

Building Micro-Enterprises through Information and Communication Technologies (ICT) in Bangladesh

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The article seeks to identify issues and challenges concerning micro-enterprises in a developing country, specifically Bangladesh. It suggests that ICT can help address the concerns of small businesses such as access to information about production techniques and potential buyers, communication requirements for negotiating price, terms of payment, and delivery logistics, among others. The article hopes to shed light on how the mobile phone and the telecenter or Community Information Center (CIC) can be used as tools for enhancing capability and sustainability of these micro-enterprises.

Background

The bulk of the economies in developing countries thrive on small, medium and micro-enterprises. The role small-scale enterprises play in the development process cannot be underestimated as they help create employment, generate income, relieve poverty and redistribute economic opportunities throughout communities.

Bangladesh is a country where small-scale enterprise is significant. While there is an absence of accurate numbers of these small businesses, estimates suggest they range from about 55,916 small industries to 511,612 cottage industries. Based on the Bangladesh Planning Commission estimates, various categories of small and medium enterprises (SMEs) are reported to contribute between 80 % and 85 % of industrial employment and 23 % of total civilian employment. Moreover, SMEs contributed BDT 741 (\$12.5) billion or nearly 25 % of the gross domestic product (BDT 2,996 billion) in 2003 (Mintoo, 2006).

This paper focuses on small businesses referred to here as “micro-enterprises” which may be defined as small enterprises that are often unregistered, operating “informally”, and usually run by the poor. Micro-enterprises may also be a family-based enterprise with family members and relatives helping out in operations. Some micro-enterprises are in the form of cooperatives with ten people or less. Micro-enterprises generally have limited or no access to micro-credit or any type of banking services. With no clear-cut definition, public call offices, barbershops, machine shop owners, village phone ladies, farmers, fishermen, tailors, seamstresses, farmers, and fishermen, among others, can be considered as micro-entrepreneurs. In Bangladesh they proliferate in both urban and rural areas. Micro-enterprises cannot be viewed as marginal since they comprise the backbone of the economy.

Information and communication are crucial for micro-enterprises to survive on a day-to-day basis. It is common to resort to traditional modes like word-of-mouth and other established indigenous information mechanisms for obtaining information.

Communication is integral for the micro-entrepreneur when it comes to getting in touch with suppliers, customers, traders, and middlemen in some cases. Accurate and speedy communication is also important for negotiating prices, terms of payment, securing stocks of commodities, and coordinating deliveries. Micro-entrepreneurs go through intermediaries or middlemen just to get their agricultural produce or handicrafts sold to buyers. Fishermen at Cox’s Bazaar, for instance, rely on middlemen to have their catch sold in the market (see Roldan, Wong, and Helmersen, 2007). Village women in some communities in Jessore sell their embroidery through non-governmental organizations which make these available to the market and to traders.

Drivers and Constraints on Micro-Enterprises

One would note that the need for survival and livelihood for individuals and families propel people to set up small businesses. In Bangladesh, SMEs and micro-enterprises are entities that cater more to a local market, mostly offering a single product or service.

The demand in the local economy capitalizing on existing skill and local resource can be a driver for these small businesses. Within communities, for example, there may be a need for agricultural produce such as fish, grains, spices, vegetables, and fruits which may not be easily obtained through one’s backyard farming or barter with neighbors. The demand for clothing, jewelry, books, phone services, and other things may also be areas where micro-entrepreneurs see opportunities for livelihood. They

put up a small capital (by borrowing or by means of their own savings) and use existing or available skills to earn from these identified opportunities.

Community networks that are built around these small businesses also serve as drivers. They can be considered as a valuable resource for small businesses as they form part of their supply and demand chain. Customers are generated from these networks. Word-of-mouth and buzz are key elements in making services and products known around the community.

Insofar as constraints are concerned, the readiness of these small enterprises to respond to social, economic and technological changes may vary and can be unique according to these enterprises' structure and size. The ability of micro-enterprises to capitalize on opportunity and wrestle with challenges depends also on these factors.

SMEs are usually considered to be more agile in their form, structure and processes. Therefore, it generates a greater willingness to rise to the challenges of innovation and change (Department of Trade and Industry (DTI), 2000).

