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A Balanced Scorecard Analysis of Financing Practices and Business Sustainability in Private Hospitals in Nairobi, Kenya

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Abstract

Health is one of socio-economic components of delivering the vision's 2030 Social pillar. However, it remains a global challenge and an impediment to the human capital growth and development. The sector is credited with the robust role it plays in ensuring healthy and skilled workforce capable of driving the economy and meeting global commitments for health such as the Abuja and Maputo Declarations. To this end, the sector contributes an average of 6% to the GDP. Therefore, the realization of fundamental rights to health and the contribution to economic development as enshrined in the vision 2030 is anchored on the development and sustainability of comprehensive investment in health systems. In Kenya, private hospitals provide over 47% of the healthcare services to the general population of over 53.8 million people in Kenya. This is an indicator of a strong yardstick in which the economic growth and prowess of a nation can be assessed. Despite the importance of hospitals in provision of health, their sustainability has been at risk. This has a major ramification on the smooth provision of health services to Kenyans, and the implementation of the Kenya Health Policy 2014-2030. Effective financing practices play a great role in safeguarding sustainability of private hospitals thus ensuring business continuity. Through a balanced scorecard analysis, this study evaluated how business sustainability was influenced by the financing practices of private hospitals in Nairobi County, Kenya. This study adopted positivism research philosophy and a descriptive research design. The study involved 68 private hospitals located in Nairobi, as advised by the 2019 Kenya Medical Practitioners and Dentist Board retention register. A closed ended questionnaire was employed in collecting primary data. A bivariate linear regression was used for inferential analysis after testing the data for normality, independence. The study established a strong, positive, and statistically significant relationship between financing practices and the sustainability of private hospitals in Nairobi. The study recommended that private hospitals should continuously build the capacity of the financing function by pooling of resources to increase efficiency in utilization of health resources as it has a significant relationship with sustainability of hospitals. In addition, they should consider borrowing assets in cases of financial crisis as a sustainability safeguard. Such practices will not only aid in developing and strengthening healthcare financing but also in reviewing of the criteria for resource allocation and utilization. Hospitals should also continuously establish good working relationships with their suppliers and service providers to enable them access necessities on credit in case of financial crisis. This will not only ensure success of the private hospitals but also in the reinforcement of the sustainability potential. In addition, hospitals should consider lease of assets to boost the financing of the hospital operations as a way of improving on the cash inflows.

Keywords: Balanced Scorecard, Sustainability, Healthcare

1. Introduction

The health sector is critical to a country's efforts to achieve its broader development objectives. In the recent years, many economies have dedicated themselves to universal health care as a national policy priority. However sustainable financing of this coverage requires funds to be well managed, and the financing practices play a key role in this. Healthcare represents an enormous sector in the society, looking at it globally. According to McCanne and Kinney (2011), healthcare accounted for 17.2%, 9.8%, and 10% of the United States, United Kingdom, and Sweden's Gross Domestic Products (GDP) respectively. However, financing practices are a key problem observed among most hospitals around the globe. This keeps threatening the achievement of such benefits plus a healthy global population. In India, 25% of the population is covered by private or public health insurance and over 71% of all health expenditures is out of pocket hence making most Indians leave their health needs unattended. The net effect is a negative aspect of the sustainability of private hospitals. Such challenges are also visible within the African content. Oyibocha et al. (2014) observed that, some of the issues affecting sustainability of Nigerian health are poor health financing, increased out of pocket expenditures, poor remuneration of staff and inadequate basic infrastructure, drugs, and equipment which all can be addressed by prudent financing practices. Such a scenario calls for a thorough evaluation of the effectiveness of the financing practices on the sustainability of hospitals, both globally and locally.

While Kenya has made substantial progress towards meeting the Sustainable Development Goals (SDGs), progress is uneven across goals and within the country. The Global Competitive Index Report (2017) indicates that on "average, the Sub-Saharan Africa's competitiveness in health concerns has not changed significantly over the past decade: while a little ground was gained between 2011 and 2015, it has been partially lost again over the past two years." ¬The rankings were Kenya: 114, Uganda: 119, Rwanda: 58, Burundi: 129. ¬ Percentage of GDP worldwide (Kenya: 13%, Uganda: 7% Tanzania: 13%, Burundi: 1%) (GCI, 2017). This is below the Abuja Declaration of 15% and serves to bring the attention accorded to the health care (African union, 2001). Key to such a gap are the financial challenges that the health sector in Kenya is facing. For instance, the American Hospital Association (AHA) and Health Leaders Media (HLM) (2012) observed that, on average 50% of hospitals had an operation margin of not more than 2.3% and an estimate of 20% had an advance operating margin. This drive has made the hospitals leaders to find different ways on which to organize and manage their institutions to be in a competitive position of achieving viable financial proceeds essential for sustained operations. In addition, previous studies such as Castro, Tascon and Tapia (2011) and Jalal (2007) have failed to evaluate and articulate the influence of financing practices on sustainability of hospitals in Kenya. It is against this back drop that financing practices will be key in achieving sustainability as private hospitals continue facing financially compelling deviations in their environment, this including healthcare transformation and quality enhancement initiatives, hence the need for this study.

