FACTORS AFFECTING THE PROFITABILITY OF MOBILE MONEY SERVICES IN ZIMBABWE

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A dissertation submitted in partial fulfilment of the requirements for the degree of Master of Business Administration

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DEDICATION

This work is dedicated to my wife Michelle and my daughter Tanatswa.

Thank you for being my source of inspiration.
DECLARATION

I, Fidelis Taziwa, do hereby declare that this dissertation is the result of my own investigation and research, except to the extent indicated in the Acknowledgements, References and by comments included in the body of the report, and that it has not been submitted in part or in full for any other degree to any other university.

Student Signature ___________________ Date__________________

Supervisor’s Signature_______________ Date__________________
ACKNOWLEDGEMENT

First and foremost my profound gratitude go to the Almighty God, without him this work would not have been a possibility. Secondly, I wish to thank my supervisor Mr. A. Chidakwa for his endless support and guidance. To Mr. Chidakwa I say, “thank you for the valuable time you took in guiding me.”

I am also deeply grateful to my workmates and research participants for helping me to carry out this study.

Finally, I would like to thank my family and fellow MBA students for their support and love during my study. To my family, thank you for your patience.
ABSTRACT

The introduction of mobile money services in Zimbabwe has been met with limited success as compared to other emerging markets such as Kenya, Uganda, and Philippines. The first mobile money service to be launched in Zimbabwe collapsed whilst the second has struggled to reach traction. The mobile money service that has managed to scale, has however not been profitable despite registering the fastest growth in terms of the number of subscribers registered. Thus, the main objective of the research was to investigate the factors that affect the profitability of mobile money services in Zimbabwe. A review of literature on areas that have a bearing on the profitability of mobile money services such as business models, revenue and cost drivers, mobile money value chain, key success factors (KSF), industry driving forces, pricing and commissions was undertaken in order to gain a better understanding of existing literature and in what direction new research should take. The review highlighted that there was a gap in literature, as there was no conceptual framework on mobile money profitability. A quantitative research methodology was used through the administration of structured questionnaires to respondents from the three mobile network operators in Zimbabwe were the response rate was 67%. Interviews were also conducted with the Reserve Bank of Zimbabwe. The data was analysed using SPSS version 16 where tests such as regression analysis and correlation were conducted. The findings revealed that there was a positive relationship between establishing a customer pain point; understanding mobile money value chain; leveraging on key success factors; understanding revenue and cost drivers and the profitability of mobile money services. Also, tests revealed that there was a negative relationship between challenges and profitability. It was therefore recommended that to be profitable, mobile network operators in Zimbabwe should establish a customer pain point, understand their value chain, leverage on key success factors, understand revenue and cost drivers, and mitigate challenges. A need for further research may extend the analysis by exploring more factors as well as geographical coverage of the study.
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<tr>
<td>GSM</td>
<td>Global System for Mobile communications</td>
</tr>
<tr>
<td>MNO</td>
<td>Mobile Network Operator</td>
</tr>
<tr>
<td>RBZ</td>
<td>Reserve Bank of Zimbabwe</td>
</tr>
<tr>
<td>POTRAZ</td>
<td>The Postal and Telecommunications Regulatory Authority of Zimbabwe</td>
</tr>
<tr>
<td>NFC</td>
<td>Near Field Communications</td>
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<td>USSD</td>
<td>Unstructured Supplementary Service Data</td>
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CHAPTER ONE

INTRODUCTION AND BACKGROUND TO THE STUDY

1.0 INTRODUCTION

Profitability is an important aspect in any organisation because it ensures the attainment of the organisational goal of shareholder wealth maximisation. It is important for businesses particularly those offering mobile money services to be profitable in order to ensure growth and sustainability. Consequently, this is the reason why this research focuses on those factors that affect the profitability of mobile money services in Zimbabwe.

The decline in the traditional sources of revenue such as voice and data (Bamforth & Longbottom, 2011; Nelson & van den Dam, 2010), has led mobile network operators to introduce overlay services such as mobile money in a bid to diversify revenue streams and unlock shareholder wealth. Mobile network operators are launching mobile money services at a rapid pace. Whereas the mobile network operators’ enthusiasm to enter the business is clear in terms of promoting financial inclusion, as evidenced by more than 150 deployments as at December 2012, the rationale for doing so has not been (Leishman, 2011). Although, Safaricom’s M-PESA and Globe Telecom’s GCASH were profitable (Smith, 2011; Leishman, 2011) it is not prudent to compare all mobile money deployments to Kenya simply because of the perfect coalescence of demand, a dominant mobile network operator and a progressive regulator that have been the key to success for M-PESA (Leishman, 2011). However, the question that remains is: Is the mobile money business profitable? This research seeks to answer that question by investigating the factors that affect the profitability of mobile money services.
The use of mobile phones continues to grow and change, particularly in Zimbabwe as evidenced by the mobile penetration rate of 97% and 12,613,971 mobile phone users (POTRAZ, 2013). One of the most important areas that mobile phones are being used is in the provision of financial services that is expected to have a positive impact on Zimbabwe. Accessing financial service applications through mobile phones effectively draws the country to a digital economy. Consequently, new opportunities particularly for the unbanked are opened (Davidson, 2011).

Zimbabwe’s mobile money industry has grown tremendously in size following the launch of Econet Wireless’ EcoCash in November 2011 that has reached out to more than 2.3 million subscribers (Econet, 2013; Mandivenga, 2013; Levin, 2013a). Telecel and NetOne have their own mobile money products namely Skwama and OneWallet respectively. The growth of Zimbabwe’s mobile money industry may be attributed to the mostly unbanked population and rising mobile penetration rate now estimated at 97% (Mandizha, 2013; Kabweza, 2013). About 80% of Zimbabwe’s populace is domicilled in the rural areas which are financially excluded. In addition, the informal sector which currently stands at 70% of Zimbabwe’s economy has also contributed to the growth of mobile money (Mandizha, 2013). In addition, the requirements for subscribing to mobile money are less stringent as compared to opening an individual bank account in Zimbabwe. Bank account opening requires proof of income in the form of a payslip, proof of residence, passport sized photos, a minimum deposit amount, and monthly maintenance charges that are beyond the reach of the poor. In order to access mobile money services in Zimbabwe, what is required is a copy of identity document (ID) and no minimum deposit and monthly charges are applicable.

Thus, mobile money is poised to become a very powerful tool for financial inclusion in Zimbabwe (Mandizha, 2013). It has the capacity to meet the needs of customers who previously could not access formal financial services. Most people relied on less safe, less reliable and more costly alternatives such as sending money by public transporters. The next section gives some brief definitions of the main concepts underlying the discussion in the document.
1.1 BACKGROUND TO THE STUDY

The section proffers a definition of key terms and focuses on the business operating environment, the mobile money industry in Zimbabwe, the global mobile money industry, and the GSM telecommunications companies in Zimbabwe. The section concludes by highlighting the context of the study.

1.1.1 Definition of Terms

An understanding of the key words used in the research is important to guide the research.

**Mobile Money**

The terms mobile money and mobile banking are often used interchangeably. Mobile banking is often used when the service is being championed by financial institutions and mobile money is often used when the product is being championed by mobile network operators. Nevertheless, mobile money is a service in which a mobile phone is used to access financial services (GSMA, 2011; Tobbin, 2011; Jenkins, 2008). Mobile banking is associated with access to a bank account via a mobile phone by customers (GSMA, 2011; Chen, 2008; Cheng, Lam, & Yeung, 2006). Hence, the provision of financial services via a mobile phone also includes accessing a customer’s bank account. Both mobile money and mobile banking entails the provision of financial services via a mobile phone.

**Agent**

An agent is a business normally a retail store that is contracted by the mobile network operator to facilitate transactions for users (GSMA, 2011). Agents accept deposits, facilitate withdrawals and sell airtime.
E – Money

This is a short for “electronic money” which is stored in the customers’ mobile wallet. A mobile subscriber gives an agent cash in exchange for the electronic money (GSMA, 2011).

Cash In

This is the process by which a user’s mobile wallet is credited with cash. This is similar to a cash deposit at a bank.

Cash Out

This is the process by which a user withdraws cash from his or her mobile money wallet.

Float

This is the electronic money in an agent’s mobile wallet that is used to process transactions. The electronic money is equivalent to the cash deposited in a bank account to purchase the electronic float by the agent.

Mobile Wallet

This is an account that is accessed using a mobile phone.

1.1.2 Business Operating Environment

The business environment in which mobile network operators operate has improved since dollarisation in February 2009. Inflation is now low at 1.87% as at June 2013 (Reserve Bank of Zimbabwe, 2013) and the country is witnessing positive economic growth (Gono, 2013). Interest rates are, however, still high at an average of 23% (Gono, 2013). The country is still facing liquidity challenges. Foreign direct investments into the country are low due to the uncertainties of the Indigenisation and Economic Empowerment regulations. External lines of credit are trickling in albeit at a slow pace due to the sovereign risk associated with the country. These factors have affected the
operations of mobile network operators in Zimbabwe. The high cost of borrowings in Zimbabwe have forced Econet Wireless Group to seek offshore funding to the tune of US$362 million. US$307 million of the facility was allocated to Zimbabwe. Of that amount, US$255 million was used to re-finance existing short-term facilities and US$55 million was used to finance equipment purchases for network expansion (Econet Wireless Zimbabwe, 2012). NetOne has not been able to find a strategic partner for its privatisation three years after the proposal was first mooted (Newsday, 2013). Telecel Zimbabwe on the other hand, accessed a US$70 million fund from Orascom Telecom its parent company to expand its network expansion (Mawindi, 2012). Access to finance has been accessible to privately owned companies, whilst the same can not be said of the state owned NetOne.

The political and legal environment in Zimbabwe has been relatively stable. A new constitution was successfully passed following the referendum that was held on 16 March 2013. Telecommunications companies are regulated by The Postal and Telecommunications Regulatory Authority of Zimbabwe (POTRAZ). POTRAZ, however does not regulate value added services such as mobile money services. The provision of mobile money services is regulated by the Reserve Bank of Zimbabwe in terms of licensing which should be obtained through a registered commercial bank since mobile money services are regarded as a payment system. As at July 2013, there were no guidelines governing the operations of mobile money services. Following fears and pressure being exerted by banks on the Reserve Bank of Zimbabwe due to the meteoric rise of Econet’s EcoCash, the Reserve Bank of Zimbabwe announced a host of measures to govern Mobile Money Transfer in January 2013 (Gono, 2013).

The Reserve Bank of Zimbabwe advised that in line with the provisions of the National Payment Systems Act [Chapter 24:23], it was in the process of reviewing the legal and regulatory framework governing mobile banking. The reviews in regulation focuses on the payment systems oversight guideline, electronic money and electronic payments guideline, and agency banking guideline (Gono, 2013). The regulations will influence the way mobile money services operate in Zimbabwe. In addition, the Central Bank has called on mobile network operators to ensure that charges were fair and implored on the
need to accommodate all banking institutions on their platforms to ensure interoperability and infrastructure sharing across institutions (Gono, 2013).

Zimbabwe’s sociological environment has evolved over the past decade. The need for internet information, communication, internet, changing population demographics towards young adults, rural urban migration have had an influence on the demand for telecommunications services. Those working in urban areas need to send funds to support families in the rural areas hence the need for mobile money services to service the unbanked in the rural areas.

1.1.3 Mobile Money Industry in Zimbabwe

The mobile money industry in Zimbabwe is composed of mobile network operators and banking institutions. The Reserve Bank of Zimbabwe has registered 18 financial institutions and three mobile network operators to offer mobile money services (Mandizha, 2013). Mobile network operators and banks need to cooperate in order to offer mobile money services. Mobile network operators require banks to operate the trust account which holds subscribers’ and agents’ funds since telecommunications companies are not allowed to take deposits. Similarly, banks require mobile network operators for the Unstructured Supplementary Service Data (USSD) gateway and delivering of transaction short message services in order to offer mobile banking services to its customers via mobile phones. Mobile network operators drive the mobile money industry as they account for 70% of mobile money services (Pénicaud, 2013). Mobile network operators also require a partner bank in order to obtain regulatory approval from the Reserve Bank of Zimbabwe. Tables 1.1 and 1.2 show the mobile network operators and banking institutions that offer mobile money services.
Table 1.1: Banks offering mobile money services in Zimbabwe

<table>
<thead>
<tr>
<th>Banking Institution</th>
<th>Mobile Operator</th>
<th>Network Operator</th>
<th>Mobile Banking Platform/Brand Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>FBC Bank</td>
<td>Net One/Telecel</td>
<td>ZIPIT/One Wallet</td>
<td></td>
</tr>
<tr>
<td>Kingdom</td>
<td>Telecel/Kineto Mobile</td>
<td>Kingdom Cellcard</td>
<td></td>
</tr>
<tr>
<td>POSB</td>
<td>Net One/Telecel</td>
<td>ZIPIT</td>
<td></td>
</tr>
<tr>
<td>CABS</td>
<td>Net One/Telecel</td>
<td>Textacash</td>
<td></td>
</tr>
<tr>
<td>Metropolitan</td>
<td>Net One/Telecel</td>
<td>ZIPIT, Metbank mobile</td>
<td></td>
</tr>
<tr>
<td>FBC Building Society</td>
<td>Net One/Telecel</td>
<td>ZIPIT</td>
<td></td>
</tr>
<tr>
<td>TN Bank</td>
<td>Econet</td>
<td>EcoCash</td>
<td></td>
</tr>
<tr>
<td>Tetrad</td>
<td>Telecel</td>
<td>e-Mali</td>
<td></td>
</tr>
<tr>
<td>CBZ</td>
<td>All</td>
<td>E-Tranzact/CBZ mobile/ZIPIT</td>
<td></td>
</tr>
<tr>
<td>Standard Chartered Bank</td>
<td>Net One/Telecel</td>
<td>ZIPIT</td>
<td></td>
</tr>
<tr>
<td>Trust</td>
<td>All</td>
<td>E-Tranzact/Bank at Ease</td>
<td></td>
</tr>
<tr>
<td>ZB</td>
<td>All</td>
<td>E-Solutions</td>
<td></td>
</tr>
<tr>
<td>ZABG</td>
<td>All</td>
<td>E-Solutions</td>
<td></td>
</tr>
<tr>
<td>Barclays Bank</td>
<td>All</td>
<td>Hello Money</td>
<td></td>
</tr>
</tbody>
</table>

Source: Reserve Bank of Zimbabwe (2012, p.43)

Table 1.2: Mobile network operators offering mobile money services

<table>
<thead>
<tr>
<th>Mobile Network Operator</th>
<th>Mobile Money Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Econet Wireless (Pvt) Ltd</td>
<td>EcoCash</td>
</tr>
<tr>
<td>Netone</td>
<td>OneWallet</td>
</tr>
<tr>
<td>Telecel</td>
<td>Skwama</td>
</tr>
</tbody>
</table>

Source: Company websites
1.1.4 Global mobile money industry

The mobile money industry continues to grow the world over as evidenced by 150 live deployments for the unbanked of which 41 were launched in 2012 (Pénicaud, 2013). Mobile money services started in 2001 when there was only 1 operator and rising to 150 over a 12 year period. Mobile network operators account for 72% of the live deployments. Figure 1.1 shows the number of live mobile money services by region.

Figure 1.1: Number of live mobile money services for the unbanked by region, 2001-2012 (year-end).

Source: Pénicaud (2013, p.6)

Figure 1.1 shows that Sub Saharan Africa accounts for 56% of the live deployments. This entails that mobile money services are ideal for emerging markets which are mainly unbanked.

1.1.5 GSM Telecommunications Companies in Zimbabwe

There are three Global System for Mobile communications (GSM) telecommunications companies in Zimbabwe namely Econet Wireless, NetOne, and Telecel whose mobile money services are briefly discussed next (Telecommunications Insight, 2012).
1.1.5.1 Econet Wireless’s EcoCash
EcoCash is a mobile money service that permits subscribers to store funds in an electronic wallet that is called mobile wallet (Econet Wireless, 2013). The mobile wallet is linked to the subscriber’s number. The service includes: cash in, cash out, airtime top up, merchant payments, biller payments and banking services (Econet Wireless, 2013).

1.1.5.2 NetOne’s OneWallet
NetOne’s mobile money service is called OneWallet and offers services such as sending funds between subscribers, mobile airtime top up, and payment of utility bills (NetOne, 2012). To send money, just like with EcoCash, a depositor has to deposit cash into the OneWallet account at a NetOne Shop or any accredited One Wallet Money Agent and make a transfer. Subscribers are also able to withdraw money from their wallets (NetOne, 2012).

1.1.5.3 Telecel’s Skwama
Telecel was the first mobile network operator to launch its mobile money service called Skwama in 2010. This product died a natural death according to Kabweza (as cited by Kufandirimbwa, 2012). There are, however, overtures by Telecel to revive mobile money services(Kabweza, 2013b).

