

EFFECT OF INTERNAL FACTORS ON THE PROFITABILITY OF PRIVATE HOSPITALS IN KENYA: A CASE STUDY OF THE KAREN HOSPITAL LIMITED

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ABSTRACT

Private hospitals largely depend on competitive marketing strategy that determines their success and growth. The modalities of the health sector have changed a lot in the new millennium compared to the way they used to be in the years bygone. The profitability of a firm is a key concern, as is the ability to better with stand negative shocks and contribute to the stability of the sector. The objective of the study was to determine the effect of internal factors on the profitability of private hospitals in Kenya. A case study research design was adopted by this study. The population for this study was departmental heads and staff in the finance department of the Karen Hospital. Stratified random sampling was used to get the data sources with primary data collected using semi structured questionnaires. The researcher used drop and pick method of data collection. A sample size of 5 respondents was chosen to form the pilot study. Data analysis was done using Statistical package for Social Sciences (SPSS version 20). Descriptive statistics were used with multiple regressions done using SPSS. Tables and other graphical presentations such as bar charts, histogram, and pie charts were used to present the data. The study established a positive relationship between profitability of private hospitals and firm size, volume of capital and tangibility of assets with leverage showing a negative relationship. The study concluded that firm size, leverage, volume of capital and tangibility of assets affect profitability of private hospitals in Kenya. The researcher recommends that private hospitals should expand in a controlled way with the aim of achieving an optimum size, avoid situations where they are highly leveraged, increasing the number of shareholders, and develop sound techniques of managing their assets. The researcher recommends a study on the external factors that may affect the performance of hospitals in Kenya.

Key Words: *internal factors, profitability, private hospitals, Kenya, Karen Hospital Limited*

Introduction

The increasing phenomenon of globalization has made the concept of efficiency more important both for the non-financial and financial institutions. Private hospitals largely depend on competitive marketing strategy that determines their success and growth. The modalities of the

health sector have changed a lot in the new millennium compared to the way they used to be in the years bygone (Hussain and Bhatti, 2010). The health sector in general has experienced some profound changes in recent decades, as innovations in technology and the inexorable forces driving globalization continue to create both opportunities for growth and challenges for private hospitals to remain profitable and ethical (Bobáková, 2003).

According to Hifza (2011) profitability is one of the most important objectives of management since one goal of financial management is to maximize the owners' wealth, and, profitability is very important determinant of performance. Therefore, private hospitals have importance both for businesses and individuals as they provide customized health services with a high level of efficiency and effectiveness. In addition, private hospitals provide economic and social benefits in the society by prevention of deaths, reduction in injury, and increasing employment opportunities.

The importance of the factors of private hospitals' profitability can be appraised at the micro and macro levels of the economy. At the micro level, profit is the essential prerequisite of a competitive private hospital riding on quality service. It is not merely a result, but also a necessity for growth and improved health care in a period of growing competition in the health sector. Hence, the basic aim of management is to achieve a profit, as the essential requirement for conducting any business (Bobáková, 2003). At the macro level, a sound and profitable health sector is better able to withstand negative shocks and contribute to the stability of the health system. The importance of private hospitals' profitability at both the micro and macro levels has made researchers, academicians, managements and regulatory authorities to develop considerable interest on the factors that determine their profitability (Athanasoglou et al., 2005).

Performance of private health institutions can affect economic growth while at the same time having unfavorable consequences for the economy as a whole. Therefore it requires empirical investigation so as to sort out what are the important factors affecting profitability of private hospitals and this will help concerned bodies to focus on the relevant factors. Hence the efficient performance of the institutions has become important and investigations by different researchers focus on what factors determine the performance especially the financial performance of the sector.

Private Health Sector in Kenya

Kenya's private sector is one of the most developed and dynamic in Sub Saharan Africa. In the health sector—where the leading causes of death are HIV/AIDS, acute respiratory infection (ARI), diarrheal diseases, and malaria (WHO,2004) the private commercial (for profit) sector and the not for profit sector play critical roles in preventing and treating disease. Even among the poor, the private sector is an important source of care. For example, 47 percent of the poorest quintile of Kenyans use a private facility when a child is sick (Marek et al.2005).

In recognition of this important role, the Government of Kenya has developed strategies to develop the private health sector in its Vision 2030 plan as well as in the strategic plans for 2008–2012 of the Ministry of Medical Services (MOMS) and Ministry of Public Health and Sanitation (MOPHS). (These two ministries are the component branches of the recently divided Ministry of Health.) Some of the key features of those plans include social health insurance to increase access to health care, a reduced role for the Ministry of Health in service delivery, more delegation of authority to provincial and district level, and promoting more public/private partnerships (PPPs).