1.1 Statement of the Problem

The health sector has a daunting task in ensuring efficient and timely provision of the highest attainable level of standards of health to its population as enshrined in the constitution of Kenya under the bill of rights and in tandem with the Sustainable Development Goals and Vision 2030. In addition, the health sector is a key contributor to the GDP of Kenya hence threats to its sustainability through ineffective financing practices are a key concern. Such threats are propagated through the financing practices which weaken the sustainability of hospitals. For instance, the supply of high-cost services that rise spending without adequate security of payback and a restricted source of funding is a common practice in hospitals that overburdens their financial positions.

In particular, private hospitals have had a poor track record in terms of sustainability, which is associated to ineffective financing practices. According to the NHIF Report (2019), 88% of private hospitals had fewer than 99 bed capacity, while just 4% of private hospitals had more than 99 bed capacity. Such statistics are a pointer towards the unsustainable state of private hospitals, yet they are highly looked upon by the vast Kenyan population which cannot be fully accommodated by public hospitals for its healthcare needs. The scenario is exemplified by Mater Hospital, which recorded a 40 percent decline in revenue in 2020 compared to the previous year. Due to such financial problems, over 20 health workers were sent home. In Finance Theory, prudent risk management is one of the pillars of business sustainability. In popular strategic financial management, the Balanced Score card (BSC) is such one tool that is available for evaluating business sustainability. Such approaches are however either ignored or significant ineffective, as evidenced through the myriad of sustainability challenges that private hospitals are facing.

Sustainability problem is further aggravated by the little scholarly attention it has received so far. Even where some existing studies have attempted to articulate the problem, there are still various gaps that exist. For instance, the study by Dalvadi and Warrier (2017) on the effect of financial risk management practices only majored on Information Technology companies, creating a contextual gap as it was not concerned with private hospitals. Equally the study by Tafri *et al*. (2009) exhibits both conceptual and contextual gaps as it was based in Malaysian banks. Such gaps call for further research through such as through this current study. The end implication is a sustainability threat to private hospitals. This study therefore aimed at bridging the gap through an evaluation of the effectiveness of the financing practices on business sustainability among private hospitals in Kenya.

1.2 General Objective

The general objective of the study was to investigate the effect of financing practices on the sustainability of private hospitals in Nairobi County, Kenya

2. Literature Review

2.1 Pecking Order Theory

Donaldson (1961) and Donaldson (1969) advanced the Pecking which proposed that firms preferred internal financing as opposed to external financing, in case a firm required external financing, it could go for debt as an alternative than to equity financing. POT asserts that firms will consider utilizing their internal generated resources before considering external resources in case there is need to additional funds. This will be followed by the issue of equity for the remaining balances (Ahmad, Abdullah & Roslan, 2012). Luigi and Sovin (2009) observed that firms have a hierarchy of sources of finance which guide firms when choosing a portfolio to finance their investments it is endowed with.

Brendea (2012) concluded that, POT predicted an inverse association on the ratio of firm's debt in relationship to its performance as stated by its profitability. This is as a result of the firm initiative in using all the available internal funds and debt as a last resort. Brendea also argued that, firms preferred utilizing their internal sources of funds and where internal funds were inadequate for financing investment opportunities, firms were at liberty to source other external sources to minimize costs due to asymmetric information. Pecking order in this study emphasizes that a firm should source and exploit chances of internal sources before going for external funds. The most profitable firms borrowed less as they had sufficient internal resources to undertake their investment activities, and that financing decision practices that are poor often lead to financial distress and insolvency to firms.

Empirically, Myers and Maijuf (1984) posited that firms preferred safer debt financing compared to risky debt financing. The Pecking Order Theory advances the proposition that by virtue of having information which is asymmetric in nature between the firm's insiders and outsiders a negative relationship can be construed between profitability and indebtedness. Castro, Tascon and Tapia (2011) in their study contended with the above view on the organization's order of urgency in minimizing adverse selection expenses that are imposed by the information asymmetry. As the theory postulates, there is a general assumption that people from outside do have limited information as opposed to the business managers and owners. Given such a state of affairs, the issues related to the business and shares meant for expansion and project financing will be most likely be valued by potential investors through the market value lenses (Amidu, 2007; Jibran et al., 2012).

