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COMPETITIVE ADVANTAGE OF M-PESA, IS IT SUSTAINABLE?

King'ori Gladys Wahito

**Submitted in partial fulfilment of the requirements for the Degree of Master of
Business Administration (MBA) at Strathmore University**



June 2015

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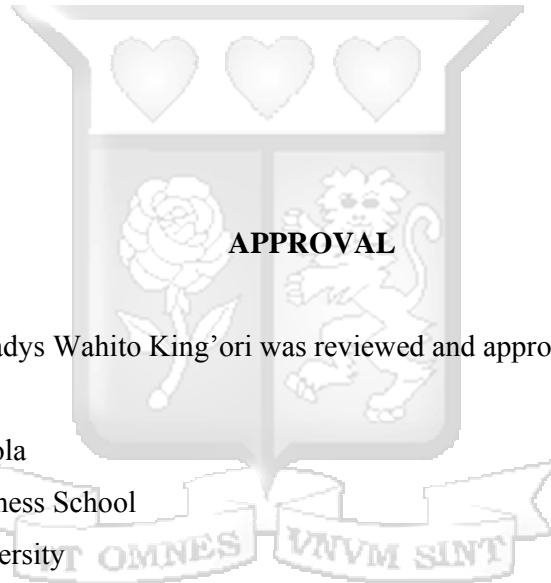
DECLARATION

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King'ori Gladys Wahito

June 2015



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ABSTRACT

Mobile Money Transfer (MMT) is an innovation to transfer money using the Information and Communications Technology (ICT) infrastructure of the Mobile Network Operators (MNO). Kenya's largest MNO, Safaricom, launched an MMT, M-PESA, an innovative payment service for the unbanked in March 2007. Within the first month, Safaricom had registered over 20,000 M-PESA customers, well ahead of the targeted business plan. The growth of M-PESA is faster than the growth of formal bank accounts. Despite competition with telcos and banks, Safaricom's M-PESA has accounted for 78.5% of the total number of active mobile money users in the country. There is therefore some form of competitive advantage that M-PESA is leveraging to gain market share.

The purpose of this study was to use the Porters Five Forces model to determine the sustainability of M-PESA's competitive advantage. A descriptive survey design was employed to achieve the study's objectives. Data was collected from 185 of the targeted 240 respondents using questionnaires.

It was found that the main sources of competitive advantage for M-PESA as a MMT service are: most of the people that use money transfer services in Kenya are on the M-PESA service, the integration of M-PESA and banks, the minimum adoption barriers and the simple and transparent pricing.

Analysis of the sources of competitive advantage by using the Porters Five Forces model and regression analysis indicates that M-PESA has a sustainable competitive advantage as a MMT in Kenya.

The study recommends that M-PESA looks out for new threats like Mobile Virtual Network Operators (MVNOs) and that future studies to be done with a higher sample size from the various towns in Kenya for a comprehensive generalization of the results.

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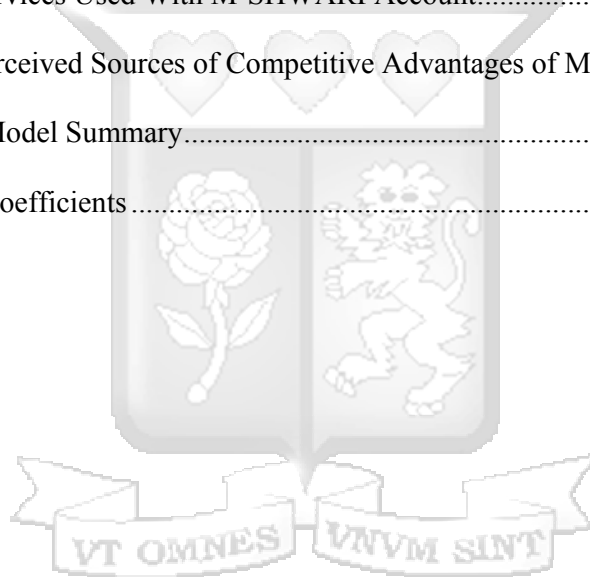
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LIST OF ACRONYMS

ATM- Automated Teller Machine

AVAC – This is a competitive strategy analysis framework that analyses **A**ctivities that a company performs, **V**alue that these activities create, **A**ppropriability of the value created, and whether the organizations is **C**hange oriented.

CBA - Commercial Bank of Africa

CCK- Communications Commissions of Kenya (now Communications Authority of Kenya)

DFID- Department of International Development

FSD- Financial Sector Deepening

ICT- Information and Communication Technology

MMT- Mobile Money Transfer

MNO- Mobile Network Operators

MVNO- Mobile Virtual Network Operators

RBV- Resource Based View. This is a competitive strategy analysis framework

SPSS - Statistical Package for Social Science- a computer program for analysing data.

VRIO- this is a competitive strategy analysis framework that determines whether a competitive strategy is **V**aluable, **R**are, **I**mitable and if the **O**rganization is geared toward exploiting its resources.

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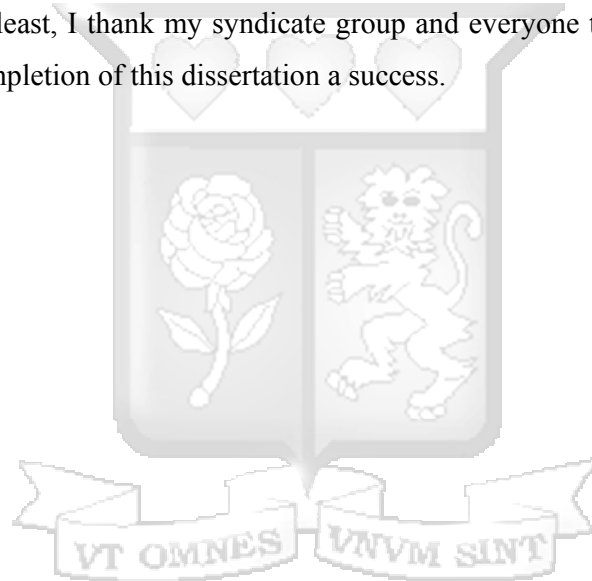
I thank God the Almighty, for giving me the means, courage, strength and perseverance to complete this dissertation.

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DEDICATION

to:

Jean Marie Muga.

for your love, support and encouragement.



CHAPTER ONE: INTRODUCTION TO THE STUDY

1.1 Background

Business competition can be defined as the effort of two or more parties acting independently to secure the business of a third party by offering the most favorable terms. It can also be described as allocating productive resources to their most highly-valued uses and encouraging efficiency (Chang, 2002). Competition among businesses causes commercial firms to develop new products, services and technologies, which would give consumers greater selection and better products. The greater selection typically causes lower prices for the products, compared to what the price would be if there was no competition or little competition. However, competition may also lead to wasted effort and to increased costs and prices in some circumstances (Kaplan & Norton, 2007).

Businesses that seek to survive competition both locally and internationally therefore need to find ways to be better than their competitors. Scholars have suggested models and strategies that businesses can adopt in order to find a competitive edge over their rivals. There are a number of theoretical frameworks have been used to analyze the competitive strategies companies deploy. Three of the popular ones are the Porters Five Forces model, VRIO framework and AVAC analysis.

The Porters Five Forces Model of Competitive advantage is defined as the strategic advantage that one business entity has over its rival entities within its competitive industry. The nature of competition is determined by five factors: Threat of new entrants to a market, Bargaining power of suppliers, Bargaining power of customers (“buyers”), Threat of substitute products and Degree of competitive rivalry (Porter, 1996).

Jay Barney, a professor of Management proposed a structured approach for the resource-based analysis of a business based on analyzing whether a resource is valuable (V), rare (R) and imitable (I) and whether the organization (O) is taking

advantage of the resource to generate sustained competitive advantage (Barney, 1991).

The AVAC analysis determines the extent to which a strategy can give a firm a competitive advantage by analyzing activities (A) that the firm performs, the value (V) that it creates, how much value it appropriates (A), and how much it is able to take advantage of change (C) (Afuah, 2009).

Mobile Money Transfer (MMT) is an innovation to transfer money using the Information and Communications Technology (ICT) infrastructure of the Mobile Network Operators (MNO). The MNO infrastructure then becomes the channel for funds transfer between customers of one or multiple MNOs to both the cellular terminals or to business organization to pay, send funds, or procure goods or send to a bank account to transact through the account (Owiro & Tanui, 2011).

Kenya's largest MNO, Safaricom launched an MMT, M-PESA, an innovative payment service for the unbanked in March 2007. Within the first month, Safaricom had registered over 20,000 M-PESA customers, well ahead of the targeted business plan (Hughes & Lonie, 2007). This rapid take up was a clear sign that the money transfer service filled a gap in the market that had been largely ignored by the banks. The product concept is where an M-PESA customer can use their mobile phone to move money quickly, securely and across great distances, directly to another mobile phone user. The customer does not need to have a bank account, and only needs to register for the M-PESA account.

The upward trend and speedy uptake of M-PESA signified that MMT service had become instrumental in providing the unmet demand for financial services, thereby promoting financial inclusion in the country. Due to the success of M-PESA, competing mobile telecommunication companies, Airtel, Yu and Orange introduced similar MMT competing services, Airtel money, Yu cash and Orange money respectively. Banks also integrated with MMT services so as not to lose the bankable market.

As successful as M-PESA is, its sustainability will be studied. The purpose of this study will be to use the Porters Five Forces model to determine the sustainability of M-PESAs competitive advantage.

1.2 Problem statement

After a month of launching M-PESA that was developed by Susie Lonie and Nick Hughes, the competitive game was on. There was stiff competition between existing money transfer agencies, banks, and other telecommunication companies. In November 2008 M-PESA had 4 million users and had transacted over 21 billion (Omwansa, 2009). In 2011, there were approximately 16 million users of mobile money in Kenya, making over 2 million transactions every day (Michaels, 2011). In 2012, Safaricom's M-PESA subscription accounted for 78.5% of the total number of active mobile money users in the country and the number of M-PESA agents was 39,400 compared to the country's total of 45,861 (Njue, 2012).

Extensive studies have been done on M-PESA usage by The Financial Sector Deepening Organization (FSD). Other studies have been done on the success factors of M-PESA and the growth and economic impact of M-PESA.

None of the research available focused on competitive advantage strategies used by M-PESA over competing MMT services, determined sustainability of the strategies and the challenges of the MMT services. This paper therefore sought to fill this gap by assessing the sources of sustained competitive advantage strategies used by M-PESA to maintain the largest market share in the telecommunication industry and evaluating these strategies using the Porters Five Forces Model.

1.3 Research Objectives

The primary objective of the study was to assess the sustainability of the competitive advantage strategies used by M-PESA MMT service to maintain a strong hold on the money transfer service over substitute MMT services.

Specific objectives are:

- (i) To determine the main sources of competitive advantage for M-PESA as a MMT service.
- (ii) To analyze the sustainability of the competitive advantage strategies used by M-PESA using the Porters Five Forces Model.
- (iii) To highlight the challenges M-PESA is facing as an MMT service.

1.4 Research Questions

- (i) Why does M-PESA seem to have a competitive advantage over other MMTs?
- (ii) How has M-PESA used their sources of competitive advantage to remain sustainable?
- (iii) Which challenges does M-PESA face as an MMT service?

1.5 Scope of the study

This study aimed firstly, to describe and analyze the sources of competitive advantage used by mobile telecommunications companies in Kenya with a focus on Safaricom's M-PESA. It did not purport to test directly the effectiveness of established theories regarding competitive strategy but rather to see how these theories might have an impact on the competitive advantage of M-PESA as a MMT.

Secondly, the study sought to find out how the various sources of competitive advantage are sustainable for Safaricom by analysis using the Porters Five Forces Model.

Finally, the study aims to identify the challenges that M-PESA faces as an MMT in Kenya.

The focus was mainly on M-PESA as the largest MMT service in Kenya. All information therefore was focused on this. The information and data gathered focused on Kenya as the specific geographical location.

