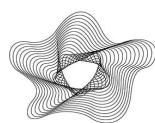


Intermediaries, Cash Economies, and Technological Change in Myanmar and India



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SUMMARY

Why do financial intermediaries persist, despite the promises of disintermediation that accompanied the diffusion of digital technologies?

Through a comparative qualitative study of financial intermediation in rural markets in Shan State, Myanmar, and Kerala, India, we map out and make visible official and unofficial roles played by different types of brokers (traders, *hundi*, transport companies, etc.), and different financial tools (cash, gold, land, banks, etc.), and look at how information and communication technologies (ICTs) fit in the interactions between the two. ICTs and human brokers perform functions that are sometimes complementary, sometimes in conflict, and sometimes simply different from each other. In examining the range of roles that (human and non-human) actors and material practices that are involved in conducting financial transactions have, we show the central role that historical legacies and politics play in explaining why both cash and financial intermediaries persist in the digital age. Focusing on the different values that human and non-human intermediaries bring to financial encounters helps explain what characteristics make each resilient or replaceable in a time of change, and furthers understanding of which of the many functions embodied by humans can be replaced or supported by digital technologies, and which ones are likely to remain the domain of humans. We conclude that the “expertise” inscribed into technological artifacts such as mobile phones tends to be fixed, whereas human expertise can be more flexible and quicker to react to changing political or economic situations.

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INDIA-MYANMAR: A COMPARATIVE STUDY

Mobile phones have been in widespread use in India for more than a decade, while they started to become common in Myanmar only in late 2014. Mobile money platforms are relatively recent in both countries, and hardly used by the communities that we studied.

By contrasting similar sites in different countries—small towns with diverse populations and substantial small and informal trade—we tried to understand the contextual heterogeneity that characterizes the role that brokers play in different uses of digital technologies and mobile financial services, as well as the historical legacies and current political economy that shape how people interact with both the state and financial services.

India: Kerala

Research in India took place in fishing communities of the coastal state of Kerala. Interviews and participant observation took place between July and September 2012 and again in May 2016, focusing on mobile technology use among fishers, fish vendors, traders and auctioneers in a fish landing center in south Kerala (Trivandrum district) and one in the north (Kozhikode district).

Mobile phones have been available in Kerala since the late 1990s, but mobile money has only just started being rolled out for a variety of regulatory and other reasons. Given this reality, the research on mobile money also included interviews with telecom companies that were starting out with mobile money platforms in Kerala.

