COMPETITIVE STRATEGIES USED BY SMALL SCALE INFORMATION TELECOMMUNICATION FIRMS IN NAIROBI

BY

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DECLARATION

This Management Research Project is my original work and has not been submitted for a degree in any other university.

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This Management Project has been submitted for examination with my approval as the University Supervisor.

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DEDICATION

To my son and daughter, Waweru and Wairimu for their understanding that mum had to attend classes even when they needed her company so badly.

To my husband Patrick, for the encouragement and support he gave me to move on with my career.

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I am very grateful to my lecturers at the University of Nairobi and other members of staff who supported me in one way or other during my study period. And to all my student colleagues with whom we interacted to make the learning a lot easier and interesting.

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To my supervisor, Jackson Maalu for his commitment and stewardship in the process of working on the project. Thanks for being my mentor.

May God bless you all abundantly.

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ABSTRACT

The objectives of this study were to determine the competitive challenges that small scale Information Telecommunication (IT) firms face and how these challenges affect them, and to determine the strategies that small scale Information Telecommunication firms in Nairobi adopt to deal with the competitive challenges that they face.

A sample of 62 small scale ICT service providers was drawn from enterprises operating within Nairobi's Central Business District (CBD) along Uhuru Highway, Haile Selassie Avenue, Tom Mboya Street and University Way (see attached map of Nairobi Central Business District). Most of the enterprises are located in the area covering Koinange Street, Press Lane, Moi Avenue, and Tom Mboya Street.

This study found that small scale telecommunication firms in Nairobi have adopted three major strategies, namely: giving customers more value, being low cost producers, and selling differentiated products. These strategies show that firms compete on the basis of low price and catering to a price-conscious market segment. These strategies are targeted at meeting needs of price-conscious customers. The firms employ both low price strategy and cost strategies

The study found that firms have generally not adopted focused differentiation as a strategy (only one-third have). This is the strategy that seeks to provide high perceived value justifying a substantial price premium.

The study found that problems of infrastructure are the most serious to small scale firms operating in Nairobi. High rents in the central business district, irregular supply

of electricity and inadequate capacity in telephone lines, together with problems of the licensing environment pose great challenges. Market dynamics and high cost of ICT equipment are also a serious challenge. Stiff competition in the market place, coupled with a rapidly changing market for ICT tools and services are other challenges that small scale telecommunications service providers in Nairobi have to contend with.

This study has shown that firms within the CBD also face major infrastructure related challenges arising from an unfriendly business climate. It is recommended that governmental authorities create a favourable environment characterized by adequate telephone lines, a simpler licensing regime, and adequate supply of electricity. Efforts to reduce rents (through, for example, creation of a preferential rent-free zone) would greatly simplify business operations and reduce the challenges.

CHAPTER ONE: INTRODUCTION

1.1 Background

1.1.1 The Concept of Strategy

The struggle to gain competitive advantage in the marketplace is very important to all business organizations intent on gaining a foothold in the market. In order to secure cost, market, or other leadership advantages it is important that organizations craft workable strategies. The success or failure of the organization may well depend on how strategies have been crafted and applied. Those organizations that thrive have found the secret to crafting and implementing superior strategies while those that fail to hold their place in the battlefield of the marketplace perish.

Strategy has variously been defined as management's game plan for growing the business, staking out a market position, attracting and pleasing customers, competing successfully, conducting operations, and achieving targeted objectives (Thompson, et al, 2005). The company's strategy therefore indicates the choices its managers have made about how to attract and please customers, how to respond to changing market conditions, how to compete successfully, how to grow the business, how to manage each functional piece of the business and develop needed capabilities, and how to achieve performance targets (ibid).

A consequence of strategic decisions is that they are likely to be complex in nature. They also involve aspects of uncertainty since the time line under consideration is in the future and managers have to incorporate many unknowns. Strategic decisions also call for change. This is a problematic organizational issue since many companies do not usually welcome change, particularly where the organization has been used to operating in certain set ways.

Many organizations generally desire to provide a product or service that is distinctive from what competitors are offering or at developing competitive capabilities that rivals can't quite match. According to Thompson (2005) what separates a powerful strategy from an ordinary or weak one is management's ability to forge a series of moves, both in the marketplace and internally, that makes the company distinctive, tilts the playing field in the company's favour by giving buyers a reason to prefer its products or services, and produces a sustainable competitive advantage over rivals. With a durable competitive advantage, a company has good prospects for winning in the marketplace and realizing above-average profitability. Without competitive advantage, a company risks being beaten by stronger rivals and or locked into mediocre financial performance.

Four of the most frequently used strategic approaches to setting a company apart from rivals and achieving a sustainable competitive advantage are: Being the industry's low cost-cost provider, out competing rivals based on such differentiating features as higher quality, wider product selection, added performance, better service, more attractive styling, technological superiority, or unusually good value for the money, focusing on a narrow market niche, and developing expertise and resource strengths that give the company competitive capabilities that rivals can't easily imitate with capabilities of their own. Thompson (2005) has contended that most companies recognize that winning a durable competitive edge over rivals hinges more on building competitively valuable expertise and capabilities than it does on having a distinctive product. Products can easily be copied. However, it is much harder for rivals to duplicate experience, know how, and specialized competitive capabilities that a company has developed and perfected over a long period of time.

1.1.2 Competitive Challenges of Small Scale Businesses

Small scale enterprises face unique competitive strategic challenges arising principally from their operations. Small businesses, more often than not, operate in a single market or a limited number of markets. In most of the cases they operate with a limited range of products or services. The scope of the operation is therefore likely to be less of a strategic issue than it is in the case of larger organizations. Johnson and Scholes (1999) also point out that small businesses are unlikely to have a central service department to undertake complex analysis and market research. Instead, this work is done by senior managers themselves, perhaps even the founder of the firm, who has direct contact with the market place and whose experience is therefore very influential. The owner's role in the management of small scale enterprises is very significant. The owner may have his strategies in the head and no one else knows about them in the organization.

Small scale enterprises face significant competitive pressures. Because of the scale of their operations, such organizations are likely to be private. As such, issues of raising capital are bound to be significant. Combined with the legacy of the owner's influence on the competitive strategy to be adopted, the choice of what strategy to undertake may be quite limited.

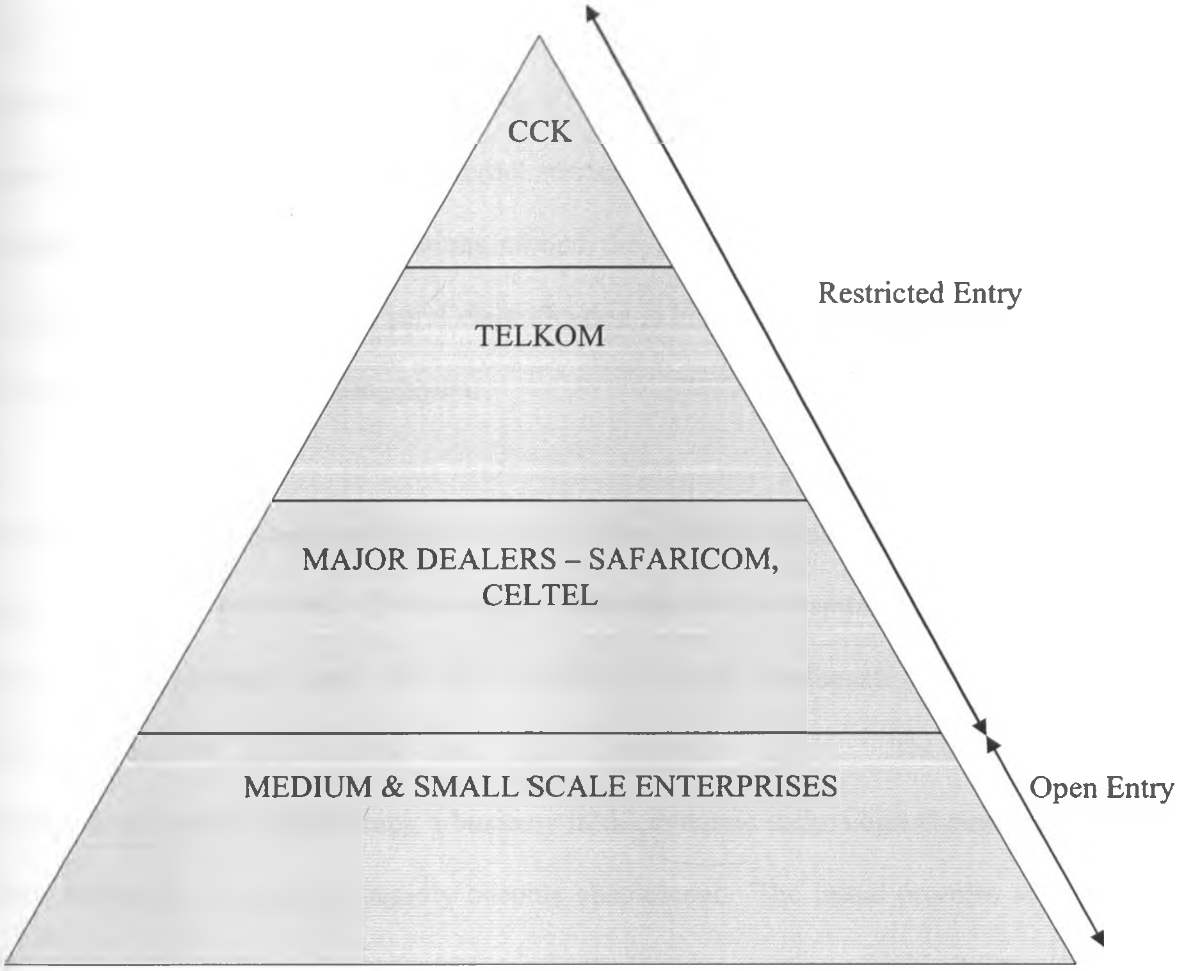
1.1.3 ICT in Kenya and its role in economic development