The private health sector has grown dramatically over the last two decades. Possible factors contributing to its growth include: lack of adequate and quality public health care services; the introduction of user fees in public facilities; and health sector reforms in the 1980s and 1990s that relaxed licensing and regulation of private health care providers and allowed public sector personnel to work in private practice (Muthaka, 2004). One indicator of growth is the increase in health facilities owned by the private sector.

There is an important opportunity in Kenya for providing needed stewardship of the private health sector. In and outside of government, there is a general consensus that the private health sector has an important role to play in the country; but it is less clear how to define appropriate roles and responsibilities for the public and private sectors in health. While stakeholders can see the advantages of PPPs, the processes and institutions to create those partnerships must be defined. Several factors contribute to the window of opportunity. The Kenyan government is actively engaging with the private sector; the MOMS and MOPHS have demonstrated interest in collaborating with the private health sector; private sector actors are well organized; and there is strong donor support for the private sector partnerships in health.

The Karen Hospital

The Karen Hospital is a multi-specialty healthcare provider providing emergency and critical care, acute medical and surgical services, diagnostics, rehabilitation, mental health, palliative care as well as undertaking research and educating the next generation of healthcare professionals. We have more than 350 staff, 3 operation theatres catering to over 26 specialties and 102 beds. The Karen Hospital strives to never lose sight of what makes our service unique. We understand that each patient is an individual with their own hopes and fears. We acknowledge the whole person, not just their illness. The essence of The Karen Hospital lies in our approach to bringing quality healthcare to our people hence establishing seven satellite centers in different parts of the country; these day-to-day interactions with our community are the defining moments that transform care from good to exceptional.

The Karen Hospital has an established collaboration of implementing the AMREF Training Programme including the e-Learning programme which is aimed at upgrading Nurses from

Enrolled Community Health Nurses (ECHNs) to Kenya Registered Community Health Nurses (KRCHNs) and from Kenya Registered Community Health Nurses (KRCHNs) to Bachelor of Science in Nursing (BSN) and to provide clinical placements for nurses and other medical and health allied professional students from the AMREF International Training Programme. The Karen Hospital and AMREF have committed themselves to consolidating and enhancing their collaboration in terms of implementing health professional training, health systems research and to actively seek and explore other areas of potential co-operation through which the aims and objectives of each institution can be realized.

Since opening in 2006, The Karen Hospital has provided comprehensive medical and surgical services. The hospital was the first to host a Live Cardiac workshop which saw cardiologists from the East Central African region attend and were the first to conduct the first CABG on a beating heart in East Africa. The theatre at The Karen Hospital has gained national recognition and was voted the best theatre in Kenya in 2009. The hospital has also been certified for ISO 9001:2008. Their legacy of promoting health and wellness reaches back to over 25 years.

Statement of the Problem

Profitability plays an important role in the structure and development of firm because it measures the performance and success of a firm. It also enhances the reputation of a firm. Maximizing the profits of firm is one of the main objectives of managers. The profitability of a firm is thus a key concern, as is the ability to better with stand negative shocks and contribute to the stability of the system. Profitability also maximizes stakeholder value and investor value. Profitability is vitally important to corporate performance, especially in competition environments. Profitability is one of the most important objectives of financial management because one goal of financial management is to maximize the owner`s wealth and profitability (Ngoyen, 2006).

During the period of 2005-2009 the annual reports of private hospitals in Kenya show large fluctuations in the profits (Republic of Kenya, 2009). This variation of profits among private hospitals suggests that firm-specific factors play crucial role in influencing private hospitals profitability. It is therefore essential to identify what are these factors and how they help private hospitals to take actions that will increase their profitability and investors to forecast the profitability of private hospitals in Kenya (Republic of Kenya, 2001).

Wanjau, Muiruri and Ayodo, (2012) did a study on the factors Affecting Provision of Service Quality in the Public Health Sector based on Kenyatta National Hospital. Owino and Korir, (2000) did a study on the Public Health Sector Efficiency in Kenya and found that the public health sector has many inefficiencies due to poor government policies. Karimi, (2001) conducted a study on the Impact of information technology management practices on customer service in the private health sector in Kenya. However, the studies done have failed to examine the

profitability of private hospitals companies, hence there is a need for a study on the factors affecting profitability of private hospitals in Kenya.

