IOSR Journal of Business and Management (IOSR-JBM)
e-ISSN: 2278-487X, p-ISSN: 2319-7668. Volume 22, Issue 5. Ser. VII (May. 2020), PP 56-66
www.iosrjournals.org

The Relationship between Cost Leadership Strategy and the Performance of NHIF Accredited Hospitals in Kenya

Grace Kahenda Ambuku Ochodo[1], Professor Margaret Oloko[2], Dr. John Yabs[3]

[1]*Doctorate Student Jomo Kenyatta University of Agriculture and Technology*
[2]*College of Human Resources Jomo Kenyatta University of Agriculture and Technology*
[3]*Coordinator – School of Business UON, Eldoret Learning Centre*

Abstract: *A strategy is about a firm's decision on where the business will go and how it will get there. strategy orientation plays a pivotal role in determining a firm's business performance Generic strategies, postulated by Michael Porter demonstrate how a business achieves and maintains competitiveness or superior performance. This study purposed to explore the relationship between cost leadership strategy and the performance of NHIF accredited hospitals in Kenya seeking to determine the effect of cost leadership strategy on the performance of NHIF accredited hospitals in Kenya. The study thus adopted a mixed research design based on a non-experimental considering both qualitative and quantitative techniques as well as both descriptive and causal approaches. The target population was the NHIF accredited hospitals in Kenya with a bed capacity of 100 and above which stood at 150 hospitals as at July 2016. Stratified and convenient sampling was adopted to select a sample of 109 hospitals from the target population of 150 hospitals with a bed capacity of 100 and more. The study targeted to collect primary data using semi structured questionnaires and in-depth interview schedules from 109 hospital administrators and CEO'S respectively from each hospital. Analysis of the data collected using the semi structured questionnaires was analysed by the help of SPSS for descriptive and inferential statistics to test hypothesis and draw conclusions on the study objective. The qualitative interviews of the hospital CEOs carried out yielded information that was analysed using thematic content analysis and results used for triangulation. The results revealed that the cost leadership strategies adopted have a significant effect on the performance of NHIF accredited hospitals in Kenya. A regression model was fitted which had an R-square of 0.232 implying that 23.2% of the variance in performance of the hospitals is explained by the variance in the cost leadership strategies adopted. The model fitted showed that cost leadership strategy has a significant coefficient estimate (β =0.478, t= 4.891, p-value = 0.000) as a predictor of performance of NHIF accredited hospitals in Kenya. The results were found to be supported by information collected from the interview responses of by CEOs who said that they had observed improved performance from the cost leadership strategies they adopted. It was thus concluded that the performance of NHIF accredited hospitals in Kenya has significant relationships with cost leadership strategy and that the strategies adopted by every hospital helped improve their overall performance.*

Keywords*: Cost Leadership Strategy; Generic Strategies; Competitive Strategies; Performance; NHIF Accredited Hospitals*

Date of Submission: 16-05-2020 Date of Acceptance: 31-05-2020

I. Introduction

A NHIF accredited hospitals in Kenya strive to offer the citizens, quality and affordable services while operating in a competitive environment. The underlying fact is that patients have a range of facilities they can patronize, beginning with public health facilities available from the community health centres to the highest County referral hospital. The entire public health facility services in Kenya are subsidized or absolutely free and thus private and faith-based hospitals must position themselves well, by adopting competitive strategies that will keep them attractive to clients and help them gain competitive advantage. There is need for them to apply appropriate strategies to withstand competition from Public hospitals. The economic environment is complex and constantly changing rapidly and unpredictably (Burnes, 2004). Ansoff (1990) notes that the days when businesses could merely wait for customers to come a long their door are long gone and those organizations must realize that their products or services, regardless of how good they are, simply do not sell themselves. This means that the organizations must seek competitive strategies to remain afloat in the business world.

The formulation of competitive strategy in any industry therefore involves first the comprehension of the fundamental determinants of competition. According to Porter (1986), strategy is the outcome of an agreed way of looking forward, some form of planning and performing in the future in order to carry out an organization's mission which specifies how a business entity will attain and uphold a competitive edge within the operating environment. A firm competes in a particular industry and gain competitive edge by purposely choosing a unique set of activities. According to Porter (1980), a firm can achieve two basic types of competitive advantage: low cost or differentiation. Health services and medical care services are not cheap and utmost care is involved as the stakes are high from the government, regulatory bodies and from the public citizenry who receive the services. In order to achieve a competitive gain, firms are required to make planned choices about the type of competitive gain they seek to achieve and the range within which they will achieve it. Choosing the competitive range or the range of the industry's actions can play a most vital role in determining competitive gain because it aims to set up a gainful and sustainable point against the forces that define your business competition.

The aim of competitive strategy is to cope with and change industry rules in the firm's favor. Competition in the hospital industry in Kenya has necessitated identification of competitive strategies employed by private hospitals to assist them remain relevant and competitive. The situation is not made any easier with the availability of the web doctor sites where clients can easily access information on the internet concerning management of their conditions and what to expect when they get into the hospitals. This is a complex scenario given that health care costs money and consumers choose hospitals depending on the services they expect. Given this scenario then, it is imperative that hospitals without compromising the quality of health care services must determine the range of competitive strategies they will adopt for competition within their industry. These they must do without breaching any ethical principles on the provision of health care and at the same time maintain the intellectual collaboration and knowledge sharing that is a key driver of the industry.

