

**THE INFLUENCE OF MOBILE PHONE USAGE ON PERFORMANCE  
OF SUPERMARKETS IN NAIROBI, KENYA**

**BY**

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## **DECLARATION**

This research project is my original work and has not been presented for examination in any other university

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This research project has been submitted for examination with my approval as the university supervisor

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## **DEDICATION**

I dedicate this work to my loving husband and my Mom. They gave me exemplary support throughout my studies.

## **ACKNOWLEDGMENTS**

I am greatly indebted to many people who contributed to this project and without whom it would not have been completed.

I wish to convey special thanks and sincere gratitude to my loving husband Geoffrey Njoroge for his love, patience, support, encouragement and understanding throughout the study period. Thanks Geoffrey, as my best friend and husband for having encouraged me and assisted with the course work and finally the completion of this research project.

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I am also grateful and thankful to my supervisor, Dr. Justus Munyoki for his invaluable guidance and support throughout the project.

Finally, I thank God for the gift of life and blessings.

These words cannot be enough, I pray for God's blessings upon your lives.

## **ABSTRACT**

This study sought to find out the impact of mobile phone use on the performance of Supermarkets in Kenya, particularly in Nairobi CBD, with detailed evidence drawn from 30 respondents. The research conceptualizes, operationalises, and tests a research model which integrates theory from the literature on the adoption and use of mobile telephony services supermarket business performance.

Data was collected through a questionnaire administered to supermarket managers, departmental heads, and supervisors. 30 respondents were surveyed, in particular, to find out how the use of mobile phone impacts on their work performance. Respondents were also questioned about their general feeling about increasing mobile phone innovations for business use. The collected data was analyzed with the help of SPSS statistical packages.

The results of this study identified the integration of mobile telephone services into Supermarket business operations as having a direct influence on perceived enhanced business performance because of their potential to enable substantial cost savings, provide greater integration of the internal and external environments of the business, increase operational flexibility and improve communication with staff, suppliers, creditors, and customers. The results also identified that the performance of supermarkets in Nairobi CBD tend to reduce considerably impacted where the use of mobile telephony is not integrated in their daily operations.

This study therefore forms a good basis for future studies by other scholars in determining the significant impact of the mobile phone, not only in supermarkets within the Nairobi CBD, but also in other urban areas in Kenya. Supermarkets themselves can use the findings of this study to enhance the integration of the various mobile phone services in their business and thus improve their performance.

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# CHAPTER ONE

## INTRODUCTION

### 1.1 Background of the Study

The diffusion of Information and Communication Technologies (ICTs) such as computer and computer networks, telecommunications in the last five years has been rapid. This has seriously changed the way Kenyans live, work, and interact. Certain processes have evolved significantly, with computers taking over most of the processes that were traditionally performed by clerks, operators and specialists. The potential of information and communication technologies to change and improve processes particularly within the business environment have attracted much attention from within academia (Sanders, 1979; King and McAulay, 1989; Lincoln and Warberg, 1987; Strassmann, 1990) and practitioners. Computers and their networks seem to have received much more attention than any of the new information and communication technologies. While computers are traditionally attributed with business and productivity, mobile telephony has not been viewed in the same manner, particularly in Kenya, despite the fact that it is one of the most diffused modes of communication.

#### 1.1.1 Organizational Performance

Organizational performance comprises the actual output or results of an organization as measured against its goals and objectives. According to Richard et al. (2009) organizational performance encompasses three specific areas of firm outcomes: (a) financial performance (profits, return on assets, return on investment, etc.); (b) product market performance (sales, market share, etc.); and (c) shareholder return (total shareholder return, economic value added, etc.). The term Organizational effectiveness is broader.

Specialists in many fields are concerned with organizational performance including strategic planners, operations, finance, legal, and organizational development. In recent years, many organizations have attempted to manage organizational performance using the balanced scorecard methodology where performance is tracked and measured in multiple dimensions such as: financial performance, customer service, social responsibility, and employee stewardship. In today's fast-changing and increasingly competitive Kenya, the effectiveness of supermarkets has become the focus of

considerable attention. When such organizations falter or fail, the consequences can be far-reaching, even devastating. Supermarkets, particularly in Nairobi, provide a rich, complex, but barely tapped knowledge about organizational performance and the processes of change. Although research approaches in this field are still in their early stages and need to be further developed, the field is fertile ground for greater understanding of organizations, organizational performance, and organizational change broadly conceived.

One of the major driving forces of change in Kenyan supermarkets is mobile telephony. Mobile phones largely affect supermarkets' capacity to generate, store, analyze, and communicate information. This has in turn affected the performance of the businesses by way of opening up new possibilities, new opportunities, and new demands at every level—from the individual to the business, and to the country.

There is therefore a greater need to evaluate the performance of Supermarkets within Nairobi in view of this effect of mobile telephony. The primary purpose behind this evaluation is to improve performance. Independently, there are several reasons why supermarkets may need to evaluate their performance. The first and the major reason is to evaluate how well a supermarket is performing. To evaluate performance, managers need to determine what an agency is supposed to accomplish (Kravchuk & Schack 1996). To formulate a clear, coherent mission, strategy, and objective. Then based on this information choose how you will measure those activities.

The other reason for evaluating a supermarket's performance is the principle of best-practice. In order for organization to evaluate performance, it requires standards (benchmark) to compare its actual performance against past performance or from performance of similar supermarkets. Another importance of evaluating a supermarket's performance is to gain the element of control in the everyday business activities. This is usually the managers' way of ensuring their subordinates are doing the right thing. Normally the major mode of control is involves employees being expected to follow and work within specific guidelines. Managers in return measure behavior of individuals then compare this performance with requirements to check who has and has not complied. The measurement of compliance with these requirements is the mechanism of control.