General objective

To determine the effect of internal factors on the profitability of private hospitals in Kenya

Specific objectives

1. To examine the effect of firm size on the profitability of private hospitals in Kenya
2. To establish the effects of leverage on the profitability of private hospitals in Kenya
3. To find out how the volume of capital affects profitability of private hospitals in Kenya
4. To assess the effect of tangibility of assets on the profitability of private hospitals in Kenya

Theoretical review

The free cash flow theory

Jensen (1989) states that when free cash flows are available to top managers, they tend to invest in negative NPV projects instead of paying out dividends to shareholders. He argues that the compensation of managers increase with an increase in the firm's turnover. Hence the objective of the company is to increase the size of the firm by investing in all sorts of projects even if these projects have a negative NPV.

Dorff (2007) argued that compensation of managers tend to increase when there is an increase in the firm's turnover. Jensen (1986) defines free cash flow as the amount of money left after the firm has invested in all projects with a positive NPV and states that calculating the free cash flow of a firm is difficult since it is impossible to determine the exact number of possible investments of a firm.

Lang, Stulz and Walking (1991) uses the Tobin's q as a proxy to determine the quality of investment. Firms with a high 'q' showed that firms were using their free cash flows to invest in positive NPV projects whereas firms with low 'q' showed that firms were investing in negative NPV projects and therefore, the free cash flows should instead be paid out dividends to the shareholders. As a whole, this study is in line with the free cash theory and was considered as very reliable among economists. Using free cash flows to invest in negative NPV projects leads to an increase in agency costs. For a hospital the free cash flows should be invested in projects that would increase customer satisfaction through improved service quality and access. These would lead to increased profits based on the management and labour quality that would make and effect relevant investment decisions.

Trade-off theory (Optimal theory)

The theory explains the friction between costs of financial distress and tax deductibility of the costs of finance (Chirinko and Singha, 2000). It suggests that firm's trade-off several aspects, including the exposure of the firm to bankruptcy and agency costs against the tax benefits associated with debt usage, offsetting these considerations is the tax benefits encourage debt use by firms (tax deductibility interest) and the final capital structure adopted by a firm will be a trade-off between these tax benefits and costs associated with bankruptcy and agency.

This implies that there's a target or optimal debt-equity ratio for a firm (Rotnanao et al, 2000) that changes only as benefits and costs alter over time. The main benefit of debt is the tax advantage of interest deductibility (MM 1963). The primary costs are those associated with financial distress and the personal tax expense bondholders incur when they receive interest income (Miller 1977). The trade-off theory of capital structure therefore predicts that firms will choose their mix of debt and equity financing to balance costs and benefits of debt. The tax benefit of debt and control of free cashflow problems push firms to use more debt financing while bankruptcy costs and other agency problems provide firms with incentives to use less. The theory describes a firm's optimal capital structure as the mix of financing that equates the marginal costs and benefits of debt financing. One of the main empirical prediction of this theory is that debt ratios will tend to be mean reverting as firms use the external capital markets strategically to keep their values at a close to their optimum (Lemmen et al, 2002). The hospitals should choose a relevant capital structure based on its size and age. Where the hospital is large they can chose debt as an option since they have assets that can be used as collateral.

Cost shifting theory

The cost shifting theory states that if the government sets a lower price per admission some of the hospital's government admissions will cost more than the revenue they generate. A profit-maximizing hospital would therefore reduce the number of admissions available to government patients and shift some of the capacity over to the private market. The private market will buy more only if the price is reduced. This is the antithesis of cost shifting. Private prices go down as government prices do. Profit-maximizing hospital will charge different prices to different categories of payers, but it will not engage in dynamic cost shifting. Rather than charging private payers more because the government pays less, [the hospital] would charge private payers less when the government pays less, and more when the government pays more. The ability to cost-shift depends on having a residual private sector where demand for hospital care is relatively inelastic. Recent [circa 1998] changes in the medical care marketplace in particular the rise of managed care have likely changed the demand elasticity. While managed care has many effects on the medical care system, the most important effect for this analysis is that it makes patients more responsive to price increases at particular hospitals. A hospital can use whatever profits it

chooses to generate to subsidize unprofitable activities, such as care for the uninsured, teaching, research, or other investments. The hospital's goal is not to maximize profits, but to maximize something else, generically termed "utility." A function that characterizes utility can include profit, of course, but it must also include other activities—unprofitable stuff—too.