The study was carried out for a period of 6 months (August 2013-January 2014), where data was collected and analyzed. The information and data gathered was therefore focused during this period.

1.6 Importance of the study

Given that the research is focusing on M-PESA as the main subject of the study, the research will be of great importance to Safaricom limited, as well as other mobile telecommunication companies. The study will assist Safaricom in knowing what gives M-PESA a competitive edge over its competitors and what keeps this competitive edge sustainable. This will enable the institutions make more informed decisions on future strategy and product development.

The study will also be of benefit to banking institutions seeking to access the profit potential of the MMT service. The findings will provide valuable information from consumers regarding their preferences and the strategies implemented by the Mobile telecommunication companies that attract them.

The output of this research will be important to the MMT customers since through their active participation they learn the activities and processes that the mobile telecommunication firms take in order to ensure that their services are favored. This understanding can create a greater synergy between the customers and firms thereby helping further improve performance.

This research should be of broad interest to researchers on the growth of M-PESA and financial inclusion. This study will open up to other studies that can focus on why M-PESA has been successful in Kenya, other MMT services in other countries, the extent to which product offerings and price incentives contribute to high take up of MMT services. The results of this study will initiate conversations on analysis of the competitive strategies used and how these strategies can be implemented for other MMTs and other organizations.

CHAPTER TWO: LITERATURE REVIEW

2.1 Competition and Business Strategy

According to Kaplan & Norton (Kaplan & Norton, 2007), operations and Business competitiveness is an important part of the study of strategy. Competition has been linked to an increasingly complex set of capabilities and competencies that firms develop to survive. Business competition can be defined as the effort of two or more parties acting independently to secure the business of a third party by offering the most favorable terms. It can also be described as allocating productive resources to their most highly-valued uses and encouraging efficiency (Chang, 2002).

Competition among businesses has two contrasting effects. First, competition causes commercial firms to develop new products, services and technologies, which would give consumers greater selection and better products. Second, competition may also lead to wasted effort and to increased costs and prices in some circumstances. For example, the intense competition for limited resources leads many potential investors to make substantial investments in accessing the resource which are not recouped, because only a fraction of their investments become successful (Kaplan & Norton, 2007).

Kaplan & Norton (2007), also state that there are three basic levels of business competition: The first level is direct competition, where products and services that perform the same function compete against each other. Sometimes, two rival companies add new products to their line, which leads to the other company distributing the same new things, and in this manner they compete. The second level is substitute or indirect competition, where products which are close substitutes for one another compete. The third level is budget competition which is anything on which a consumer might want to spend their available money. Businesses that seek to survive competition both locally and internationally therefore need to find ways to be better than their competitors.

2.2 Sources of Competitive Advantage

Nowadays, companies must deal not only with quality, cost, and flexibility requirements, but also with demands on wider aspects such as: delivery speed and reliability, customer services, and innovation in products and processes. An advantage of either of these firm attributes over its competitors can generally be referred to a firm having competitive advantage (Meso, 2005). It may involve intellectual property that is owned by a company that disallows rivals from making the same product or making the product in the same way. It may involve special skills or resources that a company possesses that are not held by competitors.

In the service industry, sources of competitive advantage have been identified generally as high customer satisfaction and service quality. Customer satisfaction is affected by service reliability, responsiveness, assurance and empathy as shown in a study of the Telecommunication industry in Malaysia using the SERVQUAL model (Loke, Taiwo, Salim, & Downe, 2011). Their study described service quality as a rationale of differences between expectation and competence along the dimensions of “reliability, responsiveness, tangibles, communication, credibility, security, competence, courtesy, understanding the customers and service accessibility”.

Other sources of competitive advantage are branding, market orientation, organizational learning, innovation, customer value, relationship marketing, networks (Hoffman, 2000), logo, trademark and licenses, innovative and know-how talent, strong brand name and reputation, industry leadership, capability to change and flexibility, positive organization culture, customer oriented culture, strong financial status, excellent marketing strategies, prospective investment and Research & Development, cost advantage, human capital and product or services advantage (Foon & Nair, 2010).

Companies leverage on these sources of competitive advantage so as to have an edge over their competitors.

2.3 Competitive Advantage Strategies

Within a competitive environment, firms not only need to leverage on their sources of competitive advantage but also change by positioning themselves strategically. The principles that underlie strategic positioning are defined as creation of a unique and valuable position, creating a “fit” in a company’s activities and making of trade-offs by choosing what not to do (Porter, 1996).

To analyze the growth potential of the specific product relative to competitors’ products, four strategic analysis models have been used namely, Ohmae’s Four Basic Strategies, Boston Consulting Group’s Growth Share Matrix, Hamel and Prahalad’s Core Competency Agenda Matrix and D’aveni’s Hypercompetition Model. Since it was found that the strategic analysis models are interconnected, firms can use an integrated approach that captures the dynamic nature of the competitive environment (Shay & Rothaermel, 1999).

Another strategic analysis model that can be used to analyze the scope of business activities related to the narrow versus broad in an industry segment is the Porter’s Generic Strategies model (Porter, 1985). The strategies are Differentiation, cost leadership, differentiation focus and cost focus as shown in Figure 2.1.

		COMPETITIVE ADVANTAGE	
		Lower Cost	Differentiation
COMPETITIVE SCOPE	Broad Target	Cost Leadership	Differentiation
	Narrow Target	Cost Focus	Differentiation Focus

Figure 2. 1 Porter's Generic Strategies

The differentiation and cost leadership strategies seek competitive advantage in a broad range of market or industry segments. By contrast, the differentiation focus and cost focus strategies are adopted in a narrow market or industry.

In cost leadership, a firm sets out to become the low cost producer. In this case the sources of advantage are economies of scale, proprietary technology and preferential access to raw materials. In a differentiation strategy a firm selects one or more

attributes that many buyers in an industry perceive as important, and positions itself to meet those needs. The added value comes with an added price.

In Cost Focus, a firm seeks a cost advantage in its target segment and exploits differences in cost behavior in some segments. In differentiation focus a firm seeks differentiation in its target segment and exploits the special needs of buyers in certain segments.

2.4 Frameworks to Analyze Competitive Advantage

The three main frameworks used to analyse competitive advantage are; Porters Five Forces Model, Resource Based View Model and the AVAC Analysis Model.

2.4.1 Porters Five Forces Model

A firm develops its organizational strategies in order to obtain competitive advantage over its competitors by responding to five primary forces: the threat to entry, the power of suppliers, power of buyers, threats of substitutes, and rivalry among existing competitors as illustrated in Figure 2.2 (Porter, 1980).



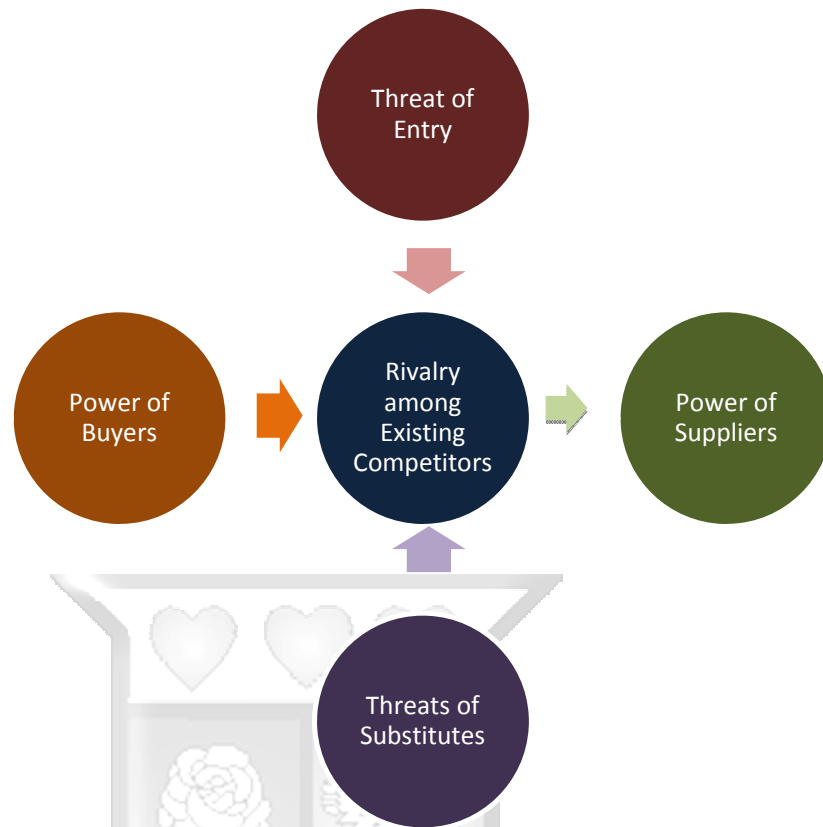


Figure 2. 2 Porter's Five Forces Model

The threat of entry puts a cap on the profit potential of an industry. When the threat is high, firms must hold down their prices or boost investment to deter new competitors.

On the other hand, companies depend on different supplier groups for inputs. When a supplier group is powerful, they can capture more of the value for themselves by charging higher prices, limiting quality or services, or shifting costs to industry participants.

Buyers or customers are the consumer of the company's product. They can capture more value by forcing down prices and demanding better quality or more services. They can also play industry participants off against one another, all at the expense of industry profitability.

When the threat of substitutes is high, industry profitability suffers. Substitutes may affect the firm directly or indirectly. The threat of substitutes is high if it offers an attractive price-performance tradeoff to the industry's product and if the buyer's cost of switching to the substitute is low.

The degree to which rivalry drives down an industry's profit potential depends, first, on the intensity with which companies compete and, second, on the basis on which they compete. High rivalry limits the profitability of an industry. Rivalry is especially destructive to profitability if it gravitates solely to price because price competition transfers profits directly from an industry to its customers.

A summary of the strategies that a firm can take advantage of in response to the 5 forces is highlighted in Table 2.1 (Porter, 2008):

THREAT OF ENTRY	<p><i>Sources of threats of entry are:</i></p> <ul style="list-style-type: none"> • Supply-side economies of scale. Produce larger volumes to enjoy lower costs per unit. • Demand-side benefits of scale. Limit the willingness of customers to buy from a newcomer. • Customer switching costs. The larger the switching costs, the harder it will be for an entrant to gain customers. • Capital requirements. The huge capital requirements limit the pool of likely entrants e.g. Upfront Advertising, Research and Development etc. • Incumbency advantages independent of size. Have cost or quality advantages not available to potential entrants. E.g. Proprietary technology, preferential access to the best raw material, most favorable geographic locations, established brand identities etc. • Unequal access to distribution channels. The more limited the wholesale or retail channels are, the tougher the entry into an industry will be. • Restrictive Government Policy e.g. Limitations of license requirements, restrictions on foreign investment etc.
POWER OF SUPPLIERS	<p><i>A supplier group is powerful if:</i></p> <ul style="list-style-type: none"> • It is more concentrated than the industry it sells to. • The supplier group does not depend heavily on the industry for its revenues. • The industry participants face switching costs in changing suppliers. • Suppliers offer products that are differentiated. • There is no substitute for what the supplier group provides. • If the supplier group can credibly threaten to integrate forward into the industry.
POWER OF BUYERS	<p><i>A customer group has negotiating leverage if:</i></p> <ul style="list-style-type: none"> • There are few buyers, or each one purchases in volumes that are large relative to the size of a single vendor.

	<ul style="list-style-type: none"> • The industry's products are standardized or undifferentiated. • Buyers face few switching costs in changing vendors. • Buyers can credibly threaten to integrate backward and produce the industry's product themselves if vendors are too profitable.
THREATS OF SUBSTITUTES	<p><i>Substitute products that deserve the most attention are those that:</i></p> <ul style="list-style-type: none"> • Compete in price with the industry's products • Are produced by industries earning high profits
RIVALRY AMONG COMPETITORS	<p><i>The intensity of rivalry is greatest if:</i></p> <ul style="list-style-type: none"> • Competitors are numerous or are roughly equal in size and power. • Industry growth is slow. • Exit barriers are high. • Rivals are highly committed to the business and have aspirations for leadership. • Firms lack familiarity with one another, there are diverse approaches to competing, and the goals are different.

