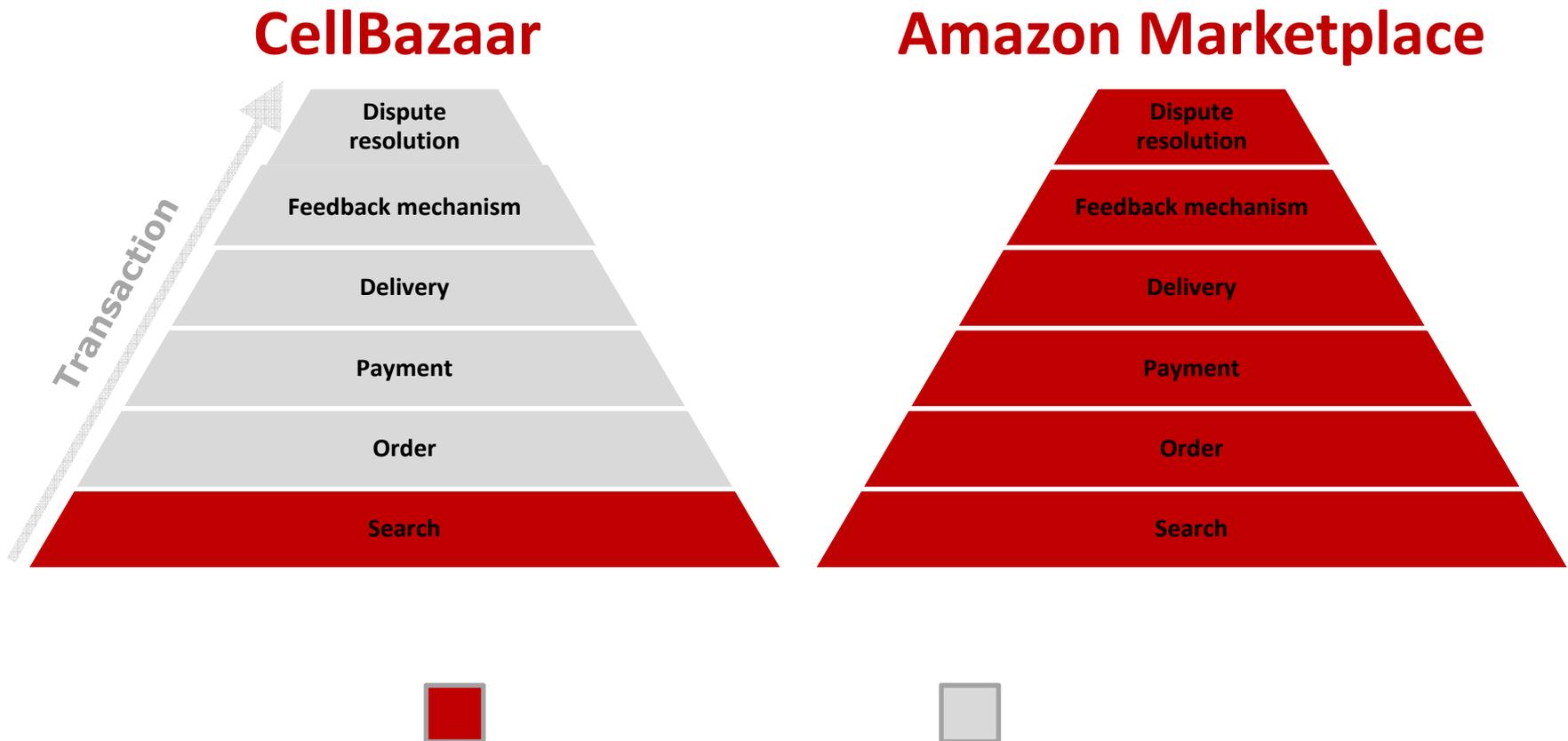www.lirneasia.net

Among BOP mobile owners

What use are handsets without data-capable networks?

