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Drivers of Mobile Money Services Development in Zimbabwe:
The Case of EcoCash

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ABSTRACT

This study sought to identify the drivers of mobile money services development in Zimbabwe using Ecocash as a case study. Through purposive sampling, respondents were selected from financial institutions, regulatory bodies, customers, and agents. The research showed that in Zimbabwe the development of mobile money services is influenced by several factors such as a high mobile telephone penetration rate, a high number of unbanked people owing to poor access to traditional banking services, a lower level of internet penetration levels, customer awareness of the service because of aggressive branding, security and ease of use, and a dense networks of agents. Fast technology diffusion was also a factor that influenced the fast adoption of mobile money services in Zimbabwe. More research is needed to assess the impediments in countries where the adoption of mobile money services has not been as spectacular as in Zimbabwe or Kenya.

KEYWORDS

EcoCash, Econet Wireless, Internet Penetration, M-Pesa, Mobile Banking, Mobile Money Services, Mobile Phone Penetration, Mobile Wallet, Technology Adoption, Telephone Banking, Urban Rural Remittances

1. INTRODUCTION

M-PESA, the Kenyan mobile money service, has seen exceptional growth since its introduction in March 2007 (Mas & Morawczynski, 2009). Six million customers had registered with the service by 2009 and this represents nearly half the customer base of Safaricom, the Mobile Network Operator (MNO) that launched M-PESA (Mas & Morawczynski, 2009). A similar phenomenal growth was observed with Ecocash, a service provided by Econet Wireless, the biggest mobile network operator (MNO) in Zimbabwe. Murumbwa (2014) noted that the changing competitive landscape for mobile telecom service companies in Zimbabwe has significantly contributed to the launch of innovative market offerings, in particular, the mobile money transfer services (MMTS). Gambanga (2017) noted that in 2016 mobile money payments in Zimbabwe accounted for 81.2% of all electronic payment transactions. During that year 298.59 million mobile money transactions were handled, up from the 228.2 million transactions in 2015 (Gambanga, 2017). The 2017 Monetary Policy Statement presented

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by the Reserve Bank of Zimbabwe shows that mobile payment occupy the highest rank as compared to other payment systems available. According to the statement, the second highest transaction volumes were for Point of Sale (POS) transactions, followed by ATMs (3.4%), RTGS (0.8%), internet transactions (0.3%) and cheque transactions (0.1%) (Reserve Bank of Zimbabwe, 2017).

This phenomenal growth of mobile payment services comes as a paradox as there have been complains that Zimbabwe lags behind in technology development as attested by the number of patents filed (Kachembere, 2018). It even runs on the opposing trend to technology adoption in Zimbabwe in various areas such as beauty therapy (Muzingwa & Kabote, 2014), small scale farming (Mudombi, 2013, Pandiriri, 2018; Zinyama, 2002), internet banking (Dube et al., 2011) and HIV-testing (Morin et al., 2006). Dube & Gumbo (2017) noted that the retail industry had made great strides to adopt online technology platforms although Zimbabwe's online technologies were described as in their infancy on the maturity model adoption curve based on Moore's chasm on technology adoption. The Ecocash exception has been also noted by Evans and Pirchio (2014). This paradoxical growth of mobile money services in Zimbabwe occurred in a context where though customers have remained loyal to banks, the banks have not been able to grow their businesses as a result of the advent of mobile banking (Mavhiki, Nyamwanza & Shumba, 2015). Instead of them seeking collaboration with the telecoms they chose to be confrontational, and lobbying for legislation that regulates mobile operators (Mavhiki, Nyamwanza & Shumba, 2015). Most banks introduced their own mobile banking products but these did not deliver full potential as they were limited to account holders only (Mavhiki, Nyamwanza & Shumba, 2015).

There is therefore a need to investigate the factors that led to this exceptional growth. Chitungo et al. (2013) extended Davies' technology acceptance model (TAM) to rural areas in Zimbabwe, but their study focuses on mobile banking rather than mobile money systems. Likewise, Dube et al. (2011) have studied the adoption of ICTs in the financial sector in Zimbabwe but they focused on SMS banking rather than on mobile money services. In other parts of the world, mobile money services been linked with financial inclusion (Lal and Sachdev, 2015, Mago & Chitokwindo, 2014, Tchouassi, 2012) but the factors that led to the fast adoption of these services were not studied except in Kenya (Mas & Morawczynski, 2009). Using Ecocash as a case study, this paper aims at investigating factors that led to the phenomenal growth of mobile money services in Zimbabwe contrary to the general trend in technology adoption in the developing world in general and in Zimbabwe in particular.

2. LITERATURE REVIEW

Mobile money is a tool that allows individuals to make financial transactions using cell phones (Jack & Suri, 2014, Vong, 2012). It refers to money stored using the Subscriber Identity Module (SIM) as an identifier as opposed to an account number in the conventional banking business (Chetty 2011). Mobile money allows people to use their mobile phones like mobile wallets in the payment system (Kizza, 2013). With mobile money technologies, people use mobile phones to send money to friends and relatives, connect to bank accounts, and make payments (Kusimba et al., 2013). According to Michaels (2011) mobile money is better than cash. Mobile money services providers allow various services such as transfer of money, paying bills and salaries, and purchasing of goods (GSMA, 2010). Mobile money services are also used for long distance remittance, micro payments, and purchase of airtime (Jenkins, 2008). Mobile money bypasses divides embedded in the traditional banking system such as the contrast between urban and rural bankers or rich vs. poor customers given the fact that mobile telephones are much more accessible than bank branches in traditional banking (GSMA, 2010, Aker & Mbiti, 2010, Chitungo & Munongo, 2013; Dube et al., 2011).

Mobile money services contribute to financial inclusion by providing financial services to the "unbanked" as they turn cellphones into 24-hour tellers (Hughes & Lonie, 2007, Donovan, 2012). Mobile money services also overcome barriers linked with access to information owing to illiteracy (Mehdi et al. 2009). The integration of financial and communication services constitutes a new phase

in the evolution of person-to-person payments (Merritt, 2011) after computer telephone integration (Fitzpatrick, 1996). Mobile money services have had an impact on non-finance related areas such as agriculture (Kirui et al., 2013) and in some parts of the world new services are emerging in terms of mobile (micro)insurance (Téllez, 2012, Prashad et al. 2014).

Although mobile money services are often described as a form of "banking," most users in Western Kenya use mobile money as a social and economic tool through which they create relationships by sending money and airtime gifts (Kusimba et al., 2013). A wide range of mobile money uses includes social gifting, assisting friends and relatives, organizing savings groups, and contributing to ceremonies and rituals (Kusimba et al., 2013). Mobile telephones constitute a new business platforms as they bringing services such as mobile money, mobile banking and mobile advertising to Small and Medium-Sized Enterprises (SMEs). In other words, mobile telephones play a marketing role (Perekwa et al., 2016). The mobile industry offers innovative pathways to achieve reliable energy access for currently underserved communities through an integration of off grid telecom tower infrastructure, mobile operators distribution networks, machine to machine connectivity, mobile payments and mobile services (Nique & Smertnik, 2015).

