

Bridging the Digital Divide – Paradigmatic Evolution of Bangladesh as the Microcosm of Emerging Economies

1 Tales of Human Endeavor

A Day in the Life of a Bangladeshi Mother

She lives in a remote village of North Bengal, some 400 kilometres from the capital. The severe winter this year has shattered the serenity of her small village, already claiming three lives. But she is not anxious for herself: many times in her forty-year life, she has thwarted nature, poverty and tradition. She is worried about her three-year daughter. A cardigan for the kid would cost 200BDT (3USD), which must be managed from the poultry she rears to earn livelihood for her family. Sixty duck or hen eggs need to be sold for the money, but only fifty were accumulated during the week. Waiting another week would be dangerous, and the middleman who buys the eggs would not pay advance or offer higher price, though she knows he had swindled her for several years. It is going to be a tough day!

But it must be a different day! The middleman came and offered her as usual 13 BDT per hali (4 units) of eggs, which she readily declined. She made a quick short call from her neighbour's cell phone to a cousin working in the village market and found the price to be 16 BDT per hali. After brief haggling, the price was settled at 15. The transactions over, the middle left, she looked at her child – a delight was diffusing over her face.

The box tells of a woman who, in her quotidian responsibilities, fights 'digital divide', and of course, the greater socio-economic divide. This is one of the myriad stories of right, empowerment, and benefiting from technology that you would find among various low-income groups of Bangladesh – a panoramic, fertile, emerging country on the Bay of Bengal.

2 Mechanisms for Bridging the Digital Divide

This section is aimed at exploring the mechanisms to fight digital divide. It starts with the necessity of a convergent stakeholder platform, describes models of access to bring connectivity to the underserved areas of the world, and finally suggests regulatory and other management steps to foster the models.

2.1 Developing a Convergent Platform

Digital Divide is a complex dynamics. It is neither a static one nor a dichotomy between the 'information-haves' and 'information-have-nots'. Different countries, and different social classes of a country, enjoy the benefit of technology at different paces. While some Stanford University students study computer ergonomics, a Somalian student is amazed to see the first computer in her life. Exchanging multi-media messages is fun for a student in Dhaka, but rural Bangladeshis still anxiously and quickly end a brief phone call, for one extra second might cost them additional 1.4US¢. Our lives across the globe intertwined, we cannot overlook these differences. Therefore, any effort to close the digital divide must stem out of a convergent platform developed by all stakeholders – from national to global level; otherwise, the divide will only worsen, paving the way for widening rich-poor gap, increasing terrorism and stagnating global economy.

2.2 Adopting the Driver Technology

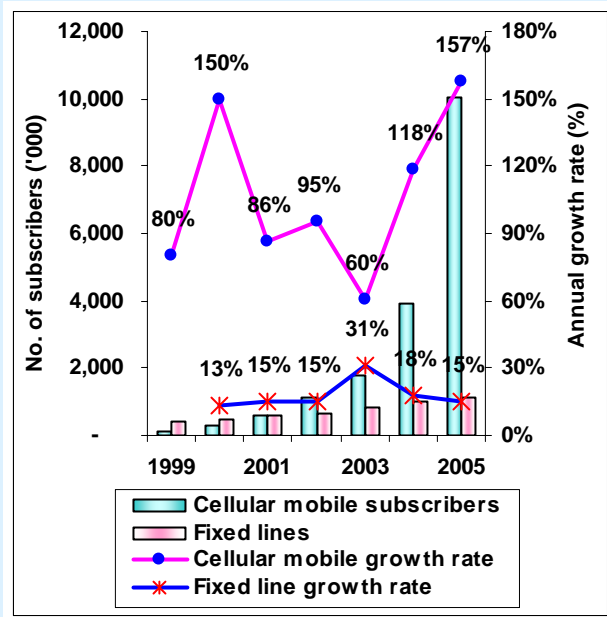
The readers should not be misled that a single technology will act as panacea to the digital divide, because the divide is neither static nor unique to any particular age. With the advent of each new technology, a new divide will evolve. Consequently, fighting the digital divide is a persistent search for equilibrium encompassing all technologies. However, this essay, while acknowledges the role of others, focuses only on cellular telephony. Recent exponential diffusion of cellular market and massive economic benefit enjoyed by emerging countries like Bangladesh suggest that cellular telephony preponderates over any other technology in bridging the digital divide.