Pecking order theory

The pecking order theory suggests that firms have a particular preference order for capital used to finance their businesses (Myers, 1984). Owing to the presence of information asymmetries between the firm and potential financiers, the relative costs of finance vary between the financing choices. Where the funds provider is the firm's retained earnings, meaning more information than new equity holders, the new equity holders will expect a higher rate of return on capital invested resulting in the new equity finance being more costly to the firm than using existing internal funds. A similar argument can be provided between the retained earning and new debt-holders. In addition, the greater the exposure to the risk associated with the information asymmetries for the various financing choices besides retained earnings, the higher the return of capital demanded by each source. Thus, the firm will prefer retained earnings financing to debt, short-term debt over long-term debt and debt over equity.

Conceptual Framework

The study can be conceptualized in framework explaining the relationship between the independent variables (factors) which include, firm size, leverage, volume of capital and tangibility of assets and the dependent variable (profitability in private hospitals).

Firm size

Firm performance can be measured in different ways and by applying different methods; however, one of the most widely applied methods refers to financial analyses that use profitability ratios as key measures of firm's overall efficiency and performance. Although a great number of theories tried to explain the reasons why some firms are more profitable than others, and numerous studies investigated different variables that may influence firm performance, the issue of firm business success continues to be an inexhaustible subject that draws attention of many practitioners and researchers. According to the free cashflow theory the objective of the company is to increase the size of the firm by investing in all sorts of projects even if these projects have a negative NPV.

The relationship between firm size and profitability occupy a substantial portion of economic literature. Studies on the effect of firm size on firm profitability have generated mixed results ranging from those supporting a positive relationship among these variables to those opposing it. Additionally, under the same sample of the firms, this relationship may be positive

over some firm size ranges and negative for others. Beside previously presented theoretical explanations, contradictory empirical results could be a result of different used samples, industry groups, time horizons, indicators and business environment.

Earlier research papers such as Sharma and Kesner, (2006) and Mitchell, (2004) strongly support the effect of firm size on business survival and variance in operating performance. They argue that firm size is a basis of competitive advantage in the sense that larger companies tend to be more efficient than their smaller counterparts and have better resources to survive economic downturns.

Using financial and economic data, Ammar et al. (2003) examined the nature of the size-profitability relationship on a sample of electrical contractors for 1985-1996 period. Using a first-order autoregressive model built into the error term, the authors found a significant difference in terms of profitability between small, medium and large firms. Namely, they revealed that profitability drops as firms grow larger than \$50 million in sales. On a sample of a US manufacturing firms, Amato and Wilder (2005) tested size-profitability relationship in linear as well as quadratic form. However, the results of their analysis showed that there is no relationship between firm size and profit rate.

Burson (2007) tested size-profit relationship for firms operating in the financial services sector. The authors examined both linear and cubic form of the relationship. With the linear specification in firm size, the authors revealed negative influence of firm size on its profitability. However, this influence wasn't statistically significant. On the other hand, the author found evidence of a cubic relationship between ROA and firm size. Besides the conflicting results on the relationship between firm size and profitability, almost all known existing studies have focused on the impact of the former on the latter neglecting the possibility of feedback. However, it is possible for profitability to affect firm size and vice versa. Firms achieve economies of scale when their operating costs increase at a rate lower than their output.

Stekler (2004) pointed out that variation over a period of average profitability for small and large firms was less than that of medium size firms. Baumol (2007) emphasized that there is a positive relationship between firm size and profits. Another study of Velnampy & Nimalathan (2007) indicated that sales are positively associated with profitability ratios except ROE, and numbers of depositors are negatively correlated to the profitability ratios except ROE, Likewise, number of advances is also negatively correlated to the ROI, and ROA

Leverage

Leverage is the amount of debt used to finance a company's assets. A company with significantly more debt than equity is considered to be highly leveraged. This variable is measured by total debt to total equity value of the company.

The trade-off theory suggests a positive relationship between profitability and leverage ratio and justified by taxes, agency costs and bankruptcy costs push more profitable firms towards higher leverage. Hence more profitable firms should prefer debt financing to get benefit from tax shield. In contrast to this pecking order theory of capital structure is designed to minimize the inefficiencies in the firms' investment decisions. Due to asymmetric information cost, firms prefer internal finance to external finance and, when outside financing is necessary, firms prefer debt to equity because of the lower information costs. The pecking order theory states that there is no optimal capital structure since debt ratio occurs as a result of cumulative external financing requirements. Hospital leverage could be defined as reserves to surplus or debt to equity. The risk of a hospital may increase when it increases its leverage.

