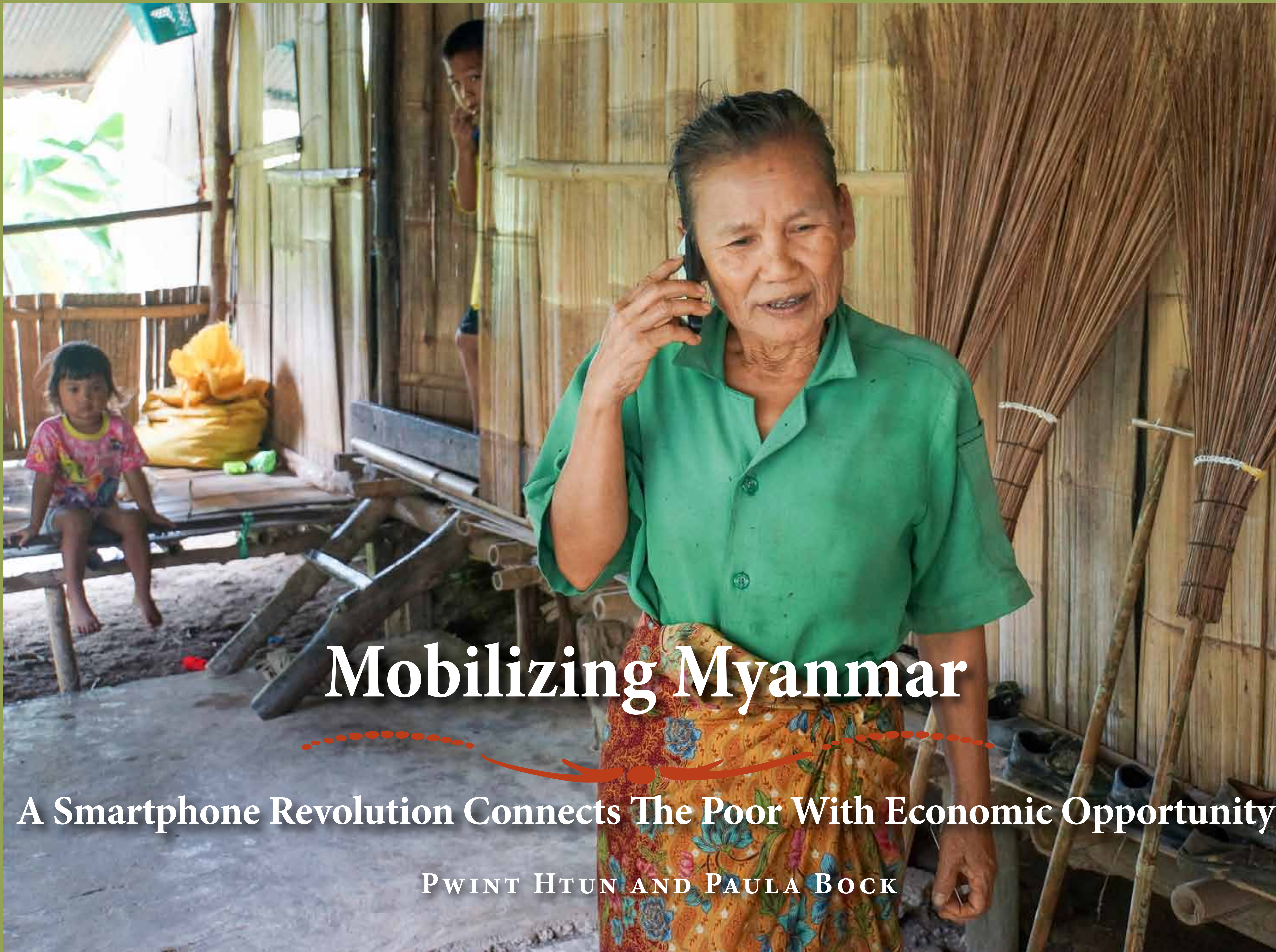

Mobilizing Myanmar

A Smartphone Revolution Connects The Poor With Economic Opportunity

Pwint Htun and Paula Bock

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A Smartphone Revolution Connects The Poor With Economic Opportunity

MYANMAR FSP FRAMEWORK ASSESSMENT *(public version)* AND FEASIBILITY STUDY

Commissioned by the Bill & Melinda Gates Foundation

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Download report: partnersasia.org/dfs

(Right)
Digital financial services—literally on the horizon for poor people of Myanmar—could transform life for street peddlers such as Myint Myint Aye, 43, who would greatly benefit from access to savings, microcredit and microinsurance.
She earns less than US$1.50 a day selling corn at Three Pagodas Pass, hardly enough to support herself and a disabled sister.

Photo by Paula Bock

(Cover)
On the edge of rice fields bordering Myanmar and Thailand, this landless Karen grandma takes a call from her adult children, migrant workers in Bangkok. They regularly send money to help care for grandchildren, ages 2 and 8, who she raises while tenant farming and making straw brooms that sell for about 70 cents each.

Photo by Paula Bock

Cell towers are fast changing the landscape and life for the people of Myanmar. Mobile coverage in Myanmar currently reaches 90 percent of the population. The big question is whether benefits of digital finance will reach women and the poor.

Photo by Paula Bock

Even in Myanmar's most remote areas, people use inexpensive solar panels manufactured in China—like this panel perched on a stand made from tree branches—to charge mobile phones. This 35-watt panel cost US$28. It can power two light bulbs and a mobile phone.

Photo by Paula Bock

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Preface

Pwint Htun, an American engineer and telecom executive who grew up in rural Myanmar, is dedicated to creating access to digital financial services for landless farmers, women and street peddlers so they can lift themselves out of poverty.

Photo by Paula Bock

Mobilizing Myanmar explores the momentous transformation underway in my homeland, a once-isolated country where cell towers are now sprouting faster than bamboo.

Our research team conducted a country-level diagnostic that leveraged data from the Central Bank, Ministry of Communications, the three telecommunication companies operating in Myanmar, Facebook, Viber, a nationally representative Information and Communication Technology survey of 7,500 households, and recent census data from the UNFPA.

We also talked with more than 150 people in rural and urban areas about their mobile phone usage, financial lives, challenges and hopes—farmers, fish mongers, street peddlers, migrant workers, smartphone salespeople, construction crews, janitors, government clerks, small shopkeepers, teens, couples on dates, women in savings groups, and widows in rural villages.

Their perspective is valuable to me because I'm passionate about creating access to digital financial services for women, the poor and rural villagers. I'd like to share some personal history to help explain where I'm coming from—and in what direction I hope Myanmar will go.

I grew up in a rural village in Myanmar's Ayeyarwady Delta. My mom, a primary care doctor and single parent, raised me and my three sisters while working full time in a small hospital set among rice paddies.

We didn't have a phone at home, but I can remember during fifth grade when our village got a manual telephone switchboard that could make regional calls. We wore our best clothes to go to the switchboard office to call our grandparents, who lived a few hours walk from us.

I loved our small village, but the school was not very good, so our family eventually moved to Yangon. In 1988, when the military cracked down on the nation's nascent democracy movement, my mom set up a makeshift clinic to treat students who'd been shot in the streets. After the junta made arrests and blacklists, my mom knew she had to flee the country and got a job at a refugee camp on the Thailand-Cambodian border where I joined her after ninth grade.

Financial and other barriers precluded formal school for me, so I studied on my own at home and on the porch, where American neighbors noticed me struggling with physics and math problems. Lipsky worked in the refugee camp with my mom; Pam was a chemical engineer, a trailing spouse who became my tutor and mentor. Pam and Lipsky brought me to live with them in Seattle, where I eventually earned an electrical engineering degree from the University of Washington.

When I landed in America, I was 18-years-old and homesick. I quickly found my first job, peddling Sprint long-distance plans at a booth at Northgate Mall. I offered passersby use of a demo phone to make a free call anywhere in the world—then tried to sign them up for Sprint. The best perk? On breaks, I could use the demo phone for free! During lunch, I'd crawl under the folding table in the middle of the mall, hidden by the red Sprint tablecloth, and call one overseas relative after another, clinging to family voices.

That's why connectivity drives me. I want affordable global connectivity so people can talk with their loved ones. My bigger dream is for everybody—every landless farmer, every woman, every poor street peddler—to be connected digitally and financially so that they can access finance, markets and information. If they can connect, they'll be able to lift themselves up.

During college, I was awarded the first Prospect Burma Scholarship, established with funds from Daw Aung San Suu Kyi's Nobel Prize money. The honor motivated me to try to give back. Because I love math and science, I turned to tech.

I worked on innovation and new product development in the U.S. telecommunications industry before taking a sabbatical to travel the world. It was while walking to a dawn meditation retreat on a small island in Thailand that I experienced a brief and disturbing encounter that changed my life.

My shabby sarong was tied sloppily, and the motorbike thug could tell by the way I walk that I'm from Burma. He mistook me for a migrant worker who likely stowed months of cash wages on her body, ripe for mugging.

Give me all your money or I'll get you deported, he growled in Thai-accented Burmese. Suddenly, I understood how millions of women feel. Utterly vulnerable. No safety for their life savings or their bodies. No one to call for help.

We lived under a tin roof; no phone in our home. We dressed in our best clothes to go call my grandparents from the village switchboard office. Pwint Htun, age 11 (right) with younger sisters Thinnu Htun, age 9, and Yee Htun, age 4.
(circa 1984-85)

Photo courtesy of Pwint Htun

Thus began my journey to bring mobile financial services to Myanmar.

Five years ago, I left my career as a telecommunications executive in order to advocate for universal digital and financial inclusion in Myanmar. As an engineer and senior manager who contributed to development of the first Android devices and first mobile social messaging app (MySpace) for T-Mobile's sidekick phone, I recognized the potential of mobile technology to dramatically improve life for poor people in my homeland. But as a former refugee who grew up in Myanmar, I also understood that digital finance might never reach those who need it most—unless the right regulations, guidance and resources were deployed at the right time.

My journey has included leading a government delegation from Myanmar to East Africa to learn about digital financial services for the poor; spearheading efforts to draft Myanmar's Mobile Financial Services Regulations; assisting Mobile Financial Services providers to receive licenses to operate in Myanmar; and convening monthly breakfast meetings with top telecom leaders in Myanmar to strategize on key common challenges.

I'm thrilled to report that in three years, from 2013 to 2016, Myanmar leapfrogged from the third least-connected country in the world to a nation of 54 million people with 51 million mobile connections. Today, 83 percent of households in Myanmar have mobile phones. More than half of all adults have smartphones because it is possible to purchase a no-brand smartphone for less than $23 in Myanmar.

I'm grateful for the efforts of visionary leaders in the President's Office, the Central Bank of Myanmar, and the Ministry of Communications. I'm especially thankful for expert advice from Rodger Voorhies, of the Bill & Melinda Gates Foundation, who helped create a checklist of progressive regulations and preconditions, and graciously agreed to travel to Myanmar in December 2012 to talk with key leaders.

Today, Myanmar has among the world's most progressive mobile financial services regulations and three mobile network operators actively working to connect rural and urban populations with financial services. Soon, most of the people in Myanmar will embrace mobile financial services just like the citizens of Kenya, Tanzania, and Bangladesh. Except in Myanmar, everyone will be accessing it from inexpensive smartphones.

This endeavor has taken more than a village—from Queen Máxima of the Netherlands, who took a special interest in the project as the United Nations Secretary General's Special Advocate for Inclusive Finance—to an inspirational woman rice farmer in a roadless village who organized her community to start a women's savings group, build a local middle school and store their rice harvest until demand and prices are high. Imagine what she'll do with a smartphone.

Imagine the possibilities: Remittance through digital finance, in addition to enabling saving and access to capital, could increase personal safety for millions of migrant women who are routinely attacked by men looking for cash. Financial connectivity could lead to microinsurance, so one crop failure or illness doesn't wipe out a whole family. Digital transactions could expand the market for farmers. E-learning could reach many bright kids, especially in rural areas, who don't have access to good schools.

My homeland is a clean slate for financial services for the poor. Progressive regulations ensure a healthy mix of corporate cooperation, competition and oversight.

My homeland is a clean slate for financial services for the poor. Progressive regulations ensure a healthy mix of corporate cooperation, competition and oversight. The Aung San Suu Kyi-led government is committed to inclusive growth to ensure rural populations have access to finance. In Myanmar, we have an ideal environment for a smartphone revolution to connect the poor with economic opportunity. As with all rollouts, there will surely be obstacles, but I am optimistic we can navigate these together and create a digital finance ecosystem to transform the lives of millions of people in my homeland and beyond.

Pwint Htun

Seattle, March 2017

Four years ago, Myanmar was the land of US$2,000 SIM cards. Today, more than half of all adults in Myanmar have smartphones because they cost only US$23 and data costs pennies. A majority smartphone market could serve as an ideal lab environment to test how mobile money could disrupt entrenched social and financial structures that have kept most people—especially women, ethnic minorities, and rural farmers—in deep poverty.

Photo by Paula Bock

In Myanmar, 83 percent of households have mobile phones, and more than half of all adults have smartphones. Many people keep their old feature phones for daily, utilitarian use while cooking, cleaning or doing other messy tasks, reserving their smartphone for entertainment (Facebook, videos) or other special occasions.

Photo by Paula Bock

Executive Summary

Myanmar is an ideal lab environment to innovate and enable novel digital financial solutions (DFS) for low-income people who are primarily smartphone users. Recent developments in Myanmar have created a unique opportunity to accelerate the pace of innovation and usher in an era where low-income people can access and use a broad and deep set of digital financial tools to transition out of poverty and mitigate financial risk. Myanmar is also ideally poised to be a demonstration country to test end-to-end digital payment solutions.

As recently as 2012, Myanmar was extremely isolated with one of the world's lowest rates of mobile phone penetration, but rapid adoption of mobile phone technology over the past four years has dramatically changed the digital landscape. Today, half the adult population uses smartphones,[1] and Myanmar has nearly 51 million mobile connections[2] for a population of 54 million.[3]

Despite this rapid uptake of mobile technology, Myanmar remains one of the least developed financial systems in Southeast Asia. The country's largest bank by asset has only 307 branches. Only 2 percent of adults have a debit card,[4] and only 3 percent of adults have insurance.[5] Only 0.01 percent of women have access to credit with a formal financial institution regulated by the Central Bank of Myanmar.[6]

Thoughtful implementation of digital financial services (DFS) could make a tremendous difference in the lives of Myanmar's women, allowing them entrée into a formal economy that has long excluded them on several fronts. Even the few Myanmar women who have bank accounts have difficulty accessing credit because most lending to small medium enterprises (SMEs) is based on collateral. Because of the gender gap in asset ownership, it is difficult for women to secure a loan.