a. Macroeconomic Indicators of Bangladesh

INDICATORS	2001-02	2002-03	2003-04	2004-05
POPULATION				
Population (Mn)	131.6	133.4	135.2	137
Density/sq. mile	2310	2341	2373	2407
NATIONAL ACCOUNTS				
GDP(Mn USD)	47571	51914	56493	60002
Growth (%)	4.4	5.3	6.3	5.4
Per Capita GDP	361	389	417	438
AGRICULTURE				
Share to GDP (%)	24	23.5	23.1	21.9
Growth Rate (%)	0	3.1	4.1	0.3
INDUSTRY				
Share to GDP (%)	26.7	27.2	27.8	16.58
Growth Rate (%)	6.5	7.3	7.7	8.6
BALANCE OF PAYMENTS				
Export (Mn USD)	5986	6548	7603	8655
Export Growth (%)	-7.4	9.4	16.1	13.8
Import (Mn USD)	8540	9658	10903	13147
Import Growth (%)	-8.5	13.1	12.9	20.6
Trade Bal(Mn USD)	-1768	-2215	-2287	-4492
SAVINGS AND INVESTMENT (% of GDP)				
Investment	23.1	23.4	24	24.43
Foreign Assistance	2	2.1	2.2	0.8
Domestic Savings	18.2	18.2	18.3	20.2

Source: JETRO website (www.jetro.go.jp/bangladesh)

b. Bangladesh Telecom Market



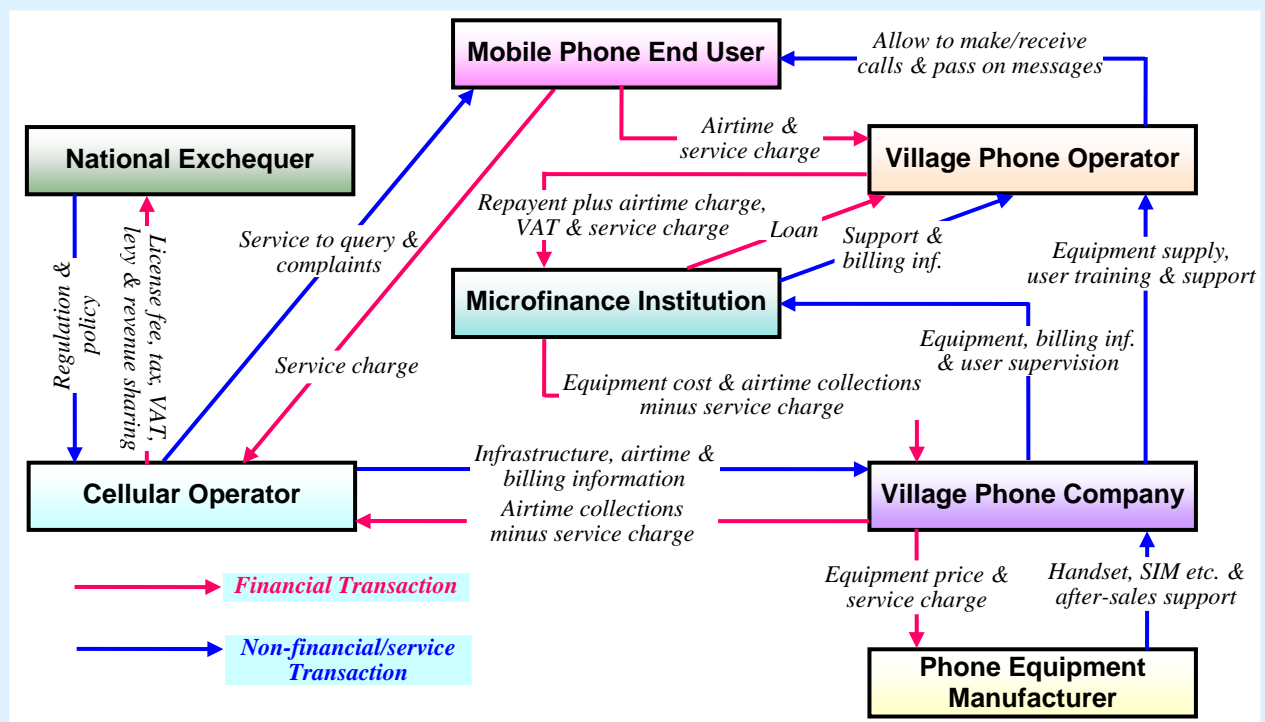
Source: AKTEL Business Intelligence (www.aktel.com)