Therefore, performance of NHIF accredited hospitals in Kenya can be a good indicator of the effect of the competitive strategies specifically, cost leadership strategy identified for use in this study. Cost leadership strategy is one in which a firm strives to have the lowest charges in the industry and bid its products or services in a broad market at the lowest prices. Characteristics of cost leadership include low level differentiation, target for average client, use of knowledge gained from past production to lower production costs, and the addition of new product features only after the market demands them. Cost leadership strategy protects the organization from new entrants. This is because a price reduction can be used to protect from new entrants. However, the danger of cost leadership is that rivals may leap from the technology, nullifying the firms accumulated cost reductions (Porter, 1996). Other competitors may imitate the technology leading to a firm's loss of its competitiveness.

The cost leadership strategy usually aims a broad market. Some of the ways that industries get cost returns are by improving process efficiency, getting unique access to a large basis of lower cost materials, making optimal outsourcing and vertical combination decisions, or evading some costs altogether. If rival firms are unable to lower their expenses by a similar amount, the firm may be able to maintain a competitive gain based on cost leadership (Porter, 1996). Firms that succeed in cost leadership often have the following internal strengths; access to the capital required to make a momentous investment in production of assets; skilfulness in designing products for efficient manufacturing, high intensity of skills in manufacturing development engineering, and efficient distribution channels.

Cost leadership by its nature provides some Défense against competition. Most clients look for high quality or low cost and are not keen with product uniqueness, and high levels of individualized service. This strategy usually requires so many resources for investment, aggressive pricing and state-of-the-art equipment. In this strategic achievement is attained through seeking low-cost customers, standardizing provision services, cutting down the personal part in service transfer, reducing network costs, and selling of portions of the service to enhance efficiency. The firm can then make small price reductions to compensate the marginally lower value (Johnson et al., 2011, Mutunga & Minja,2014). Porter (2004) states that, performance is the most important goal and the main measure of productivity but defining and measuring performance and its source has been contentious among researchers. However, scholars (Daft, 2001; Ricardo and Wade, 2001) acknowledge that organizational performance is the ability of an organization to achieve its goals and objectives (Mudaki, 2011; Wanjere, Ochieng and Odera, 2013). As a result of the competition of hospitals in Kenya and the challenges that these hospitals were facing like high cost of maintaining quality, inadequate Internal support, most hospitals are now seeking for the competitive strategies to enable them compete favorably in highly competitive marketplace. All these health institutions provide similar services and for them to survive within the health industry, they need to adopt strategies that will give them a competitive edge over the rivals and in turn avoid the threat of becoming irrelevant or, lead to a subsequent closure. Despite the many studies that have been carried out about competitive strategies on hospitals, there is a gap on how the cost leadership strategy by hospitals can influence performance especially in NHIF accredited hospitals, because there is also an experience

of a continuous change of economic environment. It is on the basis of this that this study was undertaken to assess the relationship between cost leadership strategy and the performance of NHIF accredited hospitals in Kenya.

1.1 Statement of the Problem

The Health sector environment contains both external and internal variables which must be favourable for a business to achieve its intended goals and objectives. Amidst the changing environment interplayed by these variables, there has been some concerted effort by Kenyan authorities to improve facilities and services in the public health sector. Therefore, hospitals are under increasing pressure to improve performance and health care outcomes. The existing literature does not point to a clear conclusion on whether competition can help address the performance challenges of hospitals which lead to improvements in clinical outcomes Prior research on the effectiveness of hospitals usually focuses on one strategy or one type of outcome at a time. As such, there is a dearth of systematical studies on different hospital competitive and their consequent performance outcome's (Wei- wu2014). There has been a growing intensity of competition in all areas of business, and this has resulted in a greater attraction to analyse competitive behaviour under competitive strategies application and environmental dynamics and complexity. Concerns about healthcare expenditures are a major motivation for introducing competition in hospital services (OECD, 2012)

Previous studies have endeavoured to explore on effects of competitive strategies adopted by other industries on performance. Mobile telecommunications Companies in Kenya, Kamau, (2013) conducted a study on Competitive Strategies Adopted by Private Universities in Kenya and Karanja, (2002) researched on Competitive Strategies for Real Estates: Few studies in Kenya have examined the health sector specifically in NHIF accredited hospitals in Kenya and none so far have been carried out in the County. Limited and Varmah, (2013) studied the Competitive strategies adopted by Aga Khan University Hospital in Nairobi. So far studies have not explored the relationship between cost leadership strategy and the performance of NHIF accredited hospitals in Kenya and the extent to which cost leadership strategy has impacted performance. The study therefore, sought to address this gap.

1.2 Purpose of the Study

The purpose of the study was to explore the relationship between cost leadership strategy and the performance of NHIF accredited hospitals in Kenya. The null hypothesis formulated to be tested in order to address the purpose of this study is:

H_0: There is no significant relationship between Cost leadership and performance of NHIF accredited hospitals in Kenya

II. Literature Review

This section reviews a number of publications shedding light on competitive strategy and performance of firms. The relevance of the reviews to the present study is stated and the knowledge gap, which the present study intends to fill is identified.

