DETERMINANTS OF FINANCIAL PERFORMANCE OF INTERNET SERVICE PROVIDERS IN KENYA

BY

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A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF SCIENCE IN FINANCE, SCHOOL OF BUSINESS, UNIVERSITY OF NAIROBI

2012

DECLARATION

I, the undersigned declare that this research project is my original work and affirm to the best of my knowledge that it has not been presented for any academic award in any University.

Signed: …………………………… Date: ………………………………..

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

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DEDICATION

This work is dedicated to my family and friends.

ACKNOWLEDGEMENT

I thank God for giving me the wisdom and courage and for His guidance throughout my life for without Him I would not have come this far.

Secondly, special thanks go to my supervisor, Dr. Josiah Aduda, for providing unlimited, invaluable and active guidance throughout the study. His immense command and knowledge of the subject matter enabled me to shape this research project to the product that it is now.

Thirdly, I also thank my family especially my wife, Emily and my two Sons, Josémaria and Logan. Emily, for her sacrifice, encouragement and support that has brought me this far. Josémaria and Logan, for their consistent and necessary interruptions during my deep concentration on the research project, serving as timely breaks. It is my hope that their sacrifices have finally paid off.

Finally, I owe my gratitude to a number of people who in one way or another contributed towards completion of this project especially my fellow colleagues at work and ever the supportive students.

ABSTRACT

Due to the increase in competition and increasing market liberalization, firms in the telecommunications industry are facing a threat to the profit sustainability. As market players' increase and offerings diversify, the market share reduces causing decrease in profit (Neto, Kenny, Janakiram, & Watt, 2005). Furthermore, customers' preferences are dangerously volatile and satisfaction of their diverse needs can prove arduous and the heightened customer awareness results in search for better alternative offerings in the market. As a result, customers may voluntarily switch from one vendor to the other.

The study adopted a descriptive study design. The population was ISP firms in Kenya from which 10 large ISPs were selected. A total of 50 questionnaires were mailed to the managers of these firms. Primary data was collected through structured questionnaires. Data was analysed using descriptive analysis and regression analysis.

The study found that before customer make a decision to purchase or stay with a service provider, they considered service uptime, network coverage, and customer service. The regression results showed that product pricing, customer service, and service uptime had negative but insignificant effects on firm performance while parent shareholding and network coverage had positive effects on firm performance. The study concludes that the factors influencing customer staying in a provider were service uptime, customer service, and network coverage. The study also concludes that product pricing, customer service, parent shareholding, network coverage, and service uptime do not have a significant effect on firm performance. Thus the financial performance of ISPs in Kenya is not influenced by the churn factors.

The study recommends that Internet Service Providers in Kenya should ensure that they enhance the level of service uptime as this was a major factor that customers considered before making a decision to purchase an ISP product or to stay with the same ISP. The study also recommends that Internet Service Providers should have large network coverage and not just limit themselves to a small or specific area to cover. Third, the study recommends that Internet Service Providers should invest in a modern and efficient customer care service that can provide solutions to customers who have issues with their internet. This was an important purchase decision factor by customers.

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ABBREVIATIONS

CCK	Communication Commission of Kenya.
CRM	Customer Relationship Management.
GAM	Generalized Additive Models
ICT	Information and Communication Technology.
ISP	Internet Service Provider
PWC	PricewaterhouseCoopers.
SAS	Statistical Analysis System.
SME	Small and Medium Enterprises.
SPSS	Statistical Package for the Social Sciences

CHAPTER ONE

INTRODUCTION

1.1   Background to the Study

The telecommunications industry, mainly involving data communications, is increasingly becoming one of the crucial sectors in the any economy. Rapid technological advancements have made it the most fast paced industry the world over. Developed countries have mastered the speed necessary to keep abreast with the fast paced nature of the telecommunications industry; however, the developing countries significantly lag in this regard. Due to this there are plenty opportunities for growth, in terms of new markets, increase to access of information, and improved efficiency (Wanyama and Baryamureeba, 2007).

1.1.1 Profitability

Profitability is the revenue realized in excess of costs incurred while sustainability may be represented as a number of objectives to be maximized or minimized. There are various measures of profitability which include Return On Assets (ROA) , Return On Equity (ROE), Return On Investment (ROI), Return On Gross Invested Capital (ROGIC) and Return On Capital Employed (ROCE). Sustainability is defined as "a program's capacity to remain financially viable in the absence of domestic subsidies or foreign support" (Woolcock, 1999). By definition, sustainability includes generating sufficient profit to cover expenses while eliminating all subsidies, even those less obvious subsidies.

Market liberalization has contributed immensely to the level of competition that is being experienced. The telecommunications market in Kenya was liberalized in 1999. This led to the formalization of market structures and advent of activities geared towards the development of the telecommunications markets in total (CCK, 2005). This has magnified the intensity of competition further causing dents in profitability as market share continues to shrink (Neslin, Gupta, Kamakura, Lu, and Mason, 2006).

The telecommunications industry is the most promising and it is raking in colossal profits as a whole, however, individual firms are struggling to maintain profitability levels due to the unpredictability of churn, which is the switching of customers from one provider to another and its adverse effects. Most firms are looking to safeguard the going concern and profitability of the firm as a whole (Peppard, 1993).

True sustainability means profit, however marginal, otherwise how can any business survive? The industry needs a better deal from its end customers and a chance to develop further innovation without over-bureaucratic legislation (Ball, 2006).

1.1.2 Determinants of Financial Performance

The telecommunications sector is changing radically. The changes are driven by a combination of market, business and technological forces (Evangelos, 2004). A revolutionary permeation of information has had worldwide witness due to increased efficiency by market players. Gupta (2008) indicates that the telecommunications industry is characterized by new technologies, new services, and huge capital investments to make content accessible anywhere. Market players are frequently coming up with new

products, services, and tariffs to increase their market share in consequence, the industry competition has become fierce. The emergence of electronic commerce has multiplied the amount of available information and thus offers new ways for companies to efficiently respond to clients' expectations. Simultaneously, customers can more easily inquire about the market opportunities. They become more demanding and tend to switch from their previous supplier to another retailer. This gave birth to the notion of churn.

This phenomenon has been magnified by electronic commerce. The Internet channel returns control and power to customers who are no longer confined to the decisions of a single company. The outcomes are increase in customer power (Peppard, 2000) and competition exacerbation. Competitors are only one "click away". Customer empowerment is likely to persist and amplify customer attrition issues. On the other hand, Zettelmeyer (2000) asserts that companies competing on multiple channels get information from multiple sources and can decide to communicate different amounts of data to different clusters of customers, thereby creating new differentiation opportunities. As a result, companies augment their market power, impede the emergence of a competitive strategy essentially based on the cost dominance and thus can design strategies that aim at softening churn problems.

1.1.3 Internet Service Providers in Kenya

An Internet Service Provider (ISP), which falls under the wide category of the telecommunication sector, is an organization that provides access to the Internet. Internet service providers can be either community-owned and non-profit, or privately owned and for-profit. According to The Fiber Optic Association, Access ISPs directly connect

clients to the Internet using copper wires, wireless or fiber-optic connections. Hosting ISPs lease server space for smaller businesses and other people (collocation). Transit ISPs provide large amounts of bandwidth for connecting hosting ISPs to access ISPs. Developments such as the fiber technologies have revolutionized data communications, and especially in Kenya where costs have significantly been reduced. Much as the telecommunication industry has a plethora of opportunity, it is curbed by its share of challenges that inhibit full potency actualization. These include; lack of appropriate legal framework, e.g. e-commerce, inadequate national infrastructure to reach markets, mobile operators refusing to interconnect, low ICT awareness in the industry, heavy tax on telecommunication equipment, limited amount of local content which hinders growth of the industry and lack of capacity to manage growth (Communication Commission of Kenya, 2005).

According to a PWC (2010) research on Telecommunications Industry in Kenya, 2010, they observed that the telecoms industry in Kenya, just like the rest of the world, is going through profound changes. In the past decade, technological advancement and regulatory restructuring have transformed the industry. Markets that were formerly distinct, discrete and vertical have coalesced across their old boundaries with a massive investment of capital - much of it originating from private sector participants.

