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Mobile Money Transfers and usage among micro- and small businesses in Tanzania

Implications for policy and practice

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Background and Objective

This paper is the result of an effort to analyse how, and to what extent, financial transactions over mobile networks are being used by micro- and small-sized enterprises (MSEs) in Tanzania for business purposes. The work is based on a literature review combined with field studies, which aims to provide indications and illustrations (rather than statistical evidence) of small companies' use of mobile money transactions. Inevitably, other aspects are also brought in to provide context and wider understanding. Such aspects include MSE business conditions, market dynamics, mobile market as well as regulatory characteristics.

The paper is intentionally kept as brief, concise and to the point as possible, whereas at the same time providing contextual understanding. Particularly, a few case studies are outlined in an effort to illustrate the day-to-day reality of a few entrepreneurs.

__We use the term MSE__ to highlight the fact that most of our sample consist of Micro- and Small Enterprises. A term more frequently used would be __MSME__ (Micro-, Small and Medium sized Enterprises), but as we have had very limited input from the "Medium" segment, we have decided to refer to our target as MSE.

The literature review focuses on two strands of literature; mobile financial transactions complemented with research that concerns MSE business context in sub-Saharan Africa. It was anticipated before the study that these two aspects rarely have been integrated into a coherent framework, and our literature review confirms this. We have not found much material that specifically covers MSE usage of mobile money transfers, and how this technology affects their lives and businesses. To paint a richer contextual picture, the literature review also included an inventory of mobile money transfer (MMT) providers and their offerings, regulatory aspects as well as recent developments regarding international and sub-regional transfers

The vast amount of research on mobile financial transactions in general, business conditions and dynamics, as well as the recent survey on financial inclusion in Tanzania (FSD Tanzania, 2009) however provides valuable contextual insights on diffusion and adoption in society of mobile transactions.

This is the result of a study commissioned by the Swedish International Development Agency, Sida, in Dar es Salaam. It has been carried out with support of SPIDER, the Swedish Program for ICTs in Developing Regions.

The ability to send and receive money is of major importance for very large groups in many developing countries, which is one of the main explanations to the immense uptake of MMT services by the public in general. The main money flows are known to be from urban to rural areas; and from relatively well-off people to less fortunate friends and family. From the markets exposed to MMT services, and from a general point of view, there is evidence from several developing markets that there is a clearly articulated need, as well as a willingness and ability to pay for such services. Hence, the demand is growing steadily for MMT services, in particular among the poorer segments of society. According to Leishman (2010) there was in October 2010 83 mobile banking/MMT services launched by Mobile Network Operators (MNOs) in developing countries, and another 82 are being planned.

The main rationale for undertaking this study is the interest in understanding the role of mobile money transfer in MSE business transactions. As MSEs dominate in sub-Saharan Africa and liquidity and cash-flow management are key bottlenecks for MSE operations, the fast diffusion of mobile money transfer was viewed as a potential key tool for facilitating financial transactions. Research shows that most business owners have mobile phones; over 80 % and the difference between formal and informal businesses is small (Esselaar et al, 2008). Although the technology is accessible to MSEs in many sub-Saharan countries, little is known to date of the scope, direction and impact on the businesses. There is thus scant empirical data on the phenomenon. This report intends to fill the current knowledge gap by exploring the diffusion of money transfer systems in the East African business community with a special focus on Tanzania. By reviewing the current supply and demand through a number of interviews with both users and service providers, this report also offer glimpses into what the future might hold in terms of mobile financial services.

__Financial transactions over mobile networks have many names.__ To date, the most commonly used is "__mobile banking__", which often is used to describe all sorts of financial transactions. We however refer to mobile banking only in terms of actual banking, i.e. for services where the provider will need a banking license and the user deposits in a bank account (or transfers via an account). When we use the term __MMT__ in this report, we refer to mobile money transfer services that normally not would require the service provider to hold a banking license. Therefore, the users do not hold a bank account, but rather an account to enable transfers of funds.

Although moving the knowledge frontier is the main objective, the study's conclusions should be viewed as a main input to strategy development for policy makers and commercial stakeholders alike in terms of MMT as a growth support function.

The objective of the report is to present a preliminary picture of the MSE usage of MMT service and its impact on business such as liquidity, delivery times, and order stocks. An analysis is carried out to understand what is needed to further any positive impact on MSEs in their adoption of financial services.

Approach

The overarching approach is based on the "Making Markets Work for the Poor" framework (M4P), designed for improving the understanding of market systems that involves poor people, and how to bring about systemic change in those markets systems to benefit the poor to a larger extent. In this case the poor are found in the informal sector as MSEs, and they are potential or existing users of M-banking financial services. The poor found in the MSE sector comprises in a relative sense not the poorest segments of the population, as there is adequate liquidity and solidity to set up and run a micro or small business establishment.

The M4P approach is specifically designed to address underlying causes rather than just focusing on symptoms in malfunctioning markets. It draws on in-depth knowledge of the various players in the markets and their respective function. The term ‘market system’ defines a wider set of actors that support or interfere with the market in question. The approach is indirect in the sense that support should not be given directly to companies but to market supporting activities. Therefore institutions, regulations, praxis, and so forth that affect the interplay among market actors should be focus of attention.

Setting the Scene: illustrations from the ground

Sub-Saharan markets in general

Many of us that have been doing business, or business related market research, in Sub-Saharan Africa, have many times asked ourselves questions like “under these circumstances; how do they make it work?” Traders and MSEs show an enormous energy, patience and endurance in coping with the scarce liquidity and all the practical hurdles in carrying out their daily tasks. We will not address the common business climate in Sub-Saharan Africa at depth, but before moving to a few cases, we will firstly remind the reader of main characteristics that affect most Sub-Saharan entrepreneur’s in his or her daily work. It largely applies to Tanzania, as well as to most other Sub-Saharan countries.

Businesses – who are they, and what is their role in the economy?

Firstly, it is recognized that the greater part of the business community in sub-Saharan Africa comprises MSEs (Mead and Liedholm, 1998). Although larger companies of course exist, the vast majority of companies are micro or small, and informal. It is estimated that that non-agricultural employment share of the informal workforce was 78% in 2004 in Africa, and that self-employment comprises a greater share of informal employment than wage employment (Flodman-Becker, 2004). Specifically, Flodman-Becker states that self-employment represents 70% of informal employment in Sub-Saharan Africa (81% excluding South Africa)

About half of the MSEs in Sub-Saharan Africa are estimated to be owned by women (46% in Malawi, Kenya and the Dominican Republic, and 84% in Swaziland) (Mead & Liedholm, 1998).

It was estimated in 2005 that 55 per cent of Dar es Salaam’s small businesses were in commerce; 30 per cent in services and 15 per cent in manufacturing. Similar figures were estimated for other mainland urban areas (Institute of Liberty and Democracy, 2005). Dar es Salaam was in 2008 estimated to comprise close to 700 000 street-traders (Lyons and Msoka, 2008).

A recent NBS (2008) survey revealed that around 70% of businesses in Dar es Salaam at the most have 2 employees and 90% are run as family businesses, i.e. showing the typical features of informal companies.

The vast majority of the micro-enterprises operate informally but nevertheless crucial to the economy. The overall contribution to GDP in Africa is 42 % by informal business (Garcia-Bolivar, 2006). The situation in Tanzania may represent sub-Saharan Africa as enterprises are small and informal. In Tanzania there are approximately 1.7 million SMEs, which contribute to between 30 and 40 percent of the overall GDP (TanzaniaInvest, 2009).

Cash has always been king

Business, as well as society at large in Sub-Saharan Africa, has a very strong cash-based heritage, and cash is the default means for carrying out small-scale transactions. Cash is also the key to doing business; it is a scarce resource, and an African entrepreneur's success may very well depend on his or her ability to mobilize cash quickly; from own savings, credit from suppliers, or to have customers that can pay upon delivery, or even better in the case of production and delivery being separate instances, upon the placing of an order. Based on our experience, the conjecture is that most MSEs struggle to make the cash-flow equation work out. However there is little empirical evidence found on liquidity and working capital in earlier research on MSEs financing in Africa. Rutherford (1999) discusses the key role of supplier credits in facilitating sales for very small and informal businesses such as hawkers that enjoyed a credit to be returned by the end of the day.