Table 2. 1 Summary of Porter Five Forces Strategies

Since the Porters Five Forces Model includes both firm-specific and industry-specific factors that impact firm competitiveness, it will be the theoretical framework used in this research to determine the competitive strategies used by Safaricom to advance M-PESA as well as to analyze the sustainability of the competitive advantages.

2.4.2 Resource Based View Model

The Resource-based View (RBV) of the Firm combines strategic and organizational insights on competitive advantage (Barney, 1991). This theory packages the resources of a firm and views the combination and utilization of the resources which when analyzed give the firm a competitive advantage.

Resources of the firm can include all assets, capabilities, organizational processes, firm attributes, information and knowledge (Barney, 1991). Only certain resources

are capable of being an input to a value creating strategy, which put the organization in a position of competitive advantage.

An organization's resource should have four attributes abbreviated as VRIO to provide the potential for sustainable competitive advantage. Firstly, the resources should be *Valuable*. This means that resources are able to bring value to the firm as a source of competitive advantage. Secondly, the resources should be *Rare* and deliver a unique strategy to provide a competitive advantage to the firm as compared to the competing firms. Thirdly, the resources should be *Imitable* and not easy to copy by the competitors. Fourthly, the firm should consider *Organization* and how well they are prepared to exploit their resources.

For the firm to have sustainable competitive advantage, then the resources should be Valuable, Rare, Imitable and Organized. This is the VRIO framework(Barney, 1991). The inability of competitors to duplicate resource endowments is a central element of the resource-based view.

2.4.3 AVAC analysis Model

The AVAC analysis is a function of the four components: Activities, Value, Appropriability, and Change (AVAC) that estimate the extent to which a new game strategy stands to give a firm a competitive advantage. The analysis determines whether the firm is performing the right activities and if it has what it takes to perform them, whether the customers perceives the value created by the strategy to be unique, whether the firm makes money from the value created, and finally whether the strategy takes advantage of change to create unique value and position itself to appropriate that value (Afuah, 2009).

2.5 Mobile Money Transfer

2.5.1 Introduction of MMT services in Kenya

M-PESA, the first MMT service in Kenya was introduced in 2007 by Safaricom. However, M-PESA was not Safaricom's original idea or strategy. Initially, Vodafone (UK), having been funded by Department of International Development (DFID)

partnered with Safaricom, Faulu Kenya and Commercial Bank of Africa to provide access to financial services for people in East Africa. The solution was to allow members of Faulu Kenya to pay back their loans using the M-PESA service that was developed on the basis of a low-cost International Remittance Service. However, when M-PESA recorded 20,000 subscribers in the first month of the launch, it was realized that a money transfer gap had been filled. (Hughes & Lonie, 2007).

M-PESA, which didn't need an individual to have a bank account, enabled subscribers to use their mobile phones to top up their airtime account or top up someone else's account, pay for goods and services, pay bills, send to and receive money from family and friends, withdraw from an ATM (Automated Teller Machine) or M-PESA agent physical money for their use, and manage their own accounts (Mbogo, 2010).

After M-PESA had been in the Kenyan market for two years, Yu Cash was launched in 2009 by Essar telcom. In November 2010, Orange Telcom followed with the launch of Orange Money and Zain telecom with Zain Zap. Zain Zap was re-launched in 2011 as Airtel Money by Airtel Telcom. Figure 2.3 illustrates the MMT services in Kenya with details like number of subscribers, market share and number of agents as at 2011 (Michaels, 2011).





Company	Mobile subscribers	Mobile market share	Date of mobile money launch	Mobile money subscribers	Mobile money agents
 Safaricom M-Pesa	17.5 Million	69.89%	March 2007	15.5 Million	28,000
 Airtel Money	3.8 Million	15.20%	November 2010 (as Zain Zap) relaunched in August 2011	2.8 Million	8,600
 Orange Money	2.1 Million	6.37%	November 2010	120,000	3,500
 Essar yuCash	1.6 Million	8.50%	December 2009	650,000	5,400

Figure 2. 3 MMT Service Providers in Kenya, 2011

Even after the introduction of other MMT services, M-PESA still had the most mobile subscriber's and the largest market share. They also had a 2.5 year lead in the market. Within this time M-PESA integrated their services with Banks. Banks were able to allow moving money from a bank account to the customers M-PESA account. It is reported, "By early 2011 almost 90 formal financial institutions had integrated their operations with mobile money (primarily M-PESA)..." (Johnson, Brown, & Fouillet, 2012).

2.5.2 M-KESHO, M-SHWARI & Bank Integration

Before the launch of any other MMT service in Kenya, M-PESA had already integrated with almost 90 financial institutions and had worked on a new product by integrating with Equity Bank's Mobile Banking services. On March 18th 2010, M-KESHO was launched by Safaricom and Equity Bank as the world's first bank account on the phone.

Like M-PESA accounts, M-KESHO accounts had no account opening fees, minimum balances or monthly charges. But unlike M-PESA accounts, M-KESHO accounts paid interest, did not have a limit on account balances, and were linked to limited emergency credit and insurance facilities. In addition, Equity's M-KESHO customers were able to transact at any of the retail outlets that accepted M-PESA. Customers could deposit and withdraw money from their M-KESHO account by transferring value to/from their M-PESA account, which they could in turn cash into or cash out from at any M-PESA outlet (Mas, 2010).

By the time Zap and Orange Money were launched, M-PESA was in the market for 2.5 years and had launched M-KESHO. However, the growth rate of M-KESHO was low. A study showed that by May 2010, 6 months after the M-KESHO launch, M-KESHO subscribers had grown to 613,000 and by February 2011 they grew by only 30% to 799,532. The same study indicated some reasons for the decline in growth as lack of awareness on the availability of M-KESHO services and requirement of registering for the service at an Equity Bank branch (Gakure, Anene, Arimi, Mutulu, & Kiara, 2013). Additionally, it was reported that lack of a clear

agreement between the Safaricom and Equity Bank had hindered growth of the M-KESHO (Ngigi, 2012).

With the success of M-KESHO looking grim, M-PESA launched another mobile bank account service. M-SHWARI, was launched by Safaricom and Commercial Bank of Africa (CBA) on November 27th 2012. M-SHWARI was introduced as a virtual banking platform, accessible by Safaricom's subscribers under its M-PESA service menu. Within a month, 3 million M-PESA subscribers had already subscribed to M-SHWARI and over Kshs. 1 billion was saved over Kshs. 140 million accessed as loans. The target market for both CBA and Safaricom was the 12 million Kenyans identified by the Central Bank of Kenya and the Kenya Bureau of Statistics as unbanked who were circulating Sh300 billion outside the formal banking system (Juma, 2012).

The difference between M-KESHO and M-SHWARI is that M-SHWARI accounts were not full-fledged bank accounts. They had the same transactional and balance limitations as M-PESA. M-KESHO, in contrast, was a full bank account with higher transactional ability that allowed headroom in their M-PESA account by letting them pull and push money from the capped M-PESA account to the unlimited M-KESHO account. Therefore, M-SHWARI appeared to be a more limited, though cheaper, version of M-KESHO (Mas & Omwansa, 2010).

2.5.3 Growth of M-PESA

Before M-PESA was launched in 2007 as a MMT service in Kenya, individuals used parcel transfer services offered by bus companies, money orders & instant money transfer offered by post office (postapay), and bank offered money transfers like Western Union and Moneygram (Mbiti & Weil, 2011).

In September 2008 researchers undertook a survey of 3,000 randomly selected households across Kenya to study the economics of M-PESA. It was reported that about 44 percent of households had at least one member who had used M-PESA at least once. The study also revealed that the average age of users and non-users were the same (about 35 years old), and that the M-PESA users had a larger male gender usage than female gender usage. Men who used M-PESA accounted for 61%. In

addition the report indicated that M-PESA users were more literate than non-users. Of the M-PESA users, 46% completed secondary school and 10% completed a university degree as opposed to the non-users where 37% completed secondary school and 7% completed university degree (Jack & Tavneet, 2011). The statistics from the report show that even though the M-PESA concept was new, it was widely used just a year into the launch.

By 2009, M-PESA's became the most popular money transfer tool as seen in Figure 2.4 (Michaels, 2011).

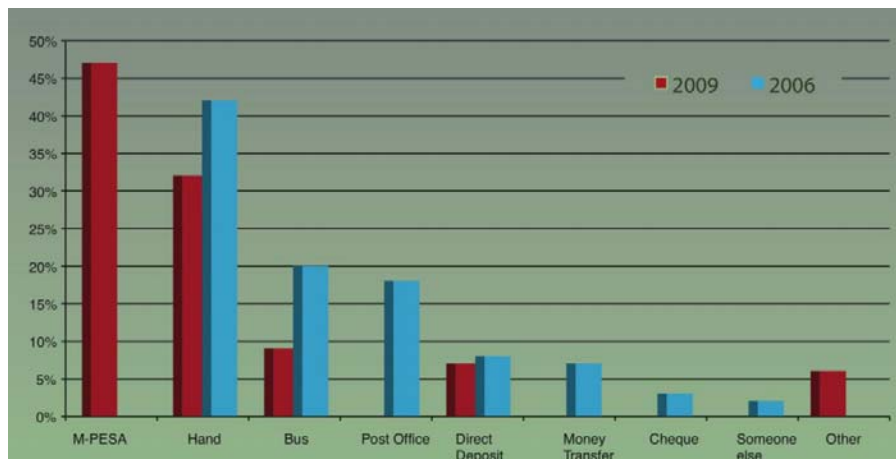


Figure 2. 4 Mobile Money Transfer behaviour before and after M-PESA

M-PESA growth was even reported to be much faster than the growth of formal bank accounts mainly because of the growth of access to mobile phones. For every Kenyan that has access to a bank account, at least two others have had access to a mobile phone. (AFI, 2010).

As of 2011, M-PESA had a network of over 28,000 agents nationwide who offered services to over 14 million individual customers and over 500 businesses in Kenya (Sadana, Mugweru, Murithi, Cracknell, & Wright, 2011). M-PESA's use had increased to organizations as well. Microfinance institutions (MFI) and insurance companies used M-PESA for cash disbursement and repayment; businesses, government and NGOs used it for cash transfers, procurement and salary payments. Merchants used it for purchases. The value proposition for use of M-PESA by organizations focused on a number of benefits, including reduction of cash "leakage"

and corruption; increased operating efficiencies, including less paperwork; better transparency and accountability via the electronic records, and more independence and self-sufficiency for users (Michaels, 2011).

Through the years, even after introduction of other MMT services, M-PESA remained the leader in terms of market share. By May 2013 M-PESA grew in revenue by 30% to 21.8 billion shillings and the number of subscribers grew to 17.1 million (Eric, 2013) and number of agents countrywide grew to 65,547 (Safaricom, 2013). CCK records that at the end of 2013, MMT subscribers grew to 26.0 million subscribers and the number of MMT agents rose to 93,689. M-PESA's market share was 65.76% in terms of subscribers and 69.96% in terms of agency network (CCK, 2013).

M-PESA started out to provide basic money transfer services, and has grown to become the most popular money transfer service that has been duplicated worldwide. With the product innovations of M-KESHO and M-SHWARI as well as M-PESA's integration to bank service, M-PESA has changed the face of banking by providing a banking alternative to the unbanked population (Johnson et al., 2012).