In the PWC research, 2010, it is observed that the result is new markets, new players, and new challenges. Market liberalization efforts have also picked up ensuing the successful partial privatization of Telkom Kenya Ltd (December 2007), divestment of GoK's 25%

stake in Safaricom Ltd through a public listing (May 2008), and the launch of fourth mobile operator Econet Wireless Kenya (November 2008). This has resulted into some of the world's best known telecommunication providers – Vodafone, France Telecoms and Essar Communications through their investments in Safaricom Limited, Telkom Kenya Limited and Econet Limited respectively.

The communication sector is still experiencing an upward trend as registered by the growth in subscriptions to all the telecommunications services. Increased competition in the mobile sector has resulted in steady growth of this market segment as the services become more affordable. Consequently, the number of mobile subscriptions as well as mobile coverage patterns has continued to demonstrate a positive growth over the period. This trend is likely to continue in future as operators continue employing innovative ways of creating market niche and retaining customers (CCK, 2010).

The telecommunication industry, especially the Internet Service Providers have experienced tremendous changes in the market. Due to market competition, most ISP's have seen their revenues drop over time. Up to fifty percent of this drop may be attributed to losing customers to completion or simply Churn. Churn management has been a big concern for most ISP's which have put in place various measures to control churn including a dedicated departments for Customer Relationship Management (CRM) whose focus is on containing customers. The ISP's however do not have a clear structure of how the firms can manage churn.

1.2   Statement of the Problem

There is need to understand the processes and impacts of a globalizing technology the historical development of that technology (Duque, Collins, Abbate, Azambuja, and Snaprud, 2007). They point out that the process of technology transfer is dependent on local cultural dynamics unique in various regions hence the different diffusions in different regions in the world over.

In Kenya, market competition has been characterized by a rush of new entrants into the market, acquisitions and quality offerings to attract new customers and retain them however, this increase in competition has led to a decrease in market share and in profitability of the market players. Due to the increase in competition and increasing market liberalization, firms in the Telecommunications industry are facing a threat to the profit sustainability. As market players' increase and offerings diversify, the market share reduces causing decrease in profit (Neto, Kenny, Janakiram and Watt, 2005). Furthermore, customers' preferences are dangerously volatile and satisfaction of their diverse needs can prove arduous and the heightened customer awareness results in search for better alternative offerings in the market. As a result, customers may voluntarily switch from one vendor to the other.

A study by Mokadikwa (2008) focused on performance factors in the mobile market. The study found that causes of customer retention were "billing by service providers" that confused customers and "better phone deals offered by the competitors". Other aspects were "poor network quality", "confusing pricing structure" and "long waiting on

customer care line". Wanyama and Baryamureeba (2007) focused on the general penetration of telecommunication in the economies of developing countries giving rise to plenty opportunities for growth, in terms of new markets, increase to access of information and improved efficiency.

While most studies have indicated the determinants of financial performance in ISP's, the question of their impact on financial performance and their weighting has been given little prominence in this market and therefore needs to be addressed in the industry hence the need for this study. Bearing in mind past studies, the questions that this research poses is, what are the major determinants of financial performance in ISP's and do all the determinants have the same weighting.

1.3   Objectives of the Study

The main objective of the study is to determine major determinants of financial performance and their weighting for Internet Service Providers (ISP's) in Kenya.

1.4   Significance of the Study

The World Bank, in a report titled "World Information & Communication for Development Report (2006) on Foreign Direct Investment in Telecommunication" stated that the telecommunication market has been marked as the main driver for improved access to information and the overall success factor in terms of profitability to both telecommunication industry and the world economy at large. This implies that the telecommunication sector can only grow.

In the wake of overwhelming competitiveness in the industry there emerges a need to maintain sustainability in profits and create value for customers. The telecommunications industry is volatile and due to rapid developments customers have arrays of options available to them from the different market players. It is no longer a prerogative to consider churn, but an imperative in order to maintain sustainability.

ISP's will, therefore, apply the recommendations of this study to greatly reduce churn and offer ISP's the opportunity to understand customer patterns. It would then offer incentives to customers marked as "red flag" to churn and probably retain them. These will help improve the financial performance of ISP's which has been largely affected by churn in the recent past.

The regulators may also look at the major determinants of financial performance and their weighting and model incentives and regulations that will ensure the ISP's remain competitive.

The study will add to the scholarly knowledge and further help other scholars and academicians who may want to use the study to improve on other determinants of financial performance the study may not have captured.

CHAPTER TWO
LITERATURE REVIEW

2.1   Introduction

This chapter will cover the general aspects of literature review based on the impact of financial performance of Internet Service Providers starting with a brief introduction, the theoretical review, major determinants of financial performance from previous studies, some financial performance measures and chapter conclusion.

2.2   Review of Empirical Studies

2.3.1 Impact of determinants of financial performance

Nowadays, more and more companies start to focus on CRM. Indeed due to saturated markets and intensive competition, a lot of companies do realize that their existing database is their most valuable asset (Athanassopoulos, 2000) and (Jones, Mothersbaugh, and Beatty, 2000). This trend is also notable in subscription services. Companies start to shift away from their traditional, mass marketing strategies, in favor of targeted marketing actions (Burez et al., 2008). It is more profitable to keep and satisfy existing customers than to constantly attract new customers who are characterized by a high attrition rate (Reinartz and Kumar, 2003). The idea of identifying those customers most prone to switching carries a high priority (Keaveney and Parthasarathy, 2001). It has been shown that a small change in retention rate can result in significant changes in contribution (Van den Poel and Larivière, 2004). In order to effectively manage customer churn within a company, it is crucial to build an effective and accurate customer-churn model.

The impact of determinants of financial performance is often correlated with the industry life-cycle. When the industry is in the growth phase of its life cycle, sales increase exponentially; the number of new customers largely exceeds the number of churners. Companies aim at getting more and more new customers. Nevertheless, the ratio (new customers/churners) tends towards one over time. The impact of churn becomes then markedly more sensitive (Lejeune, 2001).

Reichheld and Sasser (1990) provided evidence about the advantages of customer retention strategy to mitigate churn losses, which are based on a strong relationship between customer retention and profitability. They found that long-time customers: spend more over time, the operating costs to serve them decline over time, become more loyal and are less price-sensitive. Additionally, Reichheld (1996) argues that customer defection has severe effects on firms' profitability because firms have to incur in heavy costs to acquire new customers and older customers usually generates greater cash flow and profits than newer ones.

Statistical Analysis System (2000) reported that the telecommunications sector endures an annual rate of churn, ranging from 25 percent to 30 percent. This churn rate could still continue to increase in correlation with the growth of the market. Another factor that could push churn rates to higher summits is the deregulation trend.

According to SAS (2000) the churn costs for European and US telecommunications companies are estimated to amount to US$4 billion annually while the ratio (customer

acquisition costs/ customer retention or satisfaction costs) would be equal to eight for the wireless companies. It is generally admitted that companies need three years to amortize the cost (US$400 in USA and US$700 in Europe) induced by the replacement of churners and the acquisition of new customers. Not less than 10 percent keep the same supplier while opting for another package. While this kind of churn is not as alarming as the loss of a client, the effect nonetheless remains negative provided that the amount of money spent to recapture the customer in that case is more or less equal to the costs associated with normal churn.

The Strategis Group asserts that the Internet Service Providers endure a five times higher churn rate, culminating to 10 percent monthly. The main reasons invoked were "busy signals, connection speed and poor customer service" Strouse (1999) indicates that churn rate is more marked for private customers than for business ones. Groth (1999) underlines that the cellular telephone market experienced a 30 percent annual rate in the USA. In this industry, the cost of acquiring new customers amounts to $400 per new subscriber.

Hoffman & Novak (2000) confirm that costs incurred for obtaining new customers are much higher than costs linked with customer retention. Average customer acquisition costs supported by retailers on the internet range between US$100 and US$500 per customer.