In addition to the significant gender gap in access to financial services, Myanmar women face a significant gender gap in mobile ownership. However, since many more women own mobile phones (52 percent) than have access to bank accounts, it appears mobile financial services would be the most feasible way to open financial access to women in Myanmar.

As Myanmar builds out its cash-in cash-out network, regulators are considering a mandate that at least half of all the cash-in cash-out agents in Myanmar are women. If implemented, that requirement would go a long way toward integrating women into the formal economy as both agents and consumers. Daughter-to-mother technology transfer could speed the adoption of digital financial services among middle-aged women, the generation that holds economic power within the family and makes decisions about spending on family needs. *(See Women, Section 5, page 38.)*

Myanmar presents an exciting lab environment to develop an entire ecosystem of financial services that could disrupt the cycle of poverty that currently traps over 37 percent of its population.[7] The combination of inexpensive smartphones, rapid expansion of rural connectivity, technology adoption among a disproportionately high number of youth and the rural population, all combine to create a crucial tipping point to ignite mobile financial services in the country.

Digital financial services could transform the lives of poor and marginalized peoples in Myanmar, providing a path out of poverty. Digital financial tools would allow them not only to securely hold money, make deposits and withdrawals and save, but also to connect to markets, create income-generating opportunities and transmit and receive funds from family members working abroad. Creating gender responsive policies and programs will be critical to ensure that women are able to use these services and become integral players in the formal economy.

Notes

1. LIRNEasia. 2016 Nationally representative survey of ICT needs and use in Myanmar.
2. Interview with three mobile network operators
3. Ministry of Labor, Immigration, Population
4. Interview with the Central Bank of Myanmar
5. Cenfri. 2014 MAP Myanmar Diagnostic Report
6. The Role of Finance in Women Economic Empowerment in the ASEAN Region. (2014). Dr. Sandar Oo.
7. World Bank Group. (2014). Myanmar: Ending poverty and boosting shared prosperity in a time of transition

This samosa seller is among the poorest of street peddlers yet even he was able to save the equivalent of US$5.65 to buy a second-hand smartphone.

Photo by Paula Bock

Realities of Financial Services in Myanmar

Myanmar is the poorest country in Southeast Asia with the most underdeveloped financial system in the region. While 37.5 percent[1] of the population lives below the global poverty threshold of $1.90 per day, the 2011 Multidimensional Poverty Index (MPI) from the Oxford Poverty and Human Development Initiative measured 9.4 percent of the population in severe poverty.[2] Inaccessible financial structures have kept people—especially women, ethnic minorities, and rural farmers—in perpetual poverty.

The lack of access to financial structures and credit means poor, rural and migrant populations have little means to save, send or borrow money. If they do have savings, they typically keep it in the form of jewelry or livestock, putting them at risk of market vagaries, theft, and animal diseases. Further, with no way to save or access credit, the unbanked of Myanmar lack financial reserves to respond to financial emergencies and are plunged into crisis by illness, poor harvest, and natural disasters.

Myanmar's total size of unmet demand in payments and transfers is estimated around $23 billion. That means less than 10 percent of the total needs in payment and transfers are met by formal institutions.[3]

Given the lack of access to banking, the people of Myanmar rely on unregulated financial service providers in an agent-to-agent informal financial payment network called *Hundi*. *Hundi* networks transfer cash payments and remittances throughout the country as well as from Myanmar's migrant workers abroad. Myanmar's 3.1 million migrant workers abroad remitted $3.5 billion in 2015 alone.[4] Migrant workers from Myanmar will be a key population to target because they have a higher rate of mobile usage, higher rate of women users, and, as early adopters, are likely to drive in-country usage.

Notes

1 Integrated Household living Condition Survey (2009-10) http://www.mm.undp.org/content/dam/myanmar/docs/FA1MMRPoverty-Profile_Eng.pdf

2 Alkire, Sabina; Jose Manuel Roche; Maria Emma Santos & Suman Seth (2011). Myanmar Country Briefing. Oxford Poverty & Human Development Initiative (OPHI) Multidimensional Poverty Index Country Briefing Series. www.ophi.org.uk/policy/multidimensional-poverty-index/mpi-country-briefings/

3 ADB. 2017. "Accelerating Financial Inclusion in South East Asia with Digital Finance."

4 World Bank. 2016. Migration and Remittances. Factbook 2016, 3rd edition. Washington, DC: World Bank.

In the fish market at the port of Mahachai, Thailand, teen migrant workers from Myanmar use fashion apps and Facebook on their smartphones. They'd likely be early adopters and evangelizers of digital financial tools.

Photo by Paula Bock

Leapfrogging to Smartphones & Social Networks

Today, mobile coverage in Myanmar reaches 90 percent of the population with 51 million mobile connections at the end of 2016.[1] Mobile phone adoption has been rapid and widespread due to affordable SIMs and inexpensive Android smartphones imported from China. Even in rural villages with no running water, no roads and no school past fourth grade, our team found paddy rice farmers using smart phones, often charging their batteries with a cheap solar panel embedded in the leaf roof of their bamboo homes. While other phones are still in use, a 2016 market survey found 78 percent of current mobile phone users owned a smartphone.[2] This translates to nearly half of all Myanmar adults owning a smartphone. In addition, the GSMA Industry Association projects Myanmar will have the second highest smartphone adoption as a percentage of connections in the Asia Pacific by 2020.[3]

As of 2014, Myanmar licensed three telecom operators: Myanmar Post and Telecom (MPT), Telenor (Norway) and Ooredoo (Qatar). In 2017, a fourth operator Mytel (a joint venture of Vietnam's Viettel and Myanmar firms) will be licensed. Strong competition between the three current operators has brought affordable Internet and data rates, as low as 1Kyat (US $0.00075) per 1 MB of 3G data, with Telenor offering free Facebook data of 150MB per day, equal to 4GB of free Facebook data per month. This competition among providers has clearly proved advantageous for consumers.

In Myanmar, Facebook is the primary mode for digital communication for 14 million people[4] and a consumer's digital identity is tied to their Facebook account rather than their phone number. Telecom operators provide packages with free Facebook data access and consumers routinely switch between different SIM card accounts to maximize their free Facebook data quota each day. Viber has an even bigger reach with nearly 25 million active users in Myanmar as the communications platform used by government officials including police, local government, and Members of Parliament. Mobile financial services would benefit from engaging the consumer on the Facebook messenger platform or other social media such as Viber for education about and integration with the payment systems.

In Myanmar, 90 percent of mobile phones have cameras.[5] Payment interfaces that use a camera could ease widespread adoption and usage of mobile financial services. Some early adopters in Yangon have already begun to embrace QR code payments in a scan-and-pay model. There are other models emerging that could leapfrog credit cards and other last-century technology to improve the user experience in making financial transactions.

Ultimately, the success of mobile financial services will depend on creating awareness of products, confidence in using the system, and access to cash in/cash out agents in the vicinity. It will also require digital literacy to establish privacy and security so that users can build confidence and trust in the mobile financial ecosystem. This education effort will require a wide range of partnerships including, for example, reaching out to teachers and health workers to help educate and promote mobile financial services. Existing trusted *hundi* networks combined with more than 100,000 sellers of airtime across the country are poised to be converted to a truly pervasive cash-in/cash-out agent network. Ensuring at least half the agents in the country are women during buildout will go a long way toward integrating women into the formal economy as both agents and consumers.

Notes

1 National SIM Registration Database is not setup yet, therefore can only count active SIM cards
2 LIRNEasia 2016 Nationally representative survey of ICT needs and use in Myanmar
3 GSMA The Mobile Economy Asia Pacific 2016
4 Interview with Myanmar ICT for Development Organization
5 2016 Nationally representative survey of ICT needs and use in Myanmar -LIRNEasia.net

Policy, Collaboration, and Opportunities with Myanmar's New Government

The new Myanmar government led by Aung San Suu Kyi has made its focus poverty alleviation and inclusive growth. An integral part of that focus is to provide nationwide "universal financial access" by the next election cycle in 2020. To open up the payment industry and support the Myanmar government's national goals of inclusive economic growth, greater financial inclusion, reduction of corruption and eliminating shadow economies, the Central Bank of Myanmar has eliminated all existing restrictions in order to welcome all international payment providers to Myanmar.[1]

The Central Bank of Myanmar has issued one of the most progressive Mobile Financial Services (MFS) regulations in the world and as a result, several important global leaders in the industry are now working in Myanmar including Rene Meza and Jacques Voogt who led M-PESA in Tanzania.

The 2016 MFS regulations support a tiered "know your customer" (KYC) policy which makes it far easier for anyone to open an account. For instance, proof of ID is not required for Tier 1 customers conducting small-value transactions up to a maximum daily limit of 50,000 kyat or $37.

An abundance of phoneshops in Yangon sell smartphones priced as low as $20.

Photo by Pwint Htun

MFS Regulation requires interoperability for the nation's Mobile Network Operator-led mobile financial services (MFS) providers. Key MFS Industry leaders comprise a consortium that has been willing to discuss industry-led wallet-level interoperability and explore opportunities for collaboration. Industry-wide cooperation between the three leading MFS players includes plans to pool marketing resources to address the common challenges of building trust in their industry among consumers. These consortium level discussions include options for co-branding and co-investing to educate and train both consumers and cash in/cash out agents on digital and financial literacy to build consumers' confidence in MFS products.

To promote interoperability, the Central Bank of Myanmar is currently considering various options for a National Mobile Financial Services Interoperability Switch between all financial services players. The Central Bank's strategy to encourage interoperability with a mobile money switch may be aligned with Gates Foundations' efforts around Level One Project components. Myanmar is ideally poised to be a demonstration country to test end-to-end digital payment solutions such as the Level One Project financial services platform developed by the Gates Foundation.

In addition, the administration has begun to initiate a biometric digital ID system for citizens of Myanmar. This is a pivotal time to influence which digital ID structure and protocols will be used.

And it is a key time to influence and shape the MFS industry in Myanmar and to accelerate its adoption and impact across the ecosystem. In light of the Myanmar government's priorities and desire for accelerated implementation, it's critically important to provide input and investment now to push the industry to reach the rural poor and most vulnerable.

The current context and opportunities in Myanmar offer an excellent lab environment for innovative MFS solutions for low-income smartphone users. Given Myanmar's market development, there are also opportunities to test new innovations, such as using smartphone technology with QR codes, social media-integrated payment systems, and biometrics payments.

Notes

1 http://www.mizzima.com/business-domestic/visa-welcomes-opening-myanmar%E2%80%99s-domestic-payments-industry

Envisioning the Future

The timing is right to use digital financial services to make the greatest impact for marginalized people who have long been excluded from the formal economy.

The political climate in Myanmar is favorable and key leaders in government and industry are on board to collaborate. The digital financial services industry is at a pivotal stage of development, when the right investments could have a significant impact on how and whether the DFS industry is able to reach—and transform—the lives of women and the rural poor in Myanmar.

Look ahead four years and imagine the possibilities: By late 2020, Myanmar could achieve universal financial access for the whole country. Everyone in Myanmar could use mobile wallets to store money, send money, save, and spend, and they would have the ability to send money from any mobile phone to any mobile phone. Imagine ubiquitous cash-in cash-out agents (like human ATMs) serving urban and rural populations with a host of financial services. Imagine women—long relegated to the informal economy as street vendors, food servers, maids and day laborers—entering the formal economy as cash-in cash-out agents to facilitate community financial transactions. Imagine everyone in the country paying merchants and each other using standard static QR code scan-and-pay. Imagine farmers no longer having to turn to loan sharks for interim loans with exorbitant rates because the agricultural loan arrives in their mobile wallets when they need it.

As with all rollouts, there will surely be challenges, but it **IS** possible to achieve all of the above. Working together, we can make this vision reality before the end of 2020.

Myanmar's digital financial services industry is at a pivotal stage. With the right guidance and incentives, DFS innovation could transform the lives of women and the poor by this baby's fifth birthday.

Photo by Paula Bock

Yangon's urban elite will undoubtedly benefit from the smartphone revolution. But market forces alone are not enough to target and enable the rural poor and marginalized populations.
Photo by John Henderson

Portraits

Over three months, our multilingual team chatted with more than 150 people in rural and urban areas about their mobile phone usage, financial lives, challenges and hopes.

Most surveys on Myanmar telecom usage have focused on the majority Burman population in Yangon, Naypyitaw, and Myanmar's central lowlands. Our goal was to supplement this quantitative information with a qualitative snapshot of migrant and ethnic border areas where poor, ethnic, and marginalized people live.

We visited villages in Sangkhlaburi and Hpa-An—on both sides of the mountainous jungle separating Thailand and Myanmar—and also went to remote areas of the Ayeyarwady Delta and the urban slums of Bangkok, Thailand and Yangon, Myanmar to talk with migrant workers and the rural and urban poor.

Migrant workers will be a key population to target because they have a higher rate of mobile usage, higher rate of women users, and as early adopters, are likely to drive in-country usage. Myanmar's 3.1 million migrant workers abroad (including nearly 2 million migrants in Thailand) remitted $3.5 billion in 2015, alone.[(1)(2)] A recent nationally representative survey of 7,500 households found that 1 in 5 households in Myanmar receive some form of domestic or international remittance.[(3)] (*See Migrants, Section 4, page 32*)

We met people where they live, work and gather—in rice paddies, fish markets, vegetable stalls, border crossings, tea shops, noodle stands, mobile phone stores, women's savings group meetings, an agricultural cooperative, a monastery, an immigration office, a factory dorm, and villages without roads or running water. Many meetings were pre-arranged; others, spontaneous.

Our observations and interviews validate the statistics about smartphone usage. Even in rural villages with no running water, no roads and no school past fourth grade, our team found paddy rice farmers using smartphones, often charging their batteries with a cheap solar panel embedded in the leaf roof of their bamboo homes.

We were particularly intrigued by the varied stories of street vendors, usually entrepreneurial women who serve as hubs of the informal economy. They'd be ideal to consider as cash-in cash-out agents as they are already engaging in community transactions.