Myanmar: Shan State

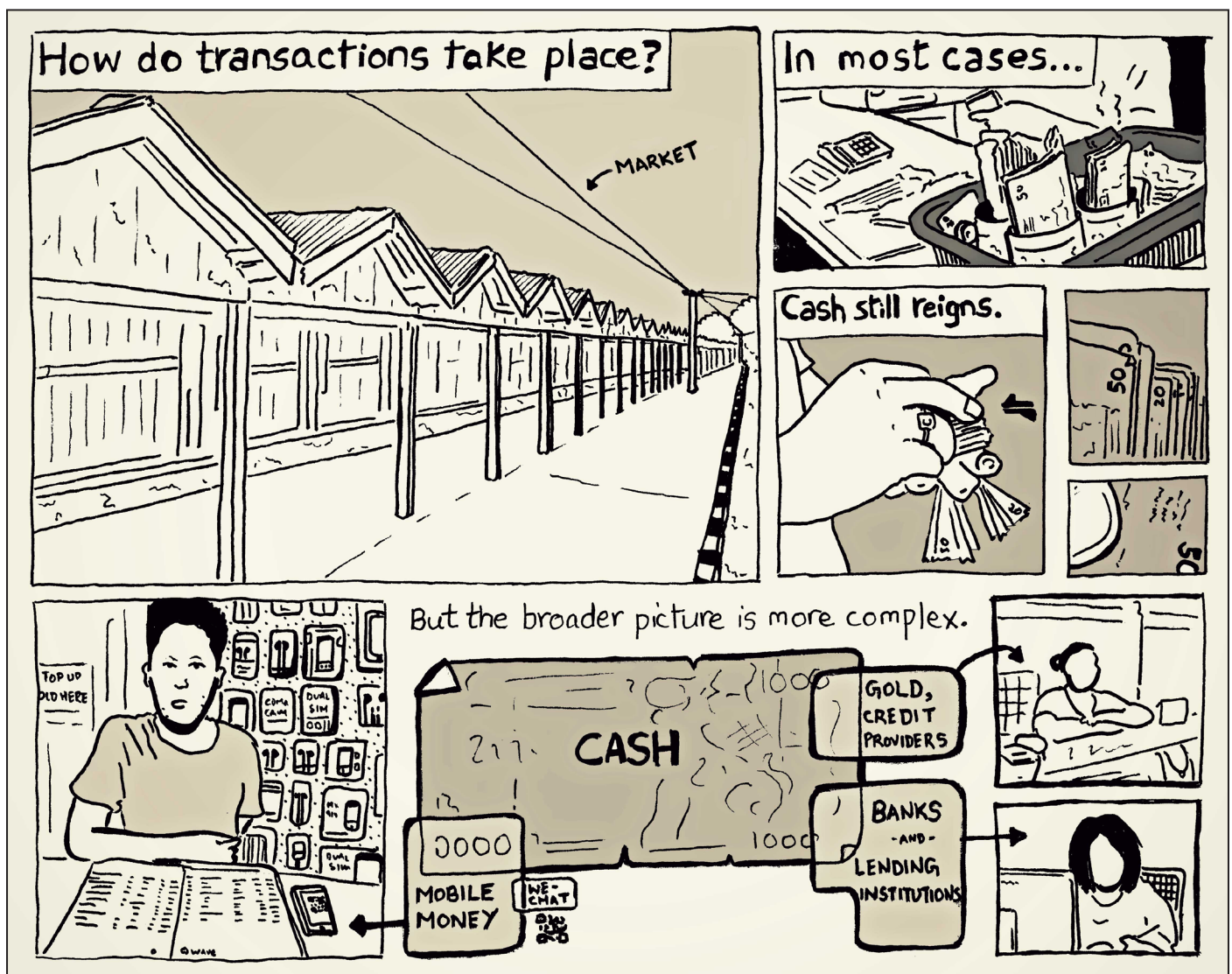
Research in Myanmar took place in Mandalay, the second largest city in the country and an important agricultural hub, and a small market town in Shan State, near the border with China. In summer 2015 and summer 2016, we did interviews and participant observation with smallholder farmers, market traders, and intermediaries, especially gold sellers and brokers. Mobile money was not commonly available nor much discussed in the country at the time, and mobile phones were still a relatively new devices, having become widely available only in 2014. The opening up of the economy in 2011 saw a remarkable increase in the number of banks and banking services. Thus, places like the small market town that we studied were experiencing at once the arrival of physical banking branches and of mobile money, a significant change from earlier times when all that was available was one state-controlled bank branch and the informal sector.

SHAN STATE, MYANMAR

A Market Town

The market town in Shan State is located about 200 Km north of Mandalay, on the road that connects Myanmar with China. The town is the center of local commerce for the villages that surround it, as well as a market for wholesalers who operate in the national and export markets. Daily, starting from 1am, farmers and fishermen from nearby villages set out their products on the road in front of the covered market by the river. Small traders from nearby villages and wholesalers buy vegetables, fruits, meat, and fish. At 6am, the road market wraps up and the covered market opens; the latter is visited by individuals and shop keepers from the town. The town also has a separate market for corn, and several wholesalers in pineapple and tea, staples of the local agriculture.