The ICT industry in Kenya is characterized by stiff competition. This competition is caused by low barriers of entry into the industry at the top and open entry at the lower level as illustrated here below. In fact, as far as small scale enterprises are concerned, all that is required to get into business is adequate capital and government licenses. The type and level of competition is a lot different for the bigger players. These have to pay a large amount of money, often running into millions of dollars, to secure operational licenses. As such, there are three major players at the national level. These are the state-owned Telkom Kenya Ltd, Safaricom and Celtel Kenya. The latter two provide cellular telephony and associated value added services.

The smaller entities typically restrict themselves to selling, at the retail level, products of the three large players. The major players also make it easy for the small scale operators to start up as their outlets in the market. For example, Celtel and Safaricom have a strategy of licensing as many outlets, a situation which increases competition among all of them. There is also ease of exit from the industry, but the high profits which can be made encourage many enterprises to try to gain a foothold rather than quit altogether.

The state of ICT infrastructure in Kenya, particularly at the retail level, is represented by a vibrant and dynamic small scale sector that provides voice and data services at a profit. Majority of these enterprises are located in Nairobi- the political, economic, and technological capital of Kenya. Most have 10-50 employees and in many cases, the owner is also an employee with formal premises for business operations.

The SSEs have to contend with the dynamic nature of the industry in which they operate. Continuous innovation has spawned many value added products and retailers have to keep up to date with all these developments. It has become possible, for example, to top up mobile phones with air time using new technologies in the cellular telephony industry. Mobile telephony has also made it possible to transact banking using cell phones. Because of the fast-changing nature of technology, ICT related equipment becomes obsolete very fast and small enterprises have to secure financing to upgrade to what the market wants or else risk becoming redundant.



1.2 Statement of the Problem

The role of ICT in economic development, particularly in less developed countries, has received academic attention from various authors. Woherem (1993) has stated that the use of IT systems is imperative if African countries are to industrialize and increase the standard of living of their people. Small scale enterprises operating in the ICT sector promise great potential in bringing such services to majority of the population thereby ushering economic and social development, creation of employment etc. As such, they need all the support they can get from the government and from business environment in order to thrive. They are a great potential in opening up the rural areas through communication and business operations e.g if information telecommunication kiosks are opened up in the rural towns with internet services, this would attract players form the different sectors to start up operations around the kiosks like is happening in India. Government support by way of rural electrification is hence required since there is ease of entry into the industry by the players.

Unfortunately, small scale providers of Information Telecommunication services face many competitive problems. These include challenges of low capitalization, a poor fit between ICT systems and the socio-cultural milieu, inadequate or inefficient telecommunication infrastructure and erratic electricity supply. They also face challenges connected with running a business in the dynamic technological environment where solutions and products rapidly become obsolescent. The initial promise of high profits also attracts many players into the industry thereby creating a highly competitive situation, a position which erodes profit gains.

The activities of the other stakeholders within this sector have a significant impact on the way small scale Information Telecommunication services providers carry out their businesses. They must be constantly on the lookout for changes in the industry and find ways of responding to them in a competitively superior fashion if they are to remain profitable.

The dynamic nature of the ICT industry characterized by continuous innovation, poses special challenges to small scale enterprises which often brings the SSEs face to face with severe competition from the industry giants. Small scale enterprises also have to confront the threat of obsolescence to ICT related equipment and the competitive pressures associated with ease of entry and exit out of the industry by fellow small scale operators.

Because of the importance of this sector, and the even greater economic importance of small scale Information Telecommunication service providers, it is necessary to consider the competitive challenges such providers face. Accordingly, this study seeks to establish competitive challenges that have impacted on Small Scale Information Telecommunication service providers in Nairobi and the strategies they are adopting to deal with the challenges.

1.3 Objectives of the Study

The objectives of this study were:

1. To determine the competitive challenges that small scale Information Telecommunication firms face and how these challenges affect them.

2. To determine the strategies that small scale Information Telecommunication firms in Nairobi adopt to deal with the competitive challenges that they face.

1.4 Significance of the Study

The study will break new ground in understanding the challenges that face this critical area of economic development. Since not much research has been done in this field, insights generated will be useful in informing the government and other stakeholders in their efforts to integrate ICT to the socio-economic development of Kenya. The study will furnish key players in the rapidly expanding ICT sector with information on competitive challenges as a first step towards nurturing and establishing ICT in its rightful role in accelerating economic development.

CHAPTER TWO: LITERATURE REVIEW

2.1.1 The concept of strategy

Strategy defines the organization's purpose, goals, priorities, objectives and deals with the organizational competitive advantage. It also defines the business of an organization (product/market scope). Strategy is a plan, ploy, pattern, position and perspective (Mintzberg, 1985).

The first step towards crafting adequate responses to market dynamics is a thorough understanding of the environment. This requires thinking strategically about two aspects of the company's situation, namely: a) the industry and competitive environment in which it operates and the forces acting to reshape this environment, and b) the company's own market position and competitiveness, its resources and capabilities, its strengths and weaknesses all with respect to its rivals and the available opportunities.

Developing a strategy requires that an organization's managers appraise its external and internal situations, evaluate the most promising strategy options, and finally select the best strategy and business model (Thompson, et al,2005). Unfortunately, it is not easy understanding the environment. This is because the business environment is made up of many different influences, raising difficulty in understanding the ensuing diversity and how this can influence strategic decision-making. Also, there is difficulty in integrating the role of uncertainty in strategic decision-making. The uncertainty introduced by the future, the pace of technological change and the speed of global communications make it nearly impossible for managers to catch up with resulting changes. Johnson and Scholes (1999) have pointed out that managers are no different from other individuals when it comes to the issues of coping with complexity. Accordingly, managers tend to simplify such complexity by focusing on aspects of the environment which, perhaps, have been historically important to their organization or those which confirm prior views. Such an action is not the result of perverse managerial behaviour. It is the natural reaction of everyone faced with complexity. Managers must, therefore, find ways of breaking out of the tendency towards oversimplification while still achieving useful and usable analysis.

To gain understanding of the environment, managers must be wary against gathering too much information, much of which might not be useful. They should, instead, be focused. The managers can use certain strategic tools (such as scenario and PEST analysis) to single out the most important environmental factors. Johnson and Scholes have suggested a framework that encompasses four steps, namely: environmental scanning to get an initial view of the nature of the organization's environment in terms of how uncertain it is, auditing environmental influences, consideration of the immediate organizational environment (for example by using Porter's Five Forces Model), and analysis of the organization's competitive position as discussed later in this paper.