Jalal (2007) established that the aspect of adverse selection coupled, with asymmetry of information has long influenced the financing decision making for instance, if the managers or business owners perceive that there is an undervaluation of the stock, they may be reluctant to do the issuance, sacrificing the investment opportunities in the long-run. On the contrary, issuing of shares to outsiders by the firm may be taken as the shares are overvalued, which may result into a fall of the share prices. The theory has been found useful by Myers and Majluf (1984) in arguing that preference is given to internally generated funds by companies in generating funds and that incurring debt to this effect will still precede the option of share issuance. Thus, firms may only resolve to

debt when they have exhausted the financial resources they have internally. De Jong et al. (2011) opined that firms in business activities should aim at formulating their financial structure that is in line with their preferred financing hierarchy.

This theory is relevant to the study as it informs financing decisions which is an attribute of capital structure and one of the independent variables in the study. The pecking order theory is considered as among the highly influential theories supporting financing that take into account factors such as policy with effects on the development of capital markets, regulations and even interest rates. The financing decisions tend to affect the viability and sustainability of the hospitals. The choice of decision has serious implications on the financial management; this therefore justifies the importance of the decisions made among equity, debt and mixed debt equity financing.

2.2 The Balanced Score Card in Measuring Sustainability

The BSC Concept, among others, was created over a number of years to support a variety of organizational purposes, ranging from profit maximization to service delivery in the public, private, and not-for-profit sectors by Kaplan and Norton in 1992. The model focusses on four key performance indicators namely financial aspects, customer related aspects, internal processes, and learning and growth (Kaplan & Norton, 1992). The proponents sought to supplement standard financial measurements with leading indicators of future financial performance in their analysis. Traditional metrics, according to Kaplan and Norton (1992), were dependent on historical performance and hence lacked the features of other non-financial measures.

Asiedu (2015) agreed, stating that the tool was effective for measuring and monitoring performance values with drivers stemming from customer value, internal business, and staff performance. The BSC tool employs a four balanced perspective dimension because organizations are required to think in terms of all four perspectives together to enhance inclusivity, as all individual contributions of the perspectives are critical to an institution's holistic sustainability (Gawankar et al., 2015).

The models helps to realize and integrate the contributions of all relevant organizational value drivers, which improves the alignment of non-financial and financial measurements. Furthermore, the scorecard assists in defining and measuring the distinct value drivers that underpin both external and internal sustainability (Chartered Institute of Management Accountants, 2005).

2.3 Empirical Literature

Botta (2019) did a study on financing decisions and performance of Italian SMEs in the hotel industry. The results showed that hotel SMEs undergo an optimal capital structure that enables them to exploit investors' returns instead of having a lot of dents that reduces their performance. The results also established that SMEs in the hotels are concerned on capital structure optimization in their capital structure. In addition, their funding behavior is determined by the availability of funds and this cause slow converging towards the optimal leverage which in the long run improves performance.

Edim, Atseye and Eke (2014) conducted an analysis on capital structure and performance in Nigeria. Debt and equity financing were singled out as the capital

structure parameters. Performance was proxied by ROA, return on capital employed (ROCE), Earnings after interest and Tax (EAIT), Return on Investment (ROI), and Earnings before interest and tax (EBIT). The study cited prudent use of debt and equity enhanced financial performance.

Cantino, Devalle and Fiandrino (2017) researched on the Financial capital structure and Sustainability of firms, with sustainability measured by Environmental, Social and Governance while Financial structure measured by Equity and Debt costs. The findings of the study revealed that Equity was positively related to sustainability while cost of debt showed negative association in firms in Italy.

Ndibwirende, Gasheja and Ndikubwimana (2019) did a study on financing decisions and sustainability of family business in Rwanda. The study used primary data. The financing practices used in the study included internal equity, external equity, debt financing decisions. The findings indicated that external funds, debt financing are preferred and external equity financing model is exclusively ignored. In addition, the study indicated that internal equity and debt financing have a significant influence on sustainability while external equity has no significant influence on sustainability of family business in Rwanda.

Doan (2020) did a study on financing decision and firm performance. The study used secondary data. Generalized method of moment (GMM) was employed to come up with the findings. The study revealed that firm performance is significantly correlated with financing decision. In addition, the findings indicated that the increase in debt use decreases firm performance. In Kenya.

