# CellBazaar, a mobile-based e marketplace: Success factors and potential for expansion

## Working Paper<sup>1</sup>

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#### 1.0 Introduction

In emerging economies, access to accurate market information can be limited by poor, underdeveloped or even absent infrastructure. Countries are poor, partly because markets do not work well and markets do not work well, partly because of information problems. Isolated and poorly informed, farmers, traders and businesses simply cannot participate in commercial exchanges, and even when they do, tend to have limited bargaining power. Telecommunication can serve to ease such limitations (Jensen, 2007). Infrastructural bottlenecks can also constrain physical access to markets; even if a farmer has access to current market prices, if he cannot get his produce to the right market before it perishes, that market information is useless. In Bangladesh, problems such as flooding, frequent electricity outages as well as urban congestion (CKS Consulting, 2009) only serve to compound such problems. This is not just so for agricultural markets, but even the market for second hand goods, services, and much more.

Electronic commerce (e commerce), or the conduct of commercial transactions over electronic networks (OECD, 2002) has been seen as a way of reducing friction in the marketplace; this allows larger volumes of transactions to take place, effectively expanding markets, but also opening up entirely new markets (Mann, Eckert and Knight, 2000; Steinfield and Klein, 1999), allowing marketers (large and small) to exploit the Long Tail (Anderson, 2006). In developed economies, e commerce has taken the form of commercial transactions being facilitated over the Internet, but recently has been extended to mobile networks as well, owing to their growing ubiquity. In emerging economies poor Internet penetration and the lack of secure payment mechanisms, *inter alia*, have slowed the growth of e commerce. Meso, Musa and Mbarika (2005) note that there is little empirical evidence of success of mobile commerce in the developing world; most evidence is anecdotal.

However, as this paper will show, e commerce is in fact taking place over these networks, even if not in the same form as in developed economies.

The phenomenal proliferation of mobile networks in developing economies, and falling profitability of the provision of pure voice services, is pushing mobile service providers to explore the vast potential of the mobile to serve purposes beyond voice. Mobile telecommunication, the fastest growing technology of all time offers the possibility of transforming these markets into more competitive and efficient structures, through reduced transaction costs, in a similar way that e commerce was hoped to.

It is within this context that this paper explores the case of CellBazaar, an electronic marketplace (e marketplace) operating in Bangladesh for the past two years, which allows buyers and sellers to

exchange information on products and services for sale, by simply using mobile phones. There are various types of ICT-based applications which can be grouped under the generic term "e marketplace" such as online auctions, trade leads, requests-for-quotes and on-line catalogues (Humphrey et al., 2003). However, as Humphrey et al. opine, this generalization could imply that all applications support on-line buying and selling, and that transactions are actually completed online; as such, in this paper, we use the term to denote any type of application which electronically supports commercial transactions at any level.

While there exist a variety of similar e marketplaces operating in both the developed (Amazon, eBay, etc.) and the developing world (ngPay.com, etc.), this service is possibly the first e marketplace accessible by not just those at the "top and middle" of the economic pyramid.

Within the context of the use of ICTs, particularly mobiles, for lowering transaction costs this research identifies and examines potential success factors behind the emergence of the service in Bangladesh. The study also explores the scope for extending the service to include payment and delivery functions, to constitute a complete commercial transaction.

The report is structured as follows; section two provides a description of the CellBazaar service, how it works and a brief evaluation of its performance so far; section three describes the theoretical framework that this paper is based upon, and also compares and CellBazaar with other e marketplaces; section four examines the possible key critical success factors contributing to the emergence and popularity of the service in Bangladesh; section five explores the potential for completing transactions upon the CellBazaar platform; section six concludes.

#### 2.0 Background

#### Bangladesh

With a population of almost 160 million in 2007 (World Bank, 2008), Bangladesh is the most densely populated country among those with populations larger than five million. Bangladesh's per capita income, USD470, was lower than the South Asian average in 2007, as well as lower than the average for low-income countries according to World Bank (2008) estimates. With three quarters of the population living in rural areas (Bangladesh Bureau of Statistics, 2009), it is estimated that about 78 percent of the 15-60 population lives on less than USD2 per day.

Nevertheless, the telecom industry in Bangladesh has flourished in recent years. While the fixed sector has stagnated, the mobile sector has grown dramatically since 2004 (Figure 1), owing to intense competition (Khaled, 2008). As a result of this competition, Bangladesh is now among the cheapest countries in the world for mobile service (Nokia, 2009:12; LIRNEasia, 2009a). The industry average revenue per user (ARPU) was a mere USD1.84 in in December 2007 (Khaled, 2008). The affordability of

mobile services, as well as their rapid diffusion into rural parts of the country in the early years (Knight-John, Zainudeen & Khan, 2005) resulted in mobile telecommunication reaching many of the lowestincome earners, or the "bottom of the pyramid" (BOP) within the country.

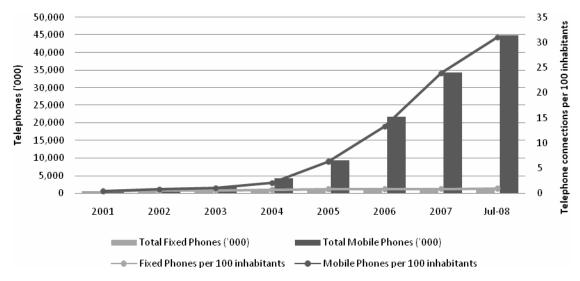


Figure 1: Growth and penetration in fixed and mobile sectors in Bangladesh Source: Khaled, 2008 (based on BTRC data)

Though the average number of mobile SIMs in 2008 was 28 per 100 inhabitants (BTRC, n.d.; IMF, 2008), a survey of teleusers<sup>5</sup> at the BOP<sup>6</sup> showed that at the BOP by late 2008, as many as 41 percent of those aged 15-60 owned their own mobile phone (LIRNEasia, 2009b). The proportion was the same for the urban and rural BOP.

By the end of 2008, there were 44.6 million mobile connections in Bangladesh from six mobile service providers: Grameenphone (47% market share), Banglalink (23%), Aktel (18%), Warid (5%), Citycell (4%) and Teletalk (2%) (BTRC, n.d).

#### CellBazaar

CellBazaar has been dubbed the "Craigslist of Bangladesh" (Goldman, 2007, October 23; Ramey, 2008, April 28). It is a mobile application which brings buyers and sellers together in an e marketplace where users can publish and retrieve information on goods or services for sale. It is essentially a real-time collection of classified advertisements, accessible through a mobile phone connected to Grameenphone's

<sup>&</sup>lt;sup>5</sup> Defined as those who had used any kind of phone (owned by themselves or someone else) in the previous three

<sup>&</sup>lt;sup>6</sup> Defined as socio-economic groups D and E more or less corresponding to households with incomes less that USD2 per day.

mobile network. Advertisements can be posted to the system as well as browsed through on a mobile through SMS, WAP, or IVR (voice, for buyers only), and also through a computer, via www.cellbazaar.com.