Mozer et el. (2000) observed that at present, domestic monthly churn rates are between 2%-3% of the customer base. Luna (1998) indicates that it costs an average of $400 to

acquire a subscriber and churn cost the industry nearly $6.3 billion in 1998; the total annual loss rose to nearly $9.6 billion when lost monthly revenue from subscriber cancellations is considered. It costs roughly five times as much to sign on a new subscriber as to retain an existing one. Consequently, for a carrier with 1.5 million subscribers, reducing the monthly churn rate from 2% to 1% would yield an increase in annual earnings of at least $54 million, and an increase in shareholder value of approximately $150 million.

Evangelos (2004) observed that the cost of churn in the telecommunications industry is large. It costs a great deal more to win new customers than it does to retain current ones. Moreover, frequently, a new customer will churn away before the company can fully recoup its acquisition costs. Customer satisfaction surveys can be misleading as indicators of what drives churn. Eighty per cent of churners had previously stated that they were satisfied with their service, but nevertheless churned within 12 months.

These different examples underline why companies pay such great attention to the churn rate. Companies that solely rely on onerous marketing campaigns to replace the lost customers are prone to serious survival problems before long. Churn management increasingly becomes crucial and generates a variety of customer-oriented activities (Lejeune, 2001).

Churning is, therefore, costly to a firm and its effective management will greatly reduce the costs to a firm. Churn management consists of developing techniques that enable

firms to keep their profitable customers and it aims at increasing customer loyalty (Lejeune, 2001).

2.2.2 Determinants of financial performance

Mattison (2005) outlines that a great number of researches have been carried out on determinants of financial performance in various countries, the results, invariably, indicate differences due to influences of culture and different market structures, however, there are five major reasons for churn worldwide. These are: price, quality of solutions, customer service, coverage and image.

Roh, Han, and Jang (2000) further indicate that poor performance, limited coverage, price of service, promotion of competitor's enhanced and satisfaction with customer service are among the reasons that should be taken into deep consideration because if neglected can cause churn. The fundamental objective of churn management is to extract the reasons of customer churn from which a suitable model can be structured.

Voluntary churn in the telecommunication industry deals with measurement of customer disconnects for personal reasons like switching to a competitor, cancelling service, transferring from one place to another, etc. The subscriber initiates it and is either deliberate or incidental. The deliberate reasons might include pricing, poor customer service or network problems (Jahanzeb and Jabeen, 2007).

Price of the products is the most cited reason for churn activity. According to a study done in Portugal by Menezes and Portela (2009) customers are constantly keen on the

market trends, any dissatisfaction by the customer in terms of price will lead to a termination, especially where there are cheaper alternatives in the market. Customers are keen on price and priority is sometimes wholly and entirely ascribed to this aspect of the firm's products (Kim and Yoon, 2004).

According to CCK (2010) the glide path adopted by the Commission imposed an immediate 50% reduction in mobile termination rates from Ksh.4.42 per minute to Ksh.2.21 per minute and then will progressively decline by 35%, 20% and 15% annually in 2011, 2012 and 2013 respectively with a view to attaining fully cost-oriented levels by 2014.

Therefore, a firm needs to effectively keep its pricing element at par with its competitors as the biggest chunk of churners, are sensitive to pricing. However, due to inherent circumstances firms may not offer relatively cheaper pricing. In such a case they may have delineate the customers from focusing on the price structure by aggressively differentiating value propositions from their competitors (Lubin and Esty, 2010).

Customers have varied needs and therefore varying priorities, whilst many of the clients would focus on price, most will also focus on quality of solutions and products offered. This is especially true for the corporate clients (Mattison, 2005). The focus is on innovation and effective delivery of the products and services (Roh et al., 2000). Churn activity will be triggered when there is an expectation gap between what the customer

expects and what is delivered. Firms should, therefore, work on minimizing the gap so as to avoid churn and loss of customer loyalty (Emagine International, 2008).

To succeed in offering superior services to customers, the company has to identify service factors and the quality of these service factors (Evangelos, 2004). Firms have an imperative duty to deliver proof of value so as to lock in customers and prevent churn (Lubin and Esty, 2010). The disadvantage is that quality of service is a subjective measure and it is arduous to assess, however, manipulation is possible through innovative advertising (Mattison, 2005).

Customer service, just like quality of solutions, is a subjective determinant and difficult to measure but it is one of the key factors that will cause a mass churn if not given much importance. Most of the distasteful factors are the customer representatives are not well familiarized with the telecommunication business, lack of courtesy, lack of information about customers and general lack of information on promotions and current trends in the market. This is a factor that management, most times inadvertently, overlook. Effective churn management will therefore encompass management strategies for personnel (Coussement and Van den Poel, 2006)

The area of coverage by the telecommunications firm plays a big role in churn reduction. It is pervasive in considering drivers of churn. This is a sensitive factor considered by customers. Menezes and Portela (2009) asserted that customers would terminate subscription where the area of coverage is limited so that they switch to a firm with a

wider coverage to cater for contingencies. Further, a limited coverage is likely to cause involuntary churn described as inevitable switch of vendors due to circumstance such as where the customer vacates and is no longer within the range provided by the firm.

Some companies may churn due to the preference of a specific positioning on a certain provider in the market. Home countries influence may also influence loyalty especially for multinationals which may prefer specific providers and influence the same from the mother countries. Brand positioning also has a huge influence in some firms who strategically choose providers to take pride on their strong brand and associations (Dasgupta, Singh, Viswanathan, Chakraborty, Mukherjea, and Nanavati, 2008).

Competition in the wireless telecommunications industry is rampant. To maintain profitability, wireless carriers must control churn, the loss of subscribers who switch from one carrier to another. As many as seven competing carriers operate in each market. The industry is extremely dynamic, with new services, technologies, and carriers constantly altering the landscape. Carriers announce new rates and incentives weekly, hoping to entice new subscribers and to lure subscribers away from the competition. The extent of rivalry is reflected in the deluge of advertisements for wireless service in the daily newspaper and other mass media. Although there is significant room for growth in most markets, the industry growth rate is declining and competition is rising. Consequently, it has become crucial for wireless carriers to control churn (Mozer, et el., 2000).

2.3   Theoretical Review

This section presents a theoretical review of the study. The theories reviewed here are efficient structure theory, market power theory, and the balanced portfolio theory. A critique of the theories and models is then made.

2.2.1 Efficient Structure (ES) Theory

The ES hypothesis, posits that firms earn high profits because they are more efficient than others. There are also two distinct approaches within the ES; the X-efficiency and Scale–efficiency hypothesis. According to the X-efficiency approach, more efficient firms are more profitable because of their lower costs. Such firms tend to gain larger market shares, which may manifest in higher levels on market concentration, but without any causal relationship from concentration to profitability (Athanasoglou et al., 2006). The scale approach emphasizes economies of scale rather than differences in management or production technology. Larger firms can obtain lower unit cost and higher profits through economies of scale. This enables large firms to acquire market shares, which may manifest in higher concentration and then profitability.

2.2.2 The Market Power (MP) Theory

Applied in ISPs the MP hypothesis posits that the performance an ISP is influenced by the market structure of the industry. There are two distinct approaches within the MP theory; the Structure-Conduct-Performance (SCP) and the Relative Market Power hypothesis (RMP). According to the SCP approach, the level of concentration in the telecommunication sector gives rise to potential market power by ISPs, which may raise their profitability. ISPs in more concentrated markets are most likely to make "abnormal

profits" by their ability to increase prices and to charge higher as a results of collusive (explicit or tacit) or monopolistic reasons, than firms operating in less concentrated markets, irrespective of their efficiency (Tregenna, 2009). Unlike the SCP, the RMP hypothesis posits that bank profitability is influenced by market share. It assumes that only large banks with differentiated products can influence prices and increase profits. They are able to exercise market power and earn non-competitive profits.