Mobile money services provide advantages as related to traditional banks. In addition to safety, mobile money services occur at a very low financial services transaction cost (Nandhi, 2012, Tchouassi, 2012). Ngugi et al. (2010) noted mobile money services were made even cheaper by the fact that existing financial institutions required a certain minimum amount of money to remain in the account at all times, and also charged exorbitantly high monthly fees for going below the minimum requirement. Through a comparative review of market structure, competition dynamics and pricing in mobile payments markets in three African countries, Robb and Vilakazi (2016) noted that where there is a dominant incumbent and that tariffs for mobile payments tend to be higher and reflect a wider gap between those for registered and unregistered customers. Hanafizadeh et al. (2014) identified eight (8) antecedent to mobile money services adoption. They include (1) perceived usefulness; (2) perceived ease of use, (3) need for personal interaction, (4) perceived risk, (5) perceived cost of use, (6) compatibility with life style and needs, (7) trust and (8) credibility.

Another important enabler in mobile money services is the mobile money agent who interfaces with the customer (Lyman, Ivatury & Staschen, 2006). Mobile money agents pre-buy mobile money and sell it against cash to the customers. They do not hold funds belonging to the Mobile Telecoms operator or its customers but use their own working capital (Alexandre, 2010). A well- managed agent network can help operators build brand awareness, educate customers, and meet system-wide liquidity demands, all of which builds confidence among users in a service that is initially unintuitive. A poorly managed one, by contrast, will be characterised by widespread low-quality customer experiences, which in turn erode trust and drive away business (GSMA, 2010). Henceforth, mobile money agents increases the adoption of mobile money services because their presence is much higher than that of traditional bank branches and they cost no additional capital to establish them since they operate in already existing businesses such as retail stores, hair salons, food outlets, fashion shops (Chetty, 2011). Through a dense network of mobile money agents mobile money services provide convenience (Jenkins, 2008). In Kenya Safaricom effectively leveraged its extensive network of airtime resellers to build a reliable, consistent store network that served customers' needs (Mas & Ng'weno, 2009). At launch Safaricom had 750 stores, and had made sure to cover Kenya's entire 69 district headquarters equivalent to the total number of bank branches in the country (Mas & Ng'weno, 2009).

Mas and Ng'weno (2009) linked the phenomenal success of mobile money services to branding, channel management and pricing. In the case of Safaricom in Kenya, Mulwa & Ndati (2013) pointed to the important role of integrated marketing communication. Kufandirimbwa, Hapanyengwi & Kabanda (2012) advocated for ICT-Business alignment in Zimbabwe. This alignment implied a need for interoperability between traditional banks and Mobile Network Operators (MNO) (Mashiri, Dzingirai, Nyamwanza, 2017). Interoperability also requires integrating Mobile Infrastructure and processes to organisation infrastructure and processes (Zanamwe, Kufandirimbwa, Kabanda, 2013). In

other words, the adoption of mobile money services implies a change in infrastructure, organisational structure and corporate culture (Bigirimana, 2004). Chitungo & Munongo (2013) observed that the technology acceptance model can be extended to the rural areas of Masvingo in Zimbabwe. This implies that factors stipulated in the TAM such as perceived usefulness and perceived ease of use are great contributor to the adoption of mobile money services. The role of marketing and branding in the development of mobile money services was also observed in Cambodia by Fang, Russell, & Singh (2014). Mehrad & Mohammadi (2017) noted that word of mouth contributes greatly to the adoption of mobile money services in Iran. Chetty (2011) explained the tremendous expansion of mobile money services by their aggressive marketing. This aggressive marketing leads to increased awareness of mobile money services (Visa Corporation, 2012).

The development of mobile money services is influenced also by the increase in mobile telephone use. Factors such as advancements in technology, socioeconomic conditions, and the high penetration rate of mobile devices are driving m-payment development in certain emerging markets (Kshetri & Acharya, 2012). Shaikh (2015) noted that although literature on mobile banking is fragmented, most studies find compatibility (with lifestyle and device), perceived usefulness, and attitude are the most significant drivers of intentions to adopt m-banking services in developed and developing countries. The GSMA (2013) report pointed out that in developing countries such as Kenya, South Africa, Brazil and India the number of mobile phones increased significantly between 2004 and 2010 while the average number of commercial bank branches per 100,000 people hasn't increased much for the same period. Globally almost half the population of the earth now uses mobile communications. A billion mobile subscribers were added in the last 4 years to leave the total standing at 3.2 billion. (GSMA, 2013).

The high number of unbanked people in developing countries created a ready market for mobile money services (GSMA, 2012, Donovan, 2012, Kenya National Bureau of Statistics, 2012, Lawack, 2012). This is manifested by several studies that point to the fact that mobile money services will improve financial inclusion (Demirguc-Kunt et al.2018, Hughes & Lonie, 2007, Lal and Sachdev, 2015, Mago & Chitokwindo, 2014, Tchouassi, 2012, Lawack, 2012). The view that the quick expansion of mobile money services is due to the high numbers of unbanked people who provided a ready demand for mobile money services is supported by statistics from (GSMA, 2011) which indicated that in the developing economies, there are more mobile phone users than bank account owners. Only 19% of the adults in Africa have access to a bank account and banking services in Africa are confined to the major cities (Kenya National Bureau of Statistics, 2012). In contradistinction to this situation, cellular operators have a 90% penetration rate, hence they have managed to take more customers than the conventional banking institutions could since 2007 (Donovan, 2012). Similar arguments are upheld by Andrianaivo & Kpodar (2012), Ndlovu & Ndlovu (2013), Demirguc-Kunt et al. (2018), Klein & Mayer (2011), Vong, Fang & Insu (2012), Etim (2014), Buku & Meredith (2012), Suri & Jack (2016), and Alexandre & Eisenhart (2012). Nevertheless, mobile money services suffered some setbacks in terms of regulation because of fears of money laundering practices (Vlcek, 2011), increased risk (Maurer, 2012, Argent, Hanson & Gomez, 2013, Chatain et al. 2008). All in all, aside from strong strategy and good business models, the impact of financial services in developing countries is dependent on the potential for market penetration, and the socio-economic and political environments in which services take root (Heyer & Mas, 2011).

3. RESEARCH METHODOLOGY

3.1 Research Design

This research used a case study design. The "case" being studied may be an individual, organization, event, or action, existing in a specific time and place (Yin, 2013). In this "case" this study focused on Ecocash, a mobile money service offered by Econet Wireless, the biggest mobile network operator

(MNO) in Zimbabwe. In our context, drivers of mobile money services development in Zimbabwe were analysed using data from the Post and Telecommunications Regulation Authority of Zimbabwe (POTRAZ), financial institutions, and Ecocash agents. This multiplicity of sources, in the researchers would allow the collection of variable information which would complement each other given the diversity of sources and this would fulfil the goal of a case study i.e. a research method involving an up-close, in-depth, and detailed examination of a subject of study (Yin, 2013).

