STRUCTURAL AND COMPETITIVE ANALYSIS OF THE MOBILE TELEPHONY INDUSTRY IN KENYA: AN APPLICATION OF PORTER'S FIVE FORCES MODEL

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DECLARATION

This research project is my original work and has never been presented in any other University/College for the award of degree/diploma/certificate.

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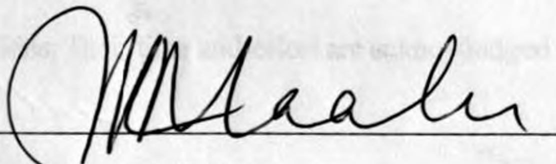
This research project has been submitted for examination with my approval as the University supervisor.

Signature: 

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Date: 7/11/07

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DEDICATION

To my husband Andrew Nyale

My children Roy, Stephanie, and Joseph.

Your support was my strength.

And you encouragement inspirational.

Your prayers were earnest.

I thank God for you.

ABSTRACT

The main objectives of the study were to establish the forces that define the structure of the mobile telephony industry in Kenya and to determine the strength of these forces in shaping competition in the industry. The study was greatly motivated by the fact that the mobile telephony industry in Kenya is a growing industry and the players therein are grappling with the contending forces that shape its structure and competitive behavior.

Questionnaires were administered to Chief Executive Officers or Corporate Strategy Managers and where these positions did not exist, to credit managers, marketing managers, and/or managers in charge of strategic planning. The study targeted 5 out of the six wireless communication providers. All the 5 firms were served with questionnaires, which they answered and returned, hence achieving a response rate of 100%. Data collected was analyzed using cluster analysis and presented using tables.

The major findings were that the mobile telephony industry operates within the six forces that define the industry structure and the competitive behavior. These forces include the entry barriers; rivalry among existing competitors; customers' bargaining power; bargaining power of suppliers; government controls; and information an telecommunications technology, all of which are embodied within the industry and each plays a major role in defining the industry structure and competition therein.

The study established that there exist barriers to entry in the mobile telephony industry making the threats of new entrants and substitute products very weak forces. These entry

barriers include huge capital outlay required when investing in the industry; enormous economies of scale enjoyed by companies already in the industry; high degree of brand identity exhibited by companies in the industry; sharp retaliation by companies in the industry to any competitive moves by new entrants into the industry; easy access to the necessary inputs by firms in the industry; and extensive differentiation of products by companies in the industry. Rivalry in the industry was found to be fierce more especially due to the fact that the industry is experiencing fast growth rate; the industry is highly concentrated and dominated by one or a few firms; and firms in the industry incur high while a number of firms have high strategic stakes in achieving success in the industry. The bargaining power of suppliers was found to result due to the fact that suppliers of inputs to the industry are few and more concentrated than are the mobile service providers and that firms in the industry have limited input substitutes. Buyers' bargaining power on the other hand was found to be in existence because buyers are price sensitive and incur no cost to switch from one service provider to another. Finally, the industry, through government control, was found to be utterly over-regulated and that developments in technology bear a lot upon the growth, competitiveness, and profitability of the industry.

The study established that the six forces that define the structure of, and hence competition in the mobile telephony industry in Kenya, do so to differing degrees of magnitude. The strongest force was found to information and telecommunications technology with the highest followed by threat of entry and barriers to entry; rivalry amongst existing firms; and government controls at equal degrees of magnitude. These were followed by the

bargaining power of supplier and buyers. Further, it was established that different factors were in play to determine the relative strengths of these forces.

General conclusion is that the mobile telephony industry is a very attractive one but because the entry barriers are very enormous, and new entrants are barred from entering the industry, hence a few firms dominate the industry. The government was also found to be a great inhibitor due to its over-regulation of the industry. For players in the industry, the phenomenon is such a favorable one because the industry is still growing and the potential to benefit from economies of scale and learning curve effects is very promising. It was recommended that the government plays a greater role in deregulating the industry to pave way for more investments in the industry.

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LIST OF ABBREVIATIONS

4G	-	Fourth Generation
CCK	-	Communications Commission of Kenya
CDMA	-	Code Division Multiple Access
GSM	-	General System for Mobile Communications
ICT	-	Information Communications Technology
SIM	-	Subscriber Identity Module
VoIP	-	Voice over Internet protocol
WiFi	-	Wireless Fidelity
WiMAX	-	Worldwide Interoperability for Microwave Access
WTO	-	World Trade Organization
VSAT	-	Very Small Aperture Terminal

CHAPTER ONE: INTRODUCTION

1.1 Background

Organizations, whether for profit or non-profit, private or public have found it necessary in recent years to engage in strategic management in order to achieve their corporate goals. The environments in which they operate have become not only increasingly uncertain but also more tightly interconnected. This requires a threefold response from these organizations. They are required to think strategically as never before, need to translate their insight into effective strategies to cope with their changed circumstances and lastly, to develop rationales necessary to lay the groundwork for adopting and implementing strategies in this ever-changing environment (Bryson, 1995).

According to Pearce and Robinson (1997), in order to achieve their goals and objectives, it is necessary for organizations to adjust to their environment. Designing viable strategies for a firm requires a thorough understanding of the firm's industry and competition. The state of competition in an industry, which is rooted in its underlying economics, depends on the competitive forces that work to define and/or characterize the industry structure.

Porter (1980) observes that the essence of formulating competitive strategy is relating a company to its environment. Although the relevant environment is very broad, encompassing social as well as economic forces, the key aspect of the firm's environment is the industry or industries in which it competes. Industry structure has a strong influence in determining the competitive rules of the game as well the strategies

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potentially available to the firm. Forces outside the industry are significant primarily in a relative sense; since outside forces usually affect all firms in the industry, the key is found in the differing abilities of firms to deal with them.

The economic character of industries varies according to a number of factors, namely: the overall size and market growth rate; the pace of technological change; the geographic boundaries of the market; the number and sizes of buyers and sellers; whether products are virtually identical or highly differentiated; the extent to which costs are affected by economies of scale; and the type of distribution channels used to access buyers. An industry's economic features are important because of the implication they have for strategy. For example, in capital intensive industries where investment in a single plant can run into millions, a firm can spread the burden of high fixed costs by pursuing a strategy that promotes high utilization of fixed assets.

Thompson and Strickland (2003) point out that one important component and competitive analysis involves delving into the industry's competitive process to discover what the main sources of competitive pressure are and how strong each competitive force is. This analytical step is essential because managers cannot devise a successful strategy without in-depth understanding of the industry's competitive character. Hax and Majluf (1996) assert that in order to select the desired competitive position of a business, it is necessary to begin with the assessment of the industry to which it belongs. To accomplish this task, managers must understand the fundamental factors that determine the firm's

long-term profitability prospects because this indicator embodies an overall measure of industry attractiveness.

1.1.1 Porter's Five Forces Model

The emergence of strategy has led to a new thinking in the area of industry analysis. Porter (1980) developed the Five Force industry analysis Model, which has a theory that there are five forces that determine competition in an industry. These forces form the basic characteristics of competition in an industry. Hence the strongest competitive force determines the profitability of an industry and its importance in strategy formulation. By far, the Five Forces Model, which forms the basis of this study, is the most influential and widely used framework for evaluating industry attractiveness. Essentially, Porter (1980) postulates that there are five forces that typically shape the industry structure: intensity of rivalry among competitors, threat of new entrants, threat of substitutes, bargaining power of buyers, and bargaining power of suppliers. These forces together with other context-specific forces (government, logistics, and information technology) as identified by Aosa (1997) and McFarlan (1984), will be the conceptual framework (as expounded in the literature) on which this study will be based.

The five competitive forces reflect the fact the competition in an industry goes well beyond the established players. All the five forces jointly determine the intensity of industry competition and profitability, and the strongest force or forces are governing and become crucial from the point of view of strategy formulation. To establish the strategic agenda for dealing with these contending forces and to grow despite them, a company

must understand how they work in the industry and how they affect the company in its particular situation (Pearce and Robinson, 1997).

A firm's performance behavior is affected by who it is competing with and in what sense they compete. The degree of competitiveness of the market refers to the degree to which individual firms in the market have power to influence price or other terms on which their product is sold. Based on market characteristics like the degree of product differentiation, presence or absence of entry barriers, economies of scale, mobility, exit and shrinking barriers, economists were able to classify industries (Lipsey, 1987; Kotler, 1998; Porter, 1980; Pearce and Robinson, 1997). Industry and competitive analysis is an orderly process that attempts to capture the structural factors that define the long-term profitability prospects of an industry, and to identify and characterize the behavior of the most significant competitors (Porter, 1980; Hax and Majluf, 1996).

Different forces take on prominence in shaping competition in each industry. Each industry has an underlying structure, or a set of fundamental economic and technical characteristics, that gives rise to these competitive forces. The strategist, wanting to position his organization to cope best with its industry environment or to influence that environment in the industry's favor, must learn what makes the environment tick. This view of the competition according to Porter pertains equally to industries dealing in service as well as those selling products. As competition has increased coupled with a changing dynamic environment in the Kenyan mobile telephony industry, it has become

increasingly important for firms to understand the industry they are in so as to develop effective strategies to compete and develop competitive advantage.

1.1.2 Overview of the Kenyan Mobile Telephony Industry

An industry can be defined as a group of firms offering products or services that are close substitutes for one another. The mobile phone industry will be defined for the purposes of this study as the grouping of organizations that are involved in selling and marketing airtime. The Kenya telecommunications sector was liberalized in the late 1990s when two mobile phone operators (Safaricom and Kencel, now Celtel) were licensed. A third mobile operator (Econet Wireless) has already been licensed and was expected to be operational by year 2004 but has been stifled by legal tussles among its would be stakeholders.

Nevertheless, the sector has since grown with the entry of other operators (V-Tel, Telkom, Popote Wireless, Flashcom, and other local loop providers). In spite of a number of current players, the industry is dominated by two large firms, that is, Safaricom and Celtel. The almost oligopolistic state of the market has encouraged stiff competition among the companies as evidenced in the different strategies being employed to increase the number of subscribers. For example, the aggressive marketing and subsidies to customers like discounted airtime, fairly priced hand sets and lines among others has seen the subscriber base increase tremendously.