- Thailand has the most advanced handsets, among poor as well as rich
  - But no 3G networks, all they have are EDGE networks
- Governments must release frequencies so operators can enable data communication
  - And in ways conducive to investment
    - Not simply to extract money for government
  - Where is the equivalent of President Obama's 10-year roadmap to release 500 MHz for broadband?
    - This, in addition to Digital Dividend earned by releasing frequencies wasted on analog TV on 700 MHz Band

# What use are handsets and networks without services?

- Services of interest to people are emerging
- More encouragement needed through app store model

Example of services/applications poor people want to use: CellBazaar in Bangladesh

CellBazaar

Transaction

Dispute resolution
Feedback mechanism
Delivery
Payment
Order
Search

Amazon Marketplace

Dispute resolution
Feedback mechanism
Delivery
Payment
Order
Search

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

Examples: Tradenet in Sri Lanka
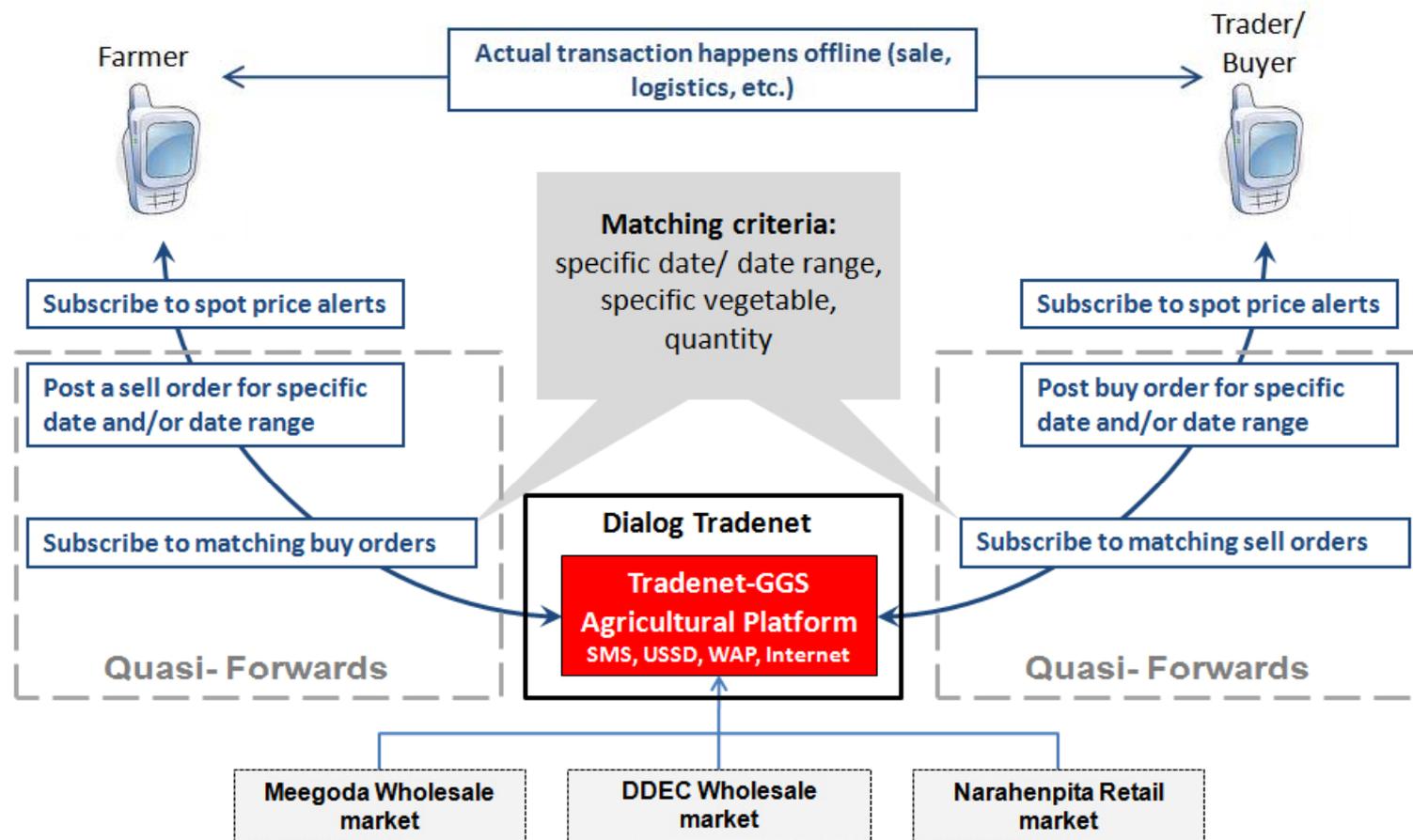
Tradenet price alerts have improved farmer livelihoods

