

## LOCATING ICTs IN ASIA'S LOW-INCOME COMMUNITIES: PRIVATE SECTOR INITIATIVES TO ADDRESS DIGITAL DIVIDE

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### Introduction

ICTs are said to play a crucial role in development and poverty reduction and this is especially articulated in national policies. Among developing countries, this perspective incorporates ICTs into the development agenda because of their relevance in transforming human activities and in presenting new opportunities for economic growth. Even if ICTs appear ubiquitous in this day and age, it still exists, the gnawing presence of digital divide and social exclusion. It is also argued that inequalities have increased since the late 1970's both between countries, within countries and in both developed and developing nations.<sup>1</sup>

A considerable number of marginalized groups, such as rural folk, women, and low-income youth remain unreached by the benefits ICTs are supposed to offer. The vision of a so-called "information *society* for all" as stated in both developed and developing countries' ICT policy documents today does not apparently include "all".<sup>2</sup> There are reasons to question both the local practices and the visions on ICT futures, and how the industry sector can play a role for ICT inclusion, how and on whose premises. Global visions and myths on possible prosperous ICT futures are continuously repeated, but there are attempts to problematize the mindsets and visions associated with ICTs for "development".<sup>3</sup> Going beyond the mere visions of access to all, the existing digital divides makes it appropriate to investigate how private sector-led ICT initiatives have approached locally marginalized groups in order to bring about ICT access, and what lessons can be learned. As Jayan Jose Thomas and Govindan Parayil (2008) experienced from their study in India, already existing social and economic divides can also be reproduced through incorporation of ICTs and new divisions are also created due to the workings of emerging economic conditions. It is important that the

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<sup>1</sup> Thomas & Parayil, 2008.

<sup>2</sup> Chiumbu, 2008; Dralega & Due, forthcoming.

<sup>3</sup> Mosco, 2004.

ICT and the telecommunication industry take these arguments into account when initiating digital access to excluded and marginalized groups in the future.

Taking as point of departure private sector-led ICT initiatives, the paper seeks to examine the following questions: In what ways does the private sector address the digital divide and exclusion of marginalized groups in Asia's low-income communities? What private sector-led initiatives by telecommunication operators touch upon the issues of digital divide and social inclusion? What are some issues pertaining to culture and human infrastructure which need to be tackled to ensure inclusion through ICT?

Focus is on the experience of Telenor<sup>4</sup> in Asia, particularly that of GrameenPhone which is one of its dynamic operating companies. A distinction needs to be made here between Grameen Bank and GrameenPhone especially in relation to the Village Phone Program. While Grameen Bank provides the micro-credit for women to start their phone business in the villages, GrameenPhone focuses on the technical and telecom-related aspects of the business. Both operate on a for-profit model. GrameenPhone caters to a wider customer base, a significant part of it are in low-income communities. The GrameenPhone CICs, in particular, operate on a franchise model whereby financial sustainability and self-liquidating operations by CIC entrepreneurs are critical. Setting up a CIC in a rural or semi-urban area by an entrepreneur involves an initial investment of 50,000 Bangladeshi Takas (approximately USD 732) financed either by Grameen Bank, NGOs providing micro-credit, or other local financing institutions. Revenues for the CICs are generated from Internet browsing or specific information search, e-mail, net telephony, CD burning, fax and scanning, digital photography, flexi load for mobile phones, and other services.

The article draws on empirical research using in-depth interviews, focus group discussions, observation and home visits conducted on ICT user and non-user projects in Bangladesh from July 2007 to November 2008. Fieldwork was done in semi-urban and rural areas in Bangladesh, namely, Dhaka district, Chittagong, Cox's Bazaar, Sylhet, Jessore, Sylhet, and Khulna. These were done in phases with Community Information Centres (CICs) as entry point in understanding lifestyles, perceptions, needs, and behaviour of people in local communities especially as they relate to Internet and mobile phone usage.

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<sup>4</sup> *Telenor is a Norwegian telecom operator, the 7<sup>th</sup> largest mobile operator in the world with 12 operating companies across Europe and Asia. Telenor owns 62% of GrameenPhone, Bangladesh's leading mobile operator.*

## **Private Sector Initiatives**

Government legislations serve as framework to ICT use and adoption in both developed and developing countries. These are aimed to set an environment whereby stakeholders, such as, telecommunication companies, non-government organizations, local governments, and communities, can take part in the provision of ICT access and usage in the grassroots level. Inclusion in this respect, therefore mean inclusion into ICT access and usage for all, but access to ICTs alone does not decrease social and economical divides.<sup>5</sup>

The private sector plays an important role in making this possible by providing the needed infrastructure to spur usage and awareness of ICT in low-income communities. As fundamentally different from NGO's roles, private sectors are profit organizations. It is possible to approach this role as ICT providers through different business models as this paper will show. This section focuses on initiatives specifically found in Bangladesh where literacy is only 43.1% (out of an estimated 153,5 million population<sup>6</sup>), mobile penetration is at a meager 14%, and internet penetration is only 0.3%.