The mobile phone industry is relatively young in Kenya. However, less than a decade after the mobile was introduced in Kenya, the number of people connected has soared and now there could be as many as ten mobile phone subscribers for every landline. Safaricom, the leading privately-owned operator, has almost 5 million subscribers, while its main competitor, Celtel, has close to 3 million (The Standard, 2007). Competition has intensified, and is characterized by introduction of new products and services and at lower rates to gain market share. Mobile phone penetration stands at around 25% among the highest in sub-Saharan Africa. Sector operators have urged the government to scrap a 10 per cent excise duty it levies on mobile phone calls. This will increase mobile phone penetration and stimulate the economy.

Therefore, it is evident that the major factors of competition in this industry revolve around building subscriber base as opposed to retention of quality clientele. The existing players have been intensely advertising and positioning their brands in various ways. This has inevitably touched on various factors of competition such as cost/price, customer care, network availability and reliability, and social responsibility activities among others (Ngobia, 2004).

In addition to the factors of competition mentioned, there are issues that have continued to stimulate or stifle growth in the industry. The mobile industry in Kenya is highly geared (license fee of Kshs 4 billion) making the payback period among he longest yet it has to remain competitive despite facing many challenges. The players in the industry find themselves in a Kenyan environment that not only provides competition but also a

myriad of economic, political, technological, legislative guidelines on existence of monopolies and other external environmental pressures.

Industry rivalry is manifested by changing prices, improved product differentiation and innovation and creative use of distribution channels. However, the competitiveness is reduced by the fact that these two firms control the entire market share (concentrated markets). The increased competitive pressure is coming not only from the two dominant carriers with talk of new entrants doing the rounds (Karobia, 2007). Entry barriers are also although high, requiring heavy fixed capital investments in terminal equipment such as base stations.

Consumer demand for affordable, convenient and high-speed communication has led to rapid evolution in technology, leading to the convergence of voice, video and data services. It is expected that the introduction of new technologies will ease the deployment of networks by operators and thus enable wider access to enhanced services at affordable rates thus increasing the range and threat of substitutes. Voice over Internet Protocol (VoIP) is one of the technologies that have accelerated convergence. These cost effective technologies have enabled fixed line operators to gain competitive advantage over mobile networks as well as increasing the threat posed by lower cost substitute communication products (The Daily Nation, 2006).

Implied in the introduction of cost effective technologies is the aspect of consumer buying power. These developments increase the consumers' buying power through

increasing the availability of affordable technologies thus increasing the range of available options; enabling the customers buy products that are undifferentiated and incur low switching costs when they change vendors; and finally, be price sensitive, due to other options available. According to Porter (2001), internet technology provides buyers with easier access to information about products and suppliers, thus bolstering buyer bargaining power.

Communication Commission of Kenya (CCK) as a regulatory body has been setting network coverage rollout timetable to rural areas regardless of economic viability of such rollouts. This has also affected the competitiveness of existing players as they are bound by such agreements. Telkom Kenya Limited (TKL) on the other hand introduced the prepaid services as well as GSM technology where landlines are not required thus intensifying competition in the industry. TKL also reduced its charges for international calls and this has intensified competition since Internet connectivity is monopolized by TKL (Ngobia, 2004).

Developments in the global telecoms sector have enhanced the competitive threat posed by new entrants, increased the bargaining power of suppliers and have threatened to erode the market base of traditional network carriers. This turn of events is caused by two new internet-based fourth generation [4G] technologies mobile technologies- Worldwide Interoperability for Microwave Access (WiMAX) and wireless fidelity (WiFi)-which offer superior voice quality, are long range and use Internet technology (VoIP) to deliver voice-a shift that has left the carriers scrambling for new strategies as they increasingly

face the prospect of competing head on with their long-term collaborators, the handset makers. With WiMAX's roots in the internet, reasoning goes, mobile networks based on this technology will be able to deliver the multimedia goods to mobile-phone customers better than traditional cellular networks (Gakuru, 2006).

For an organization to survive in a competitive environment like the one prevalent in the Kenyan mobile industry described above, it is crucial to identify structural features determining the nature of competition in its industry. Pearce and Robinson (1997) observe that designing viable strategies for a firm requires a thorough understanding of the firm's industry and competition. The concept of industry environment was propelled into the foreground of strategic thought and business planning by Porter. His well-defined analytic framework "the Five Forces Model" helps strategic managers to link remote factors to their effects on a firm's operating environment.

Porter (1980) points out that competition in an industry continually works to drive down the rate of return on invested capital toward the competitive floor rate of return, or the return that would be earned by the economist's "perfect competitive" industry. The strength of the competitive forces in an industry determines the degree to which inflow of investment occurs and drives the return to the free market level, and thus the ability of firms to sustain above-average returns.

1.2 Statement of the Problem

The environment within which a firm operates is perhaps the largest determinant of the strategies it adopts. Porter (1980) observes that the essence of formulating competitive strategy is to relate an organization to its environment. Organizations are environment dependent. They must scan the environment in order to spot budding trends and conditions that could affect the industry and adapt to them (Thompson and Strickland, 2003).

An industry's economic traits and competitive conditions and how they are expected to change determine whether its future prospects will be poor, average, or excellent. Industry and competitive conditions differ so much that leading companies in unattractive industries can find it hard to earn respectable profits while weak companies in attractive industries can report good performances. Hence, the firm must understand the industry in which it operates, which is formed by its relationship with customers, competitors, suppliers and the firm's overall industry environment.

Kenya's mobile phone industry is in a state of flux. This year alone, the three main players in the industry-Safaricom, Telkom Kenya Ltd. and Celtel have launched a number of new services for their consumers, moves which exhibit fierce competition in the industry. Over and above the stiff competition experienced by players in the industry, a number of other issues also take center stage: Telkom Kenya Limited (TKL)'s role in the industry, Communication Commission of Kenya (CCK) as the regulatory agent, the role played by handset manufacturers, technological innovations, the consumers and the

general economic environment in the country among others. These phenomena reveal how the mobile industry environment in Kenya exhibits a lot of ambivalence hence forcing industry players to make hasty decisions, some of which might plunge them into a strategic quagmire. It would, therefore, be beneficial for industry players to understand the underlying structure and the nature, source and strength competitive forces, hence the need for structural and competitive analysis of the industry (Karobia, 2007; Rice, 2007).

Whereas a number of studies (Waithaka, 2001, Oluoch, 2003; Gakombe, 2004; Ngobia, 2004, Karari, 2006 among others) have been on industry analysis, the studies have focused on different contexts with different conceptual orientations with the exception of Ngobia on context. For instance Waithaka looked at the analysis of the funeral industry in which she adopted a modified Porter's Five Forces Model which included three other forces that defined the structure of the industry, that is, the government, logistics, and power play. In her study, Oluoch applied the modified Five Forces Model to assess the perceived attractiveness of the Freight and Forwarding Industry while Gakombe, Ngobia, and Karari respectively delved into the analysis of the industry forces and the strategic choices adopted by private hospitals; the basis of competition in the Mobile Phone Industry in Kenya; and an application of Porter's Diamond Model to analyze competitiveness of Kenya's Tourism Industry.

While Ngobia studied the Mobile phone industry with a focus on the basis of competition in the industry, no known study that has focused on the structural and competitive analysis of the mobile phone industry and applying Porter's Five Forces Model. It is the

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purpose of this study to apply the Five Forces Model to assess the structure of the industry and its competitiveness in order to bridge the inherent knowledge gap. Specifically, the study intends to address the questions: What are the forces that define the structure of the mobile telephony industry in Kenya? What is the strength of the competitive forces in the mobile telephony industry in Kenya?

1.3 Objectives of the Study

The objectives of this study are:

i. To establish the forces that define the structure of the mobile telephony industry in Kenya.

ii. To determine the strength of the competitive forces in the mobile telephony industry in Kenya.

1.4 Significance of the Study

The findings of the study will benefit the following:

i. Policy makers both in government regulatory authorities and private sector will be able to utilize the findings of the study in informing their decisions regarding the way forward in the mobile telephony sector.

ii. The management and interested investors in the mobile telephony industry can use the findings of the study in crafting viable strategies with respect to investment and other aspects in their organizations.

iii. Lastly, the study will be use by researchers in both academic and business, as a reference tool in evaluating the growth, competitiveness and/or attractiveness of the mobile telephony industry in Kenya.

CHAPTER TWO: LITERATURE REVIEW

2.1 Industry Structure and Competition

An industry can be defined as a group/collection of firms offering products or services that are close substitutes for one another (Pearce and Robinson, 1997); Kotler, 1998; Lipsey, 1987; Porter, 1980). Individual industries may differ from each other according to the degree of competition among various buyers and sellers in each market (Lipsey, 1987). Kotler (1998) states that there are four forms of competition among firms: offering similar products and services to the same customer at similar prices; industry competition among firms making the same product or class of products; form competition among firms manufacturing products that supply the same service; and generic competition among all the firms competing for the same consumers' disposable income.

There are certain characteristics of a market in which a firm operates that are likely to affect a firm's behavior and performance. To decide who is competing with whom and in what sense they compete, it is necessary to distinguish between the behavior of individual firms and the type of market in which the firms operate. Economists use the term *Market Structure* to refer to the latter concept (Lipsey, 1987).

The degree of competitiveness of the market structure refers to the degree to which individual firms have power over that market- power to influence the price or other terms on which their product is sold. Factors that have been used to classify industries because they influence behaviors and therefore performance of firms include the number of sellers; the degree of product differentiation; presence or absence of entry, mobility, exit,

and shrinkage barriers. Others are cost structure, degree of vertical integration, and degree of globalization (Lipsey, 1987; Kotler, 1998; Porter, 1980; Pearce and Robinson, 1997).

These market characteristics give rise to four known industry structure types namely, pure monopoly, oligopoly, monopolistic competition, and perfect competition (Kotler, 1998; Lipsey, 1987; Brown, 1995). Pure monopoly exists when only one firm provides a certain product or service, that is, whenever an industry is in the hands of a single producer. Monopoly can be a result of a regulatory edict, patent, license, scale economies or other factors (Kotler, 1998). A monopoly has the most power over the market compared to other industry structure types. A monopoly has power to influence the market price. By reducing its output, it can force the price up, and by increasing its output, it can force the price down.