Cash still dominates financial transactions that take place in the market, although wholesalers and traders use a combination of informal trade networks called *hundi* and banks to transfer money. In terms of mobile phone coverage and services, there are now three operators: the government-controlled Myanmar Post and Telecommunication (MPT), which offers GSM and CDMA coverage, still the only feasible coverage in nearby mountain villages, and the two mobile network operators that entered the market in 2014.



Historical Legacies

In Myanmar, the historical legacies of the military dictatorship's monetary policy color people's perception of the government, trust, and the economy, as the following brief recap of recent history shows. In 1962, a coup by the military began the period of dictatorship that lasted until 2010-11. This marked the beginning of the "Burmese Way to Socialism" policies, where the economy was nationalized, the rule of one party was institutionalized, and freedom of the press was abolished. In the same year, and then again in 1964, the national currency MMK (Myanmar Kyat) was demonetized, that is certain banknotes were declared no longer legal tender. People were allowed a certain period of time to exchange the demonetized banknotes with new ones.

However, in 1987 the government demonetized the kyat again but without a conversion period. On the 5th of September the government declared that banknotes worth 25, 35, and 75 kyats would be demonetized with immediate effect, and without the possibility of conversion. This left only 1, 5, and 10 kyat notes as legal tender. At the time, the black market conversion rate from the kyat to the USD was 40:1. The official reason given by the government was that it was an operation necessary to suppress the black market for currency, and there were speculations at the time that it was a means to tackle counterfeit money printers who were based in the border areas inhabited by minorities.

What is more likely is that the government wanted to suppress the timid beginnings of a market economy and to wipe out the emerging middle class by wiping out their savings. The result was chaos in the economy, and a spike in smuggling operations with neighbors, especially China and Thailand. The elections of 2010 brought about a series of reforms that opened up the economy and relaxed government control over media and communication. Mobile telephony was controlled by the state-owned MPT monopoly, and SIM cards were extremely expensive, up to USD 1,500. In 2014, two new companies, Telenor and Ooredoo, started offering mobile services, and the price of SIM cards dropped to USD 1.5. Mobile money was being tested at the time of fieldwork, but was not used yet.



KERALA, INDIA



A Fish Market Town

One of the sites where this research took place was Vizhinjam, a coastal town about 20 Km from the Kerala state capital, Thiruvananthapuram. It has long been an important landing and auctioning site for small-scale fishers operating artisanal fishing craft in southern Kerala. Amidst the rough monsoons faced on the southern Kerala coast between June and September, Vizhinjam offers one of the few safe, all-season landing spots. While the landing of fishing boats and the auctioning of fish takes place in Vizhinjam throughout the year, activity is particularly intense between June and September when boats from nearby towns also anchor in Vizhinjam for reasons of safety. These are also the months that bring in “export” varieties such as squid and cuttle fish, thereby attracting more export company agents as buyers. Our research took place both during this season (in 2012) and earlier in the summer (May 2016).

Auctions in Vizhinjam took place between fishermen and a range of small-scale vendors and export agents. These transactions were mediated by auctioneers and relied on cash as of May 2016. Mobile phones were plentiful and used to coordinate the landing of boats, ice availability and - among the larger sellers and buyers - the prevailing prices and details about the fish varieties caught that day. Mobile phones were not used for mobile money transactions, and few people involved in the auctions had even heard of mobile wallets at the time of this research.

Historical Legacies

It is worth highlighting some points in Indian history vis-à-vis telecom policies, as they might be useful in understanding the regulation and uptake of mobile money.

1. The concepts of **semi-closed mobile wallets** is key: Money can only be paid into the wallet, not cashed out. Telecom operators need to pair up with banks so that they stay in the ambit of banking regulations while deploying their mobile money platforms. Recent changes introduced the category of payment banks and the issue of licenses to non-bank entities (a large number of them telecom operators) to operate mobile money.