1.1.6 Study Context
Due to the popularity of mobile money (Sousa, Pimentel, Barros, & Duzhnikov, 2012), there is need for a shift in research from the traditional design, adoption, and financial inclusion to the need to study profitability. Studies on mobile money have focused mainly on design (Donner & Tellez, 2008), adoption (Mirzoyants, 2013; GSMA, 2012; Morawczynski, 2011; Tobbin, 2011; Chen, 2008; Cheng, Lam, & Yeung, 2006). Other mobile money studies have focused on the implications of mobile money (Field, 2011; Kendall, Machoka, Veniard, & Maurer, 2011). In addition, studies on mobile money have also focused on the area of financial inclusion (Alonso, et al., 2013; Jack & Suri, 2011; Klein & Mayer, 2011; Gandhi, 2010). In Zimbabwe, there have been a few published studies on mobile money. Studies published in Zimbabwe have focused on the technical
and developmental aspects of mobile money particularly the integration of mobile infrastructure and processes to organisational structure and processes (Kufandirimbwa, Zanamwe, Hapanyengwi, and Kabanda, 2013) and harnessing technology for development (Kufandirimbwa, 2012). Furthermore, studies in Zimbabwe have also focused on financial inclusion (Ndlovu and Ndlovu, 2013). It is therefore evident that literature on mobile money focuses to a lesser extent on profitability. The research on the profitability of mobile money services by Leishman (2011) lacks conceptual or theoretical frameworks and relies heavily on surveys of mobile network operators. Also, the study was carried out in an environment which cannot be generalised to Zimbabwe. This study has developed a conceptual framework by combining various aspects of profitability such as customer pain point, value chain, key success factors, revenue and cost drivers and challenges.

Mobile money has become a major revenue driver for mobile network operators. M-PESA in Kenya generated in excess of 50% of Safaricom’s non voice revenue and is used by more than 70% of the adult population in Kenya (Safaricom, 2011). M-PESA is now the cornerstone of Safaricom’s corporate strategy. According to Desai (2011) “The sheer number of live deployments is a testament to the industry’s belief in the need for and profitability of Mobile Money services.” (p. 3.). A research gap on the area of factors affecting the profitability of mobile money services therefore exists.

1.2 RESEARCH PROBLEM

The mobile money industry is relatively new and few success stories exist albeit the excitement and huge investment involved in rolling out the business (Smith, 2011). Although there has been growth in the number of mobile money services, some mobile money providers launched their services whilst others have completely exited the market (Pénicaud, 2013). It is reported that, 20% of the mobile money services that were launched in 2012 were re-launches of existing mobile money services (Pénicaud, 2013). The number of mobile money services that closed or merged with other
operators in 2012 were 10%. In Zimbabwe, Telecel’s mobile money service Skwama collapsed. The failures of some mobile money services therefore represents a huge problem that needs to be addressed.

Some observers have also started to question if EcoCash will achieve the success of M-PESA which has been profitable (Chulu, 2012; Kabweza, 2012). EcoCash surpassed M-PESA’s growth in terms of customers registered (Kabweza, 2012), however, the company has not announced on the viability of the project. Econet has only announced the number of subscribers it has registered to the service and the volume of monthly transactions. Also, the company in its performance commentaries only notes the success of the product in terms of number of customers registered instead of revenue generated or the profitability thereof (Econet Wireless, 2013b). This behaviour raises eyebrows regarding the financial viability of the product. Levin (2013a) also highlighted that the product has not yet been profitable.

To buttress the assertion that mobile money services providers focus on subscribers rather than financials, Sousa et al. (2012) notes that, “most operators simply do not disclose performance of their respective M-Payments initiatives and the few that do, focus on subscribers rather than financials” (p.3). This is an indication that despite its success in terms of customers registered, the product might not be generating enough revenue and profitability. It is therefore the purpose of this study to explore factors affecting the profitability of mobile money services.

1.3 OBJECTIVES OF THE STUDY

The overall objective of this study is to ascertain the major factors affecting the profitability of mobile money services in Zimbabwe.

The sub objectives of this study are:

a) To investigate whether revenue and cost drivers have a relationship with profitability in the mobile money business.
b) To establish the relationship between mobile money key success factors and profitability.

c) To ascertain the relationship between mobile money industry driving forces and profitability.

d) To establish the challenges that negatively affects the profitability of mobile money services.

e) To find out the impact of establishing customer pain point and understanding value chain on profitability.

f) To draw strategic conclusions.

1.4 RESEARCH QUESTIONS

The main research question is:

What are the major factors that affect the profitability of mobile money services in Zimbabwe?

Research Specific Questions

a) What is the relationship between mobile money revenue and cost drivers and profitability?

b) Is there a relationship between leveraging on key success factors and the profitability of mobile money services?

c) What is the impact of industry driving forces on the profitability of mobile money services?

d) What are the challenges faced by mobile network operators that negatively impact on profitability?

e) Is there a correlation between establishing customer pain point, understanding value chain and profitability?
1.5 RESEARCH HYPOTHESIS

Hypothesis 1
Establishing customer pain point and understanding value chain has a positive impact on profitability.

Hypothesis 2
Leveraging on key success factors has a positive impact on profitability.

Hypothesis 3
Understanding the major revenue and cost drivers has a positive impact on determining mobile money profitability.

Hypothesis 4
Industry driving forces have a negative impact on profitability.

Hypothesis 5
There is a negative relationship between challenges affecting mobile money services and profitability.

1.6 JUSTIFICATION

Given the absence of a conceptual framework on profitability, the challenges faced by mobile network operators in Zimbabwe that are stated in the problem statement, it is of paramount importance that this research be conducted as its results are expected to assist mobile network operators in Zimbabwe by identifying the pertinent factors that affect the profitability of mobile money services. This research will also assist mobile network operators to reach critical mass in their mobile money product. In addition, the research will assist operators to focus on those critical factors that will make their mobile money service profitable and match M-PESA’s performance. The research will also be of paramount importance to operators that want to relaunch their mobile money services. This research will thus assist management to come up with strategies to help their organisations.
The research will also contribute to the existing body of knowledge on mobile money as the researcher endeavours to come up with a conceptual framework on profitability. Existing body of literature on mobile money profitability lacks a conceptual framework as it is based on the views of practitioners. The methodological concepts used in this research will also be of benefit to the academic world.

The research will also be beneficial to policy makers as it recommends policies that can be adopted by the regulatory authorities. To the society in general, the research will assist in the development of a good customer experience. The society will benefit from improved service delivery and development of new products that will enhance financial inclusion.

On a personal level, the research will broaden the knowledge of the researcher in mobile money services by learning from experiences in other countries and drawing parallels and similarities to the Zimbabwean situation. Since the researcher is in the mobile money services industry, the researcher’s work productivity is going to be enhanced by applying the concepts learnt to real life experiences.

1.7 SCOPE OF RESEARCH

Mobile money services are offered by both mobile network operators and banks. This research is limited to mobile network operators over the three year period 2010 to 2013.

1.8 DISSERTATION STRUCTURE

Chapter 1 gives the introduction to the study and is composed of the background to the study, problem statement, objectives of research, the research hypothesis, justification of the research project, scope of the research and ethical issues. Chapter 2 reviews theoretical and empirical literature on those factors that affect the profitability of mobile money and concludes by the formulation of a conceptual framework. The chapter also forms the basis on which the study findings are discussed. The methodology underlying
the research is contained in Chapter 3. The chapter gives an overview of data collection methods and the justification of methods used, data processing and the data analysis process. Chapter 4 gives the research findings and discussion of the research results based on literature. It also forms the basis of the conclusions and recommendations. The research ends with Chapter 5 which presents the conclusions, recommendations and areas for further study.

1.9 SUMMARY

A discussion of the background to the study, statement of the problem, study context, research objectives, research questions, research hypothesis, the justification of the study, scope of the study and the dissertation structure was presented. The next chapter is a review of literature relevant to mobile money profitability.
CHAPTER TWO

LITERATURE REVIEW

2.0 INTRODUCTION

This chapter critically discusses relevant literature on areas that have a bearing on mobile money profitability such as business models, revenue and cost drivers, value chain, key success factors (KSF), industry driving forces, pricing and commissions. An overview of the mobile money ecosystem and types of mobile money services is given first in order to set the scene for a deeper understanding of the mobile money value chain. Case studies drawn from countries that successfully launched mobile money services are also reviewed. Particular attention has been made on drawing parallels and similarities between the concepts. A conceptual framework underlying the study has also been presented. The chapter commences by with a review of the concepts that affect mobile money profitability and concludes with an outline of a conceptual framework.

2.1 MOBILE MONEY ECOSYSTEM

A business ecosystem is defined as an economic community that is supported by a foundation of interacting organisations and individuals (Moore, 1996 as cited by Jenkins, 2008). Mobile money ecosystems are networks of organisations and individuals that facilitate distribution of mobile money services (Jenkins, 2008). In agreement with Moore (1996) and Jenkins (2008), Mas and Radcliffe (2011) highlight that mobile money requires the coming together of various actors that play different roles but complementing each other. Thus, the mobile money ecosystem involves a wide range of different players that include mobile network operators, banking institutions, airtime wholesalers, retailers or merchants, billers, corporates, employers, regulators, international financial institutions and donors, and civil society
organisations (Mas & Radcliffe, 2011; Chemonics International Inc, 2010). Figure 2.1 summarises the players that constitute the mobile money ecosystem.

![Figure 2.1: The mobile money ecosystem.](source)

Source: Mas and D. Radcliffe (2011).

Figure 2.1 shows four players namely cash merchants, end users, bulk users, and merchants as well as the type of services offered. The size of the circle represents the number of users in each category. A big circle represents many users, whilst a smaller circle shows few users. The biggest users are therefore, end users who ordinarily are the subscribers. The circle of end users intersects with each of the other smaller users which indicate that end users are the cornerstone of mobile money services.

End users perform P to P (person to person) transactions which entail sending money to each other. Cash merchants on the other hand are the agents notably retail outlets where end users exchange cash for electronic money (Mas & Radcliffe, 2011). Merchants are where end users buy goods and pay using electronic money hence B to C. Merchants also purchase goods from each other representing a B to B relationship.
Bulk users are corporates that utilise services such as bulk payments or aid distribution to many subscribers hence 1 to many.

However, the mobile money ecosystem shown in Figure 2.1 proposed by Mas and Radcliffe (2011) ignores important players such as regulators and banking institutions. Without these institutions, a company will not effectively offer mobile money services since a licence is issued to the partnering bank by the regulator. In Zimbabwe, a mobile network operator requires a banking institution to seek regulatory approval from the Reserve Bank of Zimbabwe for a licence. The Post and Telecommunications Regulatory Authority of Zimbabwe (POTRAZ) is also an important regulator for mobile network operators for the GSM telecommunications aspect. Regulation is an important aspect whose importance cannot be overemphasised. The ecosystem also ignores globalisation. A mature mobile money ecosystem, should be an interoperable system that is linked to the global market (Salinas, 2012). Next, a brief overview of the various types of mobile money services is presented.

2.2 TYPES OF MOBILE MONEY SERVICES

According to Ernst & Young (2009) there are 3 types of mobile money services as shown in Figure 2.2.
These types are mobile banking, mobile money transfer (remittance), and mobile commerce (payment) (Parikh, Rindler, Konstantinov, Garcia-Monterde, & Bruck, 2013; Ernst & Young, 2009). Mobile banking includes access to the bank account in order to perform informational services and transactional services (Parikh et al., 2013; Ernst & Young, 2009). The various types of mobile banking services include inter account transfer, account enquiry, and stock trading. Mobile payments involve proximity payments and remote payments (Parikh et al, 2013). The service under mobile commerce (payment) encompasses services such as making payments through the mobile phone. Mobile money transfer encompasses domestic and international money transfers. Mobile money transfer (remittance) includes airtime top ups, person to person transfers, and international remittances (Ernst & Young, 2009). In addition to the three, mobile finance is also regarded as one of the types of services (Gencer, 2010). Mobile finance encompasses services such as credit, insurance, and savings. Having reviewed
the various types of mobile money services, it is important to examine the business models under which these services are provided by mobile network operators.

2.3 MOBILE MONEY BUSINESS MODELS

When a company comes into existence, it should explicitly or implicitly employ a business model that seeks to describe the architecture of the value creation it will employ (Teece, 2010). The essence of a business model is to define the way a firm delivers value to customers, entice those customers to pay for services, and effectively translate those payments into profits. There is a positive relationship between a firm’s choice of business model and profitability (Collins, Chan, & Roman, 2010). As such, there is need for mobile network operators to choose a suitable business model that is consistent with its profit objectives. There are generally three main mobile money business models although on the third model some authors differ on the name but the terminology is the same (Net Hope, 2012; Salinas, 2012; IFC, 2011; FACET, 2010). The two main models the authors agree on are mobile network operator (MNO) led and bank led. IFC (2011) identifies the third as collaborative model while Net Hope (2012) identified it as an independent model. Salinas (2012) and FACET (2010) identified the third model as third party service provider. The collaborative model, third party service provider, and the independent model are however, one and the same.

2.3.1 Forms of Business Models

2.3.1.1 MNO centric

This model works well in emerging markets where there is low financial infrastructure and a high unmet demand. As such, the MNOs is the most able and incentivised player to develop mobile money business since it controls both the communication network and distribution network. Also, MNOs have an ownership of subscribers hence it is easy to roll out the service. The competitive strategy that can be employed by operators is that of innovation and differentiation by offering services that did not previously exist(IFC,
2011). It is important to point out that this model is used by mobile network operators to increase their market share in a highly competitive environment. It is also used to increase traffic on the network and ultimately to reduce churn (FACET, 2010). Examples of mobile money services that are MNO led include M-PESA in Kenya and G-Cash in the Philippines (FACET, 2010). In relation to profitability, this model maximises profits because the mobile money service is spearheaded by the mobile network operator. As an example, in 2010 M-PESA’s revenues grew by 56% to US$157 million which was 13.3% of Safaricom’s revenue. As a result, Safaricom made a profit of $173 million (Wright & Shivshankar, 2011). Also, MTN Uganda after eighteen months was profitable (Wright & Shivshankar, 2011).

2.3.1.2 Bank centric model
This is whereby mobile money services are championed by banks mainly for the purposes of providing alternative access channels to their customers. The bank is therefore the key player which is responsible for deployment and negotiation of contracts with players in the mobile money ecosystem. The merit of the bank centric model is its opportunities for new clients, new revenue streams and more control of risk (IFC, 2011). Examples of bank led model include Standard Chartered Mobile Banking in Kenya (IT News Africa, 2009) and Barclays Bank’s Hello Money (Barclays PLC, 2009).

2.3.1.3 Collaborative model
This is collaboration between the mobile network operator and banks or other third parties where they agree on how they share the revenues and expenses (IFC, 2011). The merits of this model are that each partner gets a share of the revenue pie. On the flip side however, this model is complex and often difficult to manage due to the many parties involved where disagreements might arise. An example of the collaborative business model is Qtel Mobile Money in Qatar which is collaboration between Qatar Telecom (Qtel) with various financial institutions which include Qatar National Bank (Cisco, 2012).
It is important to highlight that mobile money business models are evolving and not static. The business model depends on the stage of financial development of a country. For example, in Kenya, M-PESA model evolved from MNO centric to a collaborative model (IFC, 2011). IFC (2011) developed a hypothesis of progressive development of the MNO centric model which illustrates how the MNO centric model tends to evolve as the country's financial sector develops.

**Figure 2.3**: Hypothesis of Progressive Development of MNO-Centric Model.

*Source: IFC (2011, p.82).*

As illustrated in Figure 2.3, as the financial sector of a country develops, mobile money business models change from MNO-centric to collaborative as mobile network operators, banks and third parties enter into strategic partnerships. In a country where the financial sector is not developed, the MNO centric is ideal. However, as the financial sector develops as illustrated in Figure 2.3, there is need for partnership between the mobile network operator, banks, and other service providers. This enables the mobile
network operator to offer more services. A single platform is where there is cooperation among multiple players. By entering into strategic partnerships with third parties, mobile network operators are able to increase and diversify their revenue streams thereby maximising their profitability. Money is therefore made when there is cooperation among multiple players which result in offering more services from the basic ones. This provides for growth opportunities in mobile money. The next section provides an insight into the mobile money value chain.

2.4 VALUE CHAIN

In order to effectively understand the factors affecting the profitability of mobile money services, it is necessary to explore the mobile money value chain. Porter (1985) defines the value chain as a representation of a firm’s value-adding activities, which are based on its pricing strategy and cost structure. In mobile money services, the pricing is reflected in the tariff structure, whilst cost structure is reflected in commission expense and other costs. Porter (1985) proposes the idea of value chain in order to show how customer value accumulates along a chain of activities that a firm undertakes in order to deliver a product or service. In essence, the value chain encompasses those internal processes or activities that a company performs so as to design, produce, market, and deliver its product or services (Institute of Management Accountants, 1996).

In order to effectively understand those activities that a firm should perform in order to realise value, Porter divided a firm’s activities into primary and support activities. Primary activities are those that are directly involved in the transformation of inputs into outputs as well as delivery of the products and offering after sales support (Coelho, 1999). Support activities are those activities that support primary activities and other support activities and they are ordinarily handled by the organisation’s support departments.

The value chain concept, like any other model also has its limitations. Unlike Porter’s model which only focused on those activities done by the firm, Shank and Govindarajan (1999) developed their model which was much more broader. They argue that the value chain should start with the value creating processes of suppliers, different classes of
consumers, and right up to the disposal and recycling of materials. The rationale for their criticism is that their model views the firm as part of an overall chain of value creating processes and not just the firm alone. Understanding the value chain in a broader sense therefore assists in unlocking more value and ultimately results in more sustainable competitive advantage and profitability.