The simplest and most popular (Wall Street Journal, 2008, September 8) method of posting is through mobile phones by SMS. Both posting and browsing of advertisements can be done through SMS, by sending the word "sell" or "buy" to a short code (3838); the network responds with numbered lists of options (e.g., 1= new items, 2= used items, etc.) which the user can select from, sending in her selection also through an SMS, narrowing her search or categorization of her post (respectively).

The system is only available in English. This is for two reasons. First, the majority of mobile handsets in the country do not have a Bangla (local language) option (especially among BOP users). Second, Bangla posts (even if typed using English letters) are not searchable by the underlying software. To navigate the system, minimal English proficiency is required – the user needs to know a few words to get what he or she wants from the system ("buy," "sell," "TV," "Sony," etc).

Alternatively, a non-English literate user can get someone else to process the post/search. This has even provided a revenue-earning opportunity for some entrepreneurs in Bangladesh (Quadir, 2008). An automated voice option is also available, which allows buyers to listen to a selection of advertisements in Bangla.

Sellers can post their advertisements under a given category, along with a short description, and a price (or price range, or even indicate that the price is negotiable); depending on the seller's phone capabilities (or if he is posting from a PC), she can even post a picture of the item (though only those with similar capabilities will be able to view the picture). The seller's mobile number is published within the post, and at any time, she can delete her post, or edit it.

Buyers can browse through categories of goods and services, filtering various aspects such as new vs. used goods, wholesale vs. retail (agri-produce only), and also by brands and price ranges. Once the buyer finds a product that suits his requirements and price range, he can call the seller directly, and obtain more information, settle on a price and complete the transaction if agreement is reached.

CellBazaar is exclusively offered to Grameenphone's 20 plus million customers. Others can access it through the Internet or WAP, but only Grameenphone subscribers can register to post their items.

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<sup>&</sup>lt;sup>7</sup> Naeem Mohaiemen, Vice President of Business Development, CellBazaar, interview, Dhaka February 2009

Payment for the use of CellBazaar is based on SMS, EDGE/WAP or airtime charges incurred when making a post or browsing advertisements through any of the modes offered. Essentially, payment is "pay as you go," and typically, to post an item by SMS, a seller would need to send approximately five SMSs (charged at the standard rate), which would cost BDT5.75 (approximately USD0.08), inclusive of taxes. To search, a buyer would need to send a minimum of five SMS, the final number depending on the number of advertisements he chooses to view. According to the arrangement between CellBazaar and Grameenphone, the former gets a certain, undisclosed percentage of the resulting revenue from the SMS, or WAP use. Grameenphone also receives additional revenue from the calls generated for further inquiries and transaction completion thereafter.

Various kinds of goods and services can be posted, according to 69 predefined categories (at the time of writing), ranging from electrical appliances to automobiles to mobile phones to tutoring to rice and even to cattle.

The most popular category is mobile phones, specifically used ones, which amounted to 85 percent of this category (at the time of writing, Figure 3). It appears that CellBazaar is most popular for used items.

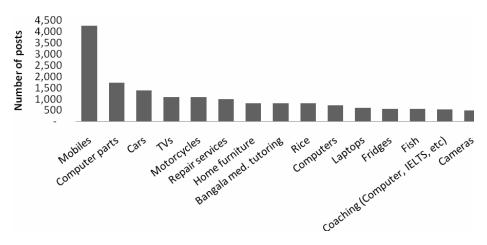


Figure 2: Top 15 CellBazaar post categories, as on 17 April 2009<sup>8</sup>

Source: www.cellbazaar.com, retrieved 17 April 2009

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<sup>&</sup>lt;sup>8</sup> Approximately 1400hrs, Sri Lanka time

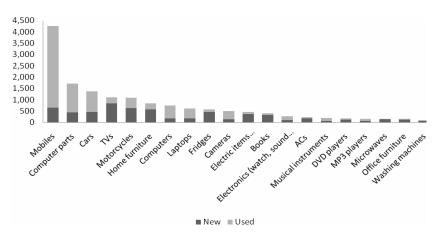


Figure 3: New vs. used items posted on CellBazaar, as on 17 April 20099

Source: www.cellbazaar.com, retrieved 17 April 2009

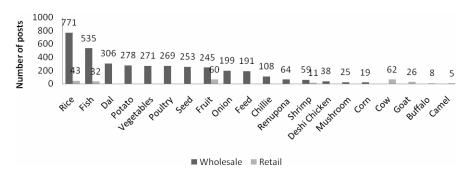


Figure 4: Wholesale vs. retail agri-produce post categories on CellBazaar, as on 17 April 2009<sup>10</sup> Source: www.cellbazaar.com and author calculations; retrieved 17 April 2009

It is interesting to note that communication devices (mobiles, computer parts, TVs, computer parts, laptops) constitute five of the top 15 post categories. Two of the 20 agri-produce categories also appear in the top 15. Among those 20 categories, except for livestock, the majority of the posts are under wholesale. The wholesale posts tend not to be removed within days, unlike the retail posts.

New categories are created by the management as needs arise. A system filter censors crude comments, gibberish, and other undesirable content, mainly as a precaution; in addition manual filtering is also used to screen such content that the system misses. 11

This application has won several awards to date, starting from the MIT IDEAS 2005 competition, when Kamal Quadir, CEO and founder, thought it up originally. It also won an award at the 2008 GSM

<sup>&</sup>lt;sup>9</sup> Approximately 1400hrs, Sri Lanka time

<sup>&</sup>lt;sup>10</sup> Approximately 1500hrs, Sri Lanka time

<sup>&</sup>lt;sup>11</sup> Naeem Mohaiemen, interview. Dhaka, February 2009

World Congress for the best use of mobiles for development. Quadir claims that CellBazaar is making an operational profit.<sup>12</sup> That could be interpreted as evidence of success.

The ideal way to assess the success of this service would be to measure the decrease in price dispersion that theory tells us will result from improved information and the associated welfare benefits to market players. The impact of mobiles was measured in four Kerala fish markets by Jensen (2007), showing that the adoption of mobiles led to a 38 percent reduction in price dispersion across the markets, in addition to an increase in fishermans' revenues, a decrease in consumer prices and a reduction is wastage (fish that found no buyers). Building on Jensen's work, Aker (2008) studied price dispersion across grain markets in Niger factoring in transportation costs (which Jensen did not). Similarly Aker showed that the introduction of mobile phones reduced price dispersion, with the effect being greater when market pairs were further away, and roads were of poorer quality. However, these kinds of evaluations require relatively large data collection exercises over time, and would only work for commodities such as rice, dal, etc, rather than non-standardized goods such as used TVs and refridgerators.

In the absense of such data collection possibilities, the number of transactions that take place over the electronic market can be tracked. However, in the case of CellBazaar, since transactions take place offline this cannot be done directly. According to a survey reported by Quadir in Nokia's Expanding Horizons magazine (2008:13), "two out of ten sellers surveyed were able to sell their items within ten days of posting." Aside from a random survey of users, estimates may be made from the number of posts that get deleted, assuming that the seller will not want to receive further inquiries once the good is sold and that deletion signifies a successful sale. This will only be relevant for one-off items for sale, leaving out wholesale suppliers and service providers, who tend to keep their advertisement on permanently.

The number of users and posts may be another indicator of success. By September 2008, CellBazaar reportedly had 1 million users, of which one quarter of them were repeat users (Wall Street Journal, 2008, September 8). On average, CellBazaar reportedly recieved an average of 100,000 hits every day (Nokia, 2008), and over 550 new posts per day, almost all through mobiles (Wall Street Journal, 2008, September 8).

<sup>13</sup> Kamal Quadir and Naeem Mohaiemen, interview. Dhaka, February 2009

<sup>&</sup>lt;sup>12</sup> Kamal Quadir, personal communication. February 2008

While initially popular in urban areas, CellBazaar says that the appliation has since become popular in rural areas too. By 2008, fifty one percent of posts were from rural areas, according to CellBazaar officials.<sup>14</sup>

The next section further explores the theoretical impacts of CellBazaar, and other similar electronic marketplaces, in terms of reducing transaction costs and improving market information for different market actors.

#### 3.0 Theoretical background

ICTs can serve to reduce transaction costs at all levels of a commercial transaction. With the emergence and spread of the Internet in the developed world, it was expected that it would change the way that companies in developing countries – big and small – would transact, connecting them (through the Web but also through specialized networks) to international markets, reducing costs and improving competitiveness, propelling growth and development. However this was based on the premise that all such companies would have access to ICTs, including cost-effective and reliable ICT infrastructure. This was not the case, as researchers such as Humphrey, Mansell, Paré and Schmitz (2003) found; businesses in developing countries did not find much use for e marketplaces, relying still on conventional methods to complete their transactions.

Internet access in the developing world is often limited. Thus, the benefits of e marketplaces, and more broadly e commerce have been limited thus far. However the widespread proliferation of mobile phones compared to computers in the developing world, especially among those at the bottom of the pyramid (e.g., LIRNE asia, 2009b), implies that the theoretical benefits of e commerce can now in fact be extended to such low income earners users in the developing world.

There are various types of ICT-based applications which can be grouped under the generic term "e marketplace" including auctions<sup>15</sup>, trade leads<sup>16</sup>, e-retail<sup>17</sup> and direct buyer/seller links<sup>18</sup> (Humphrey et al., 2003). However, as Humphrey et al. opine, this generalization could imply that *all* applications

<sup>&</sup>lt;sup>14</sup> Kamal Quadir and Naeem Mohaiemen, interview. Dhaka, February 2009; an analysis of seller locations from <a href="https://www.cellbazaar.com">www.cellbazaar.com</a> on 17 April 2009 also shows that 53 percent of posts came from outside Dhaka, while 43 from within Dhaka.

<sup>&</sup>lt;sup>15</sup> These may include, but not be limited to, buyers placing bids over a given period of time (e.g. the model used by eBay for auctions)

<sup>&</sup>lt;sup>16</sup> This refers to buyers and/or sellers posting messages to an on-line forum, indicating a desire to buy or sell items. Price information may be provided.

<sup>&</sup>lt;sup>17</sup> This refers to systems where the e-marketplace provider sells goods or service directly to the buyer, taking on the role of a seller

<sup>&</sup>lt;sup>18</sup> This may include, but not be limited to, systems where the e-marketplace provider provides direct links from their website to the seller's own website

support on-line buying and selling, and that transactions are actually completed online; as such, in this paper, we use the term to denote any type of application which electronically supports commercial transactions at any level.

Transaction costs can be broadly defined as costs incurred in making an economic exchange (Singh, 2008). This can include both tangible costs such as the cost of transportation incurred in searching for a product, as well as intangible costs such as the time and energy spent on the same. Hobbs (1997) categorizes transaction costs as comprising (1) information costs, or those incurred in determining the availability, attributes and price of good or service for sale, also known as search costs; (2) negotiation or bargaining cost, as the term suggests, costs incurred in coming to an acceptable agreement with the other party; and (3) monitoring or enforcement costs, the costs incurred in ensuring that the terms of the transaction are adhered to and taking appropriate action if not.

E marketplaces can serve to provide several benefits to buyers and sellers alike. On the buyer side, such applications reduce buyers' search costs<sup>19</sup> in terms of time and money; with the simple click of a button, information on a variety of sellers and goods and services for sale is made available. This leads to an increase in demand for goods and services (and thus an outward shift in the demand curve). The improved information reduces the ability of sellers to attract monopoly profits (Bakos, 1997), and thus improves a market's ability to optimally allocate resources. Since, in this case, buyers' surplus increases at the expense of sellers' profit, Bakos argues, as do Picot et al. (1997), that sellers should in theory oppose the introduction of e marketplaces. Though Bakos goes on to argue that there are other advantages which sellers can enjoy, particularly among those who are less-established both in terms of their customer base and physical space. These writers do not appear to give enough weight to the benefits that accrue to sellers from market widening and clearing.

On the seller side, e marketplaces also reduce seller costs by allowing sellers, particularly microbusinesses who lack the necessary resources to run brick-and-mortar shops (rent, employee salaries) to market their wares over their mobile or through a computer; this is especially relevant to low-income users in the developing world. It also opens up markets for the sale of less-popular, or long-tail products, since the cost of selling them is considerably reduced (Anderson, 2007). However, exploitation of the long tail requires sophisticated information processing and logistical capabilities that small and medium enterprises may not readily have. Nevertheless the increase in supply of goods and services (and

<sup>&</sup>lt;sup>19</sup> Ghose (2006) categorizes search costs into two components: external and cognitive; he argues that while e-marketplaces can reduce "external" costs as transportation costs incurred in searching for a product, cognitive costs can increase; nevertheless, overall, there should be a reduction.

associated outward shift of the supply curve), together with the outward movement of the demand curve leads to a fall in prices and an expansion of the market. The Jensen study (2007) showed that both buyers and sellers benefited from the creation of single large market out of the hitherto distinct 35 markets through the use of mobiles; producer prices went up, prices paid by consumers went down and markets cleared.

It has also been argued that the impact of the perhaps unjustly maligned middlemen, or intermediaries, can be reduced through e marketplaces (Wigan and Benjamin, 1995; Picot et al. 1997) as more informed sellers a chance to gain (more) direct access to markets, a process known as disintermediation (Picot et al. 1997).<sup>20</sup> Many have argued that the lack of reliable information in developing countries gives opportunity to intermediaries (sometimes more than one) to extract monopoly profits from the seller, and charge consumers exorbitant prices.<sup>21</sup> However, much of the criticism of middlemen fails to take into account the services they provide such as transportation and aggregation into larger lots. When information flows improve, the intermediaries do not disappear; the functions they perform change (Sarkar, Butler and Steinfield, 1995; Hawkins, Mansell, and Steinmueller, 1999).

#### Similar applications

This sub-section looks at some of the kinds of services that e marketplaces can provide. It draws on a comparison of e marketplaces similar to CellBazaar operating in both developed and developing countries, contained in Annex 1. These markets vary in the type of products and services offered for sale (commodity vs. non-commodity, heterogeneous vs. homogeneous) the components of the transactions which are offered electronically, and the geographical availability of the service, to name a few. Some of the kinds of services offered are:

• Search: This refers to the ability to search for goods or services for sale, possibly disaggregated by the type of good or service, condition (new or old, if applicable), price and geographical availability. All of the e-marketplaces reviewed in Annex 1 offered such services free-of-charge over the Internet, although standard SMS/GPRS charges were imposed on searches initiated via mobile phones.

<sup>&</sup>lt;sup>20</sup> Picot et al. (1997) distinguish between "execution-driven" transactions and "consulting-driven" transactions, arguing that the former can often be disintermediated with the use of ICTs, while the latter may not always be, even with ICTs, as they rely on some tacit knowledge that only the intermediary possesses.

some tacit knowledge that only the intermediary possesses.

21 Islam and Alawadhi (2008) trace the price of beans in Bangladesh through the supply chain, showing the price per unit more than doubling by the time it reaches the urban retailer.

- Order: This refers to the process involved in securing an order with the seller of the good, before transactions regarding payments are made.
- Payment: This refers to the process of completing payments electronically, facilitated by the marketplace provider. Payment options can include credit and/or debit cards, direct bank transfers, cheques and gift cards. Some e-marketplace providers offer their own "currency" such as eBay's PayPal service. PayPal is an Internet merchant service which facilitates electronic payments without disclosing bank details to the seller; funds are sent to a "virtual" PayPal account, which can be used as currency for making purchases from websites that allow it.
- Delivery: This refers to the process whereby goods are delivered to the customer. Although
  deliveries are usually handled by the sellers themselves, several of the e marketplaces offer
  dispute resolution services (as explained below), in the event that any issues relating payment and
  deliveries arise.
- Feedback mechanisms: These refer to facilities provided by the e marketplace provider which allows the buyer and/or seller to provide feedback on the other party on the quality of service they received from the same. This can take the form of reputation statements or ratings, or a combination of the two, which is open for other potential buyers and sellers to see. Such ratings can have a bearing on the party's ability to conduct business in the future, depending on the rating received.
- Dispute resolution: This refers to services offered by the e marketplace provider to settle any disputes that arise between the buyer and seller in the settling of payments and delivery of goods. For example, Amazon offers a guarantee service whereby buyers can receive up to USD2,500 of the purchase price, including shipping charges, in the event that a good fails to be delivered, the condition of the goods differs to that expected or described, or the seller fails to provide reimbursements for a returned good. Clickbd.com offers a policy where the winning bidder is obligated to pay seller within three days from the time the auction is closed; violation of this policy can result in negative feedback, or even permanent cancellation of membership with the company. BracNet.com also offers a similar policy where user membership can be deleted if negative feedback is received. Even if dispute resolution services such as that provided by Amazon are not provided, such ratings systems can be effective in deterring bad behavior, as well as discouraging bad buyers or sellers from joining the market.

#### 4.0 Critical success factors

This section examines critical success factors for the emergence of CellBazaar in Bangladesh, particularly as a marketplace capable of conducting electronic transactions through simple communication technologies such as SMS, a feature that sets it apart from many other e marketplaces available.

High mobile penetration but low Internet penetration

As seen in section two, Bangladesh's mobile sector has performed well in terms of connectivity and prices since 2004 (Khaled, 2008), growing from two percent in 2004 to  $28^{22}$ percent by the end of 2008, in less than four years. Even at the BOP as many as 41 percent of Bangladeshis (aged 15-60) owned their own mobile by late 2008 (LIRNE*asia*, 2009b).

Internet penetration levels in Bangladesh are very poor. At a country level, Internet penetration was 0.1 percent at the end of 2007 (ITU, 2008). According to the LIRNE asia survey of teleusers at the BOP, only 0.6 percent of the BOP (aged 15-16) had ever used the Internet, while 53 percent of them had not even heard of the Internet (LIRNE asia, 2009c). The weakness of conventional Internet access makes the busines case for a mobile-based model stronger.

In this kind of situation (common in developing countries) most conventional web-based e marketplaces are not accessible to the majority of the population, much less the BOP. Even if mobile-web platforms are available, their use is limited to those with WAP/GRPS-enabled handsets. Not a single BOP mobile owner in Bangladesh had used the Internet through their mobile by late 2008 (LIRNE asia, 2009b); furthermore, given that the majority of respondents had spent less than USD50 on their mobile handset (even less if it was second hand), it is unlikely that those handsets are web-enabled.

As Mansell and Jenkins (1992:16) clearly state:

"Accessibility of an ETN [electronic trading network] is [an] important factor that influences electronic trading. The value of the trade-related information that exists in electronic form can be enhanced by its wide diffusion or by its relative scarcity, depending upon the specific circumstances."

The introduction of an e marketplace which is accessible through SMS (as well as IVR) platforms revolutionalizes the way in which the market can be accessed. The millions of users with access to

<sup>22</sup> Author calculated based on subscriber data reported by the Bangladesh Telecommunication Regulatory Commission (BTRC) and population figures reported by the IMF (IMF WEO Database, October 2008)

phones with minimum capabilities get instant access. Such platforms expand the market of potential buyers and sellers providing for wide diffusion, subject to other conditions of course.

#### **Affordable**

Meso, Musa and Mbarika (2005) in a study of the influences of mobile adoption in Sub-Saharan Africa suggest that high levels of mobile adoption are necessary but not sufficient for the widespread adoption of mobile commerce in developing countries; other conditions such as affordability and perceptions of reliability in the technology (in addition to actual reliability) are necessary. In Bangladesh, affordability is most definitely satisfied, with BOP teleusers able to purchase handsets for as little as USD 25.<sup>23</sup> As mentioned earlier, Bangladesh offers some of the lowest mobile tariffs in the world (LIRNE*asia*, 2009a; see also Table 1), with the monthly total cost of ownership<sup>24</sup> for a low user being less than USD5<sup>25</sup> (Nokia, 2009:12). The SMS charges (Table 1) show that the cost of searching for or posting an item for sale via SMS are very low in Bangladesh.

Table 1: South Asian prepaid SMS charges, <sup>26</sup> February 2009

	Afghanis -tan	Nepal	Bangla- desh	Pakistan	India <sup>27</sup>	Bhutan	Sri Lanka	Maldives
On-net	0.048	0.013	0.014	0.013	0.02	0.021	0.009	0.015
Off-net	0.048	0.025	0.014	0.013	0.02	0.021	0.018	0.039

Source: LIRNEasia, 2009a

#### Exclusively partnered with largest operator

Unlike many e marketplaces which run independently and are not functionally connected to any other business, CellBazaar partners with Grameenphone to deliver the SMS/WAP/GPRS-based service. While exclusivity with one operator prevents mobile subscribers of other operators from posting items for sale, this structure allows for a higher revenue-sharing ratio between provider and mobile operator.