- Farmers less vulnerable to price fluctuations
  - A non-representative but large sample of farmers (300) in the catchment area of largest wholesale market in Sri Lanka, earned a premium 23.4% on average daily market price using Tradenet
- Farmers show strategic depth in their livelihood decisions, using Tradenet alerts to decide when to harvest and sell
- Farmers now aware of fetching better prices; has created demand for crop advisory and extension services
  - Now possible using voice
  - But is this not optimally done using data?

H.M.M.G. Dissanayake Banda

- Owns and cultivates 1.5 acres of land, located 10-15km from the market

- Knows how to grow cabbage, sweet potato, brinjal, big onions, rice

- Using Tradenet for 10 months

After Using Tradenet:

- His cabbage crop was ready for harvesting during the 3rd week of April 2010

- On 21st April 2010, he noticed prices had risen from USD 0.18/Kg in the morning to USD 0.32/Kg by late afternoon.

- Mobilized friends and family to quickly harvest the crop (using flash lights at the end since it was dark by then)

- Obtain USD 0.41/Kg - a premium of USD 0.14/Kg (51.8%) on what he had hoped to make on the crop.

- He has been following prices of green chillies on Tradenet but does not know how to grow them so is now looking for additional advisory services that can help him understand green chili cultivation

Literacy?

- Required for books and newspapers
- Not required for radio, or for TV
- Why for Internet?
  - Because we think of Internet use as being like how intellectuals use it; why?
  - The smaller screen of the mobile/netbook will make the keyboard less significant and voice inputs more important
    - What will this do to literacy?

Will there be demand?

- Do the poor have money to pay for services?
    - The answer is in new business models
    - And in services provided over the Internet putting money in people's pockets, instead of taking from their pockets
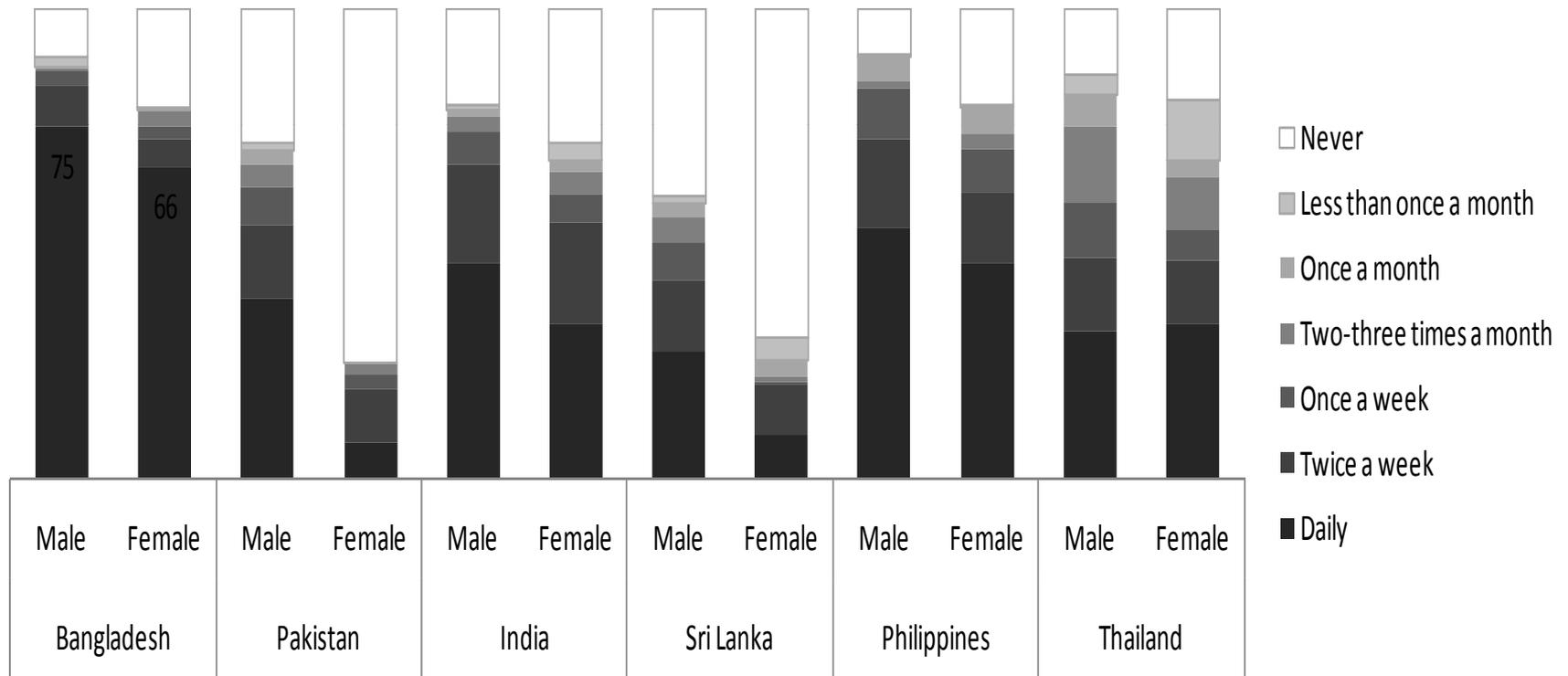
Total cost of mobile ownership in 77 emerging economies