Organizations need to commemorate their accomplishments- such ritual tie their people together, give them a sense of their individual and collective relevance. In addition, by achieving specific goals, people gain sense of personal accomplishment and self-worth (Locke & Latham 1984). Significant performance targets that provide sense of personal and collective accomplishment. Targets could ones used to motivate. In order for celebration to be a success and benefits to be a reality, managers need to ensure that celebration creates motivation and thus improvements. Supermarkets performance may also be measured for budget reasons. Although budgets are crude tools in improving performance, for example purchasing better technology because the current ones are outdated and harm operational processes. Supermarkets also need to evaluate their performance in order to establish the levels of customer satisfaction and improve customer feedback. Simple questionnaires may be sent to customers as text messages. The customers then text back their opinions and comments about an organization's products and services. Supermarkets are therefore able to gauge the levels of customer satisfaction and implement the necessary changes.

According to (Neely et al, 2002) performance measurement can be defined as the process of quantifying the efficiency and effectiveness of past actions through acquisition, collation, sorting, analysis, interpretation and dissemination of appropriate data. Effectiveness, according to Chaffrey Dave, means meeting process objectives, delivering the required outputs and outcomes "doing the right thing". Efficiency on the other hand means minimizing resources or time needed to complete a process 'doing the thing right'. People are used to thinking of ongoing performance management for employees, for example, setting goals, monitoring an employee's achievement of those goals, sharing feedback with the employee, evaluating the employee's performance, rewarding the employee's performance or firing the employee. However, performance management applies to teams and organizations, as well.

Organizational performance involves the recurring activities to establish organizational goals, monitor progress toward the goals, and make adjustments to achieve those goals more effectively and efficiently. Those recurring activities are much of what leaders and managers inherently do in their organizations -- some of them do it far better than others. When seeking to improve the performance of an organization, it's very helpful to regularly conduct assessments of the current performance of the organization.

Assessments might be planned, systematic and explicit (these often are the best kinds of assessments) or unplanned and implicit. Well-done assessments typically use tools, such as comprehensive questionnaires, SWOT analyses, diagnostic models etc., along with comparison of results to various "best practices" or industry standards.

### **1.1.2 Usages of Mobile Phones**

A mobile phone, cell phone or hand phone is an electronic device used to make telephone calls across a wide geographic area, served by many public cells, allowing the user to be mobile. By contrast, a cordless telephone is used only within the range of a single, private base station, for example within a home or an office. A mobile phone can make and receive telephone calls to and from the public telephone network which includes other mobiles and fixed-line phones across the world. It does this by connecting to a cellular network provided by a mobile network operator one of the most important requirements in a successful enterprise is communication. Without it, a company would not be able to expand to wider market and extend its reach farther. This is why cellular phones have become indispensable for a lot of people in the business world. It is considered as a vital tool for this line of work. Through this device, one can reach clients, suppliers, and consultants anytime and anywhere. Compared to the old wired phone, the portable phone is hassle-free. (Safaricom, 2010)

Another feature that makes wireless communication invaluable is its global roaming capability. This would allow people to reach one even if one is overseas. One could still negotiate any deals even if one is on the other side of the world. This is very beneficial for executives who are constantly traveling. In addition, there are now smart phones in the market that work as laptops. They can connect to the internet and allow one to check emails. Most importantly, one can frequently check the situation in the stock market. One can also use them to save files and documents for business presentations. These devices have larger memory storage. This means that one can save as many contacts and files that are need for whichever purpose. With the means to communicate, businesses can go a long way. Executives, managers, and employees would always have a way to perform their job with this gadget on hand. Mobile phones have also become valuable marketing facilities. With almost everyone in the world owning a mobile phone, it is only

appropriate that business planners use it to market their products. By using the SMS feature of the gadget, they can send messages to numerous individuals in one go.

Text messages are usually not considered as spamming. Compared to emails, there are limited numbers of addresses that one can send to and there is a possibility that the receiver might block one. Another benefit is the price. Messaging is considered budget-friendly than making a phone call. Advertising through mobile phones can work for both small enterprises and big companies. Part of the theory of advertising is to make one product known. One definitely could reach a lot of audience through mobile phones. (Safaricom, 2010)

### **1.1.3 Mobile phone Usage in Kenya**

Since M-PESA launched its services in Kenya in March 2007, it has continued to expand its mobile money services to its subscribers in the market. It started as a simple money transfer service, expanded to include utility payments using PayBill and now even has payments received from Kenyans in the Diaspora. In October 2010, Safaricom launched a new service branded as *Nunua na M-PESA*, that is available to all its 8 million active subscribers. This service is targeted at merchants and allows users to pay for their goods at supermarket tills using the M-PESA service. *Nunua na M-PESA* was launched with Uchumi and Naivas supermarket outlets across the country. This is a big step in the right direction for mobile money industry in Kenya. Having direct payments and moving towards a cashless society where direct payments are made to merchants, especially by the use of mobile cell phone, reduces risk of carrying hard cash. Safaricom is at the forefront with their M-PESA service being at the center of these payments. (Safaricom, 2010)

On the other hand Yu, the mobile phone brand of Essar Telecom Kenya Limited partnered with Uchumi Supermarkets to provide convenience and easy accessibility of the YuCash money transfer service to its consumers. This meant that consumers can pay for their goods and make other transactions using YuCash from any Uchumi outlet country-wide. The partnership allowed Uchumi Supermarkets to carry out YuCash registrations and cash-in cash-out transactions in all their outlets.

Uchumi and Naivas supermarket has partnered with Safaricom's 'Nunua na M-pesa'. This service allows users to pay for their goods at any Uchumi or Naivas branch tills using the M-PESA service. This is a big step in the right direction for mobile money industry in Kenya. This has in return has reduces the risk of carrying hard cash. Similarly, Yu, the mobile phone brand of Essar Telecom Kenya Limited has partnered with Uchumi Supermarkets to provide convenience and easy accessibility of the YuCash money transfer service to its consumers. Consumers can pay for their goods and make other transactions using YuCash from any Uchumi outlet, country-wide (Daily Nation, 3<sup>rd</sup> February 2011).