2.1 Competitive Strategies

Stock (1999) defines strategy as the pattern or plan that integrates an industry's main purpose, policies and achievement sequences into a unified whole. An industry's resources may be collected and allocated into a unique and viable position depending on its internal capabilities and weaknesses, expected changes in the environment and dependent moves by smart opponents. Githae (2004) argues that a competitive strategy is a guide of decisions in a company that give direction and disclose its intentions, purposes, or ambitions, and plans for achieving set goals. They include the variety of businesses the company is to pursue, as well as the kind of financial and human resources it needs to deploy to meet the expectations of its stakeholders, employees, clients, and societies. Strategy relates a firm to its environment and it can be formulated on three different levels, namely: corporate, business unit and operational level.

While strategy may be about competing and existing as a firm, one can argue that it is products and not organizations that compete. Products are developed by the business units. The role of the organization therefore, is to give direction to its industry operations and products so that each is performing and so that each adds to the organization's purposes (Porter, 1980). Johnson & Scholes, (1999) argue that strategy is fundamental in positioning a firm in the wider external environment. The firm needs to look at itself in terms of what the competitors are doing. This is critical because firms in the same industry tend to compete for the same customers. Ansoff & Mc Donnell (1990) defines strategy as a way of decision-making guidelines for the direction of organizational behaviour. This strategy is used as a yardstick to define its connection with the external environment and to gauge the firm's performance with the external environment. Strategy needs to take

into consideration both the immediate and distant environments. Strategy is defined by how a firm communicates to its surrounding taking into account the internal capabilities of the firm which defines the firm's competitive advantage. The success or failure of a firm's strategy will depend on skilful formulation and effective implementation.

Successful strategies have some common elements such as simple, consistent and long-term objectives, a profound understanding of the competitive environment and objective appraisal of available resources. Porter (1996) argues that strategy is about differentiation implying choosing a set of activities that are unique to deliver a mix of value to enhance service delivery and thus high revenue. Competitive strategies are concerned with how a company can gain a competitive gain through a distinctive style of competing. It is necessary for a firm to have a sustainable competitive advantage to compete but what is more important is whether the competitive advantage is sustainable (Kimando, Njogu, & Sakwa, 2012).

Attractiveness of the industry in which a firm operates is a primary determinant of its profitability; a vital secondary factor is its location within that business. Even though an industry may have below-average profitability, a business that is strategically located can earn higher returns (Kinyuira, 2014, Porter, 1985) posited that the generic competitive strategies are generally three in any industry, namely: cost leadership, differentiation and focus defined along two dimensions the Broad scope and Narrow scope, which a firm can use to get a viable market location. A firm performs best by choosing one strategy on which to focus. However, various authors (Johnson et al., 2011; Johnson and Scholes, 2008) oppose that a blend of these strategies may offer a company the best chance to achieve higher performance. Porter (1980) has argued that a firm's strength ultimately falls into one of two categories, namely: cost advantage or differentiation. By applying these powers in either a wide or narrow scope, three generic strategies result. These are cost leadership, differentiation, and focus.

2.2 Cost Leadership Strategy

Cost leadership strategy was developed by Porter (Malburg, 2000). This strategy focuses on gaining competitive advantage by having the lowest cost in the industry (cost advantages). In order to achieve a low-cost advantage, health sector must have a l-cost leadership strategy, low-cost operations with integrated sections/business units, and a workforce committed to the low-cost strategy. For an effective cost leadership strategy, health institutions must have a large market share. There are many areas to achieve cost leadership such as mass production, mass distribution, economies of scale, technology, services and products design, input cost and capacity utilization of resources.

Porter (2008) argues that only one firm in an industry can be the cost leader and if this is the only difference between a hospital and competitors, the best strategic choice is the low-cost leadership role. Miles (2005) Cost leadership strategies depend on some fairly unique capabilities of the firm to achieve and sustain their low-cost position within the industry of operation.

The Health sector especially the hospitals must be willing to discontinue any activities in which they do not have a cost advantage and should consider outsourcing activities to other hospitals with a cost advantage. For an effective cost leadership strategy, public hospitals must have a large market share. There are many areas to achieve cost leadership such as mass production, mass distribution, economies of scale, technology, services and products design, input cost and capacity utilization of resources. Porter (1998) purports only one firm in an industry can be the cost leader and if this is the only difference between a public hospital and competitors, the best strategic choice is the low-cost leadership role (Marburg, 2000).

This generic strategy calls for being the low-cost producer in an industry for a given level of quality. The firm sells its services and products either at average industry prices to earn a profit higher than that of rivals, or below the average industry prices to gain market share. Generic strategy calls for being the low-cost producer in an industry for a given level of quality. The firm sells its services and products either at average industry prices to earn a profit higher than that of rivals, or below the average industry prices to gain market share. In the event of a price war, the hospital can maintain some profitability while the competitor suffers losses. Even without a price war, as the industry matures and prices decline, the hospital that can produce more cheaply will remain profitable for a longer period of time (David, 2011).