2.5.4 Success of M-PESA

A study on the success of M-PESA reports that M-PESA's success has been attributed to its branding, channel management and pricing (Mas, Ng'weno, & Gates Foundation, 2009). Safaricom built a strong brand for M-PESA by offering a simple message of "send money home" and a massive campaign. To achieve excellent channel management, Safaricom effectively leveraged its extensive network of airtime resellers to build a reliable, consistent agent network that served customers' needs. Then, Safaricom designed a pricing scheme for both customers and stores that provided incentives for both to join M-PESA early on. The pricing tariff structure is transparently posted on the web and at each agent location. These success factors enabled M-PESA to create enough traction with both customers and agencies, building trust and overcoming the adverse network effects that afflict new mobile payments systems.

The same report states other success factors that have contributed to M-PESA's success in Kenya. These factors are: that Kenya has a concentrated mobile market, Kenya has a large market for domestic remittances and Kenya has a large entrepreneurial base of micro entrepreneurs who formed the large agency network.

2.5.5 Future of MMT services

Recent issuance of Mobile Virtual Network Operator (MVNO) license to various companies has introduced new competition to the MMT services provided by the MNOs. Equity Bank is the only bank to have been awarded a MVNO license that allows them to piggyback on Airtel's infrastructure and tap into their existing customer bases to compete in the telecom market. Thus the Equity Bank Mobile Banking customers will be able to access banking services on their phone using their own sim-card branded as Equitel (Masese, 2014).

In addition, Equity Bank offered the Equitel sim-cards operating on prefix 0763 free of charge at the equity bank branches. The NFC-enabled SIM cards are mobile banking and voice service enabled. Equity Bank account holders will access their accounts through mobile handsets and transfer money to customers subscribed to other mobile cash services such as M-PESA, Airtel and Orange Money. A user can also transfer any amount from the Equity Bank account to other commercial bank accounts, pay bills or use it to buy goods and services (Okuttah, 2014b).

The Equitel sim card will destabilize the value proposition for mobile money services. Equitel seeks to make transactions cheaper, introduce the Near Field Communication (NFC) payments using the phone on Point of Sale (POS) terminals, converge financial products on the mobile phone and allow money transfer to all banks in Kenya (Okuttah, 2014b).

There are new opportunities that keep presenting themselves in the Kenyan market where MMT services can be provided. For example, the government of Kenya seeks to make all payments cashless in the transport industry by July 2014 (Otuki, 2013). This presents an opportunity for MMTs to innovatively provide payment solutions to. Players already in the transport cashless payment space offer card solutions like

PesaPrint who launched a card dubbed "metro Card" that is NFC enabled (Okuttah, 2014a).

This study will assess the competitive strategies that M-PESA uses and analyze these strategies for sustainability using the Porters Five Forces model and regression analysis.

2.6 Challenges with MMT services

As it is, M-PESA represents a challenge for bank regulation and supervision because it is being run by a mobile phone operator and not a financial institution (Financial Sector Deepening, 2009). Safaricom is regulated by the Communications Commission of Kenya (CCK) under the Kenya Communications Act (KCA). However, KCA only regulates communications services; it does not address electronic commerce, mobile commerce, or mobile banking (Omwansa, 2009).

Other challenges reported by Infosys in the MMT industry is that there needs to be a strong value proposition to the customers in that the MMT is an extension of a consumer's normal payment modes; for mass adoptions and large scale implementation there needs to be a common technology platform for interoperability purposes; security from hacks; limited phone capabilities to build applications; costs of developing solutions and end user costs; availability of network coverage for large volumes of transactions and a provision of a policy making regulatory framework (Srinivasan & Deshpande, 2010).

Another research on mobile electronic commerce revealed that wireless transaction challenges may include unreachable radio networks; bandwidth restrictions; security in terms of authentication, integrity, confidentiality and message authentication (Tsalgatidou, Veijalainen, & Pitoura, 2000).

IFC studied challenges specifically affecting in M-PESA (IFC, 2009). Three challenges that stood out from the study are:

- i) Suitability of the Platform

It was reported that originally M-PESA would target the unbanked and Vodafone Group build their own service to cater for this. It was costly but successful. The challenge of their own platform is that extending the services takes longer to develop.

ii) Trust in the Service

Although Safaricom has an extremely trusted brand in Kenya, M-PESA was not as trusted. Delays in SMS receipts after a transaction from the ATM on Agent still cause alarm. The study showed that 4.3% of users have reported that their money was transferred to the wrong recipient and only 1/3 of these users have managed to recover these funds. These are however user errors.

iii) Agent Training and Management

It was reported that a major challenge was the agent's inability to maintain float liquidity.

This study seeks to explore other challenges that M-PESA users have.

2.7 Research Gap

An analysis has been done on innovation in the telecommunication industry in India using the VRIO framework. The research shows that as much as the VRIO framework states that for a resource to be rare it should not be shared, firms like Airtel share their infrastructure with other telecom companies in India in order to reduce the cost of operations. Further comparative analysis was done to identify the ways in which Indian firms have pursued strategic and business model innovation. The research focused on how two firms (Bharti Airtel and Micromax) successfully gained competitive advantage through innovative business models. The result was that resource dependency and heterogeneity was the basis of gaining sustainable competitive advantage (Puri, 2007).

Another VRIO based research analyses the interrelationships between RBV and organizational innovation. The research examined those aspects of RBV that critically determine the firm's capacity to innovate by integrating the relevant theoretical and empirical evidence. One of the conclusions from the research was that the relationship between RBV and innovation is bilateral. That is, while RBV

expands knowledge on the factors that determine the firm's capacity to innovate, innovation is the mechanism through which a firm can renew the value of its assets. The mutual beneficial relationship between RBV and innovation helps create and sustain advantage by producing innovative output of increased value, and by establishing new 'stocks' of specific assets that others will find impossible to replicate quickly (Kostopoulos, Spanos, & Prastacos, 2012).

The Financial Sector Deepening (FSD) report (2009) on M-PESA usage in Kenya resulted in findings of who uses M-PESA, how households use it, ways of sending money through M-PESA, reasons for sending money with M-PESA, ways of receiving money through M-PESA, experiences with M-PESA agents, benefits of M-PESA and potential improvements to M-PESA. FSD has done another study that reveals the rift in Kenya's Financial landscape and report that Reliability, convenience, flexibility and Structure are key elements that poor people look at when considering financial services (Johnson et al., 2012).

A study has also been done on the success factors of M-PESA. The study shows how branding, store channel management and pricing has enabled M-PESA to create enough traction with both customers and retail stores, building trust and overcoming the adverse network effects that afflict new mobile payments systems (Mas et al., 2009).

Other research on the MMT services in Kenya has focused on M-PESA's growth. One of the studies by the M-PESA developers focused on the mobile money for the unbanked looking at the introduction and growth of M-PESA as a MMT service (Hughes & Lonie, 2007). The Institute of Economic Affairs (Owiro & Tanui, 2011) studied the state of competition on the MMT service. The study discusses the implications for competition policy in an oligopolistic market structure with one of the players having significant market share, with high barriers to entry and exit and the players operating under two different regulatory regimes.

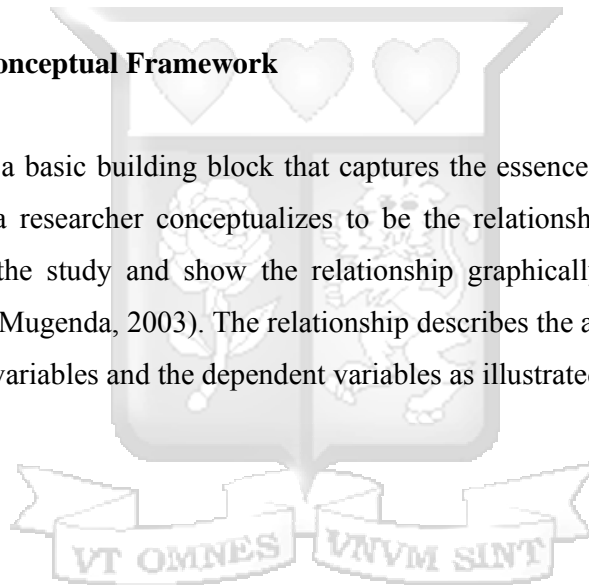
Although some studies have covered success factors and challenges of M-PESA, there has been little emphasis on analyzing the sources of competitive advantage of M-PESA using the Porters Five Forces Model and determining its sustainability.

This paper will therefore seek to fill this gap by re-assessing the sources of competitive advantage used by M-PESA to maintain the largest market share in the telecommunication industry and assessing the sustainability of these competitive advantages using the Porter Five Forces model. In addition, this paper will highlight challenges M-PESA is facing as a MMT.

Competitive strategic responses are fundamentally the same therefore, this study is different in focus by analyzing how M-PESA has responded to competitors in providing MMT services. This research will add to the existing research in this area and stimulate further research on different aspects of responses to competition in various industries and their relation to the organizations performance.

2.8 Conceptual Framework

A concept is a basic building block that captures the essence of a thing. It refers to what extent a researcher conceptualizes to be the relationship between contextual variables in the study and show the relationship graphically or diagrammatically (Mugenda & Mugenda, 2003). The relationship describes the association between the independent variables and the dependent variables as illustrated in Figure 2.5.



Independent variables

Dependent variable

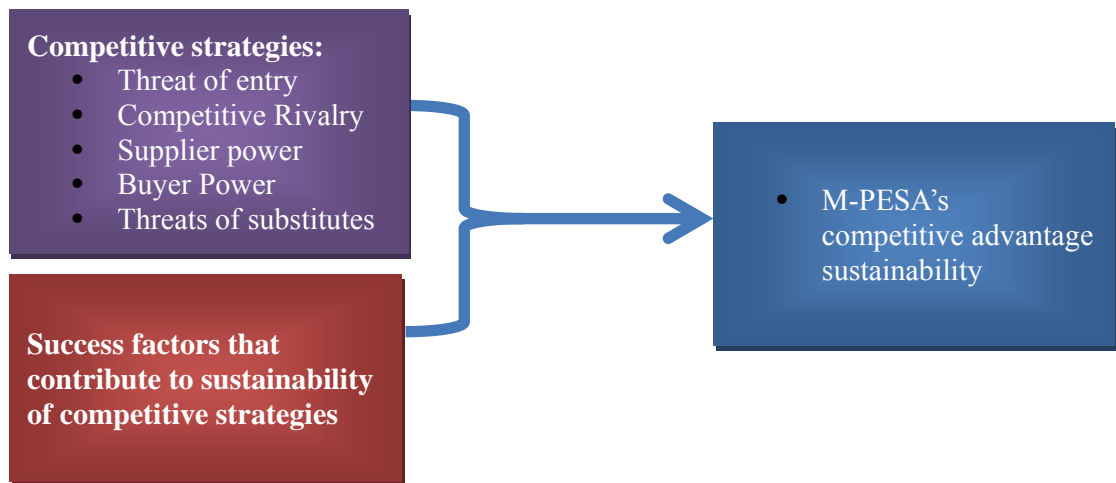


Figure 2. 5 Conceptual Framework

The conceptual framework shows the relationship between the competitive advantage strategies and their effect on sustained leadership of M-PESA in offering MMT services. The conceptual framework has been developed due to lack of an appropriate one that could be adopted from previous studies.

The independent variables are the competitive advantage strategies that M-PESA may have adopted according to the Porter five Forces Model and the success factors that contribute to the sustainability of the competitive strategies which are revealed by the respondents.

The dependent variables in the framework is M-PESA's competitive advantage sustainability measured by the regression analysis of the research results. The analysis will show which success factors stated by the respondents affect M-PESA's competitive advantage sustainability and by what degree.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter highlights the methodology that was adopted in order to meet the objectives of the study. The chapter discusses the research design, population of the study, sample design, data collection instruments and analysis of the data.

3.2 Research Design

The quantitative research design was used to collect data on the what, when, how, where, and why towards validating responses to the competitive strategies used by M-PESA and the challenges faced. Quantitative research design was used because it allows the researcher to familiarize themselves with the problem to be studied, and generate hypotheses to be tested. The mathematical process is the norm for analysing the numeric data and the final result is expressed in statistical terminologies (Golafshani, 2003).

