ISSN: 2617-4138
DOI: 10.32898/ibmj.01/8.3article01
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INTERNATIONAL JOURNALS OF ACADEMICS & RESEARCH
(IJARKE Business & Management Journal)

The Influence of Supplier Relationship Management on the Performance of Level Five County Referral Hospitals in Kenya

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Abstract

The purpose of the study was to ascertain supplier relationship management on performance of level five county referral hospitals in Kenya. Transaction cost theory guided the study. Cross-sectional census strategy of mixed methods research using random sampling on 47 county referral hospitals in Kenya with a target population of 150 respondents on a sample size of 109 was employed. Procurement, finance and medical staffs were units of remark. The study piloted twelve (12) questionnaires (10 % of sample) to test validity and reliability of the research instrument. Data on 82 questionnaires was transformed to interval scale, analyzed using exploratory factor analysis in developing multiple linear regression equation model. The final overall model was interpreted using *F*-test statistics and R^2 value. The overall final model results were; *F* statistic (5, 76) = (12.112), against critical *F* value (2.49), and general rule of thumb (F>2.5), R^2 (.443). This upshot suggests a substantial relationship amid all moderated independent variables on dependent variable. Future research be on suppliers' characteristics and behaviors on supplier visibility in pharmaceutical supply chains in Kenya, route planning and scheduling on sourcing optimization in county referral hospitals in Kenya, communication structures on performance of county referral hospitals in Kenya, order systems on performance of county referral hospitals in Kenya, and closed loop emended operations on performance of reverse logistics sourcing in referral hospitals in Kenya.

Key words: *Performance, Policies, Supply Chain Supply Chain Management, Referral Hospitals, Kenya*

1. Introduction

The concept of supply chain management is gaining more prominence among organizations as they strive to remain competitive in today's global markets that are ever more dynamic. Supply chain practices are becoming increasingly central to improved performance and value creation within organizations. Focus is now more on networked business operations that require heavy investment in supply chain management practices. It is argued that through improvements targeting the supply chain, firms as well as customers and partners stand to reap more benefits (Bahrami, Shokouhyar & Seifian, 2022).

Global pandemics have been present and plagued humanity since the early days. Each pandemic caused both economical and societal effects. A pandemic is defined by the World Health Organization (WHO) as a worldwide spread of a new disease (Queiroz, Ivanov, Dolgui & Fosso, 2022). These were all pandemics that threatened humanity. Supply chain is of great importance in the healthcare industry's is the backbone of the healthcare industry (Raj *et al*., 2022).

The quality of healthcare delivered is largely dependent on the availability of medical suppliers, at the right time and at the right quantities (Raj *et al*., 2022). For performance improvement as well as to stay competitive in the market, the most important and valuable way is to have efficient supply chain management. Through this way, the firms remain competitive in the market since there is a great competition of SCM among organizations (Wandera, Namusonge & Sakwa, 2022b).

In the era of early 1990's, the global market came under great competition in order to provide right product or services at the right time and right place. The textile industry organizations all over the world have got competitive now in local market and the work tasks should be accomplished to increase overall effectiveness of the textile firms and their supply chain. Thus, for this purpose, now the textile organizations have to understand the concepts and practices of supply chain management to increase competitiveness and overall profit (Hussain *et al.*, 2018). In the healthcare sector, a SC includes the movement of various goods through the involvement of different stakeholders to supply goods in an appropriate manner and provide good quality and the right quantity to accomplish the suppliers' requirements (Raj *et al*., 2022).

2. Statement of the Problem

Kenya's government health policy of universal health cover aims to provide equitable, affordable and quality healthcare services to all citizens, focusing on achieving highest possible health standards, guided by Kenya health policy 2014-2030 and poised by universal health coverage policy 2020-2030 (MoH, 2022). This policy emphasizes primary healthcare, plummeting deaths from communicable and non-communicable diseases in addressing emerging health challenges (MoH, 2022). The universal health coverage policy 2020-2030 aims to ensure all Kenyans have access to essential, quality health services without financial hardship (Grennan *et al*., 2021). This allows hospitals focus on firming access, ensuring quality, protecting Kenyans from financial risks of illness and strengthening responsiveness of health system (Okello *et al*., 2020). Thus, to achieve this, seamless flow of drugs and other essentials is vital (Chopra & Meindl, 2021).