Performance

Van de Ven (2006) stated that performance is the ultimate criterion in the assessment of organizations and it is a complex construct that reflects the factors used by decision-makers to assess the functioning of an organization. He suggested three criteria or categories of performance) productivity), employee morale, and) effectiveness. He further stated that the performance levels achieved by an organization constitute an input of information to its managers, which is likely to stimulate them to make adjustments in policies and modes of operation. In other words, performance is not simply a dependent end product; it is a dynamic variable.

Ford and Schulenburg (2012) in their review of performance measurement identify three perspectives that pervade organizational performance literature. The first perspective is the goal approach, which assumes that organizations pursue ultimate and identifiable goals. Under this perspective, performance is defined in terms of goal attainment. The second perspective is the systems resource approach, which stresses the relationship between the organization and its environment. Performance is defined in terms of the organization's ability to secure limited and valued resources. The third perspective is the process approach and performance is defined in terms of the behaviour of the organization's participants. Kaplan and Norton (1993) discussed performance measurement in their work on the "Balance Scorecard" which seems to be the most popular among managers. The balanced scorecard presents managers with four different perspectives on performance, financial, customer focused, internal analytical, and innovative.

Figure 1: Conceptual Framework

III. Research Methodology

This study utilized a cross-sectional survey design based on a sample drawn from NHIF accredited hospitals in Kenya that cut across various Counties. A mixed research design was adopted considered non-experimental, cross-sectional survey, descriptive and causal design approaches. The targeted population of this was NHIF ACREDITED hospitals in Kenya with a bed capacity of 100 and above which stood at 150 hospitals as at July 2016. stratified sampling design was adopted due to the heterogeneity of the target population of hospitals to draw a sample of 109 hospitals using a sampling formula given below for determining the sample size of a finite population that was proposed by Israel (2002).

The instruments used to collect data for the were questionnaire and interview schedule. The content validity was determined by multiple sources of information and chain of evidence. The reliability of instrument was determined using the test-retest reliability techniques. Data capturing was done using Excel software. The data from the completed questionnaires was cleaned, coded and entered into the computer for analysis using the Statistical Package for Social Sciences (SPSS version 21). Qualitative and quantitative analysis approaches were adopted using Descriptive statistics to describe the existing status of the hospitals with respect to the variables studied. Descriptive statistics from the questionnaire data was assessed and presented in frequency tables, graphs and with the mean and standard deviations as the measures of central tendency ad measures of dispersion respectively.

To assess the effects of the independent variables on the dependent variable, regression models were fitted. Simple linear regression based on Ordinary least squares was used to assess the direct effect of the independent variables on performance. The significance of the influence by the independent variables was based on the t-tests of the estimated coefficient estimates of the independent variable in the model.

IV. Results and Discussion of Research Findings

From the targeted sample of 109 hospitals that have a bed capacity of 100 and above across the counties in Kenya, collection was successful on 81 hospitals resulting to a response rate of 74.3%. The response rate was considered adequate basing on arguments by Richardson (2005) and Edward et al (2002). In order to explore the relationship between cost leadership strategy and the performance of NHIF accredited hospitals in Kenya, the Statistical Package for Social Sciences (SPSS version 21) windows was used to derive for the descriptive statistics. The analysis and interpretation of the findings was in relation to the study purpose of the study.

4.1 *Descriptive Analysis of the Performance of NHIF accredited Hospitals in Kenya*

Performance was the dependent variable of the study which was measured by 5 indicators of which 4 were retained following construct validity assessment carried out on the pilot study. The indicators were measured on an ordinal Likert scale of 5 as categorical representations of the levels of agreement by the respondents on the indicator statements from strong disagreement to strong agreement. In table 1, are the descriptive statistics of the data on each indicator of performance. The first indicator of the construct of performance sought to find out the view of the respondents regarding whether the hospital has an average of 50% bed occupation at any time. Majority (46.9%) of the respondents agreed. There were 0% respondents who

strongly disagreed, while 8.6% of the respondents disagreed and 12.4% of the respondents were neutral. Some 46.9% of the respondents agreed and another 32.1% strongly agreed that the hospital has an average of 50% bed occupation at any time.

As per the indicator that the hospital has high rate of in/out patient flow due to outstanding service delivery, the distribution was that there were 0% respondents who strongly disagreed, while 1.2% of the respondents disagreed and 6.2% of the respondents were neutral. Some 54.3% of the respondents agreed and another 38.3% strongly agreed that the hospital has high rate of in/out patient flow due to outstanding service delivery.

Majority (34.6%) of the respondents agreed that the hospital receives an average of 50 referrals per day. There were 6.2% respondents who strongly disagreed, while 21% of the respondents disagreed and 21% of the respondents were neutral. Some 34.6% of the respondents agreed and another 17.3% strongly agreed that the hospital receives an average of 50 referrals per day.

The fourth indicator of the variable sought to find out the view of the respondents regarding whether the hospital is a frequent recipient of service accreditation awards. Majority (37%) of the respondents agreed. There were 2.5% respondents who strongly disagreed, while 7.4% of the respondents disagreed and 21% of the respondents were neutral. Some 37% of the respondents agreed and another 32.1% strongly agreed that the hospital is a frequent recipient of service accreditation awards. As per the indicator that the average outpatient treatment turnaround time is less than three hours, the distribution was that there were 1.2% respondents who strongly disagreed, while 3.7% of the respondents disagreed and 16.1% of the respondents were neutral. Some 22.2% of the respondents agreed and another 56.8% strongly agreed that the average outpatient treatment turnaround time is less than three hours.

