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**EFFECT OF COMPETITIVE ADVANTAGE ON THE RELATIONSHIP BETWEEN
SUPPLY CHAIN QUALITY MANAGEMENT PRACTICES AND PERFORMANCE
OF PRIVATE HOSPITALS IN KENYA**

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Abstract

The objective of the study was to determine the effect of competitive advantage in the relationship between supply chain quality management practices and performance of private hospitals in Kenya. This study was anchored on positivist research philosophy with descriptive cross-sectional census survey as the design. Primary data was collected using structured questions in form of questionnaires from persons tasked with the responsibility of making drug supply chain decisions in Kenyan private hospitals based on their skills and knowledge at management level. The response rate was 77.56%. Reliability and validity for measurement items were confirmed using diagnostic tests. Model fitness was verified by means of Chi Square test (χ^2), GFI, RMSEA and SRMR. Covariance based, Structural equation modeling (CB-SEM) and hierarchical regression data analysis techniques were applied to test hypothesis that there is significant mediating effect of competitive advantage in the relationship between SCQM practices and the performance of private hospitals. Finding established partial mediation of competitive advantage in the relationship. The study recommends that private hospitals should always seek to gain competitive advantage by exploiting all unique market opportunities and counteracting competitor threats. This study avails a conceptual framework and methodological applicable as a point of reference for further studies.

Key words: *Competitive advantage, supply chain quality management practices, private hospitals*

Introduction

Skyrocketing costs of medication and related devices, pressure for high quality medical services, need for sophisticated equipment in addition to ever changing inputs, high mortality and unpredictable patterns of diseases is no longer news across the globe in healthcare sector (WHO, 2010). This is against the background of good constitutions worldwide guaranteeing the entire population the right to the best of healthcare, including reproductive health irrespective of socio-economic status. It is both basic and common knowledge that good health among citizens catalyzes national development and growth velocity, accumulates wealth and eradicate poverty. Currently, the secret of organizational success is believed to reside in the network generated competitive advantage. For smooth continuity, all firms including private hospitals, strive not only to meet investor expectations but complex demands from other key stakeholders as well. The major challenge is the strategic sustainability of achieving this important goal in the globally competitive business environment. In other words, firms must restrict themselves to operations and activities that anchor them perfectly and reasonably above competitors for unforeseen period of time. There must be systems and networks in place to ensure that quality is extended along the entire supply chain through supply chain quality management practices in order to address the concerns of stakeholders with diversified yet complimentary interests and contributions respectively. Addressing the demands is equivalent to multidimensional performance measurement which is done properly

results to ever improving organizational performance.

According to Newbert (2008), the variable is conceptualized as a firm's status higher than the average a particular attained by a firm upon utilizing unique opportunities in the market, reduction of cost and counteracting competitor threats. Chagooshi et al. (2015) operationalized competitive advantage as differentiation, flexibility, delivery dependability, reduced cost, time to market and innovation which relate more to operational performance metrics than competitive advantage. The cost reduction commonly indicated by the authors relates more to operational performance rather than higher status of a firm among its peers. The definitions in a nutshell present a dichotomous view of competitive advantage either as outstanding performance or tracks of competitive advantage (Grahovac & Miller, 2009). Conceptualizing competitive advantage has been largely elusive and this is extended to its operational definition (O'Shannassy, 2008). Despite the aforementioned difficulties in concisely defining and operationalizing concept, terms and conditions of any research dictate that a variable must be operationalized and measured to allow scientific, falsifiable and truth-seeking empirical investigation (Popper's, 1959). Without a robust operational and clear definition, the variable competitive advantage remains a fad that is merely used for convenience (Arend, 2003).

Sagalas (2015) argued that operational definition of competitive advantage should neither include indicators of operational performance nor sources of competitive

advantage. The author defined competitive advantage as being positioned higher than an average of industry as a result of exploiting market opportunities and neutralizing threat from competitors which this study adopted. To measure competitive advantage validly and reliably, there must be unambiguous and robust operational definition to permit positivist research orientation (Arend, 2003). The key objective is to scientifically determine position of a firm in the lenses of exploiting market opportunities and neutralizing threat from competitors. The process can be sequentially explained (Sigalas & Pekka-Economou, 2013). The competitiveness of focused organizations based on extent to which the organization exploits market opportunities and neutralize competitor threats is first established. The indicators position organizations among peers as either above or below average. Similar process is repeated in case of neutralizing all competitive threats and fully neutralizing the competitive threats

SCQM practices are activities effected within and across organizations to ensure that organizations consistently communicate, exchange and implement quality requirements across supply networks (Talib, Rahman, & Qureshi, 2011). Many authors have confirmed the practices as customer focus, managing supplier relationships, sharing of information, postponement, process management and coordination of supply chain are the most common practices (Zhong et al., 2016; Quang et al., 2016; Soares, et al., 2017; Bagchi & Gaur, 2018). These practices interact to link internal and external organizational operations, procedures and activities so as

to monitor as well as proactively ensure quality in the whole supply chain (Quang et al., 2016). Customer focus can be defined as efforts by organizations to address customers' complaints, build relationships with them and ensure their satisfaction (Kuei, Madu & Lin, 2001). Supplier relationship management entails selection, development, monitoring and collaborating with suppliers (Yang & Zhang, 2017). The actions lead to long term coexistence which enables firms in the chain to avoid risks and share benefits (Prajago et al., 2012). Information forms part of the intangible strategic assets of organizations and should flow fast and accurately so as to avoid gap errors and bottlenecks which jeopardize firm's profitability, customer satisfaction and organizational integrity (Zhao, Hu, & Wang, 2015). Postponement means deferring of events throughout supply system pending availability of worthier market information to minimize uncertainty and save on inventory, transportation and production costs (Bagchi & Gaur, 2018). Postponement is applicable where products in the market place are characterized by high monetary value. Internal firm process management activities encompass research and development, product design and processes. The activities dictate firm's level of productivity, time to market and employee performance important necessary for firms' competitiveness and improved performance (Zhong et al., 2016). Coordination of supply chain entails managing transportation and logistics which integrates firms, suppliers and customers to minimize waste of efforts and time resulting in increased

productivity and customer satisfaction (Farnandes, Sampaio, & Carvalho, 2014).