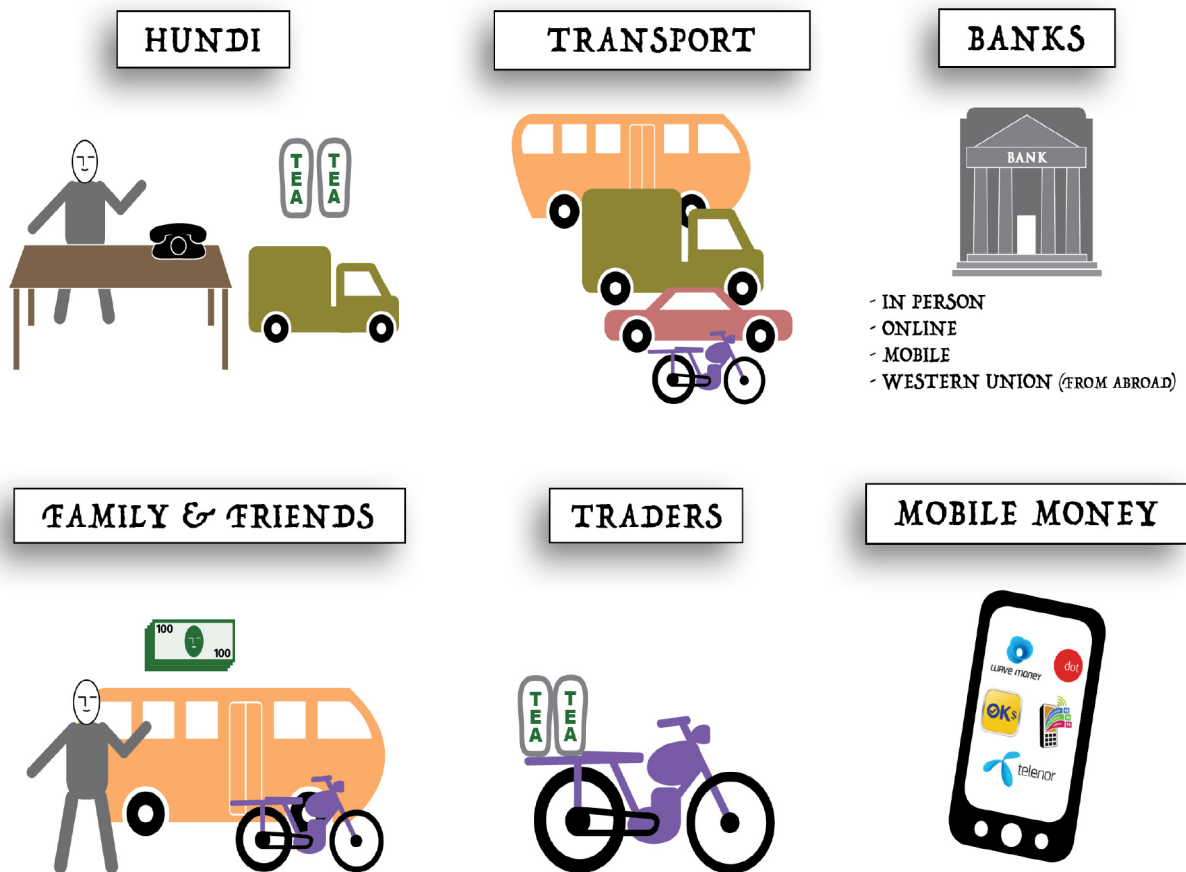
2. **Regulations have struggled to keep pace** with the rapid technological developments in this sector. The Reserve Bank of India (RBI) historically allowed non-banks to participate in payment services in two restricted ways. They could build and manage an agent network on behalf of a bank, or they could issue a semi-closed wallet that allowed customers to cash-in, buy airtime and other services, but not cash-out—not a particularly useful product for a poor customer.

3. Recent changes from 2015 introduced the category of **payment banks** which allow companies with significant distribution expertise (including mobile operators, retail chains and existing agent managers) to offer deposit accounts and payments as a stand-alone business. These entities will take deposits, convey remittances and dispense payments to recipients. They can't lend to their customers, though. Payment bank licenses have now been issued, including to telcos, and some of these have just started operating.

