The Case for BOP as a Market

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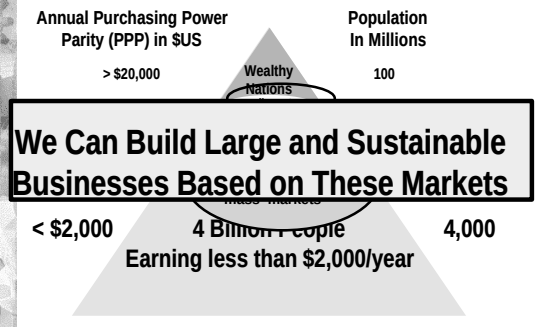
ICT for Developing Regions
September 3, 2003

Today's Focus

- Aid is not sustainable
  - It must be an investment
- (Profitable) businesses are sustainable
  - Also stabilize a region
  - Promote entrepreneurism and social mobility
- Prahalad:
  - the poor are a viable market
  - ICT can make a difference

Aid is temporary…

'The Bottom of the Pyramid'



Source: Prahalad & Hammond, Harvard Business Review, Vol. 80, Issue 9 (Sep. 2002), pp48-58

The Poor as a Market

- Very high existing costs
- Real purchasing power
- Already purchase "luxury" items
- Able to adapt to new technology

Being poor is expensive…

- Drinking Water
  - 4-100x the cost compared to middle class
  - Lima, Peru: 20x base cost, plus transportation
- Food: 20-30% more (even in poor areas of US)
- Credit:
  - 10-15% interest/day is common (>1000% APR)
  - GrameenBank is 50% APR
- Cell phone:
  - $1.50/minute prepaid (about 10x) in Brazil

Suburbs of Mumbai (Bombay)

	Dharavi (shantytown)	Warden Road	Ratio
Credit (APR)	600-1000%	12-18%	60-75x
Water (100 gal)	$0.43	$0.011	37x
Phone (cents/min)	4-5	2.5	2x
Diarrhea Meds	$20	$2	10x
Rice ($/kg)	$0.28	$0.24	1.2x

More on Dharavi

- Represents **urban poor**
  - 1300 cities with >1M people
  - Urban ICT could reach 2B people by 2015
- Dense: 44,000 people per square mile
  - Berkeley: 9700 Pittsburgh: 6000
- 6 churches, 27 temples, 11 mosques
- About $450M in manufacturing revenue
- Lots of small inefficient businesses already…

Rural Poor

- Rural areas generate about 60% of India's GDP
- Challenge is **physical distribution**
  - Drives the move toward urbanization…
  - ICT may be the *cheapest* (new) infrastructure…
- ICT could help with:
  - Education
  - Over-the-network jobs

ICT could be adopted…

- GrameenPhone: operators use GSM phones, memorize calling codes, etc…
- Test use of palm pilots for bookkeepping (to replace paper), worked well in India
- Negotiation via internet phone in El Salvador
- NairoBits (Kenya) teaches urban poor HTML
- See Digital Dividend web site…

Hindustan Lever (Unilever)

- Best example of products for BoP
- Candy:
  - Simple high-quality fruit centers (real sugar)
  - About $0.01/serving (not sold individually!)
  - Fastest growing product in any category
  - Profitable in 6 months
  - Low margin, but high ROI

Hindustan Lever (2)

- Ice Cream (novel technology)
  - About $0.04/serving
  - Problem: no refrigeration at stores or vending machines
  - Solution: better packaging keeps it cold for 24 hours
- Keys: mass production, supply-chain mgmt.
- Ice cream was previously a "luxury" product
  - Very high latent demand

Hindustan Lever (3)

Detergent	Nirma	HLL (BoP)	HLL (ToP)
Total Sales (M$)	150	100	180
Gross Margin	18%	18%	25%
Return on Capital	121%	93%	22%

Hindustan Lever (4)

- Overall: $2.6B portfolio of products
  - Zero working capital => high ROI
  - New businesses judged by capital required, volume
- Management training:
  - Requires all management (including CEO) to spend time in villages and in typical stores
  - Should lead to better products and tactics

Services for BoP

- Top three:
  - Education (20% of Digital Dividend projects)
  - Credit (micro-loans)
  - Wireless phones

TARAhaat Portal

- Portal for rural India
  - Franchised village Internet centers
  - Revenue from commissions and member fees
- Biggest success: for-profit educational services
- ICT: telephone, VSAT, diesel generators
- Local content developed by franchisee
  - Mostly 2 languages, moving toward 18
- Social goals met, financial unclear…

N-Logue (2)

- Keys:
  - Train LSPs, kiosk owners
  - Deal with (severe) regulatory issues (IIT helps here)
  - Develop local content (usually by LSP)
- Challenges:
  - Ongoing regulatory issues
  - Capital intensive business
  - Technology?