2.1.2 Understanding Competitive Environment Using Porter's Five Forces Model

Porter (1979) developed a model for understanding the competitive environment. It takes into account the fact that the character, mix, and subtleties of the competitive forces are dynamic. The model is based on the assumption that the state of competition in an industry is a composite of competitive pressures operating in five areas of the overall market, namely: a) competitive pressures associated with the market maneuvering and jockeying for buyer patronage among rival sellers in the industry; b) competitive pressures associated with the threat of new entrants into the market; c) competitive pressures coming from the attempts of companies in other industries to win buyers over to their own substitute products; d) competitive pressures stemming from supplier bargaining power and supplier-seller collaboration; and e) competitive pressures stemming from buyer bargaining power and seller-buyer collaboration. Porter further argues that a firm's ability to profit depends on its ability to influence the competitive forces in the industry (depending on the five forces).

Rivalry among Competing Sellers is the strongest of the five competitive forces. It arises from the maneuvering and jockeying for buyer patronage that goes on among rival sellers of a product or service. It is based on the understanding that the market is a competitive battlefield where it is customary and expected that rival sellers will employ whatever resources and weapons they have in their business arsenal to improve their market positions and performance. The managerial challenge is to craft a competitive strategy that allows the company to hold its own against rivals and generally strengthen the company's standing with buyers, deliver good profitability, and produce a competitive edge over rivals.

Unfortunately though, when one firm makes a strategic move that produces good results, its rivals often respond with offensive or defensive countermoves, shifting their strategic emphasis from one combination of product attributes, marketing tactics, and competitive capabilities to another. This pattern of action and reaction, move and countermove, adjust and readjust, is what makes competitive rivalry a combative, ever-changing contest. The market battle for buyer patronage in an industry takes on a life of its own, with one or another rivals gaining or losing market momentum according to whether their latest strategic adjustments succeed or fail (Thompson, 2005).

Threat of Entry of New Competitors to an industry will depend on the extent to which there are barriers to entry. These mainly revolve around the issue of economies of scale, capital requirement of entry, access to distribution channels, cost advantages independent of size, expected retaliation, legislation or government action, and differentiation.

Johnson and Scholes (1999) contend that barriers to entry differ by industry and by product/market so that it is impossible to generalize about which are more important than others. It is only important to establish that there are barriers, the extent to which they are likely to prevent entry in the particular environment concerned, and the organization's position in all this. This requires attempting to find out if the company is trying to prevent the competition of entrants, or if it is attempting to gain entry to the marketplace.

Competitive Pressures from Sellers of Substitute Products emanates from the actions of companies in a closely adjoining industry whenever buyers view the products of the two industries as good substitutes. The strength of the competitive pressures from the sellers of substitute products depends on three factors: a) whether substitutes are readily available and attractively priced, b) whether buyers view the substitutes as being comparable or better in terms of quality, performance, and other relevant attributes, and c) how much it costs end users to switch to substitutes. Thus, the lower the price of substitutes, the higher their quality and performance, and the lower the user's switching costs, the more intense the competitive pressures posed by substitute products.

Competitive Pressures Stemming from Supplier Bargaining Power and Supplier-Seller Collaborations happens when the major suppliers to an industry have considerable leverage in determining the terms and conditions of the product they are supplying and they are in a position to exert competitive pressure on one or more rival sellers. The factors that determine whether any of the suppliers to an industry are in a position to exert substantial bargaining power include the following: a) whether the item being supplied is a commodity that is readily available from many suppliers at the going market price. In this case, suppliers have little or no bargaining power or leverage since industry members have the ability to source their requirement at competitive prices from any of several alternative and eager suppliers, b) whether a few large suppliers are the primary sources of a particular item. In this situation, the leading suppliers may have pricing leverage unless they are plagued with excess capacity and are scrambling to secure additional orders for their products.

In more and more industries, sellers are forging strategic partnerships with select suppliers in efforts to reduce inventory and logistics costs, speed the availability of next generation components, enhance the quality of the parts and components being supplied and reduce defect rates and squeeze out important cost savings for both themselves and their suppliers. The many benefits of effective seller-supplier collaboration can translate into competitive advantage for industry members who do the best job of managing supply chain relationships.

Competitive Pressures Stemming from Buyer Bargaining Power and Seller-Buyer Collaboration implies that whether seller-buyer relationships represent a weak or strong competitive force depends on whether some or many buyers have sufficient bargaining leverage to obtain price concessions and other favorable terms and conditions of sale, and the extent and competitive importance of seller-buyer strategic partnerships in the industry.

Buyers gain a degree of bargaining leverage when their number is small or if a customer is particularly important to a seller. The smaller the number of buyers, the less easy it is for sellers to find alternative buyers when a customer is lost to a competitor. The prospect of losing a customer not easily replaced often makes a seller more willing to grant concessions of one kind or another. Also if buyers' costs of switching to competing brands or substitutes are relatively low, it is relatively easy for buyers to switch from seller to seller at little or no cost and anxious sellers may be willing to make concessions to win or retain a buyer's business.

Partnerships between sellers and buyers are an increasingly important element of the competitive picture in business-to-business relationships. Many sellers that provide items to business customers have found it in their mutual interest to collaborate closely on such matters as just-in-time deliveries, order processing, and data sharing.

2.3 The Nature of Competitive Strategy in Information and Communication Technology Organizations

Like all other business organizations, ICT service providers face competitive challenges. The way in which they respond to these challenges will determine whether they are to survive and prosper or decline and perish. They have to adopt a competitive strategy best suitable to their circumstances. According to Porter (1980), competitive strategy is about being different. It means deliberately choosing to perform activities differently or to perform different activities than rivals to deliver a unique mix of value.

There are many routes to achieving competitive advantage. The common factor, however, is that all involve giving buyers what they perceive as superior value- a good product at a low price; a superior product that is worth paying more for; or a best-value offering that represents an attractive combination of price, features, quality, service, and other appealing attributes (Thompson, et al,2005). Porter (1980) has isolated five distinct competitive strategies which companies can pursue.

A company can strive to achieve low-cost leadership. This happens when the organization becomes the industry's lowest-cost provider rather than just being one of several competitors with comparatively low costs. A low-cost provider's strategic target is meaningfully lower costs than rivals- but not necessarily the absolute lowest possible cost. In striving for a cost advantage over rivals, managers must take care to include features and services that buyers consider essential. For maximum effectiveness, companies employing a low-cost provider strategy need to achieve their cost advantage in ways difficult for rivals to copy or match. If rivals find it relatively easy or inexpensive to imitate the leader's low-cost methods, then the leader's advantage will be too short-lived to yield a valuable edge in the marketplace (Thompson, 2005).

A company can pursue a differentiation strategy. This type of strategy is attractive whenever buyers' needs and preferences are too diverse to be fully satisfied by a standardized product or by sellers with identical capabilities. A company attempting to succeed through differentiation must study buyers' needs and behavior carefully to learn what buyers consider important, what they think has value, and what they are willing to pay for. Then the company has to incorporate buyer-desired attributes into its product or service offering that will clearly set it apart from rivals. Competitive advantage results once a sufficient number of buyers become strongly attached to the differentiated attributes. Successful differentiation allows a company to command a premium for its product; increase unit sales, and gain buyer loyalty to its brand. Thus, differentiation enhances profitability whenever the extra price the product commands outweighs the added costs of achieving the differentiation.

The third competitive strategy is that of becoming a Best-Cost Provider. This aims at giving customers more value for the money. The objective is to deliver superior value to buyers by satisfying their expectations on key quality/service/features/performance attributes and beating their expectation on price compared to what rivals charge for much the same attributes. A company achieves best-cost status from its ability to incorporate attractive attributes at a lower cost than rivals. To become a best-cost provider, a company must have the resources and capabilities to achieve good-to-excellent quality, incorporate appealing features, match product performance, and provide good-to-excellent customer service-all at a lower cost than rivals (ibid.)

The fourth strategy involves developing a market niche based on low-cost. This strategy aims at securing a competitive advantage by serving buyers in the target market niche at a lower cost and lower price than rival competitors. Thompson (2005) believes that this strategy works best when a company can lower costs significantly by limiting its customer base to a well-defined buyer segment.

The fifth and final strategy involves developing a market niche based on differentiation. This aims at securing a competitive advantage by offering niche members a product they perceive as well suited to their own unique tastes and preferences. Successful use of a focused differentiation strategy depends on the existence of a buyer segment that is looking for special product attributes or seller capabilities and on a firm's ability to stand apart from rivals competing in the same target market niche.