This is also one of the main reasons why it has always been important to move money efficiently. Traditional money transfer service offered by for example Western Union, Moneygram, banks and post operators has been around for a long time, but are generally being considered expensive, and/or inconvenient. Informal and/or local solutions have also been in place for a long time, the most common one being sending money by buses. Relaying money by bus is usually a fairly standardised practice (FSD-Kenya 2006 & 2009), although considered unsafe due to risk of robbery. Transactions over mobile networks have rapidly gained market acceptance, as they address these shortcomings in traditional means of carrying out transactions. The strong cash-based culture and people's ability to conceptually relate to transferring money by mobile phones have however shown to be some of the greatest hurdles to overcome for mobile transaction service providers (FSD-Tanzania, 2006 and 2009).

Operating conditions not always the friendliest

As we have seen above, small-scale trading by micro-entrepreneurs in the informal sector is a very common phenomenon. This can take place in a whole range of thinkable and unthinkable places, but traders often have to fear government intervention, or harassment. Lyons and Msoka (2009) capture this well, also citing Popke and Ballard, 2004:

> "…Most street-vending enterprises can be defined as illegal, informal or extra-legal, on a number of counts: the lack of a business licence, which places traders in contravention of business and finance laws; asset informality, which results in insecure tenure, limited rights with regards to eviction and confiscations, and non-eligibility to apply for business licences and financial services; and the use of space in contravention of town planning designations, which places traders in contravention of both town planning laws and related public health bylaws. Many very small businesses are formal in one of these senses, but not in others. In using public space without legal sanction, they are dependent for their operation on the tolerance of municipal town planning departments and the ministries which control them..."

The abundant hurdles faced by MSEs, in particular for the informal sector, have been addressed by e.g. Flodman-Becker (2004, p.22) that lists the following:

- No access to formal training and, as a result, lack of skills in particular as regards basic economic skills and managerial expertise.
- Lack of formal schooling sometimes even resulting in illiteracy.
- Limited access to land and property rights.
- Limited access to formal finance and banking institutions.
- Reliance on self-supporting and informal institutional arrangements.
- Too restrictive or cumbersome taxation systems and labour laws.
- Excessive government regulations in areas such as business start-up, in particular as regards cumbersome, time demanding and costly procedures for business registration.
- Limited access to employers´ organisations, i.e. limited possibilities to exercise influence.
- Lack of access to official social security schemes.
- Lack of information on prices, viability of products, etc.
- Fewer market opportunities due for instance to non-compliance to international standards. Excessive registration and transaction costs of starting or operating businesses.
- Limited access to technology.

The constraints are interconnected because of the nature of MSE business. There is a link between MSE's low capability and the lack of supporting infrastructure as few MSEs have a voice to change the far from perfect business environment. The red tape is decreasing slowly in some sub-Saharan countries according to the World Bank's 'Doing Business' index. (Rwanda is the top-performer in terms of removing barriers though Botswana has a higher rank but fewer reforms over the last years. Kenya (98) and Tanzania (128) remain by and large unfriendly business economies (World Bank, 2010.)

MMT (Mobile Money Transfer) in Tanzania

MMT is offered by several service providers in Tanzania. As one of these – M-PESA –by far has, at the time of our study, the largest customer base and is covered more extensively by background material, we centre more on M-PESA than on other providers. Although this dominance may be changed, Vodacom – that offers the M-PESA service - is to date the MMT service provider that has reached the widest market acceptance.

Also banks are offering mobile services. In general, they tend to offer mobile solutions as an additive channel (Porteus, 2008), hence customers get "a new door" to the same services (or similar) as they would have received over the counter. These services have not been particularly aimed at previously unbanked market segments. Indications however suggest that this is about to change. Banks are showing an increased interest towards the previously unbanked market segments, and we also see new types of alliances evolve. NMB of Tanzania e.g. has its own mobile platform that competes with M-PESA though it requires both sender and receiver to hold NMB accounts. In Kenya, where the MMT development is ahead of that in Tanzania, M-PESA have partnered with Equity Bank to jointly offer bank account service (branded M-KESHO). M-KESHO users can transfer money back and forth in between their mobile M-PESA account, and their bank account residing at Equity Bank. In addition, other services related to micro-credits and micro insurances are offered. This is a development that is highly likely to spread, both in terms of development of the content and sophistication of services as well as geographically to other markets.

Vodacom launched M-PESA in April 2008 in Tanzania. Although, the market diffusion has been slower than in neighbouring Kenya, there are today approximately 1.5 M users and 6,000 agents in Tanzania. (In June 2009, there were 280 000 registered users and 1000 agents). Recent data from AudienceScapes[1] (2010) point to even higher penetration and states that there 2.75 million MMT users in Tanzania. Safaricom of Kenya claims that there 10 million users in 2010. The objective of presenting the case of M-PESA Tanzania is not to analyze its success or impact in relation to Kenya, but to independently evaluate the use of M-PESA among MSEs in Tanzania. Vodacom is the largest MNO in Tanzania competing with Zain, Tigo, and Zantel. (Zain was acquired by Bharti and re-branded into Airtel in late 2010.) Vodacom's current market share is 39 % (Citizen, March 24th, 2010).

The market for mobile payments has been totally dominated by Vodacom as both Z-Pesa and ZAP have failed to build a customer base (Rotman, 2009). ZAIN and Zantel have reportedly had technical issues and weak support to dealers, which partly explains the slow growth. Zantel has more or less pulled out of the market and allocates no resources to a re-entry[2] for the time being. The recent entry by Tigo that launched TigoPesa in early September 2010 is the arrival of a real contender in the market. Tigo's business model is similar to that of Vodacom's.

M-PESA in Tanzania was launched after successful introduction in Kenya and the M-PESA roll out in Tanzania was built on the lessons learned in Kenya. Both Safaricom of Kenya and Vodacom used the existing dealer network for airtime to develop an M-PESA agent network, though later entrants show a much more diversified profile than just selling airtime. The emphasis on a tiered structure in Kenya with super-dealers and 'aggregators' in which many agents are recruited solely for M-PESA (and not for airtime distribution) has grown slower in Tanzania (Camner et al., 2009). The rationale for not combining airtime vending with M-PESA is Vodacom's intention to promote M-PESA as a means to top up airtime rather than buying vouchers. Maintaining the airtime dealer network is more costly than letting users top op on their own airtime from their M-PESA accounts (Voogt, 2010).

In general, aggregators can play an important role in balancing agents' liquidity and float levels. An aggregator can be responsible for a group of agents' ability to look after customer needs to transact. Aggregators can have staff employed to transport cash to and from agents, and also electronic tools to monitor its agents' cash/float balance. In Tanzania, Vodacom's "masteragents" have mobile phone numbers that are toll-free for "their" agents so that agents can call in and report shortages of cash or float (Davidson and Leishman, GSMA, 2010).

The M-PESA money transfer network was designed for person-to-person remittance, and consequently not designed to take the specific needs of MSEs into account. However, as many MSEs are very small companies in which owner and manager is the same person, the payment to the owner is by default the same as paying to the MSE. This means that the

[1] The estimate was based on a survey of 2003 adult Tanzanians which found that 11.5 % used MMT and then extrapolated. Urban usage was 21 %.

[2] Zantel has recently re-launched ZPesa on Zanzibar

person-to-person set up could in reality work for MSEs as well. So far very little research and studies have addressed the use and needs of MSEs for sending money through M-PESA (or any other mobile payment system). The following case intends to introduce the reader to how and why an MSE prefer M-PESA to other payment mechanisms.

