

**A SURVEY OF FACTORS AFFECTING OPERATION EFFICIENCY OF SMALL
ENTREPRENEURS: THE CASE OF M-PESA OUTLETS IN NAIROBI, KENYA.**

BY

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DECLARATION

I hereby declare that this Masters report is my original work and has not been submitted for a degree in any other Institution.

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DEDICATION

I dedicate this study to the brave businessmen and women who are taking great risks to make ends meet.

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To my family, my wife Betty, my daughters Abigail and Debbie, my siblings and my Mum, I appreciate and I am proud of being related to you all. Every moment with you has this far seen the construction of this proposal smoother and easier. May God bless you for your love and care.

ABSTRACT

The study focused on the factors affecting operation efficiency of small entrepreneurs. The study was based on all M-pesa outlets in Nairobi. The main aim was to investigate the effects of customer experience in operational efficiency of M-Pesa outlets in Nairobi. Other aims were, to find out the effects of cost of transactions on operational efficiency of M-Pesa outlets, to determine the effects of service delivery on the operational efficiency of M-Pesa outlets, to establish the influence of access to capital on operational efficiency of M-Pesa outlets and to investigate the extent to which training and business management skills in M-Pesa outlets affect their operational efficiency.

Causal research design was used for this study and random sampling was used to come up with a sample from the target population consisting of M-Pesa agents operating in Nairobi region. Questionnaires were used to collect the primary data and the final analysis was done using statistical package for social science (SPSS version 17). Frequencies (percentages proportions) and descriptive statistics (the mean, median, percentages and standard deviation) were used to describe data collected.

The findings of this study found that the experience of the customers has led to the improvement of the competitive abilities of the M-Pesa agents and increased value of the services received by the customers. The quality of services of the M-Pesa outlets are high and this has led to effectiveness and efficiency in the processing of the elements and service delivery. The accessibility of capital by the M-Pesa operators increases their profitability. According to the study findings the training and experience of the operators influenced the efficiency of the M-Pesa agents. The findings of this study will go a long way in assisting the government to formulate good policies for the expansion of the small and medium enterprises sector.

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ACRONYMS

DAN	- Development Agency of Nigeria
DEA	- Data Envelopment Analysis (DEA)
DFA	- Distribution Free Approach
DMU's	- Decision Making Unit
FDH	- Free Disposal Hull
ICT	- Information Communication Technology
IS	- Information Systems
IT	- Information Technology,
NEEDS	- National Economic and Empowerment Development Strategy
NERFUND	-National Economic Reconstruction Funds National Poverty Eradication Programme
NGO	- Non Governmental Organization
SFA	-Stochastic Frontier Approach
SME'S	- Small and Medium Enterprises
SMIEIS	- Small and Medium Industry Equities Investment Scheme
SPSS	- Statistical Package for Social Sciences
TFA	- Thick Frontier Approach
US	- United States
USAID	-United States Agency for International Development

CHAPTER ONE: INTRODUCTION

1.1 Background of the study

Small enterprises are becoming a major and a common type of economic way of earning livelihoods for majority of people in developing countries, and Kenya in particular. Small enterprises are businesses that are privately owned and operated, with a small number of employees and relatively low volume of sales. Small businesses are normally privately owned corporations, partnerships, or sole proprietorships.

The enterprises are run by the owner or can be assisted by the family members. These sole proprietors possess a complete overview of their business, from the most insignificant production detail to its position in the marketplace (Mank, 1991). This sector provides a form of self employment to most people in the developing countries. It is estimated that roughly 66 per cent of all workers are employed in this corporate size (Pichler *et al.*, 1996).

The success of this small business depends largely on operational efficiency with which it is run. Operational efficiency is measured by comparing the inputs of an organization with its outputs—for example, the number of clients in an organization has reached with a given amount of resources, as well as the number of loans or Training courses it has provided. Other examples include the number of clients that have received services from the organization, as well as repayment and delinquency rates that the organization has been able to achieve through its monitoring operations (Edgcomb and Cawley, 1993).

Operational efficiency is an important component in performance and sustainability of small and medium enterprises. However, it should be noted that its increased efficiency does not by itself make a contribution to small enterprise development, but only reinforces its impact on the small enterprise sector. Indicators referring to organizational efficiency should explicitly state whether Fixed or indirect costs are included in the calculation.

A small enterprise is said to be operating efficiently when it is generating sales revenue and minimizing costs. This is the point where the sales volumes are increasing at minimal costs. This is a very important realization of small enterprises since they can be sustained for long periods

without collapsing. Small and medium enterprises exhibit a range of operational and development modes which encompass family businesses, start ups and spin-offs. Forms on international partnership include licensing, joint ventures and assorted strategic alliances. However, proper instruments of operational efficiency remain a popular choice and it is a route for small and medium enterprises business expansion around the world (Keating, 1989; Sanghavi, 1998).

Brian Levy (1993) explained that the study of entrepreneurship has relevance today, not only because it helps small business or entrepreneurs better fulfill their personal needs, but also because of the economic contribution of the new ventures. Brian Levy therefore sees SMEs as a positive force in Economic growth and development. He stresses further by summarizing the importance of SMEs to include ensuring rapid development, increased utilization of local resources and provision of a training ground for indigenous managers and semi-skilled workers, reduction of the rural-urban drift, development of indigenous technology and raising the living standard of rural dwellers and so on. In fact, SMEs accounts for the economic development in most developed economies of the World today. It has helped in the balance of payment position of countries; it reduces over dependence on inputs relative to their capital investment. Sequel to the aforementioned benefits, the Federal Government of Nigeria has made several attempts via the introduction of various policies at developing SMEs in Nigeria. Notable amongst these policies are; Small and Medium Enterprises Development Agency of Nigeria (SMEDAN), National Economic Reconstruction Funds (NERFUND), National Poverty Eradication Programme (NAPEP), National Economic and Empowerment Development Strategy (NEEDS), Small and Medium Industry Equities Investment Scheme (SMIEIS) and so on.

1.2 Statement of the problem

The issue of small entrepreneurs in Kenya has been recognized as a key strategy for economic development and poverty reduction in the country and other developing countries. Since their independence, most economies have been promoting the development of small enterprises as a means for economic growth. More recently, due to the increase of unemployment and poverty, there has been a renewed focus on the promotion of small businesses not merely as an engine for growth, but more importantly as the key to job creation and poverty reduction. This persistently

high level of poverty is attributed partly to the jobless growth of economies, and has led to an emphasis on small business development as a catalyst for job creation and poverty reduction.

To date, small entrepreneurs have high failure rates which are enormous for most economies with limited capital and other resources. The combined failure rates for businesses and barriers increases unemployment rates and perpetuate poverty. In the light of the above, it seems necessary to call for a special issue to address the problem surrounding small business development with the hope of encouraging more research on this important subject.

Previous research on small businesses in Kenya includes a study by J.k. Kessio (1981) on problems facing small businesses and the effect of management training on the performance of the proprietors. Mbuvi A.K.N. (1983) studied the causes of failure of small scale African businesses , Ochieng D. E (2008) studied tendering technologies adopted by commercial banks in Kenya to mitigate small and medium enterprises capacity problem. Kimami, R M. (2008) studied response strategies of small and medium audit firms in Nairobi to regulatory changes affecting the audit industry and Mulili B.M. (2000) investigated utilization of promotion mix elements by small business enterprises: the case of Nairobi East-lands area. The previous research on small businesses in Kenya have not dealt with factors affecting operation efficiency of small enterprises. This study therefore intended to find out the factors affecting operation efficiency of small entrepreneurs through a case study of the use of M-Pesa services Kenya.

1.3 Objectives of the study

The research sought to fulfill the following specific objectives.

1. To investigate the effects of customer experience in operational efficiency of M-Pesa outlets in Nairobi.
2. To find out the effects of cost of transactions on operational efficiency of M-Pesa outlets.
3. To determine the effects of service delivery on the operational efficiency of M-Pesa outlets.
4. To establish the influence of access to capital on operational efficiency of M-Pesa outlets.

5. To investigate the extent to which training and business management skills in M-Pesa outlets affect their operational efficiency.

1.4 Research questions

This research sought to answer the following research questions.

1. How does customer experience affect operational efficiency of M-Pesa outlets?
2. To what extent does the cost of transaction of M-Pesa outlets affect their operational efficiency?
3. How does service delivery in M-Pesa outlets affect their operational efficiency?
4. To what extent does access to capital of M-Pesa operators affect their operational efficiency?
5. How does training and business management skills in M-Pesa outlets affect their operational efficiency?

1.5 Significance of the study

This study will go a long way in assisting the government to formulate good policies for the expansion of the small and medium enterprises sector. This could be created through training the public on the importance of investing in the small enterprises especially for the poor and jobless, support the establishment of accessible credit facilities and institutions which can create pools of loan funds, addressing the challenges facing the sector and possible ways of improving the sector. Hence, Findings of this study will, among other things, provide information to support the government in fulfilling this duty.

To the academicians and researchers, the findings of this study will provide a basis for further research. It will also provide a wealth of knowledge for those pursuing studies in related areas such as poverty reduction, unemployment, economic growth and development, entrepreneurial flair and general investment in the economy.

The members of the public will also find the findings of this study beneficial since they will be able to know the factors that affect the performance of small businesses in Kenya.

1.6 Delimitation of the study.

This study focused on the factors affecting the operational efficiency of the small entrepreneurs. Although the study aims at determining the factors affecting the small enterprise sector in general, the focus was only concentrated on only one type of small businesses: the operations of the M-Pesa outlets in Kenya.

This study was further limited and covered the M-Pesa agents in Nairobi region .This is because Nairobi M-Pesa agents could be used to represent the rest of the agents in Kenya since the business has a lot of similarity in their operations.

1.7 Limitation of the study

This study was directed at establishing the factors affecting the operational efficiency of the small business in Kenya. Owing to the time factor and cost of the study materials the study was concentrated on only one category of these small entrepreneurs i.e M-Pesa outlets. Therefore, the study missed any other useful information from other small entrepreneurs. The scope of this study has some limitation in term of comprehensiveness. This creates a need for further studies to be done the same subject across the board.

1.8 Organisation of the study

Chapter one presents the introduction of the study. The chapter begins with the background of the study which is the followed by statement of the problem, research questions significance of the study, scope and delimitations of the study and a conceptual framework.

The remainder of the study will be organised into four chapters. In chapter two the study will present literature and the research gap. Chapter three will present a breakdown for the collection, measurement and analysis of data. Chapter four of the study will introduce the study findings while chapter five will present discussion, conclusion and recommendations of the study.

1.9 Definition of key terms

Balance score card: The balanced scorecard is a strategic planning and management system that is used extensively in business and industry, government, and nonprofit organizations worldwide to align business activities to the vision and strategy of the organization, improve internal and external communications, and monitor organization performance against strategic goals.

Cost of operation: Operating costs are the recurring expenses which are related to the operation of a business, or to the operation of a device, component, and piece of equipment or facility.

Customer experience: Customer experience is the sum of all experiences a customer has with a supplier of goods or services, over the duration of their relationship with that supplier. Customer experience includes awareness, discovery, attraction, interaction, purchase, use, cultivation and advocacy.

Efficiency theory: Refers to the various parametric and semi-parametric methods of estimating production and cost frontiers.

M-Pesa: M-Pesa is an electronic money transfer service provided by Safaricom (a mobile phone service company in Kenya).

Operational efficiency: Operational efficiency refers to the ability of a small business to increase sales or profits and reduce cost.

Service delivery: Service delivery refers to delivery of services as effectively as possible to the satisfaction and delight of the customer.

Strategy: Strategy is the direction and scope of an organization over the long-term: which achieves advantage for the organization through its configuration of resources within a challenging environment, to meet the needs of markets and to fulfill stakeholder expectations.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter presents both theoretical and empirical literature review in regard to factors affecting operation efficiency of small entrepreneurs. The chapter also presents research gap and summary of literature review.

2.2 Theoretical literature.

2.2.1 Efficiency theory.

Efficiency theory refers to the various parametric and semi-parametric methods of estimating production and cost frontiers, which include Data Envelopment Analysis (DEA) with its diverse applications in management science and operations research (Sengupta, 2003). In measuring the efficiency of a firm, the focus is primarily on its inputs and outputs. There are a number of methods to do that. They can be divided into three main categories: ratio indicators, parametric and nonparametric methods (Bai & Dai, 2006; Vincová, 2005).