## **GrameenPhone Community Information Centers (CICs)**

The CIC model has been one of the ways through which computer use and internet connectivity are made available to the digitally-excluded and unconnected in far-flung areas in Asia. Given the low internet penetration in Bangladesh, GrameenPhone, Telenor affiliate and leading mobile operator in Bangladesh, has launched GrameenPhone CICs in February 2006 to provide internet access and other communications services in rural areas. GrameenPhone started with 26 CICs in Sylhet, Rajshahi, Kulhna, Dhaka and Chittagong divisions and has now expanded into over 500 CICs all over Bangladesh through its partnership with local entrepreneurs and the Society for Economic and Basic Advancement, a local NGO working to promote rural livelihood and micro enterprises in Bangladesh.

Equipped with at least one PC, a EDGE-enabled modem, a printer, a scanner, and a web cam, the GP CIC network provides access to websites for government information and processing of documents (passport forms, birth and death certificate forms), market prices of agricultural produce, and job openings, among others. Families can also communicate with members who are working abroad through video conferencing at the CIC.

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<sup>5</sup> Thomas and Parayil, 2008.

<sup>6</sup> [www.cia.gov](http://www.cia.gov) (July 2008).

Training for CIC operators is provided for by GP for local entrepreneurs setting up GP CICs. This is considered crucial as it influences operations and the kind of service made available to the public. Drawing on the Amartya Sen's concept of capabilities, Thomas and Parayil (2008) argues that access to ICTs or access to information not necessarily lead to "positive development outcomes". In an ICT perspective capabilities and knowledge about structural conditions in a society is crucial to in order to understand and transform access and use to knowledge. Thomas and Parayil particularly illustrates this challenge through examples of how an illiterate person can have access to Internet through a village information centre, but the main obstacle for this person is still education as the person would still have difficulties in applying for a job, for example. It might also be obstacles within already existing social structures and norms discouraging women from having benefits from a village information centre. For an illiterate man, a web camera might lower the threshold for knowledge gain, but for an illiterate woman if discouraged normatively to use the CIC, other approaches is needed in order to reduce the digital divide.

There are differences in facilities and usage patterns among CICs. Some reasons for such variation include the degree of investment and initiative of operators. There are other challenges faced as well, such as technical constraints, difficulties in connectivity and power supply. For survival and financial sustainability, some CICs in Bangladesh opt to provide other non-Internet based services, such as photocopying, fax, and CD burning.

CIC entrepreneurs do have challenges to introduce Internet-based services within their respective communities. Lack of relevant content, computer skills, users' level of education, awareness and social situations combined with mounting pressure to generate revenue characterize the current state of affairs. These shared access facilities have an unlimited potential, however. With adequate human and technical resources they can provide local training, marketing and a point of presence for content providers prepared to invest in Internet-based services for the unconnected. CICs can be transformed as learning centres, supplying and collecting digital livelihood content, and knowledge transfer that can generate more franchises and micro-enterprises.

It was noted among Bangladeshi youth CIC users that they would come with their group mates to learn from each other and share the cost of using the Internet. A group of friends, for example, would download software or music, do video-conferencing, or surf websites as they pool their money to maximize an hour or so of Internet surfing time. As they experiment, they as a group, also share

experiences in using the technology. This practice where group/social learning takes place can be leveraged upon by putting educational content in shared access facilities such as the CICs.

### **Grameen's Village Phone Program**

Mobile telephony was introduced to low-income rural communities in Bangladesh through the Village Phone (VP) program. This was introduced in 1997 with the aim of providing rural people in Bangladesh with access to phone services. Considering the low teledensity in Bangladesh, approximately at 0.5%, the program was devised as a way to address this telecommunication need and at the same time, provide women with additional opportunity to augment their livelihood as village phone operators.

