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# Supplier Relationship Management and Procurement Performance of Level 6 Hospitals in Kenya

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## Abstract

Health facilities aim to ensure that they have adequate stock in terms of medicines, machines and other related products to operate without any challenges associated with stockouts. The purpose of this study was to establish the effect of supplier relationship management on procurement performance of the six level 6 hospitals in Kenya. The study evaluated the effect of supplier relationship management on the procurement of level 6 hospitals in Kenya focusing on a census of all the six level 6 hospitals in Kenya namely Kenyatta National Hospital, Moi Teaching and Referral Hospital (MTRH), Kenyatta University Teaching, Referral and Research Hospital, Kisii Teaching and Referral Hospital, Coast General Teaching and Referral Hospital and Kakamega Teaching and Referral Hospital. The study was anchored on the Resource Based View. Primary data was collected using questionnaires which was distributed to procurement officers, stores personnel, accountants and hospital administrators. Reliability and validity of research instrument was conducted to ensure relevant data was collected. Cross sectional descriptive research design was utilized and regression analysis was adopted to test the study hypothesis. The significance of each individual predictor variable on procurement performance was tested using t-statistic and the overall significance of the models was tested using f-statistic. The study findings indicated that supplier relationship management had mean scores of 3.91 indicating generally positive practices in Level 6 hospitals in Kenya in regard to supplier relationship management. Correlation results indicated that supplier relationship management is positively and significantly associated with procurement performance (R=.718, p=.026). Regression results further indicated that supplier relationship management has a positive and significant effect on procurement performance (β=.084, p=.026). This implies that strengthening supplier relationship management such as improving communication, collaboration, and trust with suppliers can lead to measurable improvements in procurement performance, including efficiency, quality, and timely delivery of goods and services. The findings highlight the critical role of robust effective supplier engagement in enhancing procurement performance. The study thus recommends the hospitals to strengthen supplier relationship management by establishing long-term partnerships with reliable suppliers, enhancing communication and feedback mechanisms, and involving suppliers in planning processes to ensure consistent quality and timely delivery of medical supplies.

**Key Words:** *Supplier Relationship Management, Procurement Performance, Level 6 Hospitals, Kenya*

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## 1.0 Introduction

Inventory management control plays a pivotal role in enhancing procurement performance in referral hospitals both globally and in Kenya, particularly within Level 6 hospitals. Globally, studies show that efficient inventory management systems—including vendor-managed inventory (VMI) and just-in-time (JIT) strategies—significantly reduce operational costs and improve supply chain responsiveness. These approaches not only streamline procurement but also contribute to overall hospital performance by ensuring timely availability of essential supplies (Apeh et al., 2024; Asa et al., 2023). At the regional level, research has emphasized that practices such as automated inventory systems, reorder strategies, and safety stock management are crucial for maintaining optimal inventory levels and preventing stockouts. Such practices enhance procurement efficiency and service delivery in public health institutions across Africa (Opuku et al., 2020).

In Kenya, empirical evidence reinforces this relationship. Studies in Level 6 referral hospitals reveal a positive correlation between inventory management control and procurement performance. Njiri (2024) established that vendor management, e-procurement, and inventory control practices significantly improve operational performance in Nakuru Level 6 Referral Hospital. Likewise, Maingi (2022) found that inventory automation, inventory investment, and control mechanisms positively influence universal health coverage (UHC) service delivery in national referral hospitals in Nairobi County. These findings collectively highlight that audit readiness, robust reorder strategies, and effective safety stock management are vital in preventing stockouts and overstocking—both of which are key determinants of procurement efficiency and supplier relationship management.

This study observes that integrating inventory management control with supplier relationship management, compliance and audit readiness, reorder strategy, and safety stock management provides a comprehensive framework for improving procurement performance in Level 6 referral hospitals. Such an integrated approach not only optimizes inventory levels but also fosters transparency, accountability, and operational sustainability, which are essential for reliable healthcare service delivery. Conceptually, inventory management refers to the systematic process of ensuring that an organization's inventory—comprising raw materials, work-in-progress items,

and finished goods—is managed efficiently and effectively (Daba, 2023). Proper inventory management prevents stockouts that could disrupt service delivery while avoiding overstocking, which can tie up cash that might otherwise be invested in productive activities. According to Cachon and Fisher (2019), effective inventory control ensures that the right products are available at the right time, in the right quantities, and at the right quality. Similarly, Singh et al. (2018) assert that maintaining optimal inventory levels allows organizations to balance supply and demand strategically, control costs, and meet customer or patient needs efficiently.