This study is also exploratory in nature because research on mobile money services development is still in its infancy (Shields & Rangarjan, 2013).

3.2 Research Methods

This study used a qualitative method. Qualitative research is a method of inquiry employed in many different academic disciplines, including in the social sciences and natural sciences, but also in non-academic contexts including market research, business, and service demonstrations by non-profit organisations (Denzin & Lincoln, 2005). Qualitative research like any other research method consists of an investigation that: (1) seeks answers to a question, (2) systematically uses a predefined set of procedures to answer the question, (3) collects evidence, (4) produces findings that were not determined in advance, (5) produces findings that are applicable beyond the immediate boundaries of the study (Mack et al., 2005).

3.3 Population and Sampling Techniques

For this study, the population was constituted by professionals from financial institutions, regulatory bodies, mobile money services customers and Mobile money agents. Financial institutions in Zimbabwe include 13 commercial banks, one merchant bank, 4 building societies and one savings bank and two development institutions. Three banks were selected randomly. The researcher allocated a number to each bank, wrote the numbers on small papers, put the papers in a box and selected 3 banks randomly. There is only one telecommunications regulator in Zimbabwe. That institution was also included in the sample. Mobile money agents and mobile money customers were selected using convenience sampling. They were identified by the posters they display at their place of service which indicates which type of service they provide i.e. Ecocash for Econet Wireless, Netcash for Netone and Telecash for Telecel. All in all, the sample include three (3) financial institutions, one regulator, 50 customers and 20 agents

3.4 Data Collection Techniques and Instruments

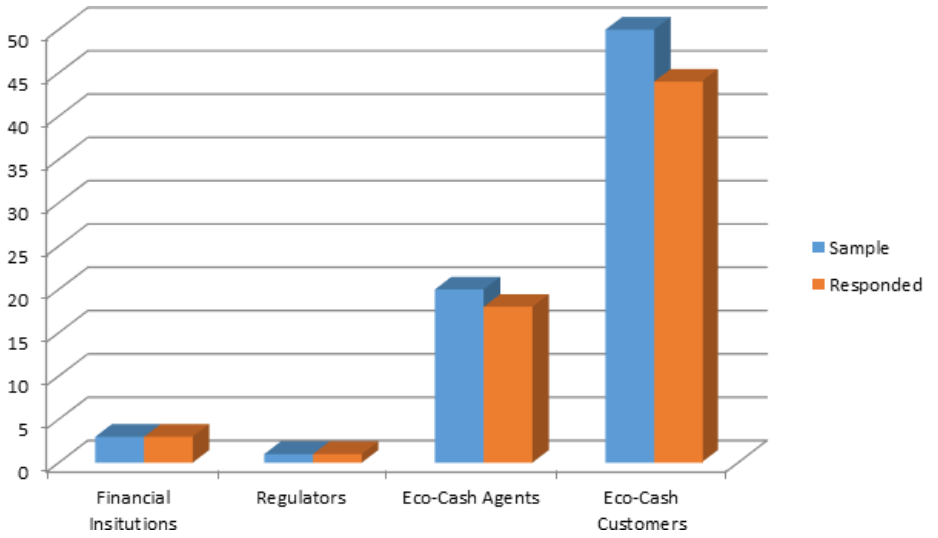
This study used both primary and secondary data. Secondary data were collected from published reports by the Postal and Telecommunications Regulatory Authority of Zimbabwe (POTRAZ). Additional secondary data was collected through desk research, the internet, published financial statements by financial institutions, Reports by International Telecommunications Union (ITU), the GSMA Association and the United Nations (UN) and records of Mobile Network Operators (MNO). Primary data was collected using questionnaires and structured interviews from senior executives in financial institutions and the regulatory authority but also from customers and mobile money services agents.

4. FINDINGS

4.1 The Response Rate

Figure 1 indicates that there was a 100% response rate in the Financial Sector, Regulators and Service provider's categories. 90% and 88% were the response rates in mobile money agents and customers categories respectively.

Figure 1. Response rate



4.2 Drivers of Mobile Money Services

4.2.1 Safety

One phenomenon that militates for the use of mobile money is the rural-urban migration. It is common for a member of a rural household to seek employment in the city. In this situation, most of the time, the male head of household migrates, while wives and children remain at home. Several strategies help to maintain such relations, including regular home visits and frequent money transfers (Mas & Morawczynski, 2009). However, non-technology based methods of transferring money involves risk of loss or theft. These methods are mainly informal and include giving money to friends and family members traveling back to the rural area. This method is the cheapest but also the riskiest, as some or all of the money could be lost or stolen along the way (Mas & Morawczynski, 2009). Money is also traditionally transferred through bus companies. These companies are not licensed to transfer money, thus there is considerable risk that the money will not reach its final destination. (Mas & Morawczynski, 2009). Money can also be transferred through the post office, and although the post office has a presence in rural areas, many complain that the service is inefficient and frequent cash shortages are reported (Mas & Morawczynski, 2009). In such as context, mobile money services are a welcome development because mobile money services not only are cheap but also they are instant and the risk of loss or theft is next to nothing. This was also observed by Mbengo & Nyatsambo (2015) in Zimbabwe.

Security and ease of use as driver of mobile money services was also corroborated by studies in other countries especially Kenya. According to a study done by VISA Corporation (2012) the primary driver and reason to adopt mobile financial services, according to the study, is not to establish formal savings, but rather the need to protect funds from theft and the ability to more easily send funds, pay bills, school fees, and transportation. Across the six countries, 80% of respondents cited "safety of not having to carry around a lot of cash" as the primary perceived benefit of mobile money, while 63% of respondents listed "speed of getting money to family members living far away" as the second most important benefit. The informal systems of money transfer such as individuals carrying money on themselves or sending drivers and conductors are susceptible to highway robberies and thefts (Kim et al., 2010 and Hughes and Lonie, 2007). Sander (2003) also noted that money sent through

friends and relatives is sometimes misused and at times never reaches its destination while money sent through letters and parcels of the courier companies may be stolen.

4.2.2 Cost

The comparison of costs in Table 1 indicates that even though Western Union had to lower its costs for sending money within Zimbabwe, mobile money still has an edge as far as pricing is concerned. For figures below $20, an eco-cash transaction can be on average 5 times, 3 times or 2 times cheaper than doing the same transaction with Western Union. Charges seem to come closer to each other when the figures to be transferred or sent are from $100 to $150 with EcoCash charging $5 whilst Western Union charges $6. But for any other charge that is above $150 western union starts charging 4% of the amount at the transfer charge, this means that an example of sending $400 will cost $9.25 with eco cash, and also costs $10 with Western Union.

