

The Cultural Foundations Supporting M-PESA's Technical Transformation of Local Economics in Kenya through Increased Money Mobility

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Abstract

Less than a decade ago, in Kenya, the preferred mode of small-scale business transactions was „cash in hand“. Though Kenyans could conduct business with whomever they pleased, it limited when and where such business could take place, thus placing certain boundaries on the culture of business relations and the growth of local economies. However, this started to change with the launch of M-PESA¹, a mobile-to-mobile money service in March of 2007. Within its first four years, it had over 9 million users, fundamentally altering the existing „cash in hand“ boundaries on business. M-PESA led to the start of a grassroots economic transformation as the gap in the use of both technology and financial services between urban and rural Kenyans narrowed. Its introduction has removed, as an obstacle to small, rural business the lack of access to banking services and allowed anyone with a cell phone to send and receive money. Moreover, this service is not tied to a bank account and the cash is readily accessed at any of the 40,000+ agents around the country. This paper will examine how this new mobility in money transfer has altered some of the priorities seen as necessary in the financial sector in order to stimulate the economy, postulate as to why this new idea was so quickly adopted and finally analyze how it changed the culture of business relationships in Kenya.

Key Words: M-Pesa, Money, Mobility, Kenya, Economy

INTRODUCTION

It is surprising to most people that one of the biggest success stories in the use of mobile money technology has occurred not in the halls of Silicon Valley or in the nations of the global north, but in Kenya, a relatively small country in sub-Saharan Africa. Its name is M-PESA, a mobile-to-mobile money service application that is now a household name in Kenya. Its' growth has been so spectacular that it has been described aptly as having —gone viral and has catapulted to the top of the economic growth chart in the information and communications technology (ICT) sector, a position prior held by the growth in mobile phone usage (Morawczynski, 2011).

From its inception in 2007, M-PESA quickly found traction in the Kenyan marketplace gaining over 1 million users that year. By the end of 2009, its' user base had ballooned to nearly 9 million individuals corresponding to 40% of the Kenyan adult population. By March of 2013, M-PESA's registration numbers were at an all time high of 15.2 million users and the Kenyan Communications Commission reported that the average amount of money transferred on the M-PESA platform per month was a staggering 80 billion Kenyan shillings per month which according to the International Monetary Fund (IMF), accounts for approximately 31% of the country's gross domestic product (GDP) (CCK, 2013; Worldbank.org, 2013).

¹ M-PESA: —Mobile-money!; *Pesa* is the Swahili word for money.

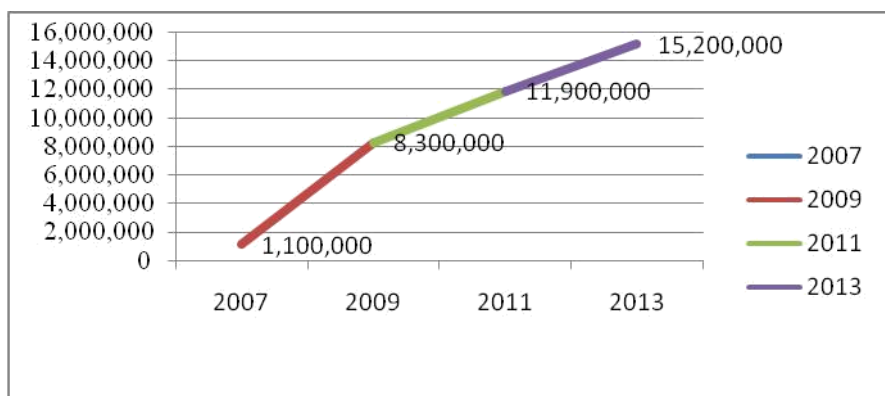


Figure 1. Increase in Registered M-Pesa Users (2007-2013)

The success of M-PESA in Kenya raises multiple questions for economists, anthropologists, psychologists and policy makers among others. Money-transfer apps have been introduced in other countries; however, none have experienced the same growth as noted in Kenya (See Figure 1). M-PESA accounts for 18 percent of Safaricom's total revenues (more than SMS and data combined) (CCK, 2013). This paper seeks to explore some reasons why M-PESA experiences high growth in Kenya by examining how this new mobility in money transfer has altered some of the stimulus priorities seen as necessary in the financial sector, postulate as to why this new idea was so quickly adopted and finally analyze how it changed the culture of business relationships in Kenya.