Literatures in capital structure confirm that a firm's value will increase up to optimum point as leverage increases and then declines if leverage is further increased beyond that optimum level. For instance Chen & Wong (2004) stated that leverage beyond the optimum level could result in higher risk and low value of the firm. Empirical evidences with regard to leverage found to be statistically significant relationship but negative. For instance Chen & Wong (2004) in Canada, Hifza (2011) in Pakistan, Ko zak (2011) in UK, Swiss Re (2008) in Egypt and Flamini (2009) in Sub-Saharan countries found that negative but statistically significant relationship between leverage and profitability of firms. Harrington (2005) stated that the relationship between leverage and profitability has been studied extensively to support the theories of capital structure and argued also that firms with lower leverage will generally report higher ROA, but lower ROE. Since an analysis for ROE pays no attention to the risk associated with high leverage.

Volume of Capital

In most of the studies concerning volume of capital measures as the difference between total assets and total liabilities and in some cases it is measured by the ratio of equity capital to total asset. Companies' equity capital can be seen in two ways. Narrowly, as stated by Aburime (2008), it can be seen as the amount contributed by the owners of a firm (paid-up share capital) that gives them the right to enjoy all the future earnings. More comprehensively, it can be seen as the amount of owners' funds available to support a business. The later definition includes reserves, and is also termed as total shareholders' funds. No matter the definition adopted, volume of capital is widely used as one of the determinants of a firm's profitability since it indicates the financial strength of the firm. As it has been expected positive relationship between profitability and capital has been demonstrated by Athanasoglou (2005). Studies conducted in different countries found that size of capital is one of the important factors that affect ROA. Athanasoglou found in his investigation that there exists a positive and significant relationship between volume of capital and profitability of the finance institutions in Greece.

Tangibility of Assets

Tangibility of assets in most studies is measured by the ratio of fixed assets to total assets. A firm with large amount of fixed asset tends to be more profitable because of increasing its future assets value. But leverage is positively related to tangibility and is negatively related to profitability because profitability has negative relationship with tangibility (Shah & Khan, 2007). Thus we expect a negative relationship between tangibility of assets and profitability. We measure tangibility of asset (TG) as a ratio of fixed assets divided by total assets. We take total net amount of fixed assets as the numerator. Using total net amount of fixed assets means the cost of fixed assets minus accumulated depreciation.

A recent study by Naveed, Zulfqar & Ahmad (2011) investigates the impact of firm level characteristics on performance public hospitals in India over the period of seven years. For this purpose, size, profitability, age, risk, growth and tangibility were selected as explanatory variables while ROA is taken as dependent variable. The results of OLS regression analysis revealed that leverage, size and risk are most important determinant of performance of a firm whereas ROA has statistically more of insignificant relationship with, tangibility of assets. However, Hafiz (2011) found that there exists a positive and significant relationship between tangibility of assets and profitability and argued that the highest the level of fixed assets formation, the older and larger the firm is.

Profitability

Profitability is the ability to earn profit from all the activities of an enterprise. It indicates how well management of an enterprise generates earnings by using the resources at its disposal. In the other words the ability to earn profit e.g. profitability, it is composed of two words profit and ability. Profitability is a measure of evaluating the overall efficiency of the business. It indicates the firm's ability to achievement of the rate of return on a company's assets and investment funds. The best possible course for evaluation of business efficiency may be input-output analysis. Profitability can be measured by relating output as a proportion of input or matching it with the results of other firms of the same industry or results attained in the different periods of operations. Profitability of a firm can be evaluated by comparing the amount of capital employed i.e. the input with income earned i.e. the output. This is popularly known as return on investment or return on capital employed. It is regarded as the overall profitability ratio and has two components; net profit ratio and turnover ratio.

Profitability at microeconomic level has been studied depending on indicators such as current ratio, liquid ratio, receivables turnover ratio and working capital to total asset (Singh and Pandey, 2008). According to Singh and Pandey (2008) there are different ways to measure profitability such as: ROA, return on equity (ROE) and return on invested capital (ROIC).