#### **1.1.4 Supermarkets in Nairobi Kenya**

A supermarket is a self-selection store that deals mainly with household goods such as utensils, foodstuff, and clothes. Normally they do not deliver goods to the customer's premises but attendants may take large purchases to a customer's car. Supermarkets sell on cash basis only. Examples of supermarket chains in Nairobi are Uchumi, Nakumatt, Tuskys, Ukwala, Naivas, Woolworths, Ebrahims, Jack and Jill, Chandarana, East Mart Stores, Gikomba Mattresses, Shop 100, and many more. There are many benefits of supermarkets which include the fact that they buy goods in large quantities which enable them to obtain good trade discounts. They are therefore able to offer lower prices for their merchandise than other retailers. Customers are also able to get most of the goods they require under one roof. This saves them time. Customers pick the goods from the shelves and pay for them at the counter and do not spend time haggling or waiting to be served by the attendants. Impulse buying leads to more sales because customers have access to the goods which they pick from the well displayed shelves and they do not sell on credit thus they avoid bad debts.

The rise of supermarkets in developing countries has received considerable attention in the development economics literature over the past few years (Reardon et al. 2003). That literature shows that supermarkets are spreading quickly in urban areas; they are modernizing their product procurement systems, differentiating them from those used by traditional retailers and wholesalers. According to Neven and Reardon (2004), supermarkets in Kenya are growing at an annual rate of 18% and have a 20% share of the urban food market overall.

## **1.2 Research Problem**

Supermarkets in Kenya are increasingly deploying the use of mobile phones to enhance the quality of their services and increase growth. The pace of transformation has speeded up with more supermarkets realizing the potential of using the mobile phones in their service delivery. However, there are only a handful of studies on the application of mobile phones for success and growth on supermarkets. Despite increasing awareness in the research literature on the importance of mobile technologies for Supermarkets in the development context (Heeks, 1999), there is still lack of studies on mobile phones adoption, usage and impact within supermarkets in Nairobi and Kenya in general. There is a need to explore how their adoption and usage are improving economic development and the extent to which mobile phones usage is practiced within supermarkets (Bugeja, 2005).

The diffusion of Information and Communication Technologies (ICTs) such as computer and computer networks, telecommunications in the last five years has been rapid. This has seriously changed the way Kenyans live, work, and interact. Certain processes have evolved significantly, with computers taking over most of the processes that were traditionally performed by clerks, operators and specialists. The potential of information and communication technologies to change and improve processes particularly within the business environment have attracted much attention from within academia (Sanders, 1979; King and McAulay, 1989; Lincoln and Warberg, 1987; Strassmann, 1990) and practitioners. One of the most important requirements in a successful enterprise is communication. Without communication, a company would not be able to expand to wider market and extend its reach farther. This is why cellular phones have become indispensable for a lot of people in the business world. In fact, it is considered as a vital tool for this line of work. Through this device, one can reach clients, suppliers, and consultants anytime and anywhere. Compared to the old wired phone, the portable kind is hassle-free. Another feature that makes wireless communication invaluable is its global roaming capability. This would allow people to reach one even if one is overseas. One could still negotiate any deals even if one is on the other side of the world. This is very beneficial for executives who are constantly traveling.

Several studies in the area of mobile phones have been done in the recent years. These include Eliakira (2008) who did a study of the key success factors in mobile phone industry in Arusha, Tanzania with findings of the phone key success factors and the strategies to be implemented, Juma (2008), did a study on challenges of mobile phones and gave out the strategies that managers could use to correct those challenges. Mureithi (2005) did a study on perception of convenience and affordability of the mobile phone and found out that in an industrial cluster in Nairobi that 93.8 per cent of the entrepreneurs owned cell phones and used them on a daily basis. A critical look at these studies indicates that there has been great emphasis on the mobile banking, choice of mobile phones, challenges of mobile phone usage but no one has yet carried out a research on the importance of mobile phone usage in determining the performance of supermarkets. This study therefore sought to determine the influence of mobile phone usage on the performance of supermarkets within Nairobi CBD. It was guided by the following study questions:

- i) What is the influence of mobile phone usage on the performance of supermarkets?
- ii) What is the importance of mobile phone in enhancing performance of supermarkets?

### **1.3 Study Objectives**

The study objectives were:

- i) To determine the influence of mobile phone usage on the performance of Supermarkets in Nairobi, Kenya.
- ii) To determine the importance of mobile telephony usage in enhancing business performance of supermarkets in Nairobi, Kenya.

### **1.4 Value of the Study**

This study contributes to and deepens our understanding and further builds theory on how the integration of mobile phone usage into business processes can enhance business performance and therefore supermarkets can apply the knowledge to improve performances of their businesses. The study is aimed at drawing attention within government and business circles to the need to focus on the uptake and use of mobile services in business operations so as to reap the benefits offered by this technology.



This study provides information that will benefit supermarket managers on the extent and challenges of using mobile phones. The extent of application in supermarkets will inform them on the effectiveness in using mobile phones. A high extent is indicative of high performance while the lower extent will point towards the challenges. Supermarkets managers are therefore be required to devise appropriate strategies to correct any anomalies. Regarding the challenges Supermarkets will understand the kind of challenges that are faced in mobile phone usage. They will then be able to formulate strategies to counter their effect. Researchers will also use the study to form a basis for further research on mobile phone usage in the world of business and academics.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter reviews literature that is relevant to the study. The literature encompasses supermarkets and mobile technology, determinants of mobile phone usage to enhance performance of supermarkets, as well as the concept of mobile phone adoption by supermarkets, whereby adoption as defined in Rogers diffusion theory (1995) is a decision to make full use of an innovation as the best course of action and literature reviewed will establish the extent of the adoption of mobile phone by supermarkets.

#### **2.2 Mobile Phone Adoption by Supermarkets**

Supermarkets in Kenya are increasingly deploying the use of mobile phones to enhance the quality of their services and increase growth. The pace of transformation has speeded up with more supermarkets realizing the potential of using the mobile phones in their service delivery. However, there are only a handful of studies on the application of mobile phones for success and growth on supermarkets. Despite an increasing awareness in the research literature on the importance of mobile technologies for Supermarkets in the development context (Heeks, 1999), there is still lack of studies on mobile phones adoption, usage and impact within supermarkets in Nairobi and Kenya in general. There is a need to explore how their adoption and usage are improving economic development and the extent to which mobile phones usage is practiced within Supermarkets (Bugeja, 2005).