Ratio of outputs to inputs: With the consideration of different inputs of resources, such as labor, capital, material, and energy, many ratio indicators can be built. But they are just partial indicators and cannot reflect the overall corporate efficiency. In recent years, more appropriate measures for comprehensive ratio indicators are developed (Hannula, 2002). But it is difficult to give objective conclusions because of the coexistence of several evaluations (Braglia, Zaroni, & Zavanella, 2003).

Nonparametric methods: These include Data Envelopment Analyses (DEA) and Free Disposal Hull (FDH), do not need to define specific production function or to estimate parameters. They are used to measure technical (technological) efficiency, looking at the level of inputs or output. Being technically efficient means to minimize inputs at a given level of outputs, or maximize outputs at a given level of inputs. DEA is a linear programming model, which is used to measure relative efficiency of Decision Making Unit (DMUs) with multiple inputs and outputs. Efficient firms are those that produce on the best-practice frontier as compared with other firms in the test group. That means that efficient firms produce a certain amount of or more outputs while spending a given amount of inputs, or use the same amount of or less input to produce a given amount of outputs. FDH is another nonparametric and non-stochastic method, which can be

regarded as a generalized DEA model with variable returns to scale. This particular model does not require the estimated efficiency boundary to have a convex shape (Mortimer, 2002; Vincová, 2005).

DEA develops and generalizes the new efficiency theory by highlighting the interface between economic theory and operations research. Some of the outstanding features of this monograph are: integrating the theory of firm efficiency and industry equilibrium, emphasizing growth efficiency in a dynamic setting, incorporating uncertainty of market demand and prices, and the implications of group efficiency by sharing investments. Applications discuss in some detail the growth and decline of the US computer industry, and the relative performance of mutual fund portfolios.

Numerous applications of this technique have been reported in the previous current literature, e.g., Charnes et al. (1994) surveyed the theory and applications of this field and Sengupta (1995) considered its dynamic and some stochastic extensions. Several reasons may be given for the popularity of this technique, e.g., only the set of observed data on multiple inputs and outputs are needed, with no requirement for data on input and output prices. Secondly, each decision making unit (DMU) compares its performance in relation to the comparison set and determines its efficiency ranking which has a range of zero to 100 percent.

The DEA techniques have been generalized in several directions, e.g., (a) dynamic situations involving capital inputs yielding outputs over several time periods, see e.g., Sengupta (1995), (b) stochastic cases where the distribution of efficiency is analyzed to see the extent of divergence from the mean or median efficiency level, see for example Sengupta (1989), (c) goal programming where the objective function of the DEA model is extended so as to include differential weights on the goals and sub-goals of the manager not previously considered, see e.g., Stewart (1996), and finally (d) the case of allocative efficiencies and assurance regions, which include price information on the inputs and outputs whenever available and also adjoin additional constraints on the virtual multipliers so as to reflect the preferences of the DMU, e.g., Cooper, Thompson and Thrall (1996).

Cost efficiency is an important aspect which needs to be incorporated into the DEA studies for input output efficiency called technical efficiency. Secondly, the overall industry perspective of total effective demand is generally ignored in DEA models, although from a macrodynamic viewpoint cyclical fluctuations in demand tend to influence capacity utilization and hence output

supply to a significant degree. Some firms are able to absorb demand fluctuations much better than others and this has important implications for DEA efficiency across firms.

The post optimality analysis of the ranking of efficiency by DEA models has to be extended in several directions. Two of these new directions arise in production scheduling problems and in output-specific input allocation problems. Production scheduling models determine the optimal levels of inputs and other decision variables such as labor, raw materials and inventories, assuming that the parameters are already estimated. The DEA models may be used to estimate these parameters. Similarly, some inputs may be specific to some outputs, whereas other inputs maybe very general without any specificity, e.g., some machines may be very specialized for some outputs, while others may be common to all mass produced output. The traditional DEA models fail to incorporate these input-output specificity considerations.

Parametric methods: These methods of efficiency measurement include the Stochastic Frontier Approach (SFA), Thick Frontier Approach (TFA) and Distribution Free Approach (DFA). These methods need to define production function according to different assumptions and to estimate parameters (Bai & Dai, 2006). They are used to measure economic efficiency. Economic efficiency is a broader term than technical efficiency, covering an optimal choice of the level and structure of inputs and outputs based on reactions to market prices. Being economically efficient means to choose a certain volume and structure of inputs and outputs in order to minimize cost or maximize profit. Economic efficiency requires both technical efficiency and efficient allocation (Vincová, 2005).

The description above shows that nonparametric methods have advantages in validity and practicality over the other two categories in efficiency measurement for systems with multiple input and output measures. They can handle several dimensions in an integrated and comparative manner but require less data and assumptions than parametric methods.

Therefore, as a basic nonparametric method, DEA are widely used in many industries, including main manufacturing industry and some service sectors, and non-profit organizations (Bai & Dai, 2006; Braglia et al., 2003; Mlima & Hjalmarsson, 2002). It can be used on the firm level or productive units in a company. By adopting the DEA approach for efficiency measurement, it is possible to find out the causes of gaps in inefficient firms so as to suggest new strategies to make improvement and reach efficiency. DEA method is applicable to the telecom industry to help

telecom operators find problem areas and improve efficiency (Lam & Shiu, 2008; Resende, 2008). It is also applied to international comparison study in the telecom field (Taiwan Telecom Bureau, 2003; Tsaia, Chenb, & Tzeng, 2006).

2.3 Empirical literature.

2.3.1 Small Enterprises.

To understand why small and medium enterprises are established, it is important to understand the process of entrepreneurship and the various theories regarding the motivation to create new enterprises. Small businesses are in most cases creations of entrepreneurs. The word entrepreneur originated from French word “entrepredre” which means to undertake. In the business context, it means individuals who undertake the risk of new enterprises. Richard Cantillon a French economist considered an entrepreneur as a risk-taker who bought goods at a certain price to sell at an uncertain price with the aim of making a profit. Menge, on the other hand in Holt (2003) views an entrepreneur as a change agent who transforms resources into useful goods and services creating circumstances leading to industrial growth. He gave the case of grain in the field, which has low value, but when harvested and milled into flour and transformed to bread has a higher value. This is the process of value addition done through food processing and manufacturing.

Austrian Economist Joseph Schumpeter (Schumpeter, 1954) considers innovation as one of the main characteristics of an entrepreneur. According to Schumpeter, innovation can take the form of combination of resources into something new such as new products, new production methods and new forms of organizations. Drucker (1986) observes that all new small businesses have many factors in common but to be entrepreneur an enterprise has to have some special characteristics over and above being new and small. Indeed entrepreneurs are a minority among new businesses. They create something new, something different; they change or transmute values (Holt, 2003).

However, the success of small business would depend on the operational efficiency with which it is operated with. Operational efficiency refers to the ability of a small business to increase sales or profits and reduce cost. The balance score card provides, clear prescription as what a company should measure in order to balance their financial and operation perspective. Gitman (2005) emphasizes on reduction of costs. The financial performance measurements are derived in the

company financial statements (Mann *et al*, 1989). A wide range of literature exists on factors affecting operational efficiency of a business.

In Storey's model, strategy is "action taken by the firm once in business" (Storey, 1994). Market positioning, new product introduction and technological sophistication are the key drivers. Technological sophistication relates to product innovation and does not include management IS. The other two drivers that support growth are a willingness to borrow money to fund it and to devolve decisions to a management team. Both of these reinforce the importance of the owner's attitude towards growth. Churchill and Lewis (1983) identify four firm related success resources: financial, personnel, systems and business (including customer and supplier relations). A key message is the need to plan for systems ahead of the stage of growth for which they are required. They also identify four owner-related factors: business goals, operational skills, managerial ability and strategic abilities.

However, it is not critical for small medium enterprises to use all these skills at all stages. For example, owners' personal skills become less relevant as the firm grows. The importance of financial resources changes with business growth. Scott and Bruce (1987) develop Churchill and Lewis' (1983) model. They identify six factors that influence growth: top management role, style, structure, product and market research, system and controls, and sources of finance. They argue that movement to the next stage is occasioned by a crisis and suggest it is unlikely that firms require formal management.

2.3.2 Factors affecting operation efficiency of small entrepreneurs

Factors affecting operation efficiency of small entrepreneurs include: Customer experience, service delivery, access to business information, capital input/access to finance, managerial training and experience, government policy and regulations and technological change.

2.3.2.1 Customer experience

There is an enormous range of services available from a vast range of organizations, including business-to-business, business-to-consumer, the public sector and voluntary organizations. It is therefore perhaps not surprising that there appears to be no single, agreed and comprehensive definition of what a "service" is (Sampson and Froehle, 2006). Pine and Gilmore (1999)

observed that as services are becoming more commoditized leading-edge companies are competing on experiences. The customer experience is sometimes seen only as an issue for “entertainment” type organizations such as theme parks (Zomerdijk and Voss, 2010).

However, the literature suggests that whatever the service (or indeed product) a customer is buying or receiving, that customer will have an experience; good, bad or indifferent, i.e. a service always comes with an experience (Carbone and Haeckel, 1994) and that all service encounters provide an opportunity for emotional engagement, however mundane the product or service might be (Voss and Zomerdijk, 2007).

Meyer and Schwager, 2007 made the point that the customer experience may provide a new means of competition. Providing a good experience is also important because it affects customer satisfaction (Liljander and Strandvik, 1997), delivers customer loyalty (Mascarenhas *et al.*, 2006), influences expectations (Flanagan *et al.*, 2005), instills confidence (Flanagan *et al.*, 2005), supports the brand (Berry and Carbone, 2007) and also creates emotional bonds with customers or, conversely, leads to emotional scarring (Pullman and Gross, 2004).

A challenge that seems to be emerging from the literature is how can organizations systematically engineer their customer experiences (Carbone and Haeckel, 1994) in order to achieve the “triple bottom line” i.e. to make them not only better for the customer but also better for the organization’s staff and better for its “bottom line” i.e. cheaper and more efficient (Bate and Robert, 2007). To make sense of the existing literature it is helpful to consider two perspectives on service, the service provided from the operation's point-of-view and the service received from the customer's point-of-view (Ding *et al.*, 2010).

The operation uses its input resources, such as labour, materials, information, technologies, equipment, and customers (or something belonging to them), to design, create and enact the service together with the customer (the service process). (This is sometimes referred to as the transformation process, Slack *et al.* (2010) or resource integration, Lusch *et al.* (2007)). From the operation's point-of-view, services are those processes (activities) which are created and enacted by organizations into which the customer provides an input and takes some part (from limited to significant) in the service process itself. Services are therefore “co-created” or “co-produced” along with the customer (Brudney and England, 1983 ;). Value is created for the organization

from the sale of the service for which the customer or some other agency pays (value-in-exchange, Lusch *et al.*, 2007).

From a customer's point-of-view (sometimes referred to as the service-dominant logic perspective, Lusch *et al.* (2007)) value is created for the customer in the service received; their experience of it (value-in-use, Lusch *et al.* (2007)) and the outcomes of the service including the benefits they get from it. While a service is the process or activity, the customer's experience is their personal interpretation of the service process and their interaction and involvement with it during their journey or flow through a series of touch points, and how those things make the customers feel (Ding *et al.*, 2010). The experience and value, Vargo and Lusch, 2004) is perceived purely from the point-of-view of an individual customer and is inherently personal, existing only in the customer's mind. Thus, no two people can have the same experience (Pine and Gilmore, 1998).

Experiencing a service results in the customer feeling emotions (powerful, subjective feelings and associated physiological states, Purves *et al.* (2001)), of which there are many hundreds. The main ones being happiness, surprise, love, fear, anger, shame and sadness, and those feelings may range from, for example, discomfort to depression or warm to intimate or at ease to ecstatic (see for example Goleman, 1996). The benefits the customer gets from using and experiencing the service includes how they perceive they have “profited” or gained from the service provided and their experience of it, i.e. how well their requirements and needs have been met. Another outcome of the service from a customer's point-of-view will be their conscious or unconscious asses to small medium enterprises of the service provided (Zomerdijk and Voss, 2010), the perceived value of the service received and their overall satisfaction or dissatisfaction. These judgments, good, bad or indifferent, will result in intentions, such as the intention to repurchase or not, the intention to recommend it to others, or the intention to complain or not. These intentions may or may not result in action.

The outcomes outlined above are from a customer perspective. There are also important outcomes from the organization's perspective. Organizational outcomes will be concerned with meeting operational and strategic objectives and financial targets for example (Johnston and Clark, 2008).