Altered Priorities in the Financial Sector and the Resulting Economic Conditions that Influence M-PESA's Success

The adoption of M-PESA came at a time when Kenya was ripe for change. The elongated trajectories of growth in the global north that were a necessary result of the speed in which technology was being developed, tested, used, antiquated, re-mastered to meet new challenges and then re-launched into public use, created specific steps that were assumed to be necessary in the adoption of technologies. By the 1990s when the tech sector reached its boom in the global north, the political growth of Kenya and the increase in the number and level of education in its populous had cumulated to provide fertile ground for the adoption of the newest tech gadgets. Global interconnectedness introduced Kenyans to resources and ideas available in the world market, to meet their challenges and sidestep social restrictions. This resulted in an ICT growth that bypassed some of the growing pains experience in the north and was fueled by the cultural, economical and political climate within the country (Shrum *et al.*, 2011). For example, a quick survey in my classes in Kansas indicates that most of my students still have a land-land phone at home, where as this is an anomaly in Kenyan homes. The majority of Kenyan children born within the last decade have no concept of what a landline telephone is. When asked about this by IBM's Think tank, Paul Kukubo, the chief executive officer of Kenya's ICT² City Project said the old analogue phones are antiquated and the new generation in Kenya doesn't comprehend a need for an immobile telephone that tethers one to a specific location in order to communicate (ibm.com, Think interview 2011).

Political-Economical Conditions that Influenced M-PESA's Success

M-PESA was launched in March 2007, just nine months before the infamous general elections that resulted in the devastating post-election violence of 2007-2008 (Kanyinga *et al.*, 2012). This period in the history of Kenya was critical to the spreading of M-PESA, because it was a time when several handicaps in the country's economic structures came to the forefront. Telephone landlines were expensive, limited and plagued by outages thus, by 2007, 8 million Kenyans had embraced the ease provided by mobile phones with 54% of adults either owning a cell phone or being able to access one (Arora & Ferrand, 2007). Additionally, over 65 internet service providers (ISPs) in the country resulted in 3 million internet

² ICT (Information, Communication & Technology). As part of Kenya's future development goals, 5,000 acres have been allocated for a US\$10 billion dollar project to construct a techno-city that is projected to be the hub of ICT in the region. (www.konzacity.co.ke)

users (CIA, 2009). Indeed it was the national and international proclivity to interaction by mobile phones and internet access that news of the political situation was quickly disseminated despite a short-lived attempt to silence the media.

Despite being able to communicate on the phone, another structural weakness was magnified; the challenge of transferring small amounts of money to family members and loved ones in the case of emergencies. These emergency funds could purchase a bus ticket, food, water, pay utilities, rent, etc. Unfortunately, the reliance on the old brick and mortar banking system proved to be a hindrance in getting financial aid to those who needed it. In some cases, the banks were closed due to the violence, but the greater challenge was tied to the fact that in 2007 only 19% of Kenyan adults had a bank account (Morawczynski, 2010). This percent was an aggregate of urban and rural populations with most rural residence having no access to a bank or any financial institution. The mode of getting money to family was limited to sending it with trusted friends or relatives. However, due to the post-election socio-political climate, few people were travelling and fewer still to the places where the money needed to get to.

The rural-heavy residency of Kenya and high levels of unemployment veritably influenced M-PESA's success with approximately 80% of the population living in rural areas and predominately engaged as subsistent farmers or pastoralists with limited liquid assets and access to banking institutions. Less than 5% of Kenya's total population is registered as holding a formal job of which three quarters are employed in the agricultural sector (CIA, 2010). An independent development programme, the Financial Sector Deepening (FSD), reported that Kenya's greatest resource shortage (32.4%) in both urban and rural livelihoods was the lack of cash income accounting for more than twice the shortage in food (15.2%) closely followed by clean water (13.8%), medicine (13.5%) and lack of fuel and shelter falling much lower than 10% (Morawczynski, 2010). With the combination of a heavy reliance on informal means of earning money, large portions of the population living in rural areas lacking banks or microfinance institutions (MFIs) and inadequate means of transport to towns with access to financial institutions, the country was ready for a service provider to think outside the models used in most of the developed world and come up with a solution unique to rural Kenya.