A firm’s ability to exploit its value chain will enhance its competitive advantage and possibly profitability. This is possible since a firm is able to assign revenues, costs, as well as assets to those value creating processes. According to Institute of Management Accountants (1996), businesses use the value chain concept to identify sources of profitability and also to have a picture of the cost of their internal processes or activities. It is therefore important that businesses that offer mobile money services understand their value chain.

The mobile money business requires the performance of a synchronised set of activities in the form of a value chain. The value chain for mobile money has primary activities and support activities. However, since mobile money is a service and not a product, its value chain will naturally differ from that of a physical product although the concept remains the same. The difference lies in that the primary activities for mobile money are four whilst those for a product are five. In addition, the support activities for a product value chain are four whilst those for mobile money services are three. The value chain for mobile money services was developed by Davidson (2011) and is depicted in Figure 2.4. Thus, analysing the value chain for mobile money services will assist organisations to identify key success factors.
Mobile money primary activities include marketing that involves dealing with branding and advertising. This is a crucial activity that has to be performed in ensuring that the brand is known. The second primary activity is cash in/cash out network or the agent channel that deals with liquidity management (Davidson, 2011). Agents should be liquid enough in order to offer services. Agents drive the mobile money business as they are the interface with customers and hence affect the customer experience. The third primary activity is technology. As compared with the traditional Porter’s value chain which treats technology as a support activity, in mobile money, technology is a primary activity. Technology in the form of the transactional platform and handset is required in order to provide the service, hence it is a primary activity. The fourth primary activity is customer care which handles customer queries. Mobile money support activities encompass float holding, license acquisition, regulatory engagement, and compliance, and product and business development. As such, the primary activities are required to deliver value to customers while support activities are required to offer support. Di Castri (2013a) further highlights that the primary activities should be performed by mobile network operators while the support activities should be performed by banks. This is so
because since it is the partnering bank that applies for the licence. The partnering bank also holds the Trust Account hence it is better suited to carry out the float holding support activity. On the other hand, the mobile network operator, as the owner of the mobile money service should be in control of the primary activites of marketing, the agency distribution channel, technology and customer care. This will help to ensure that the service reaches scale.

Revenue and costs are derived from the value chain, hence it is important that a business should understand its value chain first in order to comprehend the sources of revenues and cost. The next section presents revenue and cost drivers as well as mobile money pricing and commissions.

2.5 MOBILE MONEY REVENUE AND COST DRIVERS

In order to ensure that the mobile money service is commercially viable, mobile network operators should build a financial model that recognises key revenue and cost drivers (Leishman & Desai, 2009). In the mobile money business, value is derived predominantly from direct revenues in the form of customer fees and indirect revenues in the form of airtime savings (di Castri, 2013a; Leishman, 2011). Leishman and Desai (2009), however, best summarises the major revenues as shown in Figure 2.5.
According to Figure 2.6, revenues from mobile money can be in the form of direct and indirect benefits. The most important direct benefit is the fees paid by customers on transactions. The higher the number of transactions, the higher the revenue being earned by operators. Mobile network operators also derive revenue from earning interest on float. Revenue also comes in the form of subscription fees. Thus, operators should put more emphasis on deriving revenue from direct revenues (di Castri, 2013; Leishman, 2011; Baba, 2010). Mobile network operators thus increase revenue by encouraging more usage of the service (Kumar & Mino, 2011). The number of active customers using the service should therefore be high. Mobile network operators must also focus more on increasing electronic only transactions which earn higher margins instead of low margin transactions such as cash in or cash out. Operators should strive to increase electronic transactions per deposit (Kumar & Mino, 2011). This is because when users do electronic only transactions, operators do not pay cash in and cash out commissions to agents. However, when customers perform cash in or cash outs, operators pay commissions to agents. Hence, electronic only transactions are of high margins in comparison to cash in or cash outs which are low margin.
transactions. Furthermore, operators should address the question of increasing more electronic transactions by encouraging more use cases.

Indirect benefits mainly relate to customer retention, airtime distribution savings and upselling. It is however, pertinent to point out that some of the revenue sources proposed by Leishman and Desai (2009) are difficult to quantify and record in an income statement as they are subjective. For example, it is difficult to quantify and record indirect benefits such as customer acquisition and upselling, and customer retention.

Although it is difficult to quantify some indirect benefits as revenues, mobile network operators should nevertheless pursue them. For instance, the indirect benefit of customer acquisition and upselling results in increased revenues. By encouraging merchants to open bank accounts and coming up with additional services to banked customers, this results in the increase of transactions which will manifest in increased revenues.

On the whole, there are three basic drivers of revenue growth that operators should be aware of (Kumar and Mino, 2011) and these include: increase in active customers (growth in transactions per month per active customer), cost structure should change from fixed marketing costs towards variable agent commission costs as the service grows (Leishman, 2011; Kumar and Mino, 2011), and growth in electronic transactions per deposit.

As highlighted by Kumar and Mino (2011), mobile network operators should endeavor to increase the number of active customers. If there is a growth in the number of transactions per month per individual customer, revenues naturally increase. Active customers are users who perform transactions regularly (Davidson & McCarty, 2011).

Cost structures should change from fixed marketing costs to variable costs such as agent commissions because as the service grows, it would not be necessary to spend more on marketing costs since the brand will be known.

Growth in electronic transactions results in direct profit (CGAP, 2011). Electronic transactions which are initiated by subscribers earn more margins than cash in and
cash out transactions done at agents. It is estimated that M-PESA earns 18% margins on cash in and cashout transactions done at agents as compared to a margin of 35% earned on electronic only transactions (CGAP, 2011).

The major costs to mobile network operators include the initial investment outlay and commissions to agents. The costs are classified as fixed and variable and are shown in Figure 2.6. Agent network costs in the form of the mobile platform comprise 30% of costs according to (Leishman, 2011). The second largest cost is customer acquisition and registration costs which make up 28% of total costs. The third major costs are commissions paid out to agents and management costs. However, marketing and advertising costs account for only 8% of total costs. The key issue on mobile money cost drivers is that they should move towards variable instead of remaining as fixed in order to achieve profitability (Leishman, 2011).
**Figure 2.6: Mobile Money Cost Drivers**

Source: Leishman (2011, p.9).
2.6 MOBILE MONEY PRICING AND COMMISSIONS

The major revenues earned by mobile network operators who offer mobile money services are derived from the fees levied which is also known as customer tariffs. The major expense of the service is the commissions that are paid to agents. Davidson and Leishman (2010) postulate that in order for mobile network operators to achieve scale and profitability, they should have well designed customer tariff and commission models.

As expounded by GSMA (2009), mobile network operators should employ a value – pricing approach in setting customer tariffs. The value – pricing approach is whereby the customer’s perceived value of the service is greater than the price being charged. In turn, the price being charged should be greater than the cost of availing the product. This will ensure that subscribers use the service since the value being derived from using the mobile money service is greater the cost of using the service. In employing the value – pricing approach, mobile network operators should establish the objective of customer’s willingness to pay. Furthermore, it is important to establish how cheap or expensive the next best alternative is. Thirdly, the price being charged should be able to sustain the channel strategy adopted. Lastly as a rule of thumb, the price charged should naturally be able to cover other variable costs.

2.6.1 Tariff Sheet Structure

Pricing structure influences customer perception of value (Iyengar, Jedidi, Essegaier, & Danaher, 2011) There are three models that mobile network operators can employ in setting tariff structures and these include flat rate, percentage based and tiered (GSMA, 2009). The key or best practice in setting tariffs is that mobile network operators should only charge ‘value creating” transactions such as P2P transfers and Cash-out (GSMA, 2009). Transactions which are not value creating like Cash-ins should not be charged.
2.6.1.1 Flat Rate Tariff

A flat rate tariff is whereby customers only pay a fixed fee for a service (Frank, 2012). A flat rate is an absolute figure for example $2.00. A flat rate tariff structure is simple to use. However, the flip side of a flat rate structure is that, it is not competitive for low value transactions (GSMA, 2009). Also, by employing the flat rate structure, operators find it difficult to generate enough revenue from high value transactions. Another disadvantage of the flat rate tariff is that, customers have unlimited consumption at a fixed price which is a bargain and is appealing (Della Vigna & Malmendier, 2006; Lambrecht & Skiera, 2006; Nunes, 2000). From the perspective of the company, due to consumption of services at a fixed price which induces heavy usage, this makes flat rates unprofitable for companies (Frank, 2012). Also, since a flat rate tariff ignores frequency of usage, this reduces profitability as customers are not charged according to the size and frequency of transactions. Flat rates are mostly suitable where there is need to retain customers (Frank, 2012).

![Flat Rate](image)

Figure 2.7: Flat Rate Tariff.

Source: GSMA (2009, p.8)

2.6.1.2 Percentage Based Tariff

A percentage based tariff model on the other hand involves a percentage for instance 5%. The model captures more value and is simpler in markets with a high literacy level. Whilst in those markets with low literacy level, it is difficult to comprehend. The demerits of the model are the same for that of the flat rate structure (GSMA, 2009).
2.6.1.3 Tiered Tariff

A tiered structure involves charging the same fee for the same band. The higher the transaction bands the higher the fees will be. In terms of profitability, the advantage of using the tiered model is that it captures more value and also makes it easier to satisfy agents. Its demerit is that it is not simple. Mobile network operators should also distinguish the fees for registered and non-registered customers when employing the tiered tariff structure. This is so because transfers between registered customers should be lower since the chances of churn are also lower. However, if funds are sent to an unregistered customer, a higher margin should be levied (Leishman, 2011; GSMA, 2009).
However, Clifford (2012) introduced another pricing model which is different from the three propagated by GSMA (2009) called tariff based pricing. Tariff based pricing is a model that enables micro payments by charging lower fees for smaller transfer prices. This pricing model promotes low value transfers. Cook and Almazan (2012) and Clifford (2012) sentiments on tariff based pricing are in agreement. M-PESA in Kenya and Tanzania in 2012 utilized the tariff based pricing model (Cook and Almazan, 2012). Cook and Almazan (2012) highlight that M-PESA in Kenya and Tanzania structured their new tariffs to allow for affordable payments at the lower end. What M-PESA did is that they permitted smaller valued transfers that were not previously allowed and increased the fees for high value transfers for customers they deemed as price inelastic. However, in Nigeria micropayments are discouraged as they are more expensive (Clifford, 2012).

When designing a tariff structure, it is also of paramount importance to scan for risks. The major risks that are prevalent are direct deposits and split transactions (GSMA, 2009). A direct deposit occurs when a customer provides the agent with the mobile number of the recipient rather than their own to evade paying transfer fees. On the other hand, split transactions involve splitting a payment into multiple smaller ones in order to minimize fees.

In their conclusion, GSMA (2009) points out the following attributes of tariffs: should be priced according to perceived value, structured using tiers, should have an option to send to unregistered recipients, fees should only apply to ‘value creating’ transactions, tariff should be designed in such a way that there is minimal risk of direct deposits and transaction splitting. Pricing is therefore important in mobile money services as it results in the generation of revenues which are important for profitability.

2.6.2 Agent Commissions

For mobile money services to succeed, the agents that support it should also make money (AMPHOTRAK, 2012; GSMA, 2010). The rule of thumb in agent commissions is
that agents should be paid for every activity they perform regardless of whether the mobile network operator charges the customer for a fee or not (GSMA, 2009). In determining the level of commission to be paid to agents, emphasis should be put on the profitability of agents (GSMA, 2009). Mobile network operators should also be aware of the variables that drive agent profitability that include float, restocking cost, volume of transactions, average commission value, and average transaction value. Float refers to the amount of e-money and physical cash that an agent should possess in order to process cash in and cash out transactions (GSMA, 2010; EC, 2005). Restocking cost is the cost that an agent incurs to replenish his cash or emoney balance (Davidson & Leishman, 2010). Volume of transactions is the number of cash in and cash out transactions performed by an agent per day. Average commission value is the average commission earned by an agent for performing cash in and cash out transactions. Average transaction value on the other hand is the average value of cash in and cash out performed by customers. GSMA (2009) suggested three ways to calculate agent profitability as shown below.

Equation 1: Profit Margin x Asset Turnover

Or

Equation 2: Commisions – Restocking Costs

\[ \frac{\text{Commisions} - \text{Restocking Costs}}{\text{Float}} \]

Or

Equation 3

\[ \frac{\text{avg. commission value} - \text{restocking cost} \times \text{avg. trans value} \times \# \text{ of transactions}}{\text{avg. transvalue}} \times \text{float} \]

Equations for Agent Profitability.

The first method entails multiplying the Profit Margin and Asset Turnover. Profit Margin is daily profit while asset turnover is the rate of return on assets (GSMA, 2009). The second method involves subtracting restocking costs from commissions earned and dividing the answer by the float held by the agent. The third method of calculating agent profitability involves dividing average commission value with average transaction value. This is subtracted from the answer obtained by dividing restocking cost and the float held by agents. This is then multiplied by the total of average transaction value multiplied by the number of transactions divided by the float held by agents.

The assumptions underlying the equations are that an agent performs only one type of transaction (cash in or cash out) and not a mix. This assumption is obviously not realistic as agents perform a mix of transactions in addition to cash in or cash out such as selling airtime. The other assumption is that the agent does not incur labour cost. This assumption is also not realistic since an agent has to employ an additional transactor responsible for mobile money services. The formulae also assume that every transaction has the same average value and agents depletes their stock completely before they restock. This assumption can again be challenged since all transactions are not of the same value and also, not all agents wait for float to completely run out before rebalancing their float holdings.

The commission paid to an agent should be set at a level that will enable the mobile network operator to earn an acceptable margin. On the other hand, the commission paid to the agent should be also be set at a level that enables the agent to earn an acceptable profit or return on investment (GSMA, 2009). There is therefore, need to ensure cooperation among value chain players because a relationship that enriches one player while other become poor may not be sustainable. Hence, for mobile money services to be viable, both mobile network operators and agents should be profitable.
2.7 KEY SUCCESS FACTORS (KSF)

Key success factors are those important factors that contribute to the success be it of a product or organization (Nader Sh. Kandalousi & Abdollahi, 2011). Grunert (1992) further articulates that there are four different ways in which the term key success factors is used and these include: as a necessary ingredient in a management information system, a unique characteristic of a company, an experiential tool for managers to sharpen their thinking, and as a description of the major skills and resources required to be successful in a given market. Another definition of key success factors is, “The combination of important facts that is required in order to accomplish one or more desirable business goals” (Business Dictionary, 2013). From the definitions proffered, it can be deduced that it is important for organisations to leverage on such factors in order to be successful and profitable. The discussion on key success factors as it relates to the mobile money industry is presented next.

2.7.1 Mobile Money Key Success Factors (KSF)

There are pertinent factors that should exist in order for the mobile money service to be successful. In mobile money services, key success factors are those factors that make the fastest growing deployments to succeed. Literature on mobile money key success factors tend to agree on those crucial factors that should exist in order for the service to be successful. Mas and Ng’weno (2010) and Mas and Radcliffe (2011) highlight the different factors that are key such as marketing, branding, pricing, and channel management. However, the prominent factor between the authors was branding. Davidson (2011) was however, of the view that relationships with partner banks was key. The author’s argument was that mobile network operators and banks should work together to leverage on each other’s strengths in order to reach out to those excluded from financial services (Davidson, 2011). The key success factors highlighted are detailed hereunder.
2.7.1.2 Marketing Pull

Marketing is defined as those set of activities, institutions, and processes used for the creation, communication, delivery, and exchange of offerings that will give high value to customers, clients, partners, and society at large (Armstrong & Kotler, 2009). However, Lancaster and Reynolds (2005) defines marketing as, ‘... the management process responsible for identifying, anticipating and satisfying customer requirements profitably.” (p. 4). Marketing efforts should therefore be centred on creating and delivering value to customers.

In mobile money, marketing should be used a tool that creates a buzz and build trust in the new service (Mas & Radcliffe, 2011). As a result, there is need to explain to customers what mobile money does, why it is better than alternatives and how it works. The best way to build trust in the service is for mobile network operators to invest aggressively in above the line marketing initiatives such as television and radio and below the line initiatives such as stage plays, banner advertisements. Mobile network operators should thus invest heavily in marketing. During the first two years of its deployment, M-PESA invested approximately US$10 million on above and below the line marketing activities (Mas & Radcliffe, 2011). This helped M-PESA to reach 6.2 million customers in two years (Mas and Radcliffe, 2011). Zain Zaip which relaunched in 2002 achieved 2.2 million subscribers (Michaels, 2011). Marketing is thus, crucial to overcome trust and awareness barriers.

2.7.1.3 Branding

Blythe (2005) defines branding as a name that was used in the identification of products, services, persons, or places, and was augmented in such a way that the buyer or user would be able to distinguish pertinent, unique added values which matched their needs. In essence, this entails that customers are better able to relate to a name that they are familiar with. The success of the brand resulted from being able to sustain those added values in the face of competition. Thus, branding is a key issue in positioning since it can be used to identify a product as well as conveying an impression of its quality. In mobile money services, branding is very key as it helps customers to identify where service is being offered. It is also important that the mobile money service leverage on the corporate brand. This makes it easier for brand recognition and
awareness. M-PESA leveraged on the Safaricom brand which enjoyed 80% market share in Kenya.

2.7.1.4 Channel Management

Channel management involves managing and monitoring the activities of agents. Mobile money services are largely driven by agents. Managing the network of agents helps to retain the customer experience which is key in scaling mobile money services (Davidson & Leishman, 2010).