Since early 1990s, there has been a tremendous increase in ICTs usage and especially mobile phones usage by individuals and in businesses in many developing countries as well as in Kenya. The rapid technological advancement that the world has witnessed in the recent years, especially in the electronic industry, has also changed the means of production around the world. This can be evidenced in the telecommunications sector where, since the introduction and evolution of the mobile phones, the ways and means of business information transfer have changed leading to more efficiency and productivity in both service and manufacturing sectors (ITU, 1996).

Mobile phones use have created a situation in which users carrying portable devices have access to a shared infrastructure independent of their physical location and which provides them with flexible communication with other people and access to networked services (Ling, 1999). In today's environment, the mobile phone may have socio-economic impact and has become an integral part of the daily lives of individuals and organizations (i.e. supermarkets) all over the world. Hence, mobile phones may potentially be an important technology for economic development (ITU, 1996). Mobile phones could offer supermarkets the opportunity to grow through the simplified business information exchange, making it easier access customers, goods, services and other economic opportunities.

According to Cooper & Zmud (1990), the adoption of fixed line or mobile phones allows a supermarket to communicate with its suppliers and customers without having to pay a personal visit to the individual or organization For Supermarkets (including supermarkets) to adopt e-business and e-commerce strategies and tools, benefits must outweigh investment and maintenance costs of the ICTs both in terms of knowledge and infrastructure. Business environment, commercial considerations and potential returns drive the ICTs adoption by the Supermarkets. Primarily the mobile phone technology is catching up quickly in Kenya (King, 2004). Supermarkets have been able to carry out various transactions using their mobile phones within and around their business surroundings such as paying suppliers for goods and services, paying bills, withdrawing cash and topping up airtime accounts. They are able to know their account balances and easily manage their accounts. This has people to avoid long queues at banks. The banked and the unbanked can also maintain account balances in their mobile phones which can be perceived as deposits (Njenga, 2009). This has become a convenient way of doing business.

Mobile penetration in Kenya's telecom market will grow by 95 percent over the next five years, a market growth that will reflect intense competition among network operators and lead to a rapid uptake of mobile data services. Kenya shows impressive growth rates with significant opportunity. By the end of 2008, Kenya had more than 15 million mobile subscribers, with a mobile penetration rate of 39 percent. The subscriber base is expected to rise to 29.28 million, or 66.7 percent penetration, by year-end 2013 (Dearbhla

McHenry, 2008). According to McHenry, increased competition is helping to fuel demand for mobile services in Kenya. Until 2008, the Kenyan mobile market was a duopoly consisting of Safaricom and Zain (currently Airtel). That has now changed with the entry of two new players: Econet and Orange. Since their entry, there has been a fierce price war with operators slashing tariffs and introducing new air time promotions, making their services more affordable for the wider population. Total revenue of Kenya's telecom market is forecast to grow by 42 percent from US\$1.39 billion in 2008 to US\$1.98 billion by 2013, with 78 percent of the total revenue to be generated by the mobile sector. Mobile data will be the telecom sector's fastest-growing revenue stream, increasing in revenue from US\$62 million in 2008 to US\$224 million in 2013, partly due to the launch of 3G services but also to the explosive growth of low-tech, low-margin mobile data services, particularly mobile money transfers (Dearbhla McHenry, 2008).

### **2.3 Determinants of Mobile Phone Usage in Supermarkets**

The use of mobile phone technology requires basic knowledge to operate. As a result, majority of individuals as well as business operators in Kenya have embraced its use in their daily business operations and are registered users of M-Pesa. At the end of December 2010, Kenya had a total of 24,968,891 mobile subscribers from 22,318,610 at the end of September 2010. Similarly, mobile phone penetration has been growing steadily over the quarters. At the end of the quarter being reported, the penetration of mobile service reached 63.2 per 100 inhabitants from 55.9 per 100 inhabitants in the last quarter of the year 2010 (CCK, 2011). The quarter under review recorded 2,935,223 new mobile subscribers joining the four mobile operators in Kenya representing 12.0 per cent growth. With a subscription market share of 69.9 percent, Safaricom Limited remained on top of the three other operators and registered 736,777 new subscribers in its network between October and December 2010. Airtel with a market share of 15.2 percent was ranked second and had 814,708 new subscribers followed by Orange with a market share of 8.5 percent netting 972,928 new users within the quarter. Essar Telecom with a market share of 6.4 percent added 125,868 new subscribers to its network. The significant growth could be attributed to massive promotion and marketing activities by all the mobile operators a factor that could have contributed to increased subscriptions.

For most supermarkets, the choice of owning a mobile phone rather than a landline is affected by many factors, ranging from the failure of Kenya's telephone corporation to deliver on its universal access obligations, a more liberal regulation environment, and increased competition in the telecommunication sector (Mureithi,2005), to the users' perception of convenience and affordability of the mobile phone. Penetration of the cell phone is high among supermarkets in Kenya; Mureithi (ibid.) found in an industrial cluster in Nairobi that 93.8 per cent of the entrepreneurs owned cell phones, in contrast to 29.7 per cent who used fixed lines. Factors that affected decisions to own a mobile phone rather than a landline included the ability to communicate anywhere, anytime, and subsequent faster sales of products, among other perceived benefits.

In a study carried out by Wanjira Munyua and Mureithi in 2008, most of the respondents felt that the use of the mobile phone had improved their business's performance through their ability to integrate business and family issues. They could also organize social meetings, such as those with women's groups, through features such as the calendar and phone reminders. The mobile phone allowed them to have a sense of control, even when away from their business premises, and it improved their networks with friends and clients, as well as providing the ability to transfer money through the new service called *sambaza* credit (sharing of airtime). When asked why they purchased a mobile phone in the first place, most of the respondents spoke of encouragement from their male partners, spouses, mothers and friends. Asked what the challenges were in using the mobile phone, the women entrepreneurs cited the high costs of operating a cellular phone in Kenya, as well as concerns regarding instances where spouses and male partners sought to find out the contents of some of the conversations conducted on the phone. Some of the women felt that there was a conditional benefit of the mobile phone owing to intrusion on their privacy. When technology like the mobile phone comes into the domestic sphere it potentially brings the world with it.