2.2.3 Balanced Portfolio Theory

The portfolio theory approach is the most relevant and plays an important role in performance studies (Nzongang and Atemnkeng, 2006). According to the Portfolio balance model of asset diversification, the optimum holding of each asset in a wealth holders portfolio is a function of policy decisions determined by a number of factors such as the vector of rates of return on all assets held in the portfolio, a vector of risks associated with the ownership of each financial assets and the size of the portfolio. It implies portfolio diversification and the desired portfolio composition of a firm are results of decisions taken by the management. Further, the ability to obtain maximum profits depends on the feasible set of assets and liabilities determined by the management and the unit costs incurred by the bank for producing each component of assets (Nzongang and Atemnkeng, 2006).

2.2.4 Critique of Theories and Models

The above theoretical analysis shows that MP theory assumes profitability is a function of external market factors, while the ES and Portfolio theory largely assume that performance is influence by internal efficiencies and managerial decisions. Several

models of the firm have been developed to deal with specific aspects of firm behavior but none is acceptable as descriptive of all firms behavior. Some of these approaches are: univariant analysis, multiple discriminant analysis, multiple regression analysis, canonical correlations analysis and neural network method. Olugbenga and Olankunle (1998) noted that a major limitation of the univariant analysis approach is that it does not recognize the possibility of joint significance of financial ratios, while the canonical correlations method precludes the explicit calculation of marginal value of independent variables on the dependent variable. Nor can the significance of individual explanatory factors be ascertained. They noted that multiple regression approaches correct for these limitations and they produce comparable results to the discriminant analysis method.

Abu Bakar and Tahir (2009) evaluated the performance of the multiple linear regression technique and artificial neural network techniques with a goal to find a powerful tool in predicting bank performance. Data of thirteen banks in Malaysia for the period 2001-2006 was used in the study. ROA was used as a measure of bank performance and seven variables including liquidity, credit risk, cost to income ratio, size, concentration ratio, were used as independent variables. They note that neural network method outperforms the multiple linear regression method but it lacks explanation on the parameters used and they concluded that multiple linear regressions, not withstanding its limitations (i.e. violations of its assumptions), can be used as a simple tool to study the linear relationship between the dependent variable and independent variables. The method provides significant explanatory variables to firm performance and explains the effect of the contributing factors in a simple, understood manner. This study will adopt this approach

together with the correction analysis to determine the effects of various factors on firm performance in Kenya.

2.4   Financial Performance Measures

2.4.1 Profit Margin

This is a ratio of profitability calculated as net income divided by revenues, or net profits divided by sales. It measures how much out of every dollar of sales a company actually keeps in earnings. Profit margin is very useful when comparing companies in similar industries. A higher profit margin indicates a more profitable company that has better control over its costs compared to its competitors. Profit margin is displayed as a percentage. Looking at the earnings of a company often doesn't tell the entire story. Increased earnings are good, but an increase does not mean that the profit margin of a company is improving. For instance, if a company has costs that have increased at a greater rate than sales, it leads to a lower profit margin. This is an indication that costs need to be under better control.

$$\text{Profit Margin} = \frac{Earnings\ before\ interst\ and\ taxes\ (EBIT)}{Sales}$$

This ratio determines the profitability of the firm before tax.

$$\text{Profit Margin or Net Profit Margin} = \frac{Net\ Profit}{Net\ Sales}$$

This ratio shows what is determinable to the owners of the firm at end of the financial period. In addition, it shows tax amount liable to the firm.

2.4.2 Return On Assets – (ROA)

This is an indicator of how profitable a company is relative to its total assets. ROA gives an idea as to how efficient management is at using its assets to generate earnings. Calculated by dividing a company's annual earnings by its total assets, ROA is displayed as a percentage. Sometimes this is referred to as "return on investment".

$$\text{Return on Assests (ROA)} = \frac{Net\ Income}{Total\ Assets}$$

$$\text{ROA (Du Pont)} = \frac{Net\ Income}{Net\ Sales}\ X\ \frac{Net\ Sales}{Total\ Assests}$$

Return on Equity (ROE) Du Pont

$$= \frac{Net\ Income}{Net\ Sales}\ X\ \frac{Net\ Sales}{Average\ Assests}\ X\ \frac{Average\ Assets}{Average\ Equity}$$

$$\text{Return on Net Assests (RONA)} = \frac{Net\ Income}{Fixed\ Assets + Working\ Capital}$$

Some investors add interest expense back into net income when performing this calculation because they'd like to use operating returns before cost of borrowing. ROA shows what earnings were generated from invested capital (assets). ROA for public companies can vary substantially and will be highly dependent on the industry. This is why when using ROA as a comparative measure, it is best to compare it against a

company's previous ROA numbers or the ROA of a similar company.

The assets of the company are comprised of both debt and equity. Both of these types of financing are used to fund the operations of the company. The ROA figure gives investors an idea of how effectively the company is converting the money it has to invest into net income. The higher the ROA number, the better, because the company is earning more money on less investment.

2.4.3 Return on Investment – (ROI)

This is a calculation used to assess a company's efficiency at allocating the capital under its control to profitable investments. The return on invested capital measure gives a sense of how well a company is using its money to generate returns. Comparing a company's return on capital with its cost of capital (WACC), reveals whether invested capital was used effectively.

The general equation for ROI is as follows:

$$\text{Return on Investiments (ROI)} = \frac{Net\ Income - Dividends}{Total\ Capital}$$

Total capital includes long-term debt, and common and preferred shares. Because some companies receive income from other sources or have other conflicting items in their net income, net operating profit after tax (NOPAT) may be used instead. ROI is always calculated as a percentage. Invested capital can be in buildings, projects,

machinery, other companies etc. One downside of return on capital is that it tells nothing about where the return is being generated. For example, it does not specify whether it is from continuing operations or from a one-time event, such as a gain from foreign currency transactions.

2.4.4 Return on Equity – (ROE)

This is the amount of net income returned as a percentage of shareholders equity. Return on equity measures a corporation's profitability by revealing how much profit a company generates with the money shareholders have invested.

ROE is expressed as a percentage and calculated as:

$$\text{Return on Equity} = \text{Net Income/Shareholder's Equity}$$

Net income is for the full fiscal year (before dividends paid to common stock holders but after dividends to preferred stock.) Shareholder's equity does not include preferred shares. The ROE is useful for comparing the profitability of a company to that of other firms in the same industry.

There are several variations on the formula that investors may use:

Investors wishing to see the return on common equity may modify the formula above by subtracting preferred dividends from net income and subtracting preferred equity from

shareholders' equity, giving the following: return on common equity (ROCE) = net income - preferred dividends / common equity.

Return on equity may also be calculated by dividing net income by *average* shareholders' equity. Average shareholders' equity is calculated by adding the shareholders' equity at the beginning of a period to the shareholders' equity at period's end and dividing the result by two.

Investors may also calculate the change in ROE for a period by first using the shareholders' equity figure from the beginning of a period as a denominator to determine the beginning ROE. Then, the end-of-period shareholders' equity can be used as the denominator to determine the ending ROE. Calculating both beginning and ending ROEs allows an investor to determine the change in profitability over the period.

2.5   Chapter Conclusion

The rise in available information enlarges the customers' awareness of the different marketed solutions or products. Customers tend to be more demanding and more price or characteristics-sensitive and are able to take more relevant decisions. The information availability impacts companies' business models. Companies have new means to customize the goods and services they offer. They can opt for strategies based on one-to-one marketing or mass customization (Lejeune, 2001). Customer switch is, therefore, costly to a firm and its effective management will greatly reduce the costs to a firm and ensure sustainable financial performance. Churn management consists of developing

techniques that enable firms to keep their profitable customers and it aims at increasing customer loyalty (Lejeune 2001).

It is evident that determinants of financial performance are forming part of the main agendas in corporate meetings and strategy in the ICT sector worldwide. Regardless of all the existing theory on churn control and prediction, the uniqueness of each market need to be analyzed carefully as different factors of financial performance will have different weighting on probability. The factors also keep changing as frequently as technology does hence a once off study may not be sufficient in the long term but may need reviews from time to time. Choice of the relevant models to apply is equally important if the profitability is to be sustained. Most of the studies are based in markets outside Kenya making their applicability, weighting and accuracy needing more study hence the need for the study.