Table 1. Price comparison of sending money eco-cash and Western Union

Transfer Amount	Western Union Fees (Combined)	Transfer Amount	Eco Cash Fees (Send + Receive Charges)
$0.01 to $20	$2	$1 to $ 5	$0.34
$20.01 to $50	$3	$5.01 to $10	$0.54
$50.01 to $150	$5	$10.02 to $20	$1.04
$150.01 & above	4%	$20.01 to $30	$1.54
		$30.01 to $40	$2.04
		$40.01 to $50	$2.54
		$50.01 to $75	$3.84
		$75.01 to $100	$5.00
		$100.01 to $150	$6.00
		$150.01 to 200	$6.90
		$200.01 to $300	$8.90
		$300.01 to $400	$9.25
		$400.01 to $500	

Cost as a driver of mobile money services development is corroborated by findings by Gautam and Mass (2008) who noted that mobile banking is up to 50% cheaper than offering financial services through traditional channels, and the unmet need is enormous. Jack and Suri (2014) also have noted that mobile money services have allowed individuals to transfer purchasing power by simple short messaging service (SMS) technology and has dramatically reduced the cost of sending money across large distances.

The respondents who indicated that they do not send money represent 33% of the sample. They indicated that the introduction of mobile money service has not negatively impacted on their operations and profitability because they only allow users to receive money from relatives outside Zimbabwe. The majority of the respondents said that mobile money service has negatively affected their operations and they had to devise strategies of countering the competition. Western Union had to reduce its fees and also start allowing the transfer of money less than US$10 which they did not do previously; ZIMPOST rebranded their money transfer service and offered the ability to send money outside Zimbabwe for the first time. None of them had a facility to send money outside Zimbabwe

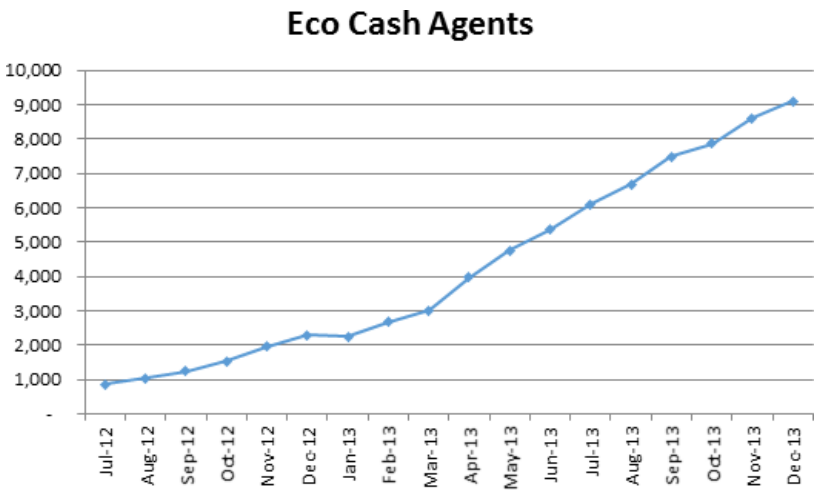
previously. All the three respondents said they did not have statistics for local money transfer services. Western Union said that statistics are done at their Head office in the United States but they concurred to the fact that mobile money services has given direct competition to their money transfer services, hence they had to act swiftly to reduce prices and stay competitive. ZIMPOST had a money transfer service called Postal money orders for the past 30 years, since the introduction of Eco-cash in 2011, ZIMPOST had to redesign their package and offer faster and reliable service.The money transfer service is now called Zip-Cash and one is able to send money to someone using their mobile numbers and it's another form of mobile money transfer.

Two out of three respondents representing 66% of the sample in the financial sector concurred to the fact that they have one form or another of sending money within the country. One of them is the only one that said it does not send money within Zimbabwe but it only allows people to receive. EcoCash agents are all over where people are staying, but some areas do not have Western Union Outlets, this implies adding transport to the cost, Western Union fails to match mobile money because mobile money has an edge because of the number of agents available.

4.2.3 Density of Agent's Network Hence Increased Convenience

To date eco cash agents are now more than 9000 agents. Data gathered from Econet indicates that agents have been steadily growing proportionally to the increase in the number of customers. Figure 2 shows the growth rate in eco-Cash Agents since 2012.

Figure 2. Growth Rate in Eco-Cash Agents



There is a positive trend in the way in which eco cash agents have been increasing and the increase in volume of transaction. From July 2012 eco-cash agents increased by an impressive 1060% which was slightly lower than the increase in eco-cash transaction volumes of 1500%.

A total of 20 Eco-Cash agents were interviewed during the research. These agents were individuals who were randomly selected in Harare. Figure 3 shows the responses from agents about the impact of eco cash mobile money service on employment creation.

11 out of the 25 who were working in the Eco-cash agent's premises said that they were previously unemployed, only 7 out of the 25 said they were employed somewhere then switched jobs to work at the eco-cash agency. The number of previously unemployed agents represents 60% of the respondents, and only 40% were previously employed. This indicates that mobile money has in some way helped in

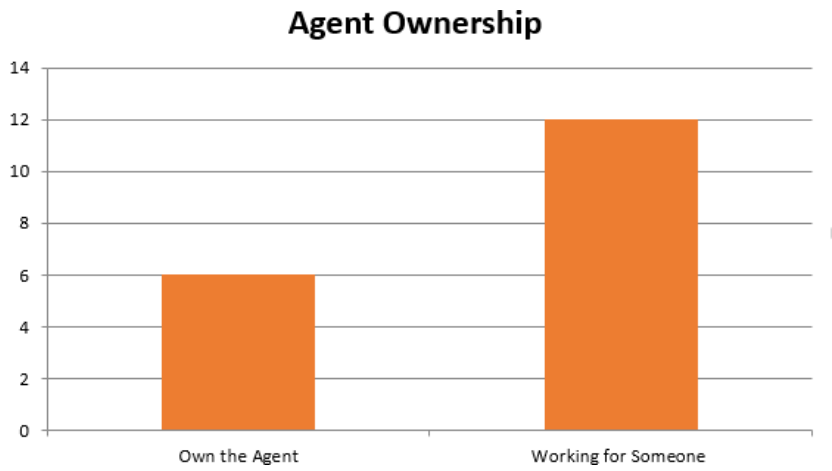
Figure 3. Previous Employment Status for Eco-Cash Agents

employment creation. The individual agent was also asked whether they owned their agency or they were working for someone who is registered by Econet as an agent, the responses were distributed as indicated in Figure 4.

Mobile money did not only create employment, but it also gave people with entrepreneurial skills the ability to start their own businesses and employ others. 66% of the agents interviewed said that they were working for some individual who had registered with Econet as an agent. And 33% of the respondents actually said they owned the agencies, and were working for themselves.

Like Safaricom, the first company that launched mobile money services, Econet in Zimbabwe enjoys market dominance. This implies that not only the number mobile money services users as a fraction of the total number of mobile telephone subscribers remains high. But also, like Safaricom, Econet is able to maintaining a balanced growth of customers and retail agents (Mas & Morawczynski, 2009). Moreover, there is need of maintaining a scalable agent distribution structure for liquidity

Figure 4. Ownership Status of the Ecocash Agency



management. Safaricom achieved this by using master agents to facilitate liquidity management. Most of these agents are Safaricom's own airtime resellers, but others include Group Securicor, branches of Equity Bank, and some larger supermarket chains (Mas & Morawczynski, 2009). A similar pattern has been observed at Econet Wireless, where whole services are available at Econet shops the country over and where EcoCash and airtime selling services are available in supermarkets, retail shops and non-telecom related businesses such as hair salons, pubs, clothing shops, and so forth. Moreover, the Econet Group now owns a bank, Steward Bank.