The market structure of perfect competition is at the opposite extreme of a monopoly. The theory of perfect competition is built on two critical assumptions: one, about the behavior of individual firm and two, about the nature of the industry in which in which it operates. The firm is assumed to be a price taker. This means that the firm is assumed to act as if it can alter its rate of production and sales within any feasible range without its actions having any significant effect on the price of the product it sells. Thus the firm must passively accept whatever price happens to be ruling on the market (Lipsey, 1987). The industry is characterized by freedom of entry and exit. This means that existing firms cannot bar the entry of new firms and there are no legal prohibitions on entry or exit. An

industry that is perfectly competitive consists of many competitors offering the same product and service (homogeneous). Since there is no basis for differentiation, competitors' prices will be the same. Sellers will enjoy different profit rates only to the extent that they achieve lower costs of production and distribution.

Before the 1930s, economists mainly studied the two polar market structures of perfect competition and monopoly. Then in the 1930s, dissatisfaction with these extremes led to the development of a theory of a new market structure called *Monopolistic Competition or Imperfect Competition.* The theory was developed by British economist Joan Robinson and American economist Edward Chamberlin (Lipsey, 1987; Brown, 1995). The main difference between monopolistic and perfect competition lies in the assumptions of homogeneous and differentiated products.

Firms in perfect competition sell a homogeneous product, which from a practical point of view means a product similar enough across the industry so that buyers cannot distinguish physically among the products sold by different firms in the industry. They thus regard the products as perfect substitutes for each other. Firms in monopolistic competition sell a differentiated product which, from a practical point of view means a group of commodities similar enough so that buyers can and do distinguish among the products sold by different firms in the industry. Because consumers regard the various products as close but not perfect substitutes, the producer of each has some power over its own price. Monopolistic competition consists of many competitors able to differentiate

their offers in whole or part. Many of the competitors focus on market segments where they can meet customer needs in a superior way and command a price premium.

Oligopoly is an industry structure in which a small number of (usually) large firms compete with each other and produce products that range from highly differentiated to highly standardized. Each firm has enough market power so that it cannot be a price taker, but it is subject to enough inter-firm rivalry that it cannot control the market completely. There are two forms of oligopoly: pure and differentiated. Pure oligopoly consists of a few companies producing essentially the same commodity. A company in a pure oligopolistic industry would find it hard to change anything more than the going price unless it can differentiate its service. If competitors match on services, then the only way to gain competitive advantage is through lower costs. Differentiated oligopoly consists of a few companies producing differentiated products. The differentiation can occur along lines of quality, features, styling, or services.

2.2 Industry and Competitive Analysis

According to Hax and Majluf (1996), industry and competitive analysis is an orderly process that attempts to capture the structural factors that define the long-term profitability prospects of an industry, and to identify, and characterize the behavior of the most significant competitors. Industry analysis is the basis of intelligent planning. It is a systemic process of gathering and analyzing information about an industry on a domestic and global scope. The information gathered would be on economic trends, social and political trends, changes in technology and the rate of change. The analysis helps in

determining the true areas in which firms compete, defines what firms consider to be competition, and helps determine key factors for success as they pursue various opportunities. It provides a basis upon which firms evaluate and decide about their corporate goals and helps to develop insight into developing appropriate strategies. Rowe et al. (1994) define industry analysis as an environmental scan to determine what forces in a firm's external environment have direct impact on its competitive position and what competitor actions need to be taken to achieve a sustainable competitive advantage. It focuses on the industries in which the firm competes (Comerford and Callagham, 1990).

Thompson and Strickland (2003) point out that one important component in industry and competitive analysis involves delving into the industry's competitive processes to discover what the main sources of competitive pressure are and how strong each competitive force is. This analytical step is essential because managers cannot devise a successful strategy without in-depth understanding of the industry's competitive character.

Waithaka (2001) quotes Robinson and Chamberlin (1936) whom she observes that when they developed the theories of imperfect competition in the 1930s, they also provided what appeared to be tight classification scheme for analysis of industries and industrial economics. Economists had long since recognized pure competition and pure monopoly, and with the addition of two kinds of intermediate competition- oligopoly and monopolistic competition- they seemed to have all the bases covered. For much of the next 40 years, economists used this framework to study the industrial economy.

Since the 1930s and 1940s, the traditional approach to analysis of industries was the Structure-Conduct-Performance (SCP) model (Brown, 1995). As the name implies, the SCP approach holds that there is an important relationship structure, conduct, and performance. According to this approach, firm and industry behavior depend on industrial structure, so once industrial structure is classified, conduct and performance can be readily deduced. The key components of an industrial structure are the number of firms in an industry, entry and exit conditions, and degree of product differentiation. Other important aspects are the extent of vertical integration, the amount and quality of information available to firms, and the amount of risk.

The structure of the industry determines whether firms are price takers (pure competition) or price makers (all other market structures), whether they engage in advertising (firms in pure competition markets do not), whether there is competition or cooperation among different firms and so on. The important point is that the conduct is associated with structure. Finally, conduct determines performance. Three of the most important elements of performance are profitability, economic efficiency, and consumer welfare. The various market structures are assumed to perform differently. For example, there are no long-run economic profits under pure competition and monopolistic competition; efficiency exists only under pure competition; and so on.

However, Brown (1995) further observed that in the 1960s and 1970s, a number of economists began to find problems with the SCP approach leading to the birth of the new

industrial economics. The most serious problem with the SCP approach is what has been referred to as the endogeneity question. "Endogenous" means determined within the system. In the context of the SCP approach, the endogeneity question concerns whether industrial performance is completely determined by industrial structure. The basic premise of SCP approach is that performance depends on conduct and structure. However, conduct is assumed to be dependent on structure and this implies that performance is determined by structure alone. The premise that industry structure determines industry performance implies the industry structure is predetermined ("exogenous") and that managers and entrepreneurs only passively respond to the industrial environment. This is inconsistent with what is known about business people. They are constantly trying to shape the industrial environment to fit their needs. For example, large firms may try to drive rivals out of business by offering goods for abnormally low prices, a strategy known as predatory pricing. Another example is limit pricing. If a monopoly firm keeps its prices low to deter entry, the industry will remain a monopoly; if it charges higher prices, firms will enter, and the monopoly will evolve into an oligopoly. To the extent that this kind of strategic behaviors does exist, industrial structure is a function of the activities of the firms and should not be treated as being exogenous.

Another problem with SCP approach is that it does not say very much about the evolution of industrial markets. This is a key problem because competition is an evolutionary and historic process. By treating industrial structure as given, SCP analysis cannot take into account strategy and the multiple interactions among firms. According to Brown (1995),

perhaps the key difference between SCP and the new industrial economics is the focus on strategy versus determinism. Traditional industrial economists believe that existing firms, markets, and production methods are a reasonable approximation of the most efficient adaptation of the existing technology that could be imposed by external order. The important point is that this approximation comes about automatically without any intervention from policy makers, so there is little role for strategic behavior by businesspeople. New industrial economists hold a much different world view: instead of being driven by a deterministic force, the market economy evolves through the interplay of firms and policy makers, who try to control economic evolution- they innovate rather than yield to the industrial environment.

Porter (1980) argues that the every firm competing in an industry has a competitive strategy, whether explicit or implicit, and that the essence of formulating a competitive strategy is relating a company to its environment. Although the relevant environment is very broad, encompassing social as well as economic forces, the key aspect of the firm's environment is the industry or industries in which it competes.

2.3 Local Empirical Studies on the Mobile Telephony Industry

Less than a decade after the mobile was introduced in Kenya, the number of people connected has soared and now there could be as many as ten mobile phone subscribers for every landline. Safaricom, the leading privately-owned operator, has almost 5 million subscribers, while its main competitor, Celtel, has close to 3 million (The Standard, 2007). Competition has intensified, and is characterized by introduction of new products

and services and at lower rates to gain market share. Mobile phone penetration stands at around 25% among the highest in sub-Saharan Africa. Sector operators have urged the government to scrap a 10 per cent excise duty it levies on mobile phone calls. This will increase penetration mobile phone penetration and stimulate the economy.

The Kenyan mobile market has expanded tenfold in the past few years, vaulting the country to the top tier of Africa's mobile industry. Expectations were once again stimulated with the expiry of Telkom's monopoly in June 2004. In spite of a number of current players in the Kenyan mobile telephony industry, the industry is dominated by two large firms, that is, Safaricom and Celtel. The almost oligopolistic state of the market has encouraged stiff competition among the companies as evidenced in the different strategies being employed to increase the number of subscribers. For example, the aggressive marketing and subsidies to customers like discounted airtime, fairly priced hand sets and lines among others has seen the subscriber base increase tremendously.

The above industry scenario has prompted a number of studies that have laid their emphasis on different aspects within the industry. Most (if not all) of the studies were carried out on two major players in the industry (Safaricom and Celtel, then Kencell Kenya Ltd.). A study by Ngobia (2004) on the basis of competition in the industry established that existing players (Safaricom and Celtell) have been able to understand the price sensitivity of their target customers and have been able to gradually define the basis of competition. As a result, they have been able to create a competitive edge that has made them achieve outstanding subscriber growth for the short period since inception.

The study further established five main bases of competition that been targeted and used by existing firms so as to remain on the edge. These include pricing; new products/services introductions; customer care services; network coverage and quality; careful selection, training and retention of personnel; and embracing new telecommunication technology. The researcher came to a conclusion that despite the low penetration by the mobile service providers, there exists fierce battle for subscribers. Subsequently, defining the basis of competition becomes vital for the operators not only to survive but also to remain profitable over the long-term.

From a marketing perspective, Odhiambo (2003) carried out study on the determinants of customer satisfaction for mobile phone subscribers in Nairobi. According to this study, customer service; assurance; service responsiveness; service access; reliability; service security; product/service features; pricing; service credibility; and service equity/fairness were found to be major determinants of customer satisfaction. The researcher further noted that these factors are important to the players in the industry because they should inform the development of marketing and competitive strategies and help in organizational resource allocation if the firms are ever to attain a positive and sustained customer satisfaction, hence a sustained competitive advantage.

Another study by Ooko (2003) took the human resource approach and delved into employee perception of the link between performance and incentive pay among selected employees in the mobile phone industry. The study established that majority of employees perceive that there exists a link between their incentive pay and their

performance indicating that the acceptance of the pay increases their level of performance at different rates. It was further noted that for the companies to be competitive, their workforce has to be motivated by both monetary and non-monetary means.

The findings of the above studies reveal that the Kenyan mobile telephony industry is in its youthful stage and yet to reach maturity and that there are several forces and/or factors that would shape its competitiveness and define its structures, a subject for this study.