Frequent stock outs of essential medicines in public health facilities diverts patients visiting these facilities by getting affordable and otherwise subsidized medicines to private health facilities and pharmacies (Demiray, Ceylan & Bulkan, 2024). The cost of healthcare and particularly of medicines in such facilities is high and most of the time is excessive (Demiray *et al*., 2024). Counties have been allocating a major proportion of their budgets towards health docket, but huge part of health department's allocation up to more than 90% in some cases, goes towards recurrent expenditure, where in Bungoma county as, in 2018/2019 financial year, allocated about 40% of its budget to the department of health and sanitation, far way above recommended 15% as per Abuja declaration, 2001 (MoH, 2022).

About 97 percent of this was 4, however, allocated to recurrent expenditure, leaving a paltry 3% for development including purchase of critical medicines (MoH, 2022). Lack of medicines in public health facilities is common in current devolved system in most counties in Kenya and in Bungoma County (Okello *et al*., 2020). Most health facilities experience medicines stock outs from time to time, making it incredibly difficult for to continue providing health care, where patients are often required to purchase drugs from private pharmacies are costly due to high markups in supply chains (Ongeri & Osoro, 2021).

In 2017, Bungoma county referral hospital, the main public health facility in the county was hit by an acute shortage of medicines after KEMSA cut off supply over a Ksh 21 million debts (MoH, 2022). This shortage included very basic medicines such as painkillers, anti-malaria medicines and other medical suppliers (Ahmed, Eticha & Ashenef, 2024). Counties have continued to owe KEMSA huge amounts of money for medicine supplied (MoH, 2022). In January 2020, as counties owed KEMSA about Ksh 2.8 billion, Bungoma County still has KSh 84.9 million debts (MoH, 2022).

According to data from global burden of diseases (GBD), most pneumonia deaths occurred in Kakamega 818, Meru 674, Nakuru 593, Mandera 566 and Homabay 534. These deaths were attributed to weak commodity management system leading to frequent shortage of drugs that treat pneumonia in children therefore causing death entails strategic form of procurement (Ahmed *et al*., 2024). Non-strategic vaccine supply and supply are delaying and limiting the impact of vaccine (Okello *et al*., 2020).

3. Objective of the Study

The main objective of the study was to determine the influence of supplier relationship management on the performance of Level Five county referral hospitals in Kenya.

4. Literature Review

4.1 Theoretical Framework

This study adopted the transaction cost economic theory. Transaction cost economics theory offers an alternative approach to the traditional mainstream economics through a lens of choice (Mikko & Mahoney, 2020). This alternative approach is to view the nature of the firm and its boundaries via the lens of "contract" (Valentinov & Iliopoulos, 2024). In collaborative relationship has been found that asset specificity and environmental uncertainty positively affect an intention for long-term orientation between SC partners (Valentinov & Iliopoulos, 2024). The underlying assumption of the theory is that there is a transaction cost in any supply chain interaction (Dza *et al*., 2023). This is because of the assumptions of bounded rationality and opportunistic behavior, and established the mediating effect dairy board through their policies, regulations, and standards on performance of dairy processing firms. It also established whether quality control measures are understood by milk suppliers and its effect to the performance of dairy processing firms (Mikko & Mahoney, 2020).

Based on the classical economics theory, it is assumed that humans have perfect rationality of their behaviors, thus bounded rationality is viewed as source of transaction costs because all factors cannot be considered in the decision-making process is expected that suppliers may deliver inferior goods if they know that their clients cannot detect the difference (Mikko & Mahoney, 2020). The theory contributed much to the study as it was established that a dairy processing firm has a department for detecting quality aspects and if influences performance of the firm, and has been applied to understand the behaviour in supply chain collaboration and its impacts on supply chain relationships and performance (Valentinov & Iliopoulos, 2024). Hence, TCE is considered to fit with nature of supply chain management research and has shown that lower transaction costs favour outsourcing and higher transaction. Furthermore, costs favour in-house operations (Mikko & Mahoney, 2020).

As an alternative for firm or market governance, collaboration arises as one of hybrid governances' forms reduce transaction costs of factors as opportunism and monitoring activities/external uncertainty (Wandera *et al*., 2022a). For this study the TCE theory implies that dairy processing firms adopt supply chain decision synchronization gain competitive gain compared to others. Transaction cost theory was thought to be relevant for this study to understand effect of supplier relationship management on performance of level five counties hospital in Kenya, hence it giving theoretical background for this study.