Other key success factors that are important to drive the mobile money business include: the need to define an early use case that encourages customers to learn about, try and use the service. Before a mobile network operator launches a mobile money service, there is need to build a clear proposition for the potential users (Camner, Pulver, & Sjöblom, 2009). Mobile operators should therefore identify and examine the existing methods used to send money in order to understand why and where people are sending money. The early use case adopted by M-PESA was send money home. This became the cornerstone of M-PESA success as it sought to address the customer pain point of domestic remittances. Identifying an early use case is crucial for growth. This appears to be one of the weaknesses of mobile money services in Zimbabwe hence the need for this research.

It is, however, important to point out the weaknesses in the key success factors that were outlined by Mas & Ng’weno (2010) and Mas & Radcliffe (2011). The authors only focused on factors that were internal to the organization and ignored external factors that are equally important. Camner and Sjöblom (2010) and Pénicaud (2013) focus on both internal and external factors which influence the success of mobile money services. External factors that influence the success of mobile money services include geographical distribution, gross domestic product (GDP) purchasing power parity (PPP) per capita, level of financial inclusion, level of GSM penetration, operator market share, and competitive landscape. Internal factors on the other hand include levels of investment, organizational structure, customer acquisition and marketing strategy, and distribution (Pénicaud, 2013; Camner & Sjöblom, 2010).
Commonalities and differences between the authors that focused on internal factors alone and those that focused on both external and internal can be drawn. The common factors relate to dominant mobile operator, marketing strategy and distribution. The differences relate mainly to the external factors proffered.

Pénicaud (2013) carried out a study of 14 mobile money services that registered the fastest growth by looking at both internal and external factors. The sprinters are the fastest growing deployments. The sprinters displayed a number of commonalities around certain internal factors such as the level of investment made into the service, organizational structure, marketing strategy or distribution system (Pénicaud, 2013). On the other hand, Cobert, Helms, and Parker (2012) identify mobile money key success factors as managing the agency network, creating a compelling product offering, and maintaining corporate commitment. As can be deduced, authors have different views on the pertinent key success factors, hence a gap has been identified which necessitates the need for further research. This research will attempt to address the gap identified.

2.7.2 Case Studies on Key Success Factors

This section focuses on country case studies of key success factors. The case studies are drawn from Kenya, Japan, and Paraguay.

2.7.2.1 M-PESA, Kenya

In order to identify key success factors, it is imperative that mobile network operators focus on how to get subscribers to trust the service and be comfortable utilising it. It is also important that subscribers find value in joining the service. A review of literature by Mas and Ng’weno (2010) reveals the undernoted 3 key success factors of M-PESA as brand development, channel management, and customer tariff and agent commission structure. However, Camner and Sjöblom (2010) differs from the assertions offered by Mas and Ng’weno (2010) as they highlight different factors. Camner and Sjöblom (2010) highlight that the 3 keys to M-PESA’s success are the ability to transform its airtime distribution into an agent network, marketing strategy, and geographical and demographic conditions. The only similarity between the authors relate to marketing
strategy employed by M-PESA whilst they differ on the rest of the factors. Also, IFC (2011) articulate that three factors that led to the growth of mobile money services in Kenya are dominant mobile operator, permissive regulation, and customer demand for additional services. When M-PESA was launched there was virtually no regulation governing its operation (IFC, 2009). The Kenyan Central Bank only introduced regulations in 2011 well after the M-PESA service was launched. Demand for other services apart from person to person transfers also contributed to the enormous success of M-PESA. As an example, 14% of subscribers use M-PESA as a savings product (FSD Kenya, 2009). Given the divergence in authors views about the key success factors of M-PESA, which is used as a reference point for a successful mobile money service, it is important that this research be carried out in order to find out key success factors for mobile money services in Zimbabwe.

**Brand development**

When M-PESA was launched, the Kenyan market had limited financial literacy. The majority of Kenyans did not have access to formal financial services. As a result, it was crucial for M-PESA to develop a good brand that was able to appeal to the highly financial illiterate clientele base. Safaricom invested in marketing such that M-PESA’s brand was stronger than Safaricom’s corporate brand in Kenya (TNS Research International, 2009). Safaricom employed a full scale national launch and chose a deliberate message and marketing mix that helped overcome network effects (Mas & Ng’weno (2010)). In order to develop its brand, M-PESA used (Mas & Ng’weno; 2010):

i. A single, simple message meant to address the key customer need of domestic remittances. As compared to Kenya, there is no single mobile money service in Zimbabwe that has a simple message that is meant to address a key customer need, what is referred to as the customer pain point. In the case of the Kenyan market, the customer pain point was the need to send domestic remittances to the rural areas as a result of the predominant rural to urban migration. In Kenya, most families reside in the rural areas whilst the husbands relocated to the cities to work in order to fend for their families. They, therefore, required a safe and efficient service to send money back home instead of the risky bus drivers. Also,
by focusing on a single simple message, M-PESA unlike other mobile network operators particularly those in Zimbabwe, did not make the mistake of attempting to replace cash in customers day to day life but simply offered a new solution of remote payments where cash was not very effective and existed few convenient alternatives. M-PESA’s message was simply “Send money home.” The message was well suited to Kenya’s demography of split families as a result of rural to urban migration. After three years down the line, this has remained M-PESA’s main marketing message. Unlike other operators, while M-PESA offered many services, Safaricom did not choose to clutter their message with multiple claims meant to draw the attention of customers that were not familiar with the service.

ii. An appropriate marketing mix was also crucial to M-PESA’s success. Initial marketing was targeted at the rich city dweller thereby avoiding the notion that it was a low value product that was aimed at the poor. This is where M-PESA’s marketing mix differ from that of Econet’s EcoCash. EcoCash’s service gives the impression that the product is targeted at the poor with no access to financial services. As time went on, M-PESA’s marketing efforts shifted from the rich with desk jobs to ordinary Kenyans from lower value professions. In terms of advertising medium, M-PESA used television and radio, radio shows and tents that explained the product and demonstrating its use cases. As people became used to the product, M-PESA replaced the use of televisions and radio with branding at agents and billboards.

iii. Consistent store branding was also used which resulted in great customer experience. There are 19,000 stores with the prominent M-PESA logo.

iv. M-PESA leveraged on the strong Safaricom corporate brand.

v. M-PESA employed an easy inbred service design. This comprised of an easy to use interface. However, M-PESA’s customers needed to get a new sim card which was provided for free. In Zimbabwe, Netone required its subscribers to obtain new sim cards as well. Telecel and Econet subscribers on the other hand did not require subscribers to obtain new sim cards.
Channel Management

Safaricom built a channel that is based on key requirements for profitability namely:

i. Providing incentives for third party retail players to get involved.

ii. Scalability (achieving rapid growth).

iii. Control over the brand, customer experience and geographic distribution of agents.

In order to manage its over 19,000 stores, Safaricom employed a parallel mechanism. The first way was to introduce a two tier structure with individual agents that were assigned to master agents. These master agents were supposed to maintain contact with Safaricom while performing two key functions of liquidity management and distributing agent commissions to the individual stores.

Customer Tariff and Agent Commission Structure

M-PESA uses a combination of flat rate and stepping up according to the size of the transaction for its tariff structure. Safaricom also pays commission to agent HeadOffices which in turn pass on to its agents usually at 30% to 70% ratio. M-PESA charges the same rate as P2P (person to person transfer) for Bill Payment and customers incur no charges on airtime top up. International remittances are charged at GBP4 per every GBP100.

2.7.2.2 NTT Docomo, Japan

Japan is the ideal model of use for mobile money in developed countries (IFC, 2011). Mobile money is Japan has the most widespread use and the largest number of subscribers. Japan has the highest penetration in the world in terms of NFC enabled cards and phones used for public transport payments. At least 78% of mobile phones in Japan are installed with NFC technology. Mobile money has however only recently begun to be used in retail shops.

As compared to Kenya’s M-PESA, NTT Docomo’s dominance in Japan’s mobile telecommunications market did not directly translate into dominance of the mobile money market. This therefore, contradicts the assertions of some authors that a
dominant mobile network operator will always be successful when it launches a mobile money service. The reason why the dominance of NTT Docomo did not immediately translate to success in the mobile money industry is because Japan has been traditionally a cash society although alternative payment instruments such as prepaid debit and credit cards have always been available. The development of mobile money in Japan is instead driven by dominant players in each segment of the value chain. For example, Edy Bit Wallet issued Edy rechargeable cards and in public transportation, East Japan Railway Company is the dominant provider in Tokyo and the surrounding areas (IFC, 2011).

There are three segments namely smart card, public transport and payment cards which uses the NFC technology. All NFC systems in Japan use the FeliCa technology that is developed by Sony. Sony and NTT Docomo established a joint venture called FeliCa Networks to leverage on their dominant positions. As a result of the joint ventures, NTT Docomo is the largest owner of the proprietary NFC technology which it is utilizing in both mobile phones and cards (IFC, 2011). By adopting this business model, Sony NTT Docomo was able to capture the entire market for electronic money. A monopoly was virtually created since any competition that used the FeliCa chip was required to pay licence fees to FeliCa Networks.

Due to the joint venture between Sony and NTT Docomo a mobile money platform called Osaifa-Ketai was launched in 2004. As at March 2011, there were more than 37 million mobile phones equipped for Osaifa-Ketai that are in use (NTT Docomo).

**Government role**

The government of Japan played a significant role in bringing private players together unlike in Kenya where there was no regulatory oversight.

**Population density**

Japan has a high population density which results in most workers taking public transport to work.
Additional Value

In Japan payment systems are equated to products. In order to retain customer loyalty, businesses must offer additional value over and above payment instruments such as rewards or loyalty points. According to a research by Portfolio Research (2010), on average each consumer in Japan subscribes to 12 loyalty cards. NTT Docomo's Internet service unifies the various loyalty cards on a single handset thereby creating a sustainable competitive advantage.

Economies of scale

Development of mobile money requires major economies of scale. Economies of scale were present in both Japan and Kenya. If major economies of scale do not exist either because the market is fragmented or because e-money is already in use both of which are prevalent in the United States of America, then various players must come together to create a single interoperable platform. It is however important to point out that there are bound to be challenges in bringing competing players together to cooperate on a shared platform while allowing players to continue to compete (IFC, 2011).

2.7.2.3 TIGO Paraguay

Tigo Paraguay had four success factors according to Tellez & McCarthy (2011):

i. Deep market understanding.
ii. Building a satisfied and motivated agent network.
iii. Developing compelling marketing strategies to drive customer activation and usage.
iv. Collaborating with an aligned bank partner.

An analysis of the Kenyan and Paraguayan case studies reveals common key success factors to both companies and these are: channel management, marketing and developing a deep marketing understanding to ascertain a customer need or customer pain point.
Industry driving forces are those internal or external forces that shape the future of an organization (Business Dictionary, 2013). These forces result in change. Examples of industry driving forces include laws and regulations, demographic factors, technology, markets and competition, and knowledge amongst others (Sellamna, nd). Industry driving forces are very important as they shape the direction in which a firm may take. This may have an impact on the achievement of a firm’s objective. As an example, laws and regulations may change which may result in an adverse impact on the attainment of a firm’s goals. It is therefore important that mobile network operators are aware of industry driving forces in the mobile money services. In mobile money services, the key industry driving forces according to Ernst and Young (2009) are regulation, technology, infrastructure, market, and risks as shown in Figure 2.8. These industry driving forces compare favourably to those found in general literature with the exception of risk and infrastructure. M-PESA is fortunate in that during the time of its launch, there was no regulation governing the operations of mobile money services. The central bank in Kenya chose to adopt a wait and learn attitude and was very instrumental in fostering the growth of M-PESA.
Demographics and socio-economic forces also have an impact on mobile money services (Pénicaud, 2013). Both Ernst and Young (2009) and Pénicaud (2013) agree that regulation is the only factor that can keep a mobile money service from succeeding. Mobile money services according to a study by Pénicaud (2013), can however, succeed in markets with diverse demographic and socio economic circumstances provided that the operators are able to design the service to meet local needs.

2.9 MOBILE MONEY PROFITABILITY

As at December 2012, there were 150 live mobile money services with 56% being in Sub Saharan Africa, 14% in East Asia and the Pacific, 12.7% in South Asia, 10.7% in Latin America, 5.3% in Middle East and North Africa, and 1.3% in Europe and Central Asia (Pénicaud, 2013). As the mobile money industry grows, practitioners are asking one simple question: is mobile money a profitable business? The answer to that question is vital. A review of literature on the factors affecting the profitability of mobile
money services reveals similarities and differences between countries or operators. The
issue of profitability in mobile money is therefore complex which requires demystifying.

The most prominent mobile money service, M-PESA of Kenya has been profitable
(Leishman, 2011). M-PESA was profitable mainly as a result of what has been termed
an anomaly of a perfect coalescence of latent demand, a dominant mobile network
operator and a progressive regulator. These factors contributed immensely to M-
PESA’s success. These factors, however, are not the same for every country. For
instance, there is not a perfect coalescence of latent demand in Zimbabwe. Also, there
is a dominant operator in Zimbabwe in the case of Econet Wireless. The question that
needs to be answered is whether it means that if a mobile network operator is not
dominant, its mobile money will not be profitable. Reality has proved this to be false
since mobile operator Zain in Kenya launched its own product called Zap Money and its
growth rate has matched that of M-PESA (Mas & Morawczynski, 2009).

As highlighted by Leishman (2011) the question remains for just about every operator
outside of Kenya: “Is there really any money in mobile money?” (p. 2).

2.9.1 Initial Investment Outlay

Initial investment outlay is the cost of entering into a project (UWF, nd). There is no
specific amount that a mobile network operator should invest before turning a profit
(Leishman, 2011). This is so because of the differences in initial investment outlay
between Vodacom in Kenya and MTN in Uganda. The level of investment should be
largely driven by country specific factors such as country population, the mobile money
services being introduced, and relationships among the value chain players (Leishman,
2011). Safaricom and Vodafone invested US$30 million in M-PESA (Mas and Radcliffe,
2011). MTN Uganda on the other hand, spent US$10.5 million (Leishman, 2011).
Vodacom spent US$25 million (Cobert, Helms, & Parker, 2012). The financing
requirement for a successful mobile network operator is driven largely by variable and
step up costs and fixed costs. Ordinarily, 55% of a mobile money service’s financing
requirement comes from variable and set up costs and 45% from fixed costs. In the first
year of operation, mobile network operators incur more fixed costs due to the need to invest in the mobile money software platform, upgrades to the Subscriber Identity Module (SIM) access gateway, above the line marketing, and also the need to embed the mobile money application on the new SIM cards. However, as the service grows, in order to ensure the viability of the mobile money service, variable costs such as agent commissions and customer registration commissions should overtake the fixed costs. In the second year of operations, variable and step costs should account for 66% of the total costs in the business (Leishman, 2011).

2.9.2 Impact Of Airtime Distribution Savings To Profitability

The ability to sell airtime using the mobile money platform is one of the most important sources of value for mobile network operators (di Castri, 2013; Faz & Moser, 2013; Sousa et al, 2012). According to Leishman (2011), value from selling airtime is unlocked in two ways namely: when mobile network operators pay higher commission and also through savings on manufacturing and storage of scratch cards.

By selling airtime through its mobile money service, MTN Uganda’s airtime savings contributed a total of 12% of their gross profit (Leishman, 2011). Also, 3% of total airtime was sold through mobile money. Safaricom sells 19% of its airtime on M-PESA (Mas & Radcliffe, 2010). In order for mobile network operators to evaluate the importance of mobile airtime top up to profitability they need to be aware of three factors which are: to identify the size of the discount at which airtime is sold to the channel. The rule of thumb is, the higher the discount given, the greater the opportunity for mobile money to deliver value. Secondly, mobile network operators should also estimate the percentage of total airtime sales they can convert from scratch cards to mobile money. Thirdly, there is need to consider the numerous costs involved in facilitating mobile top ups (Leishman, 2011).
2.9.3 Impact of Churn Reduction Benefits To Profitability

Churn refers to the number of customers leaving a particular service (Jahromi, 2009; Godfrey, Shenker, & Stoica, 2006). In essence, it is customer turnover. There is need for companies to be aware of churn drivers such as network connections and value for money that should be addressed to increase profitability (PwC, 2011). To underscore the importance of churn reduction benefits, SMART Money, a mobile money service in the Phillipines reduced its churn rate to 6% among users that use mobile money, while it was 36% for users who do not use mobile money services (Noz, Azzi, & Coppens, 2010).

The churn rate for MTN Uganda was 4.5% per month for a regular mobile phone user as compared to 0.2% for an active mobile money customer (Leishman, 2011; Ho-Young, 2010). In mobile money, reducing the churn rate increases the overall profitability of the service (Ho-Yong, 2010). In support of the assertion that reducing churn rate increase mobile money profitability, churn reduction benefits account for 33% of revenue generated by MTN Uganda (Leishman, 2011). It is however important to stress that churn reduction benefits will not be realised if a mobile money service registers customers that do not have an interest in the service, is plagued by bad customer experience, poorly planned agent networks, and poor service offering (Ho-Young, 2010).