2.4 Conceptual Framework: The Five Forces Model

In any industry, whether service or manufacturing, Porter (1980), observes that the rules of competition are embodied in five competitive forces: the entry of new competitors, the threat of substitutes, the bargaining power of buyers, the bargaining power of suppliers, and rivalry among the existing competitors. The collective strength of these five competitive forces determines the ability of firms in any industry to earn profits and these five forces vary from industry to industry. He point out that the purpose of conducting industry and competitive analysis, therefore, is mainly to understand the forces behind industry performance in order to match strategy to industry conditions.

This study will adopt and apply the Five Forces Model albeit with contextual modifications as suggested by different scholars and researchers. Pearce and Robinson (1997) built upon Porter's theory and postulated that designing viable strategies for a firm requires a through understanding of the firm's industry and competition which involves defining the industry boundaries and structure, competitive analysis and operating

environment. They go on to define the industry structure as comprising of the industry concentration, which is the extent to which industry sales are dominated by only a few firms. It also involves the economies of scale, which are the savings that companies in the industry can achieve due to increased volumes, product differentiation or the extent to which customers perceive products/services offered by different firms in the industry as different from one another, and barriers to entry. Barriers to entry are tangible or intangible obstacles that a firm must overcome in order to enter the industry.

In Kenya, studies have been conducted that have focused on the application of Porter's Five Forces Model in some industries. In her study of the funeral industry attractiveness, Waithaka (2001), adopted the modified model advanced by Aosa (1997), which included three other additional forces (government, logistics, and power play) that were found to define the structure of the funeral industry. The same modified model has been applied by Oluoch (2003) in studying the perceived attractiveness of the freight and forwarding industry. The studies substantiate the view advanced by Osigweh, 1989; Hussey, 1990; Austin, 1991; and Aosa, 1997) that management is sensitive to the context in which it is practiced and that strategic management models advanced in developed countries where strategic management originated may not be directly applicable in developing African countries, Kenya inclusive.

Wiseman and Macmillan (as quoted in Aosa 1997) accepted Porter's model but grouped the five forces into three categories, namely: suppliers, customers and competitors. This new classification did not alter Porter's propositions. Wheeler and Hunger (1990) also

agreed with Porter but wanted to include the sixth force, 'other stakeholders'. They argued that this new category would incorporate the relative power of unions, government, and other interested parties not specifically mentioned in Porter's model. In addition, though Porter had included government as a potential entry barrier under threat of new entrants, they argued that government was very powerful and merited special mention as a separate strategic force. Porter (1985) agrees that no structural analysis is complete without a diagnosis of how present and future government policy at all levels will affect structural conditions

The work of McFarlan (1984) also added an information technology (IT) dimension to the model by exploring the way that IT could be used to exploit or counter any of the forces. It was suggested that, by adding to products an IT content, which would create added value or reduce cost, it could make it more difficult for new entrants or substitute products to be successful. Also, using IT to forge links with suppliers and customers would increase the power of the organization within the market.

In developing the model, Porter (1980) observes that the essence of formulating competitive strategy in relating a company to its environment. He notes that although the relevant environment is very broad, encompassing social as well as economic forces, the key aspect of the firm's environment is the industry or industries in which it competes. According to him, industry structure has a strong influence in determining the competitive rules of the game as well as the strategies potentially available to the firm. He holds the belief that the strength of competitive forces in an industry determines the

degree to which the inflow of investment occurs and drives the return to the free market level, and thus the ability of firms to sustain above-average returns.

In investigating into the structural determinants of the intensity of competition in an industry, Porter identified the key structural features of industries that determine the strength of the competitive forces and hence industry profitability. He further points out that the five competitive forces reflect the fact that competition in an industry goes well beyond the established players. All the five forces, he observes, jointly determine he intensity of industry compctition and profitability, and the strongest force(s) are governing and become crucial from the point of view of strategy formulation.

In his proposition, Porter remains categorical that the underlying structure of an industry reflected in the strength of the forces should be distinguished from the many short-run factors that can affect competition and profitability in a transient way. For example, fluctuations in economic conditions over the business cycle influence the short-run profitability of nearly all firms in many industries as can material shortages, strikes, spurts in demand, and the like. Although such factors may have tactical significance, Porter states that the focus of the analysis of industry structure, or "structural analysis", is on identifying the basic underlying characteristics of an industry rooted in its economics and technology that shape the arena in which competitive strategy must be set. Firms will each have unique strengths and weaknesses in dealing with industry structure, and industry structure can and does shift gradually over time. Following is a detailed description of the five forces as fronted by Porter (1980).

Threat of Entry: New entrants to an industry bring new capacity, the desire to gain market share, and often substantial resources. The threat of entry into an industry depends on the barriers to entry that are present, coupled with the reaction from existing competitors that the entrant can expect. If barriers are high and/or the new comer can expect sharp retaliation from entrenched competitors, the threat of entry is low and vice versa. The major sources of barriers to entry include economies of scale; product differentiation; capital requirements; switching cost; access to distribution channels; cost disadvantages independent of scale; and government policy. Conditions that signal the likelihood of strong retaliation to entry and hence deter it include among others a history of vigorous retaliation; established firms with substantial resources to fight back; established firms with great commitment to the industry and highly illiquid assets employed in it; and slow industry growth which limits the ability of the industry to absorb a new firm without depressing the sales and financial performance of established firms

Intensity of Rivalry among Existing competitors: This takes the familiar form of jockeying for position- using tactics like price competition, advertising battles, product introductions, and increased customer service or warranties. Rivalry occurs because one or more competitors either feels the pressure or sees the opportunity to improve position. Rivalry in some industries is characterized by such phrases as "warlike", "bitter", "cutthroat", whereas in other industries it is termed "polite" or "gentlemanly". Intense rivalry is the result of a number of interacting structural factors namely: numerous or

equally balanced competitors; slow industry growth; high fixed or storage costs; lack of differentiation or switching costs; capacity augmented in large increments; diverse competitors; high strategic stakes; and high exit barriers among others.

Pressure from Substitute Products: All firms in an industry are competing, in a broader sense, with industries producing substitute products. Substitutes limit the potential returns of an industry by placing a ceiling on the prices firms in the industry can profitably charge. The more attractive the price performance alternatives offered by substitutes, the firmer the lid on industry profits and vice versa. Identifying substitute products is a matter of searching for products that can perform the same function as the product of the industry. Substitute products that deserve the most attention are those that are subject to trends improving their price-performance tradeoff with the industry's product, or are produced by industries earning higher profits.

Bargaining Power of Buyers: Buyers compete with the industry by forcing down prices, bargaining for higher quality or more services, and playing competitors against each other – all at the expense of industry profitability. The power of each industry's important buyer groups depends on a number of characteristics of its market situation and on the relative importance of its purchases from the industry compared with its overall business. A buyer group is powerful if the following conditions hold true, otherwise it is not: it is concentrated or purchases large volumes relative to seller sales; the product it purchases from the industry represent a significant fraction of the buyer's costs or purchase; the product it purchases from the industry are standard or undifferentiated; it faces few

switching costs; it earns low profits; buyers pose a credible threat of backward integration; the industry's product is unimportant to the quality of the buyer's products/services; and the buyer has full information among others.

Bargaining Power of Suppliers: Suppliers can exert bargaining power over participants in an industry by threatening to raise prices or reduce the quality of purchased goods and services. Powerful suppliers can thereby squeeze profitability out of an industry unable to recover cost increases in its own prices. The conditions making suppliers powerful tend to mirror those making buyers powerful. A supplier group is powerful if the following conditions apply, otherwise it is not: it is dominated by a few companies and is more concentrated than the industry it sells to; it is not obliged to contend with other substitute products for sale to the industry; the industry is not an important customer of the supplier group; the suppliers' product is an important input to the buyer's business; the supplier group's products are differentiated or it has built up switching costs; and the supplier group poses a credible threat of forward integration among others. The Five Forces Model is illustrated in the figure below.

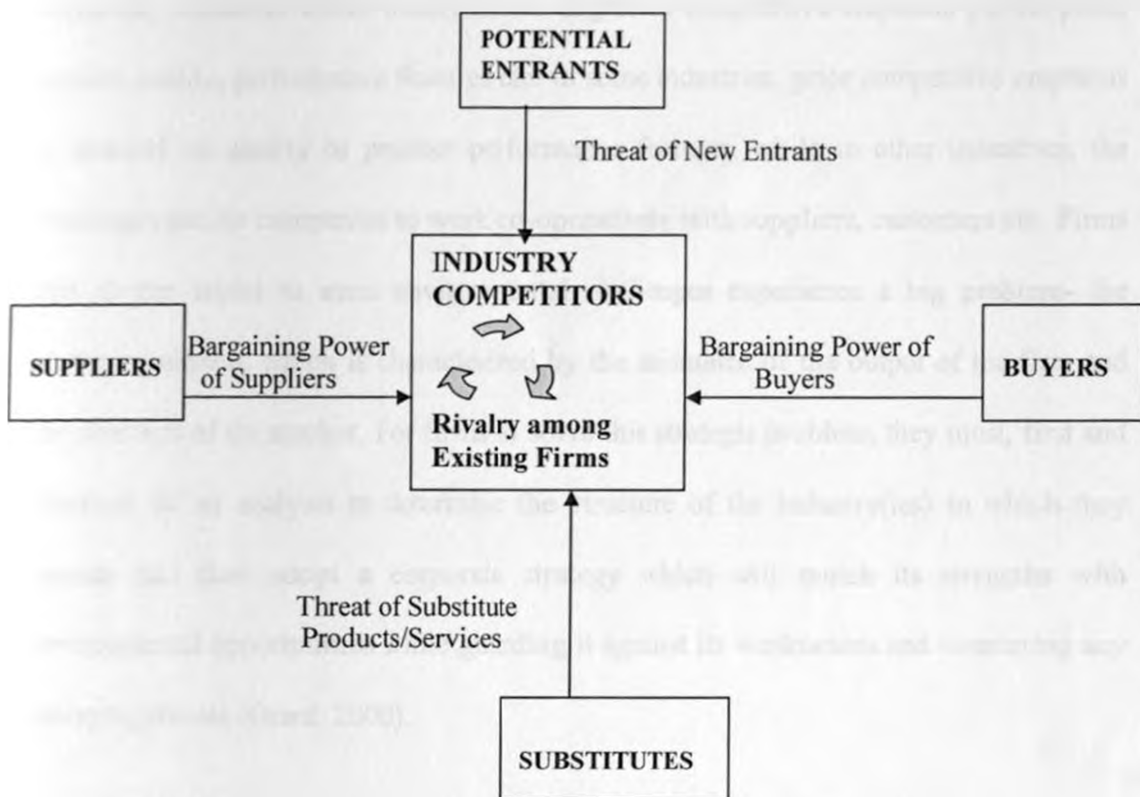

Fig. 1.1 The Five Forces Industry Analysis Model
Adapted from Porter, E. M. (1980), Competitive Strategy, The Free Press, Pp. 4

According to Porter (1980), the intensity of competition in an industry is neither a matter of coincidence nor bad luck. Rather, competition in an industry is rooted in its underlying economic structure and goes well beyond the behavior of current competitiveness. The state of competition in an industry depends on five basic competitive forces and the collective strength of these forces determines the ultimate profit potential in the industry, where profit potential is measured in terms of long run return on invested capital.