Mini-case cut flower: The case of Rajabu

Rajabu Hassan has run his little cut flower business for the last 11 years from a small shop just outside Dar es Salaam city centre next to the Namanga shopping centre. The reason for starting the business was a piece of advice that he got from his friend. He was told that it's a good business and he can make a living from it. His capital came from own savings from the time he was working at Sunflag; a textile factory in Arusha. The shop is located in a cut flower cluster comprising 27 shops in the same area. The shops were built by the businesspeople themselves on property that belongs to a nearby primary school. The rent is TSHs 125 000 per month (approximately USD 80). The flowers come from Nairobi and Arusha. Rajabu switched to M-PESA in mid 2009 after advice from among others Vodacom's campaign staff that was touring the area. He adopted the technology immediately for his business payments believing and trusting the M-PESA money transfer system without hesitation. His main supplier had never used M-PESA before and had to be convinced in the beginning, which was not to difficult according to Rajabu. He used to send money to his suppliers through the bank before even deposits to bank accounts but never liked the hassles and time spent. He has realized that he definitely prefers M-PESA since it is much faster and convenient. "Banks are very slow," Rajabu states. Adding to the inefficiency is the increasing traffic congestion in Dar es Salaam that normally adds one to three hours spent in traffic jams. The closing hours of banks also contributes to the perception of poor services.

He orders three times a week and must pay before shipment. One reason for frequent purchases is that the roses can only last for approximately one week as they normally are overripe. Arusha supplies comprise 70% of total procurement. Supplies are sometimes not enough. The Arusha flowers are bought through an agent (that in turn buys straight from the plantation) whereas Nairobi flowers come from a market place. The Arusha plantation used to sell on credit but has lately stopped. The plantation is owned and run by a Dutch person. The orders normally range from TSH 200 000 up to 1 million (approximately USD 130 to USD 650). Occasional orders of 2 million have to be transfer over two days due to mobile payment regulations. His purchases are mostly initiated by pre-orders by customers in Dar es Salaam or upcountry. The liquidity is around TSH 1.3 million (approximately USD 850), but he says it still not enough and he needs about TSH 3 million (approximately USD 2,000) in order to run his business smoothly.

The Nairobi flowers like roses comprise different species and colours than the Arusha ones. Some customers prefer Nairobi flowers. Flowers are cheaper in Nairobi but transport cost is higher. For Nairobi he, uses buses since M-PESA is restricted to Tanzania (the Kenyan M-PESA doesn't work in Tanzania and vice versa).

While discussing the benefits (and impact) of switching to M-PESA, time saved was the main advantage. Time saved had impact on his personal time but also directly on his business. For the business, the time from order to delivery in Dar es Salaam has been cut to half; from approximately four days down to two days. This has led to more orders placed per week as liquidity is a limiting for purchasing. He can't wait for customer payment but buy on orders (not yet paid) and use his own cash flow to procure cut flowers. Sometimes he has to borrow to be able to handle procurement for orders greater than TSHs 1.5 million (approximately USD 650). This is normally short term loans for two to three days until he receives payment from in particular customers in Morogoro and Mbeya, that pays through M-PESA when the goods have been delivered to the coach company; often Dar Express. This coach company knows the cut flower business – after being trained by Rajabu in the past – and thus gives special care to sensitive goods. The effect on his personal time is 'freed' capacity to communicate more with suppliers and customers. He still has many customers in Dar es Salaam that come to the shop in person. He claims that his revenues have increased moderately since he started to use M-PESA. Nowadays he normally deposits and withdraws at the recently opened two M-PESA agents in nearby Namanga shopping centre. In the past he had to go to an agent in Victoria (2-3 kilometres away) or to other agents in town. Namanga is a very busy business area and the two M-PESA agents often ran out of 'float' which means they cannot accept more deposits. (The "float" concept is explained further down.) This is frustrating since then he has to travel to Victoria or even further away.

Most customers are for large events such as weddings and funerals but there are also street vendors, sometimes on credit if he knows them well. The Dar es Salaam business is partly to recurrent customers.

Formalization, credits and loans: His business was started with his own savings but he has secured short-term loans for expanding business twice; once through Akiba Bank and once through FINCA. Currently he operates on the revenues from the business, as he prefers not to have loans. The locality, investment in the shop and having the proper business license have helped secure the loans as credit institutions came to visit before granting him the loans. *Context:* The Tanzanian cut flower sector exports 6,000 tons of roses annually and the local market comprises overripe and poor quality flowers. The Tanzanian market may reach 5-10 % of total production, or less depending on the need for composting at the large farms.

To summarize the illustration, Rajabu runs a small cut flower since 1999 in suburban Dar es Salaam. He is both paying and receiving money through M-PESA since 2009. He is paying suppliers in Arusha (three times weekly) and payments are between 200' - 1 million TSHs. His customer orders are the basis for purchases but he is not paid until he has verified shipment from the city's bus terminal. He uses the M-PESA agents in the nearby shopping centre.

Lesson learned from Rajabu's story

A number of observations may be drawn based on the case. The impact on Rajabu's business is primarily on a more efficient logistics such as time from order to delivery has been cut down from four to two days. Since most of the procurement relies on his own liquidity, the shortened time span has led to less strain on his liquidity. He will receive his customers' payments much quicker – at the time when the customer has verification of delivery – which also improves the cash flow. The overall impact has been that more orders are placed per week, which influenced his turnover upwards. There is also time saved for Rajabu personally, which he uses to spend more time at this shop for serving customers and communicating with his suppliers. An additional advantage is personal safety[3] for Rajabu as the M-PESA is close to his office which minimizes the need for carrying cash.

Mini-case braids: Reuben

Reuben in Kariokoo sells hairpieces for plaiting hair. His shop, that is small but well organised, opened no more than 7 months ago and focuses only on wholesale of braided hair. Reuben had earlier worked for Darling and decided to start his own business together with his siblings, though he has the main responsibility. The start-up capital was a loan from a relative. The loan is already paid back. He opened the shop with his sister, who has left and run a similar business today. During his time at college, Reuben received money from his mother through M-PESA and found that it was safe, quick and convenient. For several of his customers in Moshi, Dodoma, and Morogoro he accepted (and preferred) M-PESA payments from the start of the business relationship. His first upcountry customers placed the initial order about 6 months ago and re-order about twice a month. Though orders are mainly placed over the phone, he has met all his customers in person before the business relationship took off. The shipments fall just under the allowed amounts (i.e. 200' -300' TSHs; approximately USD 130-200). He has got many customers in neighbouring countries who all buy straight in person at the shop, but normally deposit money in his bank account. His business has grown fast since the start.

The supplies are from Darling, only, that produces in South Africa, Kenya and lately has started in Tanzania as well. Hairpieces from South Africa are of higher quality.

He uses the nearby M-PESA agents in Kariokoo for cashing out customer payments. As Kariokoo is the prime location for wholesale and retail in Dar es Salaam, the agents often run out of cash. Sometimes there is no agent who can provide service so he has to wait till the next day. His business has a high turnover and his own procurement is cash in advance, which means that uncollected debts will delay his stock pile up. Hence, he does not have an overdraft facility or credit with the bank to handle minor interruptions in the cash flow. For a few selected customers he sells on short-term credit such as paying two to three days after delivery but sometimes he helps start-up business by giving them 2 weeks credit the first time.

His total liquidity is around 15 million TSHs (approximately USD 9,800) but this is not enough to run the business smoothly according to Reuben. If he could have around Tshs 37 million it would help him to run the business in a more comfortable way. The reason he needs this level of liquidity, it is that sometimes lack of cash limits his capacity to place orders since there is not enough cash to pay for those products. Another contributing factor is Reuben's purchase behaviour; he prefers to order large quantities and keep selling until very little remains in stock. Unexpected large orders also strain his liquidity, which has forced him to borrow money from his sister now and then.

[3] Dar es Salaam like many large cities in Africa has been hit with escalating thefts, robbery, mugging, often combined with assaults and personal injuries.

The contact with authorities is mainly thru Tanzania Revenue Authority (TRA) that he pays every 3 month after inspection of his ‘books’ and discussing the appropriate level. TRA screens and evaluates the taxes to be collected rather than solely collecting according to record keeping (as there is little trust between the business community and TRA). Reuben has a general business license but has not yet registered a company which is not required for businesses with an annual turnover less than TSHs 40 million (approximately USD 26,000).