2.9.4 Impact of Direct Revenues to Profitability

Direct revenues are normally from customer fees which have an impact on profitability. For MTN Uganda direct revenue contributed to 52% of total gross profit for the service. This was achieved by enabling Person to Person transfers to unregistered users which increased direct revenues for MTN Uganda (Leishman, 2011).
The mobile money business just like any other business is fraught with challenges that management should address in order to attain objectives. Kufandirimbwa (2012) highlighted that the major challenge facing mobile network operators is that of cost containment. Mas and Radcliffe (2011), however, differed by highlighting that the major challenges were network effects, chicken and egg trap, and lack of trust in the new system by customers.

Davidson (2009) in agreement with Mas and Radcliffe (2011) also articulates on the importance of network effects in scaling mobile money. Network effects are important because they result in the growth or stagnation of a mobile money service. Davidson (2009) defines network effects in terms of when users of a given network are concerned about how many other users are in the same network. If users perceive that they are few in the network, the adoption of that network will stagnate. An example that is proferred of a positive network effect is that of Facebook. Facebook grew as a social network platform because of the many users that joined the service when it was launched.

Similarly, the same concept of network effects can be applied to mobile money services (Davidson, 2011). Subscribers will join a mobile money service when there are other users already using it. For instance, M-PESA has been an example of positive network effects. As the number of people in Kenya using M-PESA grew, signing up became more and more attractive to non users. As such, network effects are of paramount importance in ensuring the scaling of mobile money services. The role of network effects on mobile money is that, mobile money services become more valuable to potential users as more and more current users join the service. On the flip side, a mobile money service that has few users is not valuable and as such, offers very little incentive for new users to join the service. This problem as highlighted by Davidson (2009) is also known as the “excess inertia” or “penguin problem” and has been responsible for the death of many mobile money services worldwide.
Furthermore, Ernst and Young (2009) argues that the major challenge was that of fraud which is a key concern. Issues to do with security were also of a major concern. Other challenges highlighted by Ernst and Young (2009) were: lack of a clear and visible business model, regulation and legislation, lack of technical interoperability, and user experience. User experience is of paramount importance in the mobile money business and has been one of the challenges that operators have been facing. This has also affected the adoption of mobile money services. Operators face challenges in convincing customers that the new mobile money service was better than those currently in use.

Fraud and money laundering issues should feature high on the agendas of mobile network operators (Ernst & Young, 2009). Central banks are concerned about the potential for fraud and money laundering issues in any payment system. This inevitably increases the costs and complexity of the mobile money business, which will make it difficult for new entrants to flourish. Given the various challenges affecting mobile money services, that have been proffered by various authors, it is pertinent that a research peculiar to Zimbabwe is carried out so that parallels and similarities can be drawn with a view to providing solutions to the mobile network operators.

2.11 CONCEPTUAL FRAMEWORK

Jarvis (2013) highlights that the theoretical framework is the lens through which a study is approached. By establishing a sound theoretical framework, a researcher is given focus and clarity, since a problem cannot be approached from all perspectives instantaneously. In agreement, Sinclair (2007) articulates that a theoretical framework can be thought of as a map or travel plan.

The mobile money profitability assessment framework underpinning this study whose development was guided by existing body of literature is given in Figure 2.13.
In order to be successful, a mobile network operator should first of all, establish a customer pain point or customer value proposition. This is the identifiable need for a mobile money service which encourages early adoption of the service. Mobile operators should choose one identifiable need that addresses a customer pain point instead of promoting a wide array of services. The customer pain point is derived through research. Establishing the customer pain point will result in the identification of opportunities that drive the growth and profitability of operators (IFC, 2011).
An understanding of the value chain is crucial for any business to be successful and profitable. Understanding of the mobile money services value chain becomes the next step in the model. In order to effectively understand the factors affecting the profitability of mobile money services, it is necessary to understand the mobile money value chain. Mobile network operators should have a thorough understanding of the mobile money primary and support activities that create value. The value chain concept is used to identify sources of profitability and also to have a picture of the cost of the business’ internal processes or activities. As such, it is important that businesses that offer mobile money services understand their value chain.

Key success factors are those factors that make the fastest growing deployments to succeed. In order for mobile money services to quickly scale, businesses should identify the key success factors and leverage on them.

Having established the customer pain point, and understood the value chain, an understanding of the major revenues and cost drivers that are critical to achieving profitability is a must. Firms cannot operate as a going concern, if they do not understand the major revenue sources that must be maximised and the major costs that should be minimized.

Mobile network operators should also not ignore the key industry driving forces as they have a bearing on whether the deployment will be profitable or not. Industry driving forces such as regulation, risk, and changing customer needs have a negative impact on profitability. Establishing customer pain point and understanding value chain, leveraging on key success factors, revenues and cost drivers, challenges, and industry driving forces are the independent variables in the conceptual framework. Profitability is the dependent variable. Table 2.1 is a summary of the independent and dependent variables.
Table 2.1 Independent and Dependent Variables

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Dependent Variable</th>
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<tr>
<td>Establishing customer pain point</td>
<td>Profitability</td>
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<td>Understanding value chain</td>
<td>Profitability</td>
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<tr>
<td>Leveraging on key success factors</td>
<td>Profitability</td>
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<tr>
<td>Understanding revenue and cost drivers</td>
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<td>Challenges</td>
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<td>Industry Driving Forces</td>
<td>Profitability</td>
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2.12 SUMMARY

The chapter reviewed pertinent literature on mobile money profitability. The literature focused on areas such as mobile money ecosystem, types of mobile money services, business models, value chain, revenue and cost drivers, pricing and commissions, industry driving forces, mobile money profitability, and mobile money challenges. There were gaps in literature that resulted in the development of a conceptual framework. A conceptual framework which forms the basis of the research was therefore developed and tested in the subsequent chapters.
CHAPTER THREE

RESEARCH METHODOLOGY

3.0 INTRODUCTION

The objective of this chapter is to get an understanding of the factors affecting the profitability of mobile money services by carrying out a field work within the GSM mobile telecommunications industry. The research tools used to address the research objectives highlighted in Chapter One were questionnaires and interviews. The methodology describes the methods used by the researcher to collect data and outlines the research design, the population, the research instruments used and validity issues. Problems encountered during data collection are also highlighted. The research design is presented next.

3.1 RESEARCH DESIGN

Research design is concerned with turning the research questions into a research project (Robson, 2002), which encompasses the three layers of research strategies, research choices, and time horizons. The way research questions are answered will be influenced by the research philosophy and approach. Saunders, Lewis and Thornhill (2007) view research design as a research strategy that is concerned with the different strategies for gathering data such as experiment, survey, case study, grounded theory, ethnography and action research.

The design of the research followed the positivism paradigm. The study used a survey to collect relevant data using a questionnaire. Clegg (1990) contends that the advantage of using a questionnaire is its ability to address a large number of issues and to be administered to large numbers of people concurrently. However, the questionnaire can have a low response rate due to anti-questionnaire phobia. The research also used interviews to gather qualitative information used in explaining some concepts and also to draw up the final conclusion. As Easterby-Smith, Thorpe and Lowe (1991) suggest,
interviews are an appropriate method when it is important to understand the viewpoints that the interviewee uses as a basis for their opinion or beliefs about a particular matter or situation.

Interviews with the Reserve Bank of Zimbabwe on regulatory aspects were therefore conducted. Also, since mobile money services were relatively new having been introduced in 2011, it was important to get an insight of the present and future regulatory aspects that may have a bearing on the development of mobile money services. Hence, it was important to conduct interviews with the Reserve Bank of Zimbabwe. The study was, however, largely quantitative in nature.

3.2 RESEARCH PHILOSOPHY

Research philosophy is an overarching term that relates to the development of knowledge and the subsequent nature of that knowledge (Saunders, Lewis, and Thornhill, 2009; Cohen, Manion, & Morrison, 2007). There are four research paradigms or philosophies namely positivism, realism, interpretivism, and pragmatism (Saunders et al., 2009). For the purposes of this study, it should be noted that the research was predominantly inclined towards the positivism philosophy. The reason for choosing this approach was that the researcher utilised existing literature on mobile money services to develop hypothesis. The hypothesis was tested and confirmed in full which resulted in the further development of theory. Hypothesis testing was done through conducting various tests on the SPSS software version 16 such as regression and correlation coefficient.

3.3 RESEARCH APPROACH

It is important to understand the relevant research approach for a good study. There are various research approaches available to conduct a research study (Saunders et al., 2009) and these include either qualitative or quantitative research. Quantitative
research is concerned with the gathering of numeric al data with the view of generalising it over a group of people (Sibanda, 2009). Qualitative research on the other hand, does not involve the gathering of numerical data but focuses on developing explanations for various social phenomena through carrying out one on one interview (Hancock, 2002). This research was predominantly quantitative since it sought to gather information through the use of questionnaires in order to perform tests such as regression and correlation coefficient in order to establish relationships between the independent and dependent variables.

3.4 THE RESEARCH STRATEGY

A research strategy is a road map used when conducting a research (Marshall & Rossman, 1999). As such, the survey research strategy was used. A survey is defined as a mechanism for the gathering of information pertaining to the characteristics, actions, or opinions of a large group of people (Pinsonneault & Kraemer, 1993). A survey is thus, a systematic method of collecting data from a population of interest. It aims to collect information from a sample of the population such that the results are representative of the population. The purpose of a survey is to collect information, usually through the use of a structured and standardised questionnaire (Zikmund, 2003). The survey strategy was chosen because it allowed collection of data from a sample of the population (Glasow, 2005). In addition, since opinions from practitioners in the mobile money services industry was sought in order to make generalisations, the survey strategy was the most suitable for this (Cohen, Manion, & Morrison, 2007).

3.5 POPULATION AND SAMPLING TECHNIQUES

It is important to consider the population and sampling techniques used in the research since it is not possible to survey the entire population.
3.5.1 Target Population

Zikmund (2003) defines a population as any complete group of people, companies, hospitals, stores, college students that share some set of characteristics (p.369). Kitchenham and Pfleeger (2002) defines a target population as the group or the individuals to whom the survey applies (p.17). The target population for this research includes all mobile network operators and banks that offer mobile money services in Zimbabwe. There were 18 financial institutions and three mobile network operators that were registered to offer mobile money services by the Reserve Bank of Zimbabwe (Mandizha, 2013).

3.5.2 Study Population

A study population refers to the population of interest to the researcher (Traskin & Small, 2011). For the purposes of this study, the study population will be all the employees of the three GSM mobile network operators in Zimbabwe namely Econet, Telecel and NetOne (Mandizha, 2013). Surveying all the GSM companies therefore helps to increase the objectivity and validity of the research.

3.5.3 Sampling

O'Leary (2004, p10) defines sampling as, “the process by which a researcher selects a sample of participants for a study from the population of interest”. A sample is a finite part of a statistical population whose properties are studied to gain information about the whole population. The sample for the purpose of this study was drawn from the various functional departments in the three companies and the respondents were drawn from both managerial and non-managerial employees. The sample size was 60 as shown in Table 3.1 which was big enough to perform statistical inferences and generalisation of findings to the population.
Table 3.1: Questionnaires distribution

<table>
<thead>
<tr>
<th>Company</th>
<th>Number of questionnaires distributed</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Econet</td>
<td>30</td>
<td>50%</td>
</tr>
<tr>
<td>NetOne</td>
<td>20</td>
<td>33%</td>
</tr>
<tr>
<td>Telecel</td>
<td>10</td>
<td>17%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>60</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

The justification for not having equal respondents from each company was premised on the performance of each company’s mobile money service. Econet’s EcoCash is the most popular of the three, hence it was prudent that more respondents be solicited from Econet Wireless. Also, since Telecel’s mobile money service is now defunct, it would not be prudent to have the same respondents as Econet and NetOne whose mobile money services are still running.

3.5.4 Sampling Techniques

A probabilistic sampling method was chosen because it is best suited for making strong inferences about the target population under study (Kitchenham & Pfleeger, 2002). In order to choose the sample, stratified random sampling was used. Stratified random sampling involves dividing the population into homogenous groups, each group containing subjects with similar characteristics (Cohen, Manion, & Morrison, 2007). The main strata were each of the three mobile network operators. This was further subdivided into functional departments from where the respondents were randomly selected from managerial and non-managerial employees. The random sampling was done by choosing at random managerial and non-managerial employees from the list of possible respondents. The list was divided according to the managerial status of the target respondents. Stratified random sampling ensured representation of crucial functional mobile money services departments such as Sales and Distribution,
Marketing, Finance, Operations, Information Technology, and Risk and Compliance. If simple random sampling were used, there was a possibility of omitting the views of crucial departments. The interviews conducted at the Reserve Bank of Zimbabwe were targeted at the National Payment Systems Division where senior management of the division was interviewed. It was not necessary to interview the Post and Telecommunications Regulatory Authority of Zimbabwe (POTRAZ) because they do not regulate mobile money services.

3.6 DATA COLLECTION METHODS

Primary data was collected during this research. Primary data was collected through questionnaires and interviews. A questionnaire is a list of written questions that is given to respondents for completion (Sociology, 2013). A self-administered questionnaire was used because it is able to reach a large number of people. Also, due to the number of questions used, a questionnaire was the most appropriate instrument. In addition, the use of questionnaires was meant to eliminate interviewer bias since the questionnaire was self-administered. Interviews were used to further elicit the views of respondents that could not be adequately captured by the questionnaire. Use of interviews helped in capturing respondents’ nonverbal communication. In order to conduct the interviews, an interview guide was used for reference purposes. However, during the interview process, the responses given by the respondents also led to further probing of some aspects that were not specifically stated on the guide.

Secondary data which is data collected and proposed by others was used to explain some results (Management Study Guide, 2013). The secondary data in question was used to explain why subscription fees were the lowest revenue driver in Zimbabwe. Secondary data was also used to explain why customer acquisition and registration cost were the lowest cost.
3.7 DATA ANALYSIS

The data collected from the returned questionnaires was captured and analysed using SPSS version 16 statistical package. SPSS was used to analyse data because it is one of the most recommended statistical packages which is widely used by most researchers (Ibrahim, 1999). Cross sectional data was data collected and for the purposes of analysis in the SPSS software, it was sorted according to the objectives and hypothesis under test. The data collected was also tested for reliability using Cronbach alpha in the SPSS version 16 software package. Reliability in questionnaires is defined as a measure of consistency over time and over similar samples (Cohen, Manion, and Morrison, 2007). If a questionnaire is deemed to be reliable for research, it should be able to yield similar data from similar respondents over time. An acceptable Cronbach coefficient of reliability that is recommended is 0.70 (Nunnally, 1978). However, a Cronbach alpha of 0.6 is also acceptable since it is near to 0.70. In addition to the reliability test, the regression model was also tested. The regression model had independent and dependent variables. The model had one dependent variable profitability and five independent variables namely revenue and cost drivers ($V_1$), key success factors ($V_2$), establishing pain point and understanding value chain ($V_3$), challenges ($V_4$), and driving forces ($V_5$). The regression equation was therefore:

\[ \text{Profitability} = C + \beta V_1 + \beta V_2 + \beta V_3 + (-\beta) V_4 + (-\beta) V_5 \]

Regression Equation

It is estimated that revenue and cost drivers, key success factors, establishing pain point and understanding value chain have a positive relationship with profitability, as a result the co-efficients were anticipated to be positive. Challenges and industry driving forces were anticipated to have a negative relationship with profitability, as such the co-efficients are anticipated to be negative. A statistically significant model has a $P$ value which is zero to three decimal places (Bruin, 2006). In order to test the statistical
significance of the regression model, ANOVA F – test at a significance level of 0.05 were conducted.

In hypothesis testing, in order to reduce type 1 error which was defined as the risk of falsely rejecting the null hypothesis (Kitchenham & Pfleeger, 2002), the alpha level of 0.05 was used. The alpha level is ideally set at between 0.01 and 0.05 (Kitchenham & Pfleeger, 2002). Furthermore, to address the risk of falsely accepting the null hypothesis (type 2 error), a beta level of 0.20 was used. A beta level of 0.20 is widely used (Kitchenham & Pfleeger, 2002).

3.8 ETHICAL ISSUES

One of the ethical issues encountered was the need to ensure the anonymity and confidentiality of respondents. In order to address this challenge, respondents were not asked to disclose their name. The researcher also considered the need to properly acknowledge other people’s work and ideas. The researcher has endeavored to acknowledge other people’s work and give credit where it is due.

3.9 LIMITATIONS

Methodological limitations were encountered during the research. The research was limited in terms of sample size. The sample size chosen of 60 was not large enough. In addition, the research was also limited in terms of reliable data on mobile money profitability. Although there was literature on mobile money profitability, it was however limited in scope. The challenge on the scope of literature was overcome by reviewing literature that had a bearing on the profitability of mobile money services based on empirical studies.
3.10 SUMMARY

This chapter presented the research methodology. A quantitative research methodology was used. In terms of research methods, a mixed approach of questionnaires and interviews was used. Data was analysed using the SPSS software version 16. The chapter concluded by examining ethical issues and challenges encountered during the research.
CHAPTER FOUR

RESULTS AND DISCUSSION

4.0 INTRODUCTION

This chapter summarises and presents the results of the factors affecting the profitability of mobile money services. Data which was collected through the use of structured questionnaires and interviews was used in the analysis. The findings obtained during the process are outlined, analysed and consolidated to provide a clearer picture of the factors affecting the profitability of mobile money services in Zimbabwe. Results from normality tests, correlations, and regression analysis are also presented. The results from this analysis will provide a basis from which a sound conclusion will be drawn on the factors affecting the profitability of mobile money services in Zimbabwe.