A deductive approach was applied to use data collected to test the research questions. The researcher examined relationships between the variables i.e Porters Five Forces Model and the success factors as per the data collected to deduce the sustainability of the competitive strategies employed by M-PESA.

The research strategy used was the survey strategy. This is because surveys allow collection of standardized data from a sizeable population in an economic way and allowing for easy comparison of data. Also, when sampling is used, it is possible to generate findings that are representative of the whole population as opposed to collecting data for the whole population (Sauders, Lewis, & Thornhill, 2012).

3.3 Population of the study

The target population composed of all the current and prospective customers of M-PESA in Nairobi. As at 2009, the population of Nairobi was estimated at 3.1 million (Omwenga, 2011). The current number of customers who use M-PESA in Nairobi is

approximately 30% to 40% (Johnson et al., 2012). The population was therefore, 930,000 (30% of 3.1 million).

3.4 Sample Design

Due to time and cost constraints, the sample was purposively drawn in the urban areas of the Nairobi County. Nairobi is preferred because it has the highest number of bankable population which is estimated to be 60% of the total bankable population in the country (Johnson et al., 2012).

The sample size was derived from the formula illustrated in Figure 3.1. The sample size was derived by using the confidence level at 90 % (1.65) and using the prevalence of M-PESA subscription in Nairobi at 30%.

$$n = \frac{t^2 \times p(1-p)}{m^2}$$

n=sample size m= margin of error at 5%
 t=confidence level at 90% (1.65)
 P=prevalence of Mpesa in Nairobi (30%)

Table 1

$$240 = \frac{1.65^2 \times 0.3(1-0.3)}{0.05^2}$$

Figure 3. 6 Sample size Formula

At 90% confidence level and margin error of 5%, the population size 930,000 gave a sample size of 240 respondents. The book, Research Methods: Quantitative & Qualitative Approaches indicated that a sample size of 30 and above of the population is sufficient sample size for the study (Mugenda & Mugenda, 2003).

The respondents were being selected through simple random sampling method.

3.5 Data Collection Instruments

The primary data collection tool was directly administered questionnaires. The questionnaire (Appendix 2) was accompanied by a cover letter (Appendix 1). The

structured questions comprised of closed ended questions and one open ended question.

Part A of the questionnaire had structured question to collect general demographic information like gender, age, occupation and salary range. One checkbox was marked as the answer for each question. This information was useful in the final chapter in giving recommendation for the respondents profile used.

Part B of the questionnaire collected M-PESA information from the respondents. This information collected included whether they had M-PESA accounts or other MMT service accounts and what they used M-PESA for. One checkbox was marked as the answer for each question. Part B was used to answer the research questions on why M-PESA seems to have a competitive advantage over other MMTs

Part C of the questionnaire was used to find out how the respondents rated the perceived sources of advantage of M-PESA. A table was used to structure the questions in order to get numerical data by having the perceived sources of competitive advantage of M-PESA on the first column and the next columns having numbers 1-5. The respondents were to shade or select the number that corresponds to their opinion: 1- Strongly Agree, 2 – Agree, 3 – Neutral, 4 – Disagree, 5 – Strongly Disagree. This section was tabulated from answers to question 13 of Part B, “What would you say is the reason M-PESA is preferred”. This section of the questionnaire were used to answer the research questions on why M-PESA seems to have a competitive advantage over other MMTs and how M-PESA has used their sources of competitive advantage to remain sustainable.

Part D of the questionnaire was an open-ended question to answer the challenges that M-PESA faces as an MMT service. An open ended question was selected because the researcher wanted unbiased answers from the respondents that experienced them.

Secondary data was collected from journal articles, reports, other published material from the internet and newspapers. Information from this sources was particularly instrumental in the initial stages of research to explore the research area and clarify the problem.

3.6 Data Analysis and presentation

Data analysis consisted of examining, categorizing, tabulating or otherwise recombining the evidence to address the initial propositions of the study. Upon receipt of all the questionnaires, data analysis was done using a computer program called Statistical Package for Social Sciences (SPSS). Data was analysed by using descriptive statistics. Frequency tables were drawn and from these the data was presented in pie diagrams and bar graphs. The output of the data collected is presented in the form of tables, charts, percentages and frequencies and regression tables. The open-ended question (Part D) was analysed through quantitative content analysis by the researcher with the aim of quantifying a list of challenges as experienced by the respondent.

3.7 Research Quality –reliability, validity, and objectivity of the research

3.7.1 Reliability

Reliability as the degree of consistency with which an instrument measures the attribute it is designed to measure (Golafshani, 2003). Threats that would affect reliability of data are: Participant error, participant bias, researcher error and researcher bias (Sauders et al., 2012). In this study the researcher ensured reliability by standardising conditions in which the respondents would answer the questions.

To reduce participant bias, all respondents were gathered in a room with comfortable chairs and desks and were assured of privacy and confidentiality of the information gathered. Each respondents were handed the same questionnaire each and were requested not to indicate their names on the questionnaire.

Participant error was managed by using a clear and brief questionnaire (Appendix 2) with multiple choice answers that were to be marked. Most questions were closed ended with one main open ended questions. Trained research assistants were on hand to assist on clarifications.

Researcher error and bias were handled by having the trained research assistants enter data in the morning hours when they were fresh. The data entry was done by one research assistant and confirmed by a second research assistant.

3.7.2 Validity

Validity determines whether the research measures that which it was intended to measure. It's the degree to which an instrument measures what it is intended to measure (Golafshani, 2003). Internal Validity would be established where a set of questions would be statistically associated with an analytical factor and external validity would be established if the study's research findings can be generalised to other relevant settings or groups (Sauders et al., 2012).

This study achieved internal validity by including questions in the questionnaire that were directly answering the research questions. Questions were also based on information gathered during the literature review to ensure that they were representative of what respondents know or have experienced with M-PESA.

External validity would be ensured by having willing respondents. From the sample size of 240, 185 (78%) respondents were willing to fill out the questionnaires. The external validity is threatened here by 23% respondents unwilling to fill in the questionnaires.

3.8 Ethical Issues in Research

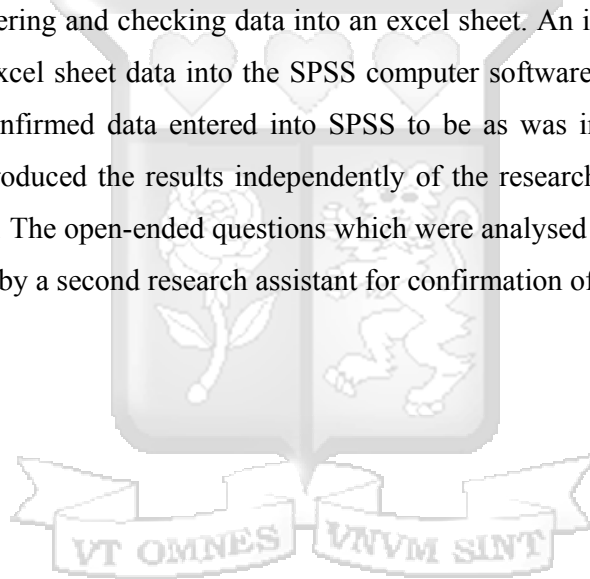
The goal of ethics is to ensure that no one is harmed or suffers adverse consequence from the research activities. Also, that the research requires not only diligence but also integrity.

Given the often sensitive relationships between researcher and respondents, reasonable safeguards were built in this study based on ethical considerations and requirements. The respondents were informed of their rights to voluntarily consent or decline to participate, and to withdraw participation at any time without penalty. They were also informed about the purpose of the study, the procedures that would be used to collect the data, and assured that there were no potential risks or costs

involved. The respondents were not subjected to embarrassment, harm, or any material disadvantage.

Anonymity and confidentiality were maintained throughout the study. Names of respondents were not be used or mentioned in this study. Therefore, the information that the researcher received during the period of this study was treated in confidence and purely for academic purposes.

The researcher tried to avoid any form of dishonesty by recording truthfully the answers of the respondents. Data entry integrity was ensured by a second research assistant. Manipulation of data could not be done since there were two research assistants entering and checking data into an excel sheet. An independent statistician entered the excel sheet data into the SPSS computer software programme. Then the researcher confirmed data entered into SPSS to be as was in the excel sheet. The statistician produced the results independently of the researcher to avoid subjective collaboration. The open-ended questions which were analysed by the researcher were also checked by a second research assistant for confirmation of credibility.



CHAPTER FOUR: DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction

This chapter presents the analysis and findings of the study as set out in the research methodology. The research data was gathered exclusively through questionnaires as the primary research instrument. The questionnaires were designed in line with the research objectives of the study. Each section highlights the results of the each question in the parts of the questionnaire. Demographic information was collected to align the results with the age, gender, and status of the respondents. It was desired that the respondent's representation would be of different ages, both male and female and of varying occupation status and salary earned.

4.2 General Demographic Information

4.2.1 Response Rate

240 respondents were targeted in collecting data. 185 out of the 240 target respondents filled in and returned the questionnaire resulting in a 77.1% response rate. These are shown in Table 4.1 and this response rate was considered acceptable.

Response Rate	Frequency	Percentage
Responded	185	77.1
Not responded	55	22.9
Total	240	100.0

Table 4. 1 Response Rate

4.2.2 Gender of the Respondents

The respondent's gender representation was almost 50-50 as shown in Figure 4.1.

This question was to determine the ratio of women to men in the respondents group.

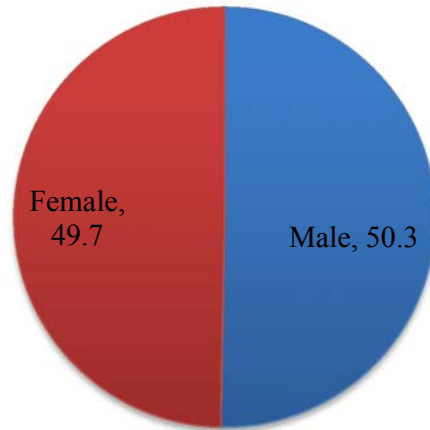


Figure 4. 7 Gender of the Respondents

4.2.3 Age Bracket of the Respondents

The findings in Figure 4.2 indicated that most of the respondents (61.6%) were between 26 and 39 years. However, there was also representation of 18-25 years, 40-60 years and above 60 years.

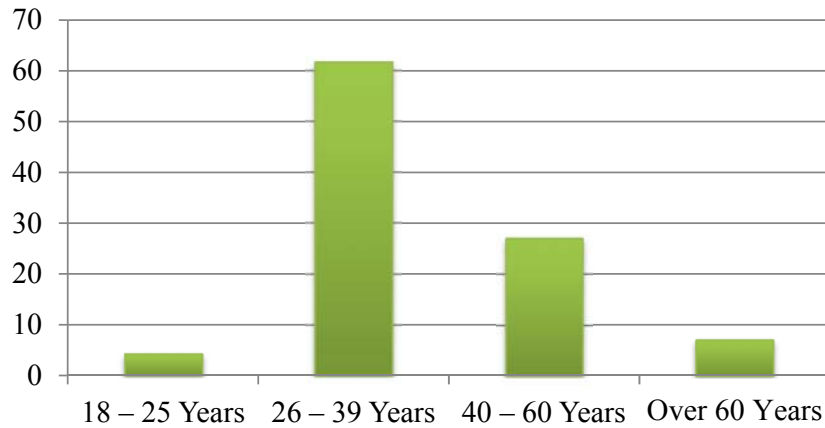


Figure 4. 8 Age Bracket of the Respondents

4.2.4 Respondents Current Occupation

Figure 4.3 showed that majority of the respondents were salaried or employed (40%) then Self-employed (27%) and an equal number of students and those retired (13.5%) and 5.9% looking for work. All categories of occupation sought out in the questionnaire were represented.