## **2.4 The Concept of Organizational Performance**

According to Richard et al. (2009) Organizational performance encompasses three specific areas of firm outputs: financial performance, product market performance, and shareholder return. The term 'organizational performance' is used in three time- senses - the past, present, and the future. In other words, performance can refer to something completed, or something happening now, or activities that prepares for new needs. Profitability, for example, is often regarded as the ultimate performance indicator, but it is not the actual performance. The actual performance occurred sometime back - first with decisions and then the actions that followed the decisions. Profit is therefore an indicator of previous performance. In this sense, performance is the outcome or 'end'.

There is a greater need to evaluate the performance of supermarkets within Nairobi in view of this effect of mobile telephony. The primary purpose behind this evaluation is to improve performance. Independently, there are several reasons why supermarkets may need to evaluate their performance. The first and the major reason is to evaluate how well a supermarket is performing. To evaluate performance, managers need to determine what an agency is supposed to accomplish (Kravchuk & Schack 1996). To formulate a clear, coherent mission, strategy, and objective. Then based on this information choose how you will measure those activities. An enhancement of business organization performance through the use of mobile technologies will depend on management's recognition of the following functions: setting objectives, establishing policies with which to work towards objectives, assign responsibilities and provide for coordinated action, selecting and developing key personnel, helping them adjust to change, motivating and stimulating them to think creatively and measuring progress and evaluating results.

Ansoff et al (1979) studies ninety-three large firms, all of which have made acquisition between 1946 and 1965 and their financial and sales measure. They found that managers were able to predict outcomes better than non-planners. The business organizations should adopt a competitive position, which will allow them to defend themselves against any forces in the industry environment. Harmnermesh (1993) proposed three broad generic strategies which if adopted by business organization will enable it to compete in a given business and position itself among its competitors. These strategies are: overall cost leadership (achieve lower cost than competitors; differentiation (creating something unique and superior) and focus; that is, selecting a particular buyer group or segment of the market as the basis for competition.

## **2.5 Use of Mobile Phone Technology to Enhance the Performance of Supermarkets**

Throughout the world billions of people are purchasing mobile phones. A 2007 International Telecommunication Union report estimated that 3.305 billion mobile phones were in use. Rapid adoption of this technology raised hopes that people in the developing world would benefit from it (Gamos, 2003). In Kenya the demand for mobile phones is huge and continues to expand; many mobile users do not own a landline at home or at work. A 2005/06 'Communications Commission of Kenya Annual Report' showed that landline subscriptions had continued to decline, remaining below 300,000 subscribers, whereas mobile telephone usage had risen from 4.6 million to 6.4 million subscribers during 2005/06. 'A substantial proportion of small businesses use mobile phones as their only means of communication' (Vodafone 2005: 51). This confirms that the mobile phone is used as a substitute for rather than to complement a landline (Donner 2007). A mobile phone is seen to offer advantages over fixed lines. A study of Kenyan women entrepreneurs revealed that the mobile phone had indeed affected the effectiveness and efficiency of businesses (Wanjira, Munyua, and Mureithi 2008).

### **2.5.1 Communication with Suppliers and Customers**

The mobile phone can act as the 'gatherer and disseminator's of information for micro-entrepreneurs. The findings showed that most supermarkets in the region are using the mobile phones for communicating with suppliers and the nature of use depended much on the economic capability of the individual SME (Donaghue, 2004). The findings explored the apparent conundrum on the expected responsiveness in the adoption of the mobile phone as an economic and entrepreneurship enabling tool, against the commonly belief that the mobile phone only contributes little to business building for the small business enterprises (supermarkets). It has been demonstrated that the mobile phone is regarded as a catalyst for productivity, networking and information gathering tool in the supermarkets, minimizing the need for travel or to have face-to-face meeting to complete a business deal (Romano, 1990). Mobile phones provide small businesses with the capability to contact new customers, suppliers or clients as it explained above, with short period of time. Mobile telecommunication contributes to equity by enabling the

disadvantaged, including the poor, isolated rural people, and the disabled, to obtain information that would otherwise be very difficult or impossible to access if it were to rely on the fixed-line phones that in most areas are not expected to be in place soon.

The findings underscore the important role of mobile phones in maintaining customer relationships are important for the survival of the business in this era of information and communication technologies. Mobile phones are used more often for keeping in contact with customers and clients compared to any other form of communication. The mobile phones telecommunication can be substituted for travel, resulting in significant savings in personnel time and travel costs. We therefore tend to believe that mobile phones usage in supermarkets is crucial for the betterment of the economic performance of the supermarkets and the society in general. Other facts remain unchanged that: although it is tempting to assume high levels of mobile phones use in expanding supermarkets, it can be difficult to separate the effects of new technology use from other factors and it should be understood that all fast-growing supermarkets are not necessarily high mobile phone users in their business (Locke, 2004). Therefore success of the supermarkets in their businesses as the return of mobile phones usage will depend primarily on the continual perception that mobile phones are better economic enabling tools.

### **2.5.2 Market Solicitation**

Poor transportation links between urban and rural areas prevent businesses from accessing information that is becoming increasingly important in the production and marketing of commodities. Today, with mobile phones, rural communities and small businesses once separated geographically and time wise has developed new virtual relationships uninhibited by conventional notions of distance and road or railway transportation links. Among the economic benefits of mobile phones is the opportunity the technology offers for producers to track price information and gaining new marketing opportunities. Increased mobile connectivity improves access to information (Vodafone, 2005). As the findings indicated, the use of mobile phones helps supermarkets to obtain better prices of their products. Mobile phones are used to improve coordination of transportation of the goods from the suppliers and in finding new market places for their products. Moreover, timely delivery of information on current market prices is critical for high value perishable agricultural products such as fresh fish, fruit and flowers.