These women who were credible Grameen Bank borrowers were given loans by Grameen Bank to purchase a handset and a GrameenPhone subscription to start out their village phone business. VP subscribers have grown with the total year-end figure standing at around 191,000 in 2005. There are more than 260,000 VP operators in more than 50,000 villages in Bangladesh. The VP operators earn on the average 277 taka per week. Monthly income could reach up to 14,400 taka (about USD 300 a month), higher than the per capita income of USD 286.<sup>7</sup>

There is a slightly higher percentage of female non phone users who indicated preference for phone operated by women. Among non-users interviewed, they expressed that they might use phone to discuss financial matters or remittances within family members which provides evidence for the importance of the phone in facilitating the flow of income and wealth within the family). Moreover, it was noted that the village phone is commonly used to contact family members working overseas – to discuss remittances aside from social calls. Aside from calling relatives, mobile phones are also used for business purposes (small enterprises) – communicating with suppliers, customers, and checking prices, among others. Those who do not use the village phone are those who had no one to call<sup>8</sup>, indicating that no family member has migrated to work. This is an interesting finding supporting the argument that ICT inclusion has to be investigated outside the scope of pure access. Also the labor market has consequences for people's digital needs. It appears that the cost of phone use here may not be a significant deterrent in using the village phone. There may be other

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<sup>7</sup> Richardson, 2000.

<sup>8</sup> *Ibid.*

factors aside from financial constraints (e.g., finding the mobile phone's relevance to daily life) that hinder people from using mobile phones.

Recently, village phone ladies have experienced difficulty in sustaining their village phone business due to high tariff rates, increased presence of individually-owned handsets, and presence of more public call offices (PCO) which offer lower call rates. Earnings of village phone ladies have significantly decreased from 14,000 - over 20,000 BDT a month to 2,500 - 3,000 BDT a month as reported by village phone ladies interviewed.

While there are new developments that seem to lessen the demand for village phone ladies (i.e., availability of cheaper phones and PCOs which make calling less costly and more convenient), the village phone ladies have remained instrumental in providing mobile phone services to those formerly unreachable by ICT. Such program also helped, in turn, build social capital for these women as trust was accorded to them by their clients together with their knowledge of their own community's networks.

There are different ways through which mobile phones are used and adopted in other market-oriented countries. Aside from Bangladesh, public call offices (PCOs) are also found in India and Pakistan. These PCOs have manned payphones or mobile phones and provide calling-card-based domestic and international telecom services either by wireless or landline. PCOs serve as alternative communication facilities for communities, with some even providing multimedia information. Their benefits are convenience, accessibility, and affordable call costs.

### **Cellbazaar**

With the presence of small, micro businesses in emerging markets like Bangladesh, the need for reliable and fast ways of exchanging market information is vital.

CellBazaar was created and founded in 2006 by Kamal Quadir as an electronic marketplace that allows people to buy and sell goods and services conveniently and at low costs through SMS, WAP and Internet. CellBazaar is a searchable electronic classifieds which posts from various districts in Bangladesh, goods and services ranging from agricultural produce, household items, to jobs.

It is common for buyers and sellers across districts to identify and communicate with each other through SMS or WAP. In GP CICs, farmers and small businessmen access information for their goods to be sold through the Internet through the CellBazaar website [www.cellbazaar.com](http://www.cellbazaar.com). For the advanced mobile phones users, buyers can search for commodities or services through Internet-

enabled mobile handsets through wap.cellbazaar.com. Once postings are seen, buyers can call and meet sellers to carry out the business transaction.

Since its launch in July 2006, the number of users has grown to over a million. There is also a reported increase of females using this option where there are limits to their mobility and open access to markets.<sup>9</sup>

Cellbazaar is a platform which is particularly helpful to micro-entrepreneurs. Since it is still in a developmental stage, the challenge lies in raising the level of awareness among those in remote villages of what it can do to support livelihood and access to markets.

### **Attendant issues to ensure inclusion and bridging the digital divides**

The globalization of knowledge, of which ICT is instrumental, has led to many possibilities in the local economy and in bringing in more participation from otherwise excluded groups. Greater access to information and communication allows the marginalized such as, farmers, fisherfolk, women, and youth to be engaged in a networked society. This especially involves activities that can improve livelihood, access to resources, and build capabilities so essential to development.

In such a condition, the importance of local knowledge can not be overemphasized. While ICT can link local communities to the global world, there is a need to ensure local knowledge as part of the knowledge base that is generated. When local content is completely responsive to the needs of the community, community participation is developed and the initiative is sustained. The rich cultural traditions and indigenous information on agricultural practices, medicine, and crafts are among those that can form part of the database of the aforementioned ICT initiatives. As the women, youth, and even the elderly are allowed to engage themselves in building this knowledge base in a CIC or mobile setting, social inclusion can take place, and the digital gap may be lessened.