Notes

1 IOM Myanmar https://www.iom.int/countries/myanmar

2. World Bank. 2016. Migration and Remittances. Factbook 2016, 3rd edition. Washington, DC: World Bank.

3. LIRNEAsia 2016 Nationally representative survey of ICT needs and use in Myanmar

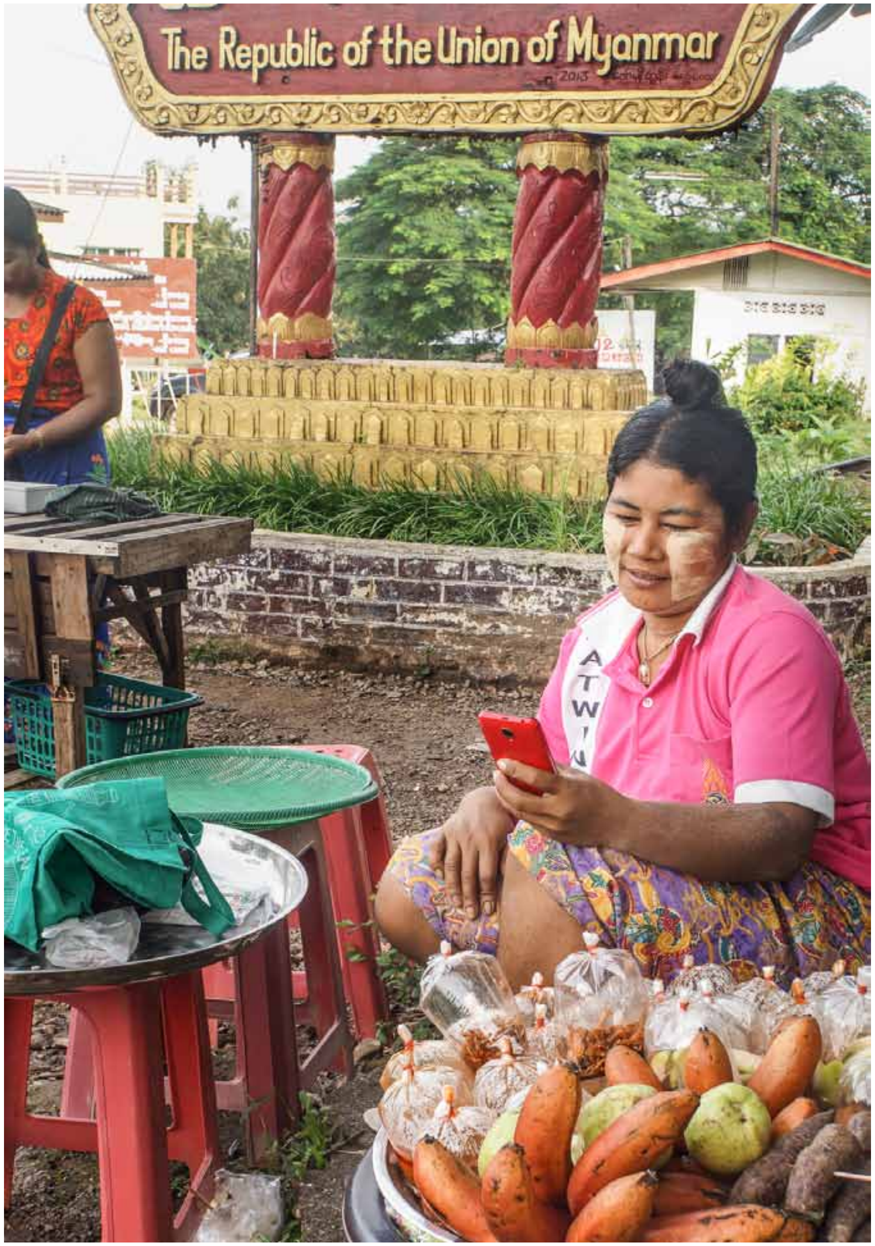


Photo by Paula Bock

The Root Seller

Early mornings, as thousands of Myanmar day laborers stream over the border at Three Pagodas Pass to work in Thai factories, 34-year-old Tin Moe Sway stakes out a prime spot selling roots, fruits and curries-to-go. She earns 200-300 baht a day (US$5.70 - $8.60)—enough to afford a dual-SIM 3G phone that cost her about US$40. The root seller migrated from the Ayeyarwady Delta about two years ago and uses her phone to call her three children, who still live in the village. It costs 3 baht/minute (US$0.09). She saves to send them money, carrying the cash on her body because she doesn't have a bank account. She remits through a *hundi*, but it's expensive; last time she transferred 500,000 kyat (US$364), it cost about US$10. Bank transfer fees would be much cheaper, she said, but there are no banks anywhere near and she fears forfeiting all the money to the bank if there is a dispute over I.D. cards when her relatives try to collect the money in Myanmar.

Rarely, Tin Moe Sway uses her phone to call a motorcycle taxi instead of walking with full tray and chair balanced atop her head.

How DFS could help: Mobile money for remittances.

Photo by Paula Bock

The Corn Seller

Too poor to own a mobile phone, 43-year-old Myint Myint Aye earns about 50 baht/day (US$1.43) selling boiled corn-on-the-cob to migrant day laborers at Three Pagodas Pass. Painfully thin, the migrant from Myanmar's Bago region struggles to pay rent (US$23/month) and support a disabled younger sister. Her family never recovered financially after her father contracted an illness and lost his job. Myint Myint Aye dropped out in sixth grade to work; subsequent family medical emergencies forced her to beg for food.

How DFS could help: low-cost phone; microinsurance; access to microcredit to buy/sell value-added products.

Photo by Paula Bock

The Quail Egg Kid

Quail eggs and fried tofu come in a plastic bag with a shy smile from 12-year-old Htoo Htoo, who earns about US$0.36 a day on the streets of Hpa-An, Myanmar. He's one of seven siblings, none in school. His mom loaned him her smartphone to keep in touch while they're peddling, but he mostly uses it to play Subway Surfers; he rarely gets to play at home because his dad and older brother hog the phone.

How DFS could help: e-learning for Htoo Htoo and siblings; microcredit and online women's co-op network for his mom.

Photos by Paula Bock

The Urban Migrant Workers, Mahachai (near Bangkok)

We heard countless versions of the same disheartening story from Myanmar migrants working in construction, cleaning, factories, fish markets and farms in Thailand. With no access to banks or the legal system, migrants are targets for robbery and assault by gangs, drive-bys and corrupt officials who threaten jail and deportation. One young woman told us that when she stepped outside to hang laundry on the clothesline, waiting gang members entered the open door and robbed and raped her roommates. Other young women described being robbed and assaulted while walking to and from work, targeted because they carry cash savings on their bodies. One young man shared a horrific tale of having his room broken into by corrupt officials who weren't satisfied with how much money they found so forced him into a vehicle and assaulted him.

How DFS could help: Mobile wallet instead of carrying cash; remittances; ability to remit into interest earning saving account for themselves; app to activate crisis-network. (Currently, even though migrants have phones, they have no one to call in a crisis.)

Photo by Paula Bock

The Village Leader

In a roadless village without running water or household electricity, Daw Kyi May is a force. The 58-year-old rice farmer (who has a fourth-grade education) organized a women's savings group and is spearheading efforts to build a local middle school so youngsters can learn marketable skills instead of migrating to Bangkok at age 14 to do manual labor. Members of the women's savings group pay two percent interest on loans, rather than outside lenders' rate of 10 percent per month. That means villagers no longer have to pawn possessions or lose everything to pay for medications and seeds. With their collective savings, the group built a granary to store their rice harvest until demand and prices are highest. And with her mobile phone, Daw Kyi May calls dealers around the region to check what they're paying for rice. Before mobile phones, she could only compare prices with one village within walking distance before deciding whether to accept a dealer's offer. Now, the market has expanded. "We have a lot more power."

How DFS could help: Savings group app; online sales of crops, digitizing agricultural value chain and extension services.

Photos by Paula Bock

The Grandmother

In her ninth decade, Grandma, in purple, still farms paddy rice. She's illiterate but eager to use new technology (with the help of other women in her savings group) to negotiate rice prices and phone relatives working in Thailand.

How DFS could help: An app to match day laborers with farmers; pictorial apps to help users who are illiterate or semi-literate.

The Construction Workers

For migrant laborers who work long, dangerous, mind-numbing shifts far from home, smartphones are a way to ease loneliness and pain. These construction workers, on their day off, use their smartphones to phone home, scroll Facebook and, yes, play Clash of Clans. Since they already use "gems" for transactions in the game, the guys anticipate they'll be comfortable using mobile money when it's available.

How DFS could help: digitizing payroll; person-to-person transactions; e-learning; online savings accounts; DFS-integrated training on workers' rights and occupational safety.

Photo by Paula Bock

The Lost Digital Wallet

In the Hpa-An Telenor shop, a young man (plaid sarong) uses Wave Money to transfer funds to a co-worker on a rubber plantation in another region. The transaction went smoothly, but the worker casually left on the counter the piece of paper with his boss's account number and pin code, highlighting the need for awareness about digital security.

How DFS could help: Education about digital security; perhaps biometric ID password that does not require alphanumeric entry.

Photo by Pwint Htun

The Custodian

When Soe Soe Khaing, a migrant janitor in Yangon, remits money to her parents in the rural, roadless, Taung Goke region of Rakhine State, it costs them 3000 kyat in bike, taxi and boat fees and up to eleven hours round trip to go to the bank to collect the money—and they can only travel when the tide is high. Because of the tidal schedule, it is impossible to get to Taung Goke several days each month. If travel delays prevent them from reaching the bank before it closes at 3 p.m., they're out of luck. Soe Soe Khaing dreams of someday remitting money to her parents via smartphone.

How DFS could help: mobile money, especially in remote, roadless villages.

Photo by Pwint Htun

The Chili Pickers of Ayeyarwady

These poor, landless day laborers earn US$2.50 - $3 per day harvesting chili and planting rice paddy, and they've weathered floods and pest-induced crop failure for three years. The natural disasters are exacerbated by ongoing months-long cash disbursement delays by the Myanmar Agricultural Development Bank. The delays force farmers to borrow from loan sharks at exorbitant rates (10 - 30 percent/month) to pay for seeds and fertilizer. Worse, the MADB often requires farmers to collect cash in-person, a journey requiring an expensive overnight stay, all day in line at the MADB, and, for male farmers, temptation to drink-it-all-away in town.

How DFS could help: Agriculture loans through mobile phones to avoid delays, exorbitant interim loans and travel expenses; crop insurance; DFS-integrated agriculture extension service; online-learning for young men and women of rural area; microcredit and online women's co-op savings network.

To earn enough to start this electronics and appliance shop in Kyondoe, Myanmar, this businesswoman and her husband, Ko Chit Win, labored many years in Bangkok as a seamstress and construction worker, remitting money back to her mom in rural Myanmar for safekeeping. Myanmar's businesswomen could play an important role as cash-in/cash-out agents, digital evangelists and trainers of other women.

Photo by Paula Bock

Current Environment: Ripe for Development

Macroeconomics - Population

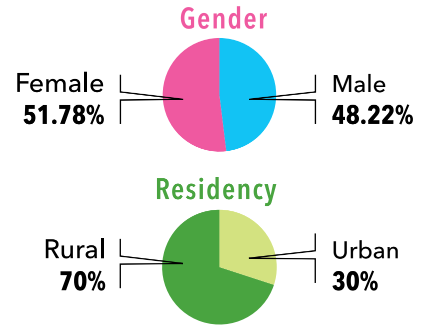
Myanmar is a country of 136 diverse ethnic populations. Since independence, the country has faced more than 50 years of civil war and still struggles to unify behind one national identity. As a result, the vast majority of the country has very little infrastructure. In 2014, Myanmar conducted a long overdue census highlighting a young population with a higher ratio of female to male.

Even in Myanmar's cities, 34.6 percent of urbanites live on less than $1.90 day. Cheap mobile phones and DFS innovation could help disrupt the cycle of poverty.

Photo by Paula Bock

2014 Myanmar Population and Housing Census

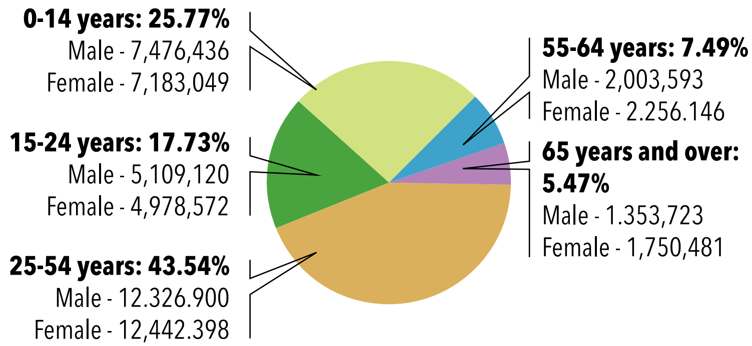
Total inhabitants: 51.4 million



Source: 2014 Myanmar Population and Housing Census

Age Distribution

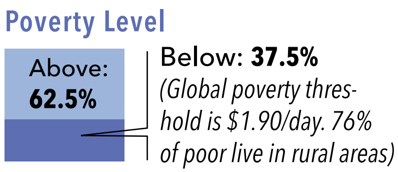
Total inhabitants: 54 million (2016 estimated)



Poverty

With 53.9 million inhabitants on a landmass of the size of Texas, Myanmar is one of the poorest countries in Southeast Asia. World Bank Group's (WBG) Systematic Country Diagnostic for Myanmar published in November 2014, claims a per capita GDP of $1,105, and a national poverty rate of 37.5 percent.

Three-quarters of Myanmar's poor living below the global poverty threshold of $1.90 per day are in rural areas (76 percent).[(1)] Poverty is most heavily concentrated in conflict-affected areas along the eastern and western border regions. The most concentrated poverty resides in Rakhine State along the Bangladesh border with a 78 percent poverty rate and Chin State at 71 percent along the Indian border.



Source: World Bank

It is important to also realize that Myanmar's urban poverty rate is 34.6 percent which is close to the national average. Among ASEAN countries, Myanmar is not only the poorest country, but also has the lowest life expectancy and the second-highest rate of infant and child mortality.[(2)]

Myanmar's life expectancy at birth is less than 66 years, and the average time spent in school is 4.1 years. Between the mid-1990s and 2011, less than 1 percent of GDP was invested for health and education combined.[(3)] The newly elected Aung San Suu Kyi-led National League for Democracy (NLD) government has pledged to increase its education and healthcare budget.

Notes

1. Integrated Household living Condition Survey (2009-10) http://www.mm.undp.org/content/dam/myanmar/docs/FA1MMRPovertyProfile_Eng.pdf
2. Human Development Report (2015) http://report.hdr.undp.org/
3. Findlay, Ronald and Park, Cyn-Young and Verbiest, Jean-Pierre A., Myanmar: Building Economic Foundations (May 2016). Asian Pacific Economic Literature, Vol. 30, Issue 1, pp. 42-64, 2016

Source: WFPGeoNode

Economy: Agriculture

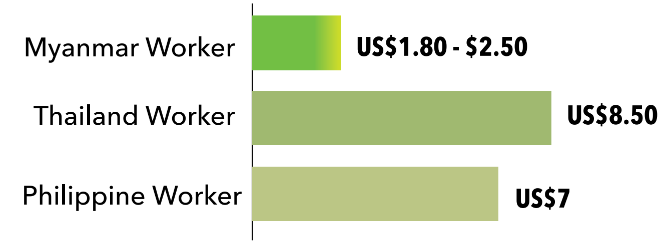
Myanmar's agriculture sector dominates its economy, contributing 38 percent of GDP, and employing more than 60 percent of the workforce.