Improved coordination of transportation is also important in the marketing of perishable products (Saunders et al, 1994). As for the case of supermarkets in Morogoro, the sales revenue of most supermarkets increased as the result of mobile phones usage, this indicates that mobile phones use by supermarkets in business transactions have a positive impact.

The costs of making calls have remained an inhibitor that hinders the use of mobile phones in supermarkets to solicit more markets for their products. But in general the supermarket owners were able to use the mobile phones to search for new markets and the above results shows the level of achievement. Many supermarkets operators has realized the benefits of using mobile phones in reducing information asymmetry in which they have gained higher returns in producing for the local markets as well as to the external markets.

### **2.5.3 Social Cohesion**

Social cohesion can be defined as “an instantiated informal norm that promotes cooperation between two or more individuals”. The mobile phones are used to bring people together in various social interactions. The findings showed that the same mobile phones used for both business and personal or social issues the only difference is the time spent on business and personal communications. It has been pointed out that initially the mobile phone serves as a tool for business management but as the times goes on mobile phones serve as a tool for social connection, in other words, managing social relationships (Bugeja, 2005). It is not possible to understand the use of mobile technologies in supermarkets strictly from a business perspective, without considering the social interaction, since these two parts are highly intervened.

### **2.5.4 Operational Cost Reduction**

Within the explored supermarkets it has been revealed that one of the advantages they gained through the use of mobiles is the reduction of transportation costs, this leads to household expenditure drops and consumer surplus increase. Based on the finding described in the previous sections, improvements in the information flows through the use of mobile phones between buyers and sellers allow for the efficient trading of information without the travelling. This is particularly significant and extremely crucial in rural areas where business men and women would have needed to travel to urban areas to check for demand and negotiate on price, all these business issues are now conducted

on the mobile phone. Moreover, in certain circumstances, mobile phones can allow the 'middle man' to be cut out (Jenson, 2001).

Economic activities in the research area depends heavily upon agriculture and the extraction and processing of natural resources for development, therefore distance from markets where the goods are sold has traditionally been an obstacle for entrepreneurs to access business information. Poor transportation links between urban and rural areas prevent Supermarkets operators from accessing information that is becoming increasingly important in the production and marketing of products (Donner, 2004). The utilization of mobile phones offer promising opportunities for producers and retail sellers to track price information, both in rural as well as urban areas. Productivity gains from the utilization of mobile phones can also be substantial for reducing operations costs and improving revenue. This can be realized through a range of factors, for example, the number of workers reliant on a mobile phone and the revenue or time savings that making use of mobile phone may come up with. Mobile phones may reduce the cost of operating and starting up businesses. Improvements in the information flows between buyers and sellers, allow for the exchange of information without travelling and this is the major step that is being utilised by the supermarkets in the research area to reduce the operations costs (Deloitte, 2008).

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter sets out various stages and phases that were used in achieving the study's objectives. The chapter therefore includes research design, population of study, data collection and data analysis.

#### **3.2 Research Design**

This study was aimed at determining the importance of mobile phone usage by Supermarkets in the CBD Nairobi Kenya. According to Cooper and Schindler (2003), a study concerned with finding out who, what, which, and how of a phenomenon is a descriptive study which was the concern of the study.

#### **3.3 Population of Study**

The population for this study comprised of 42 supermarkets chains within the Nairobi CBD in Kenya. The study focused on Nairobi due to its relatively high mobile phone users. Supermarkets in Nairobi were also greatly updated on the importance of mobile phones. There was no sampling since the entire population of supermarkets within the Nairobi CBD was studied, hence a Census study.

#### **3.4 Data Collection**

Primary data was collected using semi-structure questionnaires. No pilot study was conducted. The questionnaires were however accessed and approved by the supervisor. The researcher collected data by personally interviewing senior or chief managers heading departments, and divisional managers heading divisions. The questionnaire had two sections. The questions in the first section seek to find out general information about the respondents while the questions in the second section seeks to find out information about the use of mobile phones in supermarkets where these respondents work.

### **3.5 Data Analysis**

To achieve the study's descriptive statistics was used to summarize and organize the data. The frequencies were converted to percentages to facilitate comparisons. Measures of central tendencies like standard deviation were applied for generalizations. Calculations of parameter estimates, descriptive statistics and frequencies of various variables were obtained by use of the computer software. The findings were presented using tables.

## CHAPTER FOUR

### DATA ANALYSIS, FINDINGS AND DISCUSSIONS

#### 4.1 Introduction

This chapter covers data analysis, discussion and the findings of the research. The data was summarized by means of statistical averages (including rankings) and presented in the form of tables. Out of the 42 questionnaires distributed, 30 were completed and returned representing a response rate of 71.4%.

#### 4.2 Demographic Characteristics

The respondents were asked to indicate the period of operation in their respective supermarkets. The results are given in Table 4.1 below.

**Table 4.1 Experience with Current Supermarket**

Years of Operation	Frequency	Percent	Cumulative Percent
Below 5 years	6	20.0	20.0
5 - 10 years	8	26.7	46.7
10- 15 years	5	16.7	63.3
More than 15 years	11	36.7	100.0
Total	30	100.0	

Source: Primary Data

From the findings, 20% of the respondents indicated they had been working in their current supermarket for less than 5 years, 26.7% of the respondents have been in supermarket business for between 5 to 10 years, 16.7% of the respondents have been working in supermarkets for between 10 to 15 years while the remaining 36.7% of the respondents have been in there for over 15 years. It was therefore established that most of the respondents have been in supermarkets for more than 15 years.

Respondents were asked to indicate the ownership of the current supermarket. The results are shown in table 4.2.