The existing literature exhibits a number of gaps as far as the relationship between the sustainability of hospitals and financing processes is concerned. For instance, conceptual gaps are evident in the study by Dalvadi and Warrier (2017) who reviewed operational risk, market risk and credit risk as financial risk management practices in information technology companies and their performance. Additionally, Nacaskul (2017) determined the effect of financial risk management on sustainability. The study focused on market, operational and credit risk. The current study focused on operational risk, credit risk and legal risk. Contextual gaps can also be drawn from Tafri et al. (2009) who carried a study on the effect of financial risk and profitability of the conventional and Islamic banks in Malaysia. The current study focuses on Kenya hence bridging the gap. Methodological gaps were also identified. Tafri et al. (2009) who carried a study on the effect of financial risk and profitability of the conventional and Islamic banks in Malaysia and used Panel data regression. The current study used a multiple and simple regression model. Nacaskul (2017) determined the effect of financial risk management on sustainability. The study used desktop research methodology. The current study adopted a descriptive research design. Other gaps included theoretical gaps. Turyahebewa et al. (2013) used knowledge-based, resource-based, and dynamic capability theories in their studies. The current study considered use of modern theory thus creating a theoretical gap.

2.4 Conceptual Framework

The Conceptual framework is based on the financing practices as the stimulus variable and sustainability (financial perspective, customer perspective, internal business process and learning and growth perspective) as the measure of response variable.

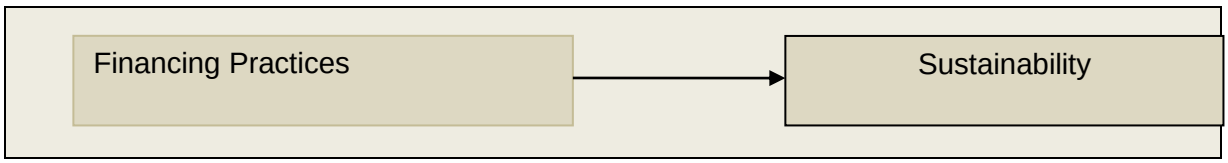

Figure 1: Conceptual Framework for Financing Practices and Sustainability

3. Research Methodology

3.1 Research Design

This study adopted positivism research philosophy as the phenomenon that is observable and measurable. This study adopted a descriptive research design. This research targeted 68 private hospitals that are located in Nairobi based on the Kenya Medical Practitioners and Dentist Board retention register (2018) and NHIF accredited Hospitals. They were selected for this study since private hospitals are major contributors in the delivery of healthcare and complement the government hospitals towards achieving UHC, in addition to having a complex management structure. The hospitals are categorized into tiers that is Tier 1, 2,3 and 4. The current study focused on Tier 3 and Tier 4. Tier 3 and 4 hospitals were selected for the study since they have established finance departments. There are 13 tier 4 hospitals and 55 tier 3 hospitals. The specific respondents included staffs in the finance department who were; hospital finance manager, accountant payables, inventory accountant, assets accountant and internal auditor. These respondents were included since they work in the finance and Audit department and thus have reasonably sufficient knowledge on financial management. Since the population contained only of 68 private hospitals, no sampling was undertaken. Therefore, census approach was applied in the research. All the 340 respondents were therefore included in the study.

Primary data was harnessed in this study. A structured questionnaire was employed in the collection of data. Questionnaires were utilized in the collection of primary data, which were then organized in a systematic manner in order to allow for easy analysis. The study utilized the Statistical Package for Social Sciences (SPSS) when carrying out the data analysis process. SPSS is favoured by various researchers given its systematic capabilities and the coverage capabilities of a wide range of the most graphical and statistical analyses and presentation.

3.2 Test of Reliability

The internal consistency of the data collection items was established through reliability tests. The test involved the use of the Cronbach's Alpha Coefficient. Cooper and

Scheduler (2011) affirmed that reliability is critical before its application in data collection. The results were as shown in Table 1.

Table 1: Reliability Test Results

Variable	Number of Items	Cronbach Alpha Coefficient
Financing Practices	11	0704

The results show that the reliability was 0.704 based on the Cronbach's Alpha Coefficient. Gay, Mills & Airasian (2009), Charandrakandan, Venkatapirabu, Sekar & Anandakumar (2011) Bryman (2009), Cooper and Schindler (2011); opined that Cronbach's coefficients of 0.6 should be employed as a rule of thumb to denote an acceptable level of internal consistency. The findings in this study therefore indicate that the items had a high internal consistency, hence reliable for the research.