Monthly TCO by country

Average 10.88 US dollars

Source: Nokia Research 2009
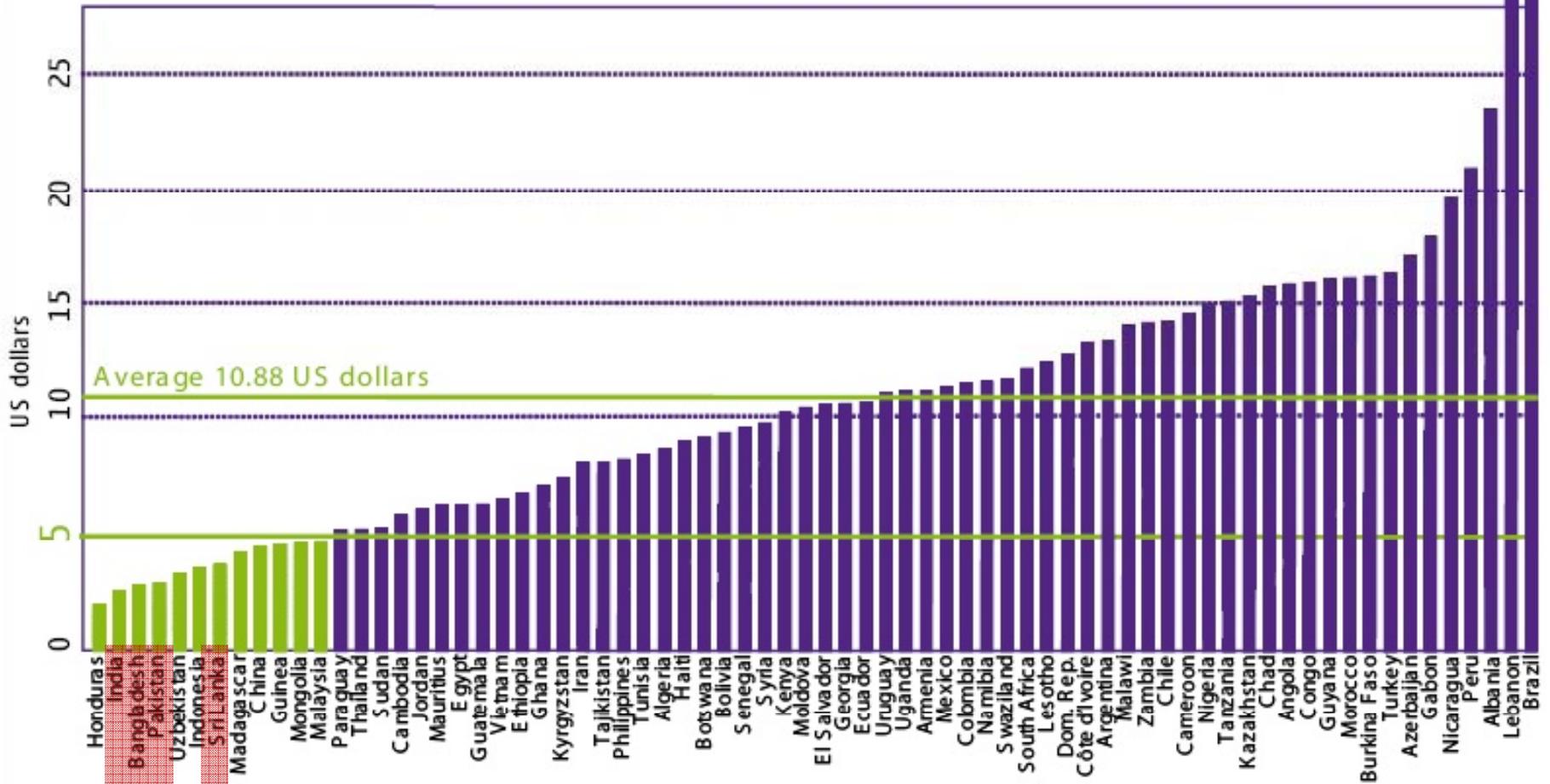
Attitudes re phone for making/saving money: Strong in some countries, not in others