**Table 4.2 Ownership**

Type of Ownership	Frequency	Percent
Locally Owned	24	80.0
Foreign Owned	3	10.0
Both Locally and foreign owned	3	10.0
Total	30	100.0

Source: Primary Data

From the findings, most of the supermarkets (80 %) were owned by local investors, a small number of supermarkets (10%) are owned by foreign investors while the remaining 10% of our respondents are owned by both local and foreign investors. The research also sought to establish how managers, heads of departments and supervisors perceived their business positioning against competitors in the same market sector. Their responses are shown in Table 4.3 below

**Table 4.3 Competitiveness of Supermarkets**

Perceived Level of Competitive	Frequency	Percent
Very competitive	24	80.0
Fairly competitive	5	16.7
Not competitive	1	3.3
Total	30	100.0

Source: Primary Data

As indicated in Table 4.3, 80 % of the respondents considered their supermarket very competitive, while a very small percentage (3.3%) considered their supermarket uncompetitive.

### 4.3 Usefulness of Mobile Phone to Supermarkets

The respondents were asked to give the usefulness of mobile phone in the day to day running of supermarkets in Nairobi CBD. The findings are shown in Table 4.4.

**Table 4.4 Usefulness of Mobile Phone to Supermarkets**

Level of Perceived Usefulness	Frequency	Percent	Cumulative Percent
Critical	3	10.0	10.0
Very useful	20	66.7	76.7
Useful	6	20.0	96.7
Not Important	1	3.3	100.0
Total	30	100.0	

Source: Primary Data

As shown in Table 4.4, 66.7% of the respondents indicated that a mobile phone is very useful to their operations, 10 percent of them said that a mobile phone is critical. A very minimal percentage (3.3%) of the respondents considered a mobile phone as not important to their supermarket. Respondents were also asked to indicate the frequency and extent to which they used mobile phone in their supermarkets. Table 4.5 below is a summary of their responses.

**Table 4.5 Extent of use of the Mobile Phone in Supermarkets**

Intensity of Use	Frequency	Percent	Cumulative Percent
Always	11	36.7	36.7
Regularly	15	50.0	86.7
Sometimes	3	10.0	96.7
Never	1	3.3	100.0
Total	30	100.0	

Source: Primary Data

As shown in Table 4.5, 50% of the respondents used the mobile phone regularly in their supermarket, 36.7% always used the mobile phone in supermarket, 10% used the mobile

phone once in a while, and 3.3% did not use the mobile phone in their supermarket. The research also sought to establish the challenges encountered during the use of mobile phone in supermarkets. It was found out that only 20% of the respondents encountered problems while using mobile phones in their business while 80% of the respondents did not experience problems while using mobile phones in their business.

#### **4.4. Mobile phone use and performance of supermarkets**

In effort to establish the relationship between mobile phone use and performance in supermarkets, 76.7 % of the respondents said that the use of the mobile phone had improved the performance of the super markets while 23.3 % of them said that use of the mobile phone in their supermarket had not improved the performance of the super markets. 53.3% of the respondents indicated that using a mobile phone in their supermarket resulted in increased profits, while 46% of the respondents did not agree that use of mobile phone resulted in increased profits in their supermarket. 60% of the respondents indicated that use of the mobile phone in their supermarket resulted in improved work performance by the staff, while 36.7% of the respondents indicated that use of the mobile phone had no significance on the volume and quality of performance of their staff. 75.3% of the respondents indicated that use of the mobile phone in their supermarket had improved the way they ordered and goods from manufacturers and traders, while 20% of the respondents indicated that the use of the mobile phone had no significance in the way they ordered their stocks.



## **CHAPTER FIVE**

### **SUMMARY, CONCLUSION AND RECCOMENDATIONS**

#### **5.1 Summary**

The primary objective of this study was to examine the extent to which the use of mobile phone has influenced the performance of supermarkets in the Nairobi CBD. The research employed the use of questionnaires to collect data. The study found out that the use of mobile phone is valuable in the day to day operations of supermarkets, with 66.7% of respondents saying mobile phone use is critical for their business.

#### **5.2 Conclusions**

This research has come up with interesting findings on the relationship between mobile telephony use in Supermarkets within the Nairobi CBD and the resulting enhanced business performance. Theoretically and practically, it has contributed to the understanding of how supermarket proprietors and managers integrate voice calls, M-pesa, SMS, and multimedia messages, to reduce operational costs, enhance flow of information, and to increase operational flexibility, all resulting in increased profits. Overall, the use of mobile telephony services in supermarkets has increased the level of productivity and competitiveness, and provides an interactive platform where vital business information can be exchanged instantly and affordably. The research in this study shows a strong influence of the integration of mobile telephony services into supermarket on perceived enhanced business performance. If the use of mobile phones in supermarkets is blended with due diligence and common business values such as better entrepreneurial skills, customer orientation and the commitment to grow the business, as well as good business environment, then the mobile phone can be a powerful tool for enhancing business performance.

#### **5.3 Limitation of the Study**

Problems noted included the fact that some supermarkets managers were reluctant to provide information citing many questionnaire they receive from various students and research organizations and fear that the information provided can be used by their competitors. Time was also a constraint as a lot was expected within a short period of time.

Mobile usage is still a new technology and getting literature material was difficult task hence reliance of internet material. Regardless of these constraints the study was successful in establishing the impact of the use of mobile phone on the performance of supermarkets, particularly its ability to influence operational costs, integration of the internal and external business environments, operational flexibility and communication with staff, suppliers, creditors, and customers.

#### **5.4.1 Recommendations with Policy Implications**

Foremost, based on the research findings, the impact of mobile telephony services is positively enormous on the performance of supermarkets within Nairobi CBD. This implies that incentives aimed at growing mobile penetration and use should be a strategic priority and policy makers like the government and other non-governmental organizations (NGO) must provide the support needed by micro-businesses to survive.

Secondly, supermarkets have a collective role of lobbying mobile service providers for tailor-made innovations to further enhance their performance. As part of short-term measures, they also need to embrace large-scale use of mobile phone to enhance their performance further, especially by contacting customers more regularly to inform them of ongoing promotions and special offers. This will enhance their image and improve customer satisfaction. Supermarkets can also use the mobile phone as a means of carrying out research, especially where customers can respond to research questions via free callback or text message service. This will enable supermarkets to get direct and more immediate response from customers, measure the levels of customer satisfaction, as well as effect required changes.