3.3 Data Analysis and Presentation of Results

Data analysis involved descriptive analysis, determination of sampling adequacy using the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and a principle component analysis (PCA) using varimax, orthogonal rotation and Total Variance Explained, Scree Plot and Rotated Component matrixes were generated and interpreted to determine the drivers of both financing and sustainability in private hospitals in Nairobi. In addition, hypothesis testing was done using a Bivariate Linear Regression model. The Model R2, ANOVA statistics (F Statistic and associated p-value) and regression coefficients (Beta and associated p-value) were generated and interpreted. The bivariate equation adopted for the study was in the form; Y/Sustainability= α + β1+ €" where Y (sustainability) was the dependent variable and β1 (Financing Practices) the independent variable. This model is supported by scholars such as Montgomery, Peck, & Vining, 2001; Garson, 2012; Argyrous, 2011), hence its adoption for this study.

4. Findings and Discussions

The research findings were discussed as below:

4.1 Response Rate

Based on the 340 questionnaires that were distributed, the response rate was as show in Table 2:

Table 2: Response Rate

Hospital size	Questionnaires Distributed	Questionnaires Received	Response (%)
Tier 3	245	146	42.94
Tier 4	95	60	17.65
Total	**340**	**206**	**60. 59**

A total of 245 surveys were distributed among tiers 3 hospitals. Among them, 146 questionnaires (42.94%) were correctly filled and returned. Furthermore, 95 questionnaires were issued to tier 4 hospitals. Out of these, 60 (17.65%) were fully completed and returned. A total response rate of 60.59%, was realized and considered as adequate for the study. This was above the response rate benchmark of 60%. According Fincham (2008) a response rate of 60% and above is suitable for a

social science research.

4.3 Drivers for Financing Practices in Private Hospitals

Following successful testing of sampling adequacy and reliability as indicated by KMO Coefficient and Cronbach alpha values, factor analysis was performed on claims about funding methods. The goal of performing factor analysis per variable was to provide factor loadings for each and every statement and to determine whether they were indeed the drivers of financing practices within the private hospitals within Nairobi County.

4.2.1Test for Sampling Adequacy for Financing Practices of Private Hospitals

A test of sample adequacy was performed to see whether the nine (9) statements used to measure funding practices were correlated or factorable, and the findings are as shown in Table 3:

Table 3: Results for Test for Sampling Adequacy for Financing Practices of Private Hospitals

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		**0.613**
Bartlett's Test of Sphericity	Approx. Chi-Square	557.871
	Df	36
	Sig.	0.000

The results in Table 3 show that the KMO value for financing practices was 0.613 which was above the recommended minimum threshold of 0.5. This statistic imply that the statements used to measure financing practices were adequate and factorable. Further, the results show that the Bartlett's Test of Sphericity show a Chi-square of 557.871 with 36 degree of freedom and an association p value of 0.00. This statistic implies that the statements measuring financing practices are highly related and the hence suitable for structure detection in the Principle Component Analysis. Based on the test results of factorability, this study confirmed that further analysis could be conducted on factor analysis on the predictor variable financing practices.

4.2.2Total Variance Explained for Financing Practices of Private Hospitals

The next characteristic of interest was to evaluate how strong the nine (9) statements measuring financing practices were in measurement of the predictor. As a result, the next factor analysis output generation for financing practices was Total Variance Explained (TVE) using the rotation sums of squared loadings values. The results are presented in the Table 4. The table represents the distribution of the variance after the varimax orthogonal rotation of the statements measuring the variable.

Table 4 shows that component one (1) to component three (3) had Eigen values of 2.833, 1.575 and 1.487 respectively and in total accounting for a total variance of 65.497%. The variance explained is a way above the minimum recommended threshold TVE is 50%. These results imply that the three (3) components are adequate for measurement of financing practices variable as the total variance explained (TVE) is above the recommended 50% threshold (Tabachnick & Fidel, 2012).