Table 1: Performance of hospitals in Kenya

		1-SD	2-D	3-N	4-A	5-SA	Mean	Std dev.
The hospital has an average of 50% bed occupation at any time	Freq.	0.00	7.00	10.00	38.00	26.00	4.025	0.894
	Percent	0.00	8.64	12.35	46.91	32.10		
The hospital has high rate of in/out patient flow due to outstanding service delivery	Freq.	0.00	1.00	5.00	44.00	31.00	4.296	0.641
	percent	0.00	1.23	6.17	54.32	38.27		
The hospital receives an average of 50 referrals per day	Freq.	5.00	17.00	17.00	28.00	14.00	3.358	1.176
	percent	6.17	20.99	20.99	34.57	17.28		
The hospital is a frequent recipient of service accreditation awards	Freq.	2.00	6.00	17.00	30.00	26.00	3.889	1.025
	percent	2.47	7.41	20.99	37.04	32.10		
The average outpatient treatment turnaround time is less than three hours	Freq.	1.00	3.00	13.00	18.00	46.00	4.296	0.955
	percent	1.23	3.70	16.05	22.22	56.79		

Source: field survey

4.2 ***Descriptive Analysis of the cost leadership strategy in NHIF accredited Hospitals.***

The study measured cost leadership strategy by 6 indicators of which 5 all retained as valid and reliable measurements of the construct in the pilot study. Table 2, shows the descriptive statistics of the data on the indicators of cost leadership strategies. The first indicator of the variable sought to find out the perception of the respondents regarding whether the hospital engages in optimal resource capacity utilization. Majority (54.3%) of the respondents agreed. There were 0% respondents who strongly disagreed, while 1.2% of the respondents disagreed and 6.2% of the respondents were neutral. Some 54.3% of the respondents agreed and another 38.3% strongly agreed that the hospital engages in optimal resource capacity utilization.

As per the second indicator, majority (54.3%) of the respondents agreed that the hospital is adequately equipped with state-of-the-art technology solutions. There were 2.5% respondents who strongly disagreed, while 6.2% of the respondents disagreed and 8.6% of the respondents were neutral. Some 54.3% of the respondents agreed and another 28.4% strongly agreed that the hospital is adequately equipped with state-of-the-art technology solutions. As per the indicator that the suppliers of goods and services are reliable and offer favorable terms of contract, the distribution was that there were 1.2% respondents who strongly disagreed, while 1.2% of the respondents disagreed and 8.6% of the respondents were neutral. Some 60.5% of the respondents agreed and another 28.4% strongly agreed that the suppliers of goods and services are reliable and offer favorable terms of contract.

As per the indicator that the hospital records an impressive outpatient flow -Majority (58%) of the respondents agreed that the hospital facility records impressive in/outpatient flow. There were 2.5% respondents who strongly disagreed, while 1.2% of the respondents disagreed and 4.9% of the respondents were neutral. Some 58% of the respondents agreed and another 33.3% strongly agreed that the hospital facility records impressive in/outpatient flow. As per the indicator that the institution's cost of factors of production is contained, the distribution was that there were 1.2% respondents who strongly disagreed, while 7.4% of the respondents disagreed and 13.6% of the respondents were neutral. Some 44.4% of the respondents agreed and another 33.3% strongly agreed that the institution's cost of factors of production is contained.

Another indicator of the construct sought to find out the view of the respondents regarding whether the hospital procures supplies in bulk. Majority (55.6%) of the respondents strongly agreed. There were 1.2% respondents who strongly disagreed, while 2.5% of the respondents disagreed and 4.9% of the respondents were neutral. Some 35.8% of the respondents agreed and another 55.6% strongly agreed that the hospital procures supplies in bulk.

Table 2: Cost leadership descriptive statistics

		1-SD	2-D	3-N	4-A	5-SA	Mean	Std dev.
The hospital engages in optimal resource capacity utilization	Freq.	0.00	1.00	5.00	44.00	31.00	4.296	0.641
	Percent	0.00	1.23	6.17	54.32	38.27		
The hospital is adequately equipped with the state-of-the-art technology solutions.	Freq.	2.00	5.00	7.00	44.00	23.00	4.000	0.922
	percent	2.47	6.17	8.64	54.32	28.40		
The suppliers of goods and services are reliable and offer favourable terms of contract	Freq.	1.00	1.00	7.00	49.00	23.00	4.136	0.720
	percent	1.23	1.23	8.64	60.49	28.40		
The hospital facility records impressive in/outpatient flow	Freq.	2.00	1.00	4.00	47.00	27.00	4.185	0.792
	percent	2.47	1.23	4.94	58.02	33.33		
The institution's cost of factors of production is contained	Freq.	1.00	6.00	11.00	36.00	27.00	4.012	0.942
	percent	1.23	7.41	13.58	44.44	33.33		
The hospital procures supplies in bulk		1.00	2.00	4.00	29.00	45.00	4.420	0.804
		1.23	2.47	4.94	35.80	55.56		