2.3.2.2 Service delivery.

According to Den Hertog, P. (2000) effective service delivery can be new solutions in the customer interface, new distribution methods, novel application of technology in the service process, innovation in service delivery systems, new forms of operation with the supply chain or new ways to organize and manage services. Many service innovations involve fairly intangible characteristics of the service, and others involve new ways of organizing solutions to problems such as new types of bank account or information service (Mitchell, 2000).

Clients are often highly involved in service production, and changes in the way in which they play their roles and are related to how suppliers can be major innovations for many services. Information technology is especially important to services (Durkin and Bennet, 1999), it allows for greater efficiency and effectiveness in the information-processing elements (Tapp, 2000). According to Patricio *et al.* (2003) “customers will use different service delivery systems” dependent on their assessment of each channel and how it contributes to the “overall service offering”. Hence service satisfaction will not merely be based on isolated service encounters and experiences but rather on the overall feelings of satisfaction (Mitchell, 2000).

Quality of service is one of the main factors that determines the success or failure of a business (Santos, 2003). According to Christopher (2001), quality of a service is a degree to which a service meets its specifications, with emphasis on meeting the customer needs.

In other words, it is the degree to which a service satisfies the need and the expectations of the user. Whereas according to Juran as quoted by Dale (1999), quality of a service is fitness of that service for use. Consumers view quality of a service in terms of certain dimensions. The determinants of service quality include the ability of a service to fulfill consumer needs or problems, ability to use the service without any danger, risk or doubt, ability of a service to be easily accessible to the service users and ability of the service to be offered today and thereafter whenever a consumer needs it (Clark and Johnson, 2000) .

Whereas according to Ronald *et al.*, (1999) sometimes service quality is just perceived, in which the consumer assumes an impression about a service and that the services are judged by their brand names and advertising to mention but a few. The quality issues of automated services are becoming important because of their potential influence on attractiveness, customer retention,

profitability, positive word-of-mouth, and maximum competitive advantages (Moutinho and Smith, 2000). According to Chaudhary (1999), quality service delivery by an organization has the advantage of creating a company reputation. A good company reputation is an asset for the company because every organization has a reputation for quality, be it good or bad.

Quality service delivery increases market share because satisfied customers will buy more and recommend the service to another consumer (Santos, 2003). Improved quality can lead to improved market share and cost saving, which both affect profitability as it improves the reliability, performance, fewer defects and consequently lower costs of business operation (Nguyen and Leblanc, 1998). The alternative delivery channels are the biggest growth drivers for the banks. According to Reichheld and Sasser (1990), migrating customers to alternative delivery channels improves the quality and lowers the cost of service delivery. The banks are getting consumers to use the right channels for the right transactions and interactions (Nguyen and Leblanc, 1998).

Customer satisfaction is based on a recent experience of the product or service. The success of small medium enterprise depends on prior expectations of overall quality compared to the actual performance received. If the recent experience exceeds prior expectations, customer satisfaction is likely to be high (Santos, 2003). In automated banking, quality impacts on the attraction of bank customers and permits banks to cut costs sharply (Mols, 1998). The quality of the automated banking services contributes to the improvement of profitability (Moutinho and Smith, 2000).

Customer satisfaction can also be high even with mediocre performance quality if the customer's expectations are low or if the performance provides value that is, it is priced low to reflect the mediocre quality. Likewise, a customer can be dissatisfied with the service encounter and still perceive the overall quality to be good. This occurs when a quality service is priced very high and the transaction provides little value. Schlesinger, L. and Heskett, J. (1991) pointed out that, customers are said to have a "zone of tolerance" corresponding to a range of service quality between "barely adequate" and "exceptional." A single disappointing experience may not significantly reduce the strength of the business relationship if the customer's overall perception of quality remains high (Sureshchandar *et al.*, 2002), if switching costs are high, if there are few

satisfactory alternatives, if they are committed to the relationship and if there are bonds keeping them in the relationship (Mols, 1998).

Service quality is considered a critical measure of organizational performance (Moutinho and Smith, 2000). It remains the most important issue in both the marketing literature generally, and service marketing literature specifically. It is considered to be an important prerequisite for establishing and maintaining a satisfactory relationship with customers

2.3.2.3 Access to Business Information

Access to business information services has been identified as one area that needs attention from governments and business services providers if the small medium enterprises sector in developing countries is to achieve sustainable levels of growth and development. Many firms in Africa operate in an information-poor environment due to lack of adequate business support services and the poor information technological infrastructure.(Oshikoya & Hussain, 2007). Access to information has however been not given the same attention as other constraints to growth of small medium enterprises like access to finance, markets, technology or training.

Accessing business information services has over the years been greatly enhanced with the emergence of various information and communication technologies. In developed countries, because of well-developed information and communication technologies (ICTs) infrastructure and easy access to computer hardware and software, small medium enterprises enjoy easy access to business information services. In developing economies there are many challenges regarding ICTs infrastructure and the cost of IT hardware and software. This in itself has created many problems in the area of business information services for the small medium enterprises sector. as governments and business service providers try to address the many challenges facing the small medium enterprises sector, it is also important that the present use of ICTs in accessing business information services be identified in order to provide more development support in this area (Levy, 2000).

Lack of sufficient market information poses a great challenge to small enterprises. Despite the vast amount of trade-related information available and the possibility of accessing national and international databases, many small enterprises continue to rely heavily on private or even physical contacts for market related information. This is due to inability to interpret the statistical

data and poor connectivity especially in rural areas. Since there is vast amount of information and only lack of statistical knowledge to interpret and Internet connectivity, small enterprises entrepreneurs need to be supported. With connectivity being enhanced (by connecting Kenya globally through Fiber Optic Cable project) there is renewed hope for the small medium enterprises.

A wide range of activities have been undertaken by business support organisations to improve the information environment of small and medium enterprises so that they are able to respond more readily to market signals (committee of donor agencies, 2001). These include support for attendance at trade fairs and business exhibitions, one-stop information shops, distribution of printed information, and support for learning visits to improve the information flow from business associations. Schleberger (1998) recommended that the scope of business information services should include: information on business trends and markets; information on business organisation; advisory services on legal and regulatory aspects, business management, customer service, business expansion and diversification and technology; identification and communication of business opportunities; providing access to linkages, finance, markets; and facilitation of business partnerships.

Schleberger (1998) further stated that information has to be focused and precise and that it has to be needs based. Information has to be presented in both written and spoken form taking into account that vernacular languages may play an important role and that accessibility must take into account the social networks in which small medium enterprises exist. the development of fully-fledged business information services in many businesses is however hampered by many problems. Kinnell *et al.* (1994) identified some of these problems in a study of marketing business information services to small medium enterprises as: backward computer and communication industries; inadequate information resources and low utilization of them; poor information awareness among the public; immature information markets; and lack of information policies/or the need to adjust and intensify them.

2.3.2.4 Managerial Training and Experience

Many small medium enterprises owners or managers lack managerial training and experience. The typical owner or managers of small businesses develop their own approach to management,

through a process of trial and error. As a result, their management style is likely to be more intuitive than analytical, more concerned with day-to-day operations than long-term issues, and more opportunistic than strategic in its concept (Hill, 1987). Although this attitude is the key strength at the start-up stage of the enterprise because it provides the creativity needed, it may present problems when complex decisions have to be made. A consequence of poor managerial ability is that small medium enterprises owners are ill prepared to face changes in the business environment and to plan appropriate changes in technology.

Majority of those who run small medium enterprises are ordinary lot whose educational background is lacking. Hence they may not well be equipped to carry out managerial routines for their enterprises (King & McGrath, 2002). Management skills relate to the owner/manager and the enterprise. Bennet (1997) defines management as concerned with the deployment of material, human and finance resources with the design of organization structure. Haimann (1977) looks at management as a process of getting tasks accomplished with and through people by guiding and motivating their efforts.

Education and skills are needed to run micro and small enterprises. Research shows that majority of the lot carrying out micro and small enterprises in Kenya are not quite well equipped in terms of education and skills. Studies suggest that those with more education and training are more likely to be successful in the small medium enterprises sector (King & McGrath 2002). As such, for small businesses to do well in Kenya, people need to be well informed in terms of skills and management. Small medium enterprises in ICT appear to be doing well with the sprouting of many commercial colleges offering various computer applications. Further, studies show that most of those running small medium enterprises in this sector have at least attained college level education (Wanjohi & Mugure, 2008).

Management is therefore necessary to enable group or business goals to be accomplished through the functions of planning, staffing, directing, controlling activities, coordination and directing. Personal characteristics of the owner/manager were interpreted by Larson and Clute (1979) as lack of experience among small business managers who happen to be the owners leading to poor performance and consequently to business failure. Bamback and Lawyer (1979)

also identified poor management as the root cause of many failings and poor performance of small business.

Nzioka (1995) in the role of education in business performance notes that one of the things that hold back the development of small – business is the need for better management. Good management means need for proper planning, control, organizing skills and proper staffing with qualified and competent employees.

Harper (1984) observes that the growth of many enterprises of all sizes, suggest that the scarcity of competent managers is a more serious constraint on economic development. As the enterprise becomes larger, the more need for managers to plan, coordinate and control the activities of the enterprise. The owner who is likely to be the manger of the small enterprise may not have the training, skills and experience to steer the operations of the business successfully hence affecting business performance. He/she may operate in a very rigid environment sometimes not dictated by sound business and management decision but by social and cultural norms. The inability to keep proper records, to separate business operations from personal, manage cash flow and growth is likely to affect business performance.

2.3.2.5 Government Policy and Regulations

The Kenya government's policy for industrialization and commerce soon after independence in 1963 was geared towards expansion of overall output focusing on large scale enterprises (Aleke, 2003). According to this policy, the assumption was that only such enterprises could contribute towards growth. It was however much later in the 1970's that it was realized that the large enterprises were not growing fast enough to solve unemployment problems.

Attention was thereafter focused on small enterprises

The government policy before and thereafter has not been very favorable to the small enterprises. Harper (1984) observes that governments that are concerned with the promotion of small enterprises should examine the impact of its policies and programmes on the small businesses, Mann *et. al* (1989) makes similar observation that government regulation about wages, taxation, licensing and others are among the important reasons why informal sector business develops. Without careful attention, government policies could crush the small business sector of any economy.

The national policy and regulatory environment has an important impact on technology decisions at the enterprise level. The structural adjustment programs (SAPs) implemented in many African countries are aimed at removing heavy policy distortions, which have been viewed as detrimental to the growth of the private sector. SAPs tend to severely affect vulnerable groups in the short run and have been associated with the worsening living conditions in many African countries (USAID 1991).

The findings in the study by Wanjohi and Mugure (2008) indicate that business environment is among the key factors that affect the growth of small medium enterprises. Unpredictable government policies coupled with 'grand corruption,' high taxation rates, all continue to pose great threat, not only to the sustainability of small medium enterprises but also to the Kenyan economy that was gaining momentum after decades. It is therefore the government's responsibility to ensure that its policies are helping and not hurting enterprises, creating conditions for the small business to flourish. Licensing, permits and business regulations for instance are major challenges facing small enterprises. Costly permits hamper private sector growth and competitiveness. Some permits and licenses exist for historical reasons while others exist for reasons that are no longer valid.

The Kenya Association of manufacturers makes similar observation and adds that although there has been some effort to streamline licensing, procedures through a single business permit, businesses continue facing difficulties with licensing procedures. The Association continues to observe that the biggest problem facing the private sector especially industry is not about the cost of the licenses but the burden resulting from selective application and implementation by government agents. A good example is given that of the occupation, Health and safety requirements which is not clear and which authorities use subjectively to harass entrepreneurs in order to solicit for bribes.

Harper (1984) also identifies inappropriate standards and legally imposed regulations, which apply to product specification, buildings and environment as some of the other problems facing small entrepreneurs. He notes that such standards are adapted from industrialized countries and for big enterprises hence inappropriate for the small business sector.

Small enterprises sometimes find it easier to operate outside the law because of the cost and cumbersome regulations unsuitable for their operations. Compliance for such regulations is costly and beyond their capacity. Some of the small business operators prefer operating outside the formal system. This according to Kinyanjui (2006) is hindering the small sector growth.

2.3.2.6 Technological Change

Introduction of Information systems (IS) by small medium enterprises provide major opportunities for obtaining added value through exploitation of the information resource. IS are also a major driver of strategic change. There is less evidence of small and medium enterprises (SMES) investing in information systems to capture similar benefits. While many small medium enterprises have taken a reactive approach to investment in IS/IT, primarily focused on cost. Hagmann and McCahon (1993) describe the adoption of IS by small enterprises medium enterprises for strategic competitive advantage. Levy and Powell (2000) report that small medium do in fact align their IS strategy to the strategic context, as defined by the level of customer dominance, to capture both cost advantages and value added benefits.