Differentiation strategies are attractive whenever buyers' needs and preferences are too diverse to be fully satisfied by standardized product or by sellers with identical capabilities. ICT companies attempting to succeed through differentiation must study buyers' needs and behaviours to learn what buyers consider important, what they think has value, and what they are willing to pay for.

Successful differentiation allows a company to command a premium price for its product, increase unit sales, and gain buyer loyalty to its brand. Differentiation enhances profitability whenever the extra price the product commands outweighs the added costs of achieving the differentiation. In the world of Internet services for example, some companies cater exclusively to a certain clientele where services offered are very different from those offered elsewhere. These services may be bundled together on the basis of technological ability of users or on paying power of customers. The customers must also perceive that they are getting distinctive value for their money. The products or services they buy are also considered unique and not simply as a commodity. Company differentiation strategies fail when buyers don't value the brand's uniqueness or when the company's approach to differentiation is easily copied or matched by its rivals (Thompson, et al, 2005).

As far as the ICT industry is concerned, Woherem (1993) has identified several obstacles to its growth, particularly in the case of developing countries. According to him, most developing countries lack adequate capitalization for the establishment of a strong ICT industry. This is carried over to companies operating in this sector, which are plagued by the same undercapitalization. There is usually very little capital set aside by the capital markets to support the robust growth of this industry. This situation leads to stunted growth of the ICT industry.

The ICT industry in Africa (and Kenya, by extension) faces challenges of appropriateness to the local situation. According to a study carried out by Odedra (1990), technology transfer of ICT to Africa is still in its infancy and has not been harnessed properly. The usage of the ICT systems suffers appropriate local contextualization. In the five channels of technology transfer he investigated (namely: acquisition of IT systems, education, and training, technical assistance licensing and direct foreign investment), Odedra found that though there is growing ICT usage, the industry as a whole suffers from specialized application of ICT capabilities. He found that most ICT systems used in Africa are bought off-the-shelf which means that such systems may not meet the consumer needs of people in the local market. ICT systems also face the challenges of acceptance in the business environment where they are incorporated to improve profitability. They are more likely to be used by individual customers, rather than business organizations, which would stand a better chance of realizing significant economic benefits.

Muchoki (2005) has found that ICT is resisted in many organizations at the stage of introduction. This is because human beings, by nature, are resistant to change. She found that users rejected the ICT system on the grounds of: fear of losing one's job, wage reduction, or of inability to learn a new job, loss of prestige or of interest in the job because the work is eliminated altogether or re-defined. She observed that for ICT systems to be accepted there is need to be tactful. She also suggested that if ICT is to be accepted, then organizations should strive to keep their people knowledgeable about the expected benefits. Users should also be involved in the entire implementation.

The government of Kenya needs to evaluate carefully ICT's potential to enhance socio-economic development. Used wisely, ICT can create higher standards of living and overcome poverty. Leaders must study how to allocate scarce financial resources in such a way that the sector, particularly as driven by the small scale operators, plays its rightful role in economic development, employment creation, and universal access to information and communication services.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1.1 Research Design

The study used the cross sectional survey design. This design was appropriate for the study because it enabled the researcher to explore the challenges that have faced ICT service providers in the study area. Coopers and Emory (1995) have recommended this method because of its suitability to find answers from respondents at a specific point in time. The research design enabled the researcher clarify and attempt an investigation of current problems facing small scale ICT Service providers.

3.1.2 Population

The population of interest was all small scale ICT service providers in Nairobi Central Business District. This is the area covering Koinange Street, Press Lane, Moi Avenue, and Tom Mboya Street. At the time of conducting the study, a spot survey showed there were about two hundred and thirty and nine (239) small scale enterprise dealing in ICT products and services. These comprised the sampling frame.

3.1.3 Sampling Design

A purposive sample from the population was selected for this study. Under this sampling method, the researcher purposely targeted a group of people believed to be reliable for the study. Reliability was determined by examining those respondents who have signed long-term lease agreements with landlords. These are assumed to be committed to their business. The researcher was careful to use common sense and best judgment in selecting respondents.

The power of purposive sampling lies in selecting information from rich cases for in-depth analysis related to the central issues being studied (Kombo and Tromp, 2006). The method is also useful where the study has to be conducted within a limited time period and under a limited budget. Sample results were judged representative of the population in line with the law of large numbers.

3.3.1 Sample Size

A sample of 62 small scale ICT service providers was drawn from enterprises operating within Nairobi's Central Business District (CBD) along Uhuru Highway, Haile Selassie Avenue, Tom Mboya Street and University Way (see attached map of Nairobi Central Business District). Most of the enterprises are located in the area covering Koinange Street, Press Lane, Moi Avenue, and Tom Mboya Street.

3.2 Data Collection

A semi-structured questionnaire (see Appendix 1) was used to collect data from respondents. Mugenda and Mugenda (2005) have suggested that structured questions are easier to analyze since they are in immediate usable form. The questions are also easier to administer because each item is followed by alternative answers. The Likert scale was used in some questions to rate responses. This numerical scale minimizes the subjectivity of responses and makes it easy to use quantitative analysis.

The study used primary data collected from this sample. The questionnaire was kept purposively simple to increase the odds of completion and participation. Primary data was supplemented by data from secondary sources, as necessary.

The researcher prepared a letter of introduction to the research assistant. This was shown to respondents to secure their trust and encourage their participation and increase the validity of the research results.

3.3 Data Analysis

Data was coded, edited, and cleaned prior to processing on the SPSS software. Descriptive statistics, percentages, and cross tabulation procedures were performed to describe, analyze, and explain the competitive challenges facing ICT service providers. The analysis established the extent to which competitive challenges have affected service providers. For open-ended questions, content analysis, a qualitative analysis technique was applied.

CHAPTER FOUR: FINDINGS AND DISCUSSIONS

4.1 PROFILE OF RESPONDENT FIRMS

This section discusses the background characteristics of the firms that were surveyed. It describes the period in which the firms had been in operation as at the time of the study, the major business activity that they engaged in, their operational status (in terms of ownership structure), and the extent of their geographical reach within the City Centre. It also describes the size of the respondent firms by looking at the number of persons employed in each of the firm. The information on geographical reach and number of employees gives an indication on the size and volume of business the respective firms conduct. This is important in understanding the firm's survival since the longer the firm has survived the more the likelihood of understanding the industry and apply various strategies for survival as compared to a new firm that has no much experience of the industry.

4.1.1 Period of Operation at Present Location

A total of 62 small scale telecommunication firms in Nairobi were surveyed. Of these, majority have not operated for long at their present location. Slightly over one-third (35.5%) have operated for less than two years. Half (or 50.0%) have operated for between two and five years while 14.5% have operated for five years or more. This is shown in Table 4.1 below:

Table 4.1: Period of operation in present location

Period of operation (years)	**Frequency**	**%(percentage)**
Below 2	22	35.5
Between 2 and 5	31	50.0
Over 5	9	14.5
Total	**62**	**100.0**

Source: Research Data

Table 4.1 above depicts that majority of respondents (85.5%) are young enterprises. This period of operation corresponds to the recent growth of the ICT sector, which has only attained prominence in the last five years following the liberalization of the sector. It is only in the last five years (from late 2001) that the mobile telephony and computer industry begun to make major contribution to Kenya's economy.

Prior to this period, the industry was stifled by excessive regulation and most of the services were offered by the state-owned Telkom Kenya. Mobile telephony services were near non-existent. Only limited mobile services were offered by Safaricom Limited which was, then, a wholly-owned subsidiary of the state-owned Telkom. The period of operation is important in helping to understand the challenges faced in relation to the experience while in operation and also the various strategies the firms are employing to survive in this relatively new industry.

4.1.2 ICT Services Offered

Respondents operate various businesses which include computer services (and Internet), mobile phones (services and accessories), and fixed telephone. They also provide supportive services in the area of training and consultancy. Activities in the computer services category include data, voice (such as Voice over Internet Protocol), and multimedia. The provision of Internet services represents the single most important item in the computer services category. This also underlies the importance of Internet as a means of communication for voice, data, and multimedia, especially arising from falling costs of connectivity and international protocols which have favoured growth of the Internet.