Table 4: Total Variance Explained for Financing Practices of Private Hospitals

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.833	31.475	31.475	2.833	31.475	31.475
2	1.575	17.505	48.98	1.575	17.505	48.98
3	1.487	16.517	65.497	1.487	16.517	65.497
4	0.96	10.667	76.164			
5	0.666	7.405	83.569			
6	0.565	6.275	89.844			
7	0.401	4.459	94.304			
8	0.284	3.16	97.464			
9	0.228	2.536	100			

4.2.4 Rotated Component Matrix for Financing Practices of Private Hospitals

In order to evaluate the constructs for the financing practices, three components were generated and the results of the varimax orthogonal rotation were as presented in Table 5. The results in Table 5 show that, all drivers of equity financing practices (first component) had factor loadings between 0.881 and 0.828, similarly lease financing practices (second component) had a three (3) statement with a loading between 0.888 and 0.690. Finally, debt financing practices (third component) two statements were retained with a factor loading of 0.747 and 0.593 respectively. On the other hand, one statement had factor loading of 0.356 below the minimum recommended threshold factor loading of 0.4 hence dropped. Based on this analysis, financing practices were measured using the three constructs and eight (8) statements

Table 5: Results of Rotated Component Matrix for Financing Practices of Private Hospitals

Statement	EFP	LFP	DFP
The hospital has been working in collaboration with strategic partners so as to boost their financial strength	0.881		
The hospital has been ploughing back its profits in the last five years	0.865		
The hospital has encouraged private investors to invest in the hospital who act as a great source of financial strength in the hospital	0.828		
The hospital considers lease of assets even when the full right of ownership is not transferred to them so as to boost its financial strength		0.888	
The hospital leases assets that full right of ownership is transferred to them to enhance their sustainability		0.827	
Sale and lease back leasing of assets has been used by the hospital in case of asset shortage thus enhancing sustainability of the firm		0.690	
The hospital has been using borrowed assets in case of financial crisis			0.747
The hospital has often borrowed loans from financial institutions whenever they are in financial crises			0.593
Our suppliers always allow us to buy on credit and pay back later			0.356

4.3 Drivers of Sustainability of Private Hospitals

Factor analysis was conducted on twelve (12) statements regarding Business sustainability after successful testing of sampling adequacy and reliability.

4.3.1 Test of Sampling Adequacy for Business sustainability

In order to check if the nine (12) statements used to measure sustainability were

correlated or factorable, test of sampling adequacy was done and the results are presented in Table 6.

Table 6: Results for Test for Sampling Adequacy for Business sustainability

KMO and Bartlett's Test		**0.718**
Bartlett's Test of Sphericity	Approx. Chi-Square	1672.04
	Df	66
	Sig.	0.000

The results in Table 6 show KMO value for Business sustainability was 0.718 and hence above the recommended minimum threshold value of 0.5. This statistic imply that the statements used to measure business sustainability were adequate for factorability. Further the results show that the Bartlett's Test of Sphericity show a Chi-square 1672.04 with 66 degree of freedom and an associated p-value of p=0.00. This statistic implies that the statements measuring business sustainability are highly related and the hence suitable for structure detection in Principle Component Analysis. Based on test results of factorability, this study confirmed that further analysis could be conducted on factor analysis on the Business sustainability (Malhotra, 2004; Tabachnick & Fidell, 2014; Brett, Ted & Andrys, 2010; Costello & Osborne, 2005)

4.3.2Total Variance Explained for Sustainability

The next characteristic of interest was to evaluate how strong the nine (12) statements measuring sustainability were in measurement of the variable. As a result, the next factor analysis output generation for sustainability was Total Variance Explained (TVE) using the rotation sums of squared Loadings values. The results are presented in Table 7. Table 7 represents the distribution of the variance after the varimax orthogonal rotation of the statements measuring the variable.

Table 7: Total Variance Explained for Business sustainability of Private Hospitals

Component	**Initial Eigenvalues**			**Extraction Sums of Squared Loadings**		
	Total	**% of Variance**	**Cumulative %**	**Total**	**% of Variance**	**Cumulative %**
1	4.424	36.864	36.864	4.424	36.864	36.864
2	1.774	14.781	51.645	1.774	14.781	51.645
3	1.378	11.483	63.127	1.378	11.483	63.127
4	1.078	8.981	72.108	1.078	8.981	72.108
5	0.961	8.011	80.119			
6	0.709	5.906	86.025			
7	0.486	4.05	90.075			
8	0.434	3.613	93.688			
9	0.28	2.33	96.017			
10	0.258	2.149	98.167			
11	0.211	1.756	99.923			
12	0.009	0.077	100			

Table 7 shows that component one (1) to component four (4) had Eigen values of 4.424, 1.774, 1.378 and 1.078 respectively and in total accounting for a total variance of 72.108%. The variance explained is a way above the recommended minimum threshold TVE is 50%. These results imply that the four (4) components are adequate for

measurement of sustainability variable as the total variance explained (TVE) is above the recommended 50% threshold (Tabachnick & Fidel, 2012)

4.2.4 Rotated Component Matrix for Sustainability of Private Hospitals

In order to evaluate the constructs for financial risk management practices, four components were generated and the results of the varimax orthogonal rotation are presented in Table 8.

