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**Resource Optimization and Sustained Competitive Advantage of  
Private Healthcare Providers in Kenya**



## RESOURCE OPTIMIZATION AND SUSTAINED COMPETITIVE ADVANTAGE OF PRIVATE HEALTHCARE PROVIDERS IN KENYA

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### Abstract

**Purpose:** This study investigated influence of resource optimization on sustained competitive advantage of private healthcare providers in Kenya, guided by the Resource-Based View (RBV) Theory. The study also sought to establish the moderating effect of organizational culture on the relationship between resource optimization and sustained competitive advantage.

**Methodology:** Adopting a descriptive cross-sectional research design, the study targeted senior managers of private healthcare providers within Nairobi Metropolitan. Both descriptive and inferential statistical analyses, including correlation, regression, and moderation tests, were employed to evaluate the relationship between resource optimization and sustained competitive advantage.

**Findings:** The findings revealed resource optimization as a significant and strong predictor of sustained competitive advantage. Healthcare organizations that adopted capability, cost and technology optimization reported improved returns on investments, customer satisfaction and market share. Furthermore, the study established that organizational culture significantly moderates the relationship between resource optimization and sustained competitive advantage. Healthcare institutions that fostered positive cultures characterized by teamwork, role clarity, and customer-centric values experienced amplified benefits from their resource optimization efforts. This finding affirms that while resource optimization is critical, its effectiveness is enhanced within supportive cultural environments that promote collaboration and strategic alignment. The study concludes that effective resource optimization, reinforced by a strong organizational culture, is essential for private healthcare providers seeking to maintain long-term competitive advantage in Kenya's dynamic healthcare sector.

**Unique Contribution to Theory Practice and Policy:** It recommends that healthcare leaders institutionalize comprehensive resource optimization strategies, invest in modern technologies, and cultivate organizational cultures that support efficient resource utilization. Policymakers are also urged to incentivize healthcare providers demonstrating excellence in resource optimization and cultural alignment to strengthen the sector's capacity for sustained competitive advantage.

**Key Words:** *Resource Optimization, Sustained Competitive Advantage, Private Healthcare Providers, Organizational Culture*

## **Background of the Study**

Resource optimization is increasingly recognized as a critical determinant of organizational performance and sustained competitive advantage, particularly in the healthcare sector where efficient use of resources directly impacts patient outcomes and financial sustainability. In private healthcare organizations, resource optimization refers to the strategic management of human capital, financial resources, technological investments, and physical infrastructure to maximize service delivery while minimizing operational costs (Moradi et al, 2021). It includes systematic processes aimed at achieving the best patient outcomes within available resource constraints.

Kenya's rapid growth in demand for quality healthcare services, coupled with rising operational costs and stiff market competition, has made resource optimization an essential strategy for private healthcare providers. The sector has witnessed increased investment in modern technologies such as electronic health records, telemedicine, and data-driven decision-making tools. However, achieving optimal resource utilization remains a challenge due to such factors as high costs of medical technology, skill shortages and regulatory changes. Private healthcare leaders must, therefore, continuously evaluate and improve their resource optimization strategies to enhance service efficiency, realize superior profits and secure sustained competitive advantage.

The Kenyan healthcare landscape is evolving, especially with the government's push toward Universal Health Coverage (UHC) and the increasing burden of non-communicable diseases. As a result, private healthcare providers are under pressure to manage limited resources effectively while meeting growing patient expectations for high-quality and affordable care. Effective resource optimization allows healthcare organizations to balance cost efficiency with quality service delivery, strengthening their market position and contributing to the overall improvement of healthcare standards in Kenya.

## **Statement of the Problem**

Kenya's private healthcare sector, which accounts for 42.4% of current health expenditure, continues to face inefficiencies in managing human, financial, and technological resources despite its significant role in service delivery (African Health Business, 2018). Although Kenya's health expenditure stands at 4.6% of GDP, a large share is channelled through private providers, increasing pressure to achieve operational efficiency and financial sustainability (World Health Organization, 2024). Operational lapses, underutilization of medical technologies, workforce development gaps, and weak cost management systems inflate expenses and undermine profitability (Kamau et al., 2019; Laibon, 2023). These challenges are intensified by rising competition, regulatory pressures, and growing service complexity, all of which demand more strategic resource management (Garattini & Padula, 2019; Kaluyu & Odollo, 2023).

As healthcare systems transition toward digital technologies and advanced service models, providers risk losing competitiveness without deliberate investment in capability development, cost efficiency, and technology optimization (Moradi et al., 2021; Wang et al., 2020). Failure to optimize resources may erode market share and weaken contributions toward Universal Health Coverage goals (KHSSP, 2018–2023). However, existing literature provides limited sector-specific insights into how resource optimization translates into sustained competitive advantage in healthcare, particularly in developing economies (Alahmar & Benlamri, 2020; Rotaru, Turcu & Draghici, 2019). Most strategic management research focuses on manufacturing and corporate sectors, offering limited attention to healthcare contexts where regulatory intensity, service quality demands, and human capital dependency alter the resource–advantage relationship (Barney, 1991; Moradi et al., 2021). This gap justified examining how resource optimization influences operational efficiency, service differentiation, and sustained competitive advantage among private healthcare providers in Kenya.

### **Specific Objectives**

1. