

Information/communication habits and needs of low-income micro-entrepreneurs in Myanmar and the role for mobile phones

Abstract

After decades of isolation, Myanmar has opened its economy. Two new telecom licenses have been issued. The pathetically low mobile/ICT use is fast changing. The late start provides opportunities for leapfrogging: avoid feature phones and voice, jump directly to smart phones and Internet. Smart phones are all about content and apps. How can these be designed without understanding the needs of the user? We focus on poor micro-entrepreneurs (MEs) because they are the engines of growth in an economy. Identifying their current needs for information and knowledge in the consumption of infrastructure services can help the operators and government design better services.

As in many countries, MEs in Myanmar are rarely formal, barely access financial services (loans, savings products, bank accounts), and face extra costs in accessing telecom, electricity services. These factors prevent them growing into SMEs (small/medium enterprises) and keep them under-productive by imposing additional (often hidden) costs.

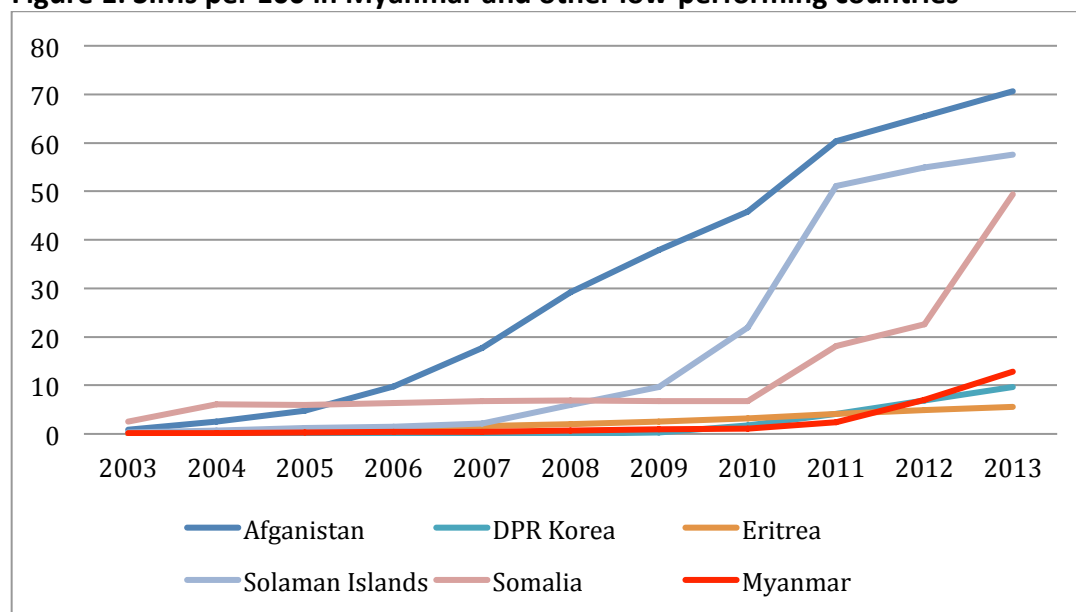
Through qualitative protocols ranging from focus groups, personal interviews, mini-ethnographic studies, we study 114 urban poor MEs in 5 urban areas. We consider our findings through the context of the Sustainable Livelihoods Framework and document multiple opportunities for MEs to be served via well-designed ICT services and devices.

1. Introduction

1.1 Myanmar opens up

After decades of isolation and military rule, Myanmar has slowly but surely started opening itself up to the world. Though the military (or those with strong military connections) still controls the majority of the power, democratic elections for some of the parliamentary seats took place in 2011. While most Western visitors were banned previously, tourism is now encouraged¹. While most investment (except for China and its Asian neighbors) were unwelcome before, it is now encouraged and indeed being courted². Perhaps no sector signifies Myanmar's economic liberalization and opening up to world trade than telecommunications. For a long time, Myanmar was among the lowest connected countries in the world (Figure 1), with connectivity primarily being provided by Myanmar Post and Telecom, the government/incumbent (there was technically a second license granted to the Military). But competitive licensing resulted in two new private sector licenses were given to Telenor (Norway) and Ooredoo (Qatar), with the two firms starting operations in August/September 2013. Since then the growth has finally started, with one operator (Telenor) reporting 3.4 million subscribers by end-2014 after just 4 months of operation, and 40% daily active internet users (Telenor, 2014).

Figure 1: SIMs per 100 in Myanmar and other low-performing countries



Source: ITU

1.2 Myanmar's late-comer advantage (compared to emerging Asia)

Unlike Myanmar, emerging Asian economies started liberalizing their markets over a decade ago. Since then, Asia has had almost unprecedented success in bringing mobile voice/SMS connectivity to its people. As documented in Samarajiva (2010), the 'Budget Telecom Network Model' drove operating costs down to previously unheard of levels; innovations such as micro-recharge in pre-paid connections enabled even those on variable and low incomes to consume mobile voice/SMS services.

At least one of the new licensees in Myanmar, Telenor, has experience in operating in financially constrained markets such as Bangladesh (Telenor's Bangladesh operation, Grameenphone, has over

¹ In 2014 tourism's contribution to Myanmar's GDP was 2.2%. This figure is forecasted to rise to 6.8% by 2015 (World Travel and Tourism Council, 2015)

² Foreign Direct Investment into Myanmar was USD 247 Million in July 2014. This increased to 2443 million by August of 2014 (Trading Economics, 2015)

half of the Bangladeshi market). It is reasonable to assume that similar business models will be adopted in Myanmar.

Yet Asia's success in voice connectivity did not extend itself to data services. While the same business models as described above have enabled most Asian countries to have low prices (in fact Sri Lanka, India and Pakistan have among the lowest mobile broadband prices in the world) and high affordability, most countries suffer from sub-20% Internet penetration. The reasons for this appears to be a combination of a) lack of awareness of the internet, b) lack of relevant content (which often means locally relevant and in local language) and c) poor service quality and d) heavy use of feature phones and low penetration of smart phones. For example, in 2006, a full 72% percent of the poor in India said they had not heard of the Internet, and 28% percent said they had heard of it but hadn't used it. By 2011 the percentage of the poor who hadn't heard of the Internet had reduced to 24%, but still a good 74% percent of them had not used the Internet (LIRNEasia, 2006; LIRNEasia, 2011). Broadband quality of service tests run by LIRNEasia (2009) showed that while prices were cheap, actual throughput (download speeds) experienced by most South Asian broadband users was lower than advertised, and value for money (actual speeds per unit of currency spent) was lower in emerging Asia compared to US and Canada. Kende & Rose (2015) and others have documented that the lack of locally relevant/local language content is a significant barrier to Internet use. The percentage of smart phones in most South Asian countries is low, even though it's been growing steadily in the past few years (Pew Research Center, 2015).

Will Myanmar traverse this path? Early indications are to the contrary. After six months of operations, Telenor reports that 40% of its SIMs are actively using the Internet (not just 'Internet enabled'). This is a number almost unimaginable in South Asia, even today (nearly decade after reforms). Myanmar's late-entry into liberalization seems to be working in its favor, finally. Smart phones are cheaper today than they were when Myanmar's peers liberalized the market. The population in Myanmar and elsewhere today is much more social-media savvy and Internet-aware than they were in the early days of Asian telecom liberalization.

Myanmar therefore has an opportunity to do things differently – that is, not just to serve the its population (from the poorest to the richest) through voice while only serving its rich populace with internet, but to extend the internet to the everyone.

1.2 Micro-entrepreneurs as the engine of growth

In this context, the research project which gave rise to this paper focused on a group which traditionally did not get attention of the telecom operators – micro entrepreneurs. While large corporates are well served by telecom operators (with dedicated account managers, specialized packages and the like), and small and medium enterprises being the next target of the companies, the smallest enterprises (micro-enterprises) are being left behind. Yet we know that in most Asian countries, the informal sector (under which most micro-enterprises fall into) and self-employed persons (which is one form of micro-entrepreneurship) account for a significant share of the employment and economic activity. Through formal data is unavailable this almost doubly true of Myanmar, thanks to its legacy of economic isolation and weak institutions.

If micro-entrepreneurs they can be encouraged to grow their businesses, and to become small and then medium enterprises, sustainable economic development can take place. In order for this to happen, their needs need to be identified. If such needs can be met through the use of ICTs, that's an added bonus.

The research identifies a range of information, communication and financial needs of urban, poor micro enterprises/entrepreneurs in Myanmar, and opportunities for ICTs to serve these needs. The limitation to urban areas is mostly because that's where the immediate roll-out of telecom infrastructure is taking place.

To briefly summarize, the objectives of the research study were to;

- 1) Identify the information, communication and financial needs of urban, poor micro enterprises/entrepreneurs in Myanmar
- 2) Identify potential opportunities for ICTs to serve these needs

2. Previous work on MEs, ICTs and growth

Significant work relevant to the topic refers to SMMEs (small, medium and micro enterprises) as a whole, where micro-enterprises/entrepreneurs are included in the group. The literature treats SMMEs as one group, or at times separates MEs from SMEs, and so on. 'Informal sector' is also a term that is found, and usually refers to SMMEs who have not registered their business or file taxes etc. Our literature review was inclusive of all these terms/definitions.

The SMME sector has an important role to play in boosting economic development, creating employment and reducing poverty in developing countries (Ayyagari et al, 2013; Bowen et al, 2009) For example in India, micro, small and medium enterprises sector contributes significantly to the manufacturing output, employment and exports of the country and occupies a strategic position in the Indian economic structure (Kumar et al, 2009). However SMMEs face many challenges; among them access to information and access to finance.

2.1 Challenges

Lack of access to information: Challenges in information access—absence, uncertainty, asymmetry—shape the working of markets and commerce in many developing countries. These challenges can shape the characteristics of supply chains, keeping supply chains localized and reducing the chance that new business and trade will emerge (Jagun et al, 2008). Research by De Silva & Ratnadiwakara (2008) also find that information search costs (a type of transaction cost) is about 11% of the cost of production for farmers in Sri Lanka.

Lack of access to financing: Financing is another challenge faced by many SMEs in developing countries. Lack of financial capital has been identified as one of the greatest perceived constraint for micro entrepreneurs. Research shows that microenterprise investment is financed largely by informal sources such as individual savings and informal loans, with institutional credit tending to pay a marginal role until recently. (Khandker et al, 2013). Many SMMEs operate in the informal sector, which further reduces their access to financial services. According to an analysis of data collected by the World Bank through Informal Enterprise Surveys, informal firms identify lack of access to finance as the biggest obstacle they face. Registered firms are 54 percent more likely to have a bank account and 32 percent more likely to have loans (Farazi et al, 2014)

Lack of formalization: Literature shows that many SMME problems are compounded by the lack of formalization. For example, De Soto (2000) claims that while informal sector is refuge for low cost activity, formal institutions may not recognize their existence officially, thereby denying them access to factors such as capital, technology, training and opportunities. The decisions to formalize may be related to burdensome regulation (De Soto, 1989), or due to the perceived costs of formalization vs. the benefits of formalization (Maloney, 2004). Formalization is not automatically beneficial – necessity of renewing the license annually, paying taxes, complying with labor laws are disadvantages cited by entrepreneurs (Perry et al, 2007). Other studies find benefits of formalisation include increased profits (Bruhn & McKenzie 2013; Rand & Torm 2012) and improved access to credit (Farazi, 2014).

2.2 How ICTs help

ICTs can contribute towards alleviating some of the challenges faced by SMMEs. Research has shown that mobile phones have the potential to address some information challenges faced by SMMEs.

Increasing flow of information: A systematic review of 14 studies of the use of mobile telephony by micro and small enterprises (MSEs) in the developing world, found a pattern of evidence suggesting that mobiles increase the information available to MSEs. The studies suggested that mobiles are most useful for streamlining marketing and sales (downstream) and procurement (upstream) with existing business contacts. The most common finding in the study linked mobile use to an increase in the flow of information between actors in the value system. The two primary sub-themes that emerged from this systematic review were “more frequent or wide ranging exchanges of price information and a more generalized discussion of increased communication with customers”. (Donner et al, 2010)

Reducing time spent on information gathering and reducing cost of information gathering: The use of mobile phones can reduce the time and financial cost of information gathering. The role of mobiles in reducing information costs has been previously documented. Aker (2008) found that cell phones “reduce grain price dispersion across markets” and “the primary mechanism by which cell phones affect market-level outcomes appears to be a reduction in search costs, as grain traders operating in markets with cell phone coverage search over a greater number of markets and sell in more markets.”

A case study of the cloth-weaving sector in Nigeria found that by serving as a substitute for journeys and in-person meetings, phone calls reduced the time and financial cost of information gathering. However a continuing need for some journeys and physical meetings was observed due to issues of trust and need for physical inspection and exchange. (Jagun et al, 2008)

Establishing/maintaining trust: The role of trust is reflected in other research. Molony et al, 2007 suggests that mobile phones can help farmers with supply and demand information, but notes that this is only so long as there is trust between the parties concerned—“trust that the dalali (wholesaler) is truthful in the price he tells the farmer that he has sold his crops for. In this respect, mobile phones can be seen as a facilitating technology for existing, trust-based relationships.” However there are indications that mobile phone use increases the efficiency of existing trust relationships; for example by enabling micro entrepreneurs to quickly establish work terms with new clients, arrange meetings, reducing uncertainty and improving time management (Caceres et al, 2012).

When information quality in terms of accuracy and relevance was considered, the case study in Nigeria did not find improvements in the quality of information within individual communication. However mobile telephony did have a qualitative impact on completeness of information, since travelers could now know whether or not a journey was needed before embarking on it (Jagun et al 2008)

New customers and suppliers: The evidence over whether mobile use brings new customers and suppliers into the market appears to be somewhat conflicting. The systematic review on the impact of mobile use on MSEs found that while some studies suggested that mobile use expands the size of markets by bringing a larger number of buyers and sellers into the marketplace, this was not a finding of all the studies. (Donner et al, 2010)

The use of mobile phones does not seem to eliminate the role of the middleman. The systematic review study found no evidence that mobile use re-organizes value systems to allow producers to bypass middlemen and notes that middlemen are positioned to take advantage of mobiles themselves. According to the review, in value systems where mobile telephony is introduced, there is “more evidence for changes in degree (more information, more customers) than for changes in

structure (new channels, new businesses)". The results suggest that there is "more evidence for the benefits of mobile use accruing mostly (but not exclusively) to existing MSEs rather than new MSEs, in ways that amplify existing material and informational flows rather than transform them" (Donner et al, 2010)

Access to financial services: Mobile banking and mobile money has to potential to open up financial services for small and medium enterprises. It makes it potentially possible for small and medium enterprises to perform major financial functions without having to carry cash or cheques. However research shows that not all SMMEs have sufficiently adopted m-commerce in doing business (Okolo et al, 2014). Many micro and small enterprise owners lack knowledge about m banking (Essegbey et al, 2011)

A pilot study which considered the impact of mobile money services on microenterprises and micro entrepreneurs in rural Cambodia found that mobile money services appear to have made significant changes on individual financial habits and practices. In this study, face-to-face interviews and ethnographic observations were conducted in six rural provinces to analyze in context customer perceptions and experiences on payment delivery, ease of use and socio-cultural changes in transitioning from physical to electronic cash.

Interviewees highlighted the advantages of not having to transfer money via banks, money exchange shops, buses, taxis, motorbikes, family member and horse carts which was described as a difficult and frustrating process which created tensions between the senders and the receivers. Interviewees also expressed the belief that they were spending less "because the money is not within their immediate reach". The study suggests that mobile money services have a large potential to reduce operational costs and improve micro or small business trade supply chain process. (Vong, 2012)

Another study in Kenya considered the effect MMTS (Mobile Money Transfer Services) on the performance of micro businesses in Kitale Municipality in Kenya. The key findings were that use of MMTS for business to business transfers when making purchases from suppliers, and customer to business transfers when customers made purchases from the business, and for debt collection for credit sales, contributed to improved performance of the micro enterprises.

The study was based on a survey of 36 micro enterprises, from the agriculture, service and processing sectors. (Wanyonyi et al 2013).

Thus it appears that while more work may be needed to publicize the value of these services among micro entrepreneurs, mobile use has the potential to improve access to financial services for micro entrepreneurs.

3. Methodology

3.1 Identifying a low-income, urban ME

For the purpose of this study, we needed to identify poor, urban MEs.

The most straightforward was the classification of 'urban': we screened for MEs who primarily operate their businesses inside areas classified as urban or peri-urban by the government of Myanmar.

The classification of what an ME is not standardized, but there is broad agreement across international agencies and researchers that asset value, income and employee numbers should be used in the classification. The World Bank and EU's definition appears to be broadly accepted, and defines a micro enterprise as employing between 0 to 9 full time equivalent employees, with annual turnover and/or annual balance sheet total does not exceeding EUR 2 million (European Commission,

2003). From this definition, we use only the employee number and income for our study. Since our focus is on poor MEs, the turnover/balance sheet cut-off is clearly too high for our purposes.

Our next focus is ‘poor’. For this, we use the Socio-Economic Classification (SEC) which is commonly used in marketing literature to classify households into A, B, C, D and E, where E is the poorest group and A is the richest. Usually the SEC classification is based on the job and education of the chief wage earner of a household. But in Myanmar, the SEC grid (see Annex 1) is based on income. For the purpose of this study, we include households that belong to SEC D and E (i.e. those at the ‘base of the pyramid’ or BOP).

We also limited ourselves to MEs who are between 15 – 45 years of age. Early adopters of ICTs are often the young(er). Since our aim is to identify ICT-enabled solutions, we did not include older MEs.

In summary, the basic screening criteria for inclusion in the protocols is an individual between 15-45 years of age, who is either self-employed or employs up to 9 full-time equivalent people, and belongs to a household that is classified as SEC D or E, operating normal business activities within urban/peri-urban areas of Myanmar.

3.2 Field work and data analysis

114 MEs were screened using the above criteria. They were spread across top 5 most populated urban areas of the country: Yangon, Mandalay, Nay Pyi Taw, Bago, and Mawylamyine. The MEs were spread across manufacturing, trade and services sector, but excluded farmer. MEs who worked from fixed locations and MEs who had variable/mobile work locations were included. In addition, 10 individuals who provide services to MEs were observed and studied in detail to understand the ‘supplier’s point of view.

The respondents were split into protocols as shown in the Table 1. The research was carried out in April and May 2014. All protocols were conducted in the local language by a local researcher, with the original research team from LIRNEasia present at each protocol, participating via a simultaneous interpreter. For all protocols, the English transcripts was obtained.

Table 1: Distribution of MEs by protocol, gender distribution and mobile use

Protocol type	Number of Protocols	Total Participants	Male and Female representation	Were non-users of mobile phones included	Were mobile users included
Focus group discussions (FGD)	10	60	50% and 50%	Yes	Yes
In-depth interviews	34	34	50% and 50%	Yes	Yes
Mini-ethnographies	20	20	50% and 50%	Yes	Yes
Service provider ethnography	10	10	44% and 56%	Yes	Yes
Total	74	124	50% and 50%	Yes	Yes

Focus group discussions had 6 participants in each, lasted about 2 hours, and were video taped. In-depth interviews were one-on-one with the respondent, and lasted on average about 1.5 hours. Mini-ethnographies involved the researchers visiting the home and work place of the respondent,

and observing his/her daily activities in their natural environment, and interviewing the respondent when he/she had free time through out the day. These mini-ethnographies lasted 6-8 hours usually.

In all cases, pre-designed loosely structured questionnaires were used as a guide. All respondents were pre-screened prior to participation in the protocols. Permission to video-record (in the case of focus groups), voice-record (in the case of in-depth interviews) or take photos (in all cases) was obtained prior to the protocol.

The research team (including interpreters and the local language speakers who conducted the protocols) met over multiple days to synthesize the findings and to identify the common themes that emerged when each respondent's profile was analyzed.

In addition, the English language transcripts of twenty five protocols from the key cities of Yangon, Mandalay and Nay Pyi Taw were analyzed using n Vivo software. Two rounds of analysis were done using n-Vivo software. First was simple word count/similar word count. The next was the process of researchers reading the transcripts in details and tagging key words, phrases and concepts, which are then analyzed using the software. For this the researchers focused on the following themes: finance; use or non use of bank accounts, use of formal/ informal bank loans, methods of saving money (group savings etc.), and use of mobile phones to coordinate money transfers³.

4. Findings

This section summarizes the findings of the protocols. Where possible, the findings in Myanmar are contrasted and compared with findings from sample surveys representative of the BOP in multiple emerging Asian economies (LIRNEasia, 2006; LIRNEasia, 2011). The two populations (BOP MEs in Myanmar vs. BOP citizens in other emerging South and South-East Asian countries) are not strictly the same. But both groups belong to SEC D and E. And the survey data is from 2006, 2008 and 2011, and reflect the early stages of the telecom sector liberalization in emerging Asia. The ME protocols in Myanmar too capture the early days of the telecom sector liberalization. As such, the contrast often sheds lights on how different Myanmar is, how it can leapfrog technology cycles, and use ICTs in a different way.

4.1 Phone ownership and use

At the time of research, the mobile SIM penetration in Myanmar, as officially reported by the government was under 14%. Out of the 114 respondent MEs, 57 (or over 50%) owned their own phone and used it, while another 9 used a shared phone. High levels of mobile phone ownership and use is not surprising given that our respondents were urban (where connectivity is higher than rural). But what was surprising was that of the 57 who owned a phone, a full 42 (or 73%) owned smart a phone, i.e. a phone that is Internet capable at higher speeds, enables the installation of apps, had a color screen and even had touch screens. The respondent most often cited gaming and media capabilities as the main reason for selecting a particular phone/model. But another explanation for high smart phone ownership lies in the price. The range of prices paid for a phone (any phone) varied from MMK (Myanmar Kyat, the local currency) 15,000– 160,000 (or between 15 – 160 USD at exchange rates prevalent at the time of research). At the higher end of this spectrum were the smart phones.

In comparison, in 2006 (i.e. at a similar stage to Myanmar in the liberalization time line), those at the BOP in Pakistan, India, Sri Lanka and the Philippines were paying USD 40 – 150 for a basic (feature)

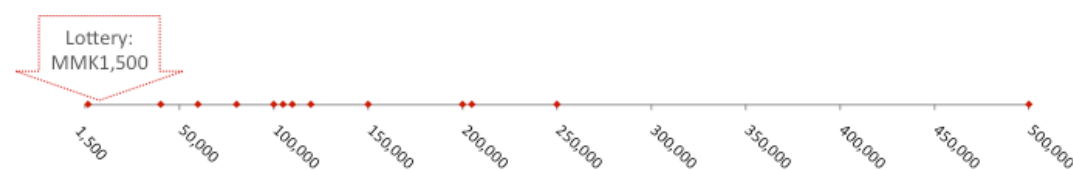
³ Only the transcripts from protocols in the 3 largest cities were analyzed using software due to time limitations. The research team is using n-Vivo to analyze ALL protocols. But only results of Yangon, Mandalay and Nay Pyi Taw are included in this paper.

phone, often a second-hand one. What’s clear is that technology has moved forward and prices of higher-end (smart) phones have come down significantly. This is enabling Myanmar’s early-adopter MEs to own sophisticated phones.

4.2 SIM ownership

Cost of the phone is the primary start-up cost in most countries because SIMs were often extreme cheap, or even free, and had minimal (if any) activation charges when first bought. Yet Myanmar is a peculiar case where until the market was liberalized, SIM cards (issued by the government owned incumbent monopoly) were an expensive and rare commodity. As recently as 5 years ago, SIM cards were only available to a lucky few, mostly those with connections to the military or government. Unsurprisingly there was a black market for SIMs and prices reported were over USD 1500 – 2500 (though was a significant drop from the USD 7500 official fee charged for a SIM card 15 years ago) (TeleGeography, 2013). Then in 2013, the government started allocating a limited number SIM cards via a lottery system. Citizens had to give their official registration details to enter the lottery and only registration per person was allowed. A person winning a SIM in the lottery had to pay MMK 1,500 (or 1.5 USD) for the privilege of owning/using it. The artificial scarcity meant the grey market for SIMs still continued at the time of the survey, and our respondents had paid anything from MMK 1,500 – 500,000 (USD 1.5 – 500) to obtain a SIM. Most respondents had paid around MMK 50,000 - 100,000 (USD 50-100), as shown in Figure 2.

Figure 2: Prices paid for a SIM card in MMK by respondents



Source: Study respondents (1 USD = 1000 MMK)

While price of a SIM had certainly come down from previous highs, the amounts paid by people of Myanmar was still higher than the cost of getting connected in most emerging Asian economies (Table 2).

Table 2: Cost of SIM and SIM-activation in selected countries compared to cost in Myanmar.

Country	Operator	Prepaid connection fee (in USD)
Indonesia	Telkomsel	free
India	Bharti Airtel	0.34
Bhutan	Bhutan Telecom	0.80
Afghanistan	Roshan	0.86
Philippines	Smart	0.91
Nepal	Ncell	0.98
Sri Lanka	Dialog Axiata	1.41
Myanmar	MPT	1.5 (via SIM lottery)
Maldives	Dhiraagu	1.93
Bangladesh	Grameenphone	2.18
Pakistan	Mobilink	2.76
Thailand	AIS	3.08
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Myanmar	MPT	USD 50 – 100 (fee paid in grey market by most MEs interviewed)

Source: Operator websites and data from study respondents

4.3 Spending patterns to consume mobile voice

The respondent spent anywhere between MMK 2500 – 45,000 a month to top up their pre-paid SIM cards. This ranged from 1- 25% of their monthly income. But it's highly likely that actual affordability in Myanmar is much worse since this group of respondents is likely to be early adopters with higher-than-average income. The target internationally (e.g. by the ITU's Broadband Commission) is to have mobile expenditure be less than 5% of monthly income.

More relevant to Myanmar's phone adoption is the availability of re-load at different value. At the time of the research, only two options existed for top-up values: MMK 5,000 and MMK 10,000 (USD 5 and 10). The lack of choice in top up values is noticeable, as is their high value. Even as far back as 2008, in the early days of telecom sector liberalization in emerging Asia, the smallest of top-up value were much smaller than in Myanmar today: 0.5 in Bangladesh, USD 0.75 in the Philippines, under USD 1 in Pakistan, and around USD 2.5 in Thailand, the richest country studied in 2008 (LIRNEasia, 2008). Most citizens at the BOP in India topped up for USD 1.24. The low values (a key part of the Budget Telecom Network model) are what enabled those on low and variable incomes to consume mobile services.

Comments such as this were not uncommon in the transcripts:

"I get a top-up card for 5,000 kyat, but find it very expensive. 2000 – 2500 kyats would be better for me".

- Htut⁴, Carpenter, aged 33, from Mandalay [translated to English]

4.4 What the phones are used for

Unsurprisingly, the phone was used for personal and business use. Since most MEs employed their family members if they employ anyone at all, it was difficult to distinguish between personal vs. business use.

The ease of coordinating with customers as suppliers was the most often cited benefit of having a mobile phone.

"A lot of my customers call me before they come to the shop to inquire if I'm there. I can also inform them to collect their product when it is repaired. About 60% of my phone contacts are customers."

- Htay, electrician, 33 Nay Pyi Taw

"If I have phone, [clients] can call me anytime. Before it was very difficult for me to communicate with them without phone."

- Hlaing, Photographer, 22, Mandalay

Customers contact me on the phone to subscribe to new journals, to inform if they are going out of town and want to stop the journals for a few days and for any other information required.

⁴ Please note that throughout this document, names of respondents have been changed in order to hide their identity, as promised during the protocols

- Zaw, 35, journal seller, Nay Pyi Taw

Sometimes the phone is used to provide a 'value added service' or to attract/keep customers loyal.

"Sometimes I spend 5,000 kyats in 5 days. It is more than I can afford. My customers want to know the football score so I dial the call center number 1876 for them to inquire the score and it costs 300 kyats/minute and many times they do not pay."

- Zaw, Journal seller, 35, Nay Pyi Taw

One ME used the phone to store pictures of the goods he produced. This catalog of products was useful in getting new customers.

- Htwe (44, Souvenir maker, Nay Pyi Taw) shows customers photos on his phone of basket designs which he can make

As in many countries with low penetration, the mobile phone was a source of direct income for MEs. The selling of minutes (i.e. the mobile phone as a public calling device) was common.

- Phyu (25, tailor, Nay Pyi Taw) used her personal phone as a pay phone and charged MMK100/min for outgoing and MMK 50/min incoming calls

4.5 Money and Finances

4.5.1 Mostly unbanked

None of the respondents had a (formal) bank account where they deposited money. The primary reason for not using banks seemed to be distrust in the banking system and fear of losing their deposits. This is a legacy of Myanmar's history where the few banks in the country were owned by cronies of the Military government.

"We don't trust in banks. We are afraid we might lose our money."

- Ni Ni Thin, Mandalay

One respondent from Mandalay referred to use of a bank account in the past though he did not currently have an account.

Moderator: *"Do you have any saving accounts at a bank?"*

Respondent: *We had family bank account previously. Now my sister got married and we do not use that anymore."*

- Respondent in a FGD, Mandalay

Irrespective of whether the respondent had interacted with bank or not, the process of interacting with banks was perceived to be tedious.

"I cannot withdraw money from the bank at the time I want"

-Ishaan, aged 29, PCO owner, Yangon

Some respondents expressed cautious interest in saving through banks, but a lack of awareness about the procedures involved was a barrier. Banks also seemed to be viewed as places where only those with 'more money' could save.

"I do not trust banks very much. But now, I become to interest in it a little. Because there are a lot of banks now and they are competing each other...I went to the (CB) bank and I saw that most of the people were waiting at counters with a number of money packs. I stood in front of a counter but no staff asked me what I wanted. At the time I thought that I had only 50,000 kyats so they didn't want to serve me. Then I left the bank without saving money."

- Mg Nyunt Wai, Nay Pyi Taw

In another example :

Moderator: *"Have you ever thought of getting a bank account?"*

Respondent: *"Yes".*

Moderator: *Why didn't you make one then?"*

Respondent: *"It won't work well for me as I don't have a lot of money to save in there and I don't feel secure to go to bank as well."*

- U Win Ko, Mandalay

4.5.2 Preference for enforced saving schemes

Though the respondents did not use banks to save/deposit money, other forms of savings could be observed.

Saving in cash was the most common form of savings observed. A cash box in the house or business location was common. Another unusual mechanism was putting money inside the bamboo pole that held up the roof of the house. Since the pole cannot be easily removed (without taking the roof down), it was seen as providing a barrier against impulsive spending.

Group savings where a group of (known) people pays in a set amount each day, with the money being disbursed to the members of the group according to the pre-determined schedule was a common practice. The fact that the group is known, that the collection (i.e. the deposits) are done daily were seen as positive inducements to engage in saving.