Recent farm economic surveys show productivity of both land and labor are much lower in Myanmar than in other Asian nations. During monsoon season, one day of work generates only 23 kg of paddy in Myanmar, compared to 62 kg in Cambodia, 429 kg in Vietnam, and 547 kg in Thailand. For example, during monsoon season an agricultural worker in Myanmar earns only US$1.80 - $2.50 per day on the days they are able to secure work and only slightly more during the dry season harvest. In comparison, an agricultural worker in the Philippines averages US$7 per day, while one in Thailand earns $8.50 per day.[1]

This low productivity means farm profits in Myanmar are among the lowest in Asia. Farmers in Myanmar are less educated and less knowledgeable than their regional peers. They also have access to fewer public services than farmers in neighboring countries.

Agricultural Worker Earning

Per day during monsoon season



Source: World Bank

Notes

1. World Bank. 2016. Myanmar - Analysis of farm production economics. Washington, D.C. : World Bank Group. http://documents.worldbank.org/curated/en/509581468181132091/Myanmar-Analysis-of-farm-production-economics

Farmers in Kayin State leave their phones home when planting paddy so the electronics won't get wet. Because half of all rural adults in Myanmar own mobile phones, there's opportunity to boost agricultural productivity and earnings by developing apps that expand markets and tap agricultural extension services. That's much needed since Myanmar's farms are less productive and its farmers poorer than in other Asian nations.

Photo by Paula Bock

Cross-border workers, Migrants, Remittance

According to Myanmar's 2014 union census data, approximately 2 million Myanmar nationals are living abroad.(1) Census data may not represent the true extent of migration, much of which exists on the frontiers of eastern border states with Thailand. The International Organization for Migration (IOM) estimates 2.9 million outbound migrants in 2015 with 1.98 million migrants residing in Thailand, alone.(2)

From another perspective, the World Bank Group's Migration Factbook estimates 3.1 million migrants and 500,000 refugees. According to the WBG's Migration and Remittance outlook for 2016, remittances to Myanmar are estimated at $3.5 billion for 2015, equal to 4.8 percent of Myanmar's 2014 GDP. (3)

A nationally representative survey of 7,500 households from 375 clusters conducted in the third quarter of 2016 found 21 percent of respondents had a family member living in other parts of Myanmar or overseas, meaning 1 in 5 households in Myanmar receive some form of domestic or international remittance.(4)

Business Environment

World Bank Group (WBG) ranks Myanmar 170th among 190 economies on the ease of doing business.(5) Lack of access to financial services is one of the greatest obstacles to doing business in Myanmar.

Only 1 percent of fixed-asset investment costs are financed by bank borrowing, for example, while 92 percent of firms rely on their own funds. Only 30 percent of Burmese firms report having a bank account—the lowest level among all the countries measured by WBG.(6)

High levels of informality throughout the economy, with a pervasive, unregulated financial sector, constitutes the large majority of lending. An estimated 9.2 million adults have a loan from an unregulated financial services provider with total outstanding debt as high as USD$5.7 billion.(7)

WBG uses "distance to frontier score" to assess the absolute level of regulatory performance over time. It measures the distance of each economy to the "frontier," which represents the best performance observed on each of the indicators across all economies in the Doing Business sample since 2005. An economy's distance to frontier is reflected on a scale from 0 to 100, where 0 represents the lowest performance and 100 represents the frontier. Myanmar has improved its distance to frontier (DTF) score (8) from 44.01 to 44.56 over the past year.

Myanmar's entry into the ASEAN Economic Community (AEC) should push liberalization and integration of Myanmar's economy with ASEAN countries. The AEC free trade agreement between ASEAN countries and neighbors in northern Asia will bring trade benefits. Myanmar hopes to leverage its crucial location between India and China with ASEAN countries in years to come.

Notes

1. 2014 Myanmar Population and Housing Census http://myanmar.unfpa.org/sites/asiapacific/files/pub-pdf/UNION_2-C_religion_EN_0.pdf
2. IOM Myanmar https://www.iom.int/countries/myanmar
3. World Bank. 2016. Migration and Remittances. Factbook 2016, 3rd edition. Washington, DC: World Bank.
4. LIRNEAsia 2016 Nationally representative survey of ICT needs and use in Myanmar
5. World Bank Group. 2015. Doing Business Economy Profile 2016 : Myanmar. World Bank, Washington, DC. World Bank.
6. World Bank. 2015. Myanmar - Investment climate assessment: sustaining reforms in a time of transition. Washington, DC: World Bank Group. http://documents.worldbank.org/curated/en/219161468109465403/Myanmar-Investment-climate-assessment-sustaining-reforms-in-a-time-of-transition
7. Centre for Financial Regulation & Inclusion (CENFRI); 2014. "Myanmar: Demand, Supply, Policy and Regulation" http://cenfri.org/documents/MAP/2014/MAP%20Myanmar%20Synthesis%20Note.pdf
8. World Bank Group. 2015. Doing Business Economy Profile 2016: Myanmar. World Bank, Washington, DC.

National ID

The 2014 Union Census found that more than 37 million out of 54 million people in Myanmar hold paper national IDs, which includes 82 percent of all adults and 79 percent of adult women.[1]

Sample Paper Pink Card National ID

Outdated paper national IDs in Myanmar contain information such as race, religion, and father's name. In an attempt to promote peace efforts and to address discrimination based on race and religion, Aung San Suu Kyi 's government has prioritized a new form of biometric-based unique digital ID containing only name, gender, date of birth, fingerprint, photo, and address.

Starting in 2017, the government of Myanmar is piloting digital ID cards to be issued to citizens over age 18 in two cities, Naypyitaw and Mandalay.

There are opportunities to influence the process of issuing digital IDs in Myanmar at this moment. The Union Minister of the Ministry of Labour, Immigration and Population stated that the government is soliciting input and is open to learning from neighboring countries, tech firms, and those already using digital ID cards.

New Government and Policy

In November 2015, Aung San Suu Kyi was elected as the leader of the nation's National League for Democracy (NLD) government. The NLD government is committed to poverty alleviation and social inclusion.[2] An economic advisor to the NLD government stated that one of the government's key goals is nationwide Universal Financial Access by 2020.[3]

The NLD government is in the early stages of liberalizing the entire insurance industry to open up the market to international providers to unleash crop insurance, health insurance and life insurance for majority of the population. It is foreseeable that microinsurance delivered through mobile financial services could potentially serve the uninsured of Myanmar to meet the risk mitigation needs of impoverished people.[4]

Notes
1. 2014 Union Census
2. Union government released its economic policy, highlighting national reconciliation and job creation as basic considerations for the policy which guarantees nationwide equitable development. http://www.statecounsellor.gov.mm/en/node/171
3. Interview with Professor Sean Turnell, Economic Advisor to NLD (2016)
4. Interview with NLD Economic Advisor Sean Turnell and Ministry of Finance Director General Dr. Sandar Oo

On Friday night, the mobile phone store is the hottest spot in Hpa–An, the capitol of Myanmar's Kayin state. For Myanmar, there were advantages to arriving last to market: $20 smartphones, cheap data and freedom from cumbersome legacy infrastructure—elements that create an ideal environment for innovation.

Photo by Paula Bock

Access to Financial Services

Least Developed Financial Services in South-East Asia

The financial services sector in Myanmar is the least developed in Southeast Asia. Due to a history of high inflation, poor customer service, and low interest rates on deposits, many in Myanmar consider bank accounts to be a waste of time.

Myanmar has four state-owned banks, 24 private domestic banks and 10 foreign banks, along with 49 representative offices of foreign banks. The banking sector accounts for the majority of financial sector assets and is dominated by the four state banks and three large private banks. In Q4 2016, the four state banks accounted for nearly 42 percent of total banking sector assets. The top three private banks accounted for approximately 36 percent of total banking sector assets.[1] The country's largest bank, by assets, is the state-owned Myanmar Economic Bank (MEB). It has 307 branches throughout the country. Other than the top four private banks, most banks are very small. Foreign banks are only authorized to offer wholesale banking services to foreign corporations.

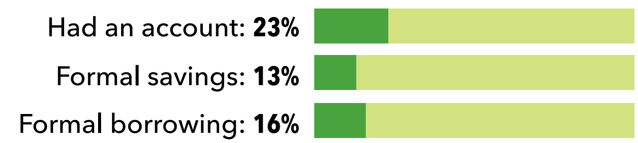
Nationwide, the outreach of banks is limited: 1,500 branches, 2,000 ATMs (as of July 2016), 6,000 POS terminals, and 1.9 million Myanmar Payment Union (MPU) debit card users.[2] Nearly all ATMs and POS terminals are located in urban areas.

Because of the banking sector's urban focus, banking-sector credit is concentrated in a few urban borrowers with collateral. Loan distribution remains substantially uneven as small and medium enterprises (SMEs) have limited access to finance for investment needs. It is not uncommon for private commercial banks to have a few hundred borrowers with relatively large average loan size.

Nationwide, only about 23 percent of adults have an account at a formal financial institution[3] with over 77 percent of the population remaining unbanked and only 2 percent holding debit cards. This low level of financial inclusion underscores the potential for growth using inclusive mobile financial services.

Bank Use is Limited

Age 15 +, as 2014



Note: Data from CBM stated that 5% of the population of age 15+ had an account in 2014.

Source: 2014 FINDEX WBG

Among businesses in Myanmar, only 30 percent report having a bank account. Self-funding is the norm for the private sector. Rather than borrowing, 92 percent of firms use their own funds to purchase fixed assets. In 2015, the World Bank Group's Investment climate assessment found only 1 percent of fixed asset investment costs was financed by bank borrowing.[4]

Myanmar's total size of unmet demand in payments and transfers estimated around $23 billion means less than 10 percent of the total needs in payment and transfers are met by current formal institutions.[5]

Notes

1. Central Bank of Myanmar
2. Myanmar Payment Union. 2016.
3. Central Bank of Myanmar stated 95 percent of population as unbanked. WBG 2014 FINDEX reported 77 percent of population as unbanked. The discrepancies between two data points can be explained as two of the state-owned banks, Myanmar Agriculture and Development Bank (MADB) and Myanmar Economic Bank (MEB), that lend limited agriculture credit to farmers are not under the jurisdiction of the Central Bank of Myanmar.
4. World Bank. 2015. Myanmar - Investment climate assessment : sustaining reforms in a time of transition. Washington, DC: World Bank Group. http://documents.worldbank.org/curated/en/219161468109465403/Myanmar-Investment-climate-assessment-sustaining-reforms-in-a-time-of-transition
5. ADB. 2017. "Accelerating Financial Inclusion in South East Asia with Digital Finance."

Informal Cash Transfer Networks – The *Hundi* Networks

The Central Bank of Myanmar didn't allow domestic banks to begin offering remittance services until 2012. Domestic banks currently provide formal channels to remit money through services such as Western Union, 2C2P, and Moneygram—often focused on places with large Myanmar populations such as Dubai, Malaysia, Singapore and Thailand.

The *hundi* system—an informal cash transfer network exchange in which paying someone in one location allows a payment to be made by an agent in a distant location with the difference settled between the agents later on—was developed in Medieval India. Customers rely on these informal channels, often delivered door-to-door with expediency and reliability. Today, the *hundi* network remains the primary means for transferring money among the people of Myanmar.

For Myanmar's 3.1 million migrant workers abroad remitting $3.5 billion in 2015,[(1)] the traditional *hundi* system is cheaper, quicker, and safer than anything the banks can offer. Migrant workers rely on the *hundi* networks to remit money back home. Rather than wire the money, brokers ask trusted counterparts in Myanmar to pay the recipient in cash, often on the same day. Little research or data has been collected on this pervasive informal cash transfer system.

Our team talked with more than three dozen people in Myanmar and Thailand about their use of *hundi* networks to transfer money across international borders and within Myanmar. Many praised the speed and relative ease of transferring money through the *hundi* system compared with personally carrying money back to their village. Many noted that fees are high. A few said some of the money remitted did not reach the intended recipient but they did not know where the leakage occurred as the system is not transparent.

Notes

1. World Bank. 2016. Migration and Remittances. Factbook 2016, 3rd edition. Washington, DC: World Bank.

When villagers hear the *hundi's* motorcycle in this roadless village, they know money is on the way. With no access to banks, migrant workers rely on *hundis* to remit money to family in Myanmar, but it can be costly.
Photo by Paula Bock

Cash-based Economy

Payments in Myanmar are overwhelmingly cash-based, with 81 percent of farmers reporting using only cash-based payments and 78 percent of employees of formal private companies and 65 percent of government employees using only cash. Ninety-five percent of adults currently receive their salaries in cash.[1]

Banks in Myanmar spend much labor and time physically moving large amounts of cash from bank to bank and branch to branch, as well as to and from the nation's central bank, requiring the recounting of money at each of these transfer points. Many of the banks themselves are not technologically equipped to handle interbank transfers and liquidity management.

The Asian Development Bank's 2017 study estimates Myanmar's total size of unmet demand in payments and transfers at around $23 billion, meaning that less than 10 percent of the total needs in payment and transfers are met by formal institutions. The total unmet credit need in Myanmar is estimated at $4.4 billion.[2]

Payments in Myanmar were wholly dependent on cash until late 2012, when the first debit cards were introduced. Yet, four years later, only 2 percent of the population has debit cards.

Insufficient delivery channels that require travelling long distances at high cost, inconvenient operating hours, and long delays such as the time it takes to remit money via banks were cited as significant deterrents to access financial services.

Lack of Access to Risk Management Tools

The people of Myanmar lack access to a variety of risk management tools such as insurance.

Myanmar has one state-owned insurance company in the nation. Twelve locally owned private insurance companies were licensed in 2013.

Still, only 3 percent of adults in Myanmar have any form of insurance with regulated financial service providers.[3] There is no safety net for marginalized urban and rural populations in Myanmar (97 percent) and very little risk mitigation opportunities for life's unexpected challenges.

Villagers such as Daw Khin Hlaing, 62, invest their savings in livestock since they don't have access to banks. But the farmer had to sell two of her four cattle recently to cover hospital expenses when her husband had a stroke. With no insurance for medicine or treatment, she'll soon be forced to sell the remaining cattle, wiping out their savings.