4.1 RESPONSE RATE

The response and results are based on respondents drawn from the three mobile network operators in Zimbabwe. A total of 60 questionnaires were distributed to respondents using the hand delivery approach. Out of the 60 questionnaires distributed, 45 were returned. However, of the 45 returned, only 40 were usable. This translated to a response rate of 67% as shown in Figure 4.1.
The response rate of 67% was fairly huge and above the acceptable 50% (Nulty, 2008). The high response rate is attributed to the enthusiasm and general interest in the research among the respondents since mobile money services is a growing business in Zimbabwe.

### 4.2 FINDINGS AND DISCUSSION

This section presents the findings. A discussion of the findings with reference to literature was made.

#### 4.2.1 Demographic Analysis

The respondents’ demographic information is summarised in terms of gender, age, educational level, and job title. In terms of gender, the study’s respondents were almost balanced as illustrated by the number of males which were 52.5% and females which were 47.5% as shown in Table 4.1. Based on gender balance, the study findings are a representative of the gender dynamics in the telecommunications industry which is predominantly dominated by males.
Table 4.1 Gender

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td>Male</td>
<td>21</td>
<td>52.5</td>
<td>52.5</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>19</td>
<td>47.5</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>40</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Respondents' predominant age group was 30-39 years as shown in Figure 4.2. This can be explained by the fact that the 30-39 years age group is the majority of the working class in Zimbabwe. In addition, the predominant age group is also explained by the fact that the mobile money services and telecommunications field in general requires a lot of expertise and experience hence, most of the respondents who were also managers are in the 30-39 age group. In view of this, the age demographics of the research is a fairly representative of an ideal study framework, hence the findings are acceptable.

Figure 4.2: Age groups

In terms of education level, the majority of the respondents (75%) had university degrees as shown in Figure 4.3. This is partly explained by the majority of the 30-39
age groups which has degrees. Also, the majority of the respondents are professionals who are highly skilled hence, they had degrees. The level of education of respondents was very crucial since the study required an understanding of the pertinent factors affecting the profitability of mobile money services.

![Education Level Chart]

**Figure 4.3: Education Level**

Job title is an important demographic parameter since it helps to explain the strategic nature of the responses. Managerial employees accounted for 65% while non-managerial employees were 35% as depicted in Table 4.2. The research’s bias towards managerial employees who make strategic decisions therefore gives credence to the findings of this research.
### Table 4.2: Job Level

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid Managerial</td>
<td>26</td>
<td>65.0</td>
<td>65.0</td>
<td>65.0</td>
</tr>
<tr>
<td>Non-managerial</td>
<td>14</td>
<td>35.0</td>
<td>35.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>40</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

### 4.2.2 Reliability Tests

A reliability test was conducted to ascertain whether the questions contained in the questionnaire were consistently measuring the concepts. An analysis of the findings in Table 4.3 reveal that the responses were consistently measuring the concepts since they are greater than 0.6.

### Table 4.3 Reliability Test

<table>
<thead>
<tr>
<th>Variable</th>
<th>Cronbach’s Alpha</th>
<th>Number of questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Establishing customer pain point and Understanding value chain</td>
<td>0.789</td>
<td>4</td>
</tr>
<tr>
<td>Leverage on factors critical for success</td>
<td>0.701</td>
<td>9</td>
</tr>
<tr>
<td>Understand revenues and cost drivers</td>
<td>0.756</td>
<td>14</td>
</tr>
<tr>
<td>Challenges</td>
<td>0.698</td>
<td>6</td>
</tr>
<tr>
<td>Profitability</td>
<td>0.713</td>
<td>5</td>
</tr>
<tr>
<td>Industry driving forces</td>
<td>0.692</td>
<td>9</td>
</tr>
</tbody>
</table>
4.2.3 Parametric Tests / Normality Tests

Parametric tests were conducted using SPSS version 16 on the data collected and the results revealed that the data was not normally distributed since its skewness and kurtosis were not near 0 as shown in Table 4.4.

Table 4.4: Normality Tests

<table>
<thead>
<tr>
<th>Tests of Normality</th>
<th>Kolmogorov-Smirnov(a)</th>
<th>Shapiro-Wilk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statistic</td>
<td>df</td>
<td>Sig.</td>
</tr>
<tr>
<td>Key_Success_Factors</td>
<td>.168</td>
<td>40</td>
</tr>
<tr>
<td>Driving_Forces</td>
<td>.270</td>
<td>40</td>
</tr>
<tr>
<td>Revenue_and_Cost_Drivers</td>
<td>.124</td>
<td>40</td>
</tr>
<tr>
<td>Challenges</td>
<td>.140</td>
<td>40</td>
</tr>
<tr>
<td>Understand_VC_and_Establi</td>
<td>.206</td>
<td>40</td>
</tr>
</tbody>
</table>

4.2.4 Correlation Coefficients

In order to test the hypothesis and draw conclusions on the conceptual framework, Spearman’s correlation coefficients were used since the data was skewed. Table 4.5 is a summary of the correlation coefficients per variable.
Table 4.5: Correlation Coefficients

<table>
<thead>
<tr>
<th>Variable</th>
<th>Correlation Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Establishing customer pain point and understanding value chain</td>
<td>0.668</td>
</tr>
<tr>
<td>Leverage on factors critical for success</td>
<td>0.518</td>
</tr>
<tr>
<td>Understand revenues and cost drivers</td>
<td>0.702</td>
</tr>
<tr>
<td>Mitigate challenges</td>
<td>-0.557</td>
</tr>
<tr>
<td>Pay attention to key industry driving forces</td>
<td>-0.003</td>
</tr>
</tbody>
</table>

The correlation coefficient of 0.668 (66.8%) indicates a strong positive linear relationship between profitability and establishing customer pain point and understanding value chain. The relationship between the variables and profitability was consistent with literature (Levin, 2013a, Page, Molina, & Jones, 2013; Sousa, Pimentel, Barros, & Duzhnikov, 2012; Davidson & Leishman, 2012, Davidson & McCarty, 2011; Mas & Radcliffe, 2011; Davidson, 2011).

The correlation coefficient of 0.518 (51.8%) indicates a strong positive linear relationship between profitability and leveraging on key success factors. The positive relationship between leveraging on key success factors and profitability was consistent with literature reviewed (Tellez & McCarthy, 2011; Smith, 2011; Mas & Ng’weno, 2010).

From the research, there is an indication of a strong positive relationship between revenue and cost drivers with profitability. As revenue increases, profitability increases. If revenues increase by 1, profitability will increase by 0.702. A positive relationship between understanding revenue and cost drivers and profitability was consistent with literature (Faz & Moser, 2013; Leishman, 2011; CGAP, 2011).

Findings suggest that there is a strong negative relationship between challenges and profitability of 0.557 (55.7%). As challenges increase by 1, profitability decreases by 0.557. A negative relationship between challenges and profitability was consistent with literature which highlights that challenges reduce profitability (Levin, 2013b).
There is however, a weak relationship between industry driving forces and profitability. Industry driving forces therefore, have no relationship with profitability. This is consistent with literature (Smith, 2011).

### 4.2.5 Regression Analysis

Since there were five independent variables and one dependent variable, multiple regression analysis was used using SPSS version 16 software. Tables 4.6 and 4.7 highlight the results of the regression analysis. Since the P value was zero to three decimal places, the model was statistically significant (Bruin, 2006). The R-squared is 0.599 which means that approximately 60% of the variability of profitability is accounted for by the variables in the model. The coefficients of the variables indicate the amount of change in profitability given one unit of change in the value of the variable, assuming that all the other variables in the model are held constant. For instance, a one unit increase in revenues will result in profitability increasing by 0.962. A one unit increase in challenges will result in profitability decreasing by 0.632. A one unit increase in customer pain point and value chain will result in profitability increasing by 0.804. A unit increase in key success factors will result in profitability increasing by 0.672. However, a one unit increase in driving forces will result in profitability decreasing by a marginal 0.01. This is not statically significant. As such, industry driving forces is not a variable that affects the profitability of mobile money services. Based on the findings the regression equation was therefore:

\[ \text{Profitability} = 6.303 + 0.962V_1 + 0.672V_2 + 0.804V_3 + -0.632 V_4 \]

**Regression Equation**

Where: revenue and cost drivers is (V1), key success factors is (V2), establishing pain point and understanding value chain is (V3), challenges is (V4). The ANOVA F-test revealed that the p value was less than alpha (0.000 < 0.05) which indicated that the regression model is useful and statically significant.
### Table 4.6: Regression Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>6.303</td>
<td>6.685</td>
<td>.943</td>
</tr>
<tr>
<td></td>
<td>Revenue_and_Cost_Drivers</td>
<td>.962</td>
<td>.235</td>
<td>.512</td>
</tr>
<tr>
<td></td>
<td>Challenges</td>
<td>-.632</td>
<td>.231</td>
<td>-.339</td>
</tr>
<tr>
<td></td>
<td>Understand Value Chain and Establishing Pain Point</td>
<td>.804</td>
<td>.183</td>
<td>-.055</td>
</tr>
<tr>
<td></td>
<td>Driving Forces</td>
<td>-.001</td>
<td>.272</td>
<td>-.120</td>
</tr>
<tr>
<td></td>
<td>Key Success Factors</td>
<td>.672</td>
<td>.132</td>
<td>.164</td>
</tr>
</tbody>
</table>

### Table 4.7: Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Std. Error of the Estimate</th>
<th>Change Statistics</th>
<th>Sig. F Change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>R Square Change</td>
<td>F Change</td>
</tr>
<tr>
<td>1</td>
<td>.774*</td>
<td>.599</td>
<td>2.69711</td>
<td>.599</td>
<td>9.860</td>
</tr>
</tbody>
</table>

*Note: * indicates significance at the .05 level.
4.2.6 Discussion of results

This section discusses the respondents’ views of the factors affecting the profitability of mobile money services. The section is concluded by relating the findings to existing literature.

4.2.6.1 Key Success Factors

The questionnaire contained questions which measured respondent’s opinions or attitudes on whether leveraging on key success factors was important for the profitability of mobile money services. Respondents were also asked to identify which key success factors were important. The respondents’ level of agreement with each of the statement was measured on a five point Likert scale rating system, whereby 1 represents “not sure” and 5 represents “strongly agree”.

Table 4.8: Key Success Factors

<table>
<thead>
<tr>
<th>Statement</th>
<th>Not Sure (%)</th>
<th>Strongly Disagree (%)</th>
<th>Disagree (%)</th>
<th>Agree (%)</th>
<th>Strongly Agree (%)</th>
<th>Mean (M)</th>
<th>Standard Deviation (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobile network operators should leverage on mobile money key success factors</td>
<td>2.5</td>
<td>0</td>
<td>7.5</td>
<td>35</td>
<td>55</td>
<td>3.6</td>
<td>0.84124</td>
</tr>
<tr>
<td>Branding is critical to the success of a mobile money services</td>
<td>0</td>
<td>2.5</td>
<td>2.5</td>
<td>42.5</td>
<td>52.5</td>
<td>3.45</td>
<td>0.67748</td>
</tr>
<tr>
<td>Relationship with partner bank (s) is of paramount importance</td>
<td>0</td>
<td>2.5</td>
<td>5</td>
<td>42.5</td>
<td>50</td>
<td>1.6</td>
<td>0.70892</td>
</tr>
<tr>
<td>Channel management is critical to retain customer experience</td>
<td>0</td>
<td>2.5</td>
<td>0</td>
<td>40</td>
<td>57.5</td>
<td>3.2</td>
<td>0.64001</td>
</tr>
<tr>
<td>Organisational structure impacts positively on success</td>
<td>5</td>
<td>0</td>
<td>17.5</td>
<td>57.5</td>
<td>20</td>
<td>2.125</td>
<td>0.91111</td>
</tr>
</tbody>
</table>
Table 4.8 shows that respondents (90%) generally agree that to be profitable, mobile network operators should leverage on key success factors and these factors should be identified. This is consistent with literature where mobile money services that were profitable such as GCASH in Philippines, MTN Uganda, and M-PESA in Kenya leveraged on certain key success factors (Mas & Radcliffe, 2011; Davidson, 2011; Tellez & McCarthy, 2011; Smith, 2011; Leishman, 2011; Mas & Ng’weno, 2010). The number of respondents who disagreed with this notion constitutes 7.5% whilst those that were not sure were only 2.5%.

Respondents were also implored to indicate the extent to which they were of the view that each of the items was a mobile money key success factor. The key success factors were split between internal and external factors. On external factors, respondents were asked to rank them on a Likert rating scale whereby 1 represented “lowest” and 5 represented ‘highest” as shown in Table 4.9.

With regard to internal key success factors, branding which had a mean score of M = 3.45, was chosen by respondents as the most important key success factor. This was followed by managing the activities of agents which had a mean score of M = 3.2. The third most important factor was organisational structure with a mean score of 2.125. The findings on branding and channel management are consistent literature (Mas & Ng’weno, 2010; Camner & Sjöblom, 2010; Camner & Sjöblom, 2009). However, on organisational structure and relationships with partner banks the findings are not consistent with literature. Most literature does not view the organisational structure as one of the important key success factors (Mas and Radcliffe, 2011; Mas and Ng’weno, 2010). Literature, however, views relationships with partnership banks as an important key success factor (Davidson, 2011).

The findings on organisational structure can be explained by the fact that in Zimbabwe, some mobile network operators such as Econet Wireless have dedicated structures specifically meant for mobile money services, hence respondents were of the view that organisational structure is an important factor. The explanation on why relationships with partner banks was not viewed as one of the key success factors in Zimbabwe is because of the business models prevalent in Zimbabwe which are mobile network
operator centric as compared to collaborative approach. In most countries where mobile money services are established, business models are evolving from MNO centric to collaborative (IFC, 2011).

Respondents' perceptions on external key success factors can be meaningfully categorised as major and moderate since 80% of the factors had mean scores above 3. The most important external key success factors were therefore the market share of the operator and the mobile penetration rate. The market share of the operator had the highest mean score of 3.95, whereas the mobile penetration rate had the second highest mean score of 3.575. These findings were consistent with literature where operators such as M-PESA and GCASH had a higher market share in a country with a high mobile penetration rate (Smith, 2011). The level of GDP (PPP) per capita had the lowest mean score of 2.225. This is also consistent with literature where there was found to be no statistical linear relationship between GDP (PPP) per capita and success in mobile money in the 49 countries that were studied (Pénicaud, 2013).
Table 4.9 External Key Success Factors

<table>
<thead>
<tr>
<th></th>
<th>Lowest (%)</th>
<th>Low (%)</th>
<th>Average (%)</th>
<th>High (%)</th>
<th>Highest (%)</th>
<th>Mean (M)</th>
<th>Standard Deviation (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level of financial inclusion</td>
<td>12.5</td>
<td>15</td>
<td>22.5</td>
<td>37.5</td>
<td>12.5</td>
<td>3.225</td>
<td>1.22971</td>
</tr>
<tr>
<td>GDP (PPP) per capita</td>
<td>42.5</td>
<td>22.5</td>
<td>15</td>
<td>10</td>
<td>10</td>
<td>2.225</td>
<td>1.3679</td>
</tr>
<tr>
<td>Mobile penetration rate</td>
<td>7.5</td>
<td>12.5</td>
<td>27.5</td>
<td>20</td>
<td>32.5</td>
<td>3.575</td>
<td>1.27877</td>
</tr>
<tr>
<td>Market share of operator</td>
<td>7.5</td>
<td>12.5</td>
<td>5</td>
<td>27.5</td>
<td>47.5</td>
<td>3.95</td>
<td>1.31948</td>
</tr>
<tr>
<td>Regulatory landscape</td>
<td>12.5</td>
<td>20</td>
<td>27.5</td>
<td>20</td>
<td>20</td>
<td>3.15</td>
<td>1.31168</td>
</tr>
</tbody>
</table>

4.2.6.2 Industry Driving forces

The questionnaire also contained questions which measured respondent’s opinions on whether industry driving forces affected the profitability of mobile money services. Respondents were also requested to identify which industry driving forces they believed mobile network operators should pay attention to. Respondents were asked to rank the driving forces on a Likert rating scale where 1 represented “lowest” and 5 represented ‘highest” as shown in Table 4.10.
Table 4.10: Industry Driving Forces

<table>
<thead>
<tr>
<th>Statement</th>
<th>Lowest (%)</th>
<th>Low (%)</th>
<th>Average (%)</th>
<th>High (%)</th>
<th>Highest (%)</th>
<th>Mean (M)</th>
<th>Standard Deviation (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regulation</td>
<td>2.5</td>
<td>25</td>
<td>15</td>
<td>12.5</td>
<td>45</td>
<td>3.725</td>
<td>1.33949</td>
</tr>
<tr>
<td>Technology</td>
<td>12.5</td>
<td>5</td>
<td>22.5</td>
<td>45</td>
<td>15</td>
<td>3.45</td>
<td>1.19722</td>
</tr>
<tr>
<td>Risk</td>
<td>0</td>
<td>27.5</td>
<td>30</td>
<td>32.5</td>
<td>10</td>
<td>3.25</td>
<td>0.98058</td>
</tr>
<tr>
<td>Changing customer needs</td>
<td>0</td>
<td>32.5</td>
<td>27.5</td>
<td>10</td>
<td>30</td>
<td>3.375</td>
<td>1.23387</td>
</tr>
</tbody>
</table>

The most important driving force was regulation with a mean score of 3.725. Technology was the second most important factor with a mean score of 3.375. Changing customer needs was the third most important driving force with a mean score of 3.375. Regulation and technology were cited by Ernst and Young (2009) as important driving forces. The same sentiments were also echoed by Pénicaud (2013).