"It is a must to give daily in a group as someone comes and collects money while I might not go everyday to deposit money in the bank."

- Ishaan, 29, PCO owner, Yangon

Not all the respondents participated in group savings; a few respondents expressed concern over security of savings and the fact that it depended on trusting the others in the group (though they did not report actual negative experiences in this regard). In comparison to saving in a bank, group savings were perceived as being much more trust worthy and secure. Social relationships between group members seemed to be important in ensuring trust.

"Moderator ; How do you choose the leader?"

Respondent4; She chooses it, we don't choose her.

Respondent1; I also see her because if she is good then she is reliable. We also check her income as well. They are all near each other."

- FGD (female), Yangon

The fact that the savings could not be accessed until a particular date was seen as both positive and negative; it ensured saving but some respondents disliked not being able to access money quickly when needed.

"With the save box, I can use it whenever I want it, but for the group saving, I have to wait for my turn and keep saving for quite long."

- FGD (male), Napytiyaw

Investing in gold was also observed. When ever there is extra cash, MEs 'pay-in' to the gold shop. When payments add up to 100% (of agreed upon amount of gold), the ME gets to take the gold home if needed.

4.5.3 Informal loans common

Even though we specifically wanted to include MEs who had obtained formal loans from banks or micro-finance institutions (MFIs), it proved to be extremely difficult, despite working with the local

firm that recruited persons for such studies. In the end, we only found 2 MEs/respondents who had obtained loans from MFIs. The terms of the loans were as follows:

- MMK 150,000 (USD 150) loan for 1 year, with 20% interest charged.
- MMK 50,000 (USD) loan for 54 days, with 2.5% interest charged.

Strangely, both loans were used to pay off house rent and to cover household expenses during a period of unemployment, and were not used to invest in the MEs business activities.

Some use of 'agricultural banks' was observed - several respondents; one from Nayphitaw (Ko Than Zaw) and one from Yangon (Ma Yu) and another from Mandalay stated that they had taken loans from the agricultural bank by mortgaging property.

In contrast to formal loans/financing, we found many instances of informal loans and financing. Money lenders (most often referred to as 'Chinese money lenders' because many of the lenders were of Chinese origin) were the most common source of financing. Pawn shops were the next most common. The interest paid on these informal loans were significantly higher than the formal loans via the MFI, even though our evidence is only anecdotal and not representative. For example, money lenders charged interest between 4 – 20% monthly while pawn brokers charged interest between 2.5 – 4% monthly. The loan sizes we observed were between MMK 20,000 – 300,000 (USD 20 – 300) for a period of 3 – 6 months.

Even in the case of these informal loans, it was not uncommon to see borrowed funds being used for daily consumption or personal expenses. However we did find instances of money being invested in a new business (start-up capital). In another case we found the money being used to fund the operating expenses of the MEs business (i.e. to buy supplies).

- Mima (ferry woman, Bago) borrowed MMK 50,000 (USD 50) from a Chinese money lender come pawn shop owner at 4% interest rate per month.
- Than (Fishmonger, Bago) borrowed MMK100,000 (USD 100) from a money lender 2 years ago and had to pay a daily interest of MMK 2,000 (USD 2) to him. She 'reinvested' this money to buy fish for the next day.
- Soe (Potter, Bago) borrowed money from the money lender at the monthly interest rate of 20% to pay for his children's tuition and school fees during the rainy season when his business was loss.
- Cho (seed seller, Bago) borrowed money from a money lender at 2% interest rate per month to start her business.

4.5.4 Banks for money transfers

Though none of the respondents had bank accounts or used banks for savings, banks were used to do money transfers by some respondents, and were even seen as reasonably efficient by some of them.

- Htay, an electrician we interviewed in Nay Pyi Taw, once transferred money via KBZ Bank to his wife's house (outside of Nay Pyi Taw). He transferred MMK 50,000 (USD 50) and paid MMK 700 (USD 0.70) as a service fee. Htay did not have a bank account at KBZ bank, and neither did the recipient. Htay's ID card was required to initiate the transfer. The recipient's ID Card was required to collect the cash at the other end. When the money arrives, the KBZ bank at the recipient's neighborhood informed the recipient via phone
- Several respondents from Mandalay also used banks for transfer of money.
"I usually go to the bank once a month to receive money. The engineers from Yangon transfer money to our contracts for wages of workers."

- Hla oo Kyaw Naing, Mandalay

4.5.5 Preference for informal money transfers

Many of the respondents preferred to use informal money transfer methods, where possible.

- Htan, a slipper maker in Mawlamying, sends money to his suppliers in Yangon through express cars that run between the two cities. He only needs to give the money, along with the name and ID-card number of the recipient. The funds are transferred in no time (i.e. the funds are available to the recipient almost instantly). For each transaction he pays MMK 500 (USD 0.50) at the car station
- Another respondent in Napytiyaw used Kanbawza bank to withdraw money sent by his brother living in Tachileik (near the Thai border)

4.5.6 Mobile phones coordinate money transfers

In both formal and informal money transfers, the mobile phone plays an important role in coordination.

- Htut (Carpenter, Mandalay) receives remittances from his contractor in Yangon regularly at CB bank. It doesn't take much time to withdraw the money. He only has to show his ID card. Earlier when he worked in Yangon he used to similarly remit money to his family back home. Once the money arrives, bank calls to inform.
- Ramon (DVD seller, Yangon), sent money to his parents through a private travel company. He noted down the vehicle number and informed his parents through the phone to collect the parcel from the driver.

Buses appeared to be often used for informal money transfers and mobile phones are used to check that the money has reached the recipient.

Respondent Yes, we are from Mandalay and we send money by parcel.

Moderator; Why don't you send it from a bank?

Respondent ; I think via parcel is faster.

Moderator ; How do you make sure if your parcel reach? If it get lost or forget to send?

Respondent ; I phone my parents and tell the bus number and time when it will reach. But it never get lost."

- Zayar Htoo, Yangon

4.6 Interactions with government

The most common interaction MEs had with 'government' is with the Ward Leader. The ward is the lowest unit of administration, and is headed by an elected Ward Leader. The Ward Leaders play a key role in the daily lives of citizens. They maintain overnight lists of visitors in the ward (anyone foreign or local who travel to another ward and stays overnight has to inform that ward's leader), provides recommendation letter for loans, approves new business locations, obtains electricity connections for the residents, facilitates the obtaining of (the mandatory) ID card/family-registration cards and holds regular meetings with households to discuss ward affairs.