Competitive forces can be moderate in one industry and fierce even cutthroat in another. Moreover, industries differ widely in the degree of competitive emphasis put on price, product quality, performance features etc. in some industries, price competitive emphasis is centered on quality or product performance features, while in other industries, the challenges are for companies to work co-operatively with suppliers, customers etc. Firms that do not adjust to meet environmental challenges experience a big problem- the strategic problem, which is characterized by the mismatch of the output of the firm and the demands of the market. For firms to solve this strategic problem, they must, first and foremost do an analysis to determine the structure of the industry(ies) in which they operate and then adopt a corporate strategy which will match its strengths with environmental opportunities while guarding it against its weaknesses and countering any emerging threats (Grant, 2000).

These five forces delimit prices, costs, and investment requirements, which are the basic factors that explain long-term profitability prospects, and henceforth, industry attractiveness. Consequently, three points are worthy observing with regard to the impact of industry structure on the profitability of a firm. First, different industries achieve different levels of average profitability; therefore, the attractiveness of an industry is a factor that is critical to understanding the performance of a firm. Second, there is a great degree of variability observed in the profitability levels among firms competing in a given industry. Thus, the ability of a firm to deploy resources and develop capabilities to achieve a superior performance, are also very important. And third, industry behavior seems to change dramatically across time so much so that industries that enjoyed high

levels of profitability in yesteryears face either mediocre or poor profitability during current times (Hax and Majluf, 1996).

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Research Design

The study was carried out through a descriptive survey research design. This research design was considered appropriate because of the cross-sectional nature of the data that was solicited. In adopting this design, the study sought to describe the structural and competitive characteristics prevalent in the mobile telephony industry. It therefore leads to the vivid presentation of the subject under study. This research design has been successfully used by researchers in similar past studies (Ngobia, 2004; Waithaka, 2001; Gakombe, 2003).

3.2 Population of Study

According to the industry regulator, the Communication Commission of Kenya (CCK), there are six (6) wireless telecommunications service providers as at July, 2007 , these six are broken down as follows 3 GSM mobile operators (Safaricom, Celtel & Econet), 1 fixed wireless CDMA provider (TKL) and 2 CDMA Local Loop Operators i.e. Flashcom & Popote. However, for the purposes of this study, the five main wireless telecommunications providers (Safaricom, Telkom, Celtel, Popote Wireless, and Flashcom) were studied as Econet was only just recently awarded their license and is yet to commence commercial operations. These five players, led by Safaricom, Celtell, and Telkom, tend to define the rules of the game in the industry, and hence significantly influence the structural and competitive shape of the industry. The other two providers (Acess and Simbanet) were considered to have insignificant influence in the industry.

3.3 Data Collection Method

The study used primary data which were mostly quantitative and descriptive in nature. Therefore, a structured questionnaire (Appendix I) was designed for this purpose. The questionnaire was designed to solicit data on forces that shape mobile phone industry structure and the nature of competition that is exhibited in the industry by the players. Respondents were presented with descriptive statements in a 5-point Likert scale on which they rated by scoring the extent to which they perceived a particular statement is descriptive of the structure of the industry and the nature of competition therein. The questionnaires were administered through mail "drop and pick" method and respondents targeted were Chief Executive Officers or Corporate Strategy Managers of the companies. However, where such positions were found not to exist, credit managers, marketing managers, and/or managers in charge of strategic planning in the organizations were targeted.

3.4 Data Analysis

Due to the cross-sectional and descriptive nature of data that was collected, the study used descriptive statistical tools of analysis. To measure the strength of the forces that define the structure and competition in the industry, cluster analysis was used. This entailed organizing variables and their relationships in measuring the extent to which they are related in describing a particular factor/force, which was then be used to describe the structure and competition in the industry. Variables defining a particular factor/force were grouped into clusters and used to measure the strength of the factor/force. The strength of a factor/force was measured by way of mean scores of each of the variables

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describing the factor/force. It was also possible to establish the most prevalent nature of competition in the industry. Analyzed data has been presented in tables to summarize the findings.

CHAPTER FOUR: FINDINGS AND DISCUSSIONS

4.1 Introduction

This chapter presents the findings of the study that were revealed upon collection and analyzing the data. The study sought to achieve two objectives. First, to establish the forces that define the structure of the mobile telephony industry in Kenya; and second, to determine the strength of the competitive forces in the industry. To achieve these objectives, a total of five companies (whose operations and relative sizes are considered to significant influence in the industry) were selected and the targeted respondents asked a set of questions in structured questionnaire about forces that define the industry structure and competition. The variables of study which were used in the questionnaire were adopted from Porter's Five Forces Model, which formed the conceptual framework for the study. All the five questionnaires that were administered were filled and returned, hence attaining 100% response rate. In analyzing the data that was collected, the variables/factors that define a particular industry force were clustered together, their respective means calculated and standard deviations after which the mean of these means is obtained to determine the extent to which the force is important in defining the structure of the industry and the competition therein. A force with mean of means of **3.0** and above would be considered to be strong enough to have impact on the structure and competitive behavior in the industry. The extent of the variation to which the respondents viewed each of the cluster factors as contributing to the force will be indicated by the respective standard deviations. The higher the standard deviation the higher the variance and vise versa.

4.2 Profile of Respondent Companies

Companies that operate in an industry are never the same with respect to some characteristics. It was the intention of the study to first establish the nature of the companies that were targeted by looking at their mode of incorporation, ownership, market coverage, and services offered. These aspects were considered to lay ground for the nature of competitive behavior in the industry. The companies that participated in the study were Safaricom Ltd., Celtel Kenya Ltd., Telkom Kenya Ltd, Flashcom Ltd, and Popote Wireless. These companies offer mobile telephony services using different technologies and covering differing ranges of network. Safaricom and Celtel are GSM mobile operators, Telkom is a wireless CDMA provider, and bothe Flashcom and Popote Wireless are CDMA Local Loop Operators. According to local media reports, Safaricom leads in subscrider base, followed by Celtel and Telkom respectively. Flashcom and Popote Wireless have very low subscriber base.

It was established that the companies were incorporated through a number of ways. Of all the five companies that were studied, only one (Telkom Kenya Ltd.) is a parastatal. The rest are limited companies. The research findings are presented in Table 1 below.

Table 1: Mode of Incorporation

Type of Company	Frequency	Percent	Cumulative Percent
Limited company	4	80.0	80.0
Corporation/parastatal	1	20.0	100.0
Total	5	100.0	

Source: Research Data

With respect to ownership, respondents were asked to state whether their companies are locally owned, foreign owned or both locally and foreign owned. It was established that of the five companies that were studied 2(40%) are locally owned, 1(20%) state owned, while another 2(40%) are both locally and foreign owned. Of those that are both locally and foreign owned, the percentage of local ownership is dependent upon the stakeholder type. Where the government was found to be a stakeholder, the local stake is higher than where local stakeholders are individuals or other firms. The findings are summarized in Table 2 below.

Table 2: Ownership

	Frequency	Percent	Cumulative Percent
Locally owned	2	40.0	40.0
Both local and foreign	2	40.0	80.0
State owned	1	20.0	100.0
Total	5	100.0	

Source: Research Data

On the aspect of market coverage, respondents were asked to state the geographical market coverage of the companies' services and/or operations. This aspect was considered to have bearing on the various companies' market sizes and the nature of competition that they face.

According to research findings, (40%) of the firms offer their services within Nairobi and its environs; while the remaining 60% offer theirs countrywide in both rural and urban areas. The findings are presented in Table 3 below.

Table3: Market Coverage

Geographical Coverage	Frequency	Percent	Cumulative Percent
Within Nairobi and its environs	2	40.0	40.0
Countrywide (rural and urban)	3	60.0	100.0
Total	5	100.0	

Source: Research Data

The companies that were covered in the study operate in an industry in which a number of services could be offered. However, the overriding service is the mobile telephony services even the scale, mode and extent to which the companies offer the service are bound to vary. Respondents were asked to list the services offered by their firms and the following were listed: mobile voice and data services as well as domestic money transfer; internet services, and fax services. The mobile voice and data services were found to be offered using various technologies viz. VoIP, ISDN, ADSL, VSAT, CDMA, GSM, WiMAX etc. These technologies provide avenues for product/service differentiation and act as bases for competition.

4.3 Industry Structural Analysis

Industry structure has a strong influence in determining the competitive rules of the game as well as the strategies potentially available to the firm. Identifying key structural attributes/features of an industry lays ground for determining the strength of the competitive forces and hence industry profitability (Porter, 1980). It is on this basis that this study sought to establish the nature of the forces that shape and/or define the structure of the mobile telephony industry, which then will be reflected in the nature of competition exhibited in the industry. Once the forces affecting competition in an

industry and their underlying causes have been diagnosed, the firm is in a position to identify its strengths and weaknesses relative to the industry.

This study was guided by the Five Forces Model by Porter (1980). The forces identified and described in the Model and other context-specific forces as identified by Aosa (1997) and McFarlan (1984) were applied to guide the interpretation of the research findings and ensuing discussions. The forces that were investigated include Entry barriers, threat of new entrants, threat of substitute products, bargaining power of buyers, bargaining power of suppliers, and rivalry among existing firms. Others include government control and information technology.

4.3.1 Entry Barriers and the Threat of New Entrants

New entrants to an industry bring new capacity, the desire to gain market share, and often substantial resources. The threat of entry into an industry depends on the barriers to entry that are present, coupled with the reaction from existing competitors that the entrant can expect. If barriers are high and/or the newcomer can expect sharp retaliation from entrenched competitors, the threat of entry is low (Porter, 1980).