4. In both the prepaid instrument and payment bank scenarios, a mobile money retail agent who loads up a wallet, and helps carry out mobile money-based transactions becomes crucial.



MONEY CIRCULATION



Moving Money Around

How do people send money around (payments, remittances, loans) and borrow it before or outside of digital financial services? In both countries, we found a multitude of intermediaries available to farmers, small traders, shop keepers, and other people needing to move money around, both within the countries and from/to other countries. We found a complex web composed of:

1. **Hundi**, a system to transfer money (and, to a lesser extent at least in contemporary Myanmar, to borrow money) that is based on informal networks of agents in different areas of a country or even across borders, who transfer and lend money very quickly. They often are traders as well, so they can move the money around while they move merchandise.
2. **Transport companies** are also used to transfer money for remittances or for commerce. People give money directly to drivers or to the bus company, which might then keep the money and act rather like a clearing house with correspondents all over the country.
3. **Extended family**, neighbors, co-villagers and friends are also used to move money around and to borrow it, with complex rules about whether/when to charge interest and how much.
4. **Traders**, who are typically very mobile and thus can transport (and loan) money easily.
5. **Specialized money lenders** (called 'blades' in Kerala) who lend money at very high interests for short periods to clients (in this case, small-scale female fish vendors) who need an unpredictable amount of cash every day to purchase their produce (here, fish) because of wide fluctuations in the volume, quality and variety of daily supply.

In this context, the arrival or the increased availability of formal financial services means that there is an increase in choices, rather than a whole new range of opportunities. However, in terms of use, in Kerala the relatively newly established bank accounts for lower income sections of the population are largely restricted to the depositing and transferring of money for government schemes or subsidies, whereas in Shan State bank accounts are specifically targeted at people with some savings or traders. In both places, therefore, the introduction of mobile money services merely adds to the range of formal financial channels that people are aware of and even are beginning to use, though to greater or lesser extents and in a largely face-to-face context.

Intermediation

Brokers, intermediaries, mediators, middlemen, translators. These are some of the terms used to describe a person who stands in the middle of a transaction between two actors and benefits from it, while profiting from (and sometimes creating value for) either or both parties involved. A typical case from both our field sites would be a small trader who buys fish at auction on a beach in India, or pineapples from a farmer in Myanmar. Such a definition, however, hides a complex reality where this intermediation can be done by humans or non-humans and where it can add value to the transaction or extract value from it.

Although brokers are often seen as rent-seekers, we shift the attention to their role as translators between different realms, and the value (a word that we use, if possible, in a neutral way, as it can be positive or negative depending on the circumstances) that they bring to financial interactions. In order to understand the similarities and differences between the functions played by human brokers and intermediation played by mobile phones, we treat humans and technologies symmetrically, looking at how each performs specific types of intermediation and how this fits with the financial lives of their clients/users.

When users choose a human or a digital intermediary, they make a series of trade-offs that are based on the values inscribed into the platform as well as in the political economy and the social organization of their lives. Thus they can rarely be understood from a strictly economic perspective, or without taking into consideration a larger temporal scale. Cash might be more expensive or less convenient than mobile money, and yet still used for reasons that are not necessarily compatible with the behavior of a rational economic agent, but that make sense in the specific context of the transaction. **Single transactions are also often not stand-alone transactions, but rather points of exchange in a web of relationships that goes beyond the market encounter,** and that includes values, like trust, that can be historical legacies rather than based on actual behaviors—such as trust based on ethnic ties in Myanmar. The value added by human brokers and cash/ digital technologies will be analyzed in the next section along two axes: time/space and expertise. We will see how humans and non-humans occupy these axes differently, and add value in different areas in a way that is sometimes complementary, sometimes substitutable, and sometimes incompatible.