According to the information gathered in the research. Zimbabwe has a very low bank branch to individuals ration. For every 100,000 individuals there are only 6 branches available to serve them. This is also the case with self-service ATMs, there are only 4 ATM machines per every 100,000 individuals. This means that it's not convenient for people who are the users or prospective users of the financial system in Zimbabwe. Compared to mobile money services there are 70 mobile money agents per every 100,000 individuals which mean that the density of mobile money agents is 10 times more than that of financial institutions. Hence mobile money is more convenient to use than banks and money transfer institutions.

Other challenges associated with the formal and semi-formal systems, include delays and long queues, network limitations, insolvency of branches, unreliable communication and misdirected parcels (AU & Kauffman, 2008). A fifth of the unbanked interviewees in Kibera use M-PESA as a substitute for informal methods of savings, especially keeping money at home. Most say they prefer to store money with M-PESA because it is safer. They do not need to worry about household members finding, and stealing, their money. Many of the unbanked further note that they keep money in M-PESA because they trust Safaricom, whereas they feel that money stored in a bank is at a high risk of being lost (Mas & Morawczynski, 2009).

In Zimbabwe, the researcher found out that ZIMPOST, Western Union and Moneygram have a combined total of 508 branches which is 61% of all financial institution outlets in Zimbabwe. There is a total of 835 financial services outlets, or branches country wide from all the financial institutions. Branches for MoneyGram are not considered as they are within existing bank branches especially for Stanbic Bank's branches and Kingdom Bank. Western Union also has 31 Standard Chartered bank branches that it uses. Taking into consideration the total population of Zimbabwe which is standing at 12,973,808, it means that Zimbabwe has an average of 6 branches for every 100,000 individuals available. It also means that there are 4 ATMs for every 100,000 individuals available. Comparing Zimbabwe with other developed countries in Europe which have an average of 44 Branches per every 100,000 adults it shows that Zimbabwe has a long way to go in terms of financial services infrastructure. A higher number of ATMs or bank branches for every 100,000 individuals is a critical factor that affects the growth and adoption of mobile services, it acts as a barrier to the adoption of mobile money. A low number of ATMs and Bank Branches per 100,000 individuals like the case for Zimbabwe speeds up the adoption for mobile money services as there is a shortage of financial services outlets and makes it difficult for the majority of the citizens to access financial service.

4.2.4 High Mobile Telephone and Internet Penetration Rate

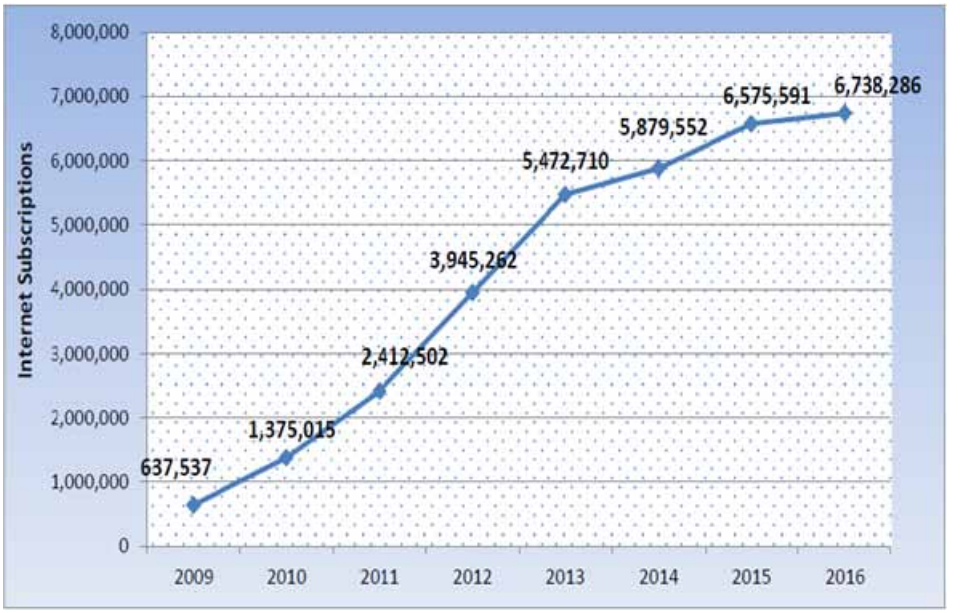
The POTRAZ (2016) sector performance indicators report for the telecommunications indicates that the total number of mobile subscriptions in the country increased by 6.2% to reach 20,257,180 from 18,992,082 recorded in the previous quarter. The number of active lines in the quarter under review was 13,010,873. This represents a 0.9% increase from 12,900,173 recorded in the previous quarter. The mobile penetration rate also increased from 96.5% to 97%. The quarterly change in mobile subscriptions per operator is shown in Table 2.

Figure 5 indicates that since the introduction of the multi-currency system in 2009, Zimbabwe's mobile subscribers grew by 80% from 3.9 million to 7.2 million in 2010. As the number of subscribers became close to the total population the growth rate has dropped to 21%, 37%, and 1.5% in 2011, 2012 and 2013 respectively. As can be seen of Figure 5 there was a rapid rise in the mobile penetration and

Table 2. Mobile Phone Subscribers

	2008	2009	2010	2011	2012	2013
Telecel	257,785	451,000	1,270,000	1,516,167	2,582,154	2,448,687
NetOne	340,000	347,000	1,253,456	1,662,952	2,017,726	2,232,617
Econet	678,148	3,200,000	4,680,782	6,008,444	8,014,055	8,114,814
Total	**1,275,933**	**3,998,000**	**7,204,238**	**9,187,563**	**12,613,935**	**12,796,118**

Figure 5. Evolution of mobile telephones subscribers



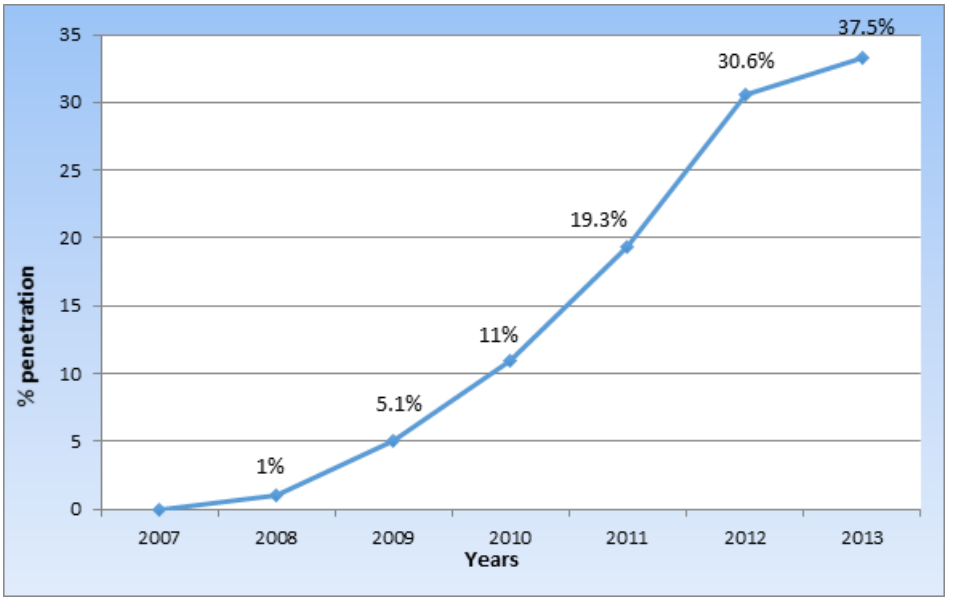
the number of people signing up for mobile services. This has resulted in one of the highest mobile penetrating rates in Africa and POTRAZ estimates that Zimbabwe will surpass the 100% mobile penetration in 2 months' time.