Change of technology has posed a great challenge to small businesses. Since the mid-1990s there has been a growing concern about the impact of technological change on the work of micro and small enterprises. Even with change in technology, many small business entrepreneurs appear to be unfamiliar with new technologies. Those who seem to be well positioned, they are most often unaware of this technology and if they know, it is not either locally available or not affordable or not situated to local conditions. Foreign firms still remain in the forefront in accessing the new technologies.

In most of the African nations, Kenya inclusive, the challenge of connecting indigenous small enterprises with foreign investors and speeding up technological upgrading still persists. There is digital divide between the rural and urban Kenya. With no power supply in most of the rural areas, it is next to impossible to have Internet connectivity and access to information and networks that are core in any enterprise. Thus technological change, though meant to bring about economic change even among the rural lot, does not appear to answer to the plight of the rural entrepreneurs.

2.3.2.7 Capital Input/Access to Finance

There are various financial challenges that face small enterprises. They include the high cost of credit, high bank charges and fees. The scenario witnessed in Kenya particularly during the climaxing period of the year 2008 testifies the need for credit among the common and low earning entrepreneurs. Numerous money lenders in the name of Pyramid schemes came up, promising hope among the ‘little investors,’ which they can make it to the financial freedom through soft borrowing. The rationale behind turning to these schemes among a good number of entrepreneurs is mainly to seek alternatives and soft credit with low interest rates while making profits. Financial constraint remains a major challenge facing small medium enterprises in Kenya (Wanjohi & Mugure, 2008).

Finding start-up finance for the business is the biggest hurdle that many entrepreneurs go through. Even after getting started, getting sufficient finance to sustain business growth is another problem. Research findings by McCormick et al (1992), Daniels et al (2003) Kinyanjui (2006) show how small medium enterprises are constrained by finance. Studies undertaken by Kiiru, Mirero and Masaviro (1988) for Kenya Rural Enterprise Programme (K-Rep) confirm that a major constraint within the small business enterprise sector is financing.

In the study carried in Nairobi among small manufacturing enterprises, Nyambura (1992) established that finance was rated among the biggest problem. In South Africa Eeden (2004) finance was also cited as one of the most prominent constrains. The problem related to finance includes lack of information on where to source for finance, restrictive lending offered by commercial banks, lack of access to finance, insufficient financing, lack of track record required by the banks, limited access to collateral, and the fact that financial institutions lack appropriate structure for dealing with small medium enterprises.

Insufficient financing is as much a problem as lack of finance as Yankaya a consultant for an NGO Techno-Serve observes (*Daily Nation*, June 20, 2006). He notes that the proliferation of MFI has not substantially improved financing options for growth-oriented enterprises. Group lending and regular weekly interest payments are necessary cures to enable small-scale entrepreneurs without collateral to access credit but the same attributes tie down growth-oriented clients. As a result of scarcity of finance, small enterprises are unable to expand, modernize or

meet urgent orders from customers. The profit Margin are usually little to support growth. Harper (1984) notes that businesses like grain millers and tailors are unable to compete with large manufactures of ready-made goods because they have to wait until a customer provides them with raw material or money to buy it. Some may be unable to get started until a customer pays the deposit, which will be used to buy the raw material.

Capital is therefore necessary for the long-term survival and growth of small enterprises. It should also be noted that more money than required can be much of a problem as less money. More money means high cost for money in terms of interest and may also lead to un-worthwhile investments.

2.4 Research gap

Literature review has presented several factors affecting operation efficiency of small entrepreneurs. The factors discussed include: customer experience (Berry and Carbone, 2007, Bate and Robert, 2007, Mascarenhas et al., 2006, Flanagan et al., 2005, Flanagan et al., 2005, Pullman and Gross, 2004, Liljander and Strandvik, 1997), service delivery (Patricio et al. 2003, Den Hertog, 2000 Mitchell, 2000 Tapp, 2000), access to business information (Levy, 2000 Schleberger,1998) managerial training and experience (King & McGrath, 2002, Wanjohi & Mugure, 2008) government policy and regulations (Aleke, 2003 & Kinyanjui 2006), technological change (Levy & Powell, 2000), capital input/access to finance (Wanjohi & Mugure, 2008, Daniels et al., 2003, Kiiru et al., 1988 and Eeden 2004).

Since its introduction in 2007, M-Pesa has had a rapid growth in terms of technology adoption with reference to number of users and volume of money transferred. The number of customers increased from 52,000 to about 8.6 million between April and November 2009, while person-to-person money transfers per month grew from 1 to 328 million US dollars in the same period (Safaricom, 2009). This is as a very substantial growth especially when one considers that Kenya itself has a population of about 38 million people and a per capital annual income of about US\$486 (Central Bank of Kenya, 2010).

Although there has been an impressive improvement on the upsurge of this very highly technological device related service. None of the previous studies in the reviewed literature has dealt with factors affecting operation efficiency of small enterprises in Kenya. This study

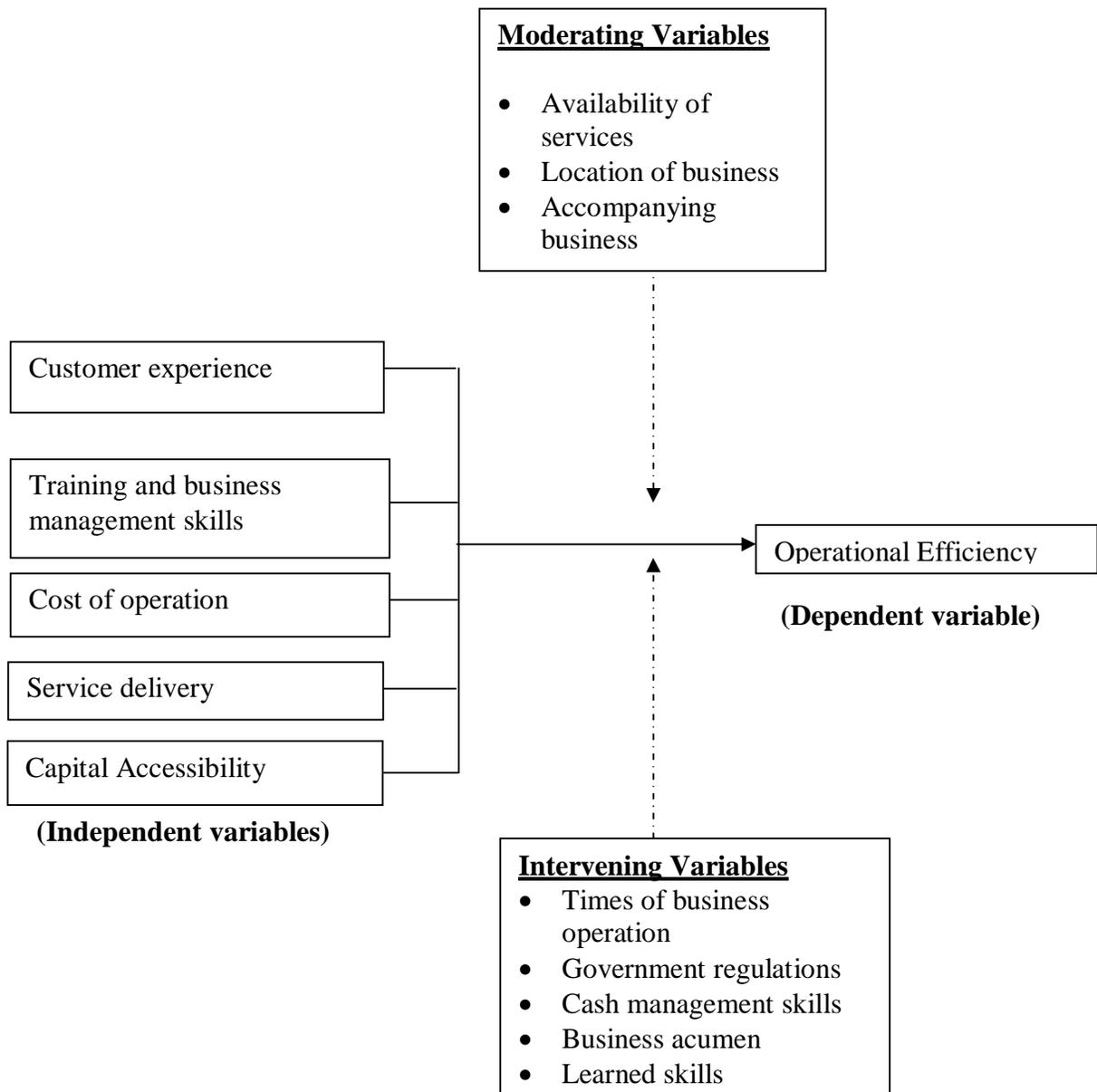
therefore seeks to determine factors affecting operation efficiency of small entrepreneurs with the specific case of M-Pesa outlets in Nairobi, Kenya.

2.5 Conceptual frame work

In this study the focused on factors affecting the operational efficiency of the small enterprises in Kenya, particularly M-Pesa outlets. It is motivated by the need to establish the impact of some variables on the operational efficiency of the enterprises. There is the dependent variable, independent variables, moderating variables and intervening variables.

The conceptual framework outlines the independent, dependent, moderating and intervening variables. The independent variables are customer experience, training and business management skills, cost of operation, service delivery and capital accessibility. The moderating variables are Availability of services, location of business, accompanying business, experience in business and ease of operation while the intervening variables are times of business operation, Government regulations, cash management skills, business acumen, learned skills and buying power of customers

This study will focus on the independent variables that affect operational efficiency, the dependent variable (see the figure below).



2.6 Summary

This chapter has presented literature review on small enterprises particularly in regard to factors affecting operation efficiency of small entrepreneurs. Factors affecting operation efficiency of small entrepreneurs discussed include: Customer experience, service delivery, access to business information, capital input/access to finance, managerial training and experience, government policy and regulations and technological change.

The chapter also presented the research gap deduced from literature review. From the literature reviewed there are no known research on how the operational efficiency of these small entrepreneurs in Kenya is related to customer experience, cost of transaction, and speed of delivery and ease of transaction. This forms the basis of this study.

CHAPTER THREE: RESEARCH METHODOLOGY.

3.1 Introduction

This chapter outlines the methods and procedures that were used by this study to realize the set objectives. It includes the research design that was used, the population targeted; data collection methods used and analysis procedures are also described.

3.2 Research Design

Causal research design was used for this study. Causal research design is a research design which specifies the nature of functional relationship between two or more variables. Causal research is often used to draw conclusions on causation or causality, that is, which variables are the causes (independent variables) and which variables are the consequence or effect (dependent variables) (Kelly, 1999).

3.3 Target population

The target population or the population of this study was the M-Pesa agents operating in Nairobi region. This target population was chosen because Nairobi hosts majority of these small businesses in Kenya which allowed for ease of data collection and involvement of a large population sample.

3.4 Design and sample size

Sampling in this study was done by random sampling. This is because the position of the agents is so large and the data can be collected randomly without producing a biased sample. The M-Pesa agents in different regions in Nairobi were approached to give their own opinions without following any order. The sample size of this study was 2% of the total number of outlets i.e. 25,000 thus 50 elements. Therefore 50 M-Pesa outlets were used for purposes of this study.

3.5 Data Collection

Questionnaires were used to collect the primary data. They included structured (close-ended) and unstructured (open-ended) questions and were administered through drop and pick method to respondents who were M-Pesa agents in Nairobi. The structured questions were used in an effort to conserve time and money as well as to facilitate easier analysis as they are in immediate usable form. The unstructured questions were used to encourage the respondents to give an in-depth response without feeling held back in revealing any information. With unstructured

questions, a respondent's response could give an insight to his feelings, background, hidden motivation, interests and decisions and give as much information as possible without holding back.

3.6 Validity

Mugenda and Mugenda (2003) asserts that, the accuracy of data to be collected largely depends on the data collection instruments in terms of validity. Validity as noted by Robinson (2002) is the degree to which result obtained from the analysis of the data actually represents the phenomenon under study. Validity of this study was ensured by having objective questions included in the questionnaire. This was achieved by pre-testing the instrument to be used to identify and change any ambiguous, awkward, or offensive questions and technique as emphasized by Cooper and Schindler (2003).