When Kenya introduced its national economic strategy laid out in Kenya's Vision 2030 plan, the field was open for savvy entrepreneurship to tackle challenges with government backing in six prioritized sectors. Information technology and Financial services were two of the six sectors that made up 57% of Kenya's GDP and thus were focused on in an effort to increase the GDP in 2012 by 10% per year from 6.1% in 2006 (Government of Kenya, 2007). The other sectors are tourism, agriculture, wholesale and retail trade and manufacturing. Kenya's Vision 2030 addresses more than just these six sectors to include long-term macroeconomic stability, government reform, increased equity in wealth creating opportunities and infrastructure, access to energy, security, water and sanitation, human resource development and equity for vulnerable groups such as the youth and women.

As only one of two mobile service providers in 2007, Safaricom, had already penetrated the market with a robust system in place to accommodate 80% market share that it owned. It started first as a subsidiary of Telkom Kenya in 1997 before Vodafone, a UK based company, acquired 40% of it in 2000 and became the think-tank that birthed M-PESA. Its business model supported the Vision 2030 project under the financial sector by increasing access to capital and by developing services that were implementable across the country. It opened access to wealth, building opportunities especially to women and youth as small business owners in all levels of the economic strata could sign up and received training as agents for Safaricom offering mobile phones, SIM cards and airtime scratch cards.

Under the guidance of a South African CEO, Michael Joseph, Safaricom effectively branded itself as being uniquely Kenyan, extensively marketing to various locations countrywide as a brand made to meet Kenyans in their diverse lifestyles from nomadic cattle herders to office workers. As Morawczynski (2011) noted in his research:

The value of Safaricom to Kenyans was made especially clear during the (mobile operator's) MO's initial public offering (IPO) in June of 2008. 10 billion shares, or 60% of Safaricom, were offered to the public. These were scrambled up quickly, and became over-subscribed by 500%. For many Kenyans, it was their first time investing in capital markets. Several informants in Kibera had taken a significant chunk out of their savings,

or acquired loans from friends and family, to purchase the shares. They all wanted a piece of Safaricom and were not deterred by the minimum initial investment, which was 10,000 Ksh (p.60).

In village markets, Safaricom's unmistakable green color became commonplace, as M-PESA retail outlets were required to paint it on their stores. This tactic embedded Safaricom in the minds of residence increasing brand awareness, trust and loyalty (Chuhan-Pole *et al.*, 2011).

Cultural Contributors to M-PESA's Success in Kenya

As an anthropologist, the influence of culture has pre-eminence in the study of human behavior, growth and development and adaptations. In 1871 anthropologist Lewis Henry Morgan described societal organizations by looking at kinship models. He concluded that there are two distinct categories of kinship, those related by blood, which he termed as kinships of consanguinity, and those related by marriage, that is, kinship by affinity (Grijp, 1997). These influenced how a society is set up and develops its institutions. Though each of the 42 Kenyan tribes have traditional kinship systems that may have followed different trajectories of development, the influence of colonization lead to a post-colonial struggle to cultivate unity as an independent country while still maintaining tribal identities. The result in Kenya is a social environment that has strong ties to the extended family, however, many times, the location for schools and work are often far from the traditional family homestead. Safaricom slogan was simply —send money homel and it was effective. Most Kenyan families are described as multi-spatial, maintain at least two households and children in boarding schools, with a third, or more, of families divided between rural and urban centers (Agesa, 2004; Owuor, 2006).

Safaricom capitalized on these kinship ties better than its competitors, offering pay-as-you-go services and airtime billing to the second, instead of minute (or more) bringing down costs to communicate with family and friends. Because of its cost effectiveness, grandparents and other relations were gifted with phones which they could buy airtime minutes for in small, less expensive increments. By the time M-PESA was introduced, it only served to add to an already beneficial service in the structure of kin relations. Now money could be send at anytime to family in rural areas and one didn't have to wait to save enough money and get time off work to hand deliver the cash.