The private sector initiatives referred to in this paper have opened up space to address issues concerning social exclusion and digital divide. These issues pertain to social and income deprivation due to individuals' lack of resources, lack of local services, disengagement and marginalization.<sup>10</sup>

In the case of the village phone program, for instance, Bangladeshi women in remote villages who were previously in the periphery of their communities had been given means to earn their own

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<sup>9</sup> CellBazaar, 2/2008.

<sup>10</sup> See Talbot (2004), especially as it relates to devising ICT-related programs on a local government context.

income. Despite existing cultural traditions restricting mobility, this initiative has given them a feeling of empowerment knowing they can contribute to the family income. Moreover, as communication nodes, their knowledge of people, contacts, and resources carry with it the potential of influencing community dynamics. Such is the case of a village phone lady respondent Feroza from Sylhet, who became a local district representative because of the social capital she has gained. As village phone lady she has acquired people's trust and confidence in her capabilities that paved the way for her role of leadership within the community.

With the CICs, Bangladeshi youth in villages can have access to ICT. A youth respondent relates his experience of using the Internet and the mobile phone:

"I do surf up Internet via mobile phone...usually, I will surf up new site, job site, and sport sites. However, if I really wanted to apply for job, for example, I will still need to turn back to the PC, which is the reason why I am here today."<sup>11</sup>

There is apparently an emergence of a digital youth culture characterized by group sharing, learning, and experimenting. Owning a personal handset or a PC may be an aspiration among majority of the Bangladeshi youth, yet shared phones and the use of public facilities make it possible for them to avail of the benefits derived from ICT.<sup>12</sup> The CICs, for them especially, can be enhanced as learning hubs given that there are group sharing and learning practices which take place. A group of young people, for example, would go to a CIC pool their money for an hour of Internet surfing and learn from each other in the process on how to use the technology. As one youth respondent mentioned:

"When I first encountered the Internet, I am pretty scared to use it. But with some encouragement from my friends and personal interest to learn more, I am doing good now."<sup>13</sup>

The "encouragement" from friends and "personal interest" uncover yet another aspect of the importance for ICT inclusion approaches to gain local knowledge in order to succeed.

### **Attendant issues and policy areas to ensure inclusion and bridge the digital divide**

There are challenges that need to be faced in order to ascertain that the digital gap and social exclusion of certain sectors in Bangladesh are minimized. The challenges do not pertain only to physical infrastructure but more importantly, to human infrastructure.

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<sup>11</sup> See Roldan, Wong and Helmersen (2007) *touching upon the digital youth culture in Bangladesh*.

<sup>12</sup> *Ibid.*

<sup>13</sup> *Ibid.*

The attitudes, skills, and knowledge needed to sustain ICT initiatives are key. Given that literacy is a challenge in Bangladesh with a literacy rate of only 47%, one crucial intervention is in the area of education. This includes increasing ICT awareness and learning through trainings especially of key influencers in the community. These may be community leaders, parents, teachers, youth leaders, and CIC entrepreneurs. Local content creation may also be incorporated in the process to generate interest and participation from community members. The relevance and sense of ownership it can bring would help make these ICT initiatives more sustainable.

There are also restrictions placed on women concerning mobility and interactions with outsiders. Barriers such as these may be addressed by introducing facilities and technologies that are culturally-attuned. Backed up with consciousness-raising and information dissemination programs in collaboration with entities, such as NGOs who work directly with the grassroots, these challenges could be overcome in the long run.

The significance of these learnings for the telecommunication and the ICT industry is that private-led telecom initiatives should attempt to stimulate more social and cultural multiplicity, and take a step beyond the so-called “information society” or “knowledge society” and rather provide rooms for *societies*, in plural. As shown in these studies already existing cultural divides can be reproduced through introduction of ICTs. Those who do not have family working abroad have different needs than those having their family around them in their everyday life, illiteracy is a challenge to be dealt with locally and so is also gender cultural differences.

Moreover, on the policy front, it is deemed important for investments to be made in major skills training initiatives as this will have a macro-economic impact on human resources and society, in general. E-learning initiatives in schools both for teachers and students through public-private sector partnerships can be made to improve skills. Focus is even more needed to target marginalized people such as those working in micro-enterprises, women, out-of-school youth, and farmers, among others. It is important to have an appropriate regulatory framework to increase chances of adoption in these groups through liberalizing new communication technologies (e.g. lifting the ban on the VoIP in Bangladesh), or setting suitable rules to encourage standardization of service quality of and pricing in various shared access facilities. Reduction of taxes on ICT services and equipment can provide some regulatory relief to improve the business case for commercial entities as incentive to bring inclusive solutions to the market.

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