According to POTRAZ (2016) the total number of active mobile money subscriptions increased by 0.7% to reach 3,221,059 from 3,199,568 recorded in the previous quarter. An active mobile money subscription is one that has used mobile money services to send or receive money, purchase airtime or to make payments in the last 90 days.

According to POTRAZ (2016) the total number of internet subscriptions increased by 0.5% to reach 6,738,286 from 6,703,518 recorded in the previous quarter. Internet penetration refers to the extent to which broadband internet and general internet access is accessible to the country's population. Figure 6 shows the growth rate in internet penetration in Zimbabwe from 2009 to date.

The internet penetration rate for Zimbabwe has been on an increase from a mere 5.1% in 2009 to a respectable 37.5% at the end of 2013. This is a relatively high internet penetration rate basing on African standards which has an average internet penetration rate of 22%, but it's not as high as in the developed countries. A high internet penetration rate means that the economy has access to various forms of e-commerce.

Figure 6. Internet Penetration from 2009 to date



Of the total mobile internet subscriptions, 166,797 accessed internet via LTE; 166,090 from Econet and 707 from NetOne. Leased lines, Dial Up, WiMAX and CDMA were the categories to register declines as the uptake of fibre and ADSL increases. Please note that the fibre subscriptions shown above are the actual active subscriptions, not connected households or corporates, i.e. those that have actually used fibre internet in the last 90 days. The same applies to the rest of the indicators on subscriptions. The internet penetration rate increased from 49.8% to 50.1%. This implies that out of every 100 people there are 50 internet subscriptions. Although data and internet subscriptions have been increasing, the rate of growth has been lower post-2013 than in the pre-2013 period. The growth in data and internet subscriptions over the years is shown in Figure 7.

A high internet penetration rate means that the economy has access to various forms of e-commerce. Availability of multiple e-commerce services fight against the development and adoption of mobile money. A low internet penetration rate for Zimbabwe and Africa is ideal for the adoption of mobile money service.

4.2.5 Aggressive Marketing Leading to High Awareness of Mobile Money

Econet Wireless, the provider of a mobile money service called EcoCash is well known for its aggressive branding hence it has the highest number of subscriptions in Zimbabwe. Figure 7 shows a rapid rise in the mobile penetration and the number of people signing up for mobile services. This implied an exponential growth in the number of Ecocash customers but also by the increase in transaction volumes. As indicated in Figure 8 between august 2012 and December 2013 Eco-cash customers have increased by over 300% from 900,000 to 3.06 million registered users.

A parallelism between the high number of subscription of Econet Wireless and the higher levels of use of its mobile money services (EcoCash) can easily be established. Information obtained from Potraz shows that the usage of the service has been increasing since inception in 2011. Figure 9 shows the increase in mobile transaction volumes in addition to the increase of mobile telephones users, increase of Eco-Cash Mobile money agents and the number of Eco-Cash subscribers since 2012. This increase indicates that the service has managed to attract users because it has an advantage on

Figure 7. Growth in Data and internet Subscriptions

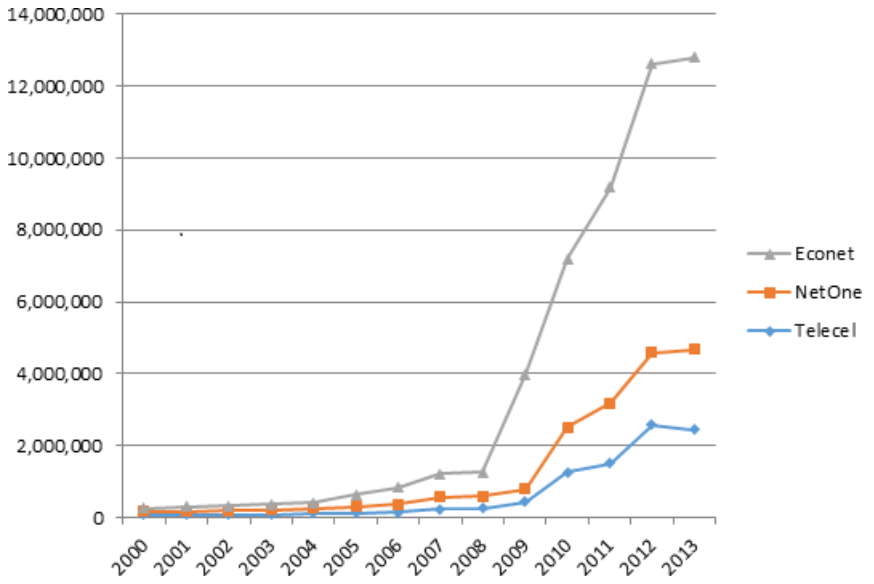
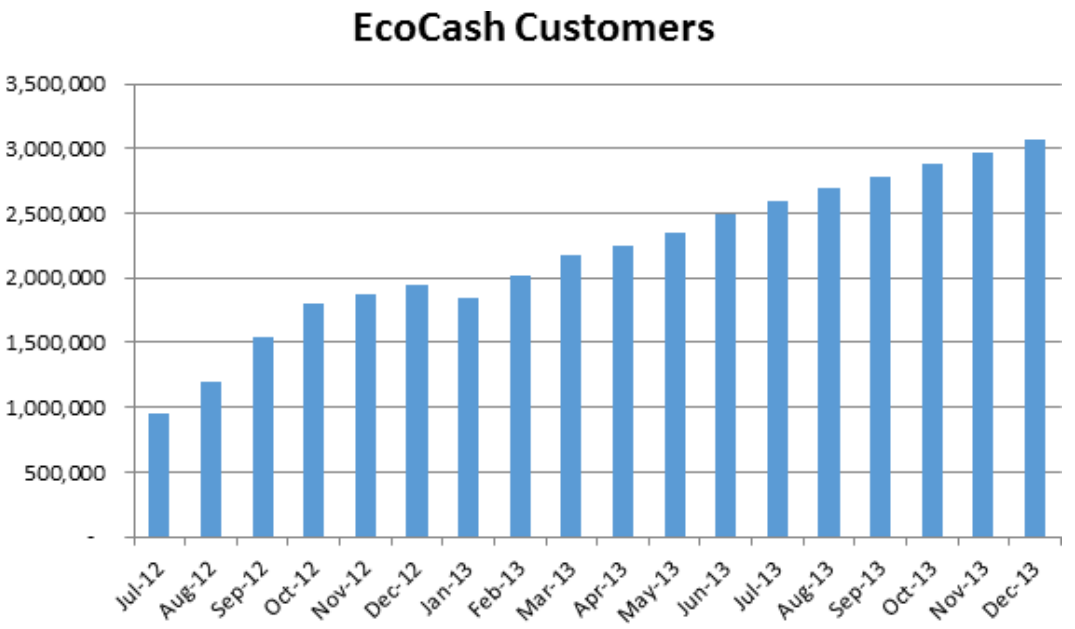