It was the intention of this study to establish whether this force was a major determinant of competitive behavior of the players in the mobile telephony industry. Various entry barriers were presented to respondents and were asked to rank each one of them according to the extent to which it bars entry of new entrants into the industry. The study findings are summarized and presented in Table 4 below. The magnitude of the mean

score of each of the entry barriers indicates the extent to which it shapes competition in the industry.

Table 4: Entry Barriers

Variable/Factor	N	Mean Score (X)	Standard Deviation
Companies already in the industry enjoy enormous economies of scale.	5	4.8	0.45
Companies in the industry have extensively differentiated their products.	5	3.0	0.71
Companies in the industry exhibit a high degree of brand identity.	5	4.8	0.45
Investing in the industry requires a huge capital outlay	5	5.0	0.0
There is presence of high switching costs when consumers switch from one service provider to another.	5	2.8	1.5
Firms in the industry benefit from absolute cost advantages due to proprietary product technology and learning experience curve among other reasons.	5	2.8	1.3
Firms in the industry have easy access to the necessary inputs.	5	3.2	0.84
Companies in the industry retaliate sharply to any competitive moves by new entrants into the industry.	4	4.8	0.5

Mean of Mean Scores $= \frac{\sum X}{n} = \frac{31.2}{8} = 3.9$

Source: Research Data **N-Number of Respondents**

From Table 4 above, it can be observed that 6(75%) of the entry barriers were found to exist in the mobile telephony industry. The barriers include, in descending order of strength, huge capital outlay required when investing in the industry (mean score of 5); enormous economies of scale enjoyed by companies already in the industry (4.8); high

degree of brand identity exhibited by companies in the industry (4.8); sharp retaliation by companies in the industry to any competitive moves by new entrants into the industry (4.8); easy access to the necessary inputs by firms in the industry (3.2); and extensive differentiation of products by companies in the industry (3.0). Presence of high switching costs when consumers switch from one service provider to another and firms in the industry benefiting from absolute cost advantages due to proprietary product technology and learning experience curve among other reasons were found to be weak entry barriers each with a mean score of 2.8.

The above findings imply that there are a number of entry barriers in the mobile telephony industry. Huge amounts of capital required investing in the industry with respect to infrastructural developments and establishment costs are highly prohibitive. The companies in the industry, notably Safaricom, Celtel, and Telkom, enjoy enormous economies of scale which are present in nearly every function of the firms including marketing, service network, and range of products, among others. The companies also exhibit high degrees of brand identity whereby they have eagerly sought to solidly establish their brands in the market to boost their recognition by the consumers. The sharp retaliation to any competitive moves by new entrants into the industry also bars new entrants into the industry. High entry barriers are fundamental to explain a sustained level of strong profitability by Safaricom. It therefore follows that players in the industry are not under threat of new entrants gaining entry into the industry to threaten their market share.

4.3.2 Intensity of Competition

Rivalry among existing competitors takes the familiar form of jockeying for position—using tactics like price competition, advertising battles, product introductions, and increased customer service and warranties (Pearce and Robinson, 1997). The study set out to establish whether players in the mobile telephony industry exhibit intense and fierce competition among themselves and which ones among the determinants of rivalry are most predominant. A summary of the study findings are presented in Table 5 below.

Table 5: Rivalry Determinants

Variable/Factor	N	Mean Score	Standard Deviation
The number of players in the industry is large and their sizes small to the extent that one firm's move does not influence behavior of others in the industry.	5	2.2	1.60
The industry is highly concentrated and dominated by one or a few firms.	5	4.4	0.55
The industry is experiencing fast growth rate	5	4.8	0.45
Firms in the industry incur high fixed costs.	5	4.2	0.45
The industry has diverse competitors with diverse strategies, origins, and personalities.	5	3.8	0.84
A number of firms have high strategic stakes in achieving success in the industry.	5	4.2	0.45
It is very difficult, if not impossible, for a firm to exit the industry once it has invested in the industry.	5	4.2	0.45

$$\text{Mean of Mean Scores} = \frac{\sum X}{n} = \frac{27.6}{7} = 3.9$$

Source: Research Data **N-Number of Respondents**

From the research findings in Table 5 above, it is clear that there is substantial competition in the mobile telephony industry. Within the industry, the intensity of competition is very high with all rivalry determinants having a mean score of above 3.0

except one with a mean of 2.2- the number and size of players in the industry, which the results confirm that it is not large and that players are not small so much so that the extent that one firm's move actually influences behavior of others in the industry. This determinant also has a big variance of 1.6.

The rivalry is exhibited by the fact that the industry is experiencing fast growth rate (mean of 4.8); the industry is highly concentrated and dominated by one or a few firms (4.4); firms in the industry incur high fixed costs (4.2); a number of firms have high strategic stakes in achieving success in the industry (4.2); it is very difficult, if not impossible, for a firm to exit the industry once it has invested in the industry (4.2); and the industry has diverse competitors with diverse strategies, origins, and personalities (3.8).

The findings show that in as much as there are not many firms in the industry, players in the industry are jockeying for positions using tactics like price competition, product introduction, and advertising battles, and increased customer service or warranties. With the aggregate mean of 3.9, the results indicate that the mobile telephony industry is experiencing very intense rivalry because one or more firms either feels the pressure or sees the opportunity to improve position (Porter, 1980).

4.3.3 Threat of Substitute Products

Hax and Majluf (1996) observe that it is not only the firms participating in the industry and the potential newcomers that are central forces in determining industry attractiveness;

we have to add firms offering substitutes, which can either replace the industry products and services or present an alternative to fulfill that demand. Porter (1980) adds that substitutes not only limit profits in normal times, but they also reduce the bonanza an industry can reap in boom times. The more attractive the price-performance alternative offered by substitutes, the firmer the lid on industry profits.

The research sought to establish whether players in the mobile telephony industry face the threat of substitutes. The findings shown in Table 6 below show that firms in the mobile telephony industry don't face the threat of substitute products. As shown in the Table 6 below, there is no pressure from substitute products that put the lid on the firms' profits in the industry (mean score 2.8).

Table 6: Threat of Substitute Products

Variable/Factor	N	Mean Score	Standard Deviation
There is pressure from substitute products that put the lid on the firms' profits in the industry.	5	2.8	0.84

Source: Research Data **N-Number of Respondents**

However, the size of the mean (2.8) could not be considered such insignificant. As Porter (1980) points out, all firms in the industry are competing, in abroad sense, with industries producing substitute products. Therefore, it could not be ruled out that there is no threat from substitute products in the mobile telephony industry. There are for example Internet Service Providers and local loop providers who offer the services provided by the firms in the industry albeit not perfect substitutes.

4.3.4. Customers' Bargaining Power

Buyers compete with the industry by forcing down prices, bargaining for higher quality or more services, and playing competitors against each other- all at the expense of industry profitability (Porter, 1990; Pearce and Robinson, 1997). This scenario will make players in the industry to pursue strategies which will have, as a key component, the attempt to neutralize buyer's bargaining power. The study's intention was to establish the extent to which buyer bargaining power shapes the mobile telephony industry. The research findings are as summarized and presented in Table 7 below.

From Table 7, the findings of the study show that of the eight (8) determinants of buyer power which were presented to the respondents, six (6) of them received a nod from the respondents that they actually influence the behavior of firms in the industry to a significant extent. Leading among those that determine subscribers' power include being price sensitive (mean 4.6); low or no switching costs (3.6); and a high propensity by the consumers to substitute one service for another. Others include consumers' possession of full information about demand, actual industry prices, and service costs; and also have knowledge of product differences offered by firms in the industry with mean scores of 3.2 and 3.0 respectively.

Table 7: Determinants of Buyer Power

Variable/Factor	N	Mean Score	Standard Deviation
Consumers of the services provided by firms in the industry are more concentrated than are the providers.	5	2.4	1.14
It is easier for a consumer group to switch from one service provider to another than it is for the service provider to switch from one consumer group to another.	5	3.6	1.14
Consumers of the industry's services have the potential to backward integrate.	4	2.5	1.00
Most consumers find the industry's services unimportant to the quality of their products/services.	5	1.6	0.89
Consumers have full information about demand, actual industry prices, and service costs.	5	3.2	1.48
Consumers of the services are price sensitive.	5	4.6	0.55
The consumers have knowledge of product differences offered by firms in the industry.	5	3.0	0.71
The consumers' propensity to substitute one service for another is high.	5	3.4	1.14

$$\text{Mean of Mean Scores} = \frac{\sum X}{n} = \frac{24.3}{8} = 3.04$$

Source: Research Data **N-Number of Respondents**

The findings in Table 7 above show consumers' bargaining power determines competition in the industry as indicated by its aggregate mean score of 3.04. It is, however, against the popular expectation that mobile phone subscribers may not be in possession of any bargaining power given the fact that are not concentrated and/or not many who are big in size. The research's findings with respect to the above determinants show that consumers of the mobile phone services are becoming more and more aware of

the industry dynamics and would not be tied to particular providers as a move to increase the switching costs.

4.3.5 Bargaining Power of Suppliers

Suppliers can exert bargaining power on participants in an industry by raising prices or reducing quality of purchased goods and services. Powerful suppliers, thereby, can squeeze profitability out of an industry unable to recover cost increases in its own prices (Pearce and Robinson, 1997). The respondents were presented with five determinants of supplier power and asked to rate each according to the extent to which it influences the mobile telephony industry' structural and competitive behavior. The findings are summarized in Table 8 below.

Table 8: Determinants of Supplier Power

Variable/Factor	N	Mean Score	Standard Deviation
Suppliers of inputs to the industry are few and more concentrated than are the mobile service providers.	5	4.2	0.45
Firms in the industry have a variety of input substitutes.	5	2.0	0.71
Inputs supplied by suppliers are important to the mobile service providers' businesses.	5	4.2	0.84
The suppliers' products are highly differentiated that it will be very costly for mobile phone service providers to switch among suppliers.	5	3.4	1.82
Suppliers to the industry have the potential to forward integrate.	5	3.6	0.55

$$\text{Mean of Mean Scores} = \frac{\sum X}{n} = \frac{17.4}{5} = 3.5$$

Source: Research Data **N-Number of Respondents**

From Table 8 above, it can be revealed that suppliers of the inputs to the industry are few and more concentrated than are the mobile service providers (mean of 4.2); inputs supplied by suppliers are important to the mobile service providers' businesses (4.2); suppliers to the industry have the potential to forward integrate (3.6); and the suppliers' products are highly differentiated that it will be very costly for mobile phone service providers to switch among suppliers (3.6). The findings imply that suppliers' bargaining power is a strong force that has potential of influencing competition in the industry more especially when the player in the industry may be tied in and find it costly to switch. The force has an aggregate mean score of 3.5, meaning that the industry finds supplier very important tin determining profitability, hence competition in the industry. The findings are implicit of Porter's (1980) assertion that the conditions determining suppliers' power are not only subject to change but also often out of the firms' control. However, firms in the mobile telephony industry can sometimes improve their situation through strategy.