3.7 Reliability.

The reliability of the questionnaires was done by pre-testing them through a pilot study and where necessary adjusted before the study to establish the effectiveness of the study. This was done to enhance the reliability and effectiveness of the study. M-Pesa agents were sensitized on the importance of participating in the study and encouraged as the sampling method was voluntary. Split-half reliability way of computing the reliability of a sum scale was used. The sum scale was divided in random manner into two halves. It was expected that the two halves were perfectly correlated (i.e., $r = 1.0$). The researcher then estimated the reliability of the sum scale via the *Spearman-Brown split half* coefficient: i.e. $r_{sb} = 2r_{xy} / (1+r_{xy})$, where r_{sb} is the split-half reliability coefficient, and r_{xy} represents the correlation between the two halves of the scale.

3.8 Data analysis

The final analysis was done using the computer software known as statistical package for social science (SPSS version 17). Frequencies (percentages proportions) and descriptive statistics (the mean, median, percentages and standard deviation) will be used to describe data collected from a sample. The findings were presented in form of tables and pie charts.

CHAPTER FOUR: DATA ANALYSIS AND INTERPRETATION

4.1 Introduction

This study sought to determine factors affecting operation efficiency of small entrepreneurs with the specific case of M-Pesa outlets in Nairobi, Kenya. The study sought to investigate the effects of customer experience, cost of transactions, service delivery, and access to capital, training and business management skills on operational efficiency of M-Pesa outlets. The findings are presented in tables.

4.2 General information.

4.2.1 Gender

The respondents were asked to indicate their gender. The findings are shown in figure 4.1. Gender relates to the constitution and conformity to the organizational regulations.

Table 4. 1 Gender

	Frequency	Valid Percent
Male	35	40
Female	52	60
Totals	87	100

Table 4.1 shows the percentage of males and females who participated in the study. From the findings the majority of the respondents were females who accounted for 60% of the respondents. The rest of the respondents were males who accounted for 40% of the respondents. The observation made was that most of the most men did not operate the M-Pesa enterprises.

4.2.2 Age bracket

The respondents were requested to provide information about their age. The findings are shown in Table 4.2.

Table 4. 2 Age bracket

	Frequency	Percent
Below 20 years	10	11.5
21-30 yrs	63	72.4
31-40 yrs	12	13.8
41-50 yrs	2	2.3
Total	87	100

From the findings in Table 4.2, majority (72.4%) of the respondents were aged between 21-30 years. Followed by 13.8% who were of the age bracket 31-40 years. The findings revealed that 11.5% were below 20 years of age. From the above findings the study deduces that majority of the respondents were aged 21-30 years . People at this age bracket are the youth, and are the majority in the entire country. Many of them are jobless and are seeking for any opportunity.

4.2.3 Level of Education

The respondents were requested to state their level of education. The findings are shown in Table 4.3.

Table 4. 3 Level of Education

	Frequency	Valid Percent
Primary school	5	5.7
Secondary school	31	35.6
Certificate/diploma	47	54.0
University degree	4	4.6
Total	87	100

Table 4.3 shows the findings on the education levels of the respondents. From the findings respondents who had certificates and diplomas accounted for 54.0%. Those who reached secondary level of education accounted for 35.6% of the respondents. 4.6% had degrees and 5.7% had primary school certificates. From the findings the study deduces that majority of the respondents had certificates and diplomas. This is because most of the respondents are middle

income earners and so getting a degree is very expensive. Others are the poor who cannot afford to go to the colleges to get certificates or diplomas and the few with degrees are the rich.

King & McGrath 2002 said “Education and skills are needed to run micro and small enterprises. Research shows that majority of the lot carrying out micro and small enterprises in Kenya are not quite well equipped in terms of education and skills. Studies suggest that those with more education and training are more likely to be successful in the small medium enterprises sector”

4.2.4 Business structure

The study sought information on the structures of the businesses of the respondents. The findings are shown in Table 4.4.

Table 4. 4 Business structure

	Frequency	Valid Percent
Sole trader	68	78.2
Partnership	13	14.9
Private ltd company	6	6.9
Total	87	100

From the findings shown in Table 4.4, majority of the respondents were sole traders (78.2%), those who were in partnership accounted for 14.9% of the respondents. The findings revealed that 6.9% were in private limited companies. From the findings it is clearly evident that most of the respondents were sole traders.

4.2.5 Work duration

The study sought information on their experience of the respondents. This was sought in terms of the years the respondents had worked in the same business. The findings are shown in Table 4.5.

Table 4. 5 Work duration

	Frequency	Valid Percent
Less than 1 yr	28	32.2
1-5 yrs	52	59.8
More than 5 years	7	8.0
Total	87	100

Table 4.5 shows the duration the respondents had worked in the same business. From the findings, majority (59.8%) had a work experience of between 1-5 years. 32.2% confessed to have worked for a period of less than 1 year and 8.0% had worked for more than 5 years. The findings indicate that majority had a work experience of between 1-5 years.

4.3 Factors affecting the operational efficiency of the small and medium entrepreneurs.

4.3.1 Customer Experience

The study obtained information on the extent of influence of some aspects of customer experience on the operational efficiency of their enterprises. The findings are shown in table 4.6.

Table 4. 6 Customer Experience.

	Frequency	Mean	Std. Deviation
There is a wide range of customer services available at the M-Pesa outlets.	87	4.53	0.73
Customer service policies at the M-Pesa outlets have led to customer satisfaction.	87	4.10	0.76
The customer service personnel are efficient in customer service functions.	87	4.23	0.82
Customer service ensures operational efficiency of M-Pesa outlets	87	4.59	3.04
Customer experience has led to improved competitiveness of M-Pesa outlets.	87	4.41	0.66
Customer service at M-Pesa outlets creates value in the service received by the customer	87	4.38	0.58

Table 4.6 shows the ratings of the respondents on the effects of the customer experience attributes on the operational efficiency of the small entrepreneurs. The aspects were analyzed using a likert scale. The scale had a range of 5 units. According to the scale, 1 represented strongly disagree and five 'strongly agree', in the continuum 2 for disagree, 3 for neutral and 4 for agree.

The study used descriptive methods of analysis i.e. mean and standard deviation. For effective analysis, those variables with a mean value close to 4.0 was rated to 'agree', those variables with mean values of close to 3.0 were rated neutral. Mean values below 2.5 were considered to a 'disagree or to 'strongly disagree'. The values of standard deviation were used to indicate the range of dispersion of the responses from the mean values. A greater value of standard deviation indicated wide dispersion.

From the findings shown in table 4.6, Respondents agreed that there was a wide range of customer services available at M-Pesa outlets (M=4.53, SD=0.73). The effect of customer service policies at the outlets influence was agreed as affecting the operational efficiency of the businesses (M=4.1, SD=0.76). The issue of the efficiency of customer service personnel at the M-Pesa outlets was approved by most of the respondents (M=4.23, SD=0.82).

The respondents agreed that customer service affected the operational efficiency of their businesses. (M=4.59, SD=3.04). The findings indicate that improvement in competition of the M-Pesa outlets was caused by the experience of the customers (M=4.41, SD=0.66). The study findings imply that the respondents agreed that value received by customers was created by customer service at M-Pesa outlets (M=4.38, SD=0.58).

Carbone and Haeckel, 1994 said "a customer is buying or receiving, that customer will have an experience; good, bad or indifferent, i.e. a service always comes with an experience and that all service encounters provide an opportunity for emotional engagement, however mundane the product or service might be".

Meyer and Schwager, (2007) made the point that "the customer experience may provide a new means of competition. Providing a good experience is also important because it affects customer satisfaction (Liljander and Strandvik, 1997), delivers customer loyalty (Mascarenhas *et al.*, 2006), influences expectations (Flanagan *et al.*, 2005), instills confidence (Flanagan *et al.*, 2005),

supports the brand (Berry and Carbone, 2007) and also creates emotional bonds with customers or, conversely, leads to emotional scarring (Pullman and Gross, 2004).

4.3.2 Cost of Transactions

The respondents were requested to provide information on effects of cost of transactions on the operational efficiency of the M-Pesa outlets. The findings are given in table 4.7.

Table 4. 7 Cost of transactions

	Frequency	Mean	Deviation
Cost of transactions through M-Pesa has provided a better alternative to the high cost of credit, high bank charges and fees.	87	4.36	0.63
Even after getting started, getting sufficient finance to sustain business growth remains a problem.	87	3.56	0.97
Switching costs between M-Pesa and other money transfer agencies are affordable.	87	4.07	0.89
Affordable costs of transactions at the M-Pesa outlets have increases market share.	87	4.21	0.78
M-Pesa transactions have lead to cost saving and lower costs of business operation	87	4.44	0.69
Migration of customers to alternative money delivery channels provided by M-Pesa has improved the service quality and lowered the cost of service delivery.	87	4.31	0.77
This occurs when a quality service is priced very high and the transaction provides little value	87	4.11	0.96

Table 4.7 shows the responses of the respondents on the influence of aspects of cost on the operational efficiency of the M-Pesa outlets. The aspects were analysed using a likert scale. The scale had a range of 5 units. According to the scale, 1 represented no extent at all and five ‘very great extent’, in the continuum 2 for less extent, 3 for moderate extent and 4 for great extent.

The study used descriptive methods of analysis i.e. mean and standard deviation. For effective analysis, those variables which a mean value close to 4.0 was rated to 'a great extent', those variables with mean values of close to 3.0 were rated moderate extent. Mean values below 2.5 were considered to a 'less extent or to 'no extent at all'. The values of standard deviation were used to indicate the range of dispersion of the responses from the mean values. A greater value of standard deviation indicated wide dispersion.

From the findings of this study, the respondents rated the cheap costs of M-Pesa services as an alternative of the high costs of credit, bank charges and fees to a great extent with a mean of 4.36. The respondents rated the problem of getting sufficient finance as affecting the sustainability of their businesses to a great extent with a mean of 3.56. To a great extent (M=4.07, SD=0.89), the respondents opined that the switching costs between M-Pesa outlets and other money transfer agencies as being affordable. The affordability of the transaction costs of M-Pesa services have greatly (M=4.21, SD=0.78) increased the market share.

The M-Pesa transactions have greatly led to cost savings and low business operations as rated with a mean of 4.44. The diversified channels provided by M-Pesa has greatly (M=4.31, SD=0.77) improved the quality of service and lowered the cost of delivering services as the quality of services provided by M-Pesa were priced at fair levels when compared to the value of the transaction.

The respondents rated the problem of getting sufficient finance as affecting the sustainability of their businesses and that the switching costs between M-Pesa outlets and other money transfer agencies as being affordable. Mann *et. al* (1989) observes that regulation about wages; taxation, licensing and others are among the important reasons why informal sector business develops.

4.3.3 Service Delivery

The respondents provided information on the extent of effect of service delivery aspects on the operational efficiency of M-Pesa outlets. The findings are shown in table 4.8.

Table 4. 8 Service Delivery

	Frequency	Mean	Std. Deviation
Services delivered at the M-Pesa outlets are of high quality.	87	4.48	0.63
Effective service delivery can be new solutions in the customer interface	87	4.24	0.75
Information technology has led to greater efficiency and effectiveness in the information-processing elements and service delivery process at the M-Pesa outlets.	87	4.63	0.63
Customers' needs such as privacy, ability to use the service without any danger, risk or doubt are catered for during service delivery at the M-Pesa outlets.	87	4.44	0.84
Services are easily accessible to the customers and are always available when customers need them.	87	4.36	0.78
The use of automated services at the M-Pesa outlets has resulted in improved brand image, customer retention, profitability, competitive advantage.	87	4.39	0.78

Table 4.8 shows the ratings of the respondents on the extent of influence of ser delivery on the operational efficiency of the M-Pesa outlets. The aspects were analysed using a likert scale. The scale had a range of 5 units. According to the scale, 1 represented no extent at all and five 'very great extent', in the continuum 2 for less extent, 3 for moderate extent and 4 for great extent.

The study used descriptive methods of analysis i.e mean and standard deviation. For effective analysis, those variables which a mean value close to 4.0 was rated to 'a great extent', those variables with mean values of close to 3.0 were rated moderate extent. Mean values below 2.5 were considered to a 'less extent or to 'no extent at all'. The values of standard deviation were used to indicate the range of dispersion of the responses from the mean values. A greater value of standard deviation indicated wide dispersion.

From the findings, the respondents rated the quality of services at the M-Pesa outlets to a great extent (M=4.48). They indicated the effectiveness of service delivery as a new solution in the customer interface to a great extent with a mean of 4.24. The extent to which information technology has led to efficiency and effectiveness in the processing of elements and service delivery was rated to great extent with a mean of 4.63. The respondents rated the extent of level of privacy and reduced risk to a great extent with a mean of 4.44. The respondents rated the extent to which services were made easily accessible to the customers and availability when needed to great extent (4.36). On the extent to which use of automated services at the M-Pesa outlets had improved brand image, customer retention and profitability was rated to a great extent with a mean of 4.39.