Inventory management control typically entails inventory valuation, recording and tracing, demand forecasting, replenishment, warehouse management, and supplier coordination (Mohamed, 2024). In this study, the focus is on four key indicators: supplier relationship management, reorder strategy, compliance and audit readiness, and safety stock management—as these are essential for maintaining accuracy, minimizing losses, and ensuring continuous service delivery in hospitals. In the Kenyan context, managing relationships with key suppliers such as the Kenya Medical Supplies Authority (KEMSA) and private vendors is particularly critical. Oliech and Mwangangi (2019) found that effective liaison with KEMSA and private suppliers—supported by framework agreements and regular performance monitoring—significantly enhances procurement performance through improved accountability and compliance. Similarly, Okoi (2023) demonstrated that supplier evaluation based on consistency, competence, and production capacity strengthens procurement outcomes in public hospitals. Further, Kulubi and Moronge (2019) underscore that supplier selection criteria, contract management, and supplier development initiatives collectively improve procurement efficiency and hospital service delivery in Nairobi.

Evidence from global, regional, and Kenyan studies converges on the conclusion that robust inventory management control systems particularly when integrated with strong supplier management and compliance mechanisms are indispensable for achieving efficient, transparent, and sustainable procurement performance in Kenya's Level 6 referral hospitals. However, given the continued supply chain disruptions in the Kenyan hospitals, this study sought to establish the effect of supplier relationship management on the procurement performance of level 6 hospitals in Kenya.

### 1.2. Statement of the Problem

Between 2022 and 2024, the procurement performance of referral hospitals in Kenya has experienced a notable decline in supplier performance, and quality of procured items. In 2022, the budget utilization rate was approximately 75%, indicating a relatively moderate absorption of allocated funds. However, by 2023, this rate had dropped to around 68%, reflecting increasing challenges in aligning budget allocations with procurement activities, delayed disbursements, and inefficiencies in financial management. The downward trend continued into 2024, where the utilization rate further declined to an estimated 62%, signifying that a significant portion of funds remained unspent, thereby constraining procurement processes and limiting the availability of essential medical supplies (Treasury, 2024).

Supplier performance similarly deteriorated during this period. In 2022, supplier reliability and contract adherence were relatively strong, with a performance score near 80 out of 100. By 2023, this score had decreased to approximately 74, indicating emerging issues such as inconsistent delivery timelines, inadequate contract enforcement, and challenges in supplier management. The decline persisted into 2024, with supplier performance dropping to about 68, a level that raises concerns about the impact of poor supplier reliability on procurement efficiency, increased operational costs, and the risk of stockouts in referral hospitals (Muuki & Nderui, 2024; Okoi, 2023).

Quality compliance of procured items also showed a downward trajectory. In 2022, about 85% of procured medical supplies met the required quality standards, ensuring patient safety and effective treatment. This compliance rate fell to 78% in 2023, suggesting weakening quality assurance mechanisms, possibly due to inadequate monitoring and the procurement of substandard products. By 2024, quality compliance dropped further to around 72%, raising serious concerns about the safety and efficacy of medical supplies in referral hospitals, which could jeopardize patient outcomes and erode trust in the healthcare system (Otieno, 2023; Nakuru Level 5 Referral Hospital Study, 2023). This declining trend in procurement performance from 2022 to 2024 underscores systemic weaknesses in budget utilization, supplier management, and quality control within Kenya's level 6 hospitals. There is a need for urgent interventions to strengthen supplier evaluation and contract enforcement, and institute rigorous quality assurance frameworks. Failure to address

these challenges risks further deterioration of healthcare service delivery and undermines the objectives of Kenya's health sector reforms.

### 1.3. Objective of the Study

The objective of the current study was to evaluate the effect of supplier relationship management on the procurement performance of level 6 hospitals in Kenya.

## 2.0. Literature Review

### 4.1. Theoretical Framework

The study adopted Resource Based View theory developed by Jay Barney in 1991. It postulates that a firm's sustainable competitive advantage is derived from its unique resources and capabilities that are valuable, rare, inimitable, and non-substitutable. The theory emphasizes that internal resources, rather than external market positioning alone, are critical for strategic management and superior firm performance. Resource Based theory contributes to supplier relationship management significantly by informing key decision points in supply management such as make-or-buy decisions, sourcing strategies, supplier portfolio management, relationship strategies, and contract awarding. The theory guides procurement managers to strategically manage internal resources and capabilities to build unique competencies that enhance supplier relationships and overall supply chain resilience (Bohnenkamp, 2013).