Source: field survey

4.3 *Relationship between cost leadership strategy and performance of NHIF accredited Hospitals in Kenya*

The objective was to establish the relationship between cost leadership strategy and the performance of NHIF accredited hospitals in Kenya. To assess the relationships factor analysis was carried out for dimension reduction to generate latent constructs were generated for the 2 variables. In this process, the indicators for each variable was reduced into one factor to generate the factor scores of the variable. The factor analysis. Confirmatory factor analysis (CFA) was used which is a restricted model that restricts the indicators hypothesized to belong to one variable to one factor model. The CFA results were used further used to assess the construct validity of the indicators of each of the 2 constructs to measure the 2 variables. This was done achieved by assessing the sampling adequacy for each CFA model using KMO and Bartlett's statistics, assessing the factor loadings of each indicator on the variables which was achieved and expunging indicators that did not adequately load the latent constructs and finally assessing for convergent validity basing on the Average variances extracted(AVEs) and the squared correlations (Kline, 2011). A summary generated from the CFA results in in table 3 shows KMO values above 0.5 and Bartlett's statistics have p-values of 0.000 which are less than 0.05 which implies sampling adequacy and suitability of the data for factor analysis to generate the latent variables of cost leadership strategy and performance (Laura J. Burton and Stephanie M. Mazerolle, 2011). One of the indicators of each variable which was found not belong to the hypothesized constructs that did not have adequate factor loadings above 0.4 were dropped thus retaining 5 items (indicators) of cost leadership strategies and 4 items of performance in the CFA models. The retained items however exhibited both convergent and discriminant validity as shown by the AVEs that are greater than the corresponding squared correlations and also greater than 0.5 (Kline, 2011). The 2 latent variables generated were therefore considered to exhibit adequate construct validity and were used in further analysis to assess for inter-relationships between the constructs.

Table 3: Correlation between cost leadership strategy and performance

	AVE	Squared correlations	Retained Items	KMO	Bartlett's Chi Square	P-value
Leadership strategy	0.730	0.586	5 out of 6	0.789	Chi2(10)=58.509	0.000
Performance	0.805	0.594	4 out of 5	0.772	Chi2(6)= 62.224	0.000

The relationship between the 2 constructs was examined by assessing the direct effect of cost leadership strategy as a predictor of performance of NHIF accredited hospitals in Kenya using a simple linear regression model fitted to estimate the significance and magnitude of the linear influence (coefficient) of cost leadership strategy. Considering the use of Ordinary least squares (OLS) in fitting the model, the classical assumptions (normality, homoscedasticity and non-autocorrelation) of linear modelling was therefore tested on the model residuals as detailed in table 4.

To confirm normality of the residuals, a test for normality using Shapiro-Wilk test was carried out. As shown in table 6, the p-value of the Shapiro-Wilk statistic was found to be greater than 0.05 to imply that the distribution of the model residuals does not significantly deviate from normality. Homoscedasticity of the residuals as a classical assumption of OLS was also assessed. The Breusch-Pagan test for homogeneity of variance was carried out where the BP Lagrange multiplier (LM) statistic was computed for the residuals. The P-value of the BP-LM Chi-square statistic was found to be 0.067 which is greater than 0.05. This showed that that the model residuals did not exhibit heteroscedasticity but were homoscedastic implying that the model met the homoscedasticity assumption.

The linear model assumption of autocorrelation was also tested on the residuals of the model used to assess the effect of cost leadership strategy on performance. Autocorrelation also referred to as serial correlation is the phenomenon where observations of a variable (residuals) are a function of other successive values of the same variable. Autocorrelation of the model residuals implies that successive values of the residuals can be sued to predict other values of the residual term. The Durbin-Watson (d) test was used to check for existence of autocorrelation of the residuals. Small values of the D-W statistic indicated successive error terms were correlated. As shown in the results, the calculated D-W statistic is larger than the upper tabulated value (1.662) from Durbin-Watson tables shown in appendix VIII. The tabulated upper value for a model with one regressor and a sample size of 81 is less than the calculated D-W which is an indication that the residuals are not serially related thus the non-autocorrelation assumption is met.

Table 4: Diagnostic tests; cost leadership strategy and performance model

	Test	Statistic	P-value	Conclusion
Normality	Kolmogorov-Smirnov	0.093	0.081	Normally distributed residuals
	Shapiro-Wilk	0.983	0.358	Normally distributed residuals
Homoscedasticity	BP-LM	3.355	0.067	Homoscedastic residuals
Autocorrelation	Durbin-Watson	1.889		Non- auto-correlated residuals

The diagnostic tests confirmed that the model fitted between cost leadership strategy and performance met all the linear modelling assumptions. The model summary table 5 provides information regarding the ability of the regression line to predict the variation in the dependent variable. The coefficient of determination (R-square) also referred to as the explanatory power of this model was found to be 0.232. This is shows that 23.2% of the variation in performance of the hospitals is explained by the variation of predictors in the model (cost leadership strategy). The difference percentage, 76.8% is the portion of variance explained by other factors that have not been included in this model that only considered cost leadership strategy.