Organizational performance refers to a measure of reward or satisfaction in return to contribution by key stakeholders (Rouse & Putterill, 2003). Traditionally, finance outcome has been used widely to gauge performance. This measure has been challenged in literature as narrow, short term, historical and lacking universal applicability and strategic orientation (Chagooshi et al., 2015). Essentially, the metric fails to address societal, environmental and economic concerns (Freeman, 2010). In response, researchers and scholars are making efforts to avail holistic, balanced and strategic performance measurement scales to address the plight of all stakeholders (Rouse & Putterill, 2003). Triple bottom line (TBL), balanced scorecard (BSC), EFQM business excellence model and The V formation model have been applied to measure performance (Elkington, 1994; Kaplan & Norton, 1996; Vijande & Gonzalez, 2007; Myrah & Tina, 2013). Each of the models have been critiqued for being incomplete, historical or ignore certain cohorts of stakeholders Chagooshi et al., 2015). The integrated performance measurement framework (IPMF) measures the impact of SCQM practices on financial, market, operational, societal, environmental, customer, learning and growth perspectives appears comprehensive. IPMF performance measurement approach is holistic, balances firm's macro and micro view, measure work rather than cost and as well having strategic relevance.

Debates on what constitutes private or public organizations are far from

conclusion. The fundamental issues for categorization advanced in literature include; stockholding, profit motive, openness to external influence, scope of sharing benefits outcomes (communal or restricted to individuals), extent of accessing the health facilities, its resources or confidential information (Vries & Huijsman, 2011; Awuor & Kinuthia, 2013; WHO, 2015). Additional guide is whether the person or the organization is acting on behalf of the entire community or restricted the individual. As such, public organizations confined to state ownership and funding. On the other hand, privately owned firms constitute those owned and funded through individual(s), sales revenue or personal investments (Lachman, 1985). Private hospitals therefore encompass profit motivated health entities that are not funded through exchequer and heavily influenced by their economic markets and those without profit making objectives. Public and private hospitals compete with and complement each other in providing healthcare. There is notable fierce competition among private hospitals since they presumably provide similar types of services (Turkyilmaz, Bulak, & Zaim, 2015).

Whether competitive is the ultimate goal to be achieved or just explains how organizational performance attained and perhaps sustained needs to be ascertained. Information on whether there is mediation in the relationship between supply chain quality management practices and organizational performance is also scanty. However, the role has been suggested in some studies. Li et al. (2004) reported mediation of competitive advantage in the relationship between supply chain management and organizational

performance without assessing the quality component. Ibrahim, Marcjanna, and Augustyn (2016) found that quality management generate competitive advantage resulting into better financial performance. Chaghooshi et al. (2015) showed SCQM to have meaningful relationship with competitive advantage without expressly stating its role. A part from ascertaining existence of mediation, it is also equally important to state the nature of mediation as either, non, partial or full mediation. Finally, it is necessary to get empirical evidence on the role of competitive advantage on the relationship from health sector especially in Kenya where such a study is neither reported nor ongoing. Preliminary evidence from literature signal lack of conceptual definition of competitive advantage (Sigalas, Pekka-Economou, & Georgopoulos, 2013). This compels Sagalas (2015) to describe the variable as popular but hardly known concept'. This endangers meaningful empirical study of this variable. From the conception, Ansoff (1965), regarded as the first scholar to define competitive advantage opine that competitive advantage is the distinct characteristics of distinct product markets that grant an organization a convincing and robust competitive position. It is near common knowledge that Porter (1985) introduced the concept into strategic management literature. However, the author hardly provides a clear conceptual definition. Instead, discussion advanced on competitive advantage is inclined towards its ability to give higher value to firms' customers. This is attributable to offering lower prices than competition while maintaining same advantages or delivering distinctive values that more than

compensated elevated price (Sigalas et al., 2013). Sigalas and Pekka-Economou (2013) argue that the approach informs on sources of competitive advantage while the second conforms to benefits that accrue from gaining competitive advantage which is advanced by market and strategy led theorists. To this extent, four issues remain vaguely addressed hence require further knowledge fulfillment. These are the concept competitive advantage, causes of competitive advantage and the benefits of gaining competitive advantage to a firm. These informational gaps necessitate the need for more research.