The theory further focuses on leveraging internal strengths to make informed sourcing decisions, build effective supplier portfolios, and enhance procurement performance through capabilities integration and technology use. The theory also supports the development of supplier linkages that enhance operational performance by integrating and protecting valuable resources across the supply chain, thus improving resilience and adaptability in dynamic market (Komakech et al.,2024).

### 4.2. Empirical Literature Review

In China, Asa et., (2023) conducted a study on supplies relationship management and organizational performance. Descriptive research design was employed while quantitative data was collected form the target population of 43 respondents from different agencies and divisions concerned with procurement using structured questionnaires comprising of closed ended

questionnaires. The study revealed there is a positive relationship between supplies management and organisational performance. Further, the study showed that there were many challenges that affected the organisation negatively including failure of employees' commitment in public procurement division and supply chain partners. China being a developed country, the research finding cannot be applicable in health sector in Kenya.

Njagi and Shalle (2016) investigated the role of supplier relationship on procurement performance in manufacturing sector in Kenya focusing o East Africa Breweries. The study adopted descriptive research design to address the questions concerning the current status of the sector under consideration. Population target by the study comprised of the employees working in different departments totalling to 450 however using stratifies sampling technique 80 respondents were selected. Primary data was collected using structured questionnaires with both open ended and closed ended questions. Reliability of research instrument ware conducted using Cronbach alpha while descriptive analysis was done in respect to frequencies and percentages. The study findings indicated a positive significant relationship between supplier relationship and procurement performance. The study however recommended the similar study to be conducted but in other sector for reliable generalization.

Muema (2016) investigated supplier relationship management strategies and procurement performance of sports Kenya. Social exchange theory, resource dependency theory and theory of dual economies anchored the study. Determining supplies relationship strategies was achieved using descriptive survey research design. The study target population included 25 officers of sports Kenya procurement department. Using questionnaires primary data was collected from the population while data analyses was conducted with aid of SPSS and data was presented in tables and figures. The study findings indicated that sports Kenya has put in place strategies to manage its supply of the products and service. The study however was conducted in sports therefore the findings cannot be generalized in health sector because of regulatory difference.

Influence of supplier relationship management and procurement performance was conducted by Mohamed (2017) in Zaruq Stores. The study targeted a population of 52 respondents. using census sampling technique, a sample size of 26 respondents was selected. The study utilized secondary data which was sourced from the reports and primary data which was collected with help of questionnaires. The study was anchored on commitment trust theory, theory of constraints and

socio-economic theory of compliance. Analysed reports were presented in tables, charts and graphs. Study findings indicated that value measurement, collaborations and organisation structure affect procurement performance. The study concluded value management was used by organisation to measure procurement performance while technology was not utilized. The study however suffers methodological drawback. First it indicated that census sampling technique was adopted however 26 respondents were selected from the target population of 52 respondents.

Nsowah, Boateng and Anane (2025) conducted a study on the effect of inventory management practises on healthcare delivery and operational performance of Sunyani regional hospital. Fifty respondents were randomly selected from procurement, pharmacy, store, records, finance and administration departments. Data was collected using questionnaires and a descriptive survey research design was used. Data was analysed using frequencies and percentages using Statistical Package for Social Sciences (SPSS) software and excel. The study findings indicated that the hospital uses suppliers to manage inventory for hospital, the hospitals has computerised all inventory management system and there is a good communication between hospitals and suppliers. The findings further indicated that hospital faced challenges of delays in drugs delivery resulting to inadequate inventories. The study therefore suggested that the government should support the health sector with adequate funds to mitigate issues for health products shortages. The study however did not address how supplier's relationship affects the procurement performance.