4.2 Empirical Review

Benah and Li (2020) define supplier link management as long-term relationship amid firm and its suppliers. Further, buyer-supplier relationship, oriented towards quality management, tends to be very close, based on long-term common interests. According to supply chain experts, SRM is comprehensive design of defining what they demand from a supplier and managing the connectivity between the companies to reach the required necessities (Matunga et al., 2021). This aids bridge the gap between the organization and the end-user. Numerous firms face snags within their network chains, resulting in loss of business. It is recommended that such firms find and implement Supplier relationship management practices to ramp up their supply chain efficiency (Matunga *et al*., 2021).

Ongeri and Osoro (2021) defined SRM as a process involved in managing preferred suppliers and finding new ones whilst reducing costs, making procurement predictable and repeatable, pooling buyer experience and extracting benefits of supplier partnerships. While for certain transactions self-centered or discrete relationships, typically categorized as arm's length appropriate for others, more collaborative relationships may be appropriate.

In other studies SRM include arms-length transactions, partnerships, just in time (JIT), strategic alliance and outsourcing/subcontracting. SRM is the systematic, enterprise-wide assessment of suppliers' assets and capabilities in view of the organizations overall business strategy (Matunga *et al*., 2021). SRM helps determine what activities to engage in with different suppliers, and planning and execution of all interactions with suppliers in a coordinated fashion across relationship life cycle to maximize the value realized through those interactions (Wandera *et al*., 2022a). The focus of SRM is to develop two-way, mutually beneficial relationships with strategic supply partners to deliver greater levels of innovation and competitive advantage than could be achieved by operating independently or through a traditional, transactional purchasing arrangement (Lee & Kim, 2021). Shukla in 2016 concurred with steps when his study identified the steps as identifying suppliers, soliciting information from suppliers, setting contract terms, negotiating with suppliers and evaluating suppliers. Supplier management plays an important role in the reduction of costs and the optimization of performance in industrial enterprises (Wandera *et al*., 2022a).

Supplier management is comprehensive approach to managing an organization's interactions with the firms that supply the products and services it uses as a sourcing policy-based design of strategic and operational procurement processes as well as the configuration of the supplier management (Chopra & Meindl, 2021). According to Kosgei and Gitau in 2016 supplier relationship management a full approach to managing an enterprise's interactions with organizations that supply the goods and services it uses SRM includes both business practices and software and is part of the information flow component of SCM (Wandera *et al*., 2022a).

Geoffrey *et al*. 2019 investigated the effects of supplier relationship management on firm performance in Kenya using descriptive survey design to establish to which extent the independent variables affected firm performance in state corporations in Kenya. Both quantitative and qualitative data were used in the study. The sample size for the study was 80. The data were analyzed using SPSS version 23 and Excel 2016 to obtain quantitative measures of the study. The study of the findings indicates that supplier evaluation, collaboration trust, and supplier development had a positive statistical relationship on procurement performance in state corporations in Kenya.

The study recommends more stringent measures to ensure the contractual obligations of suppliers are met (Kimwaki *et al*., 2022). Amoako-Gyampah *et al*. 2019 examined moderated-mediation relationships between SRM, operational flexibility, ownership structure, and firm performance (FP). The study was conducted in Ghana. The researchers distributed 250 questionnaires to the respondent, and a total of 185 were returned. The questionnaires were distributed to firms, a student in the supply chain and operations management department, and students pursuing an executive MBA program at a national university in Ghana. The study found operational flexibility capability mediates supplier relationship management on firm performance link and moderated mediated analyses show that SRM's influence on firm performance is more vital for locally owned firms (domestic)than foreign-owned firms, indicating that domestic firms stand to gain more from investments in SRM than firms with foreign ownership (Wandera et al., 2022a).

Adesanya et al. (2020) explored how tobacco-manufacturing companies can improve sustainability through effective supplier relationship management (SRM). The research used a single case study of a multinational tobacco company. Semi-structured interviews were conducted with respondents from the firm who are acquainted with sustainable SRM in the tobacco lobby and are using various techniques to enhance sustainability performance. The studies found emphasize significance of a procurement team's ability to collaborate with other functional units in incorporating green SRM.