4.3.6 Government Controls

The government plays a vital role in the mobile telephony industry and its involvement in the industry determines majority of the operations. According to Porter (1980), government can limit or even foreclose entry into industries with such controls as licensing requirements and limits on access of raw materials. However, whereas Porter considered this aspect as an entry barrier, Aosa (1997) advanced the view that this aspect stand on its own right as a force. Within the context of this study, government was considered with a latter view in mind. Research findings indicate that this force strongly

influences the structure and competition in the mobile telephony industry in Kenya. Table 9 presents a summary of the findings.

Table 9: Government Controls

Variable/Factor	N	Mean Score	Standard Deviation
There are a lot of controls by the government on the mobile phone service providers operations.	5	4.0	0.71
The number of licenses required before the firm rolls out its operations are unnecessarily many.	5	3.4	1.52
The government's policy interventions make the industry a highly regulated one.	5	3.8	0.84
The government's interest in the industry breeds unequal play field for firms in the industry.	5	4.2	1.10

$$\text{Mean of Mean Scores} = \frac{\sum X}{n} = \frac{15.4}{4} = 3.9$$

Source: Research Data **N-Number of Respondents**

The findings in Table 9 above show that the government's interest in the industry breeds unequal play field for firms in the industry with a mean of 4.2; and the presence of a lot of controls by the government on the industry with a mean of 4.0. It was also felt by respondents that the government's policy interventions make the industry a highly regulated one (3.8) and that the number of licenses required before the firm rolls out its operations are unnecessarily many (3.4). The force's aggregate mean of 3.9 is in congruency with the prevailing situation and the feeling of most players that the government plays a role in influencing and/or defining the structure of the industry and determines the competitive behavior of the firms therein.

Similar studies by Waithaka (2001) and Oluoch (2003) revealed the same phenomenon. Waithaka's study established that the government plays a role in controlling operations in

the funeral industry while Oluoch's study established the government, through stringent requirements, determines the attractiveness of the freight and forwarding industry. Therefore, it is evident that within the Kenyan context, no structural analysis of any industry is complete without a diagnosis of how present and future government policy, at all levels, will affect structural conditions (Porter, 1980).

4.3.7 Information Technology

Firms that operate within any industry are influenced by the happenings in the external environment. One of the important variables in the external environment is technology. Within the mobile telephony industry, technology is the backbone in the operations of firms in the industry and any change in this technology will have enormous effect in the way the firms carry out their business. According to McFarlan (1984) information technology (IT) could be used to exploit or counter any of the forces in the industry and also create added value or reduce cost. The study sought to establish whether developments in technology affect the industry. The findings of the study are presented in Table 10.

Table 10: Impact of Information Technology

Variable/Factor	N	Mean Score	Standard Deviation
Industry growth and development greatly hinge on developments in information and telecommunications technology.	5	4.4	0.89

Source: Research Data **N-Number of Respondents**

The findings in Table 10 above indicate that growth and development in the mobile telephony industry greatly hinge on developments in information and telecommunications technology. With a mean of 4.4, it is evident that the structure of the

industry and competition therein will greatly be determined by the extent to which firms in the industry are able to invest in new technology and be in a position to embrace new developments in technology. According to Hax and Majluf (1996), resources and capabilities are sources of the unique competencies of the firm. Investing in up-to-date technology in the mobile telephony industry gives a firm a competitive advantage than other players who have not done so.

4.4 Industry Competitive Forces

The research findings in section 4.3 above brought to light the forces that determine the structure of the mobile telephony industry. However, different forces take on prominence in different directions in shaping competition in each industry. Hax and Majluf (1996) point out, not all forces, and for that matter the factors contributing to these forces, have an equal weight in shaping the structure of the industry and the nature of competitive behavior therein. On their part Pearce and Robinson (1997) observe that whatever the collective strength of the forces, the corporate strategist's goal is to find a position in the industry where his/her company can best defend itself against these forces or can influence them in its favor. The collective strength of the forces may be painfully apparent to all the antagonists; but to cope with them, the strategist must delve below the surface and analyze the sources of competition. It was on the basis of this that the study sought to determine the strength of the competitive forces in the mobile telephony industry.

The research findings show that there are mainly six forces that shape the mobile telephony industry structure. These forces include threat of entry and barriers to entry; rivalry amongst existing firms; bargaining power of buyers and suppliers; government controls and information technology. It was, however, established that from the standpoint of players in the industry, these forces are of differing magnitudes of strength, some working in favor while others working otherwise. To determine the strength of a force, the aggregate mean of the means of all the determinants of the force were calculated. The findings as summarized in Table 11 below present the forces in order of strength, indicated by the magnitude of the mean of means.

Table 11: Strength of Competitive Forces

Competitive Force	Mean of means
Information technology	4.4
Threat of entry and barriers to entry	3.9
Rivalry amongst existing firms	3.9
Government controls	3.9
Bargaining power of suppliers	3.5
Bargaining power of buyers	3.0

The results in Table 11 above show that the strongest force that determines competition in the mobile telephony industry is information technology. The findings are reflective of the fact that growth and developments in the mobile telephony industry is dependent upon development in information technology. What this implies to the players in the industry is that for any firm to have a sustainable competitive advantage, it must continually take stock of the developments in information and telecommunications technology and devote a great part of its resources in harnessing and embracing the use of

the latest information and telecommunications technology. The findings also indicate that threat of entry and entry barriers; rivalry amongst existing firms; and government controls all have the same magnitude of strength.

It is, however, worthy noting that the threat of entry and entry barriers work in favor of firms already in the industry. The study established that there are five main of barriers to entry into the mobile telephony industry. These include huge capital requirements; enormous economies of scale; high degree of brand identity; sharp retaliation to any competitive moves by new entrants into the industry; easy access to the necessary inputs; and differentiated products.

In the mobile industry, the need to invest large financial resources in order to compete creates a barrier to entry, particularly the initial capital required to build the network infrastructure. The enormous economies of scale in marketing, network coverage, financing, utilization of the sales force and service are probably the key barriers to entry in the mobile telephony industry. High degree of brand identity acts as an important source of differentiation which leads to brand identification by consumers. This creates a barrier to entry by forcing entrants to spend heavily to overcome customer loyalty. Advertising, being the first in the industry, and product differences are among factors fostering brand identification in the mobile telephony industry. Because of the economies of scale enjoyed by firms already in the industry, any new competitive moves are highly resisted through various retaliatory actions by the incumbent firms e.g aggressive advertising, price reductions and new product introductions. The findings of the study

indicate that threats of substitute products and new entrants are therefore not strong forces in the industry given the magnitude of the entry barriers.

Rivalry amongst existing firms in the industry is another contending force, which is at the center of the forces contributing to industry attractiveness. Among the key factors giving rise to this phenomenon in the mobile telephony industry in Kenya include the fast growth rate that is experienced by the industry; high concentration and domination by one or a few firms; high fixed costs incurred by firms in the industry; high strategic stakes in achieving success in the industry; high exit barriers; and existence of diverse competitors with diverse strategies, origins, and personalities. According to Hax and Majluf (1996), if an industry exhibits high growth, a wide variety of differentiation capabilities, and a high degree of concentration, then it is most likely that health profit opportunities will become available to most participants in the industry.

Government control in the mobile telephony industry in Kenya was found to be another formidable force. The study established that there are a lot of controls by the government on the mobile phone service providers. Key among these controls include industry regulation through consistency policies by the regulator; taxation regime, foreign ownership, and license requirements. This has limited or totally foreclosed entry into the industry. This is typified by the Econet Wireless phenomenon, which is yet to enter the industry because of non-fulfillment of government requirements.

Firms within the industry were also found to contend with the bargaining power of buyers and suppliers. Bargaining power of buyers was found to be mainly determined by price sensitivity; the ease of switching from one service provider to another than it is for the service provider to do the switching; consumers' propensity to substitute one service for another is high; consumers possession of full information about demand, actual industry prices, and service costs; and consumers' knowledge of product differences offered by firms in the industry. On the other hand, bargaining power of suppliers is mainly determined by few numbers of suppliers who are more concentrated than are the mobile service providers; highly differentiated suppliers' products that it will be very costly for mobile phone service providers to switch among suppliers; and the potential of the suppliers to forward integrate.

CHAPTER FIVE: SUMMARY AND CONCLUSIONS

5.1 Summary

The mobile telephony industry operates within the six competitive forces that define the industry structure and thus determining the competitive behavior in the industry. These forces: - the entry barriers; rivalry among existing competitors; customers' bargaining power; bargaining power of suppliers; government controls; and information technology are embodied within the industry and each plays a major role in defining the industry structure and completion therein. The collective strength of these six forces, from the standpoint of industry players, determines the way the industry is structured and the competitive behavior exhibited by the firms in the industry. The forces also determine the ability of the firms within the industry to earn return on the capital invested directly from the economic activity of the industry.

From the findings of the study, it is clear that entry into the mobile industry is not easy, as there are a number of barriers that prevent entry of new firms. They include huge capital outlay required when investing in the industry; enormous economies of scale enjoyed by companies already in the industry; high degree of brand identity exhibited by companies in the industry; sharp retaliation by companies in the industry to any competitive moves by new entrants into the industry; easy access to the necessary inputs by firms in the industry; and extensive differentiation of products by companies in the industry.

Within the mobile telephony industry itself, competition is very stiff; firms must strive to have a competitive advantage over the other firms by offering better services hence some

of the large service providers in the industry engage in cutthroat competition in order to safeguard their market share and expand their subscriber base, enjoy economies of scale, and increase their profitability. Unlike stiff the competition, the substitutes in the mobile telephony industry are not many and do not pose a major impact in the structure and competitive behavior in the industry.