INTERMEDIATION ACROSS SPACE AND TIME



Time and Space: Trade-Offs

Mobile money transactions can be instantaneous in time and eliminate the need to negotiate space, for example by having to physically be present where the payment takes place. While we did witness many instances of mobile phones being used to make quick coordination decisions around financial transactions—in India to ensure an auctioneer and fishers reached the shore at the same time in order to make a sale, or to ensure that there was ice to preserve a large catch, or in Myanmar to confirm the shipping or receiving of produce using the local bus system—human brokers are also involved in increasing the time efficiency and/or negotiating spatial aspects of transactions.

“If you have to get better price, the fish has to go outside. But the payment will be late... June, July, August, September, October, these five months, since the items that turn up are exporting items, it is difficult to get finance (money/pay).” [Fish seller, Kerala]

“The big [tea] traders, they don’t pay right away. In April, I always send my tea to K. (a nearby town), but after that I tend to keep it here to sell it at the local market. They tend to pay a little higher in K., but you have to wait 2-3 months for payment, so it’s not worth it.” [Tea grower/small trader, Shan]

When dealing with markets that are further away or even international, payment is delayed, and neither fishers nor farmers cannot—or even want to—always wait a few months, even to get more money. For a fee, which embodies the difference between what they would get from selling directly and what they would get if they could wait the time it takes to actually get their goods sold they might decide to take less money sooner rather than more later. A similar negotiation takes place around space. A broker’s job is to go around villages and markets. The farmer’s job is to farm, so spending time going to markets, even assuming the existence of acceptable roads, is often a loss bigger than the loss of income from having an extra broker take his cut.

Time and Space: Political Economy

Financial decisions are often made in the context of people's lives at a given moment: Are there children to send to school? Are the fisher/farmer older and more worried about certain cash now rather than a bigger amount at a later date? Are there debts to be repaid that cannot wait any longer? Are there people such as neighbors, relatives, or friends who are going to the market and who could be trusted? If a fisherman returns after a few days at sea, and wants to buy himself a drink, he might care about selling the fish quickly through his usual intermediary at a known market in order to get the cash he needs for that drink, rather than waiting to find the best price and market. **These decisions, in turn, are shaped by the political economy of the area** (and the country—the two sometimes overlap, and sometimes do not, with local conditions and politics having a more direct and immediate consequences for farmers and fishers). Are there subsidies for small hold farming or fishing? Is there any welfare program for impoverished families that might make the difference between having to pay school fee and thus needing money immediately, or being able to wait? This is the backdrop of politics against which the individual decisions, enmeshed in them and without much control over them, play out.

Mobile money platforms do not provide services such as credit lines or overdraft protection, which could potentially be useful in these circumstances. Formal financial institutions such as banks do, but the barriers to entry for smalltime fishermen and farmers (in terms of becoming a client, providing guarantees, negotiating loans and credit lines, or simply dealing with an environment that can be overwhelming for people who might be not well educated, nor fully literate) are too high. **Paradoxically, the instant transaction time that is the advantage of mobile money is often a mismatch for these kinds of farmers and fishers.** It is either not instant enough, as in the case of the fisher who wants to purchase a drink in a place that might not take mobile money, and would thus force him to cash mobile money out in order to spend it, or the instantaneousness is not the important part of the transaction, as in the case of the tea farmer/trader and the pineapple grower who do not think it is worth the risk nor the extra gain to wait to sell at a higher price later on.



The Church on the Beach, Kerala

THE VALUE OF EXPERTISE



Human and Machine Expertise

Expertise is an umbrella category that encompasses a variety of practices, some of which are very hard to break into their components and codify, and thus to translate into features that can be inscribed in ICTs. This is not to say that ICTs do not have expertise, or rather access to expertise, successfully written into them, but rather that some types of human expertise consist of several different types of expertise layered on top of each other that are difficult to assess separately. These include **expertise about products and their market**; expertise connected with the **social standing of traders**, who are able to inhabit different social worlds that are hard for fishers and farmers to join; and **expertise in negotiating the visibility of financial transactions**.