Activities under the "Other" category include all other telecommunications services which do not fall in one of the two main groups of computer services and telephony. This is shown in Figure 4.2 below:

Table *4.2: Businesses operated by respondents*

Business Activities	**Frequency**	**%**
Computer Services	38	61.30%
Mobile Phones	17	27.40%
Others	7	11.30%
Total	**62**	**100%**

Source: Research Data

The offerings within the computer services category include computer software and hardware for office use (24.2%), Internet and communication tools (33.9%), and computer training and consultancy (9.7%). These percentages show that services that support communication are the most important while services related to training and consultancy are the least important. The typical consumers of these services are retail customers who comprise the most important clientele of these providers.

Of the firms surveyed, majority (59.7%) are sole proprietorships. Partnerships and limited liability businesses comprise 22.6% and 17.7% of the total respectively. Sole-proprietorship types of businesses are the easiest to form as start-up formalities are limited to the bare minimum. Unfortunately, such enterprises suffer from problems of limited access to financial resources. Providers of capital are justifiably hesitant to lend to sole proprietorship enterprises because they perceive that the risk of default is higher than in bigger, better capitalized businesses. Low capitalization in turn limits business expansion subjecting the business to very slow growth. This explains why most of the firms surveyed (87.1%) have only one branch in the city centre. Even for the others (12.9%) which are slightly larger, they still have no more than two branches within the city centre.

4.1.3 Firms' ICT Deployment and Use

Respondents generally deploy and use ICT tools in their businesses activities. Over three-quarters (or 77.4%) use ICT tools in-house. The most common of these tools are mobile and fixed telephones. This is because they are easily affordable (costs have been falling exponentially with respect to time) and are quite adaptable to the business needs. The least used, customer management database, require greater technical sophistication and are more prevalent in larger enterprises. This is not the case for most of the firms surveyed. Only the most advanced employ customer management database tools. This is shown in Table 4. 3 below:

Table 4.3: ICT deployment and use by firms surveyed

ICT Use	Frequency	%
Mobile/Fixed Tel	27	45%
Internet/Email	23	38%
Customer Management Tools	1	3%
Total	**51**	**100%**

Source: Research Data

The deployment of ICT tools for in-house is generally uniform for all the firms across their period of operation. There is, nevertheless, a higher representation of use in firms that are relatively older. Thus, firms with at least 2 years of operation are more likely to use ICT tools than those which have been in operation for only a shorter time (i.e. less than 2 years). This is shown in Table 4.4 below:

Table 4.4: Deployment of ICT tools for in-house use

Period in operation (years)	*Frequency*	*(%)*
Below 2	45	72.7
2 to 5	49	80.6
Over 5	48	77.8

Source: Research Data

4.1.4 Maintenance of ICT tools and Derived Benefits

Maintenance of the ICT tools is crucial in that it guards against breakdowns, enhances the useful life of the equipment as well as quality service levels. Most of the respondents (88.7%) generally are responsible for maintaining their own tools. Only a small percentage (11.3%) seeks specialized support from vendors to maintain their tools. Firms seek outside specialized support for those aspects of maintenance for which in-house technical capacity is lacking.

Small scale firms obtain several benefits from their use of ICT tools within their own operations. These include, cheap and improved communication internally, improved customer and supplier interactions, easier product sourcing (through the Internet); and, lower costs of doing businesses leading to higher profits, electronic marketing through websites, inventory management, and integration of financial systems with the Internet.

The deployment of ICT tools to support internal processes has faced some setbacks. The most common of these include system breakdowns, expenses associated with obtaining suitable software and hardware, and users' difficulties in exploiting the ICT systems. Assessment of difficulties associated with ICT use is shown in Table 4.5 below:

Table 4.5: Respondents' assessment of use of ICT in-house

ICT Use In-House	**Mean**	**Standard Deviation**
ICT Tools Too Costly	3.66	1.044
Tools Too Complicated To Use	2.34	1.027
Incompatible System	2.64	1.047
Tools Attract Few Customers	2.17	1.036
ICT Tools And Services Costly	3.6	1.108
ICT Tools For Local Environment not available	2.75	1.192

Source: Research Data

High cost is the most important issue impacting firms' use of ICT tools. In fact, 71.0% of all firms agree or strongly agree that cost is their most serious issue when making ICT decisions. System complexity (with mean score of 2.64) and ability of the system to attract customers (mean score of 2.17) do not rank highly. Only 27.4% and 17.4% of firms agree or strongly agree that these are important in influencing their ICT use. The analysis amongst the response on the factors that inhibit in house of ICT indicates that the scored factors rank *pari- passu*. The differences amongst these factors are not critical and therefore all the respondents perceive them as part of hurdles that affect ICT application and use. The standard deviation range from 1.024 to 1.192 therefore indicating the range amongst the issues responded within the study is not wide and there fore within content.

4.2 Challenges in Using ICT Tools

Small-scale telecommunication firms face many challenges in using information and communication tools. These arise from the smallness of the scale of their operation, which inevitably limits access to capital resources. This limits firms' ability to acquire ICT tools. Other problems arise in connection with adaptation of technology to the organization's environment. In fact, difficulties in adaptation may arise to the extent that firms do not know what the exact role of a certain tool is. This danger is complicated when people in the organization become fascinated by the capacity, the speed, the memory, the computational ability of ICT tools *per se*, rather than on what they are supposed to accomplish. As a result, scarce economic resources may be misallocated in purchasing and deploying expensive tools that do not contribute to organizational objectives.

The low level of technical skills of personnel in the firms studied compounds the search for effective deployment of ICT tools and thus limits full realization of ICT benefits. ICT tools require a heavy initial capital investment and for many firms, the cost is too high. This situation is worsened by the inability to access adequate financial resources from providers of capital. Rapid technological changes, which render today's technology obsolete, complicate small firms' problems. The research found that two-thirds of respondent firms face serious cost challenges in using ICT tools in their internal operations as well as in configuring them as products for sale.

The market for ICT tools is constantly changing and technology is changing every day. The rate of change is so fast that small firms find it extremely hard to keep in step. A good example is the changes that have taken place in the mobile phones sub sector. Newer, more powerful hardware and software capabilities have made yesterday's sets obsolete. New functionalities in the phone handsets are now linking mobile phone technology with the Internet.

These changes have reconfigured the existing market so that ICT firms now find themselves facing an entirely new market. This has caused serious competition among the various players and a corresponding impact on individual operations. The dynamics that have impacted on the market for ICT tools and services is shown in table 4.6 below:

Table 4.6: Importance of market variables

Variable	*Frequency*	*(%)*
Cost competition too stiff	49	79.1
Intense quality competition	46	75.8
Rapidly changing market conditions	46	74.2
Declining markets	25	41.9

Source: Research Data

The table shows that firms face a range of problems in the market. The three most important ones relate to the cost of ICT tools, the intense quality competition, and the rapidly changing market conditions. The issue of declining markets is also fairly important although it is not as serious as the first three. This is because the ICT market in Kenya is generally on the growth mode so that new technologies are quickly brought to market and are accepted by customers. This has the advantage that new technologies gain a foothold in the market but at the expense of obsolete technologies.

These market dynamics have forced firms to compete on the basis of price and quality. Unfortunately, price is not a good basis to build competitive capabilities on as it is not sustainable. This is because new technologies are continuously coming to market and these succeed to dislodge older ones, which are taken to be obsolete. The new technologies rapidly erode price advantages so that only those firms, which build their leadership on some unique advantages, can expect to survive.

Challenges arising from the infrastructure environment are the most serious to small-scale ICT firms. Within this category lie the licensing regime, rents, electricity, telephone lines and other related variables. High rents within the city centre are the single most serious infrastructural variable (93.6% of respondents agree or strongly agree). This variable is followed by problems associated with availability of electricity and telephone (72.6% agree/strongly agree), and the system of licenses (48.4%). The government has been making efforts to simplify licensing procedures as a means of improving the business investment climate. It is hoped that such measures will result in improved business conditions for these firms.

Technical challenges relate to the appropriateness of ICT solutions to local environment, the technical nature of systems, security considerations, training of users, and assessment of benefits of ICT deployment. Firms do not report major problems with technical issues. Only user training (51.6%) and security of systems (50.0%) are considered important in this class. Technical challenges are the least important.