Additionally, the fact that CellBazaar chose to offer its service exclusively to Grameenphone subscribers allowed the former to benefit from firstly the largest mobile service provider subscriber base in Bangladesh, and secondly from synergies with Grameenphone's strong commitment to economic and social development. According to the company's website, it follows the principle "development is a

<sup>&</sup>lt;sup>23</sup> Second hand handsets among the 25th percentile were purchased for less than USD24.46

<sup>&</sup>lt;sup>24</sup> Includes depreciated handset cost, service charges and tax.

 $<sup>^{\</sup>rm 25}$  The average for the 80 countries studied was USD 13.16

<sup>&</sup>lt;sup>26</sup> Prepaid per minute charges of the cheapest prepaid package (based on initial connection charges) of the largest operator (based on market share) in each country.

<sup>&</sup>lt;sup>27</sup> Refers to local tariffs only; national rate = USD 0.031

journey, not a destination;"<sup>28</sup> in addition to its considerable corporate social responsibility portfolio, the company has its roots in the Village Phone program, initially a core aspect of its business mandate, but now a part of its CSR portfolio (Knight-John, Zainudeen and Khan, 2005).

Similar to the success of the Village Phone program, the mere association of CellBazaar with the "Grameen" brand (recognized and trusted even in rural areas, owing to familiarity with Grameen Bank) may affect trust in the company and service by the public, and hence, its adoption by those particularly on lower incomes.

#### Entrepreneurial culture

Research suggests that culture plays a role in the adoption of services such as CellBazaar. A recent comparison of m commerce adoption in the UK and Hong Kong confirmed that culture (measured by four specific variables) indeed affects use of and attitudes towards m commerce applications (Harris, Retie and Kwan, 2005).<sup>29</sup>

LIRNE*asia*'s survey findings indicate that as many as 72 percent of BOP mobile owners in Bangladesh use their mobiles on a daily basis for "financial, business or work-related" communication (Figure 4). This number is considerably higher than any of the other countries in the study. Qualitative investigations found a keen interest among Bangladeshi BOP teleusers about ways to "make more money" (CKS Consulting, 2009). The mobile is clearly seen not only as a "social" utility but also as a tool for making money. CellBazaar benefits from this entrepreneurial culture.

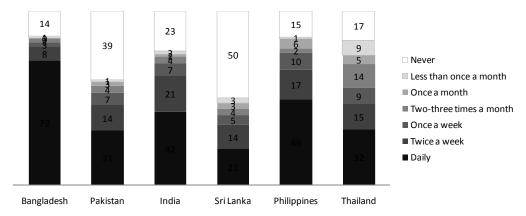


Figure 5: Use of the phone for financial, business or work-related purposes (% of BOP mobile owners)

Source: LIRNEasia 2009b

http://www.grameenphone.com/index.php?id=78

Though as the authors point out, pricing differences between markets were not accounted for.

#### 5.0 Potential for incorporating more of the transaction into the system

So far, CellBazaar only contributes to making the "search" component of a transaction more efficient. Though the mobile phone is used in the negotiation component (at least initially to make first contact), CellBazaar is not involved in this and subsequent stages of the transaction (Figure 6).



Figure 6: The role of CellBazaar in a transaction

In the case of goods, this would involve bringing payments, arrangement for delivery<sup>30</sup> as well as monitoring into the system, whereas in the case of services, this would only involve the former; physical presence will still be required for the latter, except in the case of e services. We will consider the more complex case of goods, where the buyer and seller need not necessarily meet, all interactions, save actual delivery, being capable of being completed over electronic networks.

This section looks into possibilities of expanding an application such as CellBazaar to complete the transaction on the mobile platform; similar to the role that eBay plays. This would hopefully improve the efficiency of more components of the transaction between dispersed parties.

*Problems* with shopping in e marketplaces

Shopping on any e marketplace is affected by two problems due to the asymmetric information that exists between sellers and buyers. The former has superior information on the goods traded than the latter. Sellers have the incentives to falsely represent the good (adverse selection), i.e., suggest it to be of higher quality than is the case, or in better condition than it really is in order to secure a higher price. They also have the incentives to act badly after the buyer has made payment, i.e., delay delivery, not respond to customer complaints, etc. (moral hazard) (Resnick, Zeckhauser, Swanson and Lockhead,

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<sup>&</sup>lt;sup>30</sup> In the case of a good, delivery will take place physically, i.e., offline. Some services may theoretically be delivered on the system (e.g., tele-tutoring), however in the case of the kinds of services offered by CellBazaar sellers, it is likely that delivery will still require face-to-face interaction.

2002). Studies have shown that these concerns hold back potential online shoppers from engaging in online transactions (Teo, 2006).

In the case of new and standardized (branded) goods, adverse selection is less pronounced (Resnick, et al., 2002; Teo,2006). However, the problem remains in a market like CellBazaar where many of the goods are second hand as well as less standardized.

#### The importance of trust

Trust can be considered to be loosely defined as the confidence in the reliability of a person or system (Giddens, 1990:30). The need for trust arises from a lack of information on and understanding of the particular characteristics of an individual or the particular workings of a system (Giddens. 1990:33-36). Trust is a key factor in commercial transactions (Liu, 1996).

When it comes to e commerce, where transacting parties may not know each other, have ever met or ever spoken, trust becomes even more important. As Liu notes, the move from face-to-face transactions to technology-mediated transactions implies that higher levels of trust are needed to complete them (1996:34).

Siau, Sheng and Nah (2003) in a summary of the literature on buyer trust with respect to electronic and mobile commerce show that there are several aspects of trust which are needed for e commerce transactions to take place: trust in the seller; trust in the buyer; trust in the electronic network; trust in the e marketplace, etc.

In true e commerce, the buyer and seller should not even have to meet, nor speak. Resnick and Zeckhauser (2001:2) raise a valid point about e commerce on the Internet:

"What is surprising is the vast shuttling of both new and second hand goods among distant strangers on the Internet, through such mechanisms as eBay and the Yahoo auction site. Buyers, who must pay before inspecting or receiving their items, must put considerable dollars at risk."

Yet, thousands of transactions of this nature take place over e marketplaces such as eBay every day among parties who do not know each other; in order for transactions to take place there must be some trust between parties; where does it come from?

Arguing that Internet auctions have none of the characteristics that help to build trust in conventional face-to-face transactions,<sup>31</sup> Resnick and Zeckhauser suggest that instead, this "trust among strangers" comes from a system of reputations (broadly put, feedback mechanisms). Feedback mechanisms allow transacting to establish "reputations" based on previous buyer and seller experiences in transacting with them, which are visible to any other potential transacting party.

#### *Pre-transaction concerns and options*

Unlike in a physical transaction, the buyer is unable to inspect the good properly before confirming his purchase. The potential for adverse selection is high, leading the buyer to not trust the seller. A feedback mechanism based on the past behavior of the seller (and buyer), similar to that employed by eBay could help to address this problem. Even if each seller has just a few buyers, and they are dispersed, a feedback mechanism allows buyers (as well as sellers in the case of eBay) to see past buyers' feedback on the seller (comments and numerical ratings). A buyer can record her bad or good experience on the seller's feedback page, and that information can be distributed to any number of potential buyers at no cost.