- Thida (laundry lady, Nay Pyi Taw) does not have a family registration so has to register with the local quarter office daily. She has to show her ID card and old receipt to get her name added to the overnight list.
- Crystals (32, fan seller, Yangon) lost her ID card and family registration in 2008 Nargis cyclone and goes every week to add her name to the overnight list

Most MEs were also connected to the electricity grid, and had to interact with the government owned electricity provider to pay their monthly bill.

Interactions with government were generally viewed as tedious, and informal ways of making that interaction were observed.

“ I don’t want to waste time in going to office to pay the [electricity] bill. It takes about an hour as I have to wait for a long time. Moreover, I will be paying the same amount as would be spending on transportation. “

- Olivia, 33, Hair Dresser, Yangon

Often, MEs were willing to pay fees to avoid the hassle of interacting with various government entities. For example, bill collectors (individuals in the village/ward, sometimes the Ward Leader him/herself) would charge MMK 200 (USD 0.20) to collect the money for electricity bills and to pay them at the electricity office. In some areas, the electricity company itself dispatched a car (between the 11th – 23rd of every month in the area we observed), and the MEs could pay the fee to this mobile collection vehicle, for a fee of MMK 200.

None of the MEs had formalized their business by obtaining a business registration. It seems there was a registration requirement, but since the most recent elections such requirements had ‘gone away’ (or not enforced). We only met one ME who had registered his business about seven years ago, when he used to operate out of a shop in the market. It took him 6 months to obtain the registration and cost MMK 15,000 (USD 15) initially, and MMK 20,000 (USD 20) to renew in subsequent years. But since moving his business to his home, he no longer needs to register.

Payment of various taxes takes place despite lack of registration, especially for MEs operating out of a market location that is owned/allocated by a municipality. Land tax (ranging from MMK 650/year - 200/month) , garbage tax (ranging from 500/year – 100/day), market tax (ranging from MMK 100/month – 200/day) were the different types of taxes reported. Yet even here, sometimes we found respondents who claimed that after the last presidential elections in Myanmar, the collection of certain taxes had stopped.

4.7 Overall Financial Health of MEs

We established the income and expenditure for the respondent’s business activities based on the costs/income data we obtained in the in-depth interviews and mini-ethnographies. What we find is that while a few are making a profit each month, most are barely breaking even. Several are losing money from their business activities each month, and are only able to sustain themselves because they have other income (e.g. seasonal agricultural income, for MEs who also own a plot of land where some crop is grown). Most others are simply ‘rolling’ the money – that is, living on temporary income until the cost of goods has to be paid.

Three illustrative examples of income/expenditure profiles are shown in Table 3. All three are mobile phone users who use the phone to coordinate their business activities (e.g. to talk to suppliers and customers), so can be assumed to be more efficient than the average, non-phone-using ME.

Table 3: Income/expenditure profile for three MEs in Myanmar

Respondent	Thet	Zaw	Chan
Job (primary)	Wood carver	Journal seller	Strawberry seller
Other income	n/a	Selling lottery tickets Farming	n/a
Business location	Fixed, in Mandalay	Mobile, in Nay Pyi Taw	Variable, in Yangon
Age	45	35	22
SEC group	D	E	D
Business Income (per month)	240,000	Selling journals/newspapers – 75,000 – 180,000 per month Agriculture (paddy + sesame field) – 200,000	Selling strawberries – 210,000 per month

		Lottery Tickets – 70 per ticket	
Variable Costs	Wood log – 400 per log Gold stickers – 7,500 Electricity – 1,500 Water – 400 per 20 liter can Petrol – 5000 per day Phone top-ups – 500 per month	Fuel – 1000/day Newspapers + journals – 25,000 – 30,000 daily Substitute paper-boy – 2,000 per day Lottery tickets -230 per ticket Agri (purchase of seeds, paying labor) – 450,000 – 500,000 per year Phone top-ups: 5,000 per month	Strawberries – 12,000 per day Accessories (for storing/displaying) – 8,000 every 2-4 weeks Taxi – 400-500 per day Battery-run lamp – 600 per day Rented store room – 300 per day Phone top-ups – 40,000 per month
Fixed/capital costs	Chisels – 3500 each Motorbike – 200,000 Mobile handset + SIM card – 100,000	Journal distributor deposit – 2500 Motorbike – 100,000 SIM card – 100,000 Hand-set – 45,000	Mobile handset - 135,000 SIM Card – 1,500
Total Monthly Income	About 240,000	About 780,000	About 210,000
Total Monthly expenses	About 220,000	About 720,000	About 370,000
Profit/Loss from business	20,000 (USD 20)	60,000 (USD 80)	- 160,000 (-USD 160)

Source: author calculations based on information from research protocols

5. Discussion and Policy Recommendations

Our findings show that despite many MEs owning and using the phones to coordinate business activities, their livelihoods remain fundamentally at financial risk. But the literature shows there is a clear case of using ICTs to improve the lives of small, medium and micro entrepreneurs.

The DFID framework (199) is the most commonly used sustainable livelihoods framework. Under this framework, the five assets or capital (human, social, natural, physical and financial) exist within the Vulnerability Context, i.e. - the external environment in which people exist. The vulnerability context recognises that ‘people’s livelihoods and the wider availability of assets are fundamentally affected by critical trends as well as by shocks and seasonality over which they have limited or no control’. (DFID framework, 1999) . ICTs have the potential to increase and/or protect the livelihood assets of the poor by mitigating their vulnerabilities. (De Silva H., 2008). ICTs can also facilitate transfers between different types of assets.

For example access to affordable and timely information via ICTs can provide savings in terms of reduced transport costs. Reduction in transport costs reduces the cost of accumulating physical capital by transferring those costs into benefits in other livelihood assets. (De Silva H., 2008)

We briefly discuss our findings in relation to Sustainable Livelihoods Framework, particularly in relation to the concepts of financial, social and physical capital.

Financial capital;

Most of the respondents could be described as asset poor and lacking financial capital. None of the respondents had a formal bank account. Preference was expressed for enforced saving schemes and in contrast to the lack of formal loans/ financing, informal loans were common. The interest paid on informal loans was significantly higher than the formal loans via MFI. Though none of the respondents had bank accounts, banks were used by some respondents for money transfers.