The objective of the research was to determine the effect of competitive advantage on the relationship between SCQM practices and performance of private hospitals in Kenya

Literature Review

Supply Chain Quality Management and Competitive Advantage

There is empirical data and theoretical explanation that support positive and significant effect of SCQMPs on better competitive position of organizations (Chagooshi et al., 2015). Globally, it is a common knowledge among practitioners, researchers and management that competition in a market is now among the supply chains and not individual organizations (Fawcett et al., 2006). There is significant correlation between a group of firms that commit to strategic quality, integrate their supply chains and share information and competitiveness of the firms. The competitiveness of an organization is used to measure the organization's competitive advantage (Sigalas & Pekka-Economou, 2013). Firms that adhere to high quality have the

potential to acquire competitive edge. Success in the implementation SCQM practices mitigates common sense quality among all the participants in the supply chain devoid of restrictions by the organizational boundaries. Simultaneous pursue of SCM and TQM potentially position firms at a higher competitive rank than peers in an industry (Li et al., 2004; Chagooshi et al., 2015).

Social network theory in addition to relational view underscore the vision that networking and collaborations with customers, suppliers and other prime stakeholders to through SCQM practices craft competitive advantage which explains the variances in performance among organizations (Cheng, 2017). As pointed out by Ritala and Ellonen (2010), other theories like resource-based view and industrial organization economics strongly support the view that individual organizations gain competitive advantage by utilizing interfirm cooperation. Sagalas (2015) explain that the networks formed by partner firms foster in the neutralization of (Placeholder1)competitor activities and exploitation of unique market opportunities to define competitive advantage. Organizations that focus on their customers, manage supplier relationships, share information with stakeholders, manage their internal processes well, adopt postponement strategy and efficiently coordinate supply chain tend to constrain competitor activities and improve access to niche markets. Chagooshi et al. (2015) conducted study which confirmed this narrative. They operationalized competitive advantage as differentiation, flexibility, delivery dependability, reduced cost, time to market and innovation. They

employed conical correlation for data analysis. Elshaer and Augustyn (2016) conducted a study which ascertained that upholding good quality standards in daily operations is undisputed means to become more competitive.

Competitive Advantage and Organizational Performance

Explaining reasons for variance in performance among firms is a pointer to the possibility of such organizations occupying a superior position or competitive advantage among others (Porter, 1985). Organizations that are able to neutralize competitor activities and exploit niche markets realize increased market share (Newbert, 2008). The increased market share and customer satisfaction enable these firms to generate sufficient revenue to address environmental and societal needs (Kaplan & Norton, 1996). When firms generate competitive advantage from adopting quality along the supply chains, they are able to reduce costs, improve on delivery, efficiency which lead to improved operational performance. The reduced cost of production lowers organizational expenses and improves revenue. These firms ultimately improve the financial aspect of performance. Sound financial position allows these firms to meet their statutory as well as corporate social responsibility obligations. At the same time, financial status grants the organizations inherent the capability to grow and develop.

The link is underpinned by stakeholders' theory. The theory supports the view point that addressing the needs of customers, suppliers, employees, investors, communities, environment and managers

gives the firms competitive advantage that results to long term better performance. This is because networking with stakeholders propels the firms to pursue a common goal of ever improving performance (Freeman, Dmytriiev, & Strand, 2017). As much as SCQM practices enable organizations to competitive better than other in similar business, their ultimate objective is to adequately reward contributions of all key stakeholders (Rouse & Putterill, 2003; Chagooshi et al., 2015). Any management practice like SCQM practices should target all firm stakeholder based on stakeholder theory (Freeman, 2010). Strategic survival at profits among organizations is firmly rooted on rewarding the society which provides labor, infrastructure, security and customers to them making the society the most important stakeholder (Davis et al., 2018; Di Maddaloni & Davis 2018).

However, study findings are mixed. Only senior leadership commitment and supplier engagement was reported to contribute to competitive advantage, there were doubts on how focusing on customers focus and managing employees would cause competitive advantage whereas managing internal processes and information sharing failed yield any competitive advantage. The same study only tested the quality management internal to organizations with no regard to the supply chain alongside addressing just the financial dimension of performance.

Role of Competitive Advantage on the Relationship Between SCQM Practices and Organizational Performance

Mediation accounts for how a predictor variable affects the dependent variable. A significant number of previous studies

have directly or indirectly hinted that competitive advantage is a possible mechanism through which SCQM practices improve organizational performance (Dyer & Singh, 1998; Li et al., 2004; Chagooshi, et al., 2015; Ibrahim et al., 2016). Competitive advantage arises from network tangible and intangible resources that operate in synergy and complement each other. Business premises embrace SCQM practices to augment their network competitive advantage by efficiently integrating their internal and external operations which hypothetically contribute to costs reduction, swifter operations, high quality, flexibility and agility advantages. The competences generated in context of networks breed shared value that guarantee multifaceted sustainable organizational performance. To sustain organizational performance, a firm must uphold competitive advantage by relentlessly exploiting niche market opportunities and neutralizing competitor threats (Sigalas et al., 2013)

Li et al. (2004) performed a study to understand the correlation between SCM, competitive advantage and performance outcome (market and financial). They operationalized as partnership with suppliers, sharing information, relating with customers, postponement. 196 firms were surveyed to obtain data which was analyzed using SEM. The authors established that the variables are closely related among manufacturing firms. The research findings were suggestive of possibility of mediation which was a significant contribution to the debate. However, it is worthwhile to note that, the quality aspect was not addressed. TQM is a valuable internal attribute of

organizational processes whereas SCM addresses the exterior portion of firm's processes. When the management of the two are pursued in tandem studies show that the organizational performance is amplified (Zhong et al., 2016). Also, the study findings hold for the manufacturing sector in USA which is a developed economy and may not be applicable to service sector like in hospitals which is uniquely constituted especially in developing part of the world.