To many in the global north, the idea of electronically transferring money via ones cell phone brings up security concerns that will be addressed in a later section of this paper, however, in sub-Saharan Africa, hauling physical money had been a cause of increased crime and insecurity. M-PESA addressed that issue directly. In some market segments it has become the default mode of payment due to its increase in security, for example, to taxi drivers and small-scale roadside vegetable vendors who in the past were at a higher risk of being vandalized as robbers sought their cash earnings.

In a country with a history of resource scarcity, especially in settings with little guarantee of income, the culture evolved to avoid purchasing items on credit unless absolutely necessary. Though things are shifting in contemporary Kenya, this was still the atmosphere when M-PESA was first introduced and thus it was able to capitalize on the cultural preference by offering the service that allows prepayment. In so doing, the consumer remained in control of their resources by deciding how much and when to pay. This service was not available with the landlines; not to mention that many times landline telephone bills were very high and contended, which had kept most people out of the market.

Those who have the privilege of visiting Kenya and having an objective perspective are aware of the keen desire to improve the country that has permeated in the mindset of most Kenyans, especially those in urban centers, many of which are under the age of 35 and almost all are literate. This drive can be traced back to the requirement to educate girls and boys, that started right after independence, and was reinforce by President Jomo Kenyatta and President Moi long before President Kibaki launched Vision 2030. The Kenyan school system was set up for competition and integration. Admission to the best high schools and the country's handful of universities was merit based from the beginning, thus students from different parts of the country had the potential of attending the top schools, meeting with teens from all over the nation and learning together.

Additionally, cultural arts competitions were organized in such a way that students were motivated to advance to the provincial level in the hopes of winning and meeting students from the other eight provinces³ (+ Nairobi) in music and drama. The culture of the Kenyan school system was one that ultimately setup the country for integration. Students were taught from the same curriculum and interacted within boarding schools and inter-school competitions. Most of modern Kenyans have undergone this system of education, giving them a different perspective from their grandparents on the world as a whole and on cooperative endeavors with those not of one's tribe. Not only has this increased the willingness to try something new, or to compete in an entrepreneurial setting, education has opened the doors for Kenyans to the view that a world of possibilities is within reach. M-PESA is providing one platform from which this is possible.

For instance, marginalized populations including youth in their 20s and 30s are able to develop some level of autonomy with access to cheaper mobile phones and the ability to access funds. It has improved the plight of disenfranchised women allowing them to —hide| or save small amounts of money outside of the general family funds after selling crops or their handmade wares at the local market. The introduction of M-PESA's subsidiary, M-KESHO⁴ in conjunction with Kenyan owned Equity Bank, facilitates M-PESA savings accounts for larger amounts (Cisco, 2013). In the process of using M-PESA, they learn about money management skills and women's support groups that facilitate cooperative savings in a traditional bank have increased as money can be deposited through M-PESA.

Data from the first year after it was launched showed that those who first signed up for M-PESA were better educated resulting in the initial demographic being composed of —tech savvy| customers who recognized the value offered by an electronic mobile money transfer system (Mas & Radcliffe, 2010). Thus, Kenya's education system had produced a population that was ready to capitalize on new technologies.

M-PESA Changing Kenya's Business Culture

Probably, the greatest change in the business culture that resulted from the introduction of M-PESA was the shift from the belief that a brick and mortar bank was necessary for financial services to be conducted in a precise, well-documented and secure manner. Banks have been hailed as being central to growth in the economies of developing nations and housing crucial payment mechanisms (Nyamongo & Temesgen, 2011). However, M-PESA has proven otherwise. In 2009, Kenya had a total of 43 commercial banks. Currently, there are 44 total MFIs and commercial banks; 31 of these institutions are locally owned and together they have 1,209 bank branches across the country (Central Bank of Kenya, 2013). This is in stark contrast to the 40,000 M-PESA outlets countrywide with new agents being trained daily (Cisco, 2013). It would take decades to develop bank and financial institutional infrastructures to match what M-PESA has been able to do with their franchised outlets.