The use of mobile phones in relation to financial capital can already be seen to a limited extent. Mobile phones are being used to coordinate money transfers in both formal and informal money transfers. More can be done to encourage such developments (See recommendations below).

Social capital;

In the context of the DIFD sustainable livelihoods framework this is defined as 'the social resources upon which people draw in pursuit of their livelihood objectives'. These are developed through:

- **networks and connectedness**, either vertical (patron/client) or horizontal (between individuals with shared interests) that increase people's trust and ability to work together and expand their access to wider institutions, such as political or civic bodies;
- **membership of more formalised groups** which often entails adherence to mutually-agreed or commonly accepted **rules, norms and sanctions**; and
- **relationships of trust, reciprocity and exchanges** that facilitate co-operation, reduce transaction costs and may provide the basis for **informal safety nets** amongst the poor (DIFD framework)

The role of mobile phones in enhancing networks and connectedness could clearly be observed in our study; the MEs interviewed used their phone to call their relatives, friends, business associates and in some cases to keep in touch with their customers.

For those MEs who had migrated to Yangon from other areas, mobiles were used to keep in touch with family in other areas. In some instances where respondents themselves did not own mobiles, phones belonging to others would be used; one respondent from Nayphitaw would call his parents on the village phone since the parents did not own a phone. Before the use of phones his only method of communication was by physically travelling to the village.

"Respondent; I asked my father to give me the phone number in the village. I call my parents here .

Moderator; How long have been using the phone in the village ?

Respondent; About 1 year and 6 months. The phone house is close to my parents' house . They could use it from morning to evening till 6 pm

Moderator; Before the phone in the village , how could you communicate your parents ?

Respondent; I didn't communicate my parents. But I went to the village once in three months to give some of the money to my parents. It took me 5 days to stay in the village."

A fact to note is that in this study it was difficult to make a distinction between the use of mobile phone for social purposes vs. business purposes due to large overlap between social/familial and livelihood networks. Therefore the 'social' relationships built up through communication could contribute to business as well.

Physical capital

The DIFD framework defines physical capital as comprising "the basic infrastructure and producer goods needed to support livelihoods." Infrastructure here is defined as changes to the physical

environment that help people to meet their basic needs and to be more productive. This includes affordable transport, clean, affordable energy and access to information.

With regard to access to energy most respondents in the study were connected to the electricity grid and had to interact with the government owned electricity provider to pay their monthly bills. A key issue was that these interactions were generally viewed as tedious, and informal ways of making interaction were observed. Often, MEs were willing to pay fees to avoid the hassle of interacting with government entities, resulting in increased transaction costs.

With regard to information needs, lack of access to information resulted in making the supply chain slow and costly. As discussed in the literature survey, mobile phones can play a role in reducing costs and time taken for information gathering. The use of mobile phones to improve communication along the supply chain could already be observed to some extent;

- Two MEs, Chan (strawberry Seller, Yangon) and Aung (dumpling Seller, Yangon) used their phones for business purposes such as informing their suppliers when they needed more supply
- Thet (wood sculptor, Mandalay) used his phone to inform his customers when their order was ready
- Htay (electrician, Naypidaw) called up his customers to inform them if their appliance was repaired

Recommendations: Encouragement of development of applications and services that disseminate information (market prices, weather data, etc.) to farmers would further help address the information issues.

To summarise some of the issues discussed above; as Myanmar expands mobile coverage, the following are opportunities that will be available to use ICTs in improving the businesses of MEs. These policy recommendations are relevant for both Government institutions and Mobile network operators in Myanmar.

Problem faced by SMMEs and informal enterprises	What could be done in Myanmar to solve the problem using ICTs, specially mobile phones
Lack of access to information, making supply chain slow, costly	<ol style="list-style-type: none"> 1. Let mobile network expansion continue at expedited pace and mobile phone adoption increase. As Jensen (2007) shows, widespread use of mobile phones is sufficient because people naturally coordinate their activities, thereby increasing market efficiencies. 2. Actively develop apps and services that disseminate information (market prices, weather data, etc.) to farmers. This requires coordination between data producers/owners (e.g. governments, private entities) and app developers, incubators and possibly telecom operators
Lack of access to formal financial services, imposing a significant barrier to growth and increasing costs	<ol style="list-style-type: none"> 1. Implement micro-financing mechanisms to fund expansion of enterprise activities. The collection of funds (repayment amount) can be done via mobile wallet/mobile money transfers. Reminders on repayment can also be done via mobile phones (SMS). 2. Use data analytics to combine micro-financing repayment patterns together with mobile top-up patterns to develop credit histories for MEs. These can be used to offer differentiated products (e.g. different interest rates based

	<p>on risk), overall driving down the cost of loans/financing.</p> <p>3. Enabled telco-led mBanking models in the country (as opposed to bank-led models) since the telecom firms will have a much wider reach soon (if not already)</p>
<p>Increased transaction costs in dealing with government, leading to increased costs (e.g. use of middlemen) or lack of compliance (e.g. lack of registration/formalization of the enterprise)</p>	<p>1. Citizen centric re-engineering and automation of government processes. Key is to keep in mind that solutions should be mGov oriented (i.e. use mobile devices as a delivery channel) instead of computers</p> <p>2. Provide financial incentives (e.g. direct payment) to induce MEs to formalize their businesses.</p>

6. Next Steps

The research reported here is part 1 of a panel study of MEs in Myanmar. The authors have received funding to conduct a follow-up study. The aim to study in-depth what impacts the roll-out of mobile phones have had on the livelihood, work processes and enterprise management of the MEs studied so far. We expect changes in these dimensions as the mobile network rollout takes place in Myanmar, and more of the MEs network (of personal and professional connections) are contactable via phone. We also expect changes because the government and many other non-governmental organizations are rolling out services (e.g. apps that give information about agriculture produce) that have been identifying as adding value to the production processes of MEs.

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Annex 1: Myanmar Socio-Economic Classification (SEC)

Income in Kyats/month	SEC
100,000 or below	E
100,001 - 200,000	D
200,001 - 300,000	
300,001 - 400,000	C
400,001 - 500,000	
500,001 - 600,000	B
600,001 - 700,000	
700,001 - 800,000	
800,001 - 900,000	
900,001 - 100,0000	
over 1,000,000	A