Table 5: Model Summary; cost leadership strategy and performance model

R	R Square	Adjusted R Square	Std. Error of the Estimate
.482[a]	.232	.223	.877

a. Dependent Variable: performance

b. Predictors: (Constant), cost leadership strategy

ANOVA in this regression analysis involved calculations providing information about levels of variability within a regression model forming a basis for testing the general significance of the regression model. The ANOVA table 6 shows a breakdown of the variance in the dependent variable (performance) due to the model and due to the residuals. The general significance of the model is determined by testing that the estimates of the model are jointly not equal to zero.

From the ANOVA table, the P-value of the F-statistic is less than 0.05 showing that the coefficient estimates of the model are jointly not equal to zero. This implies that the model is statistically significant in predicting cost leadership impacts the performance of hospitals in Kenya. The results show that the proportion of variance of performance that is due to the regression predictor (cost leadership) is significantly explained in the model.

Table 6: ANOVA; cost leadership strategy and performance model

	Sum of Squares	df	Mean Square	F	Sig.
Regression	18.425	1	18.425	23.921	.000[b]
Residual	60.848	79	.770		
Total	79.272	80			

a. Dependent Variable: performance
b. Predictors: (Constant), cost leadership strategy

The regression coefficient estimate of the influence of cost leadership strategy on performance is detailed in table 9. The results show that cost leadership strategy has a significant coefficient estimate (β =0.478, t= 4.891, p-value = 0.000) as a predictor of performance of NHIF accredited hospitals in Kenya. The p-value of the coefficient is less than 0.05 implying significance at 5% level of significance. The results show that increasing the levels of cost leadership strategy by one unit would result in an increase in performance of the hospitals by 4.78 units. The model fitted generated the equation given below;

$$Y = 0.478X + \varepsilon$$

Table 7: Coefficients; Model cost leadership strategy and performance model

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-.015	.098		-.154	.878
X1- cost leadership strategy	.478	.098	.482	4.891	.000

a. Dependent Variable: Y

The results from the model fitted on the effect of cost leadership strategy were used to test the hypothesis for the first study objective and to draw conclusions on the relationship.

H_{01}: There is no significant relationship between Cost leadership and performance of NHIF accredited hospitals in Kenya. From the results, the p-value of the coefficient of cost leadership strategy was found to be 0.000 which is less than the 0.05 level of significance threshold. The null hypothesis was therefore rejected and a conclusion drawn that Cost leadership strategy has a significant relationship with the performance of NHIF accredited hospitals in Kenya. The results show that cost leadership strategy has a significant impact on performance. Hospital administrators should therefore consider improving on cost leadership strategies to realize improved performance.

The results on cost leadership and its effect on performance from the quantitative data analysis was echoed in the qualitative interviews carried out among the CEOs. On the question regarding the strategies used by the hospital in managing the healthy facility and its influence in performance in terms of the market share, some respondents discussed on cost leadership strategies. A thematic/content analysis of the responses based on this question revealed that 28 CEOs use strategies of cost leadership to manage performance that have led them to improved performance. One of the CEOs who had been in service for 4 years in the hospitals stated that: "Through NHIF, all clients are advised to join it so that they can access various services at a lower cost. It boosts the market because the NHIF pays the facility to buy various commodities for our clients"

As this hospital, CEOs of hospitals that utilize cost leadership strategies to lower costs experience a boost in the market share. Among the cost leadership strategies used by hospitals is partnering with employers to provide medical services to employees. There are 62 CEOs who affirmed to partnering with employers to provide services to employees. Some hospitals who partner with employers tend to rely on the employees to have medical insurance cards and NHIF cards. They therefore offer subsidized medication cost for those employees who have NHIF cards and other health insurance cards.

Mission hospitals whose CEOs strategies on cost leadership tend to do so by adjusting cost depending on funds received from missionary operations to buffer the costs of services. A mission hospital CEO had this to say about strategies used in managing the hospital: "Its faith based and focuses mainly on the cost leadership and provision of quality services. The hospital is always in the forefront of making the treatment to patients a reality thus improving brand image"

V. Conclusions

The study generally sought to determine the role of cost leadership strategy on the performance of NHIF accredited hospitals in Kenya. The data were analysed based the objective of the study revealed regression coefficient of β 0.478 indicating increasing levels of cost leadership strategies leads to an increase in the performance of the hospital by 4.78 units leading to the conclusion that cost leadership strategy has a positive effect on the performance of NHIF accredited hospitals in Kenya. In addition, the findings of the study revealed that the cost leadership strategy has a significant effect on performance. This was evidenced by the rejection of the null hypothesis. The null hypothesis stated that there is no significant relationship between. Cost leadership and performance of NHIF accredited hospitals in Kenya. The p-value of the coefficient estimate of cost leadership strategies on performance was less than the 0.05 level of significance thus the hypothesis rejected and a conclusion drawn that there is a significant relationship between Cost leadership and performance of NHIF accredited hospitals in Kenya. Accordingly, the effect of cost leadership being found to be positive and significant imply that increasing the levels of cost leadership strategies lead to an increase in the performance levels of the NHIF accredited hospitals in Kenya.