This structure has been successful because M-PESA is a money transfer facilitator, not savings or deposit account, but is held in commercial accounts, thus the funds are insured fully under the Deposit Protection Fund managed by the Central Bank of Kenya (CBK) (International Finance Cooperation (IFC) Report, 2009). A misconception is that Safaricom acts as a bank for these funds, however that is not true. Funds are available on M-PESA's transfer platform only after they have been placed there by the M-PESA account holder through transfer from one of his/her commercial bank accounts or by taking cash to one of the agents who then credits the customer's M-PESA account with the funds. If M-PESA users don't have a bank account, as is the case for many Kenyans, the funds are still deposited in a commercial bank by M-PESA on their behalf as per the requirements of the CBK, which regulates Kenyan financial institutions (Cisco, 2013). Confirmation of transfer is send back via SMS to the originating mobile phone. For both added security and to reach the widest customer base the amounts allowed for daily transfers are limited; ranging from Ksh 10 to a daily maximum of Ksh 140,000 (about USD 1600), with a maximum per transaction amount of Ksh 70,000 and an account maximum balance of Ksh 100,000, with no minimum balance requirements. This means that the average funds held in M-PESA accounts are only about 0.2%-2.3% of bank deposits. Safaricom documents all electronic transfers so customers can access —mini

³ As of 2013, the geo-political land divisions of the country have changed per the new constitution.

⁴ *Kesho* is Swahili for tomorrow

statements of their last five transactions and regular reports of all M-PESA transactions are sent to the CBK for anti-money laundering monitoring.

Security concerns for M-PESA agents is mitigated by the small amounts of funds that the service permits. Only 4.3% of users reported cases where funds were transferred to the wrong recipients, after investigations were conducted a third of these customers received a full refund, however, most of the cases were directly due to user error (IFC report, 2009).

The network of M-PESA agents forms the backbone to its success. These agents are self-employed franchisees that, after undergoing extensive training by Safaricom, invest their own capital in the system. During the pilot program that was conducted between October 2005 and May 2006, Agents had a difficulty trusting a text message and issuing money out of their own till to customers. To get past this hurdle, M-PESA issued cash advances to the agents, but the biggest boost resulted as customers showed great interest in the product when M-PESA became a means to purchase mobile airtime (IFC Report, 2009). Recognizing this, the company offered discounts if airtime was purchased via M-PESA and with that, the concept was sold to a Kenyan population of which the majority already had access to a cell phone. As the agents saw their profits increase, trust in the brand followed suit and the agents became catalysts in its growth as well as discouragers to fraud. Agents receive a commission from M-PESA transactions and airtime purchases in addition to profits that they incur when customers buy other items from their stores. Each agent maintains a cash float and has to keep a Safaricom paper logbook recording every transaction in detail (most of which is on the SMS confirmation that the agent receives). Recorded items are M-PESA balance, date, agent ID, transaction ID, transaction type, value, customer phone number, name and national ID number. Each customer also signs the logbook for each transaction. Some agents, especially in remote areas have had difficulty maintaining their cash float. This is a challenge that Safaricom is aware of and is seeking solutions to tackle it.

CONCLUSION

By 2010, 98% of M-PESA customers were very satisfied with the service with 84% stating that it had become a necessary part of their livelihood (Mas & Radcliffe, 2010). By increasing money mobility, it has allowed greater financial connectivity and education among Kenyans, many of whom would never have gained access to traditional financial institutions because of their age, their remote residential locations, the high minimums needed to open and maintain a commercial bank account, the inconvenience and intimidation in accessing bank services. M-PESA accounted for that by piggybacking on an already successful and pervasive technology, the mobile phone. The coupling of a low gradient learning curve and a simple user interface, allows for individuals to quickly understand the system and where necessary for family members to teach each other in the convenience of their homes. The app has easy-to-follow prompts that guide a user through the different screens and utilizes the phone's SIM card to encrypt the messages for security.

M-PESA's success has led to other novel ideas being proposed in various sectors, such as the use of mobile apps for healthcare. It has already shown that the Kenyan market is open to unconventional uses in technology opening up new doors for future considerations; from how we design our schools/educational curricula, to structuring new solutions for food and water shortages, to possible solutions in managing transportation concerns at the ports, across the borders with neighboring countries and within the nation as well as the role that Kenya's ICT plays in global markets.

Already, the average Kenyan has a different view of the scope of mobile phone use and money liquidity. Only the future will show how these different paradigms will shape new technologies and what new inventions will be formulated for the use and dissemination of resources.

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BIO-DATA

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