Lesson learned from Reuben’s story

The story of Reuben is somehow similar to Rajabu’s but Reuben went straight from business start-up to using MMT (M-PESA) as his first and preferred means for receiving payments from customers based far outside Dar es Salaam. Hence, he had no prior experience of cash or bank transfer for his business. Because of the type of customers – local retail and wholesale customers visiting his shop (cash); foreign customers who deposits in his bank account before picking up the goods; and upcountry customers (M-PESA) – Reuben has a flexible approach to the methods of payment. Vodacom’s approach to expand M-PESA for every one has so far concentrated on increasing the number of agents whereas the quality of services is lagging behind in particular holding the necessary float levels and cash at hand. This is seen in Reuben’s search for agents holding enough cash for his withdrawals.

Mini-case Kway – the ‘bagman’

Kway runs a shop in the hectic Kariakoo area, selling bags and suitcases. He has been using ZAP for some time to receive payments from among others Dodoma customers. His transactions normally fall between 600’ and 1 million TSHs (approximately USD 400 – 650). Though most customers come and visit his shop while in Dar es Salaam - often to trade other products - they will place the orders when back home. Customers ‘over-shop’ while in Dar es Salaam, and the money is not always enough to pay. (I.e. paying and placing an order are mostly done at the same time in this type of business as most is cash-based.) The shipments to upcountry customers are done once per week. Once he has delivered the goods to the shipping agent, it is no longer his responsibility. The goods is insured by the freight company for any damage or loss. His main customers are in Dodoma, but he gets occasional orders from Arusha. Some customers still prefer payment by hand-delivery through the long-haul coaches, which comes from lack of knowledge according to Kway. He only sells on cash or pre-payment basis, as he has lost money on credit deals several times in the past. The ZAP service is a recent means of receiving payment for Kway who has used it since July 2010 for business purposes. For private usage, such as sending to relatives, he started a year ago; mostly for paying school fees. Customers who send through ZAP know him well and have been to his office several times. As he expresses it: “I can’t run away.” Most goods he imports directly himself from Dubai and China, but he also to a lesser extent buys from Chinese traders in Dar es Salaam. For paying overseas suppliers he is sending through the bank.

Lesson learned from the "Bagman's" story

The mini-case tells us that the advantages of MMT are found in a variety of business. Although often started for convenience reasons, the trading partners realise a number of effects such as less handling of cash (security improved), speed of transfer (improved cash-flow management), reliability of MMT (payments do not get lost in the system, which do happen with hand-deliveries).

Sample & Empirical Findings

The data collection took place during three missions to Tanzania; May, August, and October 2010. In total 110 MSEs, 32 M-PESA or ZAP agents, 2 MNOs, regulatory authorities, as well as a few non-government organisations (NGOs) were interviewed. The interviews with MSEs covered three areas, mobile transfer usage, formalization and regulation of business, and the diffusion process of mobile payment. The main focus was on actual usage and possible effect on the business. The most common platform was M-PESA as ZAP was rarely used among the interviewed MSEs, which was clearly indicated by the easy access to M-PESA agents in most urban areas. Our interviews did not include rural MSEs or agents.

	Dar	Moro	Sing	Mwan	Tot
No of MSEs	76	20	8	6	110
No of agents	23	3	3	3	32
No of MMT business users[4]	22 (29%)	2	1	1	26 (23.6 %)
No of MMT private usage only[5]	8	6	2	2	18 (16%)
No of MMT users total	29	8	3	3	43 (39%)
No of cash users only	38	11	6	3	58 (53%)
No of bank users[6]	16 (21%)	3	2	2	23 (21%)

Table 1: Sample and key findings

[4] These entrepreneurs are using MMT for business use. Some of them also use MMT privately. The private usage of "dual users" (businesses and private) are not captured in the "private usage only" statistics, which leads to the assumption that the private usage amongst entrepreneurs are actually higher than the "private usage" figure reveals.

[5] These entrepreneurs are using MMT, but only for private use. Taking into account the "dual users" (business and private), this figure may be higher in reality (se the above footnote).

[6] These are MSEs that actually use bank services for their businesses; mainly paying suppliers or receiving payment from customers. An additional type is those that import goods which require bank transfers.

The sampling was a combination of a brief pre-study and our knowledge of the Tanzanian MSE sector. The original method outlined in the proposal aimed to map a few specific sectors, which was replaced with a wider approach covering more sectors. The refined sampling was a result of the observation that M-PESA usage tended to vary according to purchase behaviour, size of transactions, distance to suppliers and customers, level of trust rather than characteristics of the sector.

The key findings presented in table 1 reveals that actually 23.6 per cent of the MSEs use mobile payments for paying suppliers or receiving payments from customers. Even though M-PESA is a new phenomenon, there are more mobile payment users than those relying on bank services. It is also evident that MSEs based in Dar es Salaam tend to rely on M-PESA more than those operating in smaller towns. In total, around 40% have used mobile money transfer for either personal or business purposes. This is similar to the penetration in Kenya nationwide. However, since Dar es Salaam is overrepresented in the sample the Tanzanian national average is probably less than 40 % reflecting on the low usage in e.g. Morogoro and Singida. The sample populations are however too small draw any statistically reliable conclusions. At this stage we can only hypothesize on the actual nation-wide diffusion of M-PESA.

Although the 110 MSEs cut across sectors, three types of businesses were more heavy users of M-PESA than others; cut flower trading (70%), handicraft and carvings (43%), and cosmetics (38%). The study includes MSEs from other sectors such as second hand clothing, stationeries, convenience stores, fashion and shoes shops, groceries and fruit sellers, agro-traders, car spare parts.

General findings

The study corroborates earlier anecdotal evidence that business usage among MSEs is increasing – right now 23% of the interviewed MSEs - but not surprisingly also reveals that cash payments, hand to hand, still dominate; cash is king. There are exceptional cases where mobile payment systems are the common means. In these special cases, often comprising a business cluster, the diffusion rate is as high as 70%. It is also found that business usage is not fully known by neither agents nor Vodacom, though many agents believe that there is an 80-20 split (private-business).

It is also evident that mobile payments right now have become an M-PESA ‘monopoly’ in Tanzania (as observed, ZAP doesn’t work properly due to too few agents). The recently launched service by Tigo may change the scene in a few months. Vodacom has developed an extensive network of agents across Tanzania using both old airtime agents and newly recruited and exclusive M-PESA agents. The network is growing fast as many M-PESA agents started in the last 3-6 months.

The agent network is perhaps growing too fast as many newly recruited agents cannot deliver services on continuous basis. In addition, security issues are not dealt with and knowledge of many smaller agents is poor such as sorting out payment order not being delivered properly (a customer may send to the wrong number). Due to high circulation of M-PESA deposits and withdrawals, it is seen as good business by the agents. Many agents cited that commissions reaching 100,000 per month.

The float is normally not a problem in urban areas whereas agents' cash flow in rural areas is still a challenge. There are exceptions such as M-PESA agents operating close to business districts with substantial deposits, which will deplete their floats early in the business day. Small agents that operate with limited float levels and that primarily target individuals are also around. The agents' floats are not adequate in these districts to meet rising demand and vice versa cash stocks are not sufficient for withdrawals. Often MSE customers have to visit three to four agents in order to finalize their transactions. The float among the visited agents ranges between 200' – 5 million TSHs (approximately USD 130-310). (2-3 million TSHs is the average). Most deposits are still less than 100 000 TSHs (approximately USD 65).

Perception and actual experience of getting access and using bank services have made the shift to mobile money transfer a fairly simple decision. The stringent conditions for even opening an account in some banks (applying for a credit line or a loan is obviously even tougher) in combination with slow services have underpinned the fast growth of M-PESA. The locality of some bank offices in down town Dar es Salaam and the time used in traffic jams also favours the use of nearby mobile money transfer agents. Further elaboration on MMT vs. bank services are laid out in the chapter "MSEs and bank services" below.

Some specific findings

The following sub-sections are based on interviews with MSMEs, MNOs, Banks, BoT, etc. By analysing the survey data there were five areas related to MSMEs use of mobile banking services; i) users' profile, 2) type of business, 3) rationale and impact, 4) the role of the agent network, 5) MSMEs view of banks.