CHAPTER THREE
RESEARCH METHODOLOGY

3.1   Introduction

In this chapter, the study outlines the research methodology the study adopted. It looks at the research design, the population, the sample, data collection methods and data analysis technique. In this research, the study sought to determine the factors of financial performance in Internet Service Providers in Kenya and their impact on profitability.

3.2   Research Design

The research was descriptive research based on Internet Service Providers in Kenya. It is quantitative and uses surveys and panels and also the use of probability sampling. Descriptive research is mainly done when a researcher wants to gain a better understanding of a topic. A simple random sampling involves usually much more than a desirable number of sample points and often impractical for complex, time-consuming analyses. The main goal of this type of research is to describe the data and characteristics about what is being studied. The idea behind this type of research is to study frequencies, averages, and other statistical calculations. Although highly accurate, it does not gather the causes behind a situation.

Certain importance/descriptive sampling methods have been developed to reduce the sample size without sacrificing the quality of the statistical properties of the output behavior variables. In the descriptive sampling technique (Ziha, 1995) the space defined

by each random variable is divided into subsets of equal probability and the analysis is performed with each subset of each random variable only once.

It was from the above understanding, that the research was based on a descriptive study. The study is vital to ISP's as it focused on the underlying factors influenced financial performance of ISP's in Kenya and maybe unique to the region. By picking a descriptive study the research focused on getting the unique determinants financial performance and be able to determine which of those factors was most important to ISPs.

3.3   Population

ISP's in Kenya deal majorly with corporate clients & SME's, which are both local and multinationals. According to the CCK Quarterly sector statistics report, 2nd quarter Oct-Dec 2011/2012, the total number of Corporate customers and SME's that had lease lines from ISP's were 76, 245. Appendix 3 groups these customers into different operators showing the total number of subscribers and the percentage market share for each operator.

Appendix 3, does not include mobile data/internet subscriptions by mobile service providers i.e. Safaricom, Airtel, Essar Telecom (yuMobile) and Telkom Orange which operate in the Kenyan market as this are considered the mass market. The study is based on ISP's in Kenya on corporate firms and Small and Medium Enterprises hence the exclusion of mobile service providers.

According to Register of Unified Licensing Framework Licensees released by Communication Commission of Kenya in February 2012, the total number of registered ISP's in Kenya was ninety two. (Appendix 2)

From the ninety two registered ISP's, the top ten providers control over ninety two percent of the market share while the other providers control less than eight percent of the market share (Appendix 3).

3.4   Sample

The study took the market share as a consideration and as per the population from CCK as per Appendix 4 the top ten providers control over ninety two percent of the market share while the other providers control less than eight percent of the market share. According to Register of Unified Licensing Framework Licensees released by CCK in February 2012, the total number of registered ISP's in Kenya is ninety two.

The study considered that the top 10 (ten) ISP's who control over ninety two percent of the market share which is considered to be a fair representative of the populations and the other 82 (eighty two) ISP's, which represent less than eight percent of the market share was not considered for the purpose of this study. Five questionnaires were sent to the each of the top 10 ISPs which were a total of 50 (fifty) questionnaires. This was considered not to significantly affect the outcome of the study hence the sample size.

3.5   Data Collection

This involves the techniques to be adopted by the researcher in the data gathering phase of the work. The researcher used the following instruments to collect the data to meet the problem of the study: primary data was obtained through structured close ended questionnaire that was distributed to the target population of top management of selected ISP's that specifically targeted the Managing Directors, the Marketing Managers, Service Delivery Managers, Technical Managers and the Finance Managers.

The questionnaire that was used was closed-ended type of questionnaire. These are questionnaires that provide a number of alternative answers from which the respondent is required to choose from. The responses are then easy to compare and analyze as they have been determined.

The research adopted the closed-ended questionnaire because most of the determinants of financial performance in the telecommunication industry are widely known and the challenge is in finding out how relevant and realistic they are in specific firms.

Among the factors that are outlined by various researchers, that determine financial performance, that were included in the questionnaire included: price, service uptime, customer service, network coverage and parent shareholding. A great number of researches have been carried out on the determinants of financial performance in various countries, the results, invariably; indicate differences due to influences of culture and different market structures.

Major factors that influence financial performance include; call quality, pricing options, corporate capability, customer service, credibility / customer communications, roaming / coverage and billing.

The questionnaire adopted questions from other researchers with a few amendments to suit ISP's in Kenya since the study is specific to ISP's in Kenya. The objective of the questionnaire included questions that sought to find out the major factors that influence financial performance in ISP's in Kenya; Determine the relevance and applicability of the financial performance factors from other researchers to ISP's in Kenya; Determine the importance attached to each of the factors and find out if there were other factors that were significant that may not have been included in the closed-ended questionnaire.

The questionnaires were sent to the sample population via email and a reminder was sent after two weeks to the ISPs that had not responded. In case there were low responses, a phone call to the ISP was made to request for their responses and where necessary a the contact was changed within the same company to ensure the sample size is sufficient. Test questionnaires were sent out to some ISPs to test their validity, reliability and administration before the questionnaires were sent to the entire sample population.

3.6   Control for Validity and Reliability

Validity and reliability are two critical concepts in implementing effective outcome measurement systems. Validity is the accuracy of the information generated while Reliability refers to consistency.

To ensure reliability the study adopted the test retest technique. This was achieved by testing the questionnaire to sample of the population to test its consistency and adjust for any inconsistencies before the real field work began as per this study.

To ensure validity, the time between the test run and the actual study was short enough to avoid historical effects. To ensure that representativeness of the sample with regard to the targeted population and the degree to which the findings can be generalized to represent the population, the study considered a sample of top ISP's who control over ninety two percent of the market share which was considered to be a fair representative of the populations and the other ISP's, which represent less than eight percent of the market share was not considered for the purpose of this study.

3.7   Data Analysis

Regression analysis was used to draw the relationships between the churn and the factors that determine financial performance. Regression analysis describes the relationship between a quantitative dependent variable and one or more independent variables. Here, regression analysis was used in order to calculate the determinants of financial performance of ISPs based on various factors.

To measure the determinants, the study focused on the factors that customers look at before investing on a service from a service provider. The factors the study focused on were Product Pricing, Customer Service, Service Uptime, Parent Shareholder and Network Coverage. All these factors contribute different weightings in making a decision to take up a service or not. These factors had been considered as major indicators of financial performances but to different extents. This implies that the Return On Invested of various ISPs was dependent on the resources they invest to mitigate this churn factors like ensuring their prices are competitive, the customer services is effective, the services uptime is optimal, there is well branded name that is internationally recognized and their network coverage is as wide spread as possible to cover a large market. Once the weighting of various churn factors have been determined, then ISPs made a decision on what churn factors are customers sensitive to and put more resources to them and eventually minimize churn hence increase the Return On Investment. The dependent variable was: Return on Investment.

Independent Variables:

No	Factor	Abbreviation	Nature of data required for prediction
1	Product Pricing	PP	Market price in comparison with other providers & CCK guidelines.
2	Customer Service	CS	Calls & emails to CS department & how many are resolved within 24 hours
3	Service Uptime	SU	The percentage of uptime to 99.99%
4	Parent Shareholder	PS	Whether the decisions are made locally or from the parent company
5	Network Coverage	NC	Number of Points of Presence (POP) in the country & the world over

Table 3.1 (Independent Variables)

Service uptime was measured using the period a customer's link is monitored and seen to be up and running. Customer services were measured using the number of emails and calls by customers to the customer service centre with various issues and how many were resolved within the agreed Service Level Agreement (SLA).

Network coverage was measured by the point of presence (POP) around the country and the world through partnerships with other service providers. Pricing was determined by the cost to the customer in comparison to the market rates under the guidelines of CCK.

Parent shareholding was determined using the companies' affiliation and whether top company decisions are made locally or from the head office out of the country. For each of the dependent variables, the regression equation was as follows;

$$\text{Return on Investiments (ROI)} = a + b1PP + b2CS + b3SU + b4PS + b5NC + e$$

Where,   a is a constant,

          b is the coefficient of each variable,

          PP is the Product Pricing,

          CS is the Customer Service,

          SU is the Service Uptime,

          PS is the Parent Shareholder,

          NC is the Network Coverage and

          ε is an error term.