ISSN: 2617-4138
DOI: 10.32898/ibmj.01/8.3article01
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4.3 Conceptual Framework

Conceptual framework refers to a visual or written relationship amid various variables often derived from one or more theories and traces the input-process-out put paradigm of the study (Saunders *et al*., 2024). Singh (2021) affirms that conceptual framework is the logical conceptualization of the entire research project. A conceptual framework is the total, logical orientation and associations of anything that forms underlying thinking, structures, plans and practices and implementation of your entire research project. It comprises thoughts on identification of research topics, problem investigated, the questions asked, literature reviewed, theories applied, methodology used, procedures and instruments.

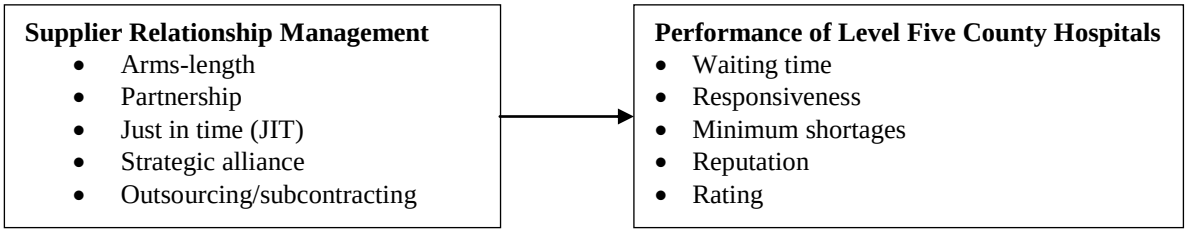


Fig. 1: Conceptual Framework

5. Research Design

The study adopted a cross sectional census design to justify the relationship amid independent and dependent variables using qualitative and quantitative methods (Creswell & Creswell, 2022). Cross sectional survey method involves analysis of data gathered from a population (Sekaran & Bougie, 2020). This choice is suitable as it utilizes questionnaires as a tool for collecting data by extensively testing analysis of relationships amid variables (Wandera *et al*., 2022b). Cross-sectional survey design applies to where data collected on entire study population at a single point in time (Saunders *et al*., 2024). These designs have two distinctive features: no time dimension and a reliance on existing differences rather than change following intervention and only measure differences amid among a variety of people, subjects or phenomena rather than change (Sekaran & Bougie, 2020).

The population for this study is all level five referral hospitals in Kenya, whilst the target population is all county referral hospitals in Kenya (Sekaran & Bougie, 2020). County referral hospitals were chosen as the unit of analysis (focus of study) as the sector exhibits strong elaborate sourcing best practices in supply chain management relevant to academia (Wandera et al., 2022b). The census research design was applied as the sample was near 100 respondents (Saunders *et al*., 2024). These respondents were further redistributed proportionally amid counties. Likewise, this study employed non-probability sampling technique in selecting respondents (Sekaran & Bougie, 2020). This technique was appropriate in collecting data as all study respondents had an equal chance of being designated (Saunders *et al*., 2024). Therefore, the choice of census design and use of non-parametric sampling technique became appropriate by reliably executing a pilot test at 5 % significance level (Ayiro, 2021).

Questionnaires were chosen as the main data collection instrument. Primary data was collected using questionnaires from selected heads involved in supply chain management operations in 47 county referral hospitals in Kenya. Questionnaires were divided into two sections; section addressed democratic information and section B assessed supply chain management. Open and closed-ended questionnaires, interview and observation schedules were main instruments applied in the collection process (Creswell & Creswell, 2022). Sekaran and Bougie (2020) further accentuate that open-ended questions are applied in getting views on given incidents such as socio-demographic information and other aspects on each variable gathered by field notes. On the other hand, closed-ended questionnaires provide clear analysis of scenarios that guided answers to quantitative (variables) questions (Creswell & Creswell, 2022). Secondary data is data already available from diverse sources and has been collected, and analyzed (Ayiro, 2021). This data was gathered from journals, books and online sources (Saunders *et al*., 2024). Further, other authorities accentuate that secondary data is normally applied when validating findings from erstwhile data collected using questionnaires or other techniques (Field, 2024).