From the findings of the study, customer bargaining power was found to be also a formidable force in defining industry structure and competitive behavior in the industry. The determinants of buyer power were found to be both on bargaining leverage and price sensitivity. These include being price sensitive; low or no switching costs; and a high propensity by the consumers to substitute one service for another; consumers' possession of full information about demand, actual industry prices, and service costs; and their knowledge of product differences offered by firms in the industry.

Porter (1980) argues that suppliers can exert bargaining power over participants in an industry by threatening to raise prices or reduce the quality of purchased goods and services. Therefore, suppliers of the industry have the potential of influencing the structure and competition in the industry. Within the mobile telephony industry suppliers of the inputs to the industry are few and more concentrated than are the mobile service providers; inputs supplied by suppliers are important to the mobile service providers' businesses; suppliers to the industry have the potential to forward integrate; and the suppliers' products are highly differentiated that it will be very costly for mobile phone service providers to switch among suppliers.

In this industry, the government plays a central role in regulating activities of the mobile telephone service providers. In most of the firms, the government affects directly or indirectly through policies, regulations, license fees etc. the government was also found to have an upper hand given that one of the firms is state owned and its controlling stake in one other firm. Through this close links to the industry, it was found out that the government has greatly influenced the structural characteristics in the industry and the competitiveness in the industry. This is mainly due to its interest in the industry that has bred unequal play field for firms in the industry; and the presence of a lot of controls by the government on the industry. It was also felt by respondents that the government's policy interventions make the industry a highly regulated one and that the number of licenses required before the firm rolls out its operations are unnecessarily many.

Lastly, information and telecommunications technology was found to be playing a central role in determining the growth and hence the structure and competitiveness of the industry.

The study established that the six forces that define the structure of, and hence competition in the mobile telephony industry in Kenya, do so to differing degrees of magnitude. The strongest force was found to information and telecommunications technology with a mean of 4.4; followed by threat of entry and barriers to entry; rivalry amongst existing firms; and government controls all with a mean of 3.9. These were

followed by the bargaining power of supplier and buyers with means 3.5 and 3.0 respectively. Further, it was established that different factors were in play to determine the relative strengths of these forces.

5.2 Conclusion

Though the structure of the industry and the inherent competitive behavior can be determined by various forces in relative and not absolute terms, the study was able to determine, from the standpoint of firms already in the industry, the forces that define industry structure and hence shape competition in the industry. Industry structure, to a great extent, determines the nature of competition that prevails in a particular industry, which subsequently influences the attractiveness of the industry and profitability of firms operating in the industry.

Companies that are able to carry out such an analysis and determine competitive forces that are prevalent in the industry will have their strategic moves informed because the strength and/or weakness of a particular may work in favor or otherwise of the firm depending on whether the firm is a new entrant or it is an existing player in the industry. Companies considering entry into the industry will have to judge whether the industry is attractive or not depending on the contending forces while those still in the industry will judge whether the contending forces are presenting opportunities or threats, and whether the prevailing conditions would enable the firms to achieve above average performance. The study findings presented the mobile industry as one in which there are a number of forces defining its structure and that this structure bears a lot upon the competitive

behavior in the industry and hence the attractiveness to new entrants and level of profitability achieved by the players in the industry. The general conclusion that can be drawn from the study findings is that the mobile telephony industry is a very attractive one because but the entry barriers are very enormous and that a few firms dominate the industry leading to monopolistic type of competition with a few traces of oligopoly.

Fortunately, for players in the industry, the structure is such a favorable one because the industry is still growing and the potential to benefit from economies of scale and learning curve effects is very promising. The industry is such a regulated one and the government's role in determining its structure and competitive behavior puts both existing and potential entrants in unequal play field given the government's stake in the industry. It is both the player and the referee at the same time.

This conclusion will not be conclusive enough without mention of the relative strengths of the forces in the industry. Information and telecommunications technology was found to be the strongest force while the threats of substitutes and new entrants were found to be the weakest forces. It was profoundly evident that developments in technology bear a lot upon the growth, competitiveness, and profitability of the industry while the enormous barriers to entry contribute a great deal to the weakness of threat of new entrants and substitute products.

5.3 Recommendations

The findings of the study established that one of the strongest forces in the industry is the government. However, it works towards making the industry such unattractive one because of the regulatory and license requirements yet the industry is an attractive one. It is therefore recommended the government plays a greater role deregulating the industry to pave way for more investments in the industry.

5.4 Suggestions for Further Research

Applying Porter's Five Forces Model, his study has provided an understanding of the forces that define the structure of the mobile telephony industry and hence determined the competitive behavior predominant in the industry. Further research is needed to explore the influence of the forces on the competitive strategies adopted by the firms in the industry.

5.5 Limitations

The interpretation of the findings of this study should be done with the understanding that the study concentrated on the firms that offer mobile telephone services. However, the companies that participated in the study are offering such a service to differing degrees. So it was not possible for the study to get a balanced view of what the situation in the industry is like because of the subjectivity of the views of some respondents.

Another limitation was an important resource: time available to do the study was too limited. Respondents were not accorded enough time to conceptualize the concept under study. Filling the questionnaires in a hurry might have not guaranteed informed and objective answering to the questions by the respondents.

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APPENDICES

Appendix I: Questionnaire

Part A: Company Profile

1. Name of the company____
2. Year of incorporation_______________________
3. Type of company/mode of incorporation
   a. Sole Proprietorship [ ]
   b. Partnership [ ]
   c. Limited Company [ ]
   d. Parastatal [ ]
4. Ownership of the company
   a. Locally owned [ ]
   b. Foreign owned [ ]
   c. Both locally and foreign owned
      i. Local ______%
      ii. Foreign______%
   d. State owned [ ]
   Other (specify)____
5. Services provided____
   ____
   ____
   ____
6. Market coverage of the company's services/operations
   a. Within Nairobi and its environs [ ]
   b. Within major towns in Kenya [ ]
   c. Country wide (both rural and urban areas) [ ]
   d. Regionally (within East Africa)
   e. Internationally (East Africa and beyond) [ ]

Part B: Industry Structure

The following statements are descriptive of the structure of the mobile telephony industry. Please rank each statement in the scale provided according to the extent to which you perceive it to better describe the industry. Use the scale below and tick appropriately.

1-'Not at all; **2**-To a less extent; **3**-To a moderate extent; **4**-To a large extent; **5**-To a very large extent

	Statement	1	2	3	4	5
1	Companies already in the industry enjoy enormous economies of scale.					
2	Companies in the industry have extensively differentiated their products.					
3	Companies in the industry exhibit a high degree of brand identity.					
4	Investing in the industry requires a huge capital outlay.					
5	There is presence of high switching costs when consumers switch from one service provider to another.					
6	Firms in the industry benefit from absolute cost advantages due to proprietary product technology and learning experience curve among other reasons.					
7	Firms in the industry have easy access to the necessary inputs.					
8	Companies in the industry retaliate sharply to any competitive moves by new entrants into the industry.					
9	The number of players in the industry is large and their small to the extent one firm's move does not influence behavior of others in the industry.					
10	The industry is highly concentrated and dominated by one or a few firms.					
11	The industry is experiencing fast growth rate.					
12	Firms in the industry incur high fixed costs.					
13	The industry has diverse competitors with diverse strategies, origins, and personalities.					
14	A number of firms have high strategic stakes in achieving success in the industry.					
15	It is very difficult, if not impossible, for a firm to exit the industry once it has invested in the industry.					
16	There is pressure from substitute products that put the lid on the firms' profits in the industry.					
17	Consumers of the services provided by firms in the					

	industry are more concentrated than are the providers.					
18	It easier for a consumer group to switch from one service provider to another than it is for the service provider to switch from one consumer group to another.					
19	Consumers of the industry's services have the potential to backward integrate.					
20	Most consumers find the industry's services unimportant to the quality of their products/services.					
21	Consumers have full information about demand, actual industry prices, and service costs.					
22	Consumers of the services are price sensitive.					
23	The consumers have knowledge of product differences offered by firms in the industry.					
24	The consumers' propensity to substitute one service for another is high.					
25	Suppliers of inputs to the industry are few and more concentrated than are the mobile service providers.					
26	Firms in the industry have a variety of input substitutes.					
27	Inputs supplied by suppliers are important to the mobile service providers' businesses.					
28	The suppliers' products are highly differentiated that it will be very costly for mobile phone service providers to switch among suppliers.					
29	Suppliers to the industry have the potential to forward integrate.					
30	There are a lot of controls by the government on the mobile phone service providers operations.					
31	The number of licenses required before the firm rolls out its operations are unnecessarily many.					
32	The government's policy interventions make the industry a highly regulated one.					
33	The government's interest in the industry breeds unequal play field for firms in the industry.					
34	Industry growth and development greatly hinge on developments in information and telecommunications technology.					

Part C: Nature of Competition in the Industry

The following statements are descriptive of the nature of competition in the mobile telephony industry. Please rank each statement in the scale provided according to the extent to which you perceive it to better describe the nature of competition in the industry. Use the scale below and tick appropriately.

1- Not at all; **2**-To a less extent; **3**-To a moderate extent; **4**-To a large extent; **5**-To a very large extent

	Statement	1	2	3	4	5
1	The whole of the mobile telephony industry is in the hands of a single service provider.					
2	The market price (air time cost) is influenced by only one service provider.					
3	Firms in the industry are price takers (can alter amount of service offered and sales within any feasible range without any significant effect on the price of the services sold).					
4	Firms in the industry passively accept whatever price happens to be ruling on the market.					
5	The industry is characterized by freedom of entry and exit.					
6	Existing firms cannot bar the entry of new firms and there are no legal prohibitions on entry or exit.					
7	The industry consists of many competitors offering the same products/service.					
8	Service providers enjoy different profit rates only to the extent that they achieve lower costs of offering service. Firms in the industry offer differentiated products/services and can be distinguished by consumers.					
9	The service providers have some power over their own prices.					
10	The industry has many competitors able to differentiate their offers in whole or part.					
11	Many of the firms focus on market segments where they can meet customer needs in a superior way and command a price premium.					
12	The industry has a small number of (usually) large firms.					
13	Firms in the industry offer products/services that range from highly differentiated to highly standardized.					
14	Each firm in the industry has enough market power so					

	that it cannot be a price taker.					
15	Each firm in the industry is subject to enough inter-firm rivalry that it cannot control the market completely.					
16	The industry consists of a few companies producing essentially the same products/services.					
17	The industry consists of a few companies producing differentiated products.					

Thank you for your cooperation.