A constant is 5%, a value which is acceptable in the industry over the last five years. This means that, regardless of all efforts, 5% of the customers are likely to switch providers.

Statistical Tests

In order to determine whether churn factors have a statistically significant effect on the Return on Investment of Internet Service Providers in Kenya, statistical tests were carried out.

Test of Individual Variables

The objective of the statistical tests was to test the hypotheses developed above concerning the Churn factors. Researchers have used different statistical tests to analyse their findings. Barako et al., (2006) and Barako, (2007) used the t-statistics and p-value tests; Zourarakis (2008), used the p-value test. Abeysekera (2008) analysed his findings using the chi2-test, while Akhtaruddin et al. (2008, 2009) the p-value test. In this light, this study also adopted the p-value and the t- statistics test.

Test of the overall model

The overall model was tested to determine the significance of the churn factors in explaining the impact they have in profitability of firms i.e. the strength of the linear relationship between the factors and financial performance of Internet Services Providers in Kenya.

Various researchers have used the coefficient of determinant ($r2$) and F-test methods to test the strength of the regression model such as Zourarakis (2008); Akhtaruddin et al., (2009); Barako et al., (2006); Barako, (2007) and Abeysekera, (2008). In the light of the above discussions, this study used the coefficient of determinant and the F- test to determine the strength of the regression model.

The data collected from various service providers was keyed in and analyzed using SPSS version sixteen (V.16). Depending on the number of responses a mean was determined that was used to allocate the weighting of each variable.

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND INTERPRETATION

4.1   Introduction

This chapter presents the results of the study. The results are based on the analysis of 29 questionnaires from the possible 50 that were dispatched representing a response rate of 58%. The chapter presents the descriptive results as well as the regression analysis results. A discussion of findings is then made.

4.2   Descriptive Results

The study was interested in finding out how long the ISP companies had been in business as service providers. The results are shown in Figure 4.1.

Figure 4.1:   Number of years ISPs had been in business
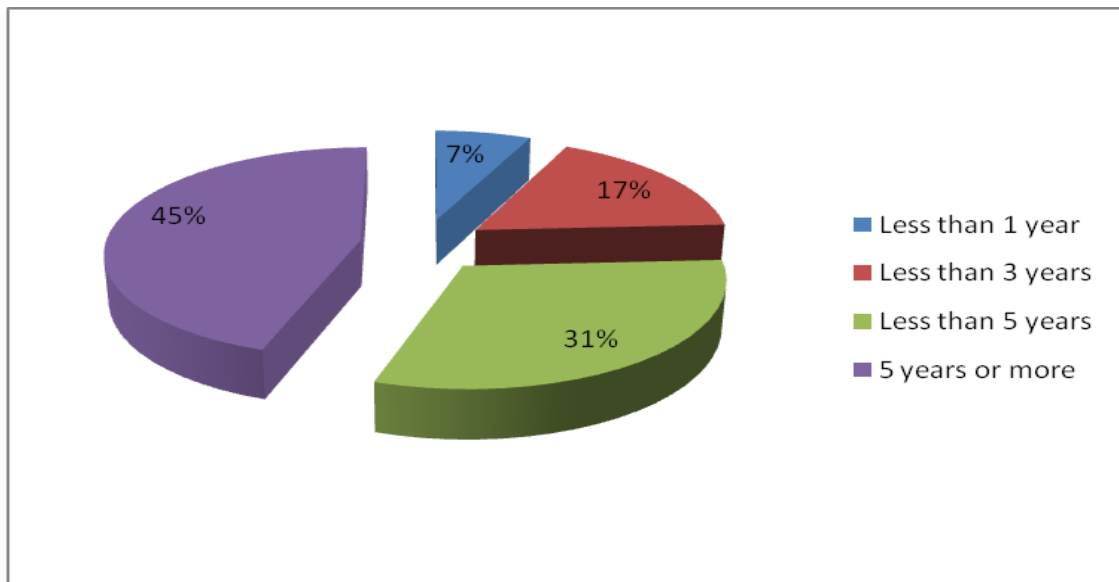
Source: Author (2012)

From the results in Figure 4.1, 45% of the ISPs had been in the business for a period of more than five years while 31% had been in the business for a period of 3 – 5 years. The respondents were asked to state how important some attributes were in their customers decision to purchase and stay with them as a Service Provider. The results of the analysis are summarized and presented in Table 4.1.

Table 4.1:   Factors influencing customer purchase decisions

Factor	S	VS	V	U	VP	Mean	SD
Service Uptime	25.0	57.1	10.7	7.0	0	4.00	0.81
Network Coverage	34.6	46.2	7.7	3.8	7.7	3.96	1.14
Customer Service	17.9	46.4	32.1	3.6	0	3.78	0.78
Parent Shareholder	0	18.2	50.0	31.8	0	2.86	0.71
Product Pricing	3.4	6.9	51.7	34.5	3.4	2.72	0.79

Key: S = Superior; VS = Very Satisfactory; A = Average; U = Unsatisfactory; VP = Very Poor
Source: Author (2012)

The results in Table 4.1 show that the most important attribute was service uptime (82%) followed by network coverage (81%), and finally customer service (64%). The mean scores further confirm that service uptime (mean = 4.00), network coverage (mean = 3.96) and customer service (mean = 3.78) were important factors in customer decisions to purchase or stay with service providers while parent shareholder (mean = 2.86) and product pricing (mean = 2.72) were not.

The respondents were also asked to indicate the factors that will trigger customer churn. The results are summarized and presented in Table 4.2.

Table 4.2:   Factors Influencing Customer Churn

Factor	VI	I	N	NI	U	Mean	SD
Service Uptime	79.3	20.7	0	0	0	4.79	0.41
Customer Service	58.6	31.0	10.3	0	0	4.48	0.68
Network Coverage	30.8	42.3	26.9	0	0	4.03	0.77
Parent Shareholder	11.1	14.8	48.1	7.4	18.5	2.92	1.20
Product Pricing	3.4	13.8	31.0	20.7	31.0	2.37	1.17

Key: VI = Very Important; I = Important; N = Neutral; NI = Not Important; U = Unnecessary

Source: Author (2012)

The results in table 4.2 show that the important factors were service uptime as agreed by all the respondents, customer service as agreed by 90% of the respondents and network coverage as agreed upon by 73% of the respondents. The mean scores also show that service uptime (mean = 4.79, customer service (mean = 4.48) and network coverage (mean = 4.03) were significant factors that influenced customer churn.

4.3   Regression Analysis Results

Table 4.3 shows the regression model summary results where R, R square, adjusted R square and standard error of estimate are presented.

Table 4.3:   Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
.601[a]	.361	.201	3.31805

Source: Author (2012)

The results in Table 4.3 show that the churn factors had a joint moderate effect on firm performance as shown by r value of 0.601. The R squared of 0.361 shows that the independent variables accounted for 36.1% of the variance in firm performance.

Table 4.4 shows the ANOVA results which explain the model fit through the F statistic and the probability of F-statistic.

Table 4.4:   ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Regression	124.469	5	24.894	2.261	.088[b]
Residual	220.189	20	11.009		
Total	344.657	25			

Source: Author (2012)

The results in Table 4.4 show that the F statistic was 2.261. At 5% level of confidence, the F statistic was not significant but at 10%, it was significant. The sum of squares also confirms that the regression model explained less than the residual.

Table 4.5 shows the coefficient results for the model variables, the t-values of each of the independent variables as well as the significance (p-value).

Table 4.5:   Coefficients

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	36.502	13.808		2.64	.016
Product pricing	-3.327	1.648	-1.021	-2.01	.057
Customer service	-2.312	2.456	-.302	-.941	.358
Service uptime	-4.934	2.825	-.433	-1.74	.096
Parent shareholder	2.174	1.763	.683	1.23	.232
Network coverage	3.372	2.221	.703	1.51	.145

Source: Author (2012)

The results in Table 4.5 show that product pricing had a negative effect on performance (-3.327). The t-value was -2.01 and the p-value was 0.057 suggesting that the effect of product pricing on performance was insignificant at 5% but significant at 10% level of confidence.