Some deeper insights of the growing use of MMT: A user profile

Taking a closer look at the empirical findings may help understand how and why a service that facilitates 'moving money' can diffuse relatively quickly among MSEs in Tanzania. By 'profiling' an M-PESA user it becomes evident that it does not just happen in all business transactions but there are a number of characteristics of the business, type of customers, etc. First, there has to be trust between the sender and receiver. This is often defined as a 'business relationship' that is built up over time. Many respondents claimed that the have been doing business for more than five years, in particular with suppliers. It is clear that money is not just sent to anyone. The use of MMT could be triggered by either buyer or seller but mostly initiated by the seller. A second observation is the geographical location of buyer and seller; in most cases there is a distance of more than 150 kilometres between the two. Morogoro which is 175 kilometres from Dar es Salaam is an in-between case as good bus transportation makes a trip to Dar es Salaam relatively fast and easy favouring buying in person rather than ordering over phone or email. However, many upcountry customers from places such as Singida, Doodama, Mbeya, Moshi preferred MMT and goods sent on the long-haul coaches. The role of distance is its effect on opportunity to meet, which is also depends on the customers' buying behaviour and level of diversification. Many MSEs do not rely on one single line of business and instead procures a range of products, which necessities a trip to Dar es Salaam. The suppliers are too many and the value of each purchase too small for efficient use of MMT. A third feature is the type of goods – relatively standard or customized

– where standard products dominated for MMT. For cases where the specification was more difficult to provide such as fashion clothing, or new product lines in cosmetics, some suppliers had developed a system of returning goods. Hence, the customer could if not satisfied send back for cash compensation or different product.

Fourthly, the value of the transaction should be within the ceiling amounts set by Bank of Tanzania (BoT), i.e. less than TSHs 500,000 (approximately USD 330) for a single transaction (or 1 million per day). In the sectors where MMT was common most shipments were between 200,000 and 500,000 TSHs (approximately USD 130 - 330). A fifth finding was the frequency of ordering (or selling). Sectors with small value per transaction tend to be extremely cash dependent such as street vendors and market places. The high value business (i.e. low frequency) would normally fall far outside the allowed amounts for sending. Hence, most business using MMT tend be in the middle with ordering or sales taking place two to three times a week. However, there were exceptions where trading only took place twice a month at the most but the trading partners preferred MMT. A sixth aspect was the MSEs experience of MMT such as M-PESA. Businesses located in a cluster tended to learn and trust MMT faster than those operating in a dispersed manner (i.e. with less links to businesses in the surrounding area). This was also affected by the locality of agents such as nearby M-PESA agents providing adequate service. We also noted that MSEs' capacity to organise shipments was important, as freight companies do not have a business model that includes payment for the goods per se. Although the buyer is in most cases responsible for the freight it is the supplier that administers. The buyer takes the formal ownership of the goods once it is delivered to the freight company since this is when the MMT takes place. This arrangement is common due to the preference for prepayment among MSEs. A final determining factor for many MSEs has been the limited level of trust in MMT substitutes (banks, cash, etc). A majority of the MSEs are dissatisfied with, or has a negative picture of, bank services.

Where are the MSEs that meet the profile?

M-PESA is not sector dependent although freight and transportation companies are often mentioned as key users by agents. It is actually emergency payments to drivers that are most common. As indicated earlier, three types of business stand out as keen M-PESA users for business purposes, which meet most of the specified criteria for an M-PESA user. The cut flower cluster, purchases from either Arusha or Nairobi. Most of the businesses have been trading flowers for more than five years, some even more than 10 years and the supplier structure is very stable. Few change supplier if at all over the years. The value of transactions ranges from 200,000 to 500,000 TSHs (approximately USD 130 - 330) which fits under the maximum cap set by BoT. The products ordered are either quite 'standardised'; such as cut flowers and cosmetics, or known by the customers. E.g. woodcarvings and curio/handicraft are well known by the customers but there is opportunity to meet once in a while to discuss new designs, as many suppliers deliver themselves to the woodcarving cluster. The cut flower cluster uses MMT for both buying and selling, whereas the woodcarving cluster only for purchasing goods The cosmetics cluster uses MMT solely for sales as most inputs are imported. In our sample, these businesses are based in urban areas, particularly in larger towns.

Rationale for MSE to adopt MMT, and impact of doing so

The findings in this study point to a number of reasons why MSEs adopt MMT service at a relative high rate. The first ones are well known - and referred to in several earlier papers that concerned private use - that MMT services are fast compared to the alternatives, convenient thanks to a understandable user interface and a well-developed agent network, as well as affordable to most people. Many of the business people underscore that it saves time, is safe and that they can lessen their dependence of banks that many are tired of.

We did not quite expect that there also should be such clear indications of direct impact on actual businesses. It should be pointed out that our data on impact do not cover the whole sample, as it required additional interviews and a great deal of trust between respondents and interviewer. One of these aspects is quite simple – when there is less time spent on the bus or in line waiting your turn at the bank, you can spend more time in your shop and consequently sell more. Several entrepreneurs have reported that this newly won time is not only spent on prospective customers, but also on attending to administrative matters as well as looking after the appearance of the business. Moreover, the ease of ordering and paying for relatively standardised goods or services, and the consequential speedier logistics, enables businesses to lessen time between order and delivery (payment), hence improving liquidity. An order that used to take four days to complete that now only takes two, brings a liquidity improvement of 50%, not to mention that the customer is more satisfied with this as well. It brings more of a just-in-time (JIT) approach to the wholesalers, which now can order more often. Clearly, these are quite positive effects that lead to more efficient liquidity management and increased customer satisfaction.

As outlined above, it should be noted that our research indicates there are a number of prerequisites needed for this to take place. The main ones are that there must be a certain level of trust amongst the parties; there need to be a geographic distance between the supplier and the retailer, and the transaction volume must be lower than the regulatory maximum transaction limits, as well as high enough to motivate the transaction at all.

The MMT systems in Tanzania: opportunities and constraints

Mobile money transfer systems are a recent phenomenon in Tanzania, introduced in mid 2008. To develop the agent network has taken considerable time as the already existing 'voucher' network was not set up to meet the new conditions set by MMT regulations and business models. Three factors stand out as critical; agents' float and cash levels, knowledge and capacity, as well as security arrangements. The agent's float is the key instrument for instant deposits of money. Customer deposits are instantly active in their M-PESA accounts because of the design of MMT system. Hence, customers rely on agents' earlier deposits at NBC (National Bank of Commerce is holding the M-PESA float on Vodacom's behalf) to be able to send money immediately after a deposit is done at the MMT agent's office. The system works as long as the agents – normally two or three times a week – top up their floats by depositing cash into their NBC account. To balance the float according to customer demand is a non-trivial task, requiring substantial cash-flow management by the agent. (When the float is zero the agent cannot accept more deposits and there is sometimes a delay in the system as an NBC deposit may not instantly be credited the agent's float. Several agents complained about 12-24 hours time delay). Normally the agents need to deposit a sufficient float[7] for two days due to slow process. The float levels among agents vary a lot, from TSHs 200 000 up to several millions[8] (USD 130 to a few thousand). Vodacom is aware of the constraint in the agent network, which has led to the establishment of Vodacom's own M-PESA offices. These 'branded' shops keep higher float and cash levels to meet the increasing demand but have also stepped up security by handling payments in a more bank-like manner. E.g. the tellers have similar security system as a retail bank.

Many agents run parallel business and see M-PESA as a supplementary side business. These agents normally have little prior knowledge of financial transactions and therefore have to learn-by-doing from scratch. The handling and stocking up of large amounts of cash are potential bottlenecks for many agents that find it difficult to plan the demand for customer withdrawals and deposits. Mostly the M-PESA system is straightforward with few technical glitches and problems. Sometimes customers send to the wrong number and want to block a transfer which often requires the intervention by Vodacom as few agents know how to sort it out. As M-PESA in Tanzania is USSD-based (Unstructured Supplementary Service Data) there is no link to the handset's address book, which means that the phone numbers must be entered manually. This increases the risk of entering the wrong number. ZAP on the other hand, which is STK-based is better integrated with the handsets and offer such services.