This is the extent to which a statistic is without bias and consistently measure across time by examining internal homogeneity of a variable by Cronbach's alpha or intra-class coefficient (ICC) tests (Field, 2024). The study used Cronbach's alpha in measuring internal consistency on one-dimensional data (Hardle *et al*., 2024). Statistics label Cronbach's alpha standardized reliability co-efficient values of 0.9 are excellent, 0.80 is good, 0.7 is acceptable, and 0.6 is poor and whilst 0.5 is termed unacceptable (Singh, 2021). To ensure findings are reliable, a pilot test was carried out on four (4) private referral hospitals in Kenya using ten (12) questionnaires (10% of sample size (109) using Cronbach's alpha test. The results were; supplier relationship management had 0.747, transport management 0.913, information sharing 0.896, inventory management 0.912, government and hospital policy 0.902 and performance 0.935. Conclusively with an average Cronbach's Alpha of 0.896 (good) on six (6) items. These scores signify constructs result having a strong internal consistency amid measured variable items (Creswell & Creswell, 2022).

ISSN: 2617-4138
DOI: 10.32898/ibmj.01/8.3article01
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The data gathered from the questionnaire will be edited to ensure completeness, consistency, and accuracy. The data collected was transformed into a form appropriate for manipulation and analysis. The data gathered from the questionnaire were edited to ensure completeness, consistency, and accuracy. Data collected was analyzed by Statistical Package for Social Sciences (SPSS) version 26. In analyzing the data, tables which include distribution and percentage were used as analytical tools. This study established a multiple linear regression equation that explained the relationship between supply chain management and the dependent variable (Yin, 2017). This relationship derived a link between independent variables on the dependent variable by outlining a multiple linear regression equation as listed in the model.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_{12} + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \varepsilon,$$

Where

Y = Performance of level five hospitals in Kenya
β_0 = Constant
β_{1-4} = coefficients of the independent variable
X_{1-5} = Supplier Relationship Management factors,
ε = the error

6. Research Findings and Results

One hundred and nine (109) questionnaires were distributed to employees working for county level five referral hospitals in Kenya, only 82 questionnaires were adequately filled signifying a 75.2% response rate depicted in Table 1 (Kline, 2023). This rate is deemed fitting as 75% is rule of thumb minimum response for any academic study (Ayiro, 2021).

6.1 Descriptive Statistics for Performance

Respondents were presented with twenty-five (25) opinion statements as indicators for measuring the performance on a five-point Likert scale in Table 1.

Table 1: Descriptive Statistics for Performance Items

Opinion statement	Mean	Std. Dev
Our hospital uses responsiveness measure on the performance	2.77	1.308
Our hospital is responsive to our customers' requests	2.73	1.267
Our hospital responsiveness aids in managing our suppliers relationships	2.78	1.277
Technology has enabled our hospital realize its objectives	3.02	1.276
Our hospital sufficiency in stock has developed our relations	3.02	1.276
Our hospital transport system has made our services robust	3.07	1.255
Our government has made our supply systems resilient	3.41	1.465
Our hospital uses reputation in measuring performance	2.71	1.347
Reputation of our hospital systems has resulted in good relations with our customers	2.62	1.302
Our government support has made our hospital have good reputation	2.83	1.205
Our hospital transport network has made our services robust	2.96	1.300
Our services have made our the have good relations with partners	3.37	1.401
Our hospital uses hospital ranking to measure hospital performance	2.83	1.456
Our technology is well ranked among hospitals	2.80	1.494
Our hospital transport system is reliable	2.78	1.474
Our hospital stock availability has made our hospital stable	3.36	1.425
n=153		

Twenty-four-point four percent (24.4%) of respondents agreed that "Our hospital uses responsiveness measure on the performance"(M=2.77,SD=1.308).Twenty-nine point three percent (29.3%) of respondents disagreed that "our hospital is responsive to our customers' requests" (M=2.73, SD=1.267).Thirty-two point nine percent (32.9%) of respondents disagreed that "Our hospital responsiveness aids in managing our suppliers relationships"(M=2.78, SD=1.277). Twenty-four point four percent (24.4%) disagreed and were neutral that "Technology has enabled our hospital realize its objectives" (M=3.02, SD=1.276).Twenty-five point six percent (25.6%) of respondents disagreed and were also neutral that "Our hospital sufficiency in stock has developed our relations" (M=3.02, SD=1.276).