Table 4.5 also shows that customer service had a negative effect on firm performance (-2.312). The t-value was -0.941 and the p-value was 0.358 meaning that the effect of customer service on firm performance was not significant.

Further, Table 4.5 also shows that service uptime had a negative effect on firm performance (-4.934). The t-value was -1.74 and the p-value was 0.096 meaning that the effect of service uptime on firm performance was not significant at 5% but was significant at 10% level of confidence.

The study also found that parent shareholder had a positive effect on firm performance (2.174). The t-value was 1.23 and the p-value was 0.232 meaning that the effect of parent

shareholding on firm performance was not significant at 5% or at 10% level of confidence.

Lastly, Table 4.5 shows that network coverage had a positive effect on firm performance (3.372). The t-value was 1.51 and the p-value was 0.145 meaning that the effect of network coverage on firm performance was not significant at 5% and at 10% level of confidence.

4.4   Summary and Interpretation of Findings

The study sought to determine major determinants of financial performance and their weighting for Internet Service Providers (ISP's) in Kenya. This section discusses the results of the study based on this objective.

The study found that product pricing had a negative effect on firm performance. This means that since product pricing is not a significant churn factor, the lower significance has negatively affected performance of ISP firms in Kenya. The fact that this effect was insignificant however means that product pricing does not affect performance of ISP firms in Kenya.

This is inconsistent with theory as product pricing is expected to significantly and positively impact firm performance. This is especially inconsistent with Mokadikwa (2008) who found that pricing was a significant factor that influenced performance of mobile market. The results are also inconsistent with the findings of Mattison (2005) and

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Roh, Han, and Jang (2000) who found that price was an important factor that influenced firm performance.

The study also revealed that customer service had a negative effect on firm performance. As the results had also shown that customer service was a significant churn factors, these results show that its higher significance had negatively affected firm the performance of ISPs in Kenya. The fact that this effect was insignificant however means that customer service does not affect performance of ISP firms in Kenya.

These results are also inconsistent with prior theories and empirical findings. For example, Mokadika (2008) had found that customer care experience was an important factor that influenced performance of mobile firms hence the present findings contradicts these results. The results are also inconsistent with the findings of Mattison (2005) and Roh, Han, and Jang (2000) who found that customer service was an important factor that influenced firm performance.

Additionally, the study found that service uptime had a negative effect on firm performance. Service uptime was a significant churn factor and the results therefore mean that higher significance of service uptime negatively affects profitability of ISPs in Kenya. The fact that this effect was insignificant however means that service uptime does not affect performance of ISP firms in Kenya.

These results also contradict the theory and prior empirical evidence. For instance, in the study by Mokadikwa (2008), it was found that poor network quality was an important factor that affected the performance of mobile firms. This means that in the case of ISPs in Kenya, the service uptime should significantly influence firm performance. The results are also inconsistent with the findings of Mattison (2005) and Roh, Han, and Jang (2000) who found that quality of solutions and poor performance was an important factor that influenced firm performance.

The study also found that parent shareholder had a positive effect on firm performance. Parent shareholder was not a significant churn factor and the results therefore mean that lower significance of parent shareholder positively affects profitability of ISPs in Kenya. The fact that this effect was insignificant however means that parent shareholder does not affect performance of ISP firms in Kenya.

Theory suggests that higher control levels by the headquarters for subsidiaries are not good for the growth of a business. Given that most of the ISPs in Kenya are not subsidiaries, the results indicated a lack of significant effect. Theoretically therefore, the results on parent shareholder effect on performance of ISPs in Kenya were consistent.

Lastly, the study found that network coverage had a positive effect on firm performance. Network coverage was a significant churn factor and the results therefore mean that higher significance of network coverage positively affects profitability of ISPs in Kenya.

The fact that this effect was insignificant however means that network coverage does not affect performance of ISP firms in Kenya.

These results further contradict the findings of Mokadikwa (2008) who noted that poor network quality was an important factor that affected the performance of mobile firms. This means that in the case of ISPs in Kenya, the network coverage should significantly influence firm performance. The results are also inconsistent with the findings of Mattison (2005) who found that coverage was an important factor that influenced firm performance. Further, Roh, Han, and Jang (2000) had also found that poor performance and limited coverage of the network was a significant factor.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1   Introduction

This chapter presents the summary of the study findings in section 5.2, conclusion in 5.3, recommendations in 5.4, limitations of the study in 5.5, and suggestions for further research in 5.6.

5.2   Summary of Study Findings

The objective of this study was to determine major determinants of financial performance and their weighting for Internet Service Providers (ISP's) in Kenya. The study adopted a descriptive study design. The population was ISP firms in Kenya from which 10 large ISPs were selected. A total of 50 questionnaires were mailed to the managers of these firms. Primary data was collected through structured questionnaires. Data was analysed using descriptive analysis and regression analysis.

The study found that most of the firms (45%) had been in business for more than 5 years. The study further revealed that before making a decision to purchase or stay with a service provider, 82% considered service uptime, 81% of the customers considered network coverage, and 64% considered customer service. Regarding the factors influencing customer churn, the study found that churn in all the firms was influenced by service uptime, customer service influenced churn in 90% of the firms while network coverage influenced 73% of the firms.

The regression results showed that product pricing, customer service, and service uptime had negative but insignificant effects on firm performance while parent shareholding and network coverage had positive effects on firm performance. All these factors were insignificant at 5% level of confidence while product pricing and service uptime were significant at 10% level of confidence.

On the suitability of the model, the study found that the variables had a moderate effect on performance (r = 0.601). The independent variables accounted for 36.1% of the variance in performance. The models F statistic was not significant at 5% level but at 10% level of confidence.

5.3   Conclusion

The study concludes that the important attributes that customers considered before making a decision to purchase or stay with a service provider were service uptime, network coverage, and customer service.

Secondly, the study concludes that the factors influencing customer churn were service uptime, customer service, and network coverage. These factors significantly influenced customers' decisions to change a service provider if unsatisfied.

The study also concludes that product pricing, customer service, parent shareholding, network coverage, and service uptime do not have a significant effect on firm

performance. Thus the financial performance of ISPs in Kenya is not influenced by the service churn factors.

5.4   Recommendations for Policy

Based on the findings of this study and the conclusions thereof, the study makes a number of recommendations. First, the study recommends that Internet Service Providers in Kenya should ensure that they enhance the level of service uptime as this was a major factor that customers considered before making a decision to stay purchase an ISP product or to stay with the same ISP.

Second, the study recommends that Internet Service Providers in Kenya should have large network coverage and not just limit themselves to a small or specific area to cover. This was an important factor that customers considered before making a purchase decision and therefore in order for an ISP to attract customers and maintain them, there is need to cover a large area. It was also an important churn factor.

Third, the study recommends that Internet Service Providers should invest in a modern and efficient customer care service that can provide solutions to customers who have issues with their internet. This was an important purchase decision factor by customers and also a churn factor.

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5.5 Limitations of the Study

The study focused on a sample of Internet Service Providers in Kenya. The study may therefore be limited by the sample selected for the study and interpretations should therefore be limited to ISPs.

The study is also specific to Kenya. This means that the study suffers from the limitations of country specific studies as it cannot be generalized to other countries as they have different operating environment from that of Kenya.

The study also heavily relied on the responses of managers in ISPs and therefore the results are focused on the perspectives of managers and not the customers. The results are therefore reliable to that extent.

5.6 Suggestions for Further Research

The study suggest that future studies should cover a large sample than the one covered in this study in order to enhance the applicability of the results to the entire industry. Time factor may also play a significant role in changing the important factors of consideration in the ISP business.

Secondly, the study suggests that there is need to perform another study on factors that influence customer purchase decisions of ISP services from the perspective of customers and not from the perspective of managers.

Lastly, it is suggested that another study be done in the industry with a revised model that involves other factors which may affect firm performance – firm-specific factors, industry-specific factors as well as macroeconomic factors – in order to find out what factors influence financial performance of ISPs.