Though such mechanisms may not be perfect, Resnick et al. argue that as long as users perceive the system to work, bad behavior will be deterred and bad sellers will be discouraged from joining the market (2002). That is, the threat of negative feedback for bad behavior regulates sellers' behavior. Key to this is that the seller has to incur some initial costs to start selling and establishing a reputation.

Of course there is the possibility of the seller creating a fresh profile, wiping the slate clean (especially in Internet e marketplaces since a valid email address, a basic registration requirement, can be obtained using false identities). However, in CellBazaar's case, you would need a new mobile connection; this is not very expensive, but the registrant's identification needs to be verified according to government regulations. In any case without the verification requirement, it is easier and less costly to obtain a new email address than it is to obtain a new SIM card.

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<sup>&</sup>lt;sup>31</sup> (1) Locality of the transaction: Transactions that take place locally (most commonly the case according to the authors) permit inspection of the goods, allowing the buyer to ascertain the quality of the good. (2) Frequency of interaction with seller: Frequent interactions with the same seller allow trust to be built up over time. (3) Local reputations: Peers may provide buyers with knowledge about the seller. (4) Seller reputation in other contexts: Reputations can be "borrowed" from other contexts (e.g. the seller has a good reputation in a personal context, which he would not want to jeopardize, thus signaling trustworthiness). (5) Seller's duration of operation: Sellers' existence over many years allows it to build up a reputation. (6) Reputations borrowed from others: Associations with other (trusted) individuals or organizations provide the seller with greater reliability in the eyes of the buyer. (7) Brand names: Associations with other (trusted) brands similarly indicate reliability. (8) Large outlays: Sellers may signal "reliability" by making large outlays (e.g., on a showroom) indicating that they have sufficient resources.

Resnick et al. (2002) also showed that reputations matter more for "riskier" goods, that is, higher value, less standardized used items. A technical partial solution, which already exists on CellBazaar, is the option to upload and view photographs of the good being advertised. This, however, requires the seller and buyer to have advanced mobile capabilities.

#### Payment concerns and options

There are trust concerns with completing payments on the system, which include technical and policy aspects.

The seller has to be able to trust that the buyer will make the payment should she deliver the good; the seller has to trust the mode of payment (e.g., cheques may bounce after delivery). The buyer has to be able to trust that the seller will deliver the good if he makes the payment. Neither party will want to go first, given the risks.

The way that some e marketplace operators have overcome these issues is by introducing a (trusted) third party guarantor to reassure both parties. The buyer issues the payment to the third party guarantor; the seller then is able to deliver the good; once the buyer confirms that the good has been received or otherwise accepts the responsibility, the third party guarantor then releases the payment to the seller (Figure 7). 32

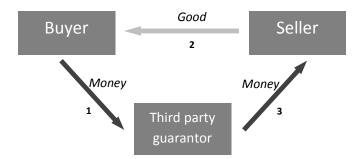


Figure 7: Overcoming trust concerns in transactions through third party guarantors

The third party guarantor can be a credit card company, a money broker (e.g., Propay, Paymate on eBay), or even the e marketplace operator itself (e.g., Amazon and eBay both offer account systems where the seller must open an "account" with them which is connected to the seller's bank account;

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<sup>&</sup>lt;sup>32</sup> In fact this is the case in *all* money transactions that take place in an economy. As Giddens points out in economic transactions, by exchanging money tokens (guaranteed by the state) instead of engaging in barter exchanges, the requirement for trust in the other party is replaced with trust in an "abstract system," guaranteed by a third party (1990).

money from all transaction transits through this account); eBay also offers escrow services, but according to Resnick and Zeckhauser (2001), these are rarely used.

Other concerns that buyers and sellers may have with payments are the ability to track a payment, the security of the buyer's credit card details, purchase protections (or insurance), and prompt payment.

CellBazaar aims to provide an e marketplace which is accessible to a wide range of Bangladeshis, including those at the BOP. The reality of most developing countries, and in particular the BOP, is that access to bank accounts and credit cards is poor. At the BOP 29 percent had access to a bank account (broadly defined as some kind of bank account within the household and not differentiating between current and savings accounts) and three percent had access (similarly defined as held by someone in the household) to a credit card. On the other hand, 41 percent owned their own mobile, and an additional 19 percent had access to a mobile within their household; these kinds of numbers have inspired mobile payment and banking applications to be developed for the developing world in recent times. As such, an obvious way to facilitate payments on CellBazaar would be through a mobile payment system.

Secure mobile payment systems have already been tested and implemented in several Asian countries, most famously in the Philippines. Mobile users (who subscribe to the networks which provide payment systems) can send money from one mobile to another, and make other payments through a simple SMS, for a small fee.<sup>33</sup> Money can be put into or taken out of the system through local agents.

The technology for these kinds of systems exists. The two major barriers to successful implementation are uptake and regulation. Even in the Philippines, actual usage of mobile payments appears to be very poor at the BOP. Just four percent of the BOP had used a mobile payment system in the Philippines, of which, just over half used them regularly (LIRNE asia, 2009b). Though there is great familiarity with mobiles, SMS and electronic reloading in the Philippines, awareness of mobile payments at the BOP is very poor. Therefore uptake of mobile payments in Bangladesh could face similar problems.

The lack of a clear policy framework is a barrier for mobile payments. Mobile payments can blur the lines between mobile operators and banks, and therefore telecom and financial regulations. Therefore clear guidelines are required on the functions a mobile operator can and cannot perform (e.g., can they accept deposits like conventional banks?) in this context. The current lack of such guidelines in Bangladesh is a barrier to the adoption of mobile payments.<sup>34</sup>

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For example, a G-Cash user is charged 1% of the transaction value for sending money (<a href="http://gcash.globe.com.ph/subsectionpagearticle.aspx?secid=25&ssid=43&id=86">http://gcash.globe.com.ph/subsectionpagearticle.aspx?secid=25&ssid=43&id=86</a>)

<sup>&</sup>lt;sup>34</sup> Though the government is said to be "in the process of" developing guidelines to permit mobile payments.

#### Post-payment concerns and options

Once the payment has been made, there still remain trust concerns, as well as infrastructure challenges to be addressed.

The buyer has to be assured that the seller, after the payment has been made, will actually ship the good within a reasonable time, and that the latter will respond if the former has complaints after receipt; a problem of moral hazard. Resnick et al. (2002) argue that a reputation system can take care of this problem too, as it will with adverse selection discussed above.

As seen in section three, some e marketplaces offer some basic dispute resolution services, such as providing negative feedback, cancellation of accounts, etc. This could be an option for the e marketplace provider seeking to build on applications such as CellBazaar.

Infrastructural limitations also prevail in a country like Bangladesh. For successful e commerce a reliable, secure and cost-effective delivery mechanism is required, with tracking options.<sup>35</sup> Bangladesh has private courier services; however these may serve corporate users, therefore not be affordable for CellBazaar transactions. The national postal service is also an obvious option; however reliability could be a question.