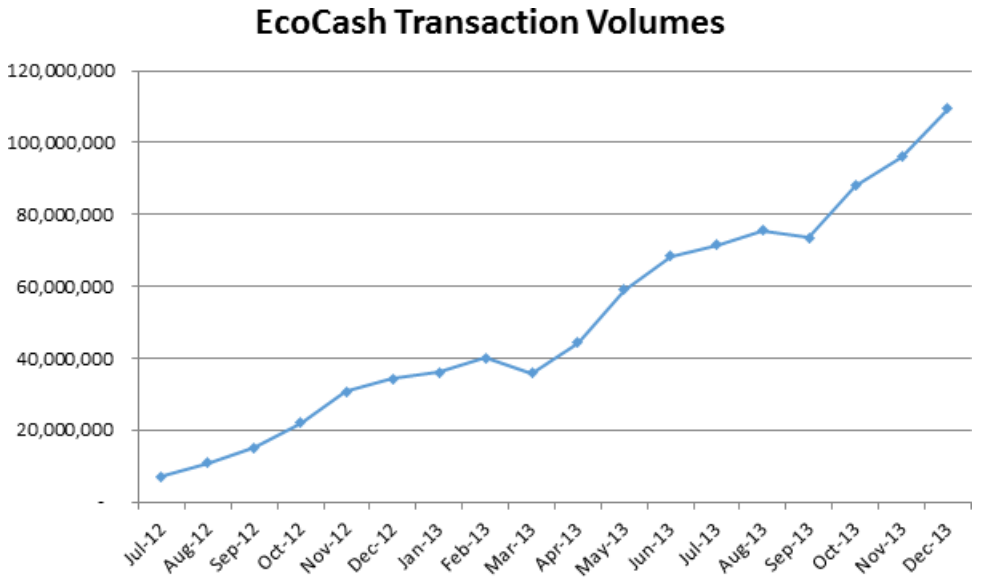
Figure 8. Increase in Ecocash Customers



the current offerings in the market. This has resulted in increased transactions volumes as illustrated by Figure 9.

Between august 2012 and December 2013 Eco-cash customers have increased by over 300% from 900,000 to 3.06 million registered users. A study by The Visa Corporation (2012) found that there is high awareness of mobile money services and capabilities among consumers in developing economies. Across the six countries surveyed, average awareness stood at 56% and three countries

Figure 9. Increase in Mobile transaction volumes



stood out in particular: In Ghana, awareness was at 93% with MTN identified as the most known mobile money provider; in Pakistan 89% of the public are mobile money aware and easyPaisa is the most recognized brand; and 53% of consumers in Bangladesh were aware of mobile money and identified bKash as the leading brand. This aggressive marketing by mobile money services has been the greatest driver of mobile money success (Chetty 2012). Awareness as a factor that drivers mobile money services development is also highlight by Obiero (2016).

4.2.6 High Number of Unbanked Public

Interviews were carried out and questionnaires sent to 50 eco-cash users. One of the questions that was asked is whether the user had a bank account or not. Figure 10 indicates that from 44 eco-cash customers that responded, 12 representing 29% responded by saying that they have bank accounts. 10 of the customers indicated that they used to have bank accounts but they abandoned them and the accounts were subsequently closed by the bank for various reasons including but not limited to lack of funds to sustain the accounts.

The majority of eco-cash respondents indicated that they would want to have a bank account in future. Respondents were asked to select reasons why they currently do not have a bank account. Only 10 out of the total of the total of 44 respondents said that they had no interest in opening a bank account. 66% of the eco-cash customers shared the same notion that unemployment was the main reason why they did not have bank accounts. 61% of them also said that the bank account opening requirements were also to blame since banks require a payslip for one to open an account which they do not have because they are unemployed.

From 44 eco-cash customers that responded, 12 representing 29% responded by saying that they have bank accounts. 10 of the customers indicated that they used to have bank accounts but they abandoned them and the accounts were subsequently closed by the bank for various reasons including but not limited to lack of funds to sustain the accounts (Figure 11).

This high population of unbanked people is corroborated with the availability of banking outlets. Only 19% of the adults in Africa have access to a bank account and banking services in Africa are confined to the major cities (Kenya National Bureau of Statistics, 2012). For this reason alone, cellular

Figure 10. Eco-Cash Customers with Bank Accounts

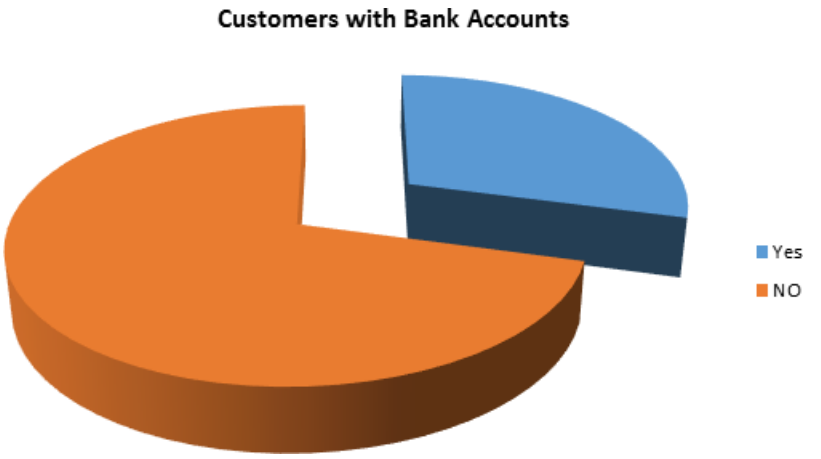
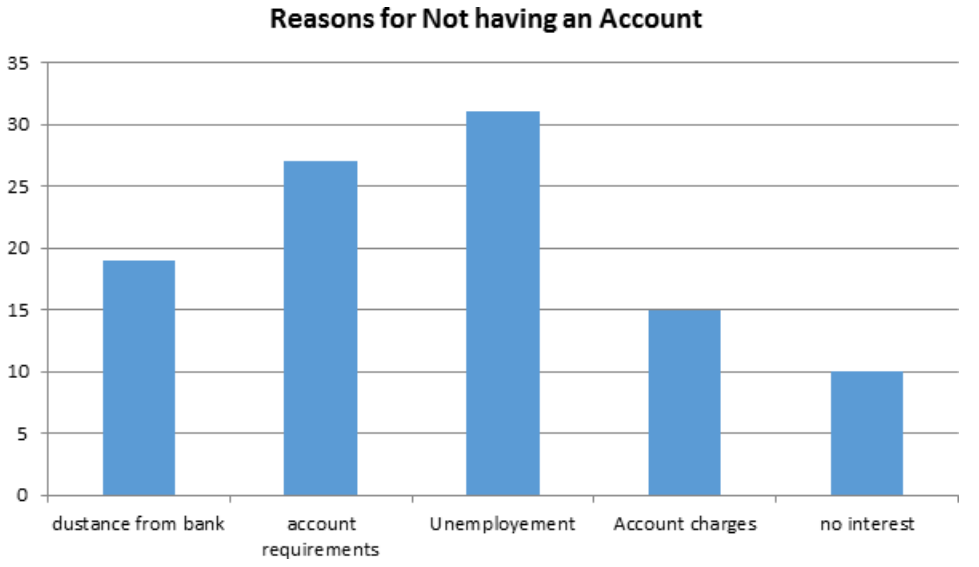