Although industry driving forces are important, they do not have a bearing on profitability as shown by the weak correlation co-efficient of -0.003 and a p value of .0601 which is not statistically significant. This therefore means there is no statistical significance between driving forces and profitability. If industry driving forces increase, profitability is not affected. For example, if regulation increases, profitability is not affected. This is consistent with literature where in Philippines despite the high levels of regulation prevailing, GCASH managed to be profitable (Smith, 2011).

4.2.6.3 Challenges

Respondent’s opinions or attitudes on whether challenges negatively affected the profitability of mobile money services were sought. The respondents’ level of agreement with each of the statement was measured on a five point Likert scale, where 1 represents “not sure” and 5 represents “strongly agree”.
Table 4.11: Challenges

<table>
<thead>
<tr>
<th>Statement</th>
<th>Not Sure (%)</th>
<th>Strongly Disagree (%)</th>
<th>Disagree (%)</th>
<th>Agree (%)</th>
<th>Strongly Agree (%)</th>
<th>Mean (M)</th>
<th>Standard Deviation (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct deposits (third party cash ins) reduce profitability</td>
<td>2.5</td>
<td>5</td>
<td>12.5</td>
<td>42.5</td>
<td>37.5</td>
<td>3.925</td>
<td>0.97106</td>
</tr>
<tr>
<td>Lack of capital stifles deployment of mobile money services</td>
<td>0</td>
<td>2.5</td>
<td>2.5</td>
<td>45</td>
<td>50</td>
<td>3.575</td>
<td>0.67511</td>
</tr>
<tr>
<td>Network effects have a negative impact on profitability</td>
<td>7.5</td>
<td>2.5</td>
<td>15</td>
<td>60</td>
<td>15</td>
<td>3.275</td>
<td>1.01242</td>
</tr>
<tr>
<td>Level of regulation in Zimbabwe is excessive</td>
<td>7.7</td>
<td>17.9</td>
<td>59</td>
<td>15.4</td>
<td>0</td>
<td>3.1795</td>
<td>0.79046</td>
</tr>
<tr>
<td>Excessive regulation negatively affects profitability</td>
<td>0</td>
<td>0</td>
<td>15</td>
<td>57.5</td>
<td>27.5</td>
<td>1.875</td>
<td>0.64798</td>
</tr>
<tr>
<td>Excessive regulation in a hindrance to the growth of mobile money services</td>
<td>0</td>
<td>0</td>
<td>10</td>
<td>62.5</td>
<td>27.5</td>
<td>1.825</td>
<td>0.59431</td>
</tr>
</tbody>
</table>

The majority of respondents were generally in agreement that direct deposits, lack of capital, and network effects were challenges that had a negative impact on profitability. Challenges had a negative correlation coefficient of -.557. Correlation between challenges and profitability at a p value of .031 was statistically significant at the 0.05 level of significance. In addition, a total of 80% of respondents agreed that direct deposits reduced profitability as shown in Table 4.11. This is consistent with literature where direct deposits reduced the revenues of mobile network operators by up to 40% (Levin, 2013b). A total of 95% of respondents highlighted that lack of capital stifled the growth of mobile money services. However, this is contrary to literature. There is no relationship between capital and profitability as evidenced by the differences in initial investment outlay that was invested in M-PESA in Kenya and MTN Uganda which were both profitable (Leishman, 2011).

Views on whether regulation was excessive in Zimbabwe were sought from the respondents. Respondents were generally in agreement that the level of regulation in
Zimbabwe was not excessive. This is evidenced by 76.9% of the respondents as shown in Figure 4.4.

The level of regulation of mobile money services in Zimbabwe is excessive.

Respondents’ views were sought on whether they believed excessive regulation had a negative impact on profitability. Respondents from the three mobile network operators were in agreement to a greater extent (85%) that excessive regulation impacted negatively on profitability. The same question was posed to the interviewees from Reserve Bank of Zimbabwe. In contrast, the Reserve Bank of Zimbabwe argued that regulation had no bearing on profitability. The issues of profitability have to do with operator’s strategies and not regulation. As a result, regulation is a risk management mechanism that is meant to bring stability to the payment systems and not to stifle growth and profitability.
4.2.6.4 Mobile Money Revenue and Cost Drivers

Respondents were requested to rank revenue and cost drivers they perceived to be important for mobile money services on a 5-point Likert scale.

The study findings indicate a strong positive relationship between mobile money revenue and cost drivers and profitability as evidenced by the correlation coefficient of 0.702 and a p-value of 0.045 which is statistically significant. In addition, 100% of the respondents as shown in Table 4.12 posit that understanding major revenue and cost drivers has a positive impact on profitability. These findings are consistent with literature (Faz & Moser, 2013; Leishman, 2011; CGAP, 2011).

From Table 4.12, it is evident that the mean scores of 7 out of the 9 revenue and cost drivers are greater than 3.00. This is an indication that respondents perceived many of the drivers as important to the profitability of mobile money services.

Customer charges had the highest mean score of 4.4 which signifies that it is the most important source of revenue for mobile money services. The second most important revenue driver was airtime distribution savings which had a mean score of 3.55. Churn reduction benefits were the third most important source of value with a mean score of 3. The reason why churn reduction benefits were the third most important factor is attributed to the fact that it is an indirect source of revenue and is therefore difficult to quantify. Subscription fees scored the lowest score of 2.525. This is because in Zimbabwe, subscribers are not levied fees for enrolling for mobile money services.

Initial investment outlay is the most important cost driver according to findings (M = 3.775). Commission to agents (M = 3.4), mobile money software platform (M = 3.275), and marketing and advertising costs (M = 3.15). Customer acquisition and registration costs had the lowest mean score of 2.1. This finding is however not consistent with literature where customer acquisition and registration were regarded as one of the major cost drivers (Leishman, 2011). The reason why customer acquisition and registration cost were regarded as not major in Zimbabwe is attributed to the fact these were mainly incurred during launch and also subscribers were not required to swap for new SIM cards in the case of Econet Wireless and Telecel. NetOne subscribers were
however, required to obtain new SIM cards which were compatible for mobile money services.

However, most of the findings on value and cost drivers were consistent with literature were direct revenues such as customer charges were the major source of revenue for mobile network operators and initial investment outlay was the major cost driver as well as commission to agents (Faz & Moser, 2013; Leishman, 2011; GSMA, 2009; Leishman & Desai, 2009).

### Table 4.12 Revenue and Cost Drivers

<table>
<thead>
<tr>
<th>Statement</th>
<th>Lowest (%)</th>
<th>Low (%)</th>
<th>Average (%)</th>
<th>Higher (%)</th>
<th>Highest (%)</th>
<th>Mean (M)</th>
<th>Standard Deviation (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Value Drivers</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Customer charges</td>
<td>5</td>
<td>2.5</td>
<td>10</td>
<td>12.5</td>
<td>70</td>
<td>4.4</td>
<td>1.10477</td>
</tr>
<tr>
<td>Airtime distribution savings</td>
<td>5</td>
<td>15</td>
<td>10</td>
<td>60</td>
<td>10</td>
<td>3.55</td>
<td>1.03651</td>
</tr>
<tr>
<td>Subscription fees</td>
<td>17.5</td>
<td>35</td>
<td>27.5</td>
<td>17.5</td>
<td>2.5</td>
<td>2.525</td>
<td>1.06187</td>
</tr>
<tr>
<td>Chain reduction benefits</td>
<td>2.5</td>
<td>25</td>
<td>52.5</td>
<td>10</td>
<td>10</td>
<td>3</td>
<td>0.9337</td>
</tr>
<tr>
<td><strong>Cost Drivers</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Initial Investment outlay</td>
<td>7.5</td>
<td>7.5</td>
<td>25</td>
<td>20</td>
<td>40</td>
<td>3.775</td>
<td>1.27073</td>
</tr>
<tr>
<td>Commission to agents</td>
<td>17.5</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>37.5</td>
<td>3.4</td>
<td>1.54919</td>
</tr>
<tr>
<td>Mobile money software platform</td>
<td>12.5</td>
<td>17.5</td>
<td>15</td>
<td>40</td>
<td>15</td>
<td>3.275</td>
<td>1.28078</td>
</tr>
<tr>
<td>Customer acquisition &amp; registration costs</td>
<td>32.5</td>
<td>40</td>
<td>15</td>
<td>10</td>
<td>2.5</td>
<td>2.1</td>
<td>1.05733</td>
</tr>
<tr>
<td>Marketing and advertising costs</td>
<td>12.5</td>
<td>17.5</td>
<td>27.5</td>
<td>27.5</td>
<td>15</td>
<td>3.15</td>
<td>1.25167</td>
</tr>
</tbody>
</table>

In order to derive more revenue, findings revealed that 90% of the respondents are of the view that mobile network operators should design a tariff structure that captures more value. The tiered tariff structure, according to 77.5% of the respondents captures more value. These findings are consistent with literature which found that of the three tariff structures namely percentage based, fixed and tiered, the tiered tariff structures captures more value (GSMA, 2009).
Respondents as shown in Table 4.13 agreed (95%) that direct revenues had a positive contribution to the profitability of mobile money services in Zimbabwe. This finding is consistent with literature where direct revenue contributes 59% of revenue for major mobile money implementations in West Africa (Faz & Moser, 2013).

**Table 4.13 Revenue, Cost Drivers, and Profitability**

<table>
<thead>
<tr>
<th>Statement</th>
<th>Not Sure (%)</th>
<th>Strongly Disagree (%)</th>
<th>Disagree (%)</th>
<th>Agree (%)</th>
<th>Strongly Agree (%)</th>
<th>Mean (M)</th>
<th>Standard Deviation (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Understanding major revenue and cost drivers is key in determining profitability</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>35</td>
<td>65</td>
<td>3.8</td>
<td>1.28305</td>
</tr>
<tr>
<td>A tariff structure that captures more revenue is important for profitability</td>
<td>5</td>
<td>0</td>
<td>5</td>
<td>55</td>
<td>35</td>
<td>3.165</td>
<td>1.21126</td>
</tr>
<tr>
<td>A tiered tariff structure captures more revenue</td>
<td>10</td>
<td>0</td>
<td>12.5</td>
<td>60</td>
<td>17.5</td>
<td>2.25</td>
<td>1.08012</td>
</tr>
<tr>
<td>Agent commission structure should result in operators earning an acceptable R.O.E.</td>
<td>2.5</td>
<td>0</td>
<td>2.5</td>
<td>70</td>
<td>25</td>
<td>1.85</td>
<td>0.69982</td>
</tr>
<tr>
<td>There is a positive relationship between the level of investment and profitability in mobile money services.</td>
<td>0</td>
<td>2.5</td>
<td>12.5</td>
<td>42.5</td>
<td>42.5</td>
<td>3.175</td>
<td>0.77625</td>
</tr>
<tr>
<td>Airtime distribution savings have a positive impact on mobile money profitability.</td>
<td>5</td>
<td>0</td>
<td>10</td>
<td>62.5</td>
<td>22.5</td>
<td>2.025</td>
<td>0.8912</td>
</tr>
<tr>
<td>Churn reduction benefits have a positive impact on mobile money profitability.</td>
<td>22.5</td>
<td>0</td>
<td>2.5</td>
<td>55</td>
<td>20</td>
<td>2.5</td>
<td>1.43223</td>
</tr>
<tr>
<td>Increasing ARPU (Average Revenue Per User) increases mobile money profitability.</td>
<td>5</td>
<td>0</td>
<td>12.5</td>
<td>52.5</td>
<td>30</td>
<td>2.975</td>
<td>0.94699</td>
</tr>
<tr>
<td>Direct revenues have a positive impact on mobile money profitability.</td>
<td>0</td>
<td>2.5</td>
<td>2.5</td>
<td>70</td>
<td>25</td>
<td>3.225</td>
<td>0.59431</td>
</tr>
</tbody>
</table>
4.2.6.5 Establishing customer pain point and mobile money value chain

The respondents were requested to indicate the extent to which customer pain point and mobile money value chain contribute positively to the profitability of mobile money services in Zimbabwe. A five point Likert scale was used, where 1 denoted ‘not sure’ and 5 was agreement to a large extent ‘strongly agree’

Establishing customer pain point and mobile money value chain had a strong positive correlation of 0.668 to profitability. The relationship between customer pain point and mobile money value chain and profitability was therefore statistically significant at the 0.05 level. It is also evident from Table 4.14 that the mean scores for customer pain point and mobile money value chain exceeded 3.00. This is an indication that the respondents were of the view that customer pain point and mobile money value chain are important factors in determining the profitability of mobile money services in Zimbabwe. The respondents’ opinions are consistent with literature on the need to establish a customer pain point before launching mobile money services and the need to understand the mobile money value chain (Levin, 2013a; Page, Molina, & Jones, 2013; Sousa, Pimentel, Barros, & Duzhnikov, 2012; Davidson & Leishman, 2012, Davidson & McCarty, 2011; Mas & Radcliffe, 2011; Davidson, 2011). In Haiti as an example, the customer pain point was the need to move money due to the widespread damage in the communications and transport infrastructure following the devastating earthquake (Taylor, Baptiste, & Horst, 2011).

In order to have an assessment of respondents understanding of the value chain for mobile money services, respondents were requested to indicate whether mobile network operators in Zimbabwe understood their value chain. From the findings in Table 4.14, it was evident that mobile network operators in Zimbabwe do not have a thorough appreciation of their value chain as evidenced by 50% of respondents who were in agreement that they did not understand the mobile money value chain.
Table 4.14: Customer pain point and mobile money value chain

<table>
<thead>
<tr>
<th>Statement</th>
<th>Not Sure (%)</th>
<th>Strongly Disagree (%)</th>
<th>Disagree (%)</th>
<th>Agree (%)</th>
<th>Strongly Agree (%)</th>
<th>Mean (M)</th>
<th>Standard Deviation (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobile network operators in Zimbabwe do not understand the mobile money value chain.</td>
<td>5</td>
<td>2.5</td>
<td>42.5</td>
<td>32.5</td>
<td>17.5</td>
<td>2.45</td>
<td>0.9858</td>
</tr>
<tr>
<td>Defining an early use case is critical for the scaling of mobile money services in Zimbabwe.</td>
<td>2.5</td>
<td>0</td>
<td>0</td>
<td>62.5</td>
<td>35</td>
<td>3.725</td>
<td>0.71567</td>
</tr>
<tr>
<td>To succeed in the mobile money business, it is critical to understand the mobile money value chain.</td>
<td>2.5</td>
<td>2.5</td>
<td>0</td>
<td>32.5</td>
<td>62.5</td>
<td>3.5</td>
<td>0.84732</td>
</tr>
<tr>
<td>It is important for mobile network operators to establish a customer pain point before launching a mobile money service.</td>
<td>12.8</td>
<td>0</td>
<td>5.1</td>
<td>30.8</td>
<td>51.3</td>
<td>3.9231</td>
<td>1.32555</td>
</tr>
</tbody>
</table>

4.3 SUMMARY

This chapter presented an analysis of data from the mobile network operators in Zimbabwe. The data was presented using figures and tables in order to give a clear picture of the factors affecting the profitability of mobile money services. The major findings were that there is a positive relationship between profitability and key success factors, a positive relationship between establishing customer pain point and understanding value chain and profitability, no relationship between industry driving forces and profitability, negative relationship between challenges and profitability. This chapter also provided the foundation for conclusions and recommendations in Chapter 5.
CHAPTER FIVE

CONCLUSION AND RECOMMENDATIONS

5.0 INTRODUCTION

The primary objective of the research was to ascertain the factors that affect the profitability of mobile money services in Zimbabwe. This chapter presents a summary of the main conclusions and recommendations. Section 5.1 presents the conclusions, Section 5.2 the modified conceptual framework, Section 5.3 presents the recommendations, whilst Section 5.4 highlights the study limitations and suggestions for further research.

5.1 CONCLUSION

This section presents conclusions that were drawn from the findings. Special reference will be made to answering the research questions and results from testing the hypothesis.

5.1.1 Key Success Factors

The major key success factors that mobile network operators should leverage on in order to be profitable were classified under internal and external factors. The major internal factors critical for success that was chosen by respondents were branding, followed by managing the activities of agents, and organisational structure. The most important external key success factors cited by respondents were market share of the operator, mobile penetration rate, and level of financial inclusion in the country. From the foregoing analysis, it is evident that for mobile network operators to be profitable, branding which entails ensuring visibility of agents and visibility of the brand through aggressive marketing initiatives is key. This helps to increase the activity ratio for both
customers and agents. The major conclusion is that mobile network operators should leverage on both internal and external factors critical for success. The hypothesis that leveraging on key success factors had a positive impact on profitability was supported by the findings.

5.1.2 Industry Driving Forces

The objective was to find out whether industry driving forces impacted negatively on the profitability of mobile money services. Research findings indicated that there was no relationship between industry driving forces and profitability. The hypothesis that industry driving forces had a negative impact on profitability was therefore rejected. Although, there was no relationship between industry driving forces and profitability, this does not mean that industry driving forces were not important. Industry driving forces bring change to any particular industry. To this end, findings revealed that industry driving forces that mobile network operators should be aware of include regulation, risk, and changing customer demand.