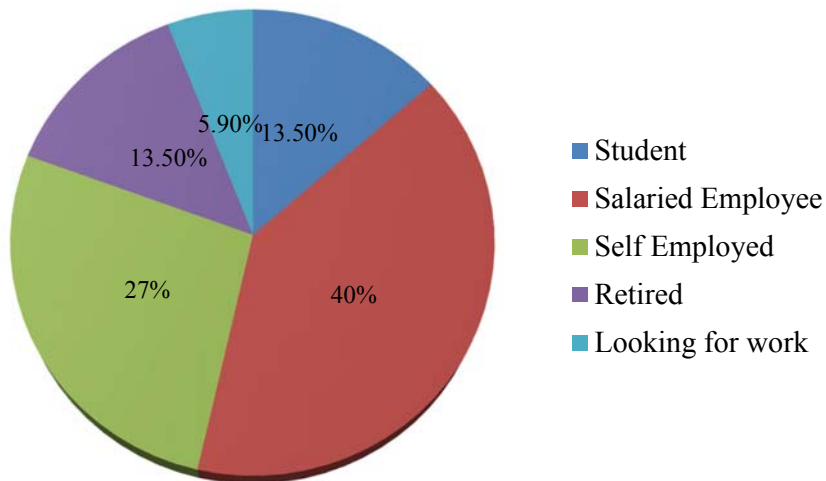


Figure 4. 9 Respondents Current Occupation

4.2.5 Respondents Gross Monthly Income/Salary Range

Although most of the respondents were earned between 30,000- 60,000 Ksh. as gross salary, 36.3% earned below Ksh. 30,000 and 25.4% earned above Ksh. 60,000 as Figure 4.4 illustrated.

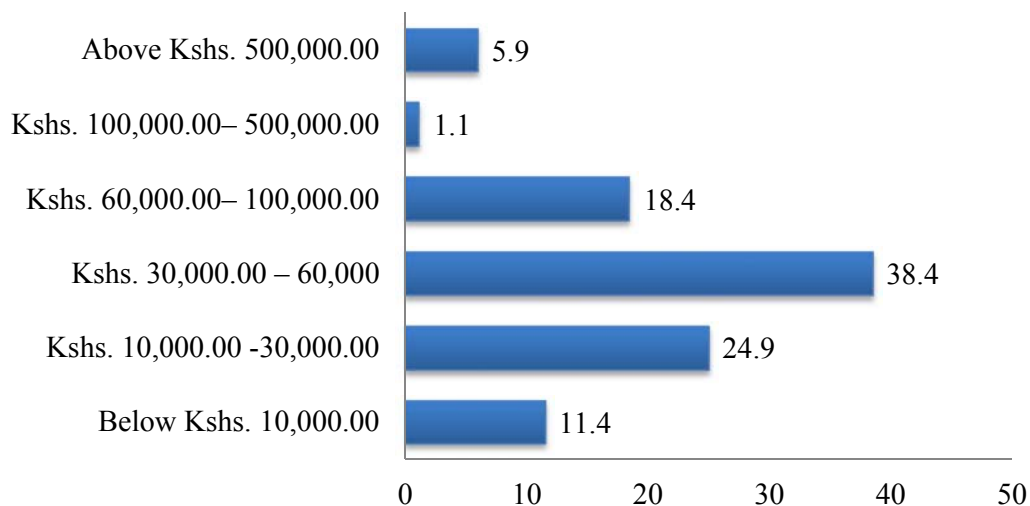


Figure 4. 10 Respondents Gross Monthly Income/Salary Range

4.3 General M-PESA Information

4.3.1 Respondents Ownership of an M-PESA Account

Table 4.2 showed that all but one of the respondents had M-PESA accounts. This is in agreement with FSDT (2009a) data that shows that over one third of adults in Kenya are regular users of mobile phone-based electronic payments system.

Ownership of M-PESA account	Frequency	Percent
Yes	184	99.5
No	1	.5

Total	185	100.0
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Table 4. 2 Respondents Ownership of an M-PESA Account

4.3.2 M-PESA Services Used By Respondent

It was apparent in Figure 4.5 that the most common service used by M-PESA subscribers was money transfer. These findings are in agreement with the Financial Sector Deepening (FSD) report (2009), which records the most important uses of M-PESA is receiving and sending money.

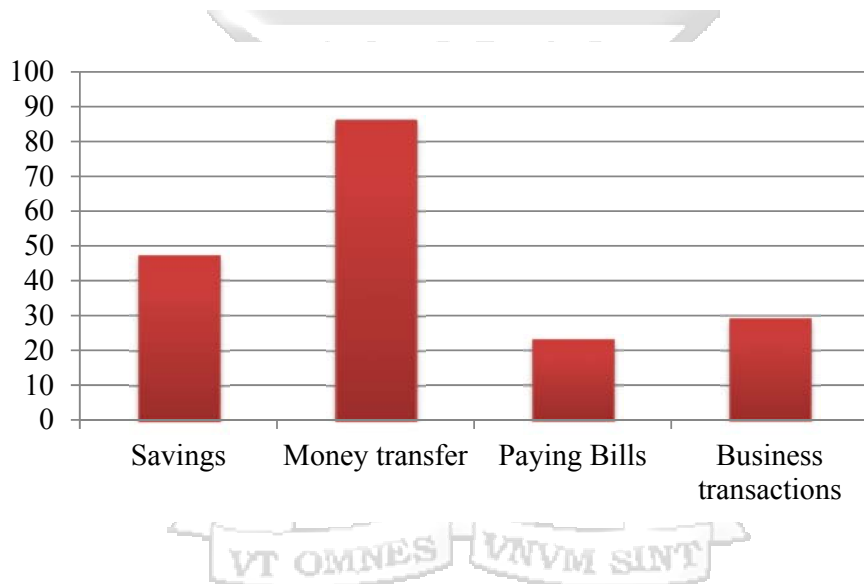


Figure 4. 11 M-PESA Services Used By Respondent

4.3.3 Respondents Length of Time with M-PESA Account

The length of time that the respondent has been with M-PESA was researched to be more than 6 years as seen in Figure 4.6.

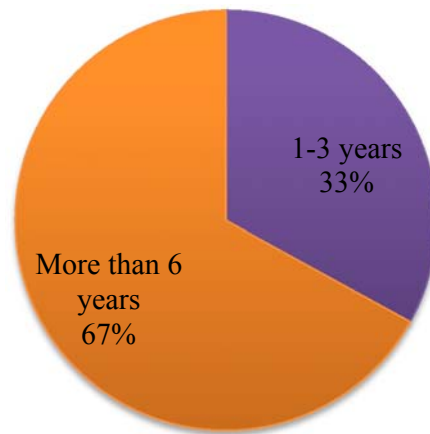


Figure 4. 12 Respondents Length of Time with M-PESA account

This indicates that most of the respondents had had M-PESA accounts since its inception in Kenya. This is in line with statistics that record M-PESA as having 4 million users by November 2008 (Omwansa, 2009).

4.3.4 Frequency of Use of M-PESA Account

It was deduced from Figure 4.7 that most respondents use their M-PESA accounts on a weekly basis (43.8%).

■ Many times a day ■ Daily ■ Weekly ■ Monthly

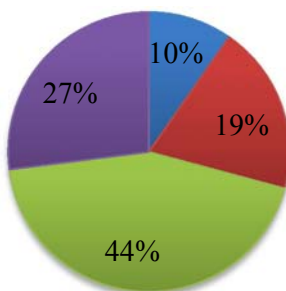


Figure 4. 13 Frequency of Use of M-PESA Account

4.3.5 Respondents Ownership of another Mobile Money Account

It was interesting to report in Table 4.3 that majority of the respondents (79.5%) indicated they had another mobile account. Figure 4.8 illustrates that Airtel Money was held common secondary line. Also, Figure 4.9 shows the uses of the secondary line was mainly money transfer. However, the study found that majority of the respondents hardly used the secondary MMT as seen in Table 4.4.

Ownership of another MMT service	Frequency	Percent
Yes	147	79.5
No	38	20.5
Total	185	100.0

Table 4. 3 Respondents Ownership of another Mobile Money Account

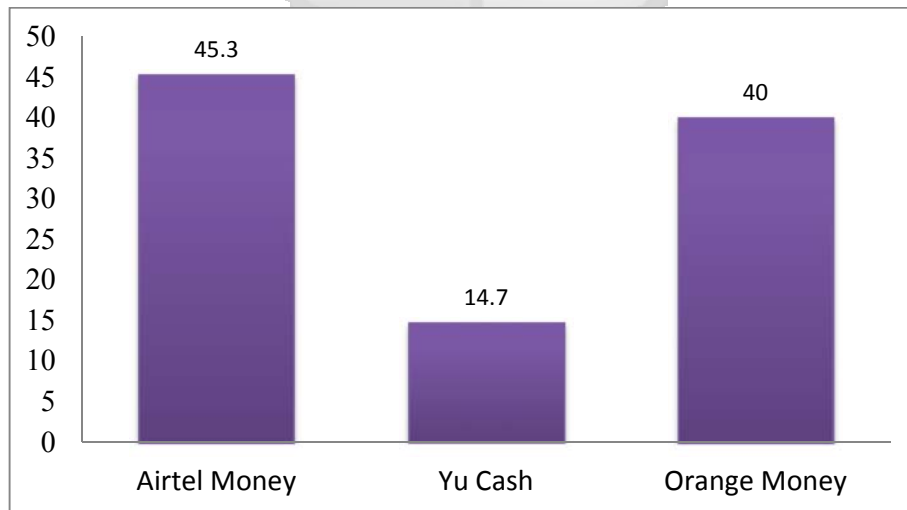


Figure 4. 14 Brand of the Other Mobile Money Account

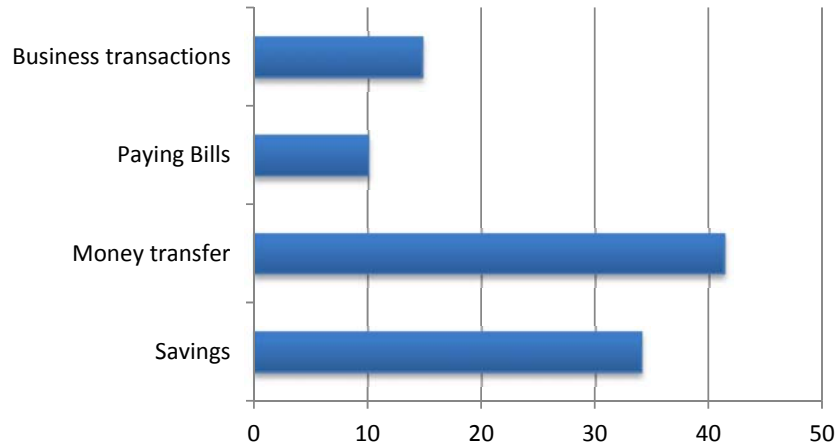


Figure 4. 15 Use of the Other Mobile Money Account

Frequency of using other MMT	Frequency	Percent
Many times a day	11	7.3
Daily	1	.7
Weekly	34	22.7
Monthly	28	18.7
Hardly at all	76	50.7
Total	150	100.0

Table 4. 4 Frequency of Using the Other Mobile Money Account

4.3.6 Preference of M-PESA to any other Mobile Money Account

Generally, M-PESA was the preferred MMT compared to other MMTs as shown in Table 4.5.

Preference of M-PESA	Frequency	Percent
Yes	184	99.5

No	1	.5
Total	185	100.0

Table 4. 5 Preference of M-PESA to any other Mobile Money Account

4.3.7 Reason for preferring M-PESA

Table 4.6 illustrated that the reason for preferring M-PESA was mostly the large agency network followed by ease of use.

Reason for preferring M-PESA	Frequency	Percent
Large Agency network	105	56.8
Those I send money to are on M-PESA	19	10.3
It is easy to use	39	21.1
I can send money internationally	1	.5
It is less expensive	8	4.3
I can move money from my bank to M-PESA	13	7.0
Total	185	100.0

Table 4. 6 Reason For preferring M-PESA

4.3.8 Ownership of an M-KESHO and M-SHWARI Accounts

The study reported that about 50% of the respondents had an M-KESHO account (Figure 4.10) and that all the M-PESA account holders also had an M-SHWARI account (Figure 4.11).