Photo by Paula Bock

The Government of Myanmar is in the early stages of liberalizing its entire insurance industry to both open up the market to international providers and to put crop insurance, health insurance and life insurance within reach for majority of the population. Microinsurance delivered through mobile financial services has the potential to serve the 97 percent of people who are uninsured in Myanmar to mitigate the risks of this vulnerable population.[4]

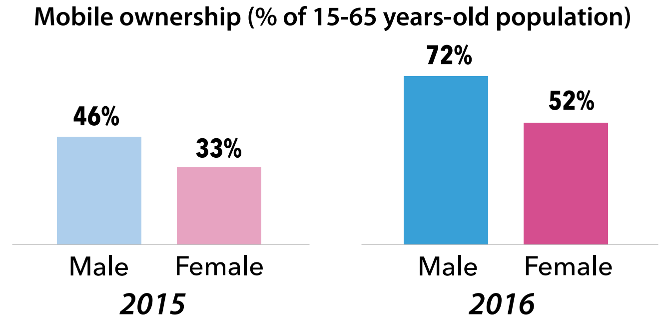
Notes

1. World Bank. "The Global Findex Database 2014: Measuring Financial Inclusion around the World. " http://datatopics.worldbank.org/financialinclusion/country/myanmar
2. Asian Development Bank. 2017. Accelerating Financial Inclusion in South East Asia with Digital Finance.
3. Centre for Financial Regulation & Inclusion (CENFRI); 2014. "Myanmar: Demand, Supply, Policy and Regulation" http://cenfri.org/documents/MAP/2014/MAP%20Myanmar%20Synthesis%20Note.pdf
4. Interview with NLD Economic Advisor Sean Turnell and Ministry of Finance Director General Dr. Sandar Oo

Smartphone adoption spread fast among the 3,000 day laborers from Myanmar, mostly women, who walk across the border every morning to work in factories in Sangkhlaburi, Thailand.
Photo by Paula Bock

DFS Holds Key to Unlocking Women's Access to Finance

52% of adult women own mobile phones and active SIMs. Women are still 28% less likely to own a phone than men.



Source: LIRNEasia - MIDO Survey Q3 2016

Women's Access to Financial Services

Thoughtful implementation of digital financial services could make a tremendous difference in the lives of Myanmar's women, allowing them entrée into a formal economy that has long excluded them on several fronts.

Only 17 percent of women have held accounts at formal institutions including microfinance institutions, according to the WBG's Global Financial Index 2014 data. Findex data show the gender gap in account ownership is at 7 percent globally and 4 percent in East Asia and the Pacific. Myanmar has a significant gender gap in account ownership (11 percent gap) compared to other Southeast Asian countries.[1]

Even the few Myanmar women who have bank accounts face much difficulty getting access to credit. Most lending to small medium enterprises (SMEs) in Myanmar is based on collateral. Because of the gender gap in asset ownership, it is difficult for women to secure a loan. Global Financial Index 2014 data indicates 12 percent of Myanmar women borrowed from a financial institution.

Only 0.01 percent of women in Myanmar have access to credit with a formal financial institution regulated by the Central Bank, according to the Central Bank of Myanmar's Director General's paper published in October 2014 in the ASEAN Financial Inclusion Conference proceedings.

In addition to the significant gender gap in access to financial services, Myanmar women face a significant gender gap in mobile ownership. A 2016 study found that although 52 percent of adult women in Myanmar own a mobile phone and an active SIM, women in Myanmar are on average 28 percent less likely to own a mobile phone than men.[2]

However, since many more women own mobile phones (52 percent) than have access to bank accounts (2 percent or 17 percent depending on source), it's apparent that mobile financial services would be the most feasible way to open financial access to women in Myanmar.

In Myanmar, there are no customized telecommunications services or financial products targeted to women. There is a lack of understanding and appreciation about challenges specific to women. These gaping holes leave abundant opportunity to develop specific products, services and solutions for women.

As Myanmar builds out its cash-in cash-out network, regulators are considering a mandate that at least half of all the cash-in cash-out agents in Myanmar are women. If implemented, that requirement would go a long way toward integrating women into the formal economy as both agents and consumers.

Notes

1. World Bank Group. (2014). Global Findex
2. LIRNEasia and MIDO. 2016. Nationally representative survey of ICT needs and use in Myanmar

Women street vendors and shopkeepers might be easily able to integrate the role of cash-in cash-out agent with concurrent sales tasks such as selling fruits, fish and curries. Having an extensive network of female agents would also accelerate the use of mobile money among young women who might otherwise hesitate to give their mobile number for over-the-counter transactions to a male agent for fear of being harassed.

Daughter-to-mother technology transfer could speed the adoption of digital financial services among middle-aged women, the generation that holds economic power within the family and makes decisions about spending on family needs. For example, a mother-daughter SIM incentive might require a daughter to bring her mothers to a technology workshop in order for the mother to get a free SIM or affordable financing for smartphone (which it is likely the daughter would later want to borrow from mom). After a month, in order to get a free top-up on the SIM, the daughter would need to bring her mother back to the workshop and the mother would need to demonstrate mastery of basic smartphone functions and DFS apps.

Rural Access to Financial Services

Rural areas have limited access to banking services, and bank lending to agriculture is largely restricted to the state-owned Myanmar Agricultural Development Bank (MADB). The MADB has major financial and operational challenges due to a subsidized market-lending rate, and is unable to meet the demand for lending. Private sector banks require collateral-based lending, which restricts their lending to land-title holders only. Land issues and land titles are one of the country's major issues in rural areas where land registration is limited. Land laws are outdated and often contradictory. Throughout decades of dictatorship, land grabbing by the military and ruling elite was common. Unclear rule of law around land issues threatens to dispossess women and thousands of farmers who have insecure rights to their land.

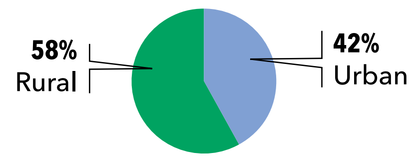
Private sector banks have a very low penetration in rural areas. In fact, MADB is the only bank focused on serving farmers and given that 70 percent of the rural population remain outside the coverage area of the formal banking system, the majority are unable to access mainstream financial products.

Because 53 percent of rural adults in Myanmar own a mobile phones and active SIM, digital financial services could be the key to opening access to finance and opportunities for inclusive growth for Myanmar's rural population.

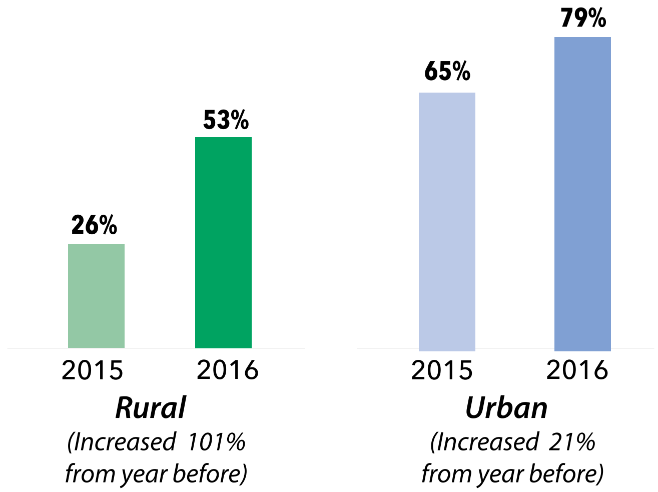
DFS Holds Key to Unlocking Rural Population Access to Finance

53% of rural adults own mobile phones and active SIMs. There are more mobile phone owners in rural area than cities because the total rural population is greater than the total urban population.

2016 national mobile ownership (% of 15-65 years-old population)



Mobile ownership: Rural vs. urban



Source: LIRNEasia - MIDO Survey Q3 2016

Daughter-to-mother technology transfer could speed the adoption of digital financial services among middle-aged women, the generation that holds economic power within the family and makes decisions about spending on family needs. While mom sells durians and mangosteens, her 13-year-old watches music videos on the family smartphone.

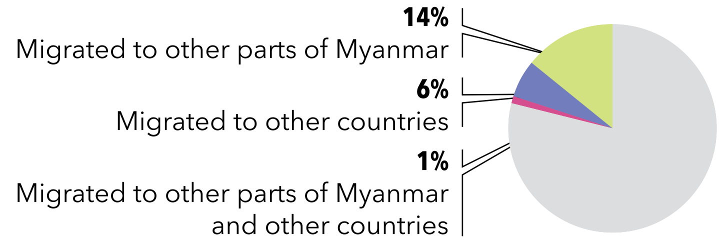
Photo by Paula Bock

Access to Financial Services from Nationally Representative Survey

A nationally representative survey of 7,500 households from 375 clusters conducted in third quarter 2016 found only 3.6 percent of survey respondents have personal bank accounts and 1.2 percent of survey respondents have debit/credit cards. In urban areas 6.5 percent of households have a bank account whereas in rural areas, only 0.9 percent of households have bank accounts.[(1)]

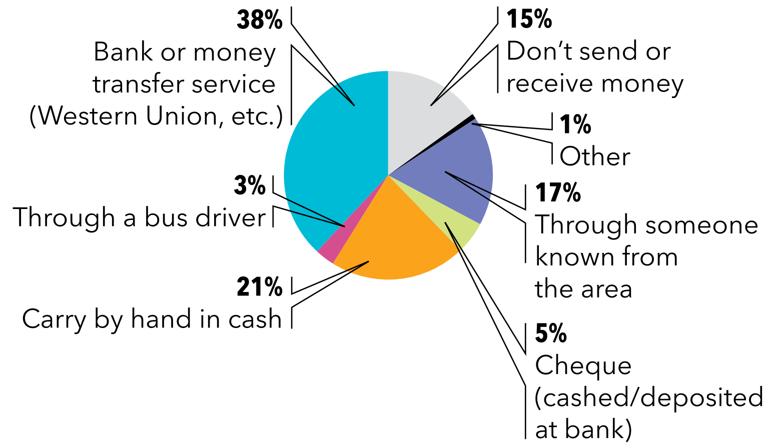
Survey Results from Third Quarter of 2016

21% of survey households have a family member living in other parts of Myanmar or overseas



Only 3.6% of respondents had personal bank accounts, a third of those with bank accounts had debit/credit cards

Bank /money transfer services and hand-carrying of cash are most popular money transfer methods for households with migrants



Source: LIRNEasia - MIDO 2016 - Nationally representative survery

Notes

1. LIRNEasia – MIDO 2016 – Nationally representative survey of ICT needs and use in Myanmar http://lirneasia.net/

Village kids hang out at the betel nut seller's home because she has a television powered by solar panel (battery on back table). In exchange, the kids crack betel nuts for her (on blue tarp). The children's families use candles at night, too poor to afford solar power. The boy dropped out in second grade to herd cattle.

Photo by Paula Bock

Telecommunications Industry

Mobile Network Coverage

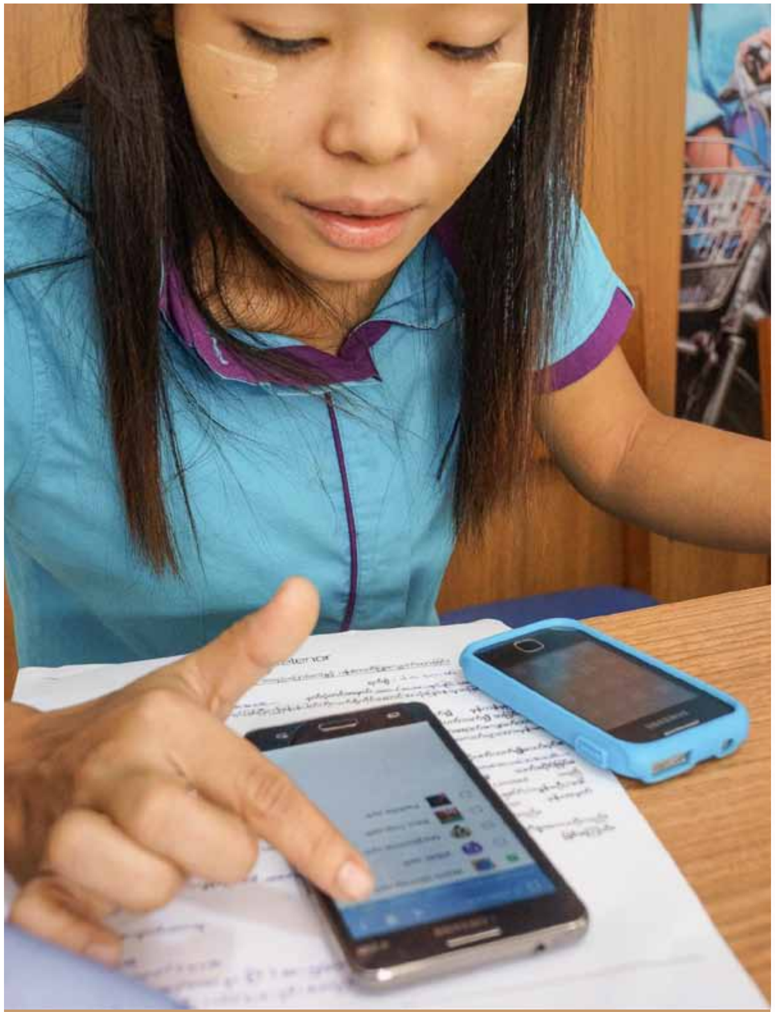
In the past four years, Myanmar has experienced a dramatic shift in mobile network coverage and affordability. In 2013 Myanmar was the third least-connected country in the world. By the end of 2016, 3G mobile coverage was available to 90 percent of the population and Myanmar had 51 million mobile connections.[1]

A transparent, competitive licensing process was initiated in 2013 with the support of international advisors. The telecommunications licensing agreement requires each mobile network operator (MNO) to provide network coverage to 90-95 percent of the population within five years of rollout, and the telecommunications regulator (PTD) has plans to create a universal service fund to cover an additional 4 percent of the population out of the final 5 percent not covered by licensing agreements.

The three current Myanmar MNOs are Myanmar Post and Telecom (Joint Operations with Japanese firms), Telenor from Norway, and Ooredoo from Qatar. A fourth operator, Mytel, a joint venture between Viettel of Vietnam and Myanmar firms, was licensed in January 2017 with a commitment to extend access to 95 percent of the population by 2020.[2]

With four operators, there will be ample consumer choice, and an even more competitive market that will drive down prices for connectivity. It is expected that connectivity prices will get lower with stronger competition[3] and telecom companies will be highly motivated to engage the financial service sector to generate more revenue.