ROA is an indicator of how profitable a company is relative to its total assets. It gives us an idea as to how efficient management is in using its assets to generate earnings. Most researchers state that the key indicator of a firm's profitability is ROA defined as the before tax profits divided by total assets. Hardwick P. & Adams M. (1999), Hafiz Malik (2011) are among others, who have suggested that although there are different ways to measure profitability it is better to use ROA. It is computed as a ratio between Net Income and Total Assets (Burja, 2010).

$$\text{ROA} = \text{Net Income} / \text{Total Assets}$$

ROE measures a company's profitability which reveals how much profit a company generates with the money shareholders have invested. It is calculated as a ratio of Net Income and shareholders' equity.

$$\text{ROE} = (\text{Net Income} / \text{Shareholders equity}) \times 100$$

ROIC is a measure used to assess a company's efficiency in allocating the capital under its control in profitable investments. This measure gives a sense of how well a company is in using its money to generate returns. It is calculated as a ratio of Net income-dividends divided by capital.

$$\text{ROIC} = (\text{Net Income} - \text{Dividend}) / \text{capital}$$

The capital includes long term debt and share capital.

Empirical review

It is contended in the literature that the profit rates of the firms can persist over time and increasing levels of profits can help firm grow faster and at the same time the size of a firm plays an important role in determining the kind of relationship the firm enjoys within and outside its operating environment. The larger a firm is, the greater the influence it has on its +stakeholders. Again, the growing influences of conglomerates and multinational corporations in today's global economy (and in local economies where they operate) are indicative of what role size plays within the corporate environment.

Lee (2009) analyzed the effects of size on profitability for 7,000 US publicly-held firms during the period 1987-2006 and he found that firm size has positive impacts on profitability (Lee, 2009). After the above review, it is possible to say that the results of the empirical studies on the effects of size on profitability are far from being unequivocal. Yet, some studies find a positive impact, while others find negative or no relationship between firm size and profitability.

Flamini et.al (2009) carried out a study on the determinants of commercial bank profitability in sub-Saharan Africa. He found that size is used to capture the fact that larger firms are better placed than smaller firms in harnessing economies of scale in transactions and enjoy a higher

level of profits. One of the most important questions underlying bank policy is which size optimizes bank profitability.

Liargovas & Skandalis, (2008) carried out an empirical study on analytical framework of profitability in the case of Greek industrial firms during the period 1997-2004. The paper examined the impact of key determinants of firms' profitability. The study results showed that size, tangibility, growth, debt to equity ratio, size and the index for management competence significantly affect firm profitability in Greece.

Hifza (2011) examined the relationship between volume capital and return on asset for Pakistan insurance industry. The study was carried on registered insurance companies in the capital city of Islamabad. Stratified random sampling was used to select a sample of 45 companies in the city. He found that the Return on assets was high with a large volume of capital. This shows that there is a positive and statistically significant relationship between capital and profitability of insurance companies.

Yuqi (2007) did a study on the determinants of Banks' Profitability and Its Implication on Risk Management Practices in the UK. The study was carried out in Nottingham city and involved 3000 respondents selected from 43 commercial banks in the city. He found that for firms that become extremely large, the effect of size could be negative due to bureaucratic and other reasons. He also found that no significant relationship between tangibility of assets and profitability of banks. However, he found a positive and statistically significant relationship between growth and profitability of banks.

Research Methodology

Research design

A case study research design was adopted by this study. According to Kothari, (2006) a case study design is a way of organizing data and looking at the object to be studied as a whole, a case study makes a detailed examination of a single subject or a group of phenomena. Case approach helps to narrow down a very broad field or population into an easily researchable one, and seeks to describe a unit in details, in context and holistically, (Kombo & Tromp, 2006). The study hence considered case study design suitable since data was gathered from a single source; The Karen Hospital. The method of data collection was tested for validity and reliability, conditions which according to Kothari, (2006) must be present in descriptive studies.

Target population

A population is defined as a complete set of individuals, cases or objects with some common observable characteristics, (Mugenda & Mugenda, 2003). The population for this study was departmental heads and staff in the finance department of the hospital.

Sampling frame

A sampling frame is a comprehensive list of all sampling units, which a sample can be selected, (Kombo and Tromp 2006). Sampling frame was a list of employees working at hospital headquarters consisting of employee from all levels of employment.

Sample and sampling techniques

A sample is a small group obtained from accessible population, (Mugenda & Mugenda, 2003). Sampling is the procedure a researcher uses to gather people, places or things to study, (Kombo & Tromp, 2006). Stratified random sampling was applied in getting the number of respondents for the study. Stratified random sampling ensures inclusion, in the sample, of sub groups, which otherwise would be omitted entirely by other sampling methods because of their small number of population, (Mugenda & Mugenda, 2003). A sample of Fifty four (54) respondents was chosen for the study.