Cadden, Humfreys and McHugh (2013) used series of ANOVA's to analyse data from first moving consumer goods (FMCG) supply chains confirmed mediating effect competitive advantage and moderating role of firm characteristics. Chaghooshi et al. (2015) used conical correlation analyze data to which confirmed that SCQMPs has positive significant impact on competitive advantage. They found out that SCQMPs positively impact on competitive advantage. From the evidence hitherto presented, competitive advantage has some role between the study variables. This role is certainly not clear especially in the context of private hospitals in Kenya. A

single study that seeks to unravel role of each of the variables among private hospitals in a developing nation was necessary for clarity this relationship. A mediating variable (competitive advantage) explains the mechanism through which the independent variable, SCQM practices affects the dependent variable organizational performance (Byrne, 2010).

Conceptual Framework

Based on literature review and theoretical underpinnings, it was proposed that competitive advantage as measured by neutralization of competitor activities and exploitation of market opportunities mediates the relationship between supply chain quality management practices organizational performance. SCQM practices included; supplier quality management, customer focus, information sharing postponement, process management and coordination of supply chain. Organizational performance indicators were financial, market, societal, operational, learning and growth and environmental. This information is shown in the diagram bellow

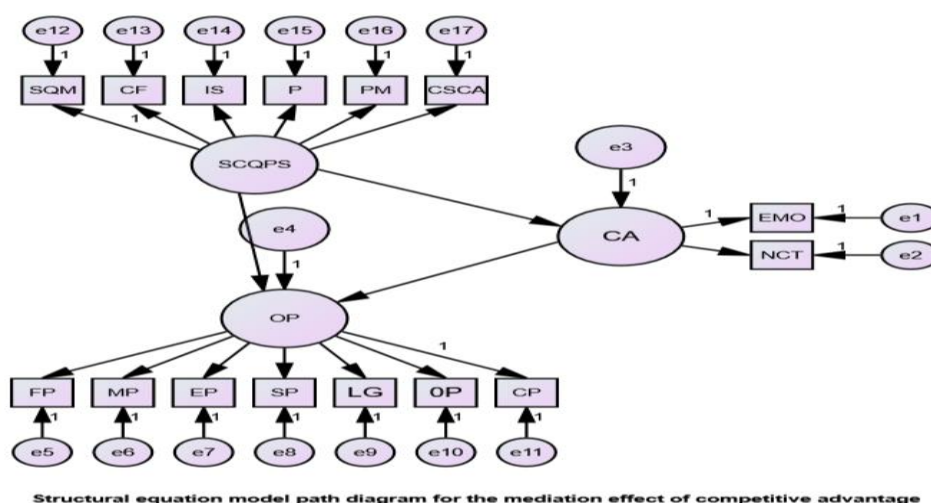


Figure 2.1 Conceptual framework

Hypothesis

From the conceptual framework, the effect of competitive advantage on the relationship between SCQM practices and performance of private hospitals in Kenya was hypothesized as follows:

H₁: Competitive advantage significantly mediates the relationship between SCQM practices and the performance of private hospitals.

Research Methodology

Positivists research paradigm where the universe is viewed as closed system in which one can observe and record empirical data to determine cause-effect relationships conclusively was adopted. Cooper and Schindler (2008) argued that generalizable theoretical models generated through positivism explain and predict outcomes of cause effect relationship. Therefore, optimization techniques were used. Descriptive, cross-sectional survey research was the design of choice. The design was preferred over and above others as it is known to uncover point in time the relationships among variables that was herein investigated (Saunders et al., 2007). The process does not permit control and manipulation of variables of study. The study targeted all private hospital under category C according to National Hospital Insurance Fund (NHIF) which were 158 in number. Structured questionnaires were used to collect data from the person tasked with the responsibility of making drug supply chain decisions based on their skills and knowledge at management level through dropped and later picked or emailed. Reliability and validity tests prior to data analysis. Questionnaires reliability was checked using Cronbach's Alpha where

recording above 0.6, all indicators had a total to item correlation scores of above 0.3, the AVE scores were above 0.5 confirming high composite reliability and content validity was accomplished by developing questionnaires consistent with tools available in literature in consultation with academic experts whose suggestions for modifications were adopted. Further, the factor loading values were above the recommended 0.4 to confirm construct validity. Discriminant validity was tested through heavy factor loading of indicators on the constructs and comparing AVE estimates of latent variable with squared inter-construct correlations associated with the construct (Fornell-Larcker criterion). As requirement for CB-SEM, the model was diagnosed using Shapiro-Wilk test for normality, VIF values for collinearity, Koenker test for homoscedasticity and Durbin-Watson test for autocorrelation (Razali & Wah, 2011). The model met all the recommended thresholds necessary to permit model determination.

Data Analysis And Research Findings

The objective of the study was to determine the effect of competitive advantage on correlation between adoption of SCQMPs and performance of Kenyan private hospitals. Questionnaires were delivered to 156 facilities, response rate of 77.56% was achieved. However, upon scrutiny, eleven (11) questionnaires were found to have significant missing data on crucial performance variables and purged from initial analysis which left a total of 110 fully filled questionnaires. The effective response rate was therefore adjusted to 70.51%. Information contained in Table 4.1 illustrates that a significant proportion of the hospitals had bed

capacity of less than 100, slightly more than six out of ten of the facilities belonging to this category (65.5%), less than a third (27.3%) had bed capacity ranging between 100 and 250, while the capacity of the remaining facilities which were less than one-tenth (7.3%) had a bed

capacity greater than 250. Bed capacity measures the size of the hospitals which can be classified as large, medium and small

Demographic data on the private hospitals was as shown below.