Notes
1. Data sources from MNOs and Telecommunications Regulator (PTD)
2. http://asia.nikkei.com/print/article/230789
3. https://www.mobileworldlive.com/blog/blog-viettel-faces-maturing-market-in-myanmar/



With four mobile network operators in Myanmar providing competition, it's likely connectivity prices will decrease, motivating telecom companies to engage with financial services to generate more revenue.

Photo by Paula Bock

Affordable Data and Social Networks

With strong competition between three MNOs, the average revenue per user ($4.52/month) is expected to get lower. At 1Kyat (US$0.00073)per 1MB data, Myanmar data rates are affordable even for the rural population.

Facebook and Viber are by far the most popular social networks in Myanmar and have become the key source of communication for voice, messaging, email and social networking.

Telecom operators provide packages with free Facebook data access. Selected plans with Telenor offers up to 4G of Free Facebook data per month. Free Facebook lite on MPT offers Free Basics and Facebook Flex plans that allow people to move between two modes – free mode and data mode. Free mode is where users can post, comment, like, and chat for free, however they cannot view images and videos.

Facebook is the primary mode for communication for 14 million people.[1] Consumers routinely switch between different SIM card accounts each day to maximize their free Facebook data. According to Telenor's data, at the end of 2016, approximately 70 percent of Telenor's data usage is on web browsing, and 77 percent of that is on Facebook.

Affordable Data: 1 Kyat (US$0.00073)/MB

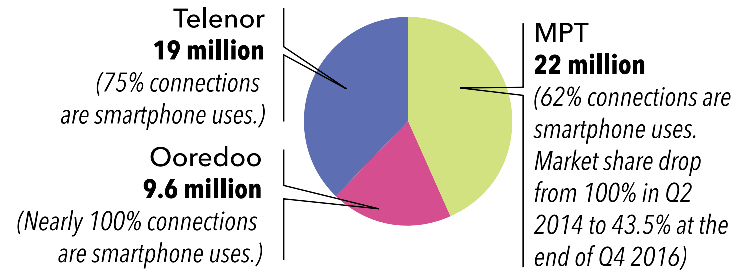
25 million Viber accounts & 14 million Facebook accounts

Viber has an even bigger reach with 25 million active users in Myanmar. It is also the communications platform used by government officials including police, regional administrators, and Members of Parliament.

The mobile financial services industry would benefit from engaging the consumer on the Facebook or Viber platform to educate about and integrate with the Facebook Wallets or Viber Wallets payment systems.

Active SIMs

Total number of active SIMs reached 51 million at the end of December 2016.
Smartphone adoption is nearing 75 percent.
ARPU or average revenue per user is $4.52 a month.



Source: MNOs

Smartphone Ownership

Mobile Network Operators (MNOs) estimate smartphones represent 75 percent of all phones in the country – roughly 38 million connections out of 51 million connections.

MNOs Network Data shows that smartphones represent:

- 62 percent of MPT's 22 million mobile connections
- 75 percent of Telenor's 19 million mobile connections
- Nearly 100 percent of Ooredoo's 9.6 million mobile connections

Notes

1. Myanmar ICT for Development Organization

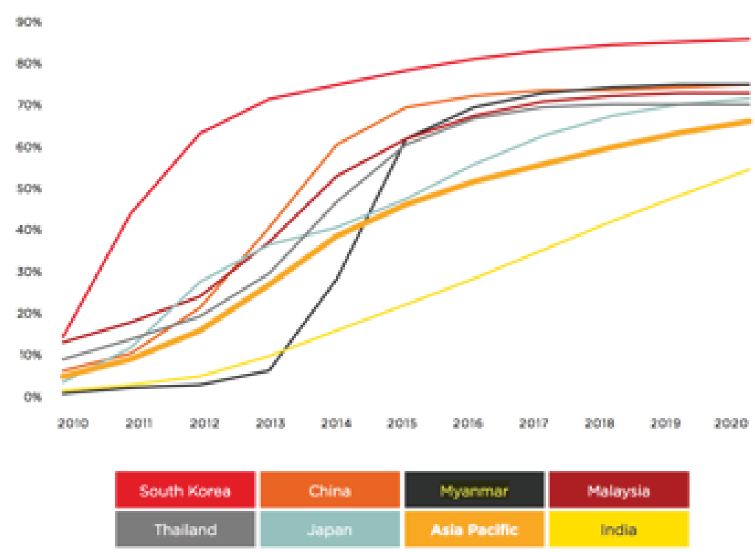
Similarly, a recent nationally representative market survey estimated that 78 percent of phones operating in Myanmar are smartphones.[1]

Surpassing other developing countries, projections are that by 2020 Myanmar will have the second highest smartphone adoption (after Korea) as a percentage of connections in Asia Pacific.[2]

Supply side data from the International Data Corporation (IDC) Asia Pacific Q3 2016 confirms this survey data, finding that in third quarter 2016, supply side mobile shipments to Myanmar were 80 percent smartphones and only 20 percent feature phones.[3]

The wide use of smartphones in Myanmar presents a unique test environment for financial services since it eliminates the need for a USSD channel and opens the entire market to innovation.

Smartphone Adoption as a Percetage of Connections



Source: GSMA Intelligence

Findings on Mobile Ownership from a Nationally Representative Survey

Two ICT state assessments were conducted by an ICT policy think tank LIRNEasia and Myanmar ICT for Development Organization (MIDO). The baseline survey was conducted in Q1 2015 and a follow-up survey was conducted in Q3 2016.

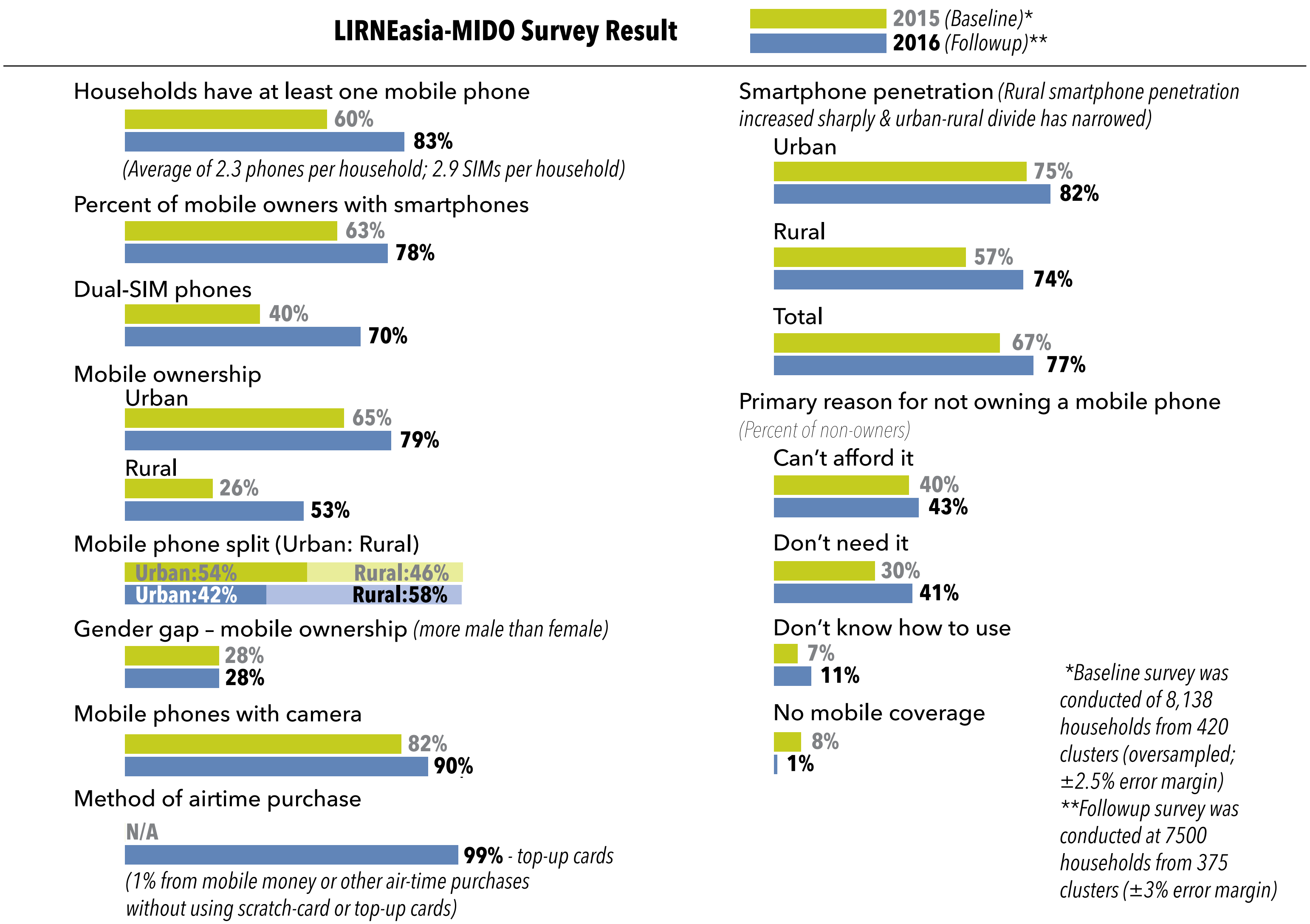
Key findings from this nationally representative survey in 2016 include:

- **83 percent of households own a mobile phone and active SIM, and 78 percent of those mobile phones are smartphones.**
- **The urban/rural divide has dramatically narrowed in the past year in terms of smartphone adoption**
- **Over half of women and rural adults now own a mobile phone and active SIM**

The pervasiveness of smartphones in Myanmar is due to the availability of no-name-brand low-end smartphones from China costing below $23. Lower-priced smartphones can be purchased from the informal secondhand smartphone market for less than US$6.

Even with nearly half the adult population of Myanmar owning a smartphone, there remains the challenge of low digital literacy skills. The survey found that digital literacy skills are especially low amongst rural people and particularly among women.

Notes
1. LIRNEasia MIDO Q3 2016 ICT Assessment Survey
2. GSMA The Mobile Economy Asia Pacific 2016 http://www.gsma.com/mobileeconomy/asiapacific/
3. IDC Q3 2016 Myanmar Mobile Phone Shipment http://www.idc.com/getdoc.jsp?containerId=prAP4219761



Source: LIRNEasia-MIDO

On their best sales day, this father and daughter earned US$7.34 selling snacks along the side of the road in Kayin State, Myanmar. Usually, they make much less. To survive, they rely on remittances from a sister/daughter working in Bangkok. She gave them the feature phone, but they only use it to receive calls from her; outgoing calls would be too expensive.

Photo by Paula Bock

Mobile Financial Services

Digital Payments

Historically, the Central Bank of Myanmar closed off the domestic payment system to international players and only domestic companies were authorized to provide domestic payment systems. The Myanmar Payment Union (MPU) has been the sole payment processing gateway for banks to access credit card networks.

In January 2017, the Central Bank of Myanmar removed all restrictions, welcoming all international payment companies to compete in the Myanmar market. Opportunities are emerging now for all international payment providers to digitally connect the unbanked in Myanmar. Removing restrictions will accelerate the shift from cash-based to digital economies throughout the country.

Policy for Mobile Financial Services

The Central Bank of Myanmar (CBM) issued a Mobile Banking Directive in December 2013 that established a bank-led model for the provision of mobile banking services.

In March 2016, the CBM issued a regulation on Mobile Financial Services (MFS). The MFS regulation has led to expansion of a wider range of financial institutions and non-bank entities, such as MNOs and third parties.

MFS regulation requires the MNOs or any non-bank entities to first set up a dedicated entity as an MFS provider. Without this, some countries have MNOs as a subset of their telecomm providers, which doesn't allow the MNOs to have the same level of focus or ability to raise capital.

MFS regulations support a tiered "know your customer" (KYC) policy which makes it far easier for anyone to open an account. For instance, proof of ID is not required for Tier 1 customers conducting small-value transactions up to a maximum daily limit of 50,000 kyat (or US$37).

MFS regulations require providers to offer wallet-level interoperability between MFS providers to enable openness between all networks.

Mobile Financial Services Regulation Tiered Limit

Tier	Know your customer / customer due diligence	Daily cumulative transaction limit	Monthly cumulative transaction limit	Maximum balance limit
Level 1 For individuals only	Presentation of ID is required if and when necessary	**50,000** Kyat (US$37)	**1 million** Kyat (US$737)	**200,000** Kyat (US$147)
Level 2 For individuals only	SIM registration or National ID or driver's license or passport is required	**200,000** Kyat (US$147)	**5 million** Kyat (US$3,685)	**1 million** Kyat (US$737)
Level 3 For registered businesses only	Business registration certificate, identification requirements for opening bank accounts	**1 million** Kyat (US$737)	**50 million** Kyat (US$36,845)	**10 million** Kyat (US$7,370)

The following services are allowed under the CBM Mobile Banking Directive and MFS regulation:

- **Disbursement of in-bound foreign remittances**
- **Cash-in and cash-out (CICO) using a mobile account through agents, bank branches, ATMs, and mobile operator outlets**
- **Person-to-business payments (e.g. utility bill payments, merchant payments, MFI loan repayment)**
- **Business-to-person payments (e.g. salary disbursement, vendor payments, MFI loan disbursement)**
- **Government-to-person payments (e.g. pension, subsidies)**
- **Person-to-government payments (e.g. tax)**
- **Person-to-person payments (transferring funds from one registered mobile account to another registered mobile account).**

Bank-led Mobile Banking: Closed-Loop Networks

The Central Bank of Myanmar (CBM) has approved 8 (out of 24) private banks to offer mobile banking services. To date, these bank-led mobile options have operated as a closed loop of small Myanmar companies operating primarily in Yangon.

At this time, bank-led mobile money offerings are not interoperable; they are closed-loop systems with a mostly urban agent network numbering in the hundreds. The exception—based primarily on agent network size—is AGD Bank's partner "True Money Myanmar," which has plans to expand mobile financial services to 10 ASEAN countries.[1] True Money Myanmar is owned by Thailand-based Ascend Group with a 20 percent stake from Alibaba; the Ascend Group aspires to reach 100 million customers across Asia by 2020. Because this is a bank-led effort, they have not been subject to the MFS regulations of interoperability.

Myanmar Central Bank's supervision team has limited capacity or ability to measure current metrics on the amount of money in the system, transactions per month, number of active users and other basic data. This limits the quantifiable data available from the banks and also limits the transparency of the bank-led systems. It is unlikely that these bank-led options are going to have any incentive to create interoperability or access for the poor and rural people of Myanmar.