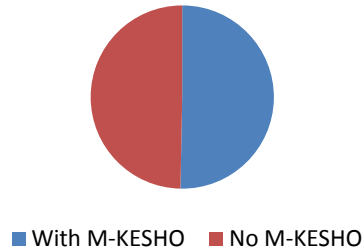


Figure 4. 16 Ownership of an M-KESHO Account

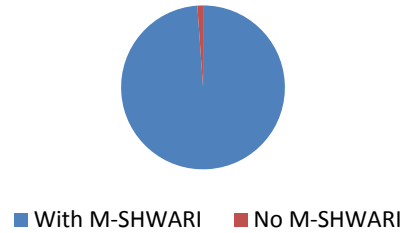


Figure 4. 17 Ownership of an M-SHWARI Account

4.3.9 Services Used With M-KESHO Account

The M-KESHO account was mostly used by the respondents to move money to and from the bank as seen in Table 4.7, even though there were other services available like saving, loans and insurance.

	Frequency	Percent
Savings	18	19.4
Loans	30	32.3
Insurance	5	5.4
Moving money from and to the Bank	40	43.0
Total	93	100.0

Table 4. 7 Use of the M-KESHO Account

4.3.10 Services Used With M-SHWARI Account

As for the M-SHWARI account, the respondents tended to use all the services in approximately equal proportions as shown in Table 4.8.

	Frequency	Percent
Savings	63	34.4

Loans	57	31.1
Moving money from and to the Bank	63	34.4
Total	183	100.0

Table 4. 8 Services Used With M-SHWARI Account



4.4 Perceived Sources of Competitive Advantages of M-PESA

The results of the perceived sources of competitive advantages of M-PESA from the respondents are shown in Table 4.9.

	Strongly agree	Agree	Neutral	Disagree	Strongly agree	Mean	Std deviation
M-PESA allows me to send money to the bank	87	88	10			1.5838	.59414
The price of M-PESA services are relatively lower than that of competitors	54	99	23	7	2	1.9405	.81543
I feel that M-PESA service is of high quality	53	119	7	6		1.8162	.65005
M-PESA are very aggressive in advertising and pushing products to the markets	80	98	2	5		1.6324	.64692
I use M-PESA because of their agency network	95	76	14			1.5622	.63218
I think that M-PESA is more affordable to use	75	95	13	1	1	1.6919	.67340
I find that the Menu of M-PESA is easy to use	76	105	4			1.6108	.53150
Most of the people I send money to are also on M-PESA	135	50				1.2703	.44530
I move money from my bank account to M-PESA	102	80	3			1.4649	.53172
I move money from my M-PESA account to my bank account	62	121	2			1.6757	.49200
I send money to people out of Kenya with M-PESA	51	118	14	1	1	1.8270	.62756
We have poor quality existing alternatives for sending money (postal, buses etc.)	74	98	10	1	2	1.6973	.69567
M-PESA has minimum adoption barriers e.g. free to register, free to deposit, no minimum balances	101	79	5			1.4811	.55258
M-PESA has simple and transparent pricing	97	84	4			1.4973	.54298
M-PESA can be linked directly to customers bank account for easier integration	70	112	1	2		1.6486	.55248

Table 4. 9 Perceived Sources of Competitive Advantages of M-PESA

The findings indicate that main perceived sources of competitive advantage for M-PESA as a MMT service are quality (I feel that M-PESA service is of high quality), large customer base and agency network (Most of the people I send money to are also on M-PESA, I use M-PESA because of their agency network), innovation (M-PESA allows me to send money to the bank, I move money from my bank account to M-PESA, I send money to people out of Kenya with M-PESA, M-PESA can be linked directly to customers bank account for easier integration)

4.5 Regression analysis

Table 4.10 shows in summary the variation in unit variables that will cause changes in Sustainability of competitive advantage strategy through the measure of the R².

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.820 ^a	.672	.643	.29528

Table 4. 10 Model Summary

The adjusted R² is known as coefficient of determination, which tell us the variation in dependent variable due to changes in independent variables, from the above table the adjusted R² was 0.643, which means that there was 64.3% variation in the sustainability of competitive advantage strategy due to changes in success factors and competitive strategies. Before including the margin of error of 0. 29528, the coefficient of determination measures the variation between dependent and independent variables at 0.672.

The R is correlation coefficient which tells us the strength of relationship between the variable. The study found that the correlation coefficient is 0.820 thus there was a positive relationship between Sustainability of competitive advantage strategy and success factors and competitive strategies at a value of 0.820.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.208	.153		1.356	.177
	M-PESA allows me to send money to the bank	.037	.064	-.044	-.568	.571
	The price of M-PESA services are relatively lower than that of competitors	.150	.046	.248	3.265	.001
	I feel that M-PESA service is of high quality	.154	.054	-.203	-2.855	.005
	M-PESA are very aggressive in advertising and pushing products to the markets	.107	.053	.140	2.002	.047
	I use M-PESA because of their agency network	.009	.060	-.011	-.143	.886
	I think that M-PESA is more affordable to use	.114	.066	.156	1.742	.083
	I find that the Menu of M-PESA is easy to use	.039	.051	-.042	-.752	.453
	Most of the people I send money to are also on M-PESA	.064	.071	.057	.899	.370
	I move money from my bank account to M-PESA	.318	.063	.342	5.013	.000
	I move money from my M-PESA account to my bank account	.133	.068	.133	1.962	.051
	I send money to people out of Kenya with M-PESA	.189	.058	.240	3.249	.001
	We have poor quality existing alternatives for sending money (postal, buses etc.)	.024	.040	.034	.604	.547
	M-PESA has minimum adoption barriers e.g. free to register, free to deposit, no minimum balances	.161	.055	-.181	-2.930	.004
	M-PESA has simple and transparent pricing	.200	.061	.220	3.248	.001
	M-PESA can be linked directly to customers bank account for easier integration	.206	.060	-.230	-3.412	.001

a. **Dependent Variable:** Sustainability of competitive advantage strategy

Table 4. 11 Coefficients

From Table 4.11, it was revealed that the success factors (allowing the sending of money to the bank, lower prices compared to the competitors, high quality, large agency network, affordability, easy to use Menu, mass usage, ability to move money from bank account to M-PESA, ability to move money from M-PESA account to my bank account, ability to send money out of the country, poor quality existing alternatives for sending money, minimum adoption barriers, simple and transparent pricing and ability to link directly to customers bank account for easier integration) were at a constant of 0.208.

This means, a unit increase in allowing the sending of money to the bank would lead to increase in Sustainability of competitive advantage strategy by a factor of 0.037, a unit increase in lower prices compared to the competitors would lead to increase in Sustainability of competitive advantage strategy by a factor of 0.150, a unit increase in M-PESA high quality would lead to increase in Sustainability of competitive advantage strategy by a factor of 0.154, a unit increase in high quality would lead to increase in Sustainability of competitive advantage strategy by a factor of 0.107, a unit increase in large agency network would lead to increase in Sustainability of competitive advantage strategy by a factors of 0.009, a unit increase in affordability would lead to increase in Sustainability of competitive advantage strategy by a factors of 0.114, a unit increase in easy to use Menu would lead to increase in Sustainability of competitive advantage strategy by a factors of 0.039, a unit increase in mass usage would lead to increase in Sustainability of competitive advantage strategy by a factors of 0.064, a unit increase in ability to move money from bank account to M-PESA would lead to increase in Sustainability of competitive advantage strategy by a factors of 0.318, a unit increase in ability to move money from M-PESA account to my bank account would lead to increase in Sustainability of competitive advantage strategy by a factors of 0.333, a unit increase in ability to send money out of the country would lead to increase in Sustainability of competitive advantage strategy by a factors of 0.189, a unit increase in poor quality existing alternatives for sending money would lead to increase in Sustainability of competitive advantage strategy by a factors of 0.024, a unit increase in minimum adoption barriers would lead to increase in Sustainability of competitive advantage strategy by a factors of 0.161, a unit increase in simple and transparent pricing would lead to increase in Sustainability of competitive advantage strategy by a

factors of 0.200, a unit increase in ability to link directly to customers bank account for easier integration would led to increase in Sustainability of competitive advantage strategy by a factors of 0.206.

4.6 Porters Five Forces Model Analysis

The threat of entry puts a cap on the profit potential of an industry. MPESA was the first MMT service launched in Kenya in 2007. This made it difficult for competitors to come up with similar service offerings as fast. When competing MMTs were implemented, M-PESA held down their prices and innovated new product offerings like M-KESHO and M-SHWARI so as to deter new competitors. Since M-PESA was first to market and kept on innovating new products, this increases the customer switching costs making it difficult for a new entrant to gain customers. In addition, the capital requirements to begin MMT services is very high. This includes the infrastructure, advertising, innovation, research and development. Therefore, for M-PESA the threat of entry is low.

The supplier power force would determine the organizations inputs. The suppliers in this case would be the agents who depend heavily on M-PESA for revenues. As per the study, many respondents enjoy M-PESA services because of the large agency network. This means that compared to other MMT services, M-PESA agents were more accessible. However, these agents do not essentially create or innovate M-PESA services. They get the service as is provided by Safaricom. The agents provide M-PESA services to customers for a commission fee. Since the suppliers wholly rely on M-PESA to offer services, the supplier power is low.

Consumers of the M-PESA services are in the millions and they all consume the same M-PESA services and have very similar experiences. The study revealed that 99% of the respondents had an M-PESA account and that most of the people money is sent to, are on M-PESA. Therefore these consumers would face switching costs if they decided to move to a competitor MMT service. Since M-PESA already has the majority of consumers in the MMT service industry, the buyer power is low.

There have been substitutes for M-PESA that have not affected its market share like Airtel Money, Orange Money and Yu Cash. M-PESA does not compete on price but on quality and service offering like sending money to the bank and integrating with the bank account as the study reported. It has continuously innovated products that meet its customers' needs like M-KESHO and M-SHWARI. Since the threat of substitutes is low, then the M-PESA profitability has not suffered much as a result of substitute MMT services offered by other telecommunication companies.

The intensity of rivalry among the competing MMT services could be seen as high. However, there are only is low because the number of competitors is low and unequal in size and power. Also, the approaches to competing are similar and the goals for all MMT is similar.

4.7 Challenges M-PESA is facing as an MMT Service

The respondents indicated that most of the challenges they face when using M-PESA were human related. One of the common errors revealed in the study was entering the wrong business (biller) number in the “pay bill” function. The normal transaction flow for paying bills is *Go to M-PESA Menu>Select Lipa na M-PESA>Select Pay Bill> Enter the business number> Enter the account number>Enter the amount> Enter PIN> Confirm transaction and press OK*. Entering the wrong business number leads to transfer of money from their M-PESA account into a different biller’s account instead of their biller they intended to pay. For Example the correct business account for Kenya Power and Lighting prepaid electricity is 888880 and the account number is the prepaid account number. If any of the business number or account number digits are entered incorrectly, then the transaction will be unsuccessful.

Another challenge was entering the wrong account number. This is where money is transferred from the customers M-PESA account to the right financial institution, but then the financial institution’s system is not able to locate the right account, or credits a different account if an account with the number entered by the customer does exist.

Other minor challenges were reported to be from delays in processing transactions. It was noted that respondents could sometimes experience delays in processing M-

PESA payments. Also, it was recorded that transferring money from a bank account through a banking institutions mobile banking platform had many steps and took long to reflect in the respondents M-PESA account because of the “clunky” interface between the back-end integration systems. Also, the M-PESA withdrawals from a bank account was recorded to be challenging as customers have to connect through the institution’s m-banking platform and then transfer to M-PESA. Execution of the withdrawal instruction often takes a long time – as much as a few hours.