Table 4.1 Bed Capacity

Bed capacity	Frequency	Percentage	Cumulative Percentage
Below 100	72	65.5	65.5
100 – 250	30	27.3	92.7
Over 250	8	7.3	100
Total	110	100	

Source: Primary Research Data, 2019

Table 4.2 presents findings relating to age of the hospitals.

Table 4.2 Age of the Hospital in Years

Age (Years)	Frequency	Percentage	Cumulative Percentage
Less than 10	28	25.5	25.5
10 – 20	47	42.7	68.2
Over 20	35	31.8	100
Total	110	100	

Source: Research data, 2019

Information obtained indicates that about a quarter (25.5%) of the private hospitals were started within the past decade, slightly less than a half of them (42.7%) have been operating for periods between 10-20 years and the remaining a third (31.8%) for more than 20 years. This means that generally, about three quarters of the hospitals (74.5%) indicated to have been operating for more than ten years, a period considered long enough to enable them to have mastered the requisite

business dynamics. Age of organizations is an indicator of beliefs, feelings, persuasions, experiences and intuitions about quality management. To ascertain factorability of the items in the latent constructs, there was need to perform both Bartlett's and Kaiser-Meyer-Olkin (KMO) tests (Kaiser, 1974). KMO measure of sampling adequacy was obtained for all the study sub constructs. For KMO test, all values recorded were above the threshold of 0.6 (Kaiser, 1974). Further Bartlett's

Test of Sphericity indicated that all sub variables had values of chi-square which were significant at $p < 0.001$ (Barlett,

1954). The tests confirmed that items representing the sub constructs could be subjected to factor analysis

Table: 4.4 Kaiser-Meyer-Olkin and Bartlett's Tests

Sub construct	KMO measure	Approx. Chi-Square	df	Sig.
SCQM	.655	66.199	3	.000
Customer focus	.648	49.240	3	.000
Information sharing	.632	18.660	3	.000
Postponement	.627	20.055	3	.000
Process management	.665	64.047	3	.000
Coordination of supply chain activities	.642	41.383	3	.000
Exploitation of market opportunities	.674	35.460	3	.000
Neutralization of competitor threats	.692	32.037	3	.000
Financial performance	.640	77.873	3	.000
Market share	.633	39.920	3	.000
Environmental performance	.661	67.890	3	.000
Societal performance	.681	39.643	3	.000
Learning and growth	.631	45.948	3	.000
Operational performance	.668	26.379	3	.000
Customer perspective	.665	25.748	3	.000

Table 4. 3 Descriptive Statistics for Measurement Scales

Latent constructs	Indicator items	Code	No. of items	Mean	Std. Deviation	Skewness	Kurtosis
Supply Chain Quality Management practices	Supplier quality management	SQM	3	3.3606	.89754	-.034	-.623
	Customer focus	CF	3	3.5818	.75613	.106	-.479
	Information sharing	IS	3	3.4636	.71548	-.227	.322
	Postponement	P	3	3.4212	.71060	.184	-.164
	Process management	PM	3	3.3545	.84867	-.120	-.886
	Coordination of supply chain activities	CSCA	3	3.4667	.75851	.146	.326
Organizational factors	Leadership and commitment	LC	3	3.3667	.81142	-.317	-.076
	Information & communication technology	ICT	3	3.2091	.91634	-.095	-.463
	Trust	T	3	3.4121	.86373	.494	-.286
	Corporate culture	CC	3	3.5333	.76918	.320	-.257
Competitive advantage	Exploitation of market opportunities	EMO	3	3.2455	.70484	-.618	.798
	Neutralization of competitor threats	NCT	3	3.4485	.74664	.099	-.327
Organizational	Financial performance	FP	3	3.3242	.81332	.040	-1.107

I performance							
	Market performance	MP	3	3.3727	.80611	-.002	-.697
	Environmental performance	EP	3	3.5606	.87313	.325	.764
	Societal performance	SP	3	3.5242	.79814	.347	-.409
	Learning and growth	LG	3	3.5303	.77195	.029	-.612
	Operational performance	OP	3	3.4970	.71783	-.159	.310
	Customer perspective	CP	3	3.6697	.64569	.211	-.171
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	Operational performance	OP	3	3.4970	.71783	-.159	.310
	Customer perspective	CP	3	3.6697	.64569	.211	-.171

Source: Primary research data, 2019

Hypotheses Testing, Interpretations and Discussions

Interpretation of the SEM began with an evaluation of the indicators of each of the

three latent constructs; SCQM practices, CA and the performance of private hospitals. Table 4.53 presents a summary of the results of the evaluation.

Table 4. 4 SCQM Practices, Competitive Advantage and Performance Findings

Latent Variable	Indicators	Loadings	Indicator Reliability	T Statistics	p-values
Supply Chain Quality Management Practices	SQM	.997	.714	11.564	.000
	CF	1.016	.669	12.293	.000
	IS	.864	.755	9.816	.000
	P	.799	.671	8.639	.000
	PM	1.195	.716	13.872	.000
	CSCA	.980	.639	11.235	.000
Competitive Advantage	EMO	.963	.674	19.224	.000
	NCT	1.037	.670	20.688	.000
Organizational Performance	FP	.970	.739	9.238	.000
	MP	1.102	.625	12.182	.000
	EP	1.197	.723	12.283	.000
	SP	.994	.605	10.010	.000
	LG	1.085	.651	13.061	.000
	OP	.875	.630	9.616	.000
	CP	.776	.610	9.371	.000

Source: Primary research data, 2019

From Table 4.53, the observation is that the results obtained confirm that the individual reliability values of all the three constructs in the model are greater than the 0.4 threshold. However, it is clear that a good number of the values are greater than the recommended 0.7 (Wong, 2013). With the favourable outcomes, it is in order to

ascertain that all the outer model loadings are sufficiently significant.