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APPENDICES

Appendix 1:   Questionnaire:

Customer Delight Index

Customer satisfaction is a permanent objective for Service Providers. Service Providers continuously seek ways to improve on the delivery of their services to their esteemed Customer, at all times.
Please take a few minutes to complete this brief survey and let us know how you rate your Service Provider.

1. How long have you been in business as a Service Provider?

Please choose **only one** of the following:

- ◆ Less than 6 months
- ◆ 1 year to less than 3 years
- ◆ 3 years to less than 5 years
- ◆ 5 years and more
2. How important are each of the following attributes in your customers decision to purchase and stay with you as a Service Provider?

Please choose the appropriate response for each item:

Factor	Very Important	Important	Neutral	Not Important	Unnecessary
Product Pricing					
Customer Service					
Service Uptime					
Parent Shareholder					
Network Coverage					

3. Are there any Other Factor/(s) other than the five above that you consider important to your customer satisfaction?

_____

Which one/(s) are they?

_____

4. How would you rank these factors from the most important to the least important when it comes to customer satisfaction?

Please rank each factor from 1-5 with 1 being the most important:

Factor	Ranking
Product Pricing	
Customer Service	
Service Uptime	
Parent Shareholder	
Network Coverage	

5. Please indicate in each of the factors below the level of likelihood that will trigger your customer to Churn (i.e. consider another Service Provider) in case the factor does not meet their business needs:

Please choose the appropriate response for each item:

Factor	Definitely	Highly Likely	Likely	Not Likely	Neutral
Product Pricing					
Customer Service					
Service Uptime					
Parent Shareholder					
Network Coverage					

Thanks you for your time.

Appendix 2: Licensed ISP's in Kenya

	Company Name	Region
1	Accesskenya Group Limited	Nairobi
2	Adtel Phone Co. Ltd	Nairobi
3	Africa Online	Nairobi
4	Airtel Networks Kenya Limited	Nairobi
5	Airtouch Connections Limited	Nairobi
6	Aja Limited	Nairobi
7	Alldean Networks Limited	Nairobi
8	Attain Enterprise Solutions Limited	Nairobi
9	Bell Western Limited	Nairobi
10	Beneficial Solutions and Technocrats Limited	Nairobi
11	Bernsoft Interactive Limited	Nairobi
12	Birdseye Auto Track Limited	Nairobi
13	Boss Communications Company	Nairobi
14	Cellulant Kenya Limited	Nairobi
15	Commcarrier Satellite Services Limited	Nairobi
16	Comtec Hosting Solutions Limited	Nairobi
17	Convegzed Information Services Limited	Nairobi
18	Craft Silicon Limited	Nairobi
19	Databit Limited	Nairobi
20	Digital Distribution Centre (K) Limited	Nairobi
21	Electronic and Transmission Media Limited	Nairobi
22	EM Communications Limited	Nairobi
23	Enterprise Data Freedom Limited	Nairobi
24	Essar Telecom Kenya Limited	Nairobi
25	Fanaka Online Limited	Kisumu
26	Finnet Communications Limited	Nairobi
27	Flex Communications Limited	Nairobi
28	Fourth Generation Networks Ltd	Nairobi
29	Frontier Informatics Limited	Nairobi
30	Frontier Optical Networks Limited	Nairobi
31	Gateway Telecommunications (Kenya)Limited	Nairobi
32	Geda Limited	Nairobi
33	Gelati Limited	Nairobi
34	Horyal Services Limited	Nairobi
35	Hotego Networks Limited	Nairobi

Source: Register of Unified Licensing Framework Licensees, CCK, February 2012

Licensed ISP's in Kenya Continued;

	Company Name	Region
36	Indigo Telecom Limited	Nairobi
37	Industrial Technology Trading Company Limited	Nairobi
38	Instaconnect Limited	Nairobi
39	Intergrat Limited	Nairobi
40	Internet Solutions Kenya Limited	Nairobi
41	Iphone Global Ltd	Nairobi
42	Iquip Limited	Nairobi
43	Itek Solutions Limited	Nairobi
44	iWayAfrica Kenya Limited	Nairobi
45	Jadalink Kenya	Nairobi
46	Jamii Telecommunications Limited	Nairobi
47	Karibu Telecom Limited	Nairobi
48	Kasnet Internet Services Limited	Nairobi
49	Kentrace And Accessories	Karatina
50	Kenya Data Networks Limited	Nairobi
51	Kinde Engineering Works Limited	Nairobi
52	Klass Image Limited	Nairobi
53	Lantech (Africa) Limited	Nairobi
54	Linkers International Limited	Nairobi
55	Lyle Kenya Limited	Nairobi
56	Mobile Telephone Networks Business Kenya Limited	Nairobi
57	Nairobinet (K) Limited	Nairobi
58	Next Generation Networks Telecommunications (EA)	Nairobi
59	Nia Moja Business Solutions (K) Limited	Nairobi
60	Ninewinds Communications Limited	Nairobi
61	Nirali Enterprises Limited	Nairobi
62	Ocean Five Telecom Kenya Limited	Nairobi
63	Octopus Ict Solutions Limited	Nairobi
64	Orca Bay Data Solutions Limited	Nairobi
65	Porting Access (K) Limited	Nairobi
66	Pwani Telecoms Limited	Mombasa
67	Rainbow Network Solutions Limied	Nairobi
68	Rasmilink	Nairobi
69	Safaricom Limited	Nairobi
70	Sat Africa Limited	Nairobi

Source: Register of Unified Licensing Framework Licensees, CCK, February 2012

Licensed ISP's in Kenya Continued;

	Company Name	Region
71	Sea Submarine Communications Limited	Nairobi
72	Servtel Communications Limited	Mombasa
73	Sisi Communications Limited	Nairobi
74	SITA Data	Nairobi
75	Sovaya Communications Limited	Nairobi
76	Speedial Connections Limited	Nairobi
77	Suuban Enterprises	Nairobi
78	Swift Global (K) Limited	Nairobi
79	Telkom Kenya Limited	Nairobi
80	Total Security Surveillance Limited	Nairobi
81	Toucan Network Limited	Nairobi
82	Tracer Limited	Nairobi
83	Tracesoft Limited	Nairobi
84	Tuseme Africa Limied	Nairobi
85	UUNET Kenya Limited	Nairobi
86	Uvacorp Technologies Limited	Nairobi
87	VirtualSat Limited	Nairobi
88	Vision Network Solutions Africa Limited	Nairobi
89	VOIP Pro(K) Ltd	Nairobi
90	Wananchi Group Kenya Limited	Nairobi
91	Wifismartzone Solutions	Nairobi
92	Xtranet Communications Limited	Nairobi

Source: Register of Unified Licensing Framework Licensees, CCK, February 2012

Appendix 3:   **Fixed/Wireless Internet Subscriptions by Operator**

No.	Name of Operator	Total Customers (Dec 11)	% ge Market Share
1	Kenya Data Networks	25,525	33.48
2	Wananchi Telecom	17,958	23.55
3	Access Kenya	11,150	14.62
4	Telkom Kenya	10,423	13.67
5	Swift Global	1,200	1.57
6	Flexible Bandwidth	1,198	1.57
7	iWay Africa	935	1.23
8	Internet Solutions	847	1.11
9	Call Kenya Networks	627	0.82
10	Tangerine	543	0.71
11	Others	5,839	7.66
	TOTAL	**76,245**	**100**

Source: CCK Quarterly sector statistics report, 2nd quarter Oct-Dec 2011/2012

Appendix 4:   Target Population & Sample Size

No.	Name of Operator	%ge Market Share (Dec 2011)
1	Kenya Data Networks	33.48
2	Wananchi Telecom	23.55
3	Access Kenya	14.62
4	Telkom Kenya	13.67
5	Swift Global	1.57
6	Flexible Bandwidth	1.57
7	iWay Africa	1.23
8	Internet Solutions	1.11
9	Call Kenya Networks	0.82
10	Tangerine	0.71
	TOTAL	**92**

Sample Size Using Quota Sampling