2.3 Formulating Business Models

a. Microfinance

Providing microfinance to eliminate entry-cost barrier has been a novel mechanism in bringing cellular connectivity to rural Bangladesh. The Village Phone (VP) concept of Grameen Telecom is such a venture under which women borrowers take loan for the phone equipment and repay it back slowly with the revenue they earn from charging villagers for phone services.

Village Pay Phone Model



Source: Schematic adapted by the author

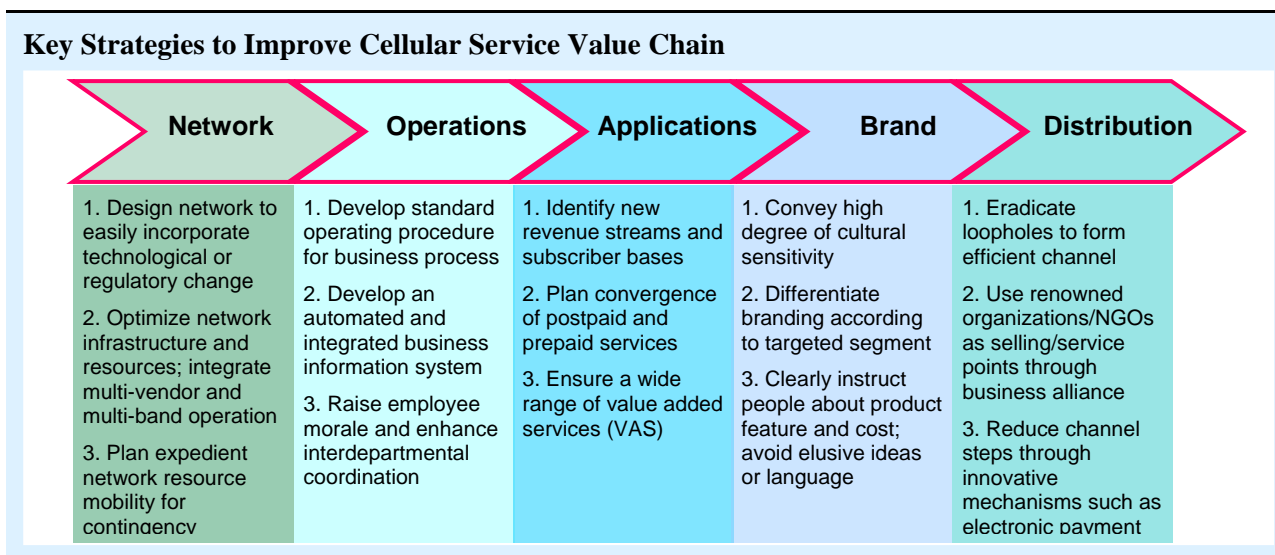
Highly successful initiatives, the VPs now provide access to telecommunications facilities to more than 60 million people living in rural areas of Bangladesh. While a successful VP model requires concerted interplay of various parties, it can always be tailored in the context of different emerging countries.

b. Emerging Market Handset (EMH) Program

The EMH program, an initiative launched in February 2005 by GSM Association to provide low cost handsets, will be another driver to increasing access in the emerging economies. The program has the potential to add more 100 million new global connections per year. Bangladesh is going to participate in the second phase of this program.