To establish internal consistency reliability, composite reliability scores of the latent constructs obtained from the SEM output was assessed. Table 4.54 presents the findings.

Table 4.5 Composite Reliability, Cronbach’s Alpha and AVE of Latent Constructs

Latent Variable	Composite Reliability	Cronbach’s Alpha	AVE	Square root of AVE/DV
SCQM practices	.763	.832	.417	0.646
Competitive Advantage	.758	.725	.427	0.653
Organizational performance	.781	.840	.474	0.688

Source: Primary research data, 2019

Findings show that the composite reliability scores for all the latent variables were greater than the recommended minimum value of 0.6 (Bagozzi, 2010). Evidently, all the Cronbach’s Alpha values for the constructs were above the 0.7 threshold (Hair Jr, Matthews, Matthews & Sarstedt, 2017).). This is an indication of a good level of internal consistency in all the three latent variables.

Construct validity was checked by testing convergent validity and discriminant

validity based on AVE of each latent variable. Findings illustrated that the AVE figures for the three latent variables are below the acceptable 0.5 maximum (Hair et al., 2017). Due to this observation, convergent validity was again verified by extracting the factor and cross loadings of all items to their particular latent constructs where the significance of the p-values was analysed. Table 4.55 presents summary of confirmatory factor analysis results.

Table 4.6 Confirmatory Factor Analysis Results

Indicators	SCQM Practices	Competitive Advantage	Organizational Performance	p-values
SQM	.755	.457	.319	.000
CF	.762	.581	.338	.000
IS	.685	.469	.130	.000
P	.638	.406	.112	.000
PM	.799	.638	.112	.000
CSCA	.733	.537	.368	.000
EMO	.772	.879	.273	.000
NCT	.797	.893	.317	.000
FP	.439	.276	.663	.000
MP	.577	.229	.759	.000
EP	.581	.798	.762	.000

SP	.479	.237	.692	.000
LG	.610	.269	.781	.000
OP	.459	.297	.677	.000
CP	.446	.258	.668	.000

Source: Primary research data, 2019

Data obtained show that the constructs items loadings and cross loadings for each

of the individual item and their p-values which are statistically significant hence confirm convergent validity.

Table 4.7 Fornell-Larcker Criterion for testing Discriminant validity between SCQM practice, Competitive Advantage and Organizational Performance

Variable	DV	Discriminant Validity Matrix		
		SCQM practices	Competitive Advantage	Organizational performance
SCQM practices	0.646	0.646		
Competitive advantage	0.653	0.417	0.653	
Organizational performance	0.688	0.624	0.652	0.688

Source: Primary research data, 2019

Discriminant validity was also verified by comparing discriminant value with the inter construct correlation. This was precisely conducted to ascertain that the latent constructs SCQMP, CA and OP have no significant relationship. The validation is accomplished by relating discriminant value (DV) of each of latent variable with the the inter-construct correlations from AMOS output (Byrne, 2010). Discriminant value for SCQM practices is 0.646. This value is larger compared to inter construct correlation value between the variable and competitive advantage (0.417); and that of organizational performance (0.624). The discriminant value for competitive advantage was found to be 0.653. The value is larger than the inter construct correlation value between competitive advantage and SCQMPs (0.624). It is also

greater when related with inter construct correlation value between the same variable and organizational performance (0.652). Similarly, the DV of organizational performance (0.688) is greater than the inter construct correlation value between the variable and SCQM practices (0.624); and between the variable and competitive advantage (0.652). This confirms discriminant validity.

Measurement model fitness was evaluated based on Chi Square test of goodness fit (χ^2) insignificant at 0.05, GFI ranging between 0 and 1 and best value being 0.90, RMSEA with values ranging between 0.0 and .08 in line with the recommendations of Barret (2007) and SRMR which should range between 0.0 to 1.0. However, values of a well-fitting model should be below 0.05 (Diamantopoulos & Siguaw, 2000).

Results in Table 4.57 show that; χ^2 was insignificant and equivalent to 3.485 at 189 degrees of freedom, SRMR for the data was equivalent to 0.044 and RMSEA was significant at 0.0413. All the three model fitness indices confirmed that the model had acceptable fits. GFI reading of

0.740 was below confirmed model fitness parameters (Barret, 2007; Hu & Bentler, 1999). The lower GFI figure is due to sample size of 110 respondents. To obtain better values, sample size should be closer to 200 (Randhawa & Ahuja, 2017).

Table 4. 7 Model Fit Statistics for Mediating Effect of Competitive Advantage on the relationship between SCQM Practices and Organizational Performance

Model	χ^2	Df	SRMR	RMSEA	GFI
Default model	3.485	189	0.044	0.0413	0.740

Source: Primary research data, 2019

After evaluating model fitness, the next step was to interpret the regression coefficient for the path diagrams. Figure 4.8 presents the standardized estimates for

the existing relationship between the variables in the path diagram. From Table 4.58, the standardized regression weights for the existing relationship between the variables can be viewed.