The study showed that the majority of the agents visited operated M-PESA as a side business and normally had very little or no modifications for hosting an M-PESA office. Hence, there were few security arrangements for minimizing thefts and robbery. The exception was the Vodacom's own M-PESA offices that were more bank-like with safety glass and bars to deter break-ins. Vodacom's intention is to transfer these shops to private investors under franchise arrangements (Voogt, 2010). Several of the smaller M-PESA offices operating without increased safety measures were aware of the situations and had planned to step up security. This was more based on their own concern rather than safety regulations imposed by Vodacom or BoT.

The challenge for Vodacom presently is to make M-PESA accessible for everyone by decreasing the number of users per agent. In July 2010, M-PESA in Tanzania had 4,500 agents and four million users, which mean there are on average about 900 users per agent. In Kenya the average is about 600 per agent.

Vodacom's model to deliver MMT services draws heavily on the capacity of the agent network. The model comprises three layers; agents, super-agents, and aggregators. The super-agents are banks and should not be confused with aggregators that are not banks. This model was first introduced in Kenya (Mas and Radcliffe, 2010) and has recently been launched in Tanzania as well to solve the float and cash levels amongst smaller agents. In this structure the small agents operate in a tiered system supported by an aggregator that supplies cash on commission basis as 30 % of the aggregatee's commission is drawn by the aggregator.

[7] The situation is similar in Kenya which draws from how M-PESA is set up versus the custodian banks (SCB and CBA) and interbank arrangements (Eijkman et al, 2010)

[8] According to Vodacom's requirements for M-PESA 'stand-alone' agents, the minimum float should not be less than Tshs 3.5 Million (www.vodacom.co.tz).

To conclude, MMT is not for every business; the type of business and need for MMT depends on a few factors. First, in situations where buyers and sellers are located nearby there is no obvious need to use MMT as cash is preferred for most transactions. Since the M-PESA tariff structure favours sending larger amounts, with high fees for sending small amounts such as TSHs 5,000 (approximately USD 3), there is little incentive to use M-PESA for petty trading. The ceiling amounts automatically block big transactions, as TSHs 500,000 (approximately USD 330) is not sufficient for most medium sized and larger firms' transactions. Moreover, the business situation is a key factor whether MMT will work or not. In almost all cases where MMT is used there is long-lasting business relationship, often five years or more. Hence, short term or no commitment at all between buyer and seller will favour other means of payment. An additional feature of MMT is the account type, individual rather than corporate, which means that is a physical person that receives instead of the company as a legal entity. This is a major deterrence for most large firms.

MSEs and bank services

In our sample 21% of interviewees regularly used a bank for business purposes. Many had earlier experience of baking and had hold accounts for private use before starting a business. MSEs using banks are either small, rather than micro, or having SME customers/suppliers that require bank services. MSEs relying on imports normally use bank services, as MMT currently does not work cross-border, and would in some cases not have been able to facilitate the larger amounts required anyway. However, most interviewees claimed that (regardless if they used services or not) that banks are slow and expensive. Many payments that pass through banks, are however not transfers *per se*. The reason is that interbank switching (i.e. relaying funds automatically between banks), is reportedly working quite poorly. Hence, someone making a payment may very well go in person to a branch of the receiver's bank in question, and make an over the counter deposit to the receiver's account, rather than using his/her own bank as a transfer source. Our research did not cover to what extent bank payments per definition are deposits rather than transfers. As deposits with many banks are free, we are led to believe that the many interviewee references made to banks being expensive, rather relates to the fixed costs related to holding the bank account or actual *transfer* fees (for example for making international payments). *[Banking transfers section is to be slightly amended in the very final version.]*

This also leads us to believe that convenience and saving time in most cases play a more significant role than transaction costs in monetary terms, as an MMT transfer may actually cost more than a bank deposit.

The observation is that most small businesses want to spend as little time as possible running banking errands. Amongst smaller companies, there is also a sense of being intimidated by banks; banks make the MSE businesspeople feel small, and people who feel intimidated by banks are less likely to ever become a bank customer. Many non-bank business users stated that they would not meet the stringent conditions set by the banks for accessing certain services such as a credit account or a loan. The extent of business actually trying to convince the bank, or simply not trying was not clear from the data collected. A number of MSEs had bank accounts for private use but did not see any benefit of using a specific account for the business or request other services.

Hence, MSEs seem to turn to banks when MMT systems are not able to facilitate their needs. The reasons are that transaction sizes are too large for MMT systems, or MMT systems lack the adequate links to the rest of the financial system. This may for example occur when a supplier or a customer prefers a bank transfer, or in international situations.

Discussion: MMT - an enabling MSE growth factor?

To recapitulate, MSEs in Tanzania face a number of growth barriers which are not addressed in this particular study. The role of 'moving money' in economic growth has been pointed out elsewhere and our study of 110 MSEs corroborates that how efficient money is transferred between businesses has a direct impact on the financial conditions for growth. The study set out to analyse the impact of MMT on MSE business conditions, in particular growth factors. The design of the study does not allow for any far-reaching conclusions whether MMT users are more successful than non-users. At this stage, the main conclusion is that MSEs do use MMT services to facilitate financial transactions mainly with other MSEs.

The profiling of the users does disclose a number of interesting findings such as relying on a smaller number of suppliers and customers, which facilitates development of trust. The MMT users seem more focused than non-users by less variety in their product or service offerings which is prerequisite for shipping goods to customers without prior inspection. All MMT users had a fixed locality for their business and had acquired the necessary degree of formalisation for their specific business. E.g. there were no street vendors found among the users. The MSEs showing these characteristics had most likely behaved similarly without the introduction of MMT services. The hen and egg discussion will not tell us if non-users will turn into the 'profiled ones' by using MMT services or they need to transform their business in that direction first. Our educated guess is that the MSE must mature and develop first before being able to adopt the technology and benefit fully from its services.

Do MMT services contribute to growth? Small transactions now take place instantly and, within national borders, independently of location. However, when we look at the role of mobile money transfer services in business growth, we need to recognise the fact that this is a small - but important - business supporting function. It does not address many of the challenges that MSEs are exposed to, but it does without doubt make the ever-current need to move money over distance easier, as well as affordable and accessible to large market groups new to financial services.

Our findings indicate that the time-saving factor – often described as a "convenience factor" – actually support increased sales as well as gives time to support other business matters, such as more efficient management of staff, or making the shop more attractive to prospective customers. Moreover, one of the constant battles that MSEs are fighting is that against poor liquidity. Several of the entrepreneurs we interviewed reported liquidity improvements of up to 50% as a result of speedier logistics and consequently faster delivery to (and payment from) end customers. It makes little sense to use any of the established liquidity ratios to calculate stock turnover or mathematically illustrate this further, as the entrepreneurs we have interviewed hardly kept their larger orders in stock, but merely could deliver to their customers faster. As these traders normally have to pay when the order is placed, which ties up cash just the same way as stock would, and hence is of equal relevance. It is interesting to note that freeing up of a scarce business resources (in this case cash), also directly promotes an increased turnover.

It seems that few entrepreneurs have started using MMT for these reasons, but rather from less precise advices from friends, relatives or M-PESA marketing staff. We also have the impression that realising these advantages have made entrepreneurs more aware of the benefits they bring, and hence can lead to better organised and managed businesses.

A deeper look at the data reveals that many MSEs using the money transfer services had or could have access to bank services. Hence, for the more developed MSEs it is not lack of bank services or being denied such services that are the bottleneck but the perceived (and real) poor services delivered by the traditional retail banks. It is evident that cash at hand remains the most important financial resource for the majority of the MSEs but also for the MMT users. This is partly because there is little opportunity for deposit taking in the current MMT structure as maximum deposits levels are set at fairly low levels.

The future of mobile financial services

The M4P approach calls for systemic change, by addressing causes rather than symptoms. In the wider view of market systems, mobile money transfer services are a small support function that lubricates business transactions. It should be noted that today's MMT services were designed by MNOs and primarily for P2P remittance. The underlying driver was mainly to generate revenue and diminish churn rates. It is increasingly recognized that mobile financial services are easily accessed by the so called unbanked, basically the poorer parts of society in developing countries.