Thirty-two point nine percent (32.9%) of the respondents disagreed that "our hospital transport system has made our services robust" (M=3.07, SD=1.255).Thirty-five point four percent (35.4%) of the respondents strongly agreed that "Our government has made our supply systems resilient" (M=3.41, SD=1.465). Twenty-six point eight percent (26.8%) of the respondents disagreed that "our hospital uses reputation in measuring performance" (M=2.71, SD=1.347). Twenty-nine point three percent (29.3%) of the respondents disagreed that"reputation of our hospital systems has resulted in good relations with our customers'' (M=2.62,

SD=1.302). Thirty-six point six (36.6%) of the respondents disagreed that "our government support has made our hospital have good reputation" (M=2.83, SD=1.205).

Thirty-four point one (34.1%) of the respondents strongly disagreed that "our services have made the have good relations with partners" (M=3.37, SD=1.401). Twenty-five point six (25.6%) of the respondents strongly disagreed that "our hospital uses hospital ranking to measure hospital performance" (M=2.83, SD=1.456). Twenty-nine point three (29.3%) of the respondents strongly disagreed that "our technology is well ranked among hospitals (M=2.80, SD= 1.494).Twenty-six point eight (26.8%) of the respondents strongly disagreed that "our hospital transport system is reliable" (M=2.78, SD=1,474). Thirty-one point seven (31.7%) of the respondents strongly agreed that "our hospital stock availability has made our hospital stable" (M=3.36, SD=1.425).

These findings agree with various scholar; Hussain *et al.* (2018) examined supply chain on the firm performance in the Textile sectors. Data was collected from the textile sectors and the target population was the managers.30 questionnaires distributed among the managers which have the great knowledge related to the supply chain and it is influenced on the performance of the textiles sectors, they gave us positive responded. In this study we found results are to describe that SCM was not only the impact on the performance of the hospital but also the competitive advantage of the hospital.

6.2 Descriptive Statistics for Supplier Relationship Management

Respondents were presented with twenty-five (25) opinion statements on indicators in measuring the variable as indicated in Table 2 on a five-point likert scale.

Table 2: Descriptive Statistics for Supplier Relationship Management Items

Opinion statement	Mean	Std. Dev
Our hospital uses negotiations tactics on transactions	1.99	1.242
Our hospital clearly communicates on using arms-length transactions	2.15	1.134
Our hospital applies arms-length in measuring supplier relationships	2.01	1.252
Our hospital has other options apart from arms length in measuring supplier relationships	2.24	1.233
Our hospital arms-length creates trust in relationships amongst suppliers	2.72	1.425
Our hospital partners with other organizations to facilitate continous services	2.49	1.381
Our hospital premises suppliers as fundamental in our performance	2.77	1.426
Our hospital understands various cultures our suppliers emanate from	2.71	1.559
Our hospital recognizes our customers as a way of enhancing relationships	3.11	1.440
Our hospital outsources services that are unessential	3.09	1.476
Outsourcing of works has improved on quality of suppliers	2.66	1.335
n=153		

Fifty-one-point two percent (51.2%) of respondents strongly disagreed that "our hospital uses negotiations tactics on transactions" (M=1.99, SD=1.242). Thirty-nine point zero percent (39.0%) of respondents disagreed that "Our hospital clearly communicates on using arms-length transactions" (M=2.15, SD=1.1134). Forty-eight point eight percent (48.8%) of the respondents strongly disagreed that "our hospital applies arms-length in measuring supplier relationships" (M=2.01, SD=1.252).Thirty-five point four percent (35.4%) of the respondents disagreed that "our hospital has other options apart from arms length in measuring supplier relationships" (M=2.24, SD=1.233).

Twenty-six point eight percent (26.8%) of respondents strongly disgreed that "Our hospital arms-length creates trust in relationships amongst suppliers" (M=2.72, SD=1.425). Thirty point five percent (30.5%) of respondents strongly disagreed that "our hospital partners with other organizations to facilitate continuous services "(M=2.49,SD=1.381).Twenty-five-point six percent (25.6%) of respondents disagreed that "our hospital premises suppliers as fundamental in our performance"(M=2.77,SD=1.426).Thirty-two point nine percent (32.9%) of the respondents strongly disagreed that "our hospital understands various cultures our suppliers emanate from"(M=2.71, SD=1.559).