The findings in Table 8 show that, all drivers of financial perspective (first component) had factor loadings between 0.825 and 0.711. Similarly, customer perspective (second component) had a three (3) statement with a loading between 0.871 and 0.534. Internal business growth (third component) had a factor loading between 0.946 and 0.438. Finally Learning and Growth (fourth component) had a factor loading between 0.944 and 0.740.

For each of the components all statements were retained as they had a loading above the minimum threshold of 0.4. Based on this analysis, sustainability was measured using the four constructs and twelve (12) statements. Based on these analyses, all statements selected for measurement of sustainability were retained. All the Balanced Score Card (BSC) measures were therefore retained for the further analysis.

Table 8: Results of Rotated Component Matrix for Business sustainability

Statement	FP	CP	IBG	LBG
The return on equity has grown over the last 6 years	0.825			
The return on asset has grown over the last 6 years	0.748			
Our hospital increased revenue growth over the last 6 years	0.711			
Our hospital increased the number of patients retained over the last 6 years		0.871		
The number of new patients has been increasing consistently over the last 6 years		0.667		
Our hospital greatly increased patient satisfaction over the last 6 years		0.534		
The hospital minimized the length of patient stay to reduce the cost over the last 6 years.			0.946	
The hospital reduced readmission cases by quality care over the last six years			0.659	
The hospital maintained conducive work environment over the last 6 years			0.438	
The number of grants and donors increased substantially over the last 6 years				0.944
Our hospital promoted employees satisfaction over the last 6 years				0.879
Our hospitals encouraged and promoted staff training over the last 6 years				0.740

4.3 Test of Regression Assumptions

According to Shevlin and Miles (2010), data analysis as a process requires a number of tests to before the actual process began. The assumptions are basically on the response variable distribution and residuals distribution.

4.3.1 Test of Normality for Sustainability

Sustainability measure (BSC measures) was assessed for the Gaussian distribution using the graphical method. The visualized random distribution of the empirical together with the theoretical distributions of the variable, are presented in Figure 1.

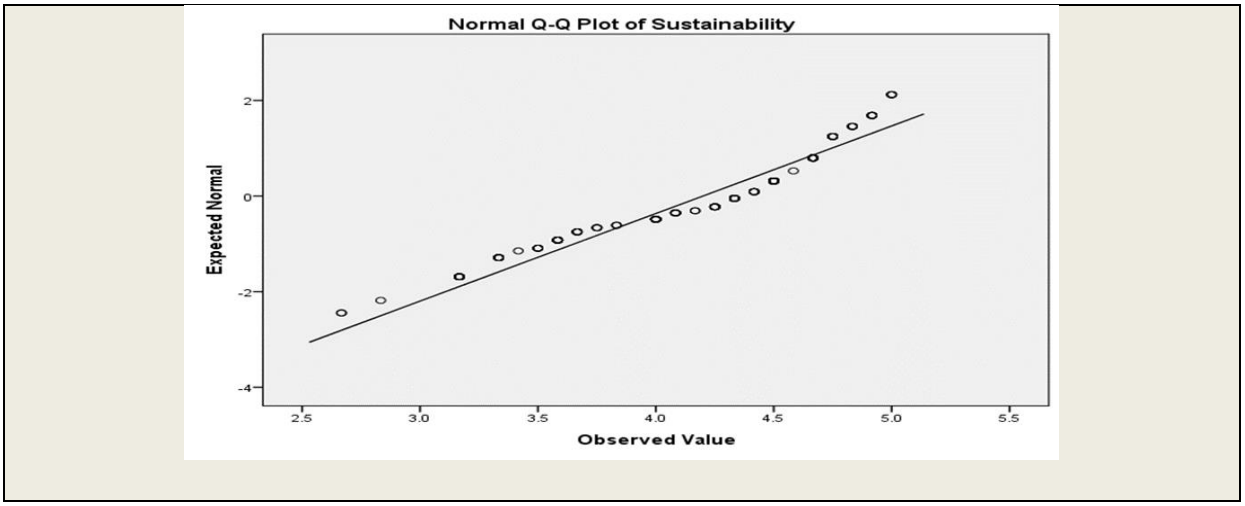

Figure 1: Q – Q Plots for Sustainability

Results in figure 1 show the Q-Q plots indicated that the data appears as roughly a straight line. This implied that the data set for the dependent variable (sustainability of private hospitals is normally distributed. This further indicted that further regression analysis could be conducted since the data is normally distributed (Shevlin & Miles, 2010).