Data collection Instruments

The questionnaire is among the most popular data collection methods in business studies. It refers to a method of data collection that utilizes questions for recording the verbal behaviour of respondents Ghayri & Gronthug (2005). The researcher used both primary and secondary sources to collect data. Primary data was collected using semi structured questionnaires. This type of questionnaire uses both closed and open-ended questions. Closed questions have predetermined answers and usually collect quantitative data while open-ended questions give the respondents free will to answer and usually collect qualitative data. The researcher chose the self-administered questionnaire method for all correspondents as it is simple and easy to administer to respondents to complete at a convenient time.

Data collection procedure

The researcher used drop and pick method of data collection where the questionnaires are left at the respondent's premises and then collected later at agreed time. During the collection period, the researcher ensured that the consent of the respondents is obtained and that no one's right is infringed during the exercise.

Pilot test

A pilot study was undertaken in order to pretest the data collection instrument. A pilot study is a small scale preliminary study before the main research in order to measure the validity and reliability of data collection instruments, (Kothari, 2006). A sample size of 5 respondents was chosen to form the pilot study. According to Mugenda, and Mugenda (2003) a pilot study of between 1-10% of the target population is acceptable. Developed questionnaires were sent to the selected respondents and then the information acquired evaluated to assess their reliability and validity. Then effective revision was done based on the discovery on whether the questions have meaning for the participant, checking for participant modification of a question's intent, examining question continuity and flow, experimenting with question-sequencing patterns.

Data analysis and presentation

After data collection, the filled-in and returned questionnaires were edited for completeness, coded and entries made into Statistical package for Social Sciences (SPSS version 20). The researcher used descriptive statistics where frequencies and Percentage of responses were obtained through the use of SPSS. The measure of dispersion such as the mean and standard deviations was used. Tables and other graphical presentations such as bar charts, histogram, grouped frequency distributions and pie charts as appropriate were used to present the data collected for ease of understanding and analysis.

In addition, a multiple regression will be used to measure the quantitative data and will be analyzed using SPSS too. The regression equation is:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon$$

Where Y is the dependent variable (profitability), β_0 is the regression constant, β_1 , β_2 , β_3 and β_4 are the coefficients of independent variables, X1 is firm size, X2 is leverage, X3 is volume of capital and X4 is tangibility of assets.

Research Results

Regression Analysis

Table 1: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.869 ^a	.755	.746	.33868

Adjusted R2 is called the coefficient of determination and it shows how profitability of The Karen hospital varied with changes in firm size, leverage, volume of capital and tangibility of assets. From data in the above the value of adjusted R2 is 0.746. This implies that, there was a variation of 74.6% in profitability of private hospitals with changes in firm size, leverage, volume of capital and tangibility of assets at 95% confidence interval, the study also found that there is a strong positive relationship between the study variable as shown by correlation coefficient of 0.869.

Table 2: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.042	2	.021	3.064	.018 ^b
	Residual	13.692	42	.326		
	Total	13.734	44			

From the ANOVA statics in table above, the processed data, which is the population parameters, had a significance level of 1.8% which shows that the data is ideal for making a conclusion on the population’s parameter as the value of significance (p-value) is less than 5%.

Table 3: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.835	.129		8.978	.000
	Firm size	.574	.418	.357	2.205	.018
	Leverage	-.125	.112	-.152	1.121	.026
	Volume of capital	.771	.061	.597	1.971	.043
	Tangibility of assets	.643	.082	.586	1.488	.042

The established regression equation was:

$$Y = 0.835 + 0.574 X1 - 0.125 X2 + 0.771 X3 + 0.643 X4$$

From the above regression model, holding firm size, leverage, volume of capital and tangibility of assets to a constant zero the profitability of hospital would be 0.835. It established that a unit increase in firm size would cause an increase in profitability of private hospitals by a factor of 0.574, a unit increase in leverage would cause a decrease in profitability of private hospitals by a factor of 0.125, also a unit increase in volume of capital would cause increase in profitability of

private hospitals by a factor of 0.771, also unit increase in tangibility of assets would cause an increase in profitability of private hospitals by a factor of 0.643. This clearly shows that there is a positive relationship between profitability of private hospitals and firm size, volume of capital and tangibility of assets. However there is a negative relationship between leverage and profitability of private hospitals. The study further revealed that the P-value were less than 0.05 in all the variables, which shows that all the independent variables were statistically significant and thus in position to make conclusion for the study.

Summary of Findings

The study established that firm size affects profitability of hospital. The firm size was found to affect profitability of hospital to a great extent. The study found that larger firms perform better than smaller firms due to economies of scale. This had the lowest mean. Efficiency was also found to increase with size which leads to maximum resource utilization leading to increased profits. This had the highest mean. In large firms the separation ownership is high compared to small firms which make large firms vulnerable. The respondents agreed that their hospitals have large asset base.