Twenty-three point two percent(23.2%) of the respondents strongly agreed that "our hospital recognizes our customers as a way of enhancing relationships" (M=3.11, SD=1.440).Twenty-five point six percent (25.6%) of the respondents agreed that "our hospital outsources services that are unessential"(M=3,09, SD=1.476).Twenty-four point four percent (24.4%) of the respondents disagreed that "outsourcing of works has improved on quality of suppliers"(M=2.66, SD=1.335).They demonstrate that operational flexibility capability mediates supplier relationship management on firm performance link (Wandera et al., 2022a). Moreover, their moderated mediated analyses show that SRM's influence on firm performance is more vital for locally owned firms (domestic)than foreign-owned firms, indicating that domestic firms stand to gain more from investments in SRM than firms with foreign ownership hence the above results agreed with the scholar.

6.3 Inferential Statistics

ISSN: 2617-4138
DOI: 10.32898/ibmj.01/8.3article01
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The study sought to establish supplier relationship management and the performance of level five county referral hospitals in Kenya. To attain this objective, a coefficient of determination, level of significance and strength of relationship were assessed using model summary, anova and regression analysis tests in the following tables.

Table 3: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.323[a]	.105	.046	19.127	1.723

a. Predictors: (Constant), Outsourcing, partnership, armslength, strategic alliances, just in time
b. Dependent variable: Performance

The coefficient of determination in Table 3 for model 1 are (R^2=0.105, R=0.323). These results implies that 10.5% of variation in the response variable is explicated by supplier relationship management, whilst 32.3% is the relationship amid independent and dependent variables. The R^2 (0.105) exhibit an inconsequential relationship amid the variable and the response variable (Yolsal, 2021).

Table 4 : Analysis of Variance (ANOVA)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3245.383	1	649.077	1.774	.128[b]
	Residual	27803.739	152	365.839		
	Total	31049.122	153			

a. Dependent Variable: Performance
b. Predictors: (Constant), Outsourcing, partnership, arms length, strategic alliances, just in time

The ANOVA results in Table 4 are F (5, 76) =1.774, p<.05). From these outputs, *F* statistic (1.774) is lower than critical *F* value (2.49), and general rule of thumb (F>2.5), thus designating the model as insignificant (Kissell & Poserina, 2017). The *F* statistic (1.774) against critical *F* value and general rule of thumb (2.34, 2.5), depict a significant link with the criterion variable (Kissell & Poserina, 2017).

Table 5: Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		Beta	Std. Error	Beta		
1	(Constant)	50.812	7.712		6.588	.010
	Arms length	.414	.504	.102	.1533	.413
	Partnership	.506	.480	.149	1.054	.295
	Just in time	.110	.495	.030	.223	.1534
	Strategic alliances	.506	.503	.128	1.006	.318
	Outsourcing	.156	.406	.046	.384	.702

a. Dependent Variable: Performance

This outcome designates supplier relationship management as inconsequential influenced the criterion variable by (1.774). Level five hospitals in Kenya perform considerably by (50.812) devoid of supplier relationship management in place. The analysis derived the ensuing econometric regression equations;

$$Y = 50.812+.414X_1+.506X_2+.110X_3+.506X_4+.156X_5$$

Where,
Y: Performance, X_1: Arm's length, X_2: partnership, X_3: just in time, X_4: strategic alliances and X_5: outsourcing. Similarly, these findings inform that county.

7. Summary Findings, Conclusion and Recommendations

The objective of this study was to establish supplier relationship management and the performance of level five county hospitals in Kenya. The three (3) latent factors of supplier relationship management were; arms-length, partnerships, and just in time.

Descriptive statistics on the variable postulate that supplier relationship management had a considerable effect on the response variable. The study ascertained that arms-length, partnerships, and just in time, influenced criterion variable. Supplier relationship management significantly influenced the response variable. This verdict confirms that arms-length, partnerships, and just in time indicators were relevant on the response variable.

The study recommends that organizations should develop structures that create sustainable systems for managing supplier relationship management by on arm's length transactions, partnership, and JIT. Equally, Counties should develop robust transport systems to allow flow of essential services. Studies indicate that information sharing influences flow of services, but real time information is lacking.

Inventory management plays a significant role in enhancing service delivery. Events of inadequate drugs and essential services in county hospitals should be controlled. Supply chains are solutions to a seamless service offers by organizations. The government should allow county governments procure certain non-essential drugs directly from suppliers to beat bureaucracy. All county governments should employ qualified personnel in procurement and frequent checks and audits be conducted in all hospitals on sully chain management best practices.

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