Den Hertog, P. (2000) said that “effective service delivery can be new solutions in the customer interface, new distribution methods, and novel application of technology in the service process, innovation in service delivery systems, new forms of operation with the supply chain or new ways to organize and manage services. Many service innovations involve fairly intangible characteristics of the service, and others involve new ways of organizing solutions to problems such as new types of bank account or information service”.

Clients are often highly involved in service production, and changes in the way in which they play their roles and are related to how suppliers can be major innovations for many services. Durkin and Bennet,(1999) said that “Information technology is especially important to services, it allows for greater efficiency and effectiveness in the information-processing elements. Patricio *et al.* (2003) said that “customers will use different service delivery systems” dependent on their assessment of each channel and how it contributes to the “overall service offering”. Hence service satisfaction will not merely be based on isolated service encounters and experiences but rather on the overall feelings of satisfaction.

4.3.4 Access to Capital

The respondents provided information on the level of approval and disapproval with aspects of capital. The findings are shown in table 4.9.

Table 4. 9 Access to Capital

	Frequency	Mean	Std. Deviation
Assure that the company is capable of carrying out its functions	87	4.32	0.56
Receives adequate cash flows for meeting the short-term obligations	87	3.70	0.75
Receives adequate cash flows for meeting future functional costs	87	3.71	0.83
capital management techniques such as Intersection of carrying, cost and shortage cost	87	3.67	0.91

Table 4.9 shows the responses on the influence of access to capital on the operational efficiency of the M-Pesa outlets. The aspects were analyzed using a likert scale. The scale had a range of 5 units. According to the scale, 1 represented strongly disagree and five ‘strongly agree’, in the continuum 2 for disagree, 3 for neutral and 4 for agree.

The study used descriptive methods of analysis i.e mean and standard deviation. For effective analysis, those variables which a mean value close to 4.0 was rated to ‘agree’, those variables with mean values of close to 3.0 were rated neutral. Mean values below 2.5 were considered to a ‘disagree or strongly disagree’. The values of standard deviation were used to indicate the range of dispersion of the responses from the mean values. A greater value of standard deviation indicated wide dispersion.

From the findings, the respondents agreed that access to capital assured the company capability to carry out its functions (M=4.32). The accessibility of capital was agreed as being adequate to facilitate cash flows for meeting the short term obligations (M=3.7). The findings revealed that capital was adequate to meet future functional costs of the M-Pesa outlets as rated with a mean

of 3.71. The respondents agreed that the services had good management of capital techniques such as intersection of carrying, costs and shortage (M=3.67, SD=0.91)

In the study carried in Nairobi among small manufacturing enterprises, Nyambura (1992) said that “finance is rated among the biggest problem”. In South Africa Eeden (2004) said that “finance is cited as one of the most prominent constrains. The problem related to finance includes lack of information on where to source for finance, restrictive lending offered by commercial banks, lack of access to finance, insufficient financing, lack of track record required by the banks, limited access to collateral, and the fact that financial institutions lack appropriate structure for dealing with small medium enterprises”

Harper (1984) said “businesses like grain millers and tailors are unable to compete with large manufactures of ready-made goods because they have to wait until a customer provides them with raw material or money to buy it. Some may be unable to get started until a customer pays the deposit, which will be used to buy the raw material” Capital is therefore necessary for the long-term survival and growth of small enterprises. It should also be noted that more money than required can be much of a problem as less money. More money means high cost for money in terms of interest and may also lead to un-worthwhile investments.

4.2.4.1 Financial Resource Management Indicators

The respondent indicated the extent to which access to capital had brought about financial improvement in the company along the listed indicators. The findings are shown in table 4.10.

Table 4. 10 Financial Resource Management Indicators

	Frequency	Mean	Std. Deviation
Improved profitability	87	3.14	1.08
Easy expansion of markets for M-Pesa services	87	3.26	1.12
Higher Rate of Return	87	3.34	1.00
Increased sales	87	3.37	1.04
Low cost of operation	87	3.15	1.09

Table 4.10 shows the extent to which access to capital had improved some financial indicators in the company. The aspects were analyzed using a likert scale. The scale had a range of 5 units.

According to the scale, 1 represented no extent at all and five 'very great extent', in the continuum 2 for less extent, 3 for moderate extent and 4 for great extent.

The study used descriptive methods of analysis i.e. mean and standard deviation. For effective analysis, those variables which a mean value close to 4.0 was rated to 'a great extent', those variables with mean values of close to 3.0 were rated moderate extent. Mean values below 2.5 were considered to a 'less extent or to 'no extent at all'. The values of standard deviation were used to indicate the range of dispersion of the responses from the mean values. A greater value of standard deviation indicated wide dispersion.

The findings of the study indicated that most of the respondents rated the effect of access to capital as having improved profitability to a moderate extent ($M=3.14$, $SD=1.08$). The extent to which access to capital had expanded markets for M-Pesa was rated to a moderate extent with a mean of 3.26.

From the findings access to capital had increased the rate of return, volume of sales and cost of operation to a moderate extent they were rated with mean values of 3.34, 3.37 and 3.15 respectively. Finding start-up finance for the business is the biggest hurdle that many entrepreneurs go through. Even after getting started, getting sufficient finance to sustain business growth is another problem.

Insufficient financing is as much a problem as lack of finance as Yankaya a consultant for an NGO Techno-Serve observes (*Daily Nation*, June 20, 2006). He said" the proliferation of MFI has not substantially improved financing options for growth-oriented enterprises. Group lending and regular weekly interest payments are necessary cures to enable small-scale entrepreneurs without collateral to access credit but the same attributes tie down growth-oriented clients. As a result of scarcity of finance, small enterprises are unable to expand, modernize or meet urgent orders from customers. The profit Margin are usually little to support growth"

4.3.5 Training and Business Management Skills.

The respondents provided information on training and business management skills and operational efficiency at the M-Pesa outlets. The findings are shown in figure 4.11

Table 4. 11 Training and business management skills

	Frequency	Mean	Std. Deviation
The personnel at M-Pesa outlets are well trained and skilled in handling customers.	87	4.61	0.58
There is sufficient deployment of material, human and finance resources at the M-Pesa outlets.	87	4.33	0.62
Continuous education and training is conducted to improve service delivery at the M-Pesa outlets.	87	4.10	0.90
Managerial functions such planning, staffing, directing, controlling activities, coordination and directing are effectively carried out at the M-Pesa outlets.	87	4.02	0.76
Poor management as the root cause of many failings and poor performance of small business.	87	4.07	1.00
Training and business management skills have improved operational efficiency at the M-Pesa outlets.	87	4.29	0.68

Table 4.11 shows the responses on the effect of training and management skills to the operational efficiency of M-Pesa outlets. The aspects were analyzed using a likert scale. The scale had a range of 5 units. According to the scale, 1 represented strongly disagree and five 'strongly agree', in the continuum 2 for disagree, 3 for neutral and 4 for agree.

The study used descriptive methods of analysis i.e. mean and standard deviation. For effective analysis, those variables which a mean value close to 4.0 was rated to 'agree', those variables with mean values of close to 3.0 were rated neutral. Mean values below 2.5 were considered to a 'disagree or strongly disagree'. The values of standard deviation were used to indicate the range of dispersion of the responses from the mean values. A greater value of standard deviation indicated wide dispersion.

From the findings, the respondents agreed that personnel at M-Pesa outlets were well trained and skilled in handling customers with a mean of 4.61 and a standard deviation of 0.58. The extent of deployment of material, human and finance resources at M-Pesa outlets was agreed with a mean

of 4.33 and a standard deviation of 0.60. The respondents agreed that education and training was done to improve service delivery with a mean of 4.10 and a standard deviation of 0.9. The findings indicates that respondents agreed with a mean of 4.02 and a standard deviation of 0.76 that managerial functions such planning, staffing, directing, controlling activities; coordination and directing were effectively carried out at the M-Pesa outlets. . However, the cause of many failures and poor performance of small business was perceived to be poor management and the respondents agreed with a mean of 4.07 and a standard deviation of 1.00. The respondents approved the contention with a mean of 4.29 and a standard deviation of 6.28 that training and business management skills as key factors in bringing about operational efficiency at the M-Pesa outlets.

Apart from the named factors affecting the operational efficiency of the M-Pesa outlets, the respondents added adoption of technology, cost of living and business size as other factors which influenced the operational efficiency of M-Pesa outlets. Most of the respondents mentioned provision of credit facilities at lower rates to enable easy access to capital to small business as a way of enhancing operational efficiency of small businesses.

Wanjohi & Mugure, 2008 said “As such, for small businesses to do well in Kenya, people need to be well informed in terms of skills and management. Small medium enterprises in ICT appear to be doing well with the sprouting of many commercial colleges offering various computer applications. Further, studies show that most of those running small medium enterprises in this sector have at least attained college level education”.

CHAPTER FIVE: SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This study was done to establish the factors which affect the operational efficiency of the small businesses. The study also established the extent of the factors on the operational efficiency of the small businesses. The study was centered on the M-Pesa outlets as a case of the small business in Kenya. The findings are provided in the following sections.

5.2 Summary of Findings

Majority of the respondents who participated in this study were females who accounted for 60% of the respondents. The rest of the respondents were males who accounted for 40% of the respondents. Majority of the respondents were aged between 21-30 years who accounted for 72.4% of the total respondents. The study revealed that most of them had certificates and diplomas. Most of the businesses were solely owned by one person (78.2%). The study findings showed that majority (59.8%) of the respondents had a work experience of between 1-5 years.

From the findings of this study, there exists a wide range of customer services at the M-Pesa outlets as rated by (M=4.53, SD=0.73). The study findings implicate that customer service policies at the M-Pesa outlets led to the satisfaction of the customers with a mean of 4.1. Most of the respondents indicate that the customer personnel are efficient in customer service functions (M=4.23, SD=0.82).

The findings of this study showed that the customer services at the M-Pesa outlets led to operational efficiency with a mean of 4.59 although there was a wide dispersion among the responses with a standard deviation of 3.04. According to the findings of this study the experience of the customers led to improvement in competitiveness of the M-Pesa outlets in Kenya (M=4.41). The use of the customer service at the M-Pesa outlets led to increase in value of the services received by the customers.

The study findings indicated that cheap costs of transaction at the M-Pesa outlets acted to a great extent (M=4.36) as a major alternative of the high costs of credit, bank charges and fees. The transaction costs of switching M-Pesa services with other money transfer agencies was rated as

being affordable with a mean of 4.07. The study findings implicated that the affordability of the transaction costs of the services at the M-Pesa outlets as having increased the market share to a great extent (M=4.21, SD=0.78).

The low costs of the M-Pesa services has been associated greatly (M=4.44) with cost savings and low business operations costs. The findings also highlighted that the diverse channels provided by M-Pesa as having improved the quality of service and lowered the costs of delivering services, since they were priced at fair levels compared to the value of their respectively transactions (M=4.31, SD=0.77)

From the findings of this study, the services available at the M-Pesa outlets were of high quality (M=4.48). This according to most of the respondents is a new solution in the customer interface as rated with a mean of 4.24. The influence of information technology in bringing about effectiveness and efficiency in processing of the elements and service delivery was highly rated as being effective (M=4.63). From the study findings, the services have improved the privacy and minimized the danger of transaction. They are also less risky (M=4.44). The respondents indicated the services were easily accessible to the customers and always available (4.36). Moreover, the use of automated services at the M-Pesa outlets had improved the brand image, customer retention and profitability of their businesses to a great extent (M=4.39).

The findings of this study, most of the respondents agreed that capital accessibility enabled the company to perform its transactions (M=4.32). The findings of this study shows that capital accessibility was adequate to meet the short term financial obligations of the agents (M=3.7). The findings revealed that capital was adequate to meet future functional costs of the M-Pesa outlets as rated with a mean of 3.71. The respondents agreed that the services had good management of capital techniques such as intersection of carrying, costs and shortage (M=3.67, SD=0.91)

From the findings of this study, most of the respondents rated the effect of access to capital as having improved profitability to a moderate extent (M=3.14, SD=1.08). The access to capital was also viewed as having expanded markets for M-Pesa to a moderate extent with a mean of 3.26. The means of accessing capital had increased the rate of return (M=3.34). Increased the volume of sales (M=3.37) and reduced the costs of operation (3.15) to a moderate extent.