Regulation does not have a bearing on profitability (Smith, 2011). Changing customer needs help mobile network operators to continuously introduce new services. Risk on the other hand, refers to fraud and money laundering systems. Mobile money as a payment system is fraught with risks that should be managed failure of which calls for regulatory intervention.

5.1.3 Revenue and Cost Drivers

The objective was to investigate whether revenue and cost drivers have a relationship with profitability in the mobile money business. Results indicated that there was a strong positive correlation between revenue and cost drivers and profitability. This hypothesis was therefore supported by the findings. Revenue is the major source of value for mobile network operators hence, this factor scored the highest correlation with
profitability. Findings revealed that the major revenue sources were direct revenues. Mobile network operators should therefore maximise on direct revenues in order to be profitable and cash flow positive.

The major revenue sources were identified as customer charges, airtime distribution savings, and churn reduction benefits. The major cost drivers were initial investment outlay, commission to agents, and the software application. The most important cost driver was initial investment outlay. The second most important cost driver was commission to agents.

5.1.4 Challenges

One of the objectives was to find out the impact of challenges on mobile money services. The hypothesis that challenges negatively impacted on the profitability of mobile money services was tested and found to be true and the relationship was a strong negative linear relationship. This means that as challenges increase, profitability decreases. The major challenges according to respondents were direct deposits or third party cash ins as they are commonly known in Zimbabwe. Lack of capital and network effects were also cited as key challenges. Direct deposits were however, the major challenge which impacted negatively on the profitability of mobile money services.

5.1.5 Customer Pain Point and Value Chain

Findings revealed that there was a positive relationship between establishing a customer point and understanding the mobile money value chain and profitability. The hypothesis was therefore supported. It was also revealed that mobile network operators in Zimbabwe do not have a thorough understanding of their value chain. The next section presents the modified conceptual framework.
5.2 MODIFIED CONCEPTUAL FRAMEWORK

Following results from the findings Figure 5.1 is the modified conceptual framework. Driving forces have been removed as they do not have a relationship with profitability.

Figure 5.1: Modified Conceptual Framework
To be profitable, there is need for mobile network operators to ensure that they understand the factors presented in the modified conceptual framework.

5.3 RECOMMENDATIONS

The following recommendations may be drawn from the current study. The recommendations apply to the industry, regulatory authorities and the academia.

a) To achieve scale early, mobile network operators should establish a customer pain point after a thorough research to identify a compelling need that will create the ‘wow’ factor. Mobile network operators should also not make the mistake of launching too many use cases as this will confuse customers. New products should be introduced gradually.

b) There is need for mobile network operators to fully understand their value chain. Operators should concentrate on key primary activities such as marketing, agency distribution network, technology and customer care in order to retain the customer experience. Support activities such as float holding and licencing should be done by the partner bank in liaison with the operators.

c) Leveraging on key success factors is of paramount importance to mobile network operators. Mobile network operators should therefore leverage on branding, channel management, and organisational structure. Mobile network operators should ensure that agents are well branded. The activities of agents should be monitored through periodic visits and agent liquidity should be monitored on a daily basis. Operators should also assist agents with liquidity through the partner bank by offering loans. In terms of the organisational structure, mobile network operators should put in place a flexible structure that encourages innovation. External key success factors such as the market share of the mobile network operator are also pertinent. Initiatives should be put in place to register as many customers as possible who are currently on the mobile network platform. This is meant to drive customer acquisition. Once customers are registered, driving customer usage or customer activity ratio should naturally follow as
long as the mobile network operator has established a customer pain point that will motivate subscribers to use the service.

d) In terms of revenues, mobile network operators need to maximise revenues and minimise expenses. The bulk of the revenues should come from customer fees. These should constitute more than 50% preferably 60% of direct revenues. The remainder of the revenue should come from airtime distribution savings and churn reduction benefits. In order to generate more revenue, mobile network operators should implement a tiered customer tariff. The higher bands should be cheaper than the lower bands. Given that the bulk of transactions are mainly in the lower bands this will stimulate more revenues for the mobile network operators. Promotions should also be put in place to drive customer usage. When mobile network operators introduce new services, the fees should take into account the Cash In cost. The fee charged should be able to cater for the cash in commission paid to agents since customers are not charged.

As mobile money services grow, mobile network operators in Zimbabwe should ensure that expenses shift to variable from fixed. Commission should constitute the bulk of operators’ expenses in order to realise profitability. There is however need to strike a balance between revenue earned by operators and the commission paid to agents.

e) Mobile network operators should address challenges such as direct deposits, lack of capital, and network effects. Direct deposits are reduced through customer and agent education. In addition, the prohibition of direct deposits should form part of the agency contract with the ramifications of breach clearly specified. Know Your Customer (KYC) requirements such as asking for positive identification when a customer performs a deposit.

Mobile network operators should also perform agent visits and inspect the agent record sheets in order to ensure compliance. Agents that are not in compliance should be warned while repeat offenders should either have their agency contract revoked or suspended for a period of time. Mobile network operators should also perform off site data analysis by analysing transactions. Operators should identify direct deposits by looking for transactions where there was a deposit in a customer’s account and
corresponding withdrawal within a period of twenty four hours or on the same date. The Cash In and Cash Out usually happens at different agents in distant locations.

Since there is generally no agreement on the level of capital that mobile network operators should set aside, operators in Zimbabwe should however set aside enough capital that will enable the mobile money service to reach scale early. The challenge of network effects is best addressed by aggressive advertising and marketing campaigns. Advertising campaigns through the electronic media, print media and road shows should be carried out in order to educate users and create the enthusiasm to use the mobile money service.

f) In the formulation of regulation, it is recommended that the central bank should consult widely especially with the mobile network operators so as to put in place regulations that do not stifle the development of mobile money services in Zimbabwe. In order to safeguard the safety of the national payment systems, the Reserve Bank of Zimbabwe should also conduct periodic on site surveillance at agents’ locations to ensure that agent locations have adequate security, are liquid, and are enforcing Know Your Customer (KYC) practices as enshrined in the Bank Use Promotion and Suppression of Money Laundering Act Chapter 24:24.

g) The findings of this research can be used by the academic world. Further studies on the issue of profitability can be conducted based on the mobile money profitability assessment model that was developed by this study. In addition, this research will also form part of literature that can be reviewed since there is a research gap on literature that focuses on mobile money profitability.

5.4 EVALUATION OF THE RECOMMENDATIONS

The recommendations proffered are evaluated in Table 5.1 in terms of suitability, feasibility and accessibility as highlighted by John & Scholes cited by (Wu, 2010).
<table>
<thead>
<tr>
<th>Recommendation</th>
<th>Suitability</th>
<th>Feasibility</th>
<th>Acceptability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Establishment of customer pain point.</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Understanding mobile money value chain.</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Leveraging on key success factors.</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Maximising on revenue drivers and minimising on cost drivers.</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Mitigating challenges such as direct deposits, network effects and lack of capital</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>In terms of policy issues: consultations when drafting regulation and carrying offsite visits to agents.</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Use by academia in reviewing literature.</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
</tbody>
</table>

Suitability was based on whether the recommendations were suited to the existing and anticipated external environment in which the companies are operating. Feasibility was measured in terms of availability of resources to implement the recommendations. The recommendations also had to be acceptable to the stakeholders.
5.5 AREAS FOR FURTHER STUDY

The current study focused on the three GSM telecommunications industry players and a relatively small sample. Further research may extend the analysis by exploring more factors as well as geographical coverage of the study.
REFERENCES


Barclays PLC. (2009). Barclays. Retrieved from Barclays:
http://group.barclays.com/Sustainability/Inclusive-banking/Case-studies/CaseStudy/1231782381168.html


http://www.businessdictionary.com/definition/key-success-factors.html


CGAP. (2011, April 28). Blogs: CGAP. Retrieved from CGAP Web site:


UWF. (nd). *Calculating the Net Investment (NINV) or Initial Outlay (IO)*. Retrieved February 26, 2013, from UWF Web site: http://uwf.edu/r constand/fin4424web/T9-CapBud/T9-CapBudP02.htm


APPENDIX 1: QUESTIONNAIRE AND INTERVIEW GUIDE

30 June 2013

Dear Sir/Madam

RE: MBA Research Questionnaire

My name is Fidelis Taziwa, a student with the University of Zimbabwe’s Graduate School of Management who is enrolled for the Master of Business Administration degree. As a requirement for the fulfillment of the degree programme, I am conducting a research which seeks to investigate the factors affecting the profitability of mobile money services in Zimbabwe. May you kindly spare a few minutes of your time to give your opinions on this issue.

Please note that this research is purely for academic purposes only and will be treated with the strictest confidentiality. The findings of this survey will not be used for any other purpose besides that intended for this research. For further clarifications regarding this study, please feel free to contact the Researcher on the following telephone numbers 0772 889 937 or email address: taziwa.fidelis@gmail.com

Your cooperation is essential for the results of the survey to be valid and reliable.

Yours faithfully

Fidelis Taziwa
RESEARCH TOPIC: FACTORS AFFECTING THE PROFITABILITY OF MOBILE MONEY SERVICES IN ZIMBABWE.

There is no right or wrong answer so feel free to answer in a way that expresses your most objective opinion in each case.

[Tick (✓) as applicable in the boxes provided]

a) Background Information

1. Background Information:

Gender: Male [ ] Female [ ]

Age (Years)

Under 20 [ ] 21 – 29 [ ] 30 – 39 [ ] 40 – 49 [ ] Over 50 [ ]
2. Education

Secondary [ ]  College/Poly [ ]  University [ ]  Other specify………………… [ ]

3. Job Title

Managerial [ ]
Non-Managerial [ ]

b) Key Success Factors

4. Branding is critical to the success of a mobile money service.

Strongly agree [ ]  Agree [ ]  Disagree [ ]  Strongly disagree [ ]  Not sure [ ]

5. A good relationship with the partner bank(s) is of paramount importance to the success of mobile money services in Zimbabwe.

Strongly agree [ ]  Agree [ ]  Disagree [ ]  Strongly disagree [ ]  Not sure [ ]

6. Managing the activities of agents is critical in order to retain the customer experience.

Strongly agree [ ]  Agree [ ]  Disagree [ ]  Strongly disagree [ ]  Not sure [ ]

7. Defining an early use case is critical for the scaling of mobile money services in Zimbabwe.

Strongly agree [ ]  Agree [ ]  Disagree [ ]  Strongly disagree [ ]  Not sure [ ]

8. There is a positive relationship between the level of investment and profitability in mobile money services.

Strongly agree [ ]  Agree [ ]  Disagree [ ]  Strongly disagree [ ]  Not sure [ ]

9. The organisational structure impacts positively on the success of mobile money services.

Strongly agree [ ]  Agree [ ]  Disagree [ ]  Strongly disagree [ ]  Not sure [ ]
10. Mobile network operators in Zimbabwe do not understand the mobile money value chain.

Strongly agree [ ] Agree [ ] Disagree [ ] Strongly disagree [ ] Not sure [ ]

11. Which of these external factors is critical to the success of mobile money services in Zimbabwe? Rank in order of importance 5, 4,3,2,1 with 5 being the highest and 1 the lowest.

Level of financial inclusion
GDP (PPP) per capita
Mobile penetration rate
Market share of the mobile network operator
Regulatory landscape

12. Which of the following industry driving forces should mobile network operators be aware of that have an impact on the provision of mobile money services in Zimbabwe? Rank in order of importance 5, 4,3,2,1 with 5 being the highest and 1 the lowest.

Regulation
Technology
Risk
Changing customer needs
Other (please state)………………………………………………

13. Rank in order of importance the major revenue drivers for mobile money services in Zimbabwe? The ranking scales are as follows: 5, 4,3,2,1 with 5 being the highest and 1 the lowest.

Customer Charges
Airtime distribution savings
Subscription fees
Churn reduction benefits
Other

………………………………………………………………………………
14. Rank in order of importance the major cost drivers for mobile money services in Zimbabwe? The ranking scales are as follows: 5, 4, 3, 2, 1 with 5 being the highest and 1 the lowest.

- Initial investment outlay  
- Commissions to agents  
- Mobile money software platform  
- Customer acquisition & registration costs (cost of replacing Sim)  
- Marketing and advertising costs

15. A tariff structure that captures more value is important for the profitability of mobile money services.

Strongly agree [ ] Agree [ ] Disagree [ ] Strongly disagree [ ] Not sure [ ]

16. Mobile network operators should adopt a tiered customer tariff which captures more value.

Strongly agree [ ] Agree [ ] Disagree [ ] Strongly disagree [ ] Not sure [ ]

17. The agent commission structure should result in operators earning acceptable margins.

Strongly agree [ ] Agree [ ] Disagree [ ] Strongly disagree [ ] Not sure [ ]

18. The agent commission structure should result in agents earning an acceptable return on their investment.

Strongly agree [ ] Agree [ ] Disagree [ ] Strongly disagree [ ] Not sure [ ]

19. Airtime distribution savings have a positive impact on mobile money profitability.

Strongly agree [ ] Agree [ ] Disagree [ ] Strongly disagree [ ] Not sure [ ]

20. Churn reduction benefits have a positive impact on mobile money profitability.

Strongly agree [ ] Agree [ ] Disagree [ ] Strongly disagree [ ] Not sure [ ]
21. Increasing ARPU (Average Revenue Per User) increases mobile money profitability.

Strongly agree [ ] Agree [ ] Disagree [ ] Strongly disagree [ ] Not sure [ ]

22. Direct revenues have a positive impact on mobile money profitability.

Strongly agree [ ] Agree [ ] Disagree [ ] Strongly disagree [ ] Not sure [ ]

e) Challenges faced by MNOs

23. Direct deposits (third party cash ins) reduces the profitability of mobile money services.

Strongly agree [ ] Agree [ ] Disagree [ ] Strongly disagree [ ] Not sure [ ]

24. Lack of capital stifles the deployment of mobile money services.

Strongly agree [ ] Agree [ ] Disagree [ ] Strongly disagree [ ] Not sure [ ]

25. The growth of mobile money services is constrained when users only adopt mobile money services simply because they are other users within the network that are using the service (Network effects).

Strongly agree [ ] Agree [ ] Disagree [ ] Strongly disagree [ ] Not sure [ ]

26. The level of regulation of mobile money services in Zimbabwe is excessive.

Strongly agree [ ] Agree [ ] Disagree [ ] Strongly disagree [ ] Not sure [ ]

27. Excessive regulation negatively affects the profitability of mobile money services.

Strongly agree [ ] Agree [ ] Disagree [ ] Strongly disagree [ ] Not sure [ ]

28. Excessive regulation is a hindrance to the growth of mobile money services.

Strongly agree [ ] Agree [ ] Disagree [ ] Strongly disagree [ ] Not sure [ ]
f) Mobile Money Profitability Assessment Model

29. It is important for mobile network operators to establish a customer pain point before launching a mobile money service.

Strongly agree [ ] Agree [ ] Disagree [ ] Strongly disagree [ ] Not sure [ ]

30. Mobile network operators should decide on the appropriate business model to adopt in order to be profitable.

Strongly agree [ ] Agree [ ] Disagree [ ] Strongly disagree [ ] Not sure [ ]

31. To succeed in the mobile money business, it is critical to understand the mobile money value chain.

Strongly agree [ ] Agree [ ] Disagree [ ] Strongly disagree [ ] Not sure [ ]

32. Mobile network operators should leverage on mobile money Key Success Factors.

Strongly agree [ ] Agree [ ] Disagree [ ] Strongly disagree [ ] Not sure [ ]

33. Understanding the major revenue and cost drivers is key in determining mobile money profitability.

Strongly agree [ ] Agree [ ] Disagree [ ] Strongly disagree [ ] Not sure [ ]

34. Mobile network operators should be concerned about industry driving forces affecting the mobile money business?

Strongly agree [ ] Agree [ ] Disagree [ ] Strongly disagree [ ] Not sure [ ]

35. Mobile network operators should continuously relook at all of the aspects of the profitability model as the economy grows.

Strongly agree [ ] Agree [ ] Disagree [ ] Strongly disagree [ ] Not sure [ ]
Interview Questions Guide

Dissertation Research Topic: Factors affecting the profitability of mobile money services in Zimbabwe.

1. Is there any regulation that governs the provision of mobile money services in Zimbabwe?

2. If answer to 1 is yes, please name the regulation or Acts applicable.

3. If answer to 1 is No, are there any plans in the foreseeable future to regulate mobile money services?

4. Currently Zimbabwean banks are regulated in terms of bank charges. Is there any regulation extended to mobile money services on the level of charges they should charge.

5. Do you think excessive regulation has an impact on the profitability of mobile money services?

6. Do you think excessive regulation inhibits the growth of mobile money services?
**APPENDIX 2: CORRELATION COEFFICIENTS**

**Appendix 2**

Table A2.1 Key Success Factors and Profitability

<table>
<thead>
<tr>
<th>Correlations</th>
<th>Key Success Factors</th>
<th>Profitability</th>
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*. Correlation is significant at the 0.05 level.

Table A2.2 Challenges and Profitability

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**. Correlation is significant at the 0.05 level.**
Table A2.3 Revenue and Cost Drivers and Profitability

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**. Correlation is significant at the 0.05 level.

Table A2.4 Driving Forces and Profitability

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<th>Driving forces</th>
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### Table A2.5 Customer Pain Point and Value Chain

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</table>

**. Correlation is not significant at the 0.05 level.

**. Correlation is significant at the 0.05 level.