A ranking of challenges, by categories, shows that infrastructure has the most serious implications on the success of the ICT firms. This is the category that relates to the matter of high rents within the city centre and the unreliable electricity and telephone regimes. Challenges relating to technical issues are perceived as the least serious. A summary of the importance of respective challenges is shown in Table 4.7 below:

Table 4.7: Importance of challenges facing small scale ICT firms

Challenges	**Frequency**	**(%)**
Costs	69	27
Technical Issues	39	15
Market Issues	69	27
Infrastructure	83	31
Total	**260**	**100**

Source: Research Data

Infrastructural challenges impact 71.5% of firms, showing that they represent the most serious problem that ICT firms have to deal with. This is followed by market and equipment costs (both at 67.8%). Technological issues are the least serious (37.5%) to these firms.

4.3 Competitive Strategies Adopted

Surveyed ICT firms have adopted a number of competitive strategies to deal with these challenges. The strategies are designed to afford a competitive advantage in the battle for the market. These strategies include: attempting to be a low cost producer, offering differentiated products and services, being a best value supplier (by giving customers more value for money), targeting a niche market by offering low prices, and selling to a certain market based on specialized requirements.

The degree to which these competitive strategies have been adopted is shown in table 4.8 below: The response and the analysis indicate that the degrees to which the respondents use and adopt the various strategies differ. Looking at the standard deviation, the most frequently used strategies are quick response to market changes, adoption of new strategies and strong customer with very low mean amongst respondents at 1.72 to 1.79 against the other strategies of 2.84

Table 4.8: Competitive strategies firms have undertaken

Strategy	**Mean**	**Standard Deviation**
Increased Revenue Fron New Products	2.54	1.179
Strong Customer Focus	1.72	0.859
Speed To Market	2.35	1.132
Knowledge And Intellectual Capital	2.15	1.138
Low Cost Competitor	2.84	1.308
High Quality	1.78	1.068
Quick Response To Mkt Changes	1.79	0.897
Adoption Of New Strategy	1.77	0.876

Source: Research Data

The data shows that firms place most priority in the strategies that which seek to capture and retain customers on the basis of low price and more features. Strategies tailored at creating specialized customers and creation of niche markets have been the least used.

According to table 4.9 below, the most important strategies are associated with low cost (80.7%), differentiation of products from rivals (75.8%), and attempting to give customers more value over and above the functional features (79.1%). Strategies of creating niche markets (33.9%) and selling to specialized requirements of customers (32.3%) have been the least applied.

Table 4.9: Firms adopting various competitive strategies

Strategies Used	Frequency	%
Low Cost	50	81%
Differentiation	47	76%
Value Addition	48	79%
Niche Creation	21	34%
Selling To Special Customers	19	32%

Source: Research Data

Emphasis on strategies of low cost and more features have a number of disadvantages. First, a low cost strategy offers only a short term advantage. Rapid advances in technology ensure that whatever cost advantage a firm may have will last only a short time. Knowledge of how to keep costs low cannot be hoarded for long as the market will ensure that all firms get it.

The low-price strategy is untenable in the long-run in the absence of certain fundamental competencies. Some of these include the ability to purchase large quantities of a given material from a supplier, greater negotiating power that would ensure that deliveries are on time (leading to reduction in inventories), and a build up of knowledge and experience among buyers that leads to greater internal efficiencies. Small ICT firms lack these underlying fundamentals and therefore their adoption of this strategy faces serious sustainable issues.

The strategy of offering customers more features is only useful up to a point. It is not possible to add features *ad infinitum* without altering the basic functionality of the products. Besides, customers are interested more in the functional features than in superfluous ones. This means that the only sustainable competitive strategies are those that emphasize serving unique, niche markets or where the firm sells to specialized requirements of customers. This is the strategy that will confer the leadership position which alone can confer economic value. Unfortunately, the ICT firms surveyed firms have not adopted these sustainable strategies.

The low cost supplier strategy has been adopted by a significantly higher percentage of younger firms (less than five years) compared to older ones. Whereas 55.5% of firms over five years adopt this strategy, the respective percentage for firms that have operated for less than two years and those between two and five years is 83.9% and 86.3%. Relatively older firms (above 2 years) adopt the differentiation and more features strategies compared to younger firms

Thus, a relatively larger percentage of younger firms employ strategies aimed at capturing the market on the basis of low prices. Older firms, on the other hand, have moved to more value-adding strategies.

The strategy of selling to a certain market target, based on specialized requirements of customers, is relatively more developed in firms over 5 years old and less used by younger firms. Older firms (over 5 years) are more than two times as likely to adopt this strategy as are firms younger than 2 years. Only about one-third (32.3%) of firms between 2 and 5 years adopt the strategy of catering to specialized requirements of customers. This is shown in Table 4.10 below:

Tale 4.10: Firms catering to specialized requirements of customers on basis of age

Age Of Firm	**Frequency**	**Extent Of Adoption Of Technology**
Over 5 Years	34	56%
2 – 5 Years	19	32%
Below 2	14	23%
Total	**67**	**100%**

Source: Research Data

The least used strategy by all firms is that of creating niche markets. Just slightly over a third of the firms, categorized by age, have utilized this type of strategy.

4.4 Business Strategies

In addition to competitive strategies, firms undertake organization-wide, business strategies. These include emphasizing innovation (that is, increasing the percent of revenue from new products and services), having a strong customer focus, increasing the speed with which products are brought to market, and building intellectual capital. They also include incorporating quality into everything the firm does, responding quickly to changes in the market, and adopting new technologies as they come to market. Table 4.11 below shows the most important business strategies that firms have instituted:

Table 4.11: Most important business strategies firms have undertaken

Name of business strategy	***Frequency***	***Percentage of firms (Great extent/Very great extent)(%)***
High quality of products	52	84.7
Strong customer focus	51	83.6
Adoption of new technologies	51	82.3
Quick response to market changes	50	82.0
Developing knowledge and intellectual capital	44	72.1

Source: Research Data

From this table, the most important business strategies that firms have undertaken are: dealing in high quality products, maintaining a strong customer focus, adopting new technologies and responding quickly to market changes. However, relatively fewer firms have committed themselves to developing knowledge and intellectual capital.

The least important strategies are those connected with increasing revenue from new products and services (54.2%), and increasing speed to market (53.2%). This situation may be explained by the inability of small scale firms to create new products and services by themselves as these firms are limited to selling whatever they receive from their upstream suppliers. On the same note, small scale firms cannot significantly improve their speed to market. They have to wait for their bigger suppliers (and manufacturers) to create a market for the products before they can move in to supply the demand so created. The study shows that older firms (those over 5 years old) are significantly more likely to emphasize increasing the percentage of revenue from new products (and services) than younger ones. This reflects their ability to purchase newer, more expensive products from upstream suppliers as they come to market. Because the large suppliers usually have been able to create demand for the new products, distributors are able to ride on the market that has been created and this way sell more of the new products. Table 4.12 below shows that the oldest firms adopt the strategy of increasing revenue from new products and services to a great extent.

Table 4.12: Increasing revenue from new products and services

Period in operation (in years)	***Frequency***	***Percentage (Great/Very great extent) (%)***
Under 2	35	57.1
Between 2 and 5	29	48.3
Over 5	41	66.6

Source: Research Data

Older firms are also more likely to have a strong customer and quality focus than younger ones. This is shown in the figure 4.13 below:

Table 4.13: Business strategies by period of operation

Age Of Firm	**Frequency**	**Response to Market Changes (%)**
Over 5 Years	55	90.3%
2-5 Years	47	77.3%
Less Than Two Years	38	62.5%

Source: Research Data

Younger firms are significantly more likely to respond quickly to changes in the market compared to older ones. The study shows that firms less than five years are significantly more likely to respond to market changes (77.3% and 90.3% for below 2 years and between 2 to 5 years firms respectively) compared to older, more established ones (62.5% for firms over five years old).

However, quick response to market is not synonymous with speed to market (percentages for this are: 50.0%, 54.8%, and 55.5% for below 2, 2 to 5, and over 5 years' firms, respectively). This information is represented in table 4.14 below:

Table 4.14: Response to market of firms by period of operation

Age Of Firm	**Frequency**	**Extent of Adoption of Technology**
Over 5 years	48	77.8%
2- 5 Years	55	90.3%
Below 2 Years	45	72.8%
Total	**148**	

Source: Research Data

A larger percentage of firms between 2 and 5 years (90.3%) adopt new technologies as they come to market compared to firms of below 2 years (72.8%) and older firms over 5 years (77.8%).