From the findings, the respondents agreed that personnel at M-Pesa outlets were well trained and skilled in handling customers (M=4.61, SD=0.58). The extent of deployment of material, human and finance resources at M-Pesa outlets was agreed with a mean of 4.33. The respondents agreed that education and training was done to improve service delivery (M=4.10). The findings indicates that respondents agreed (M=4.02) that managerial functions such planning, staffing, directing, controlling activities; coordination and directing were effectively carried out at the M-Pesa outlets. . However, the cause of many failures and poor performance of small business was perceived to be poor management (M=4.07). The respondents approved (M=4.29) the contention that training and business management skills as key factors in bringing about operational efficiency at the M-Pesa outlets.

Apart from the named factors affecting the operational efficiency of the M-Pesa outlets, the respondents added adoption of technology, cost of living and business size as other factors which influenced the operational efficiency of M-Pesa outlets. Most of the respondents mentioned provision of credit facilities at lower rates to enable easy access to capital to small business as a way of enhancing operational efficiency of small businesses.

5.2 Conclusion

The study has noted that the M-Pesa outlets have a wide range of customer services. These customer oriented services lead to the satisfaction of the customers. Since the services at the M-Pesa outlets are customer based, they are efficient in service delivery to the customers (M=4.23). The services of customers at the M-Pesa outlets have led to operational efficiency of their businesses. The experience of the customers has led to the improvement of the competitive abilities of the M-Pesa agents. The use of customer service has also led to increased value of the services received by the customers.

The study concludes that, the services available at M-Pesa outlets are of high quality (M=4.48). This is new solution to the customers their transaction of transfer of cash. The adoption of information technology has led to effectiveness and efficiency in the processing of the elements and service delivery. The services have been enhanced privacy, minimized danger of loss and reduced risk of theft. The use of automated services at the M-Pesa outlets have improved brand image, improved customer retention efforts and the profitability of their businesses (M=4.39).

The study has noted that access to capital has enabled the company to facilitate and enable the transactions of the businesses. The capital access is adequate to meet the short term financial obligations of the agents and even the future functional costs. The respondents have management of capital techniques such as integrating the carrying costs and cost shortage. The study has found that accessibility of capital for the M-Pesa outlets has improved profitability of the business and expanded markets. Other associated benefits realized are higher rates of return, increased volumes of sales and reduction in the costs of operation of the businesses.

From the findings of this study, personnel at the M-Pesa outlets are well trained and skilled in handling the customers. The M-Pesa outlets have high levels of material, human and finance resources. The M-Pesa personnel are trained and are provided with relevant information continuously to enhance the quality of their services. The M-Pesa outlets' personnel are equipped with planning, staffing, directing, control and co-ordinational training. Poor management is the major cause of poor business performance and failures. Hence, training of business management skills is a key factor in bringing about operational efficiency at the M-Pesa outlets.

The impact of new technology, cost of living and business size are other factors which influence the operational efficiency of the small businesses. Provision of credit facilities at lower and affordable rates could cure problems on the efficiency of the small businesses in Kenya.

5.3 Recommendations of the study

To enhance the sustainability of the small entrepreneurs and create more avenues for job in Kenya; The small businesses and enterprises should be supported. The small business enterprises seem to more wanting if the full benefits are to be realized. This study recommends the following:

- The government should initiate credit facilities to the low income earners to be able to reach capital, and other financial needs to start and operate small enterprises.
- The government should incorporate business management skills in the syllabuses of the technical schools to equip more people with business skills.
- Adoption of new and advanced technology in the small enterprises to increase their efficiency and quality of their services to customers.

REFERENCES

- Activities to Enhance Technology Adoption Behavior, *Journal of Information African Universities: A Study of Kenya and Nigeria. Technovation*, 24, 10, 841-851. and University of Pennsylvania.
- Bai, X. J., & Dai, X. H. (2006). Production efficiency appraisal to China's main car manufacturers based on DEA model (in Chinese). *Journal of Finance and Economics*, 32(10), 35-47.
- Bate, P., Robert, G. (2007), "Toward more user-centric OD – lessons from the field of experience-based design and a case study", *The Journal of Applied Behavioral Science*, Vol. 41 No.1, pp.41-66.
- Berry, L.L., Carbone, L.P. (2007), "Build loyalty through experience management", *Quality Progress*, Vol. 40 No.9, pp.26-32.
- Braglia, M., Zaroni, S., & Zavanella, L. (2003). Measuring and benchmarking productive systems performances using DEA: an industrial case. *Production Planning & Control*, 14(6), 542-554.
- Brian Levy (1993). Obstacles to developing indigenous small and medium enterprises: An empirical assessment. *The World Bank Economic Review*, Oxford University Press, 7(1) (Jan., 1993). 65-83
- Brudney, J.L., England, R.E. (1983), "Toward a definition of the co-production concept", *Public Administration Review*, Vol. 43 No.1, pp.59.
- Carbone, L.P., Haeckel, S.H. (1994), "Engineering customer experience", *Marketing Management*, Vol. 3 No.3, pp.8-19.
- Central Bank of Kenya. (2007). Survey on Bank Charges and Lending Rates.
- Central Bank of Kenya. (2010). Monthly Economic Review: December 2009.
- Charnes, A., Cooper, W. W., & Rhodes, E. (1978). Measuring the efficiency of decision making units. *European Journal of Operation Research*, 2, 429-444.
- Chaudhary, K.A. (1999) *Encyclopedia of Modern Management Techniques*. New Delhi: Anmol Publications Pvt
- Christopher, L. (2001) *Services Marketing*. 4th ed; New Delhi: Pearson Education Inc.
- Clark, G. and Johnson, R. (2000) *Service Operations Management*. London: Prentice Hall

- Cooper, D., & Schindler, P.S.(2003). *Business research methods* (8th ed). New Delhi: Tata McGraw-Hill Publishing Company. India.
- Cooper, W.W., Thompson, R.G., and Thrall, R.M., (1996). Extensions and new developments in DEA. *Annals of Operations Research*, 66, 3-45.
- Den Hertog,P.(2000) Knowledge- Intensive business services as co-producers of innovation. *International Journal of Innovation Management*.
- Ding, D.X., Hu, P.J., Verma, R., Wardell, D.G. (2010), "The impact of service system design and flow experience on customer satisfaction in online financial services", *Journal of Service Research*, Vol. 13 No.1, pp.96-110.
- Djiofack-Zebaze, C. & Keck, A. (2009). Telecommunications Services in Africa: The Impact of WTO Commitments and Unilateral Reform on Sector Performance and Economic Growth, *World Development*, 37, 5, 919-940.
- Economist. (2009). the Power of Mobile Money, *the Economist*, September, 26th.
- EJISDC (2010), 43, 3, 1-16
- Flanagan, P., Johnston, R., Talbot, D. (2005), "Customer confidence: the development of a pre-experience concept", *International Journal of Service Industry Management*, Vol. 16 No.4, pp.373-84
- From Mobile Phone Banking in Kenya*. Washington D. C.: Brookings Institution.
- FSD Kenya. (2007). Financial Access in Kenya: Result of the 2006 National Survey.
- FSD Kenya. (2009). FinAccess National Survey 2009: Dynamics of Kenya's Changing Financial Landscape. 37 (5), 919-940.
- GSMA. (2010). Mobile Money for the Unbanked: Annual Report 2009. 23 (3), 52-64.
- Hughes, N. & Susie, L. (2007). M-PESA: Mobile Money for the "Unbanked" Turning Cell In Kenya: The Role for Decentralized Services, *Small Enterprise Development*, 17, 3,41-53
- International Telecommunication Union. (2009). Information Society Statistical Profiles
- Johnson, S., Malkamaki, M., & Wanjau, K. (2006). Tackling the 'Frontiers' of Microfinance
- Johnston, R., Clark, G. (2008), *Service Operations Management*, 3rd ed., Financial Times/Prentice-Hall, London,
- Karnani, A. (2007). The Mirage of Marketing to the Bottom of the Pyramid, *California*

- Kessio, J. K. (1981). A study of the problems facing small businesses and the effect of management training on the performance of the proprietors: a case study of the Nandi district.
- Kimami, R. M. (2008). Response strategies of small and medium audit firms in Nairobi to regulatory changes affecting the audit industry.
- KPMG International (2008), "A survey into the growth and sustainability issues driving consumer organizations worldwide",
- Lam, P. L., & Shiu, A. (2008). Productivity analysis of the telecommunications sector in China *Telecommunications Policy*, 32 (10), 20-30.
- Resende, M. (2008). Efficiency measurement and regulation in US telecommunications: A robustness analysis. *International Journal of Production Economics*, 114 (1), 205-218.
- Liljander, V., Strandvik, T. (1997), "Emotions in service satisfaction", *International Journal of Service Industry Management*, Vol. 8 No.2, pp.148-60
- Lippert, S. & Davis, M. (2006). A Conceptual Model Integrating Trust into Planned Change
- Lusch, R.F., Vargo, S.L., O'Brien, M. (2007), "Competing through service: insights from service dominant logic", *Journal of Retailing*, Vol. 83 No.1, pp.2-18.
- Management Review*, 49, 4, 90-111
- Manica, L. & Vescovi, M. (2009). Mobile Telephony in Kenya; is it Making the Life Better?
- Mank, P (1991), *Personalpolitik in mittelständischen Unternehmen: Eigenarten, Versäumnisse, Chancen*, Frankfurt, pp.
- Mascarenhas, O.A., Kesavan, R., Bernacchi, M. (2006), "Lasting customer loyalty: a total customer experience approach", *Journal of Consumer Marketing*, Vol. 23 No.7, pp.387-405.
- Mbuvi A.K.N. (1983). A study of the causes of failure of small scale African businesses: a case study of machakos district
- Meyer, C., Schwager, A. (2007), "Understanding customer experience", *Harvard Business Review*, Vol. 2007 No. February, pp.117-26.
- Mlima, A. P., & Hjalmarsson, L. (2002). Measurement of Inputs and Outputs in the banking industry. *Tanzanet Journal*, 3(1), 12-22.
- Mobile Money Summit, Barcelona, Spain

- Mols, N. (1998), "The behavioural consequences of PC banking", *International Journal of Bank Marketing*, Vol. 16 No.5, pp.195-201.
- Moore, G.A. & McKenna, R. (1999). *Crossing the Chasm: Marketing and Selling High-Tech*
- Mortimer, D. (2002). Competing Methods for Efficiency Measurement. A Systematic Review of Direct DEA vs SFA/DFA Comparisons. West Heidelberg, Australia: Centre for Health Program Evaluation.
- Motivation and Emotion into the Technology Acceptance Model, *Information*
- Moutinho, L., and Smith, A. (2000), "Modelling bank customer satisfaction through mediation of attitudes toward human and automated banking", *The International Journal of Bank Marketing*, Vol. 18 No.3, pp.124.
- Mugenda, O. M., & Mugenda, A. G. (2003). *Research methods: Quantitative and qualitative approaches*. Nairobi: Acts Press.
- Mulili B.M. (2000). Utilization of promotion mix elements by small business enterprises: the case of Nairobi East-lands.
- Mwangi, K.S. & Njuguna, N.S. (2009). *Expanding the Financial Services Frontier: Lessons*
- Ndirangu, M. (2005). *Kenya Today: Breaking the Yoke of Colonialism in Africa*. New York,
- Nguyen, N., Leblanc, G. (1998), "The mediating role of corporate image on customers' retention decisions: an investigation in financial service", *International Journal of Bank Marketing*, Vol. 16 No.2, pp.52-65.
- NY, USA: Algora Publishing.
- Ochieng D. E (2008). A survey of tendering technologies adopted by commercial banks in Kenya to mitigate small and medium enterprises capacity problem.
- Ombok, E. (2009). Safaricom Releases First Solar-Powered Mobile Phone. Bloomberg.
- Opera Software. (2010). State of the Mobile Web, May 2010.
- Oyelaran-Oyeyinka, B. & Adeya, C.N. (2004). Dynamics of Adoption and Usage of ICTs in
- Patricio, L., Fisk, R., Cunha, J. (2003), "Improving satisfaction with bank service offerings: measuring the contribution of each delivery channel", *Managing Service Quality*, Vol. 13 No.6, pp.471-82.
- Phones into 24-Hour Tellers in Kenya, *Innovations: Technology, Governance*,
- Pichler, J.H, Pleitner, H.J, Schmidt, K.-H (1996), *Die Führung von Klein- und Mittelunternehmen*, Bern, Stuttgart, Vienna, Vol. 2 pp.11-18.