In the context of ICT adoption, Ritchie and Brindley (2005) argue that the barriers to ICT adoption faced by small enterprises are within strategic framework (business strategies, capital investment and networks), technological framework (complexity and professional support), and organizational and behavioral elements (human capacity and risk perceptions).

Looking at micro-enterprises / SMEs in a developing nation like Bangladesh, they appear to be no different from those in the developed world. However, we are able to point out significantly unique constraints such as lack of access to the right financing, information, and innovation necessary for their business development.

According to Donaghue (2004) the use of financial services as a development tool has evolved over the past 25 years. This involves rural credit schemes for subsidizing loans to poor farmers, micro-financing to provide working capital loans to predominately female micro-entrepreneurs, and a variety of organizations offering a range of financial services to help low-income households increase incomes and reduce their vulnerability to income fluctuations.

Although there are many channels to access to financing sources, small enterprises face multiple bottlenecks when they deal with financial institutions. They lack access to financing support due to the need for collateral or guarantee and steady flow of income

to fulfill banking institutions' requirement. They have low financial maturity in terms of exposure to different financing options, and more importantly, they lack understanding or preparedness for future 'shocks' such as bad harvest seasons or flooding for those in the agriculture sector.

For example, farmers in Bangladesh have a low risk tolerance with the volatility of harvests. From the banks' perspective, they will try to limit their exposure by turning off farmers and rejecting their loan or other financing application. Without proper access to the formal banking system, most of them resolve to informal financing such as obtaining loans from usurers or lenders who charge high interest on a daily or weekly basis. Sometimes, farmers use their land title as collateral and risk their land being taken away if unable to pay.

Information flow in a developing country like Bangladesh may not be fluid compared to other developing countries. This can be ascribed to the lack of infrastructure (e.g. Internet-connected PC, public source etc.) and information sources (e.g. lack of transparent information sources, persons with the right information access). This is further amplified by the low literacy among micro-entrepreneurs, preventing them from finding necessary information sources to use for their own benefit.

In the Bangladesh context, a typical case would be that of a rice trader who wishes to get the latest pricing or type of rice but will have to depend mostly on middlemen for information. This may be the most efficient way of accessing information given the current condition. However, there is so much more information or transparent knowledge if there is a good information infrastructure (e.g. information dissemination from a governing body or a public information resource center).

According to Ghobadian & Gallear (1996) and Rothwell (1989), small enterprises have limited access to resources. Due to the scarcity of resources, most SMEs in the developing countries have the tendency to fulfill what is necessary to ensure their business survival.

This is of course a main concern; however; there are still a selected few who are willing to innovate to expand their businesses. There are plenty of innovations to go around, be it in agricultural, trading or small-scale manufacturing. It is just that it is not evenly distributed, especially in the rural areas. Romano (1990) revealed that the SME new product and product improvement growth is related to research and development, innovation, and the ability

to gain advantage over competitors in the product market. Acs and Yeung (1999) further elaborated that the ability to innovate and adopt new technology to make product modifications is likely because of the greater creativity and innovativeness of small-firm employees.

Based on our observations in Bangladesh, most of the micro-entrepreneurs or small business entities have limited innovation and visibility. It is difficult accessing the most recent or most efficient technique or most cost-effective way of doing business. This ties back to the earlier point on small enterprises lacking information access and infrastructure. This inhibits innovation. To illustrate, without knowing the best technique to ensure water irrigation, a farmer-entrepreneur may miss out on innovation that could increase his productivity.

Telecenters and Mobile Phones as Tools. CICs as Resource Centers

Community Information Centers (CICs) or telecenters are considered among the tools used to allow a freer flow of communication and information to reach villages and rural areas in Bangladesh, and which could in turn help even small business people or micro-entrepreneurs to increase their client base and address information needs.

The CIC provides communication, data access and other services that help cater to the learning, livelihood, and communication needs of people living in these remote areas. Grameenphone set up CICs in 2006 and is now providing Internet access to over 500 rural communities throughout Bangladesh. Grameenphone is targeting to make CICs available to some 1,500 communities in the next few years.

A Grameenphone CIC is a center equipped with a computer which can access the internet using an EDGE modem. A variety of services are made available via this telecommunication link – voice, email, web and other information based services.