The discussion in this chapter has looked at the business strategies small scale ICT firms have adopted to meet challenges of operating in the competitive environment of changing technologies, changing markets, and intense competition. The discussion has shown that these firms attempt to respond to challenges of the market by offering low prices. This strategy is not sustainable in the long-run because price gains are easily eroded by improved technology which leads to falling prices. The least used strategy is that of creating niche markets for their offerings.

Firms are not able to utilize differentiation strategies to any great extent because crucial to this strategy is the understanding of customers' needs and the ability to build appropriate product or service features. Competitive advantage through differentiation is likely to be achieved not by one element of the value chain, but by multiple linkages within the value chain. This is because it may be relatively easy for a competitor to imitate a product, or an aspect of technology but it is more difficult for a competitor to imitate differentiation based on a multitude of compatible linkages and processes through a value chain. This means that creativity and the management of product and process innovations are essential for competitive advantage.

The summarized statistical analysis of key challenges facing the small scale ICT entrepreneurs are given in the table 4.15 below.

Table 4.15 Statistical analysis of the key challenges

Age Of Firm	**Mean**	**Standard Deviation**
ICT Tools Costly	3.66	1.044
ICT Services	3.6	1.108
Security of ICT Tools	3.10	1.183
High Rents In CBD	4.21	1.771
Intense Quality Competition	3.72	1.082
Rapid Changing Environment	3.76	1.119

Source: Research Data

This analysis indicates that the differences between the degrees to which the respondents face the challenges are not critically different. The minimum averages are not critically different as all the respondents report an average of more than minimum. It can therefore be taken that the cited challenges cut across the industry (respondents).

CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter summarizes the major findings of the study and provides a direction for further research and recommendations for policy-making. It shows the competitive challenges that small-scale telecommunication firms in Kenya's capital city face and the strategies they have adopted.

5.2 Summary

The business environment within which telecommunication firms in Kenya operate is very difficult. Firms face a multitude of challenges making it necessary for them to adopt sustainable competitive strategies just to survive.

Researchers have recognized that the only way firms can create and sustain competitive advantage is by developing competitively valuable expertise and capabilities rather than on having a distinctive product. It is, however, a much harder thing for rivals to duplicate experience, know how, and specialized competitive capabilities that a company has developed and perfected over a long period of time. This means that only creativity and management of product and process innovations are essential to competitive advantage.

This study found that small scale telecommunication firms in Nairobi have adopted three major strategies, namely: giving customers more value, being low cost producers, and selling differentiated products. These strategies show that firms compete on the basis of low price and catering to a price-conscious market segment. These strategies are targeted at meeting needs of price-conscious customers.

The low price strategy seeks to achieve a lower price than competitors whilst trying to sell similar products to those offered by competitors. The problem with this strategy is that competitors, which in turn can lead to a further drop in prices, easily imitate it. This leads to a drop of industry profits arising from a vicious price war. In the course of time, firms can find themselves unable to acquire a surplus of profits to reinvest in their businesses

Low cost (low price) can be successful as a competitive strategy. To achieve this, the organization must seek to sustain reduced prices over competition on the basis of having the lowest cost base such that competitors cannot hope to emulate it. An organization may also be able to reduce cost by concentrating on aspects of its value chain which are especially valued by customers and outsourcing those activities which can be carried out at less cost by others.

The study found that firms have generally not adopted focused differentiation as a strategy (only one-third have). This is the strategy that seeks to provide high-perceived value justifying a substantial price premium.

The study found that problems of infrastructure are the most serious to small-scale firms operating in Nairobi. High rents in the central business district, irregular supply of electricity and inadequate capacity in telephone lines, together with problems of the licensing environment pose great challenges. Market dynamics and high cost of ICT equipment are also a serious challenge. Stiff competition in the market place, coupled with a rapidly changing market for ICT tools and services are other challenges that small scale telecommunications service providers in Nairobi have to contend with.

5.3 Recommendations for Further Research

The study did not delve into the level of education of the firm owners. It may be necessary to do another research to find out how education level of business owners defines the type of strategies undertaken. It may also be necessary to study what factors owner-managers take into account when crafting their strategies.

5.4 Conclusion

This study has shown that firms within the CBD face major infrastructural challenges arising from an unfriendly business climate. It is recommended that governmental authorities create a favourable environment characterized by adequate telephone lines, a simpler licensing regime, and adequate supply of electricity. Efforts to reduce rents (through, for example, creation of a preferential rent-free zone) will greatly simplify business operations and reduce the challenges.

Owner-managers do not know the most suitable strategies relevant for small firms. It may be necessary to expose owners to the best strategies available as a first step to getting them involved in understanding strategy and helping them to navigate the challenges of a rapidly changing environment.

Small-scale ICT firms need strategy. It is not excuse enough that owner-managers do not have the formal education to craft organizational strategy. In fact, because of their unique problems, small-scale ICT firms can be said to require more strategy than the firms in the higher echelons of the ICT sector pyramid. Small ICT firms, just like their larger competitors, need strategy. They must, therefore, think through a strategy, which will give distinction. They must find their specific ecological niche in which an advantage can be gained which would lead to ability to withstand competition. The specific niche may be leadership in a distinct market, (defined by geography, consumer needs, or consumer values) or it may lie in a specific excellence, such as capacity to give service. It may also lie in a specific technology.

All the surveyed firms reported having limited access to financial resources. Because of this situation, firms must learn how to best concentrate whatever resources are available in a manner that returns the highest possible rate on its investment. This requires that the firm clearly identify key activities that would bring results and concentrates them there to avoid a diffusion of resources. Because their ability to get additional resources is limited, they must make sure they will not outrun their financial base. They must be proactive in ensuring that they know in advance when and where their financial needs will increase.

Understanding their environment is an important aspect of strategic response of small firms. They must know major changes in their environment and craft their response as appropriate. Their success depends on their response to changes taking place continuously in the environment. They must, therefore, know any possibility of changes in their ecological niche and take steps to respond in the best way possible.

APPENDIX 1: QUESTIONNAIRE

This questionnaire seeks information on the challenges your business has faced since you commenced operations. The information is intended for academic purposes only and will not be divulged to any other person.

Please complete ALL sections of this document. All questions are inter-related and are very important to the study. Do not leave any section incomplete.

SECTION A: BACKGROUND DETAILS

1. How long have you been operating in your present location?

   a) Below 2 years

   b) Between 2 years and 5 years

   c) Over 5 years

2. What is your major area of business activity?

   a) Computer services, including Internet

   b) Mobile phone and Accessories

   c) Fixed Telephone only

   d) Other (please specify)______________________________

3. Please indicate the nature of your business

   a) Sole proprietorship

   b) Partnership

   c) Limited Liability Company

   d) Cooperative

   e) Other (please specify)____________________________________

4. Do you have another branch or branches within Nairobi?

a) Yes

b) No

5. If the answer to the above is YES, how many branches/ shops do you currently have in within Nairobi (excluding this one)?

a) Under 2

b) 3 to 5

c) Over 6

6. How many employees do you have in this branch?

a) 0 – 2

b) 3- 5

c) Over 6

SECTION B: BUSINESS ACTIVITY DETAILS

1. What ICT tools/ services do you deal in? (Choose the option that represents the **MOST** important segment of your business)

a) Computer software and hardware for office use only

b) Mobile phone software and accessories

c) Internet and communication software and hardware

d) Training services

e) Other (please specify)________________________

2. Do you use ICT tools/ services for own in-house needs?

a) Yes

b) No

3. If the answer to 2 above is yes, please select the ICT tools/services you **most** commonly use in-house from the options below:

a) Mobile and fixed telephone

b) Internet and email

c) Business website

d) Customer management database

e) Other (please specify)______________________________

4. Who maintains your ICT tools/ services?

a) Ourselves

b) Vendors

c) Others (specify please)_________________________

5. Please list, in the space provided below, the benefits your business has obtained from using ICT tools and services.

---

6. What failures have you experienced in deploying and using ICT tools in your business?

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7. How else do you **expect** to use ICT tools in running your business **or** in those of your customers?