Thirdly, mobile phone payment service has been widely embraced by customers of all walks across the country. M-pesa, Airtel Money, and YuMoney have enabled people to enjoy the convenience of paying for goods across the counter without paper in Uchumi and Naivas supermarket chains. However this is only a small fraction of supermarkets in Nairobi and Kenya in general. Other supermarket chains should embrace this means of payment thus passing the benefit of convenience to their customers. In return, these measures would encourage frequent shopping by customers at any time of the day and further improve the supermarkets profits.

#### **5.4.2 Recommendations for Further Research**

This study sought to find out the impact of the use of the mobile phone on the performance of the supermarket as an organization, and did not attempt to establish the impact of use of the mobile phone on supermarket staff. Since motivation of staff, better tools of trade, and better flow of communication has huge implications on the volumes and quality of work by staff, further studies should be conducted to provide insight into the right manner of mobile phone usage by staff to enhance the performance of supermarkets. This study also found out that supermarkets encounter various problems while using the mobile phone, including inconveniences resulting from mobile phone service system failures, and occasional interruption of service. Further studies should be conducted to identify viable solutions to these challenges.

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**APPENDIX 1**  
**COVER LETTER**

**Saturday 3<sup>rd</sup> September, 2011**

To Whom It May Concern,

Dear Sir /Madam,

**REF: MBA RESEARCH PROJECT**

I am a student at the University of Nairobi pursuing a master's degree in business administration. I am currently carrying out a research on the influence of mobile phone usage to Supermarkets in Nairobi Kenya as part of academic requirements.

I would be grateful, if you could spare some time from your busy schedule and fill the attached questionnaire.

The information you provide will be treated with utmost confidentiality and will be solely for the research project; however the findings of this study can be availed to you upon request on completion of this research.

Thank you in advance for taking your time to fill out this questionnaire.

Yours faithfully,

Keziah Njoki Wambui

## **APPENDIX 2**

### **LIST OF SUPERMARKETS**

1. Bestly Supermarket(Ronald Ngala)
2. Chandarana Supermarket(Ngara)
3. Downtown Supermarket(Timboroa Road)
4. East Matt Supermarket(River road)
5. Electrical Supermarket(Globe Cinema branch)
6. Gikomba Matresses(Gikomba market)
7. Home Choice Supermarket(Ngara branch)
8. Ibrahim Supermarket(Moi Avenue Street)
9. Jack and Jill Supermarket(OTC)
10. Kiri Supermarket(Kilome Road)
11. Naivas Supermarket(Donholm branch)
12. Nakumatt Supermarket(Haille Sellasie branch)
13. Nakumatt Supermarket(Moi Avenue branch)
14. Nakumatt Supermarket(Lifestyle branch)
15. Nakumatt Supermarket(Ronald Ngala branch)
16. Paris Supermarket(Ukwala Road)
17. Purvi Supermarket(Gikomba)
18. Tumaini Supermarket(Belle view branch)
19. Tumaini Supermarket(off Jogoo Road)
20. Tuskys Supermarket(Beba Beba branch)
21. Tuskys Supermarket(Daima branch))



22. Tuskys Supermarket(Imara branch)
23. Tuskys Supermarket(Pioneer branch)
24. Uchumi Supermarket(Mombasa Road)
25. Uchumi Supermarket(Off Jogoo Road)
26. Ukwala Supermarket(Hakati Road branch)
27. Ukwala Supermarket(Mega branch)
28. Ukwala Supermarket(Tom Mboya branch)
29. Uncle Jims Supermarket(Off Juja Road)
30. Westies Supermarket(Nairobi West branch)

## **APPENDIX 3**

### **QUESTIONNAIRE**

Pease answer all questions as directed

#### **SCETION ONE: General particulars.**

1. For how many years has this supermarket been in business?
  - a. Below 5 years
  - b. 5-10 years
  - c. 10-15 years
  - d. More than 15 years
2. How many staff does your supermarket have?
  - a. Below 10
  - b. 10-20
  - c. 20-50
  - d. More than 50
3. Who are the owners of this supermarket?
  - a. Locally owned
  - b. Foreign owned
  - c. Both locally and foreign owned

#### **SECTION TWO: Uses of Mobile Phones**

4. Do you consider this supermarket competitive? ( Please tick where applicable)
  - a. Very competitive ( )
  - b. Fairly competitive ( )
  - c. Not competitive ( )
5. How important is a mobile phone to this supermarket? ( Please tick where applicable)
  - a. Critical ( )
  - b. Very useful ( )
  - c. Useful ( )
  - d. Not important ( )

6. To what extent do you use a mobile phone in this supermarket? ( Please tick where applicable)

- a. Always ( )
- b. Regularly ( )
- c. Sometimes ( )
- d. Never ( )

7. Have you experienced trouble while using a mobile phone in your business? ( Please tick where applicable)

- a. Yes ( ) No ( )

b. If Yes, please specify

.....  
.....  
.....  
.....

8. Has the use of mobile phone helped improve the performance of your supermarket? (Please tick where applicable)

- a. Yes ( ) No ( )

b. If Yes, please specify

.....  
.....  
.....  
.....

9. Has the use of mobile phone resulted in increased profits for your business? ( Please tick where applicable)

- a. Yes ( ) No ( )

b. If Yes, please specify

.....  
.....  
.....  
.....

10. Has the use of mobile phone in your business resulted in improved work performance by your staff? ( Please tick where applicable)

a. Yes ( ) No ( )

b. If Yes, please specify:

.....  
.....  
.....  
.....

11. Has the use of mobile phone helped improve the way you order and deliver your goods? (Please tick where applicable)

a. Yes ( ) No ( )

12. In your view, what is the importance of using a mobile phone in business?

.....  
.....  
.....  
.....

13. Any other comments about the use of a mobile phone in business?

.....  
.....  
.....  
.....

Thank you for your response.