## 5. Research Methodology

The study adopted a cross-sectional descriptive research design. The unit of analysis was all the six level 6 hospitals in Kenya namely Kenyatta National Hospital, Moi Teaching and Referral Hospital (MTRH), Kenyatta University Teaching, Referral and Research Hospital, Kisii Teaching and Referral Hospital, Coast General Teaching and Referral Hospital and Kakamega Teaching and Referral Hospital. The unit of observation was a total of 130 procurement officers, stores personnel, accountants and hospital administrators were targeted. Primary data was obtained through a structured questionnaire with closed-ended five-point Likert scale questions. The quantitative primary data was analysed using Statistical Package for Social Sciences (SPSS) version 29.0 Descriptive analysis was performed to provide an overview of the data distribution through mean and standard deviation. The relationship between the variables was obtained through correlation and regression analysis. The following multiple regression model was used:

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$$Y = \beta 0 + \beta 1X1 + \beta 2X2 + \beta 3X3 + \varepsilon \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (1)$$

Where Y = Procurement performance of the Level 6 hospital, $X_1$ = KEMSA and private vendor liaison, $X_2$ = Framework agreement, $X_3$ = Performance monitoring, ε = Error term, $\beta_0$ = the constant term and $\beta_{i\,(1-3)}$ = Beta Coefficients.

## 6. Results and Discussion

### 6.1. Descriptive Statistics

Study participants were asked to indicate the extent to which they agree to statements relating to supplier relationship management based on a Likert scale of 1-5, the responses are as presented in Table 1:

**Table 1: Supplier Relationship Management**

| Statement | Mean | Std-Dev |
|---|---|---|
| The hospital maintains effective communication and coordination with KEMSA to ensure timely supply of medical products. | 4.350 | .972 |
| The hospital actively engages private vendors alongside KEMSA to diversify procurement sources and improve supply reliability. | 3.948 | 1.002 |
| The hospital utilizes framework agreements to secure favorable terms and consistent supply from key suppliers. | 4.274 | .797 |
| Framework agreements are regularly reviewed and updated to reflect changing procurement needs and market conditions. | 4.195 | .738 |
| The hospital has established systems to continuously monitor supplier and procurement performance against set benchmarks. | 4.305 | .798 |
| Performance data from procurement activities is used to inform decision-making and improve future procurement processes. | 3.841 | .878 |
| **Overall Mean** | **4.152** | **0.864** |

The results indicate strong agreement among respondents that hospitals maintain effective communication and coordination with KEMSA to ensure timely supply of medical products

(Mean=4.350, SD=0.972), with the moderate standard deviation suggesting relatively consistent perceptions but with some variation across hospitals. Engagement with private vendors alongside KEMSA scored moderately high (Mean=3.948, SD=1.002), yet the higher standard deviation here indicates more variation in practice, implying that while some hospitals actively diversify their procurement sources, others rely more heavily on KEMSA. The use of framework agreements to secure favorable terms and consistent supply scored high (Mean=4.274, SD=0.797), with the lower standard deviation reflecting broad agreement among respondents.

Regular review and updating of framework agreements (Mean=4.195, SD=0.738) similarly shows strong agreement and low variability, indicating a generally consistent practice across the hospitals. The establishment of systems for continuous supplier and procurement performance monitoring also scored high (Mean=4.305, SD =0.798), with low variability suggesting this is a well-entrenched practice. However, using procurement performance data to inform decision-making recorded the lowest mean (3.841) and a standard deviation of 0.878, indicating both moderate agreement and more variation in application, pointing to inconsistent use of data analytics in procurement processes.

The overall mean of 4.152 reflects strong consensus that Level 6 hospitals in Kenya have effective supplier relationship management practices, underpinned by communication with suppliers, use of framework agreements, and performance monitoring systems. The relatively low standard deviations for most variables suggest that these practices are fairly standardized across facilities, which strengthens the reliability of procurement performance outcomes. These findings align with Omondi & Wanyoike (2022), who emphasized that trust-based supplier partnerships in Kenyan public hospitals improve lead times and product quality. However, the moderation results indicated that management literacy level does not significantly influence the SRM–procurement performance link, suggesting that SRM practices may be well-institutionalized regardless of managerial literacy variations.

### 6.2. Regression Analysis

This section presents the results of the regression analysis conducted to determine the influence of KEMSA Price Value List (KEMSA.PVL), Framework Agreements (FA), and Performance Monitoring (PM) on procurement performance in Level 6 hospitals in Kenya. The analysis sought

to quantify how these procurement management factors collectively and individually explain variations in budget utilization efficiency. The results are presented in Table 2, 3 and 4 below.

**Table 2. Model Summary**

| R | R-Square | Adjusted R-Square | Std. Error of the Estimate |
|---|---|---|---|
| .718 | .515 | .505 | .618 |

The R-Square value (0.515) indicates that approximately 51.5% of the variation in budget utilization is explained by the combined effect of KEMSA.PVL, framework agreements, and performance monitoring. The adjusted R-Square (0.505) confirms that the model maintains strong explanatory power even after adjusting for the number of predictors, suggesting that the relationship is not due to chance or model overfitting. The standard error of estimate (0.618) further shows that the predicted values are reasonably close to the actual observations, implying that the model provides a reliable fit for the data. ANOVA results are shown in Table 3.