- Pine, B.J. II, Gilmore, J.H. (1999), *The Experience Economy: Work Is Theatre and Every Business a Stage*, Harvard Business School Press, Cambridge, MA, .
- Prahalad, C.K. (2004). *The Fortune at the Bottom of the Pyramid: Eradicating Poverty Products to Mainstream Customers*. New York, NY, USA: HarperCollins.
- Pullman, M.E., Gross, M.A. (2004), "Ability of experience design elements to elicit emotions and loyalty behaviors", *Decision Science*, Vol. 35 No.3, pp.551-78.
- Purves, D., Augustine, G.J., Fitzpatrick, D., Katz, L.C., LaMantia, A-S., Williams, S.M. (2001), *Neuroscience*, 2nd ed., Sinauer Associates, Sunderland, MA,
- Rasmussen, S. (2009). *The Hype Cycle and Mobile Banking*. Paper presented at the GSMA
- Reichheld, F. and Sasser, W. (1990)"Zero defects: quality comes to services", *Harvard Business Review*, Sept-Oct, 1990, pp 105-111.
- Robinson, S. (2002). *Research methodology*. Washington D.C.: National Academies Press
- Rogers, E. (1995). *Diffusion of Innovations* (4th Ed.). New York, USA: The Free Press
- Ronald, T.R; & Anthony, J.Z. (1999) *Services Marketing*. Bangalore: Eastern Press satisfaction with technology-based service encounters, *Journal of Marketing*, 64 (3), 50-64.
- Rono, J. K. (2002). *Impact of Social Adjustment Programmes on Kenyan Society*, *Journal of Safaricom* (2009c) *MPESA Key Performance Statistics*
- Safaricom. (2009a). *M-PESA Customers to Withdraw Cash from Pesa Point ATMs*.
- Safaricom. (2009b). *M-PESA Services*. *EJISDC* (2010), 43, 3, 1-16 the *Electronic Journal on Information Systems in Developing Countries*
- Sampson, S.E., Froehle, C.M. (2006), "Foundations and implications of a proposed unified services theory", *Production and Operations Management*, Vol. 15 No.2, pp.329-43.
- Santos, J. (2003), "E-service quality: a model of virtual service quality dimensions", *Managing Service Quality* Vol. 13 No.3, pp.233-46.
- Schlesinger, L. and Heskett, J. (1991) "Breaking the cycle of failure in service", *Sloan Management Review*, spring, 1991, pp. 17-28.
- Science*, 32, 5, 434-448.
- Sengupta, J. K. (1989). *Efficiency Analysis by Production Frontiers: The Nonparametric Approach* (Dordrecht, Holland: Kluwer).
- Sengupta, J. K. (1995). *Dynamics of Data Envelopment Analysis: Theory of Systems Efficiency*. Dordrecht, Holland: Kluwer.

- Sengupta, J. K. (2003). New Efficiency Theory: With Applications of Data Envelopment Analysis. *A Quarterly Journal of Operations Research*, 4, 1-2.
- Shin, I. (2006), "Adoption of enterprise application software and firm performance", *Small Business Economics*, Vol. 26 No.3, pp.241-56
- Social Development in Africa*, 17, 1, 81-98.
- Stewart, T.J., 1996, Relationships between data envelopment analysis and multicriteria decision analysis. *Journal of the Operational Research Society*, 47, 654-665.
- Sureshchandar, G., Rajendran, C., Anantharaman, R. (2002a), "Determinants of customer-perceived service quality: a confirmatory factor analysis approach", *Journal of Services Marketing*, Vol. 16 No.1, pp.9-34.
- Suri, T. (2006). Selection and Comparative Advantage in Technology Adoption. *Yale Systems Research*, 11, 4, 342-365.
- Technology: Toward a Unified View, *MIS Quarterly*, 27, 3, 425-478.
- Teoh, S.Y., Tng, Q.H., Pan, S.-L. (2008), "The emergence of dynamic capabilities from an SMALL MEDIUM ENTERPRISES-enterprise system upgrade", paper presented at the 16th European Conference on Information Systems, Cork, 9-11 June, .
- The Equity Building Society. (2002) Remote Village Mobile Banking.
- The Tornado. New York: Harper Collins Publishers.
- Through Profits, Pennsylvania, USA: Wharton School Publishing, Pearson Education
- Tsaia, H. C., Chenb, C. M., & Tzeng, G. H. (2006). The comparative productivity efficiency for global telecoms. *International Journal of Production Economics*, 103(2), 509-526.
- University Economic Growth Center Discussion Paper No. 944
- Vargo, S.L., Lusch, R.F. (2004), "Evolving to a new dominant logic of marketing", *Journal of Marketing*, Vol. 68 No.1, pp.1-17.
- Venkatesh, V. (2000). Determinants of Perceived Ease of Use: Integrating Control, Intrinsic
- Venkatesh, V., Morris, M., Davis, G. & Davis, F. (2003). User Acceptance of Information
- Vincová, K. (2005). Using DEA models to measure efficiency. *BIATEC*, 13(8), 24-28.
- Wangai W.J (1982). The role of the accountant in assisting the small business client in solving his financial problems: a survey of the Kenyan situation
- Wiefel, P. (2002). *The Chasm Companion: A Field book to Crossing the Chasm and inside*

Zomerdijk, L.G., Voss, C.A. (2010), "Service design for experience-centric services", Journal of Service Research, Vol. 13 No.1, pp.67-82.

Appendix 1: letter of introduction.

Dear Respondent,

RE: Support on MBA Thesis

I am an MBA student at University of Nairobi and in my final year of study. The MBA is a double concentration focusing on project planning and Management. As part of the requirement for graduation, I'm undertaking a research to establish the factors affecting the operational efficiency of small scale entrepreneurs in Nairobi, Kenya.

In this regard, I'm kindly requesting for your support in terms of time, and by responding to the attached questionnaire. Your accuracy and candid response will be critical in ensuring objective research.

It will not be necessary to write your name on this questionnaire and for your comfort, all information received will be treated in strict confidence.

In addition, the findings of the study will solely be used for academic research purposes and to enhance knowledge in the field project planning and management. If need be the research report may be presented to your organization for information and record.

Thank you for your valuable time on this.

Yours faithfully

Patrick Njoroge

Appendix 2: Questionnaire for the M-Pesa agents

This study seeks to determine factors affecting operation efficiency of small entrepreneurs with the specific case of M-Pesa outlets in Nairobi, Kenya. The study seeks to investigate the effects of customer experience, cost of transactions, service delivery, access to capital, training and business management skills on operational efficiency of M-Pesa outlets.

PART A: GENERAL INFORMATION.

1. Please provide responses to the questions below.

a.	Sex	Male <input type="checkbox"/> Female <input type="checkbox"/>
b.	Age bracket	Below 20 years <input type="checkbox"/> 21-30 yrs <input type="checkbox"/> 31-40 yrs <input type="checkbox"/> 41-50 yrs <input type="checkbox"/> Over 50 years <input type="checkbox"/>
c.	Level of Education	Primary school <input type="checkbox"/> Secondary school <input type="checkbox"/> Certificate/diploma <input type="checkbox"/> University degree <input type="checkbox"/> Other (specify).....
d.	Business structure	Sole trader <input type="checkbox"/> Partnership <input type="checkbox"/> Private ltd company <input type="checkbox"/> Other (specify).....
e.	Work duration	Less than 1 yr <input type="checkbox"/> 1-5 yrs <input type="checkbox"/> More than 5 years <input type="checkbox"/>

PART B: CUSTOMER EXPERIENCE.

2. To what extent do you agree to the following statements regarding effects of customer experience in operational efficiency of M-Pesa outlets? Tick appropriately using a likert scale of 5 where 5= Very great extent, 4= Great extent 3= Moderate extent and 2= Less extent and 1= No extent at all.

		Very great extent	Great extent	Moderate extent	Less extent	No extent
a.	There is a wide range of customer services available at the M-Pesa outlets.					
b.	Customer service policies at the M-Pesa outlets have led to customer satisfaction.					
c.	The customer service personnel are efficient in customer service functions.					
d.	Customer service ensures operational efficiency of M-Pesa outlets					
e.	Customer experience has led to improved competitiveness of M-Pesa outlets.					
f.	Customer service at M-Pesa outlets creates value in the service received by the customer					

PART C: COST OF TRANSACTIONS

3. To what extent do you agree to the following statements regarding effects of cost of transactions on operational efficiency of M-Pesa outlets? Tick appropriately using a likert scale of 5 where 5= Very great extent, 4= Great extent 3= Moderate extent and 2= Less extent and 1= No extent at all.

		Very great extent	Great extent	Moderate extent	Less extent	No extent
a.	Cost of transactions through M-Pesa has provided a better alternative to the high cost of credit, high bank charges and fees.					
b.	Even after getting started, getting sufficient finance to sustain business					

	growth remains a problem.					
c.	Switching costs between M-Pesa and other money transfer agencies are affordable.					
d.	Affordable costs of transactions at the M-Pesa outlets have increases market share.					
e.	M-Pesa transactions have lead to cost saving and lower costs of business operation					
f.	Migration of customers to alternative money delivery channels provided by M-Pesa has improved the service quality and lowered the cost of service delivery.					
g.	This occurs when a quality service is priced very high and the transaction provides little value					

PART D: SERVICE DELIVERY

4. To what extent do you agree to the following statements regarding effect service delivery on the operational efficiency of M-Pesa outlets? Tick appropriately using a likert scale of 5 where 5= Very great extent, 4= Great extent 3= Moderate extent and 2= Less extent and 1= No extent at all.

		Very great extent	Great extent	Moderate extent	Less extent	No extent at all.
a.	Services delivered at the M-Pesa outlets are of high quality.					
b.	Effective service delivery can be new solutions in the customer interface					
c.	Information technology has led to greater efficiency and effectiveness in the information-processing					

	elements and service delivery process at the M-Pesa outlets.					
d.	Customers' needs such as privacy, ability to use the service without any danger, risk or doubt are catered for during service delivery at the M-Pesa outlets.					
e.	Services are easily accessible to the customers and are always available when customers need them.					
f.	The use of automated services at the M-Pesa outlets has resulted in improved brand image, customer retention, profitability, competitive advantage.					

PART E: ACCESS TO CAPITAL

5. To what extent do you agree to the following statements the influence of access to capital on operational efficiency of M-Pesa outlets? Tick appropriately using a likert scale of 5 where 5= Strongly agree, 4= Agree, 3= Disagree, 2= Strongly disagree and 1= Don't know.

		Strongly agree	Agree	Disagree	Strongly disagree	Don't know
a.	Assure that the company is capable of carrying out its functions					
b.	Receives adequate cash flows for meeting the short-term obligations					
c.	Receives adequate cash flows for meeting future functional costs					
d.	capital management techniques such as Intersection of carrying, cost and shortage cost , Working capital financing and Cash budgeting					

6. Kindly indicate the extent to which access to capital has brought about financial improvement in the company along the listed indicators? Use a scale 1-5 where 1=Not at all, 2=little extent, 3=Moderate extent, 4= Great extent, 5=Very great extent.

Financial Resource Management Indicators	1	2	3	4	5
Improved profitability					
Easy expansion of markets for M-Pesa services					
Higher Rate of Return					
Increased sales					
Low cost of operation					

PART F: TRAINING AND BUSINESS MANAGEMENT SKILLS

7. To what extent do you agree to the following statements regarding the extent to which training and business management skills affect operational efficiency at the M-Pesa outlets? Tick appropriately using a likert scale of 5 where 5= strongly agree, 4= Agree, 3= Disagree, 2= strongly disagree and 1= Don't know.

		Strongly agree	Agree	Disagree	Strongly disagree	Don't know
a.	The personnel at M-Pesa outlets are well trained and skilled in handling customers.					
b.	There is sufficient deployment of material, human and finance resources at the M-Pesa outlets.					
c.	Continuous education and training is conducted to improve service delivery at the M-Pesa outlets.					
d.	Managerial functions such planning, staffing, directing, controlling activities, coordination and directing are effectively carried out at the M-Pesa outlets.					
e.	Poor management as the root cause of many failings and poor performance of small business.					
f.	Training and business management skills have improved operational efficiency at the M-Pesa outlets.					

8. Which other factors affect operation efficiency at the M-Pesa outlets.

- a)
- b)
- c)
- d)
- e)

9. Recommend ways in which operation efficiency at the M-Pesa outlets can be improved.

- a)

- b)
- c)
- d)
- e)