Notes

1. Interview with Managing Director of True Money Myanmar

True Money, owned by a Thailand-based group, is a bank-led effort that's not subject to MFS regulations on interoperability.

Photo by Pwint Htun

MNO-led Mobile Financial Services: Interoperable Open Networks

As of January 2017, there are three key MNO-led MFS Players in Myanmar:

1. Wave Money (Licensed in Q4 2016)

2. Ooredoo Myanmar Fintech (applying for license)

3. MPT JO Mobile Financial Services (yet to apply for an MFS license, pending approval from Ministries to set up independent entity)

The Central Bank of Myanmar has mandated these three key players to be interoperable at the wallet level for customers. All three of these telecomm network providers have access to wide distribution networks and thus are the operators expected to serve the rural population of Myanmar.

Wave Money

At the beginning of October 2016, CBM kicked off the MFS industry in Myanmar by licensing Wave Money. Wave Money is established as a joint venture between Telenor, FMI and Yoma Bank. Wave Money is led by industry veteran Brad Jones, who led Wing in Cambodia.

Wave Money offers simple and reliable mobile money financial services through a convenient Android application and a network of Wave Shops nationwide.

Within the first three months of operation, Wave Money established an agent network of 5,000 agents in 221 townships (out of 330 townships nationwide). While Wave Money's current agent network is still small, Wave Money intends to grow using Telenor's existing network of over 100,000 airtime resellers. They hope to convert selected airtime resellers to provide a pervasive agent network throughout the country.

Unlike any other developing countries, 80 percent of Myanmar's nascent MFS industry users use an Android app; the rest use over-the-counter service to send or receive money.

Wave Money Fee Structure

Transfer fee from Wave Account to Wave Account is free up to 200,000 kyat ($150).

Withdrawal fee is 2000 kyat ($1.5) for $100 equivalent; withdrawal fee is 700 kyat ($0.52) for $5 equivalent.

Ooredoo Myanmar FinTech

Ooredoo Myanmar FinTech is a subsidiary of Ooredoo Myanmar led by Rene Meza and Jacques Voogt of Vodacom, Tanzania's M-PESA team. This team has incredible experience and technical skills, allowing them to bring best practices from East Africa to the MFS industry in Myanmar.

Nearly 100 percent of 9.6 million Ooredoo customers are smartphone users on Ooredoo's 3G/4G network. Ooredoo Myanmar also uses a network of over 100,000 airtime resellers and plans to convert selected airtime resellers to become part of their agent network throughout the country.

Ooredoo Myanmar FinTech has submitted the MFS application, and is expected to launch as soon as the Central Bank issues MFS license.

MPT JO

State-owned MPT has a joint operations agreement with Japanese firms KDDI and Sumitomo.

Per MFS regulation requirement, MPT is in the midst of setting up a dedicated company called MPT JO MFS led by Rozano Planta, formerly with G-Cash from the Philippines.

MPT is expected to submit its application for an MFS license as soon as company registration is completed.

With the largest nationwide 3G Network in the country and 22 million active SIMs, MPT has potential to be a successful MFS provider. MPT's current network of over 100,000 airtime resellers located in every single township of the country will be converted to provide a pervasive agent network throughout the country.

Industry Consortium on Interoperability and Collaboration

Myanmar's MFS industry, now comprised of three key MFS providers, is willing to collaborate to move the industry forward.

Industry leaders are committed to tackling common challenges together and to speak with one voice as an industry. Monthly meetings of the MFS Industry Consortium address common challenges and opportunities for industry growth. The consortium plans to address wallet-level interoperability and plans to pool resources to build consumer awareness and confidence in the MFS industry.

Common Obstacles for all MFS Providers

There are four common barriers faced by all MFS Providers.

1. Lack of customer awareness and education about mobile financial services (MFS)

Although there is a buzz about 'mobile money' across Myanmar, there is little genuine customer knowledge and trust around how it works. The people of Myanmar have little or no understanding about the benefits of mobile money and the opportunities it offers. While existing MFS players have invested heavily in branding, there has been a lack of significant investment into nationwide, mass-market campaigns to educate the Myanmar people about mobile money, how it works and the services it offers.

2. Unauthorized, unregulated MFS providers

Ever since the early days of mobile money in 2013, there have only been closed-loop, national bank-led options in Myanmar. But in 2016, many small private companies entered the mobile financial services market. One MFS provider—OK$—is operating without permission from Myanmar's Central Bank. If unregulated providers like OK$ collapse or get hacked, consumers could lose confidence in the MFS industry.

The Central Bank must play an active role and close down unauthorized providers until they meet licensing requirements. The

Monthly MFS Industry Consortium Breakfast Meeting (L-R) Takashi Shigeno (Chief Marking Officer of MPT), Sonal Banerjee (Head of Mobile Money for Ooredoo Myanmar), Jacques Voogt (Chief Commercial Officer of Ooredoo Myanmar), Pwint Htun (Architect of MFS Industry in Myanmar), Brad Jones (CEO of Wave Money)

Photo courtesy of Pwint Htun

Central Bank needs support and coaching to strengthen their role. Current MFS providers, who have followed the regulations, would like a level playing field with all operators required to be licensed. An impartial industry builder is needed to help CBM enforce licensing and regulation.

3. Competitive informal cash transfer system

Traditional formal and informal money transfer systems already in place charge low rates and MFS providers cannot succeed unless they compete with these rates.

4. Reluctance to shift from a cash-based economy

Change can be difficult to achieve among a population accustomed to making all transactions in cash. The norm in Myanmar is to receive cash for everything from salaries to business payments and to purchase small and large items such as houses and cars with stacks of cash. Changing the mindset to think of e-Money as 'real' money will be a significant challenge.

Given these common challenges faced by all MSF providers, it is in their interest and in the interest of the government and the consumer to tackle them with a coordinated approach. Again, making this happen requires an impartial industry builder to negotiate and facilitate these collaborations.

Opportunities for Innovation in the Mobile Financial Services Industry

Myanmar is a clean slate for innovations in mobile financial services and an ideal place to test out novel digital solutions for people who are primarily smartphone users. The Deputy Governor of the Central Bank of Myanmar is considering various options for a national mobile financial services interoperability switch to connect the banking sector, mobile financial services providers and future new entrants to the payment ecosystem of Myanmar.

As noted earlier, extensive adoption of smartphones throughout Myanmar allows the development of creative innovations, providing opportunities not yet explored in many other countries.

With half of adults in Myanmar owning a smartphone, it is possible to test:

Changing to digital financial services may be challenging for a culture accustomed to only cash transactions. Then again, it has been surprising to witness older, traditional populations eagerly embracing new technologies in Myanmar.

Photo by Paula Bock

- **Biometric passwords**
- **Lock screen pattern passwords**
- **Agent performance ratings**
- **Camera-integrated payment systems (QR Code scan & pay)**
- **Social network-integrated payment systems (Viber)**
- **Social network-integrated virtual savings groups**
- **Peer–to-peer lending through social networks**
- **Credit through social lending**

Myanmar's total size of unmet demand in payments and transfers is estimated to be around $23 billion, which means less than 10 percent of payment and transfer needs are met by formal institutions.[1]

Some of the opportunities for innovation with mobile financial services in Myanmar include:

1. Digitizing cross-border remittance

• Myanmar's 3.1 million migrant workers abroad remitted $3.5 billion in 2015[2]

• Digitizing would allow remittances to be linked with savings accounts

2. Digitizing salary payments

• Digitizing salary payments of private companies and government employees

• 95 percent of adults currently receive their salaries in cash[3]

3. Digitizing Agriculture Value Chain

• Opportunity to digitize US$8 billion[4] value per crop cycle of cash–based transactions to a DFS platform

• Currently, 81 percent of farmers use cash-based payments

4. Mobile Microinsurance

• Only 3 percent of adults currently have insurance from a regulated entity[5]

• Impactful opportunities to improve risk mitigation for the poor

• Insurance industry liberalization could unleash microinsurance for farmers, and bring access to crop insurance, health insurance, and life insurance to the rural population.

5. Providing Digital Financing for Solar Energy (PAYGO Solar)

• 69 percent of the 53 million people have no access to grid electricity[6]

• A Norwegian non-profit, Brighterlite, is piloting a pay-as-you-go solar energy plan using digital payments

6. Merchant Payments

• Opportunity to digitize B2B payments to allow supply purchasing

• Opportunity to attract credit-strapped merchants using the Kopo Kopo Grow model to provide merchants with a cash advance/credit service to replenish stock, refurbish their premises, or launch a new business line.

7. Mobilizing personal savings

• Possible high-impact collaborations to link village savings and loans associations (VSLA) together and connect VSLAs with formal financial institutions

• Social network-integrated virtual savings groups.

8. Microfinance

• Loan disbursement and collection using mobile financial services.

9. Bill payment aggregators

• 2C2P and ConnectNPay (CNP) are two companies currently looking to innovate bill payments

10. Peer-to-peer lending

Smartphones can enable user-friendly experiences and new innovations in delivering financial services for marginalized populations. Investing in creative innovations is timely to leverage the momentum of smartphone expansion in Myanmar and shape user behavior. The insights and knowledge learned from these possible innovations will create public good as they are shared with other developing countries around world.

Notes

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6. 2014 Union Census

Families displaced by conflict in Waing Maw, Kachin state, learn how to receive funds for emergency food aid on their mobile phones as part of a United Nations World Food Programme pilot. The mobile cash transfers for humanitarian assistance are safer, faster, and more convenient than directly distributing food or bank notes, UN officials say.

Photo by Raffy Luik

Envisioning the Future

Imagine how different life would be for this family if Teuy, a widow who constantly surfs the edge of financial disaster, gets access to digital financial tools that allow her to safely store, save and borrow money and use microinsurance to mitigate life's ups and downs.

Photo by Paula Bock

The timing is right to use digital financial services to make the greatest impact for marginalized people who have long been excluded from the formal economy.

The political climate in Myanmar is favorable and key leaders in government and industry are on board to collaborate. The digital financial services industry is at a pivotal stage of development, when the right investments could have a significant impact on how and whether the DFS industry is able to reach—and transform—the lives of women and the rural poor in Myanmar.

Look ahead four years and imagine the possibilities: By late 2020, Myanmar could achieve universal financial access for the whole country. Everyone in Myanmar could use mobile wallets to store money, send money, save, and spend, and they would have the ability to send money from any mobile phone to any mobile phone. Imagine ubiquitous cash-in cash-out agents (like human ATMs) serving urban and rural populations with a host of financial services. Imagine women—long relegated to the informal economy as street vendors, food servers, maids and day laborers—entering the formal economy as cash-in cash-out agents to facilitate community financial transactions. Imagine everyone in the country paying merchants and each other using standard static QR code scan-and-pay. Imagine farmers no longer having to turn to loan sharks for interim loans with exorbitant rates because the agricultural loan arrives in their mobile wallets when they need it.

As with all rollouts, there will surely be challenges, but it IS possible to achieve all of the above. Working together, we can make this vision reality before the end of 2020.

Smartphones have changed the culture of Myanmar tea shops, where young adults now spend more time scrolling Facebook than chatting face-to-face. Introducing and making digital financial tools accessible to a broad swath of the population would enable smartphones to transform society in a meaningful way.

Photo by Paula Bock

Acknowledgements

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We would like to thank you for your efforts to extend financial services to the marginalized of Myanmar.

Pwint Htun is an architect of Myanmar's digital financial services industry. An advocate for digital inclusion and universal financial inclusion, Ms. Htun worked as an advisor to the Omidyar Network and the Consultative Group to Assist the Poor (World Bank). Prior, Ms. Htun held various senior manager roles at US-based wireless telecommunications and IT companies including T-Mobile, Hewlett-Packard and Agilent Technologies. She has a BS in Electrical Engineering from University of Washington, a Masters of Engineering Management from Northwestern University, and Executive Education training from Harvard Business School. She has given talks at various conferences in Myanmar including GSMA's Connect Women Conference and Mobile Payments & E-Commerce for Emerging Markets/Asia Pacific Summit. Ms. Htun serves on the Board of Directors for Partners Asia.

Paula Bock has been involved with ethnic and migrant communities in Thailand and Myanmar since 1996 as a longtime volunteer, award-winning *Seattle Times* journalist, and on staff at nonprofit Partners Asia. She co-authored the book *From Rice Cooker to Autoclave at Dr. Cynthia's Mae Tao Clinic,* and her documentary photography is featured in the Smithsonian's online exhibition, *A Day in the Life of Asian Pacific America.* Ms. Bock is currently a senior writer/editor at PATH. She graduated from Harvard University and served as a Rotary International Ambassador Scholar in Taipei.

Though rice farming looks idyllic, it's backbreaking labor plagued by leeches, snakes and the specter of crop failure and low prices. Innovations in digital financial services could help Myanmar's farmers, women and other marginalized people transition out of poverty into more stable lives.

Photo by Paula Bock

Appendix: Acronyms

ADB - Asian Development Bank
AEC - Association of Southeast Asian Nations Economic Community
AGD - Asian Green Development Bank
AML - Anti-Money Laundering
API - Application Programming Interface
ASEAN - Association of Southeast Asian Nations
ATM - Automatic Teller Machine
B2B - Business to Business
B2P - Business to Person
CBM - Central Bank of Myanmar
CBO - Community-based organization
CENFRI - Centre for Financial Regulation & Inclusion
DFS - Digital Financial Services (used synonymously as MFS in Myanmar)
G2P - Government to Person
GDP - Gross Domestic Product
L1P - Level One Project
LIFT - Livelihoods and Food Security Trust Fund
MADB - Myanmar Agricultural Development Bank
MAP - Making Access Possible
MEB - Myanmar Economic Bank
MFI - Microfinance Institution
MFS- Mobile Financial Services (aka DFS)
MIC - Myanma Insurance Company
MNO - Mobile Network Operator
MPT - Myanmar Post and Telecommunications
MPU - Myanmar Payment Union provide ATM and POS switching service among the banks.
NGO - Non-governmental Organization
NLD - National League for Democracy (current ruling party)
NPS - National Payment System
OTC - Over The Counter
P2B - Person to Business
P2P - Person to Person
POS - Point of Sale
PTD - Post and Telecommunication's Department (Telecommunications Regulator)
RTGS - Real Time Gross Settlement System
SME - Small and Medium Enterprises
UNCDF - United Nations Capital Development Fund
USAID - United States Agency for International Development
VLSA - Village Level Savings Association
WBG - World Bank Group
Foreign exchange: The local currency in Myanmar is the Myanmar Kyat (K). USD equivalent shown throughout this document was calculated using a average exchange rate of Kyat 1350 /USD

Appendix: References

Act now while the mobile financial services industry is still in a malleable stage, the political climate in Myanmar is favorable, and key leaders in government and industry are on board to collaborate.