Most of the informal intermediaries we met were themselves members of the communities where they transacted and had long years of experience in their work. This led to their status as **local experts, who knew financial transactions and networks in their domain**. In Kerala, fishers viewed their auctioneers as having experience with and deep knowledge of the local fish economy and the process of auctioning. They could be relied on to gauge the prices of different varieties of fish, their seasonal availability and demand across geographies. Auctioneers were also trusted with price negotiations, as most auctions were characterized by a certain ambiguity and allowed some room for negotiation on prices. The bids were seldom placed in words by potential buyers; instead, they would mouth a number, nod their head, raise an eyebrow, or gesture with their fingers to let the auctioneer know how much more they were willing to pay. These gestures would sometimes be contested. For example, in an auction for squid, when an auctioneer looked towards Lily, one of our research participants, to raise the bid to Rs. 900, she shouted back “Who said 900? I only said 890.” In another instance, at an auction for crabs, the auction was closed at Rs. 340—or so the auctioneer said, insisting the vendor had last bid Rs.340.

Human and Machine Expertise (*continued*)

A few vendors supported him as well, but the vendor insisted she had only said Rs.330 and started to take the crabs, thrusting that amount into the auctioneer's hands and moving on. From observing several more instances of such altercations, it was clear that once the fish had been collected or deposited into a basket, it went with the vendor; regardless of what rate had actually been reached, who had misunderstood or was willfully misled, whose voice was louder, or who was more popular or powerful in that scene. In this case, we see the value and the mediation brought to the auction by both humans (the auctioneers who deal with ambiguity) and by cash and its materiality, which aids in negotiation to some degree. We see from this example how the political economy of the auction ground, too, is factored into the way cash is used. Thus, in the initial auction, a certain price is fixed for a small quantity of fish. A few small-scale buyers bid for it and purchase lots of fish. However, they pay a slightly lower price than decided, by handing over the cash and moving away. Since these are regular auctioneers and buyers, and are recognized as small-scale buyers with limited means, they are able to get away with small-scale acts of non compliance.

Similarly, in Shan State, traders of crops that had a national and international market were recognized as those who knew what buyers wanted in terms of product, but also in terms of guaranteed quality. For example, the Burmese-Chinese minority dominates the tea trade (and many other agricultural commodities), because of language and of family networks that extend well beyond the state. However, tea is grown in the mountains by the Palaung (or Da'ang) minority. They have the land and the expertise to grow tea, but it is difficult for them to make the transition to being national and international traders. They do not have the extensive networks or the skills to enter the international market, even when they possess the financial resources to do so,

“Tea is a lot of money on the ground and in the warehouse...A tea trader needs money to buy tea and to be able to survive while he waits for his sales to go through. The Chinese have money, are better than others at doing business, and have an extended family network [that they can rely on].” [Palaung tea trader, Shan State]

We mentioned above that traders are able to inhabit different social worlds that their clients are often not able to successfully bridge: the sense of “feeling out of place” that makes opening a bank account a much bigger challenge than simply gathering the documents required to accomplish the task. **Ethnicity, gender, religion, caste, and educational levels all contribute to making people feel out of place in certain situations and environments.** The *hundi* system described above, for example, has been integral part of local economies in both India and Myanmar, that were mostly ignored by national financial institutions, and before them by colonial ones. The system itself has its origins in India, where it was developed in order to move money around the country. *Chettiars*, money-lenders of Tamil origin who settled in Myanmar during the British colonial times, introduced the system there, and provided loans and banking for both agricultural and trading enterprises that were not served by city-based financial institutions. Their role kept money flowing through the country and from abroad during the military dictatorship, and is still widely used today for internal and international remittances. The risk that goes with the informality of using a *hundi* is balanced by the low fees and/or better exchange rates than those applied by banks, and by the personalized service, which includes home delivery of the money even to villages, and a face-to-face interactions with the agent.