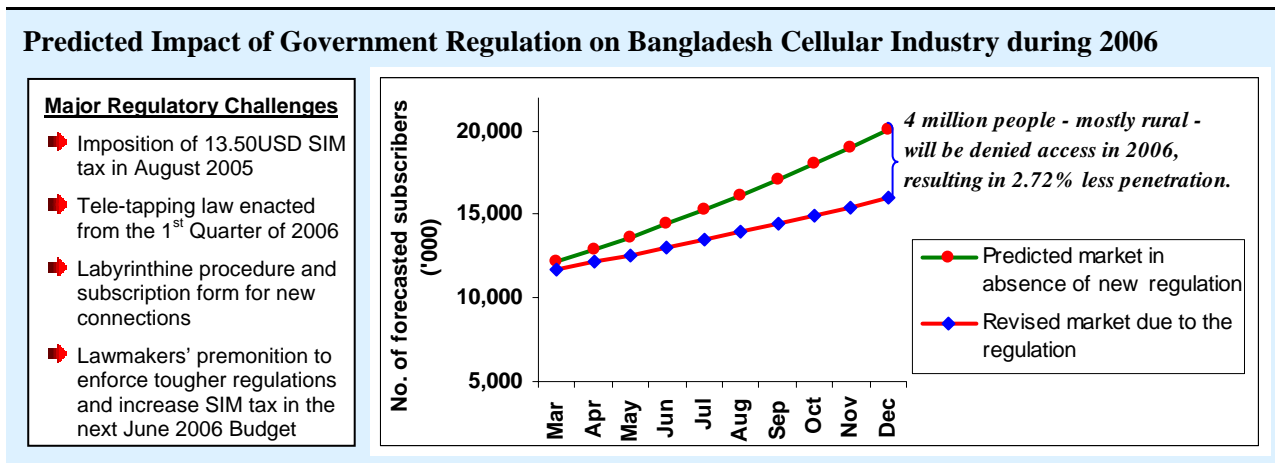
c. Operator Value Chain

Inefficient operator value chain is one of the major challenges to cellular market growth. Very few operators in Bangladesh have well-defined business processes, and even fewer follow those procedures. A couple of years ago, many countryside Bangladeshis were reluctant to connectivity because of service hassle, not because of service cost. In many cases, people traveled over 100 kilometers to pay bills or get new connections. Unscrupulous dealers and channel partners also often create fictitious shortage of SIM and refill cards and charge exorbitant prices later on. By redesigning, and if necessary outsourcing, the businesses processes, an operator can well manage its value chain, boost market share and contribute to overall market.



2.4 Managing the Diffusion

For the needed acceleration and efficient management of telecom market, legal and regulatory steps are always paramount. Though cellular telephony started in Bangladesh in 1989, it is only after 1996 that the market became vibrant, thanks to major deregulations by the government. Unfortunately, some recent hectic decisions of the telecom watchdog BTRC are flagrantly impeding the market growth.



While government, and BTRC, may not be deliberately intrusive, it seems that these entities have no visionary focus. They allow duty free import of handsets but let the benefit erode by charging 13.50USD activation fee and 15% VAT. Ironically, the high price elasticity of demand for cellular service indicates that decreasing these charges will bring more than proportionate increase in government tax and significantly drive GDP.

With the competition intensified, the operators must gradually shift their attention from cost cutting to product differentiation. They must engage in continuous brand creation and brand positioning, but of course, with a high degree of sensitivity to local culture. Lack of operators' cultural sensitivity is a major reason for operators' schism from the regulatory authority and the subscribers. While VP program of Grameen Phone was greatly praised, its *djuice* brand promotion is severely criticized for using unorthodox slang-like words targeted at the young. On the other hand, AKTEL's prepaid *JOY* package has elicited tremendous response, acquiring 800,000 new subscribers in only 16 days in December 2005- an achievement that was acclaimed by GSMA World Congress in Barcelona.

People also need to be educated about the immense prospect and benefit of cellular technology. Emerging countries possess strong ambivalent feelings about new technology. While some view mobile phones as an expedient link among family and society members, others view the devices as vice that undermine their core values and loosen bond. The undertaking is simple: educate the people, and it is their prerogative to shape their own culture.

3 Conclusion

Bridging the digital divide does not mean swift dissemination of news like 'Nine UN peacekeepers from Bangladesh have been killed in an ambush in the Democratic Republic of Congo'. The philosophy of bridging the digital divide is that this disaster could have been avoided through proper information flow. And to discover this underlying beauty of technology, we always need ecumenical mind-set and endeavor.

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