Table 4. 8 Effect of Competitive Advantage on SCQMP and OP of Private Hospitals in Kenya

			β	SE	T	P
Competitive Advantage	<---	SCQMP	.417	.099	4.791	.000
Organizational Performance	<---	SCQMP	.427	.067	6.211	.000
Organizational Performance	<---	Competitive Advantage	.474	.059	6.894	.000
Indirect			.319	.043	7.482	.000

Source: Primary research data, 2019

From Figure 4.1 SCQM practices, competitive advantage and the interaction term accounted for 58% of the change in organizational performance. Competitive advantage explained 17% of the variation. Table 4.58 indicates that impact of SCQM practices on organizational performance is positive and significant ($\beta = 0.427$, $t = 6.211$, $p < 0.001$). Similarly, it was established that CA has a positive and significant effect on the performance of private hospitals in Kenya ($\beta = 0.474$, $t = 6.894$, $p < 0.001$). Competitive advantage

was positively and significantly related to SCQM practices ($\beta = 0.417$, $t = 4.791$, $p < 0.001$). The indirect effect of SCQM practices on the performance of private hospitals was also positive and significant ($\beta = 0.319$, $t = 7.482$, $p < 0.001$). Findings therefore established that CA has partial mediation effect the relationship between SCQM and OP of private hospitals in Kenya. However, since the direct effect is significant as well ($\beta = 0.427$, $t = 6.211$, $p < 0.001$), the mediation is partial.

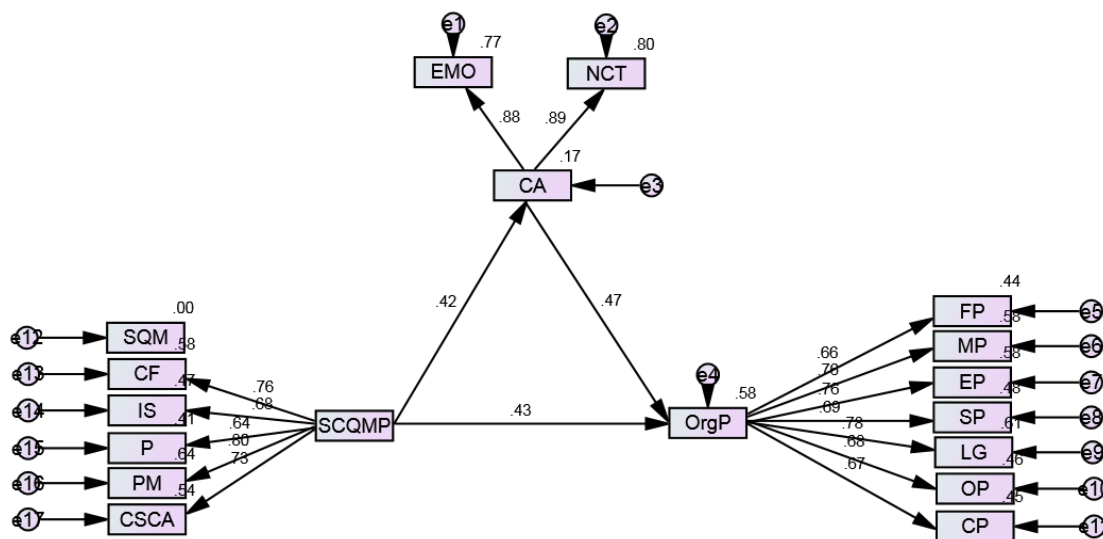


Figure 4.1 Structural Equation Modelling Path Diagram for the Mediating Effect of Competitive Advantage on the relationship between SCQM Practices and Organizational Performance

The hypothesis predicted a significant mediating result of CA in the relationship between SCQM and the OP of private hospitals. CB-SEM and analysis via hierarchical regression were used to test this hypothesis. The process entailed first

confirming reliability and validity of the outer and inner models. Findings illustrated that all the outer model loadings were significant, the reliability of all the indicators being greater than the minimum threshold of 0.4 (Wong, 2013). Model fit statistics were used confirmed model fitness were; Chi Square test of goodness fit (χ^2),

GFI and SRMR. Results in Table 4.55 show that χ^2 was insignificant and equivalent to 3.485 at 189 degree of freedom against expected insignificance at 0.05; SRMR for the data was equivalent to 0.044 against

expected value below 0.05, RMSEA was significant at 0.0413 against the threshold of 0.0 to 0.08 while GFI was equivalent to 0.740 which was within the range of between 0 and 1. The values therefore confirm that the model meets the threshold for measurement of model fitness (Barret, 2007; Hu & Bentler, 1999).

The model with SCQM practices and competitive advantage as the mediating variable term accounted for 58% of the change in organizational performance of which competitive advantage explained 17%

of the variation. From the findings, it was established that the effect of SCQM practices on organizational performance is positive and significant ($\beta = 0.427, t = 6.211, p < 0.001$). Similarly, it was established that SCQM practices was positively and significantly related to competitive advantage ($\beta = 0.417, t = 4.791, p < 0.001$). Competitive advantage proved to positively and significantly affect performance of private hospitals in Kenya ($\beta = 0.474, t = 6.894, p < 0.001$). The indirect impact of SCQM practices on the performance of private hospitals was also positive and significant ($\beta = 0.319, t = 7.482, p < 0.001$). The inner model suggests that the hypothesized path relationship among the latent constructs in the model produced the findings in Table 5.1.