In the early days, the Internet was seen as a threat to the US Postal Service (USPS) (Childs, 1998, April 24). By 2005, the picture had changed altogether, with growth in e commerce making a significant positive contribution to the volume of mail going through the postal service, specifically from Amazon, eBay and Netflix (Fallows, 2005, September 4). The USPS was led to innovate, installing barcode tracking mechanisms, flat-rate boxes, providing printable postage labels, as well as a range of services for shippers (in fact, specifically targeted for the likes of the millions of eBay sellers) on its website. USPS now even partners with other courier services such as FedEx and UPS, to provide the "last mile" of the delivery service (Hafner, 2006, August 2). Similarly, this could be an opportunity for the Bangladeshi postal service to reinvent itself. The Bangladesh postal service currently has a "value pay post" facility (cash on delivery) used by a few companies; this also offers an opportunity for the buyer to pay for the good upon delivery, and the postal service to pay the seller thereafter.

It appears that the biggest barrier to expanding CellBazaar in a country like Bangladesh is the delivery aspect. Without a reliable, secure and cost-effective delivery system, transactions will be

<sup>&</sup>lt;sup>35</sup> However, whatever delivery services employed may have limitations on size and content; given the nature of some of the basic goods traded through CellBazaar (e.g., livestock) regular face-to-face delivery options may be required in any case.

geographically limited; nevertheless, access to geographically unlimited market information improves market efficiency, which is a step forward.

#### 6.0 Conclusion

There is great potential for mobiles to transform e commerce in developing countries; through reduced transaction costs at all levels of a transaction, the potential efficiency benefits are great. Thus far limitations in Internet access, secure payment mechanisms, *inter alia* have precluded the widespread adoption of e commerce applications in the developing world.

CellBazaar represents a working form of e commerce for the developing world, linking buyers and sellers of all kinds of goods and services in all parts of Bangladesh. The simple mobile application is albeit a rudimentary and partial solution, however it has been taken up by at least one million Bangladeshi mobile users thus far, even among the rural poor. Factors that have helped it to work are the high level of mobile access in the country (even among the rural and the poor), the low cost of using the service (for buyers as well as sellers), the exclusive partnership it holds with the largest mobile operator, and the entrepreneurial culture in the country. Future empirical research similar to the work of Jensen as well as Aker would be useful in assessing the economic impacts in terms of reduced price dispersion, increased seller profits and consumer welfare; however, this would only be possible for the case of commodities, rather than the full range of unstandardized products and services available.

In order to extend a system like CellBazaar to include the complete aspects of a transaction, there are several issues of trust, infrastructure and policy which need to be overcome. It appears that in a country such as Bangladesh, the latter will pose the largest challenges.

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**Annex 1: Comparison of e marketplaces** 

	Cell Bazaar <sup>36</sup>	Craigslist <sup>37</sup>	Amazon Marketpla ce	eBay	Clickbd.com <sup>38</sup>	bracNet	ngpay <sup>39</sup> , <sup>40</sup>	SNX India	e-Choupal
Start of operation (year)	2006	1996	2000	1995	2005	Not specified	2008	Dec 2007	2000
Operating country head office	Bangladesh	USA	USA	USA	Bangladesh	Bangladesh	India	India	India
Type of application	Trade leads (classifieds),	Trade leads (classifieds),	Trade leads (classifieds) direct buyer/seller links	On-line auction; direct buyer/seller links Trade leads (classifieds),	On-line auction; trade leads (classifieds),	Trade leads (classifieds),	e-retail	On-line spot market	Trade leads (classifieds), <sup>41</sup>
Geographical availability of service	Local	International	Internationa 1	International	Local	Local	Local	Local	Local
Reach <sup>42</sup> (Percent of global Internet users: three-	0.0065%	1.811%	2.009% <sup>43</sup>	2.063%	0.0047%	0.00053% 44	0.00203%	0.000007%	Not applicable

Only available to Grameenphone subscribers
 Source: <a href="http://www.craigslist.org/about/factsheet">http://www.craigslist.org/about/factsheet</a>
 According to its website, over 90 percent of all listed items gets sold on ClickBD.
 According to its website, ngpay has become the fastest growing end-to-end mobile commerce service in India
 Other similar places include FutureBazaar
 At the time of writing, it is not clear whether products and/or services offered by third-party sellers are order via direct links to a seller's website or not.
 Website statistics from www.Alexa.com

	Cell Bazaar <sup>36</sup>	Craigslist <sup>37</sup>	Amazon Marketpla ce	eBay	Clickbd.com <sup>38</sup>	bracNet	ngpay <sup>39</sup> , <sup>40</sup>	SNX India	e-Choupal
month average)									
Daily page views per user (three month average) <sup>45</sup>	19.2	20.92	6.35	14.64	14.2	3.2 <sup>46</sup>	2.64	1	Not applicable
Other traffic information (as reported by own website)		No. of page views a month: 20 billion No, of users a month: 50 No. of new classified ads a month: 40 No. of job listings a month: 1 million		No. of active users (worldwide; Quarter 1, 2009): 88 million total value of sold items on eBay's trading platforms in 2007: nearly \$60 billion in 2007 <sup>47</sup> ;			over 200,000 registered users		
Languages offered (may not be comprehensive)	English	English, French, German, Italian,	English, French, German French,	English, German, Dutch, French, Italian, Japanese, Polish, Korean,	English	English	English	English	Local (multiple Indian languages)

Refers to <a href="https://www.Amazon.com">www.Amazon.com</a> US site (and not only Amazon Marketplace)
 Refers to entire site, of which the classified section is only one part of it
 Website statistics from www.Alexa.com

<sup>46</sup> Refers to entire site, of which the classified section is only one part of it
47 See http://files.shareholder.com/downloads/EBAYPRES

http://files.shareholder.com/downloads/EBAYPRESS/632302102x0x223370/C99E1580-C708-46FA-A1B5-3FB94A64ABB2/eBayMarketplacesFastFacts.pdf, http://files.shareholder.com/downloads/EBAYPRESS/632302102x0x223370/C99E1580-C708-46FA-A1B5-3FB94A64ABB2/eBayMarketplacesFastFacts.pdf; and http://news.eBay.com/fastfacts\_paypal.cfm