MMT is, as already stated, a market success amongst a broad public. Nothing suggests that the demand of sending money would decrease in the foreseeable future. It is a service that has, and will have, significant relevance to large groups. We can already see that previous scenario predictions are being realized. In Kenya, Equity Bank is connected to M-PESA, offering money transfer between the customer's M-PESA account and a specific M-KESHO account at Equity but also includes interest, micro- savings, insurances and credit (Mas, 2010; Equity Bank, 2011). The service is also fully integrated in the cell phone by either JAVA or USSD (Mas, 2010).

This integration was made possible by the Central Bank of Kenya (CBK), which issued new agent banking regulations in 2010, allowing banks employ retail outlets for cash in and out transaction. These outlets can now also and promote financial services and receiving account applications (although not approve them). Safaricom is, in addition to Equity Bank, also connecting M-PESA in Kenya with the accounts of other banks. (Mas, 2010).

The service offering is hence expanding to meet demands amongst market segments with different sophistication. This is most likely happening without one side of the spectrum benefiting from the other; as clients move "upwards" to more sophisticated financial services, there will still be a need for the basic services from users at all levels of sophistication.

Many of the users that this report illustrates use MMT as a substitute for cash transfers. It is evident that several use them not only for *transfer* of value, but also for *storage* of value (small scale savings, or deposit for safety to withdraw at a later point in time). There is presently already a range of needs reflected in the market. It is however not likely that there will be huge movement towards more advanced services in near future, considering the very strong cash history and limited previous exposure to financial services.

Business usage of MMT is currently mainly taking place over services designed for private use. It is equally true that business usage of mobile financial services will expand out from MMT to a range of more sophisticated services. Business packages designed to meet the particular needs of densely populated market segments, including for MSEs, will evolve. The pace of this evolution will largely be defined by service providers' confidence in the MSE market segment to generate return on investments, as well as that of financial regulatory progresses. Such regulatory adaptation to business must address transfer and balance restrictions, as well as how progressive service providers, and their alliances with banks, will be allowed to deliver new services. For example, there is a clear need for expanding businesses to separate the MMT account from the business owner, and instead link the account to the business entity itself.

Mobile financial services policy and regulation do not exist in isolation; it is affected by local, national and international *business* policy and regulation. To exemplify, the progress of the EAC customs union implementation will affect how the companies illustrated in this report will be able to trade regionally. National and local policies on formal- and informal businesses will affect how and where businesses are allowed to trade at all.

The increased proximity between new mobile financial services and traditional retail banks points to the fact that both service provider types are interested in the services provided by the other. Banks are showing an increased interest in the expanding segment of previously unbanked and remittance market. Banks also seek to defend its current upmarket market segment that increasingly is turning to new services for part of their service needs. Mobile providers on their part need to expand their offerings but are restricted by regulatory boundaries once the MMT services expand into areas defined as banking by the central bank. Their options are to either obtain a banking license, or to establish mutually beneficial alliances with holders of banking licenses.

One MMT constraint bound to change, is that of MMT systems limited or non-existing links to other parts of the financial system. In Kenya, limited transfers can now take place between the M-PESA account and Equity Bank in the M-KESHO arrangement outlined above. Although there is much to wish for regarding inter-bank switching in Sub-Saharan Africa at large, clearly the growth MMT in the business community is limited by not being better connected to the formal bank world. Also in Kenya, M-PESA has a small-scale arrangement with three international money transfer services; Western Union, Provident Capital and KenTV. At this point, money can only be sent from these three in the UK to Kenya, and hence be received by M-PESA account holders, but not vice versa. None of these "connecting" services are currently available in Tanzania, but Vodacom is working to make it happen (Voogt, 2010).

The traditional regulatory challenge is to allow for new services to evolve whilst maintaining stable financial mechanisms and market confidence in the financial system. New challenges will include keeping the public aware of where services from one provider end, and services from the next provider begin. In other words, where a bank is providing services "behind" a mobile provider, it may not be obvious if the service is being delivered with or without a banking license. This may be hard to assess for an educated consumer, let alone large user groups with limited education or exposure to financial services.

In addition to the "established" services to enter into the mobile domain – micro level savings, credits and insurances, it is possible that we will see other, more advanced options for placing money. One obvious facility is to handle exchange rates for cross-border transactions. Future expanded services could also include options to small-scale investments in shares, mutual funds and bonds. Further, payments to other entities than to pre-registered commodity providers could be foreseen. Such frequent payment receivers also include various tax receiving agencies. Currently in Dar es Salaam, certain micro enterprises have to pay tax at six different government offices, in person, for various purposes (FSD-Tanzania, 2010). Surely, we are inevitably to see a more effective tax payment regime is in the future; it would regardless of which be advantageous for entrepreneurs to be able to pay their taxes without going to the offices in person.

This study's results in a context

The use of mobile money transfer in our MSE sample is approximately double compared to the national average among the public. This can be explained by three observations; 1) the MSEs were located in urban areas and mainly in Dar es Salaam, 2) the MSEs studied were micro, but by and large formal enterprises with a fixed locality having most required permits and licenses required by the authorities, 3) the MMT users were fairly successful MSEs that do not represent the average Tanzanian in MMT usage. Actually the MMT users could be portrayed as "middle" in our total population in terms of size, formalisation, business locality, etc., as neither the smaller micro-enterprises nor the larger enterpriser used MMT for business purposes.

Morover, our sample was not selected from the extreme micro- and informal businesses that represent the poorest population in Tanzania. For instance, our sample enterprises had access to means to start-up a business. In donor statistics, many of them (23%) would, as occasional bank users, be classified as "formally financially included", and the MMT users as "informally included". There are however reasons to believe that this segment is important. As stated by Hallberg (2000), micro- and small-scale enterprises account for a large share of employment in most developing countries and 90 per cent of all enterprises operating Dar es Salaam are MSEs (NBS, 2008). The income generated in the segment primarily studied here, spills over on poorer segments in terms of purchases of goods, employment and grants or credit to family and friends.

There is sometimes a tendency in the North to believe that slow development is overly a consequence of lack of access to various types of infrastructure. Although this is true in many cases, in particular for rural poor, there are supplementary explanations. In terms of financial inclusion, there are similar threads of discussion regarding access. In our sample, we have found a very pragmatic stance on access to financial services. MMT is frequently used as it is viewed as a convenient, time-saving, cost-efficient and safe means of paying and getting paid, when certain situational criteria is met. The services of retail banks are used, but only when the situation so requires, as bank errands are a bit more expensive and takes more time. These entrepreneurs value the services brought to them by MMT as it makes their life easier. They can spend time saved on increasing sales, and they may increase turnover as their liquidity has improved as a consequence of a faster payment mechanism. In this context, it is fair to say that MMT services improve businesses and support growth, as it releases scarce resources (time and liquidity). It would however be an exaggerated conclusion to believe that access to MMT completely transformed businesses exposed to it, or that entrepreneurs were significantly poorer prior to the introduction of MMT services.

The launch of MMT services in Tanzania like M-PESA was mainly about rolling out an 'access' structure as the MNOs were fairly sure about market demand. The early adopters in the MSE segment have mostly been in business for a few years and understood the potential for facilitating existing business. Hence, the adoption was triggered by substituting other means of paying suppliers or receiving customer payments. An observation could therefore be that *market* inclusion works in tandem with financial inclusion.

Policy recommendations

The market has shown that it is ready for MMT services. The MSEs interviewed show a slightly higher adoption rate than urban Tanzanian in general (23.5 vs. 21 per cent). Numerous studies of M-PESA of Kenya and a few recent ones on the case of Tanzania verify quick diffusion rates though still higher among the banked but slowly penetrating into the unbanked world.

On a policy level, there are three apparent "frontiers" to pursue for increased diffusion of MMT services to the MSE sector. The frontiers comprise partly a step towards mobile banking rather than just a money transfer service.

One such frontier is increased integration between MMT and the banking system, as we have now started to see in Kenya. This is not only a way of sending money across several systems, but also serves as lubrication for increased business exchange between smaller and larger businesses. The regulatory challenges may be larger here, as it will include interfaces between different "tiers" of service providers, and in order to keep the public's confidence in the system, a certain level of clarity is needed on who is who in terms of service delivery. Related to this, there is also a need by regulators to revise the current 'loose' regulatory framework to formulate clear regulations to current and prospective MMT service providers, for example on transaction volumes, business use of services, security, and using the service for small-scale savings. This is obviously related to the discussion on tiered service offerings below. Lack of clarity and uncertainty is not good for any business – and nor for the confidence in the financial systems. By setting the rules clearly, the playing field is more predictable and this will promote further investments and competition.