VI. Recommendations

Based on the findings, analysis, discussions and conclusions of this study, the following recommendations are made; That NHIF accredited Hospitals in Kenya consider adoption of cost leadership strategy, with the view to enhance performance in finance, administrative and quality management. The hospitals will leverage on cost advantage, to charge lower costs or enjoy higher profit margins. Through the use of proprietary technology, hospitals will provide quality services and attract patronage hence increasing market share and be dominant in the industry, thus gaining exceptional returns leading to improved sustainability of the business.

NHIF, being well positioned to contribute to the introduction and implementation of Universal Health coverage in Kenya should encourage the adoption of competitive strategies, especially cost leadership in their hospitals with a view to roll out affordable and quality healthcare.

References

[1]. Ansoff, H.I. (1990). Implementing Strategy and Management. New York: Prentice Hall.
[2]. Burnes, B. (2004). Managing Change. Strategic Approach to Organizational Dynamics
[3]. David, F. (2011). Strategic Management, Columbus: Merrill Publishing Company.
[4]. Githae, D. (2004). A Survey of the extent of entrepreneurship practice in public sector African Journal of Business and Management Vol 2 (3) PP 16-31, ISSN: 2518- 0312
[5]. Johnson G. & Scholes K., (1999). Exploring Corporate Strategy, Prentice Hall, Europe
[6]. Johnson, G., Scholes, K. & Whittington, R. (2008). Exploring Corporate Strategy: Text and cases, 8th edition, London, prentice Hall, Pearson education Ltd.
[7]. Kamau, S. (2013). Competitive strategies adopted by private Universities in Kenya, Unpublished MBA Thesis, University of Nairobi
[8]. Kaplan, R. S. Notrtopn Y. (1993). How the balanced scorecard complements the McKinsey 7-S model. Strategy & Leadership, 33(3), 41-46
[9]. Karanja, P.W. (2002). Competitive strategies of real estate firms: The perspective of Porter's competitive advantage. Unpublished MBA Thesis. Nairobi: University of Nairobi.
[10]. Kimando, L.N., Njogu, G.W., & Sakwa. M. (2012), An analysis of Competitive strategies employed by private Universities in Kenya. Management Science and Engineering journal, 6 (2), 55-70
[11]. Kinyuira D. (2014). Effects of Porter's Generic Competitive Strategies on the Performance of Savings and Credit Cooperatives (Saccos) in Murang'a County, Kenya.IOSR Journal of Business and Management (IOSR-JBM) e- ISSN: 2278-487X, p-ISSN: 2319-7668. Volume 16, Issue 6.
[12]. Malburg, C. (2000). Competing on costs, Industry Week, Vol. 249 (17), 31.
[13]. Miles, R.E., Miles, G. & Snow, C.C. (2005) Collaborative Entrepreneurship: How Communities of Networked Firms use Continuous Innovation to create Economic Wealth, Stanford College Press, Stanford, California.
[14]. Mudaki, A. (2011). The Effect of Risk Underwriting Performance of Insurance Firms in Kenya. Unpublished MSC (HRM), Masinde Thesis Muliro University of Science and Technology.
[15]. Mudaki,A.,Wanjere, D., Ochieng,I&Odera, O. (2013) Effects of Operational Factors on Organizational Performance in Kenya Insurance Industry, International Journal of Business and Social Science Vol.3 No. 17;237-241
[16]. Mutunga, S.L., & Minja, D. (2014). Generic strategies employed by food and beverage firms in Kenya and their Influences on sustainable competitive advantage. International Journal of Business and Management Review. 2(6), 1-15.
[17]. OECD (2012). OECD Health Statistics 2014: How does South Africa Compare? Accessed on August28, 2019 from http://www.oecd.org/els/health- systems/Briefing-Note-SOUTH-AFRICA-2012.pdf.
[18]. Porter M. (2008). Competitive Strategy: Techniques for analyzing industries and competitors. New York: Free Press.
[19]. Porter, M. (1980). Competitive Strategy: Techniques for analysing industry and competitors. New York: The Free Press.
[20]. Porter, M.E. (1985). Competitive Advantage: Creating and Sustaining Superior Performance, Free Press, New York, NY.
[21]. Porter, M. (1986). Response to letters to the editor. Harvard Business Review, 2(2): 162- 163.
[22]. Porter, M.E. (1996). Competitive Advantage: Creating and Sustaining Superior Performance, New York, Free Press.
[23]. Porter, M. (2004). Competitive Advantage, Free Press.
[24]. Stock, C.W. (1999). Strategic Management; A new view of Business policy and planning, little Brown & company.

[25]. Varmah B.M. (2013). Competitive strategies adopted by Aga Khan University Hospital in Nairobi, Kenya and Challenges faced in their implementation. Unpublished MBA Thesis, University of Nairobi Private Sector Firms in Kenya.
[26]. Weiwu, (2014). Hospital competitive strategies and performance outcomes. Doctoral Assertion – Graduate School, University of Tenesse, Knoxville.

Grace Kahenda Ambuku Ochodo, et. al. "The Relationship between Cost Leadership Strategy and the Performance of NHIF Accredited Hospitals in Kenya." *IOSR Journal of Business and Management (IOSR-JBM)*, 22(5), 2020, pp. 56-66.