	Cell Bazaar <sup>36</sup>	Craigslist <sup>37</sup>	Amazon Marketpla ce	еВау	Clickbd.com <sup>38</sup>	bracNet	ngpay <sup>39</sup> , <sup>40</sup>	SNX India	e-Choupal
		Portuguese, and Spanish	Japanese	Spanish, Swedish, Turkish, Vietnamese					
Some Types of product/service s offered	New/ used items; services; wholesale/retai l agri-produce	Jobs, housing, goods, services, loc al activities, advice	Books, electronics, apparel, furniture, food, toys (new and used)	Clothing, shoes, accessories, consumer electronics, home & garden	New/ used items; services; Electronics, Cameras, Phones, Computers, CDs, Mobiles, Fashion Accessories, Music, and Travel.	New/ used items; services;	Travel, entertainment, banking, bill payment, shopping, food, charity	Fruits & vegetable	Wheat, vegetables, shrimp
Services offered	Search, posting	Search, posting	Search, posting, payment, order, delivery <sup>48</sup> , dispute resolution services <sup>49</sup> , buyer/seller reputation statements	Search, posting, order, payment, dispute resolution services <sup>50</sup> , buyer/seller reputation statements	Search, posting, order, dispute resolution services, buyer/seller reputation statements	Search, posting, buyer/seller reputation statements	Search, order, payment <sup>51</sup> , delivery,	Search, posting, order, payment <sup>52</sup> delivery, quality inspection services	Search, order
Choice of Payment/delive	N/A	N/A	ACH <sup>53</sup> - enabled	Third-party Merchant accounts (PayPal/	N/A		Credit cards, HDFC Bank	Bank transfers	N/A

<sup>&</sup>lt;sup>48</sup> Applicable where seller stores item at an Amazon Fulfillment Center
<sup>49</sup> See <a href="http://www.amazon.com/gp/help/customer/display.html?nodeld=537868">http://www.amazon.com/gp/help/customer/display.html?nodeld=537868</a>

<sup>50</sup> See http://resolutioncenter.eBay.com/

Has financial grade security; users required to enter 6-digit PIN; ngPay provides 128-bit end-to-end financial grade security from the user's handset through to the application servers. It uses an innovative approach based on the concept of application layer security and has been independently certified for financial transactions by leading security firms and financial institutions.

 <sup>&</sup>lt;sup>52</sup> Buyer's funds only released once commodities are physically received
 <sup>53</sup> Automated Clearing House

	Cell Bazaar <sup>36</sup>	Craigslist <sup>37</sup>	Amazon Marketpla ce	eBay	Clickbd.com <sup>38</sup>	bracNet	ngpay <sup>39</sup> , <sup>40</sup>	SNX India	e-Choupal
ry options offered (options through which marketplace facilitates deliveries)			bank checking account, Credit cards, Amazon gift cards	Moneybookers/ Paymate/ProPay/Escr ow); cheques,, money orders & bank wire transfer can be offered for select purchases			account, ItzCash Cards, ngpay Wallet <sup>54</sup>	(funds sent through clearing banks of SNX to delivery center); banking credit available	
Types of electronic platforms offered	SMS, WAP, GPRS, voice (IVR)	Web, GPRS	Web & select mobile web (GPRS) <sup>55</sup>	Web, GPRS	Web	Web	GPRS	Web	Web
Access device	PC/laptop, Mobile	PC/laptop , Mobile	PC/laptop , Mobile	PC/laptop, Mobile	PC/laptop	PC/laptop	Mobile	PC/laptop	PC/laptop
Cost of using service (excluding standard mobile/internet service provider charges; may not be comprehensive)	- Notice	Posting charges - free except for select ads (Job posts, brokered apartment rental, etc.)	Monthly subscription charges (Only applicable to large-scale sellers ) 56, seller/referr al fees (applicable when item	Listing/posting fees; Seller fees (on items sold)	enhancement services available (featured listing fees)			Member deposits <sup>58</sup> ,	

<sup>&</sup>lt;sup>54</sup> ngpay's Mobile Wallet is a tamper-proof digital wallet that stores Bank account/Credit card details in an encrypted form on a mobile phone . An ngpay PIN is needed to access ngpay or payment/banking transactions
55 Accessible via iPhone and iPod Touch

	Cell Bazaar <sup>36</sup>	Craigslist <sup>37</sup>	Amazon	eBay	Clickbd.com <sup>38</sup>	bracNet	ngpay <sup>39</sup> , <sup>40</sup>	SNX India	e-Choupal
			Marketpla						
			ce						
			sold);						
			fulfillment						
			fees						
			(storage,						
			order						
			handling,						
			pick & pack						
			weight-						
			handling,						
			shipping fees) <sup>57</sup> ;						
			fees) <sup>57</sup> ;						
			special						
			product Ad						
			fees						
e commerce	B2C, C2C	B2C, C2C	B2C, C2C	B2C?, C2C	B2C, C2C	B2C, C2C	B2C	B2B	B2B
classification									
$(B2B^{59}, B2C^{60},$									
C2C <sup>61</sup> )									

Applicable if seller stores item at an Amazon Fulfillment Center
 At the time of writing, it is not clear whether membership fees are imposed or not
 Refers to an e-commerce transactions taking place between businesses
 Refers to an e-commerce transaction taking place between a business and a consumer
 Refers to an e-commerce transaction taking place between consumers

### **Annex 2 CellBazaar post categories**

www.cellbazaar.com, 17 April 2009

	Total	New	Used	Whole- sale	Retail
Mobiles	4,249	639	3,610		
Computer parts	1,716	445	1,271		
Cars	1,376	458	918		
TVs	1,099	840	259		
Motorcycles	1,082	636	446		
Repair (mobile, computer, electronics, electric, car)	1002				
Home furniture	829	564	265		
Bangala medium tutoring	815				
Rice	814			771	43
Computers	734	180	554		
Laptops	616	176	440		
Fridges	568	462	106		
Fish	567			535	32
Coaching (Computer, IELTS, etc)	539				
Cameras	491	131	360		
Photography	474				
English medium tutoring	458				
Electric items (IPS, UPS, generator, stabilizer, oven, fan)	454	355	99		
Books	391	324	67		
Land (to buy)	355				
Apartments (to buy)	308				
Dal	306			306	
Fruit	305			245	60
Garments	286				
Potatos	278			278	
Vegetables	271			271	
Event services (catering, decorating)	270				
Electronics (watch, sound system, photocopier, cassette player, PABX, VCD player, CD player, projector, fax machine)	269	91	178		
Poultry	269			269	
Videoing services	259				
Seeds	253			253	
Full time jobs	248				
Rental (automobile, venue, sound system)	238				
ACs	223	177	46		
Handicrafts	223				
Onions	199			199	

	Total	New	Used	Whole- sale	Retail
Musical instruments	196	49	147		
Bus hire	193				
Feed	191			191	
DVD players	175	123	52		
MP3 players	152	49	103		
Microwaves	151	129	22		
Office furniture	145	110	35		
Flats (for rent)	116				
Part time jobs	114				
Chillie	108			108	
Washing machines	96	63	33		
Shrimp	70			59	11
Renupona	64			64	
Cows	62				62
Music classes	57				
Machinery	54				
Offices (for rent)	48				
Language classes	46				
Deshi Chicken	38			38	
Pet birds	29				
Shops (to buy)	27				
Goats	26				26
Houses (for rent)	25				
Mushrooms	25			25	
Pet fish	24				
Corn	19			19	
Shops (for rent)	15				
Pet dogs	11				
Offices (to buy)	10				
Buffalo	8				8
Camel	5				5
Pet cats	4				
Pet rabbits	4				