Photo by Paula Bock

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This moment in Myanmar provides a unique opportunity to innovate digital financial services that could transform life for marginalized people who have long been excluded from the formal economy.

Photo by Paula Bock

Potential Agent Networks: Cash Acceptance Networks

In addition to over 100,000 airtime resellers, and the trusted *hundi* network of informal cash transfers, other cash acceptance networks exist in Myanmar that could be utilized to build mobile financial services.

1. 2C2P: an experienced ASEAN regional payment services company, 2C2P aims to be a payment platform for micro-enterprises to allow anyone to form their own e-commerce business with the smartphone app, selling goods and services.

The 2C2P team is highly regarded by the CBM. 2C2P's 123 Network is connected to more than 100 partners with over 320,000 payment collection points across ASEAN to enable prompt and easy payment collections. The more than 23,000 payment collection points in Myanmar include post offices, the Myanmar Awba Group and ABC convenience store chains.

In Myanmar, 2C2P offers a mobile wallet and provides aggregator services including the ability to top-up Debit Cards, purchase airtime for any of the telecom operators, pay for a bus or airline ticket, and pay monthly installments for Rent2Own services, as well as ability to make utility payments such as an electricity bill or satellite TV bill at any of the network's 23,000 payment collection points across Myanmar.

2C2P has also developed Qwik, a peer-to-peer payment platform for the ASEAN region currently being piloted in Thailand in partnership with Facebook for a cashless, convenient, and secure option to transfer money between friends, and buyers and sellers on Facebook. Qwik allows payments on Facebook, using a variety of payment options:

- Credit/Debit Cards
- Over-the-counter cash payments via 123 network of 320,000 locations across Southeast Asia
- Online Direct Debit Payments
- ATM payments
- Payment by mobile banking or internet banking or mobile financial services

2. True Money Myanmar: True, the Thai telecommunications giant, has opened a mobile money division focused on Myanmar. Payment company Alibaba has a 20 percent stake in the ASCEND group which owns True Money. Currently operating in six countries—Cambodia, Myanmar, Thailand, Vietnam, Philippines and Indonesia—True Money plans to move toward a single platform for all mobile money transactions on its platform across all countries.

True Money Myanmar has permission for international inbound remittances through AGD Bank and expects to receive the outbound permission soon. With outbound permission True Money Myanmar can help individuals as well as companies send payments to ASEAN neighbors by phone rather than by wire.

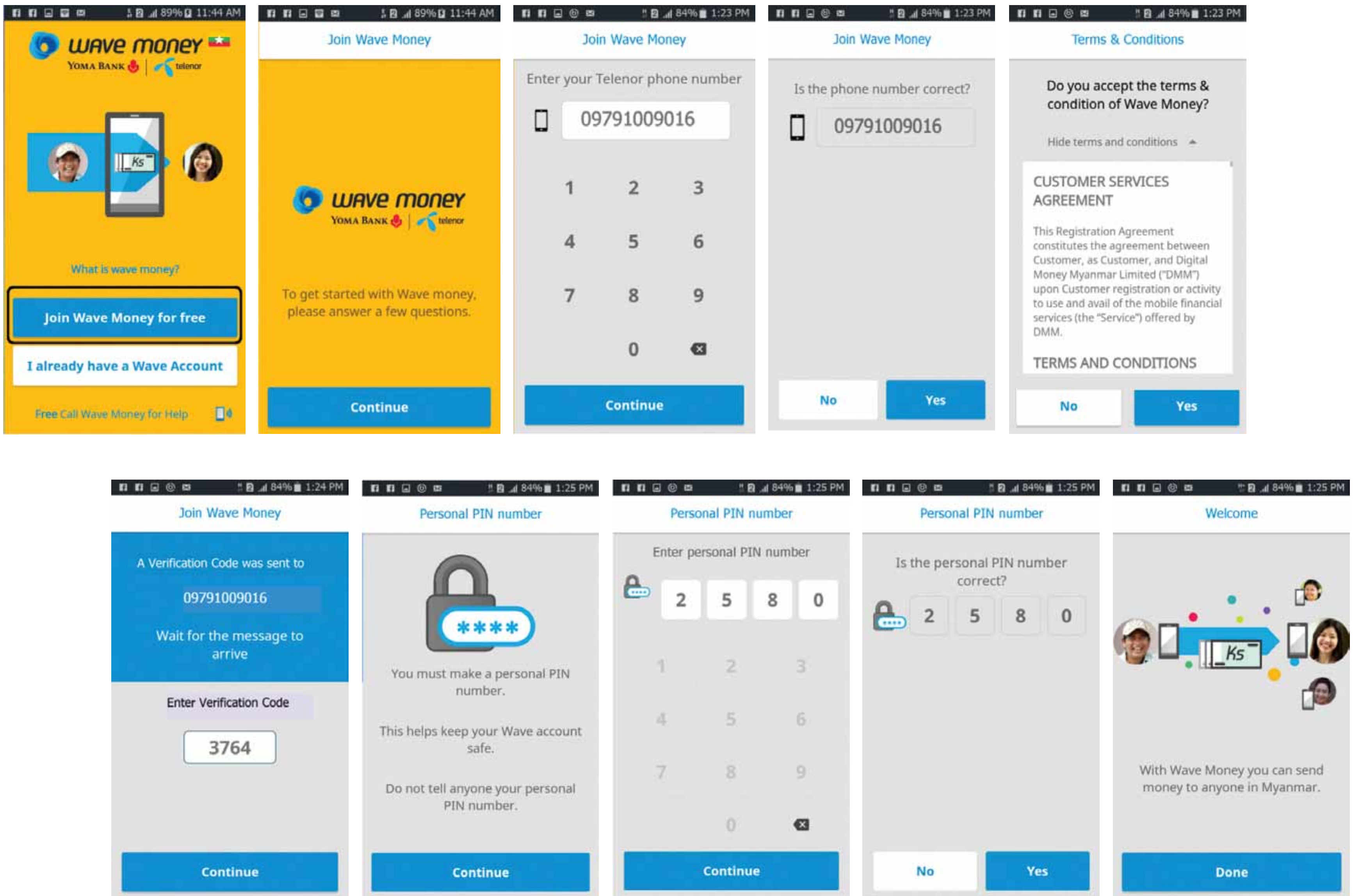
True Money Myanmar claims 6,000 agents and 500,000 transactions/month, most of which are airtime reselling activity. True Money Myanmar has begun offering the ability to make utility payments and is expanding to merchant payments. However, True Money Myanmar uses point of sale (POS) devices instead of mobile phones. True Money Myanmar is offering lower transaction fees than Wave Money even though it costs them more. This constrains True Money Myanmar from scaling their products because they have to subsidize their expensive POS devices.

3. Red Dot Networks (RDN): Red Dot Network is building a cash acceptance network using POS terminals to resell airtime and bill payment. Red Dot has connected with over 14,000 merchants in Myanmar.

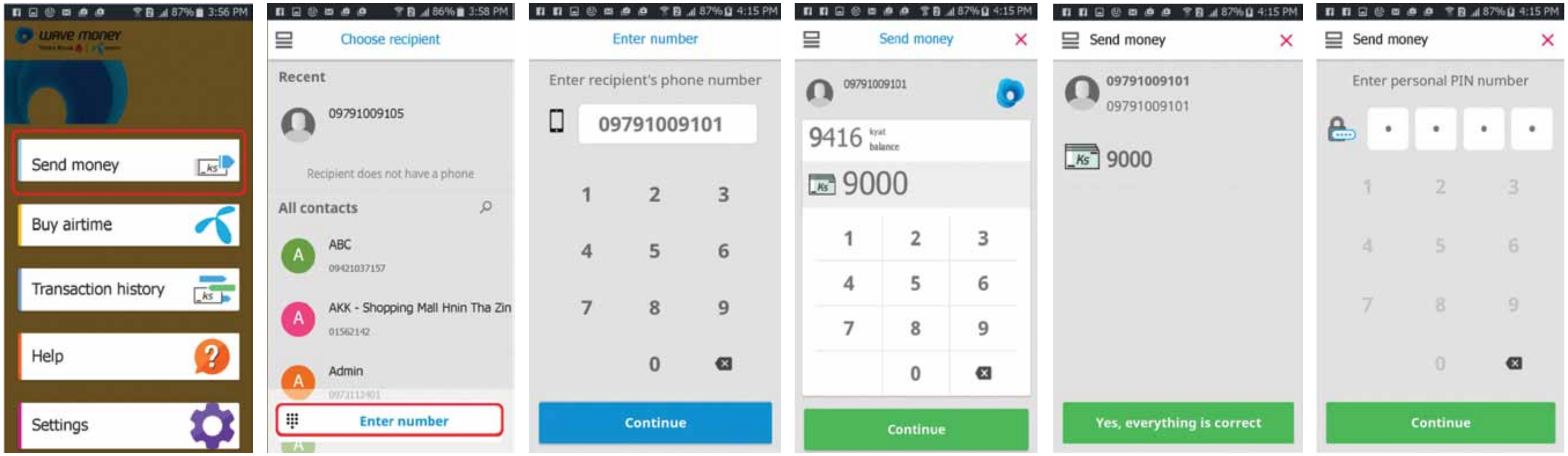
Wave Money Account Creation Steps

Creating a new Wave Money Account takes less than 3 minutes (to self register) and requires no photo ID. The other two MFS providers will follow suit with the same account registration process.

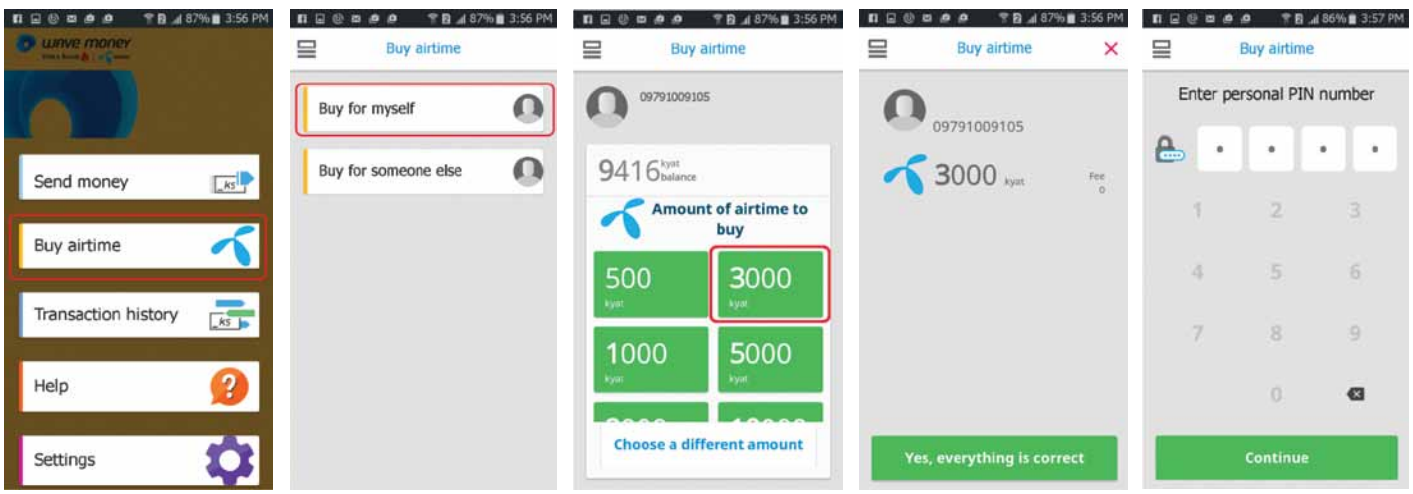
Steps to create a new mobile money account



Steps to send money



Steps to purchase airtime



Steps to reset PIN

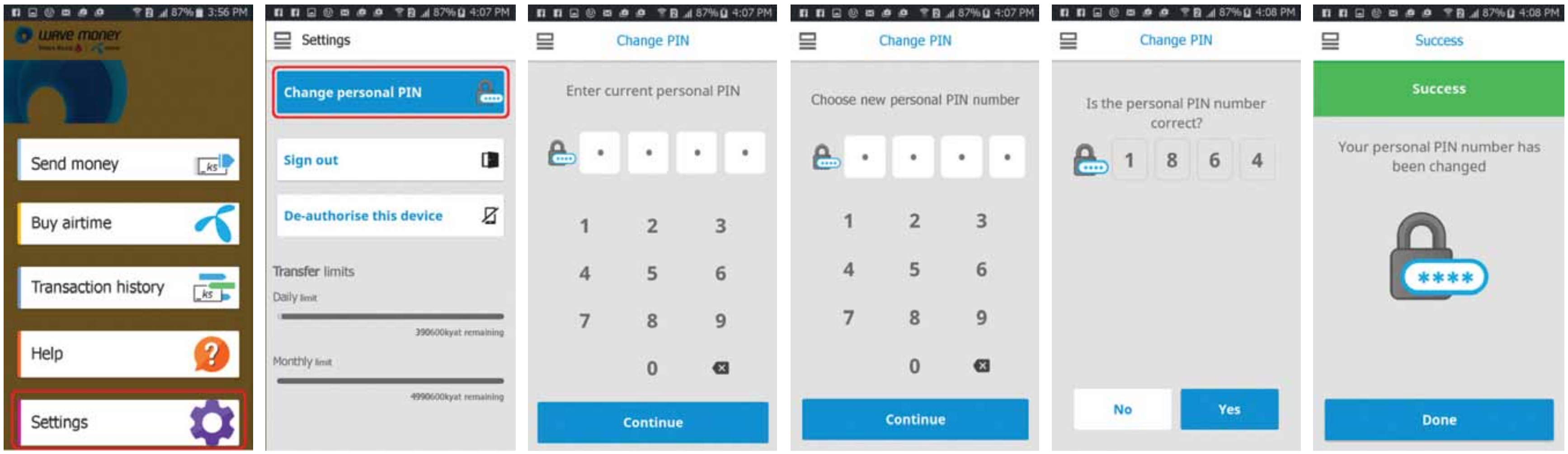


Photo by Paula Bock

Commissioned by the Bill & Melinda Gates Foundation, *Mobilizing Myanmar* explores the momentous Smartphone Revolution underway in an impoverished, once-isolated country where cell towers are now sprouting faster than bamboo.

"My dream is for everybody—every landless farmer, every woman, every street peddler—to be digitally connected so they can access financial services, markets, and information. If they can connect, they'll be able to lift themselves up."

—**Pwint Htun**, *architect of Myanmar's digital financial services industry*

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