Figure 11. Reasons for not having a Bank account



operators have a 90% penetration rate, hence they have managed to take more customers than the conventional banking institutions could since 2007 (Donovan 2012).

This view was corroborated by Kendall et al. (2012) who noted that perhaps the key challenge is that the vast majority of the poor lives in a cash economy and is paid in cash. In developed economies, banks usually receive clients' salaries via direct deposit, and the money can either be moved to longer term savings products or be withdrawn and spent through channels like ATMs and point-of-sale devices (Kendall et al. 2012). In developing economies, the poor lose the natural connection to the financial system that stems from having income born in electronic form. They require a deposit taking infrastructure to even get their money into the bank in the first place, and to make matters worse, the poor often earn money unpredictably and need to deposit whenever small windfalls come their way (Kendall et al. 2012). Meanwhile, banks and other financial service providers are loath to deploy deposit-taking banking infrastructure (i.e., branches and two-way ATMs) as intensively as they might

require to service poor clients' greater deposit needs, since the revenue these clients generate does not justify the investment (Kendall et al. 2012). In fact, even clients who do not require intensive deposit services (e.g., those who might receive direct government transfers or military pensions) are rarely seen as profitable customers by banks, given the low balances they hold and the high transaction costs of traditional banking infrastructure (Kendall et al. 2012). For Kendall et al. (2012) mobile money appears to have the potential to solve many of these issues. Kendall et al. (2012)' views are corroborated by figures from the GSMA (2013).

5. CONCLUSION

The phenomenal development of mobile money services in Africa is unparalleled. In Zimbabwe, EcoCash a service offered by Econet Wireless, the leading Mobile Network Operator (MNO) has grown in proportions that are similar to its predecessor in Kenya, M-Pesa. This phenomenal development called for research because mobile money services grew very fast against the background of slow technology adoption in other area in developing countries in general and in Kenya and Zimbabwe in particular. The development of M-Pesa in Kenya was influenced by factors such as a latent demand for money-transfer services, poor alternatives for making domestic money transfers, Safaricom's market dominance (Mas & Morawczynski, 2009). There was a need to assess whether similar factors may have influenced the phenomenal development of money services in a different socio-economic context. Zimbabwe has experienced almost two decades of economic decline but despite these economic challenges mobile money services thrived. While in Kenya, Safaricom responded to the context proactively through strong branding and simple messaging for an easy-to-use service, frequent and consistent monitoring of retail agents, scalable agent distribution structure for liquidity management, free deposits, no minimum balance, ability to send money to non-customers, enabling ATM withdrawals, maintaining a balanced growth of customers and retail agents (Mas & Morawczynski, 2009). Other factors such as fast technology expansion contributed to the development of mobile money services (Jack & Suri, 2014). In Zimbabwe, Econet Wireless shares most of these characteristics of Safaricom although it does not allow sending money to non-customers. In the case of Ecocash, six factors have contributed to the phenomenal development of mobile money services especially in Zimbabwe, namely,

1. **Safety:** Mobile money attract less attention from thieves and unlike cash which may be lost during movement from one point to another mobile money is safe even in the event one losses one's mobile device;
2. **Cost:** The cost of mobile money services is lower than most bank charges and there is no need to maintain a minimum balance. The opening of an Ecocash account is free of charge as well and once a telephone or a sim card is lost with float inside, the owner of the sim card will be refunded at the purchase of a new one.
3. **Density of Agent's Network Hence Increased Convenience:** Ecocash services can be provided in any retail outlet without the need of additional investment in building or space createion as contrasted to the high cost of building new branches in traditional banking;
4. **High Mobile Telephone Penetration Rate:** The POTRAZ (2016) sector performance indicators report for the telecommunications indicates that the total number of mobile subscriptions in the country increased by 6.2% to reach 20,257,180 from 18,992,082 recorded in the previous quarter. The number of active lines in the quarter under review was 13,010,873. This represents a 0.9% increase from 12,900,173 recorded in the previous quarter. The mobile penetration rate also increased from 96.5% to 97%;
5. **Aggressive Marketing Leading to High Awareness of Mobile Money:** Like Safaricom in Kenya, Ecocash responded to the context proactively through strong branding and simple messaging for an easy-to-use service. The availability of Ecocash services can be seen through a poster

indicating the billing code in various retail outlets such as clothes shops, restaurants and bars, hair saloons and recently in commuter omnibuses. In addition, to these innovative marketing strategies, Ecocash uses traditional advertising channels such as radio, television, billboards, stickers on vehicles and painting of buildings;

6. **High Number of Unbanked People:** Like in Kenya, the high number of unbanked people in Zimbabwe owing to the location of bank branches mainly in urban or densely populated areas, the distance between rural populations residence and bank branches, the minimum balance requirements and application fees, mobile money bypasses divides embedded in the traditional banking system such as the contrast between urban and rural bankers or rich vs. poor customers given the fact that mobile telephones are much more accessible than bank branches in traditional banking (GSMA, 2010, Aker & Mbiti, 2010, Chitungo & Munongo, 2013; Dube et al., 2011). Mobile money services contribute to financial inclusion by providing financial services to the "unbanked" as they turn cellphones into 24-tour tellers (Hughes & Lonie, 2007, Donovan, 2012) and overcoming barriers linked with access to information owing to illiteracy (Mehdi et al. 2009). Nevertheless, the similarities between Econet Wireless market position in Zimbabwe and Safaricom is Kenya may limits our understanding of possible impediments to the development of mobile money services. There are other mobile money services in those markets such as One Wallet (offered by NetOne) and Telecash (offered by Telecel) in Zimbabwe but they do not enjoy as much expansion as Ecocash.

Conflicts of Interest

We wish to confirm that there are no known conflicts of interest associated with this publication and there has been no significant financial support for this work that could have influenced its outcome.

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