Another such frontier involves the establishment of a business version of MMTs that could address the specific needs of MSEs. The current MMT services were designed to transfer money efficiently, not to enable or facilitate business-to-business payments. We know that there is a need to have corporate (rather than individual) MMT accounts. Other functions could involve payments of taxes and salaries as well as functions for generating reports for book-keeping purposes. Several tiers can be envisaged with levels of "know your customer" (KYC) and anti-money laundering (AML) measures implemented. Similarly as today, lower KYC and AML levels would enable a lower market tier with lower transactions and balance caps, as well as a simplified registration process. Similarly, KYC and AML levels more equivalent to banking standards could be arranged to cater for larger transactions, possibly restricting cash in/out transactions to agents that are geared for larger requirements on liquidity and float, as well as with proper security measures implemented. Support can be aimed at regulatory level, and involve facilitating dialogue aspects inclusive of service providers and user groups alike.

A third frontier is *international, or at least sub-regional (for example the East African Community, EAC) MMT*. It would, just to exemplify, make life much easier for the flower traders we have come across in our market contacts. It is a policy harmonisation process that already has begun on EAC level, and it is an important one.

An East African Payment System (EAPS) is said to be linking national real time gross settlement (RTGS) systems in the future. Further, EAC member states will also on a sub-regional level aim to provide a harmonised response to MMT services, to support the establishment of a modernised regulatory structure and sub-regional market integration (East African Community Portal, 2010). The regional integration and harmonisation of financial systems will clearly support regional businesses' integration at large, and should be a priority for policy makers and donors alike. Although a clear policy and regulatory framework is a necessity, it is important that harmonised regional policies will be completely cemented due to its international dimension. There should also be a platform in place for on-going dialogue and development, where also the private sector is involved - both as service providers and as users. In such an on-going forum, multi-stakeholders discussions can be held on market- and regulatory imperfections, as well as the development of market demands, offerings and technology. This will be important so as the regional dimension will not be hindering the development of financial services in the region. Support can also here involve technical assistance to central banks in this aspect, and to facilitate dialogue with private sector actors, both MMT service providers and business users, of course inclusive of MSEs.

Tiered offerings are also bound to happen, as evolving market needs are being more clearly articulated, and MMT providers and banks are getting closer to each other. Poorer users will however not be particularly interested in paying a premium for higher transaction and balance limits that they will not come close to anyway. This, along with the fact that most agents will not be able to move up to a higher tier, will also bring a tiered agent structure. In such a structure, certain agents will have to handle higher demands on security, liquidity, reliability as well as KYC and AML. It is likely to assume that it will be easier to recruit higher tier agents in business district with substantial supplementing business, as these will have to be more "institution-like". This scenario may hence be very good for MSEs in more business-intense areas, but may increase the financial access gap between urban and rural areas. The on-going policy harmonisation work on EAC level on agent/branchless banking may address these matters.

A fourth frontier comprises the possible role of facilitating the situation for MSEs' financial needs. This role may be financed and guided by neutral actors such as NGOs, donor agencies, microfinance organisations (MFIs) that are not directly linked with the commercial aspects of the MMT services. The facilitation should focus on functions that support the MMT 'market' in general rather than funding individual companies' activities. The support could take form of establishing a forum for discussing business use of MMT and M-Banking services, clearly related to the recommendations on a regional forum above. The challenge is to identify and/or associations that represent the MSEs as they are customarily not well organised. The objective is to lay a foundation which provides a voice for the numerous MSEs as the roll out of MMT services to date have been driven by MNOs in a push-manner rather than pulled by an articulated market need. The forum should in addition to MSEs, invite key stakeholders such as BoT, FSD Tanzania, key MFIs, retail banks, the MNOs, donors active in financial inclusion and private sector development. Support can include forum facilitation, technical assistance to BoT and financing of MSEs participation expenses.

A final frontier – drawing on the discussion above - concerns the offerings by MNOs such as Tigo, Vodacom, Airtel and Zantel. Our study has document that a large number of MSEs use MMT for their businesses' financial transactions. It is also evident that the current offerings not were designed with MSEs in mind in terms of technology, transactions caps, agent capacity, etc. It is our belief that a tiered system should be in place which would cater for the demands of business rather than individuals P2P transfers. The first step is awareness among the MNOs about the MSE usage to address shortcomings in the agent network and/or adjustment of technology. The regulatory aspect is crucial, but the long-term growth will depend more on the capacity of the agent network to meet the increasing demand driven by MSEs.

Scope for further research

Firstly, our study points to a number of lessons learned for understanding MSEs' use of mobile money transfer. However, the study was limited in scope and had an urban bias which means the data cannot verify how widespread the phenomenon is across sectors and location in Tanzania. Further, the impact analysis was based on a small sub-sample which also highlights the need for additional verification. Hence, there is a need to conduct more comprehensive and thorough studies of the role of MMT in MSME[9] financing. A three step approach is envisaged; i) a survey using a randomized sample that enables an analysis of the scope, i.e. quantitative methods using questionnaires, etc., ii) impact measurement of mobile money transfer in a small sub-population using qualitative methods, iii) to understand the diffusion of MMT by studying the drivers for adopting the technology. The rationale for such a study is that we need to know how the mobile money systems can become more responsive to the concerns of all stakeholders as there is limited knowledge of mobile money practices among MSMEs (MSME owners, policy makers, financial institutions, and international development agencies).

Secondly, more research on the *requirements of a tiered MMT service approach* is required. The findings of this study suggest that there is a market demand for an MMT service able to facilitate small business needs; with higher transaction- and balance limits as well as higher security measures in place. But such a service clearly increases the requirements of the service delivery chain, as well as on KYC and AML procedures. Consequently, a regulatory nod is also a requirement. More comprehensive research along these lines could highlight market demand, the position of service providers and the regulatory point of view. Use

[9] In proposed further research, we suggest that also medium-sized enterprises to a larger extent are included. We therefore use the term MSME; Micro-, Small and Medium sized Enterprises, when discussing proposed research.

Thirdly and perhaps related to the tiered service thoughts above, a greater understanding of the increased proximity in between MNOs and banks is needed. We need to better understand the dynamics of the intertwined service delivery, including how the new offerings are being adopted by the MSME segment, how the market is likely to develop, and how regulatory concerns affects the development.

Fourthly, the role of financial inclusion on poverty reduction has been lively discussed. In the context of MSME adoption of MMT and other financial services, we propose further research on *the role of market inclusion* along the lines of the M4P framework. . Could financial inclusion on its own lead to market inclusion? The question is posed more than as an academic exercise, as the interplay between the two will affect any intervention to support MSE growth. One such area is how the overall business environment and capability of the MSEs relate to the need for financial services. A lesson learned is that most MSEs currently using mobile financial services are probably not those that are in high need of support to develop business and facilitation to enter into the market. Hence solely focusing on improving the MMT services as such will most likely still leave a large proportion of the MSEs outside the formal markets. Our study did however not focus on these informal and micro enterprises that operate in market places or street vending. We have especially not included rural MSEs in our sample that normally are lagging in adoption because of limited exposure/knowledge as well as weak rural MMT agent network.

A fifth concern is a more *fundamental understanding of MSME needs of financial services*, which seems relevant for two reasons; i) mobile payment/banking services have, by and large, been supply driven to date as little adaptations for the MSME sector exist in the MNO offerings. ii) As most MSMEs have not been formally included in the financial sector, retail banks and MNOs have limited knowledge of their specific needs. Research has mostly focused on the need for credits and loans (such as the role of MFIs) but less on the impact of efficient payment models to improve the cash flow. The World Bank's ICA studies (Investment Climate Assessment) show that small firms are more credit constrained than large ones (41% vs. 11 %). For micro firms it is expected than the situation is worse. However, MSMEs financial needs go beyond loans that could be better matched with mobile money services if the needs are studied in-depth in a multi-disciplinary fashion as financing is intrinsically linked to the overall business context.

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