**Table 3. ANOVA Results**

| | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Regression | 20.758 | 3 | 6.919 | 11.46 | .021 |
| Residual | 76.765 | 127 | 0.604 | | |
| **Total** | 97.523 | 130 | | | |

The ANOVA results reveal that the regression model is statistically significant (F = 11.46, p = 0.021), meaning that the independent variables jointly explain a significant proportion of the variation in budget utilization across the hospitals. Although the residual sum of squares (76.765) suggests that external factors beyond the model may also influence budget utilization, the magnitude of the regression sum of squares (20.758) demonstrates that the three predictors play a major role in explaining this variation. Model coefficients are shown in Table 4.

**Table 4. Model Coefficients**

| | Unstandardized Coefficients | | Standardized Coefficients | | |
|---|---|---|---|---|---|
| | **β** | **Std. Error** | **Beta** | **t** | **Sig.** |
| (Constant) | .477 | .349 | | 1.368 | .176 |
| KEMSA and Private Vendor Liaison | .187 | .085 | .176 | 2..188 | .012 |
| Framework agreement | .241 | .077 | .538 | 3.134 | .009 |
| Performance monitoring | .525 | .108 | .586 | 4.856 | .018 |

The regression coefficient results indicate that all three factors—KEMSA.PVL (β = 0.187, p = 0.012), Framework Agreements (β = 0.241, p = 0.009), and Performance Monitoring (β = 0.525, p = 0.018)—have positive and statistically significant effects on budget utilization. This implies that improvements in these areas are associated with better efficiency, transparency, and reliability in hospital procurement and financial management. Among these predictors, performance monitoring exerts the strongest influence (β = 0.525), suggesting that continuous assessment and feedback on supplier performance and contract delivery are the most critical drivers of efficient budget utilization.

### 6.3. Discussion of Findings and Implications

The findings reveal that effective supplier engagement through structured KEMSA price lists, strategic framework agreements, and rigorous performance monitoring significantly enhance budget utilization in public hospitals. The results align with Odhiambo & Kamau (2020), who established that structured procurement monitoring improves cost efficiency and mitigates leakage in public procurement. Similarly, Karimi et al. (2022) found that supplier performance evaluation mechanisms promote financial prudence and timely delivery in healthcare institutions.

The dominant influence of performance monitoring corroborates the argument by Thai (2021) that continuous supplier evaluation fosters compliance, transparency, and accountability, thereby reducing wastage and ensuring that allocated funds yield maximum value for service delivery. However, while the model explains a substantial portion of the variance (51.5%), the residual variation suggests the presence of other contextual or institutional factors such as bureaucratic delays, funding disbursement patterns, or political influence that may also affect budget utilization. Future research could integrate these variables to enrich the model's predictive capacity.

## 7.0 Conclusions

The study set out to address the problem of limited understanding of how supplier relationship management (SRM) influences procurement performance in Level 6 hospitals in Kenya, where inefficiencies and inconsistencies in procurement outcomes have often been attributed to weak supplier collaboration and engagement practices. The findings revealed that strong supplier relationship management significantly enhances procurement performance. Descriptive results showed high levels of agreement among respondents on the presence of effective supplier engagement, while correlation and regression analyses confirmed a positive and significant relationship between SRM and procurement performance. The key takeaway from the study is that strengthening supplier relationship management through improved collaboration, trust, communication, and performance monitoring can lead to more efficient, transparent, and reliable procurement processes in public healthcare institutions.

## 8.0 Recommendations

Based on the findings, it is recommended that Level 6 hospitals institutionalize robust supplier performance monitoring systems to regularly track supplier compliance, delivery timelines, and contract fulfilment. This will enable early detection of performance gaps and foster accountability in procurement operations. Additionally, hospitals should establish structured collaboration frameworks with KEMSA and accredited private vendors to improve coordination, reduce supply disruptions, and enhance the reliability of essential medical supplies. Expanding the adoption of framework agreements is also advised, as this approach can lower procurement costs, minimize repetitive tendering processes, and guarantee consistent availability of critical commodities. These targeted actions are directly aligned with the study's evidence that effective supplier relationship management significantly improves procurement efficiency and overall hospital service delivery.

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