Through GP CICs, online marketing, trading, and business transactions can take place through the CellBazaar. CellBazaar is a Grameenphone service that makes buying or selling goods and services possible through the Internet and over the mobile phone. One can post information on goods to buy or sell on CellBazaar (via its website, or for Internet/EDGE activated mobile handsets, one can go to wap.cellbazaar.com with the phone's internet browser). Sellers can be contacted directly. When buyers see an item they like, they can call the seller, get additional information, and meet the seller to complete the transaction.

CellBazaar is an example of a platform which micro-entrepreneurs can use. It can give them a wider reach and allows them to sell to regions all around Bangladesh. There is still, however, low awareness and usage of the Internet through CICs in remote villages. Grameenphone seeks to beef up awareness of CellBazaar through their local CIC entrepreneurs. There may also be other internet-based solutions that may provide assistance to micro-enterprises insofar as their information and communication needs are concerned.

The Mobile Phone as an Enabling Tool

Based on cases from our fieldwork in Bangladesh, we argue that there is a role to be played by mobile phones in empowering micro-enterprises. Constraints faced by micro-enterprises could be reduced in some way with the mobile phone as a business-enabling tool.

In this section, we explore this apparent conundrum on the expected responsiveness in the adoption of the mobile phone as an enabling tool, against the belief that the mobile phone only contributes little to business building for the small business enterprises. It also demonstrates three parameters that set off the mobile phone as a catalyst for productivity, networking and information gathering.

The mobile phone as a productive tool implies that the small business owners use the mobile phone to conduct business either to complete an order or bid for a stock. In one sense, the mobile phone acts as the compressor of time and distance, minimizing the need for travel or to have face-to-face meeting to complete a business deal.

The mobile phone can act as the 'gatherer and disseminator' of information for micro-entrepreneurs. There are examples of this, especially the well-known stories of the fisherman or farmer checking prices, finding suppliers or bidder customers through his mobile phone (King, 2004; Ross, 2004). Through the socio-economic lens, mobile phones resemble an engine that pulls forward the socio-economic status of the owner – owning a mobile phone is liberating the economic boundary of the small business owner, therefore, he or she can now be in touch with other business partners or customers.

Moreover, the mobile phone also serves as a tool to create networking opportunities – one chance encounter or chat through the mobile phone leads to another business opportunity scenario.

The widespread use of mobile phones among the small entrepreneurs leads to new practices in their business transaction, and these changes have significant implications for mobile operators who wish to capture these small entrepreneurs' unmet needs. Because of the adoption of these new modes of space-time coordination and increasing mobility of the small business owners by owning mobile phones, the spatial formation and processes of interaction between buyers and sellers have apparently become much more complicated in this age of mobile communication.

Internet-Based and Mobile-Based Platforms for Micro-Enterprises

While there are challenges faced by micro-enterprises in Bangladesh, there are possible tools made available through ICTs for their empowerment and growth.

Internet- and mobile-based applications can be used to help micro-enterprises handle concerns regarding information and communication. CICs can provide venues for bringing micro-entrepreneurs and traders/buyers to meet online through the CellBazaar initiative as an example. CICs can serve as "digital brokers" for small businessmen like farmers and fishermen who could transact business with the help of CIC operators in accessing the Internet. This, however, would entail significant work insofar as consciousness-raising on the benefits of the Internet is concerned. At present, there seems to be little awareness and interest among farmers, fishermen, and other small entrepreneurs in availing of CIC services, much less in visiting them. This is where much effort from Grameenphone, its CIC operators, and other stakeholders, such as community leaders and influencers, need to be consolidated to make the CIC a valuable resource center for the local community. In setting up an Internet-based system, it is essential to build upon and integrate already existing indigenous information mechanisms to make it more viable. This may still include participation of middlemen but in a different level or degree. Making them part of a new digital trading system may entail re-training or re-tooling. However, their knowledge on the local ecosystem could be helpful, however, and including them as a player in an ICT-based platform can make transparency more possible.

At present, since Internet connectivity in Bangladesh is low (only 0.3 %), it may be that mobile phones offer a good option because of the high mobile network coverage (98 %). The mobile phone can facilitate faster, direct communication between micro-entrepreneurs, their suppliers, and clientele. Even low-income people can have access now to handsets

with the decreasing prices of simple low-end handsets. This augurs well for small enterprises to ride on the benefits that ICT tools can offer to improve the cost of doing business even in extremely challenging and competitive local settings.

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