Use of the phone for business, financial or work puposes (% of BOP mobile phone owners)

Legend:
- Never
- Less than once a month
- Once a month
- Two-three times a month
- Once a week
- Twice a week
- Daily

Countries (Male / Female):
Bangladesh, Pakistan, India, Sri Lanka, Philippines, Thailand

Values shown: 75 (Bangladesh Male), 66 (Bangladesh Female)

Can all enjoy the benefits of the Internet?

- Yes, but not unless
  - We are open to multiple paths
  - And governments, operators, applications providers do the right things,
    - Or at least do fewer wrong things

Investment, above all

- Mobile voice success was achieved because the necessary 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
  - In many countries, license renewal uncertainties are affecting investment

What policymakers & regulators can do: Leverage business model that worked for voice for data

- 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

What operators can do: Prepaid "sachet" pricing

- Innovative 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
- Be hospitable to applications: decentralized innovation
  - App store is the way to go
    - Standard interface
    - One revenue split w/ advertising, another without

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Rest of us . . .

- Innovate
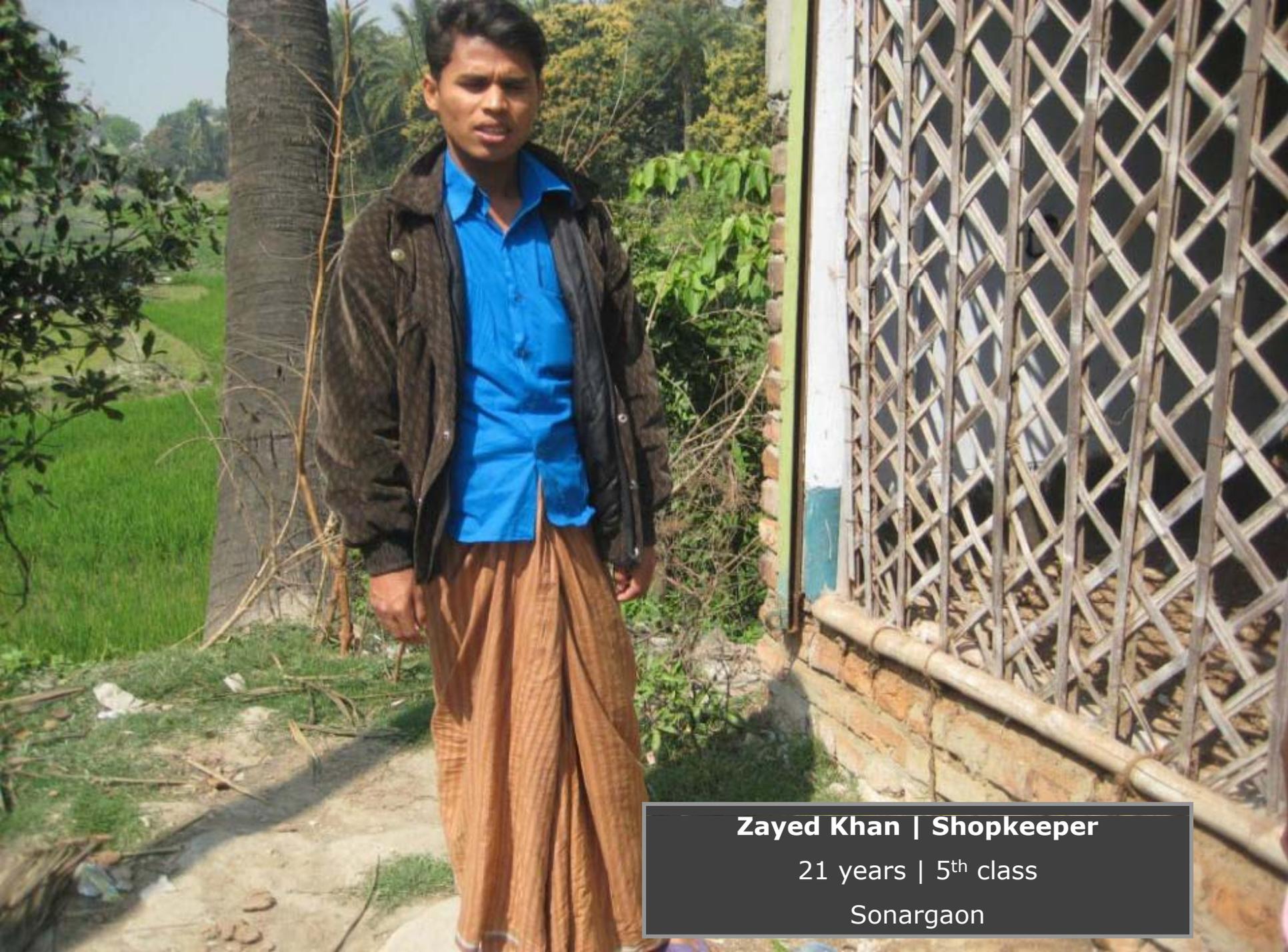
Zayed Khan | Shopkeeper

21 years | 5th class

Sonargaon

Zayed takes care of the shop that his father started ten years back when his eldest brothers was joining farming. The current shop was half its size then and Zayed has expanded it by renting another space next to it. Zayed has been working around the shop since he left school at class five. He was not good in his studies and so his father set up the shop as a way for him to fend for himself. He has been looking after the shop for the past 7 years .

A school near the shop keeps his business going. Peak times of children coming to the shop are usually at 7.00-7.30 AM, 11.00-11.30AM and around 1.00-1.30PM, when children get a break from the school.

Just outside his shop, is a village club of sorts, where young boys to unemployed men of his age, spend their time playing cards and carom. They also constitute a small portion of his clientele but since many of them are of his age group, he finds these people difficult to deal with as they often ask him for snacks and cold drinks for which they do not always pay. Zayed's concern is that seeing his business grow, they might turn against him although many of them are people he has grown up with. He wishes this spot would develop more for them to have to shift.

Zayed is the only respondent in Bangladesh who clearly said that his sole reason behind purchasing a mobile was to expand his business. Unlike before when he did not have a phone and always had to be at the shop, his phone enables him to place his second youngest brother at the shop and turn his attention to other potential business opportunities. His brother calls him if there is a delivery or he does not know some prices. Zayed is able to solve these issues remotely and instructs his brother on cash handling in case of a big delivery.