CHAPTER FIVE: DISCUSSION

5.1 Introduction

This chapter provides the summary of the findings from chapter four, highlighting work done in this study and comparing it to work done in previous studies.

5.2 Summary of the Findings

The 185 participants in this study had representation of people aged from 18 to over 60 years. The participants were from various walks of life with varied salaries. Both genders were also well represented.

The study sought to answer the three research questions. The first research question was on the main sources of competitive advantage for M-PESA as a MMT service.

A study of the Telecommunication industry in Malaysia using the SERVQUAL model (Loke et al., 2011) and another study on sustainable competitive advantage (Hoffman, 2000) find that the main sources of competitive advantage were high customer satisfaction, innovation and service quality.

After the regression analysis, the findings of this study indicate that main perceived sources of competitive advantage for M-PESA as a MMT service are quality (I feel that M-PESA service is of high quality), large customer base and agency network (Most of the people I send money to are also on M-PESA, I use M-PESA because of their agency network), innovation (M-PESA allows me to send money to the bank, I move money from my bank account to M-PESA, I send money to people out of Kenya with M-PESA, M-PESA can be linked directly to customers bank account for easier integration).

These findings are also similar to ones in previous studies that found that trust was additionally built through the ease of use of M-PESA. This includes, immediate transaction confirmations via SMS, as well as paper and digital bookkeeping (Mas & Morawczynski, 2009), providing a free SIM card compatible with basic mobile phones, making registration free and simple (Hughes & Lonie, 2007), not requiring a minimum balance (Mas, Radcliffe, & Foundation, 2010), and allowing M-PESA

users to send money to non-users who could still redeem it for cash at an agent (Mas et al., 2009).

The second research question was on determining the sustainability of the competitive advantage strategies used by M-PESA using the Porter's Five Forces Model. Studies by the economist attribute MPESA's success to its affordability compared to other methods of sending money, the dominance of Safaricom as a telecommunication company, an effective marketing campaign - "send money home", innovation by extending traditional MMT services to paying bills, disbursing salaries, loans and savings (T.S, 2013).

This study showed that the top five factors that contribute to the sustainability of the competitive advantage of M-PESA from the regression analysis done are: firstly the ability to move money from the bank account to M-PESA account. Secondly, that M-PESA can be linked directly to customer's bank account for easier integration. Thirdly, that M-PESA has simple and transparent pricing. Fourthly, that M-PESA can send money to people out of Kenya. Finally, that M-PESA has minimum adoption barriers e.g. free to register, free to deposit, no minimum balances. The themes were generally around innovation and pricing.

The success factors that emerged in the report can therefore be linked to M-PESA's competitive strategy and its large market share. By 2013, M-PESA had 17.1 million customers and 65,547 agent outlets (Safaricom, 2013). CCK records that at the end of 2013, MMT subscribers grew to 26.0 million subscribers. and the number of MMT agents rose to 93,689 (CCK, 2013). That brings M-PESA's market share to 65.76% in terms of subscribers and 69.96% in terms of agency network.

Therefore, as long as M-PESA keeps the Porter Five Forces low, and enhances or increases its success factors that contribute to the sustainability of the competitive advantages, the market share will continue to be larger than other MMTs and therefore have a sustainable competitive edge over its competitors.

The third research question was to explore the challenges that M-PESA is facing as an MMT service. It was found that most of the challenges were human error related.

Errors like entering the wrong business (biller) number in the “pay bill” function or entering the wrong account number were common.

A system related challenge was delays in processing transactions at Safaricom’s end as well as the financial institution’s end when doing a bank to M-PESA transaction. However, after the study was complete, Safaricom developed an Application Programmable Interface (API) that allowed the financial institutions to be able to transfer money from the bank account to M-PESA through the mobile banking application in a matter of seconds (Mumero, 2014).



CHAPTER SIX: CONCLUSION AND RECOMMENDATIONS

6.1 Conclusions of the Study

Recognizing that companies have develop competitive strategies to give themselves an edge over their competitors, these companies need to sustain the success factors as a long term strategy. In this regard, this study reviewed literature that covered all the three research questions. This information combined with the research findings were used to analyze the sustainability of M-PESA's competitive advantage using the Porters Five Forces Model and regression analysis.

As much as other telecommunication companies came up with MMT services later on, they are yet to catch up to M-PESA's subscription rate (low threat of entry). The respondents also indicate that they have poor quality existing alternatives for sending money (low threats of substitutes). M-PESA has a large agency network that is dependent on M-PESA commission for revenue (low power of suppliers). Also, most of the people respondents send money to are also on M-PESA and the price of M-PESA services are relatively lower than that of competitors (low rivalry among existing competitors). M-PESA service is of high quality, M-PESA has minimum adoption barriers e.g. free to register, free to deposit, no minimum balances and M-PESA has simple and transparent pricing (low power of buyers).

From the regression analysis, the success factors that greatly contribute to the sustainability of M-PESA are: the ability to move money from the bank account to M-PESA account, direct linking to customer's bank account for easier integration, simple and transparent pricing, ability to send money to people out of Kenya and M-PESA's minimum adoption barriers e.g. free to register, free to deposit, no minimum balances.

Therefore, because of its success factors and low Porters Five Forces, M-PESA has a sustainable competitive advantage over competing MMT services in Kenya.

6.2 Recommendations

It is recommended that:

- M-PESA money transfer service should maintain sustainable competitive advantage by keeping the Porter Five Forces low.
- M-PESA and other MMT services should consider new threats like Equity Bank who have been recently awarded a Mobile Virtual Network Operator (MVNO) license that will destabilize the value proposition for mobile money services.
- MMT Services should look into market trends and government regulations. The government of Kenya seeks to make all payments cashless in the transport industry. This is an opportunity for MMTs to tap into by expanding their service offering.

6.3 Suggestions for further research

Further research should be done on the sustainability of the competitive advantage strategies used by M-PESA MMT service to maintain a strong hold on the money transfer service over substitute MMT services with a higher sample size from the various towns in Kenya for a comprehensive generalization of the results.

Other studies should be done to find out whether the competitive strategies that M-PESA has used and its success factors can be replicated for other MMT service companies or other industries.

It is interesting to note how M-PESA success factors have changed from Branding, channel management and pricing at the beginning to present factors that include innovation and pricing. Further research should be done to determine whether the success factors will be constant or keep changing depending on the consumer needs.

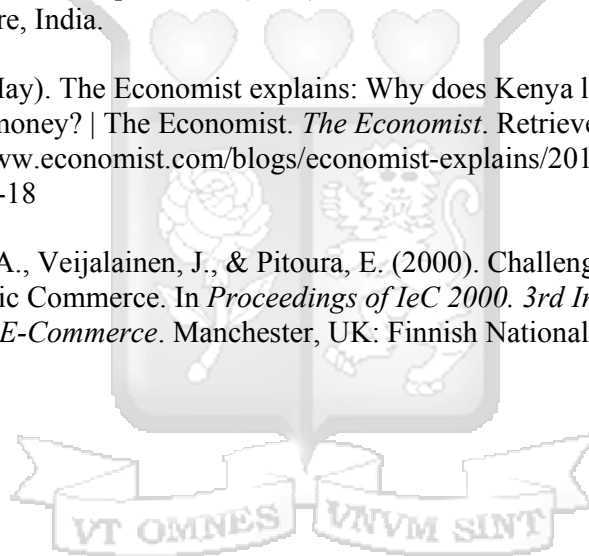
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APPENDICES

Appendix 1: Letter of Introduction

GLADYS KING'ORI
P.O. BOX 9058,
NAIROBI.
geeking7@yahoo.com

October 2013

DEAR SIR/MADAM,

RE: RESEARCH STUDY QUESTIONNAIRE

I am a final year Masters in Business Administration (MBA) Student at the Strathmore Business School. I am conducting an academic Research on the “The sustainability of the competitive advantage strategies of M-PESA”. The research is towards the fulfilment of the degree of Master of Business Administration at the Strathmore Business School.

In this regard, I request your support in filling the attached questionnaire. Your response will be highly appreciated and used for academic purposes only. The information you provide will be confidential and not be distributed to anyone. Your personal information is not required.

Yours Sincerely,

Gladys King'ori.

Appendix 2: Questionnaire

Part A: General Demographic Information

1. Please indicate your gender (Tick one)

Male Female

2. What is your age bracket? (Tick one)

Below 18 Years 18 – 25 Years 26 – 39 Years

40 – 60 Years over 60 Years

3. What is your current occupation? (Tick appropriate)

Student Salaried Employee

Self Employed Retired

Looking for work

4. What is your Gross monthly Income/salary range?

Below Kshs. 10,000.00 Kshs. 10,000.00 -30,000.00

Kshs. 30,000.00 – 60,000 Kshs. 60,000.00– 100,000.00

Kshs. 100,000.00– 500,000.00 Above Kshs. 500,000.00

Part B: General M-PESA information

5. Do you have an M-PESA account? (Tick one)

Yes No

6. If yes, what services do you use the account for? (Tick all appropriate)

Savings Money transfer

Paying Bills Business transactions

Other (Specify) _____

7. How long have you had an M-PESA account? (Tick one)

Less than 1 year 1-3 years

4-5 years 6 years

8. How often do you use the M-PESA account? (Tick one)

Many times a day Daily

Weekly Monthly

Hardly at all

9. Do you have another Mobile Money Account? (Tick one)

Yes No

10. If yes, what other Mobile Money Account do you have? (Tick all appropriate)

Airtel Money Yu Cash

Orange Money

11. If yes, what services do you use the other mobile money account for? (Tick all appropriate)

Savings Money transfer

Paying Bills Business transactions

Other (Specify)_____

12. How often do you use the other mobile money account? (Tick one)

Many times a day Daily

Weekly Monthly

Hardly at all

13. What would you say is the reason M-PESA is preferred? (Tick all appropriate)

Large Agency network Those I send money to are on M-PESA

It is easy to use I can send money internationally

It is less expensive I can move money from my bank to M-PESA

Other (Specify)_____

14. Do you have an M-KESHO account? (Tick one)

Yes No

15. If yes, what services do you use the account for? (Tick all appropriate)

Savings Loans

Insurance Moving money from and to the Bank

Other (Specify)_____

16. Do you have an M-SHWARI account? (Tick one)

Yes No

17. If yes, what services do you use the account for? (Tick all appropriate)

Savings Loans

Moving money from and to the Bank

Other (Specify) _____



Part C: Perceived sources of competitive advantage of M-PESA

19. Tick the most appropriate response for why you prefer using M-PESA

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Competitive Advantage Strategies	①	②	③	④	⑤
M-PESA allows me to send money to the bank	①	②	③	④	⑤
The price of M-PESA services are relatively lower than that of competitors	①	②	③	④	⑤
I feel that M-PESA service is of high quality	①	②	③	④	⑤
M-PESA are very aggressive in advertising and pushing products to the markets	①	②	③	④	⑤
I use M-PESA because of their agency network	①	②	③	④	⑤
I think that M-PESA is more affordable to use	①	②	③	④	⑤
I find that the Menu of M-PESA is easy to use	①	②	③	④	⑤
Most of the people I send money to are also on M-PESA	①	②	③	④	⑤
I move money from my bank account to M-PESA	①	②	③	④	⑤

I move money from my M-PESA account to my bank account	①	②	③	④	⑤
I send money to people out of Kenya with M-PESA	①	②	③	④	⑤
We have poor quality existing alternatives for sending money (postal, buses etc.)	①	②	③	④	⑤
M-PESA has minimum adoption barriers e.g. free to register, free to deposit, no minimum balances	①	②	③	④	⑤
M-PESA has simple and transparent pricing	①	②	③	④	⑤
M-PESA can be linked directly to customers bank account for easier integration	①	②	③	④	⑤

Part D: Challenges faced by M-PESA as a MMT service.

18. Describe the challenges you currently face with M-PESA.