Table 5.1 Significance of Path Coefficients in the Model

Hypothesized path relationship			Path coefficient	p-values
SCQM Practices	->	Organizational Performance	.427	.000
SCQM Practices	->	Competitive Advantage	.417	.000
Competitive Advantage	->	Organizational Performance	.474	.000
Indirect Effect			.319	.000

Source: Primary research data, 2019.

Findings therefore established that since the effect of SCQMP on organizational performance remain significant when competitive advantage is added, it thus can be concluded that competitive advantage partially mediates the relationship between SCQMP and OP of private hospitals in Kenya. Therefore, hypothesis 3 which predicted that competitive advantage

significantly mediates the relationship between SCQM practices and the performance of private hospitals is supported.

Past studies have demonstrated that creation of competitive advantage upon simultaneously pursuing TQM and SCM (Li et al., 2004; Chagooshi et al., 2015 Ibrahim et al., 2016; Sharma & Modgil, 2020).

Similarly, relational view posits that networking and collaborations with customers, suppliers and other prime stakeholders through SCQM practices craft competitive advantage which explains the variances in performance among organizations (Dyer & Singh, 1998; Kaynak & Hartley, 2008). Sagalas (2015) explain that the networks formed by partner firms aid in the neutralization of competitor activities and exploitation of unique market opportunities hence define competitiveness, competitive advantage and higher firm performance.

As much as the SCQM practices may lead to competitive advantage, the ultimate objective of a firm is to reap higher performance benefits to all key stakeholders (Rouse & Putterill, 2003; Chagooshi et al., 2015). Any management practices like SCQM practices should target all firm stakeholder based on stakeholder theory (Freeman, 2010). For organizations to sustainably succeed in the unforeseen future, they must involve the society as the provider of labor, infrastructure, security and customers to them making the society an all-time critical stakeholder (Davis et al., 2018).

Summary, Conclusions, Implications And Recommendations

The model tested comprised of latent exogenous term, SCQM practices; a latent proposed mediator, competitive advantage and an endogenous latent construct, organization performance. Findings showed that the path between SCQM practices and organizational performance was positive and significant, the path between SCQM practices and competitive advantage was

positive and significant and the path amid competitive advantage and organizational performance was also significantly positive. The indirect path was also significant. The interpretation is that a positive and significant relationship exists between SCQM practices and organizational performance. Also, a positive significant is confirmed between SCQMPs and competitive advantage. There is as well significant positive in the relationship between the variable and dependent one. The relationship between SCQM practices and organizational performance with competitive advantage added as a mediating variable is also positive and significant. The verdict is that competitive advantage is a partial mediating variable in the link between SCQM practices and the performance of private hospitals in Kenya.

The study provided empirical evidence that competitive advantage partially mediates the relationship between SCQM practices and organizational performance among private hospitals in Kenya. the study adds to knowledge by providing the evidence on conceptualization and measurement of competitive advantage as an intervening variable as stipulated by Sigalas and Pekka Economou (2013). This study measured competitive advantage using the sub variables of extent to which an organization exploits market opportunities and neutralize competitor threats as prescribed in literature. The study established that two sub variables of competitiveness and competitive advantage explain the mechanism through which SCQM practices impact on organizational performance as hinted by past researchers (Dyer & Singh, 1998; Li et al.,

2004; Chagooshi et al., 2015; Ibrahim, Elshaer et al., 2016). Theoretical prediction using stakeholder theory, relational view and social network theories that interconnectedness and interactions of the stakeholders through implementation of SCQM practices brings about competitive advantage that improves organizational performance was tested and confirmed empirically (Lahouel et al., 2014). The study confirmed that networks formed through inter-organizational linkages are sources of relational rents and competitive advantage as postulated using relational view (Eloranta & Turunen, 2015).

To achieve improved and sustained performance, this study found that firms need to measure competitive advantage validly and reliably as suggested by Sigalas and Pekka Economou (2013). This is achieved when firms determine competitiveness by measuring the extent to which the organization exploits market opportunities and neutralize competitor threats. Again, being a dynamic variable, this process should be continuous in organizations. The study recommends that firms should always seek to gain competitive advantage. This is supported by empirical evidence that competitive advantage partially, significantly and positively mediates the relationship between SCQM practices and organizational performance. The study only focused on private hospitals in Kenya as per National hospital Insurance Fund classification. This excluded public hospitals and not for profit organizations which tend to serve majority of the Kenyan population and therefore could give much more information on the

subject matter given the variation in their operational variation. In addition, the study was restricted to Kenya and therefore is prone to lack of external validity. It would therefore necessary to include data from other countries in the region or across the globe so as to increase generalizability of the research findings.

In this study cross-sectional census survey was adopted. Given the dynamic nature of variables such as organizational performance and competitive advantage, the findings have the potential to change with time. Also, the business environment varies with time, customer demands, technology evolution and context. Quality is also known to take evolutionary pathway; as such implementation of SCQM practices is most likely to follow the same trend. In this regard, future studies need to consider the option of longitudinal research to assess the alterations in the SCQM practices implementation and its relationship with competitive advantage and organizational performance in the course of time. Additionally, the method may reveal changing patterns of tool adoption. This study was a quantitative one with positivist philosophical orientation aimed at verifying conceptual framework developed from theory and literature review. To overcome the shortcoming of testing the known, future studies should adopting critical realism which tolerates conducting a qualitative study which would enable identification of other dimensions of SCQM practices, competitive advantage and organizational performance which may not be adequately captured through a quantitative survey alone.

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