From the results above, the points are about the same distance from the line. Therefore, the data have homoscedasticity. The results therefore indicate that the regression model chosen between financial risk management practices and sustainability was appropriate to the data.

4.4 Inferential Results

Financing practices were regressed against sustainability to explain the relationship between financing practices and sustainability. In order to assess the combined effect of financing practices on sustainability of private hospitals in Nairobi County, Kenya. The following null hypothesis was tested by the study.

$H_0$1: Financing practices do not have statistically significant effect on Sustainability of private hospitals in Nairobi County, Kenya.

In order to test the hypothesis *$H_0$1* the weighted mean of each of the financing practices measures were regressed on the weighted scores of sustainability of private hospitals measures.

In order to assess the model appropriateness, the overall model level of significance and financing practices significance in the model: Model summary, ANOVA and regression model coefficients output were generated and the results presented in Table 9, Table 10 and Table 11 respectively. The model fitness results were presented in Table 9:

Table 9: Model Fitness for Sustainability and Financing Practices

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.277a	.077	0.072	0.52574

Table 9 shows that the R was 0.277. This implies that financing practices has a weak correlation with sustainability of private hospitals. In addition, the R square was 0.077. This implies that financing practices accounts for approximately 7.70% of the variation in

sustainability of private hospitals (R^2 = 0.077). The model in Table 4.8 was further examined for its significance in predicting financing practices on sustainability of private hospitals in Nairobi County, Kenya using ANOVA. The results for ANOVA for financing practices and sustainability are presented in Table 10.

Table 10: ANOVA Results for Financing Practices

		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	6.066	1	6.066	22.451	.000b
	Residual	55.116	204	0.27		
	Total	61.182	205			

Table 10. show that F statistic of 22.451 and the associated P-value of 0.000 which is a value less than a p value of 0.05. This imply that the financial practices have statistically significant effect on sustainability at a 95% confidence level. Based on these results the study rejected the $H_0$1 hypothesis that stated that financing practices does not have statistically significant effect on Sustainability of private hospitals in Nairobi County, Kenya and concluded that financing practices have statistically significant effect on Sustainability of private hospitals in Nairobi County, Kenya.

Regression of Coefficient significance of the financing practices and sustainability was presented in Table 11.

Table 11: Regression of Coefficient for Financing Practices

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model	**B**	**Std. Error**	**Beta**		
(Constant)	3.199	0.214		14.938	0.000
Financing practices	0.275	0.058	0.315	4.738	0.000

Table 11 shows that financing practices have beta coefficient of 0.275 and associated p value of 0.000. This implied financing practices explains 0.275 of the variation in sustainability of private hospitals. As such, at zero operational level of the financing practices, business sustainability is expected to be at 3.199. An improvement in financing sustainability by one means that business sustainability of private hospitals in Kenya can improve by 0.275 times. Based on this research, the formula for calculating the sustainability of private hospitals when given the value of the financing practices is as shown below:

Sustainability = 3.199 + 0.275 Financing Practices

5. Conclusions and Recommendations

5.1 Conclusions

The study concluded that financing practices had a positive and significant effect on sustainability of private hospitals. The ANOVA statistics for financing practices had an associated p-value of p=.000 < p-value of .05 Based on this, the associated objective's null hypothesis was rejected This study therefore concludes that indeed, at 95% degrees of confidence, there is a positive and statistically significant relationship between financial risk management practices and sustainability of private hospitals in Kenya. the β of 0.275 on the other hand indicates that with a improvement of financing practices by

one, then sustainability of private hospitals is set to improve 0.275 times. In addition, the study concluded that strategic partners, private investors as well as ploughing back of profits were the most common source of financial strength in most private hospitals. In addition, establishing a good relationship with the suppliers enables the hospitals to buy goods on credit in case of financial crises. Sale and lease back leasing enhances the sustainability of hospitals.

5.2 Recommendations

The study recommended that private hospitals should continuously build the capacity of the financing function as it has a significant relationship with sustainability of hospitals. In addition, they should consider borrowing assets in cases of financial crisis as a sustainability safeguard. They should also continuously establish a good working relationship with their suppliers so as they can buy goods on credit in case of financial crisis. This will enhance their sustainability. In addition, hospitals should consider lease of assets as way of financing the hospital operations. In addition, the hospitals should leverage on the public-private partnerships to build the critical infrastructure for provision of health services. This will not only improve organizational performance but also aid in putting in place a comprehensive mechanism that will assist in developing and implementing a healthcare financing policy that will strengthen sustainability potentials of these entities.

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