---

8. In your assessment of ICT tools and services use, how would you rate them (that is, the ICT tools and services) based on the following guidelines? (1= Strongly disagree, 2= Disagree, 3= Cannot answer, 4= Agree, 5= Strongly Agree)

i. Cost of ICT tools /services is too high________

ii. Too complicated in using_________________

iii. Systems incompatible with user requirements_________

iv. Attracts few customers_________

SECTION C: CHALLENGES IN USING ICT TOOLS (WITHIN THE BUSINESS OR AS REPORTED BY CUSTOMERS)

Please indicate the level of your agreement or disagreement with the following statements (using the following key: 1= Strongly disagree, 2= Disagree, 3= Cannot answer, 4= Agree, 5= Strongly Agree)

1. Cost of ICT tools and/or services is too high_________
2. ICT solutions appropriate for local environment not available_________
3. Users not well trained to work with ICT solutions_________
4. Systems too technical, making its use too difficult_____________
5. Benefits of ICT tools not easily recognizable_____________
6. Security of ICT tools/systems easily compromised_______________
7. Infrastructure facilities (e.g. telephone, electricity) available__________
8. Licensing environment supportive of ICT development_____________
9. Competition with other players in the market place too stiff_________
10. Rents in the City Centre too high______________

SECTION D: COMPETITIVE CHALLENGES

Please indicate the level of your agreement or disagreement with the following statements (using the following key: 1= Strongly disagree, 2= Disagree, 3= Cannot answer, 4= Agree, 5= Strongly Agree)

1. We try to sell our products and services at the lowest possible price______________________________

2. We have made efforts to differentiate our products and services from those of our rivals__________________________________

3. We have made efforts to give our customers more value for their money by providing additional value at the same price___________

4. We sell only to a certain market target, which we try to serve at lowest possible price___________________

5. We sell only to a certain market target, based on specialized tastes and requirements of our customers_________________

6.Other comments____

____

____

____

Thank you for your cooperation in completing this questionnaire

REFERENCES

Anangisye M. E.; ***Cooperative shops in Africa,*** (1997).

Andrews, K.***; The Concept of Corporate Strategy,*** Illinois, down-Jones-Irwin, (1971).

Ansoff, H. I.; ***implementing strategic management*** Prenticel Hall, Second Edition (1990).

Aosa, E. E.; '***An Empirical Investigation of Aspects of Strategy Formulation and Implementation within large, private manufacturing Companies in Kenya'*** unpublished Ph.D. Dissertation, February (1992).

Bird, B.; ***Entrepreneurial Behaviour: What do entrepreneurs do?*** Paper presented at the Babson Entrepreneurship Research Conference, Wellesley, MA, (1986).

Bird, B.J. ***Intentional maps of Entrepreneurs,*** PhD Diss. University of Southern California, (1983).

Bird, B.J.; ***Entrepreneurial Behaviour, Case Western Reserve University,*** Scott, Foresman and company, England, (1989).

Borland, C.***; Locus of control, Need for Achievement and Entrepreneurship,*** (Doctoral Diss) University of Texas, (1975).

Bourgeois L. J.***: Strategy and the environment: A conceptual Integration*** Academy of Management Review 5, (1980).

Box T. M. and Watta, L. R; ***Strategy in mall doses***: Generic strategies, www.pttstate.edu, (2000) Brockhaus, R. 1980.***Risk Taking Propensity of Entrepreneurs***. Academy of Management journals 23 (3) 509-520, (1980).

Cavanaugh J. A.; ***Alternative to Economic*** Globalisation, (2002).

Chandler. A.; ***Strategy and Structure: chapters in the History of American Industrial Enterprise.*** Cambridge, Massachusetts, M.I.T. Press, (1962).

Drucker, P. F.; The ***Practice of Management*** Harper and Row, New York (1954).

Earl, M.; ***Management Strategies for Information Technology,*** Hemel (1989).

Forester, T. The Information Technology Revolution. Basil Blackwell, London (1985)

Gatheru W. and Shaw R.; ***An economic and Public policy agenda for Kenya,*** (1998).

G.O.K. (1965); ***Sessional Paper No.10 socialism and its application to planning in Kenya.*** Government Printers Nairobi (1965).

G.O.K (1975): ***Sessional Paper No. 14 on Cooperative Development Policy for Kenya,*** Government Printers, Nairobi (1975).

G.O.K. (1976) ***Kenya Cooperative Development Plan 1976 – 1980*** Government Printer, Nairobi (1976).

G.O.K. (1997); ***Sessional Paper No. 6 on cooperatives in a liberalized Economic Environment,*** government Printers, Nairobi (1997).

G.O.K. (1997); ***Sessional paper No 4, Renewed Growth through the cooperative movement,*** Government Printer, Nairobi (1997).

Grant Robert: ***Contemporary strategy analysis, concepts, techniques and applications,*** New York, Blackwell Publishing (1998).

Halal, W. E.; The ***Infinite Resource***, Jossey-Bass Inc. San Francisco (1998).

Hamel, G. & Prahalad, C. K.; ***Competing for the future***, Boston, The Harvard Business School, (1994).

Henry, Haggen; Framework ***for cooperative legislation*** internal Labour office – Geneva (1998).

Hill W. L. C et al: ***Strategic Management*** Fifth Edition (2001).

Kimuya, P. Wagacha, M; ***Kenya's strategic policies for the 21st century*** & Abagi O. (ED) (1999)

Kimuyu, P. ; ***Micro Institutions.*** Discussion paper No 030/2002 Institute of Policy Analysis & Research (2002).

Kimuyu, P. & Omiti, J. ; ***Institutional impediments to access credit by Micro Level enterprises in Kenya.*** Discussion paper 026/2000 (2000).

Manyara, K. M. ***The Development of Cooperative Law and policy in Kenya***, 2nd edition Oscan Print (2003).

Market Intelligence, Banking Survey, the business and financial journal (2000).

McClelland, D., J. Atkinson, R. Clark, & L. Lowell. ***The Achievement Motive.*** New York: Appleton- Century-Crofts (1953).

Mintzberg H. et al; ***Of Strategies, Deliberate and Emergent,*** Strategic Management Journal, July – September, (1985).

Mittra, S. "***Strategic Planning Practices within Hotels and Restaurants in Nairobi"*** Unpublished MBA Dissertation, (2001).

Muchoki, E*: **ICT Diffusion in Micro finance Institutions:*** Unpublished MSc Thesis. Kenyatta University (2005).

Nachmias and Nachmias: ***Research Methods*** in the Social Sciences (1996).

Newman W. H. et al; Strategy: ***A Multi level integrative approach*** South Western Publishing Co; Cincinnati, Ohio, (1989).

Odedra, M.***; Information Technology Transfer to Developing Countries. Is it Really Taking Place?*** Conference on Information Technology Assessment, University of Dublin, Dublin (1990).

Oyoo M.; ***Evaluation of Financial Performance of Saccos in Nairobi,*** unpublished MBA thesis, University of Nairobi (2002)

Pearce, J. A. & Robinson, R. B; ***Strategic Management: Strategy Formulation and implementation.*** Third Edition, Richard D. Irwin INC (1991).

Peters J. T. and Waterman H. R.; ***In search of Excellence.*** Harper and Row Publishers, New York (1982).

Porter M. E.; ***Competitive Advantage,*** New York; Free Press (1985).

Porter, M.; ***Competitive Strategy***. Free Press (1981).

Porter, M. Competitive Strategy: ***Techniques for Analyzing Industries and Competitors.*** Free Press, New York (1980).

Taylor, B.; **'*Corporate Planning for the 1990s:*** The New Frontiers,' Long Range Planning, (1992) Dec 1986.

Thompson, J. L. Strategic ***Management; Awareness and Change,*** Chapman and Hall, London, 1990).

Timmons, A. J. and Stephen, S.: ***New Venture Creation Entrepreneurship for 21st century***.www.mhhe.com/timmonsoe

Woherem, E. E., Information Technology in Africa: ***Challenges and Opportunities,*** ACTS Press, Nairobi, Kenya. (1993)

World Association of Small and Medium Enterprises; ***Report of the first global Conference on Micro Enterprises*** (2000).

Yazdani, M. ***Intelligent Machines and Human Society,*** Ellis Horwood Ltd, Chichester, England (1984).