This kind of expertise in navigating and bridging different social worlds is perhaps the hardest to delegate to ICTs. Whereas in principle social barriers to entry are lowered on the class-less and ethnicity-blind world of ICT-based services such as digital money, or Market Information Systems, in reality such experiences are highly mediated by the offline worlds that people belong to. Of course the flexible human expertise, compared to the more fixed one inscribed into ICTs, can be a positive or a negative element in financial transactions. The Chettiars saw (and still see, even though increasingly pushed into the grey economy) a business opportunity where the formal banking system saw excessive risk, but they bring their own human biases when deciding who to lend to and how to ensure re-payment that are different from formal rules related to the same issues that are inscribed into ICTs and the regulatory system that they are part of.

CONCLUSION



The combination of various technologies, including ICTs, and brokers such as traders and auctioneers in rural markets in Myanmar and India translates the global reality of finance, financial tools, international supply chains, and political economy into an actionable reality for local farmers and fishers. **A key feature of human brokers is that they are flexible and responsive to the changing political economy of their countries in ways that are not always possible for technology, by moving in the grey areas between official regulations and informal economies, and thus leveraging gaps or strictures in the official economy. This flexibility is the constant value that users get from using human brokers rather than ICTs, all other things being equal.** Because humans can leverage their social knowledge in their role as brokers, they are able to adjust to changes in a broader political economy as well as to the specific users that they are working with. Thus, they can offer temporal and spatial fixes as well as their expertise in ways that are attuned to the times and their users. Technologies, on the other hand, face constraints on the extent to which they can be flexible based on what is inscribed into them by their creators and by the regulatory regimes in which they operate. For example, the fact that mobile money makes financial transactions visible is a feature that is inscribed into both the hardware and software that power mobile money and into the regulatory framework that allows it to operate under certain conditions. ICTs can be flexibly used, but this flexibility has to be figured out by its users, and there are limits to how much flexibility a given technology can provide along a particular dimension.

A second point we want to highlight is how brokers are usually better equipped, financially and often socially, to appropriate ICTs and leverage them to strengthen their positions in the markets, sometimes undermining farmers and fishers and reducing them to mere recipients of their expertise, or even trapping them in relations they cannot escape.

Thirdly, we suggest that the question of whether or not financial transactions can be mediated more efficiently or effectively by humans or technologies is not one that can be answered in the abstract, without referring to the specific conditions of a specific place. We will note that, for example, the problem that ICT users might have with being tracked in their transactions is less of a concern where digital technologies are introduced together with system reforms that make the system less predatory. The axis of time/space is also amenable to technological rather than human mediation, once structural reforms change the material circumstances of people.

The 2016 demonetization in India, and the demonetizations that Myanmar experienced in its recent history, have uniquely affected certain segments of the population for whom the state was and is not a reliable financial partner. Such actions reverberate through time, and rhetoric alone is not sufficient to persuade the

same people that the state is now concerned about their financial inclusion. Once again, the issue of time is at the forefront: the consequences of financial encounters, either between individuals or between individuals and institutions, extend through time and the latest ones take place in the shadow of those that happened before, thus needing the appropriate historical and political background to be fully understood.

Finally, we want to stress how **it is easier for existing social practices and networks to adapt to innovation than it is for them to be changed by it**. This is not a novel finding, but it is often overlooked when talking about the potential for inclusiveness of digital technologies: they are, in fact, more empowering for those who are already in a position of power, and who can thus acquire them earlier, and deploy them alongside their existing tools and networks. For instance, traders acquired mobile phones before fishers and farmers did, and were able to reconfigure their own networks to take advantage of them. Once again, if looked at purely from a transactional and financial perspective, fishers and farmers are perpetually catching up with the better established traders. Using (or not using) ICTs and tools like digital money in their own way rather than according to the expectations of the government and of financial institutions is their own act of resistance and reclaiming of their own well-established practices.

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