Growth through mobile

- Zayed first used a mobile phone in 2002 at a friend's place and bought himself a mobile 18 months back (late 2007). He along with his uncle's son went to Dhaka to buy the phone.

- He used Grameen network for the first 1year and later changed to Banglalink because of Grameen's higher tariff.

- He feels that owning a mobile phone has eased his work schedule which used to require constant presence at the shop. Now he can take a break, stay at home on Friday evenings or meet others to explore new opportunities. His younger brother looks after the shop and coordinates with him via mobile.

- Since he took the mobile, more vendors contact him when a new product is launched. He does not know how they get his number but it makes him feel good that he can have a lot more products at no extra effort.

- In his attempt to develop his business, Zayed has applied to Banglalink to obtain a reload SIM. He would like to sell reloads. Since this process was taking more than 2 months, he had tried to purchase a SIM from another vendor who was shifting professions for 20,000 taka but it turned out that there were a lot of dues on that SIM, so he did not take it. He found this by going to the Banglalink office in Narayanganj. He is now waiting to get an official SIM .

Zayed previously had to travel to Dhaka to get his supplies almost every 2 weeks to get his supplies. These were not on Fridays so he had to close his shop , thus losing business. Now the vendors send him stocks from Dhaka based on his calls for supplies. Zayed has now started a chicken selling business. He buys the chicken from a farmer who guides him about the right time to purchase and sells them to buyers who come to his shop. He sells live chickens and buys a hundred chicken at a time.