The study found that majority of the respondents indicated that leverage affected profitability of their firm. Leverage affected profitability to a great extent. The study further established that the respondents agreed that leverage beyond the optimum level results in higher risk and low value of the firm and that those hospitals with lower leverage will generally report higher ROA. The respondents however disagreed that a hospital's profits increase with leverage, firms prefer debt financing to equity and that their firm has a high debt to equity ratio.

The findings of the study found that majority of the respondents indicated that the volume of capital affects profitability of The Karen hospital to a very great extent. The study found that the respondents agreed that The Karen hospital has a large capital base, The Karen hospital has large number of shareholders who have increased the volume of capital and that there is a high reserve base in The Karen hospital. However the respondents disagreed that The Karen hospital has low paid up capital and that hospital has long-term debts that have boosted the capital base.

The study found that majority of the respondents indicated that tangibility of assets affected profitability of their firms. Tangibility of assets was found to affect profitability to a very great extent. The study found that the respondents agreed that The Karen hospital has a large number of fixed assets, a firm with large amount of fixed assets tends to be more profitable and that The Karen hospital has a large number of current assets. However the respondents disagreed that there is a high level of liabilities in The Karen hospital.

The study found that return on assets was the major measure of profits in hospital. The study also found that other measures used included Return on equity, Return on Investment, cost of inputs,

Return on invested capital and Receivables turnover ratio respectively. The study found that profitability involves relating output as a proportion of input, Profits in The Karen hospital have been rising, profitability is a measure of evaluating the overall efficiency of the business and that profitability is a major objective of hospital. The management of the hospital should increase the number of current assets in the asset portfolio, have more shareholders to increase equity, improve their service quality, use combined sources to fund activities and increase debt to a certain level that doesn't affect the financial autonomy of the company.

Conclusions

The study concludes that firm size affect profitability of private hospitals in Kenya to a great extent. Large firms perform better than smaller firms due to economies of scale and increased management utility which enhances efficiency. There is a strong positive relationship between firm size and profitability. Large companies are found to have a competitive advantage over small firms as large firms have a wide array of resources and also enjoy economies of scale, hence are in a better position to compete in the market. However, for firms that become extremely large, the effect of size could be negative due to bureaucracy and other reasons (Yuqi, 2007).

The study concludes that leverage affects profitability of private hospitals in Kenya to a great extent. There is a negative relationship between leverage and profitability. This means that the higher the leverage the lower the profits. Most private hospitals prefer equity to debt in their capital structure. Firms with a high debt to equity ratio have a high leverage and low profits. However a little leverage below the optimum level is necessary for effective performance of hospitals.

The study concluded that the volume of capital affects profitability of private hospitals in Kenya to a very great extent. There is a positive relationship between volume of capital and profitability of private hospitals in Kenya. Firms with a large number of shareholders and large capital base perform better compared to those with a small capital base.

The tangibility of assets affects profitability of private hospitals in Kenya to a very great extent. A firm with large amount of fixed assets is more profitable compared to one with a small number of fixed assets. This is because the higher the fixed assets the higher the return on assets. There is a positive relationship between volume of capital and profitability.

There are various measures of profits in private hospitals in Kenya. These include return on assets, return on equity, return on investment, cost of inputs, return on invested capital and receivables turnover ratio. Profitability is one of the major objectives of private hospitals in Kenya.

Recommendations

The study recommends that companies should expand in a controlled way with the aim of achieving an optimum size so as to enjoy economies of scale which will ultimately result in higher level of financial performance. However if a firm expands beyond the optimum size diseconomies of scale will set in and this can result in a decline in the financial performance of the firm.

Based on the trade-off theory for capital structure, the study recommends that firms can take advantage of debt to make a better return on equity which ultimately influences firms' profitability. They should determine an optimal debt level that balances the benefits of debt against the costs of debt. They should avoid situations where they are highly leveraged since this may lead to bankruptcy if they are unable to make payment on their debt.

Private hospitals in Kenya should consider increasing the number of shareholders which would increase the capital base. This would ensure that there is more equity compared to debt. This would also lead to increased efficiency due to high level monitoring.

Private hospitals in Kenya should have high consideration of increasing their assets. Because the size of the company is an important factor as it influences its competitive power. The study also recommends that hospitals develop sound techniques of managing current assets to ensure that neither insufficient nor unnecessary funds are invested in current assets.

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