Wireless Phone

- Direct models (one per user)
  - Prepaid cellular
    - $10-20 cards in Latin America
    - Very profitable ($1.50/minute)
    - Very high demand
  - Ericsson MiniGSM
    - 5000 users in 35km radius
    - Ships in single container
    - (Relatively) easy to set up

Shared Wireless

- Shared use is the easiest way to reduce cost…
- GrameenPhone
  - Regular GSM phones and basestations (Nokia)
  - Bid on and won a national GSM license
  - Regular customers paid for early basestations
- GrameenTelecom
  - The social enterprise
  - Works with rural franchisees (who get micro-loans)
  - Shared use model

GrameenPhone (2)

- Rural phones: $93 per phone per month
  - > Twice as much as urban phones (not shared)
  - Some phones > $1000/month
  - But only 2% of total phones (but 8% of revenue)
- Monopoly phone company is a real problem
  - Anti-competitive, outdated laws
  - Limiting factor for the number of villages reached
    - 4200 out of 65,000 so far
- Room for better technology (for the rural users)

N-Logue Rural Internet Access

- Spun out of IIT Madras
- Rural connectivity is very low, but demand high
- Three groups:
  - "Foundation" – HW/SW partners
  - LSPs – Local service providers (one per region)
    - Up to 50,000 e-mail users per LSP
  - Kiosk owners – individual entreprenuers
    - Capital is about $400 per "line"
- Custom Technology (but obsolete!)
  - 25km line-of-sight wireless to LSP
  - Should be able to move to newer networks

Prahalad's Suggestions

- ICT is a tool for regular business
  - Larger reach at lower costs
  - Lower transaction costs
  - Better pricing, planning, supply chains…
- Enlightened management
  - Focus on ROI, not margin (or product cost)
  - Solve the whole problem (e.g. ice cream packaging)
  - Local content, local adaptation, local training

Prahalad Suggestions (2)

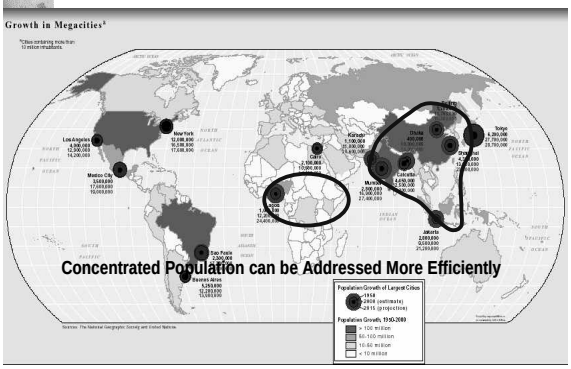
- Role for R&D
  - HP Labs in India, China
  - Hindustan Level has full-scale R&D for BoP market
  - Challenges are different than first world
    - Power, cost, literacy…
- BoP is early (risky).. So share risks
  - NGO or government help
    - Global Digital Opportunity Initiative (Markle & UNDP)
  - Consortia
    - TARAhaat member companies share the risk

Rough Summary

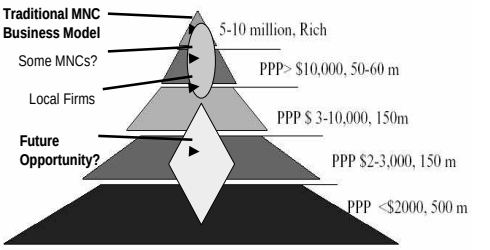
- Potential for large high-growth markets
  - Current systems are very inefficient
  - Opportunities to create income/jobs as well
  - Focus on ROI (use of capital)
- There is a role for technology
  - Simple (like ice cream)
  - Complex (new wireless for rural areas)
  - Users happy to adapt (and able!)
- Franchising seems to be a key to scalability

Backup

Growth in Megacities—An Urban Future



Example: An Emerging Market—India



http://www.wri.org/meb/wrisummit/pdfs/hart.pdf

The 'Yes, But…'s

- Corporate cost str… a given…
  - "The poor cannot be … tomers because, with our current cost structures, we ca… …ete in that market profitably."
- Our focus is on products, not functionality. We worry about 'detergents' … …liness'
  - "The poor cannot aff… …ey have any use for, the products and services sold in de… …arkets"
- Our emphasis is product and process innovation, not business innovatio…
  - "Only the developed … …ciate and will pay for new technology—the poor … …t and use the last generation for themselves."

Source: Prof C. K. Prahalad, U Mich.

The 'Yes, But…'s

- We do not see the … of the Pyramid forcing us to innovate around … development
  - "The Bottom of the P… …t important to the long term viability of our business. It should be served by governments and non-profits."
- Managers do not … about business challenges that have a huma… …ement to them
  - "Intellectual excitemen… …developed markets—it would be hard and expensive to recruit, train and motivate managers to tackle such a challenge."
- If this was a viabl… …rtant marketplace, someone would … …y tackled it successfully

Source: Prof C. K. Prahalad, U Mich.

"Bad Tech": Nestle

- Starting in the 1970's, Nestle pushed infant formula to third-world mothers:
  - Mistaken belief that it is was better (in US)
  - Assumed sterile water and bottles!!
  - Assumed mother would not dilute (saving money)
  - Results 25x more likely to die of diarrhea
  - Worse: use of formula for a while stopped lactation (causing an addiction)