Zayed recharges his mobile phone from a shop down the same line as his shop. He reloads his mobile for 20 taka everyday. He always pays the money in cash first and then gets the recharge. He has needed to ask the recharge shopkeeper to top-up his phone twice without having paid and in both the times it was a family emergency in the middle of the night. Zayed has also experienced the money transfer system through mobile recharge widely prevalent in Bangladesh. The village 'maulavi' had to send his family in the village money in an emergency while he was away in Dhaka. He sent 1000 taka as flexi to Zayed's phone and Zayed paid the whole some to the family. He did not take any interest on the amount as he considered such a transaction un-Islamic.
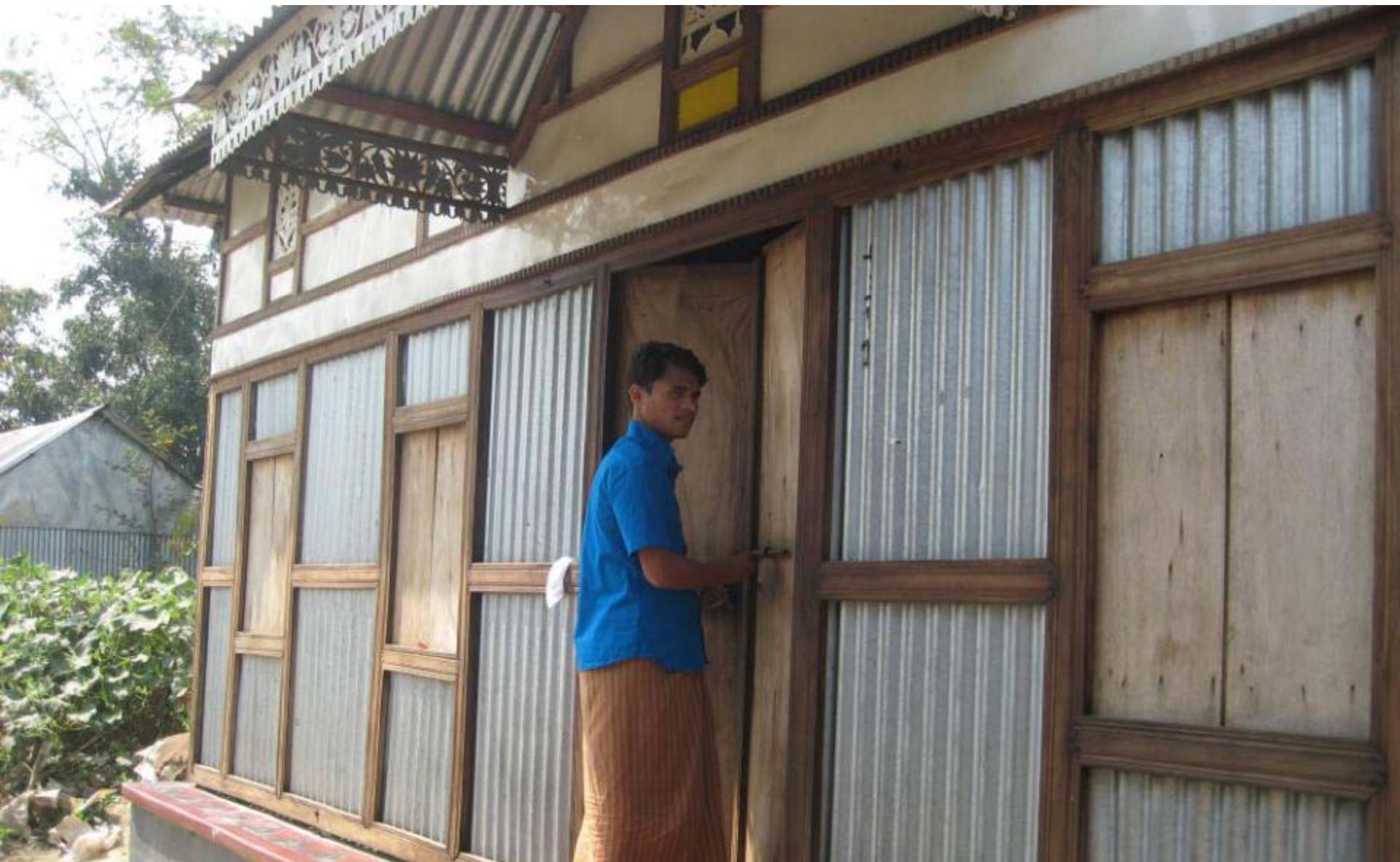
In the last 18 months, Zayed has also purchased this piece of land and is building his house. He has a cemented base of house with aluminum sheets for roofs and walls. This is both cost effective and low maintenance in this village which gets flooded for 3 months every year. This is a 2 bedroom house with cooking space and toilets all outside in the shared space. His sisters study in these rooms when he is at the shop but at night he alone sleeps here. Sometimes his cousin comes and stays. His other siblings stay on similar houses in the same compund. He eats with his mother who stays in an adjacent 2 room house.

What services he wants

- Zayed's literacy is recognized is a major drawback to his seeking any kind of information.

- Although he sends messages, they are almost always forwards. He is keen on song and ringtone downloads but he knows these are frivolities which he can do without.

- His interest is education. If he could learn something while sitting at the shop, it would be best. English and Math are his major interests.

- His sisters are highly interested in astrology but such entertainment related services should not be encouraged as this will increase expenditures. He would prefer to limited their phone use so that it is mostly for necessary purposes.

- He has heard of a health centre finding service. He wants to use the service to book his number at hospitals.

- He has seen how mobile companies send advertisements to his phone. He would like to know how he could also advertise his own products. This is where he feels his low education is a hindrance. This is why he wants the brother to study well to be able to help him in such functions.

- Zayed's interest in finding new opportunities for expansion is noteworthy. He requires reliable information assistance on how he can do better.

- He is a potential tax payer in the future. He knows nothing about taxes. Such assessments and information spread are crucial for the rise of the BOP user to higher socio-economic classes.

- Zayed needs reliable manpower. The village has plenty of unemployed youth. Through training and hierarchical understandings, mutual needs can be solved.

- He will also benefit from livestock pricing, maintenance and care updates since he plans to sell chickens to larger firms in Dhaka and Narayanganj.

- There is a need for adult education services that are not highly time consuming, are practical in nature and add value to existing skills.

- Reliable finance schemes with easy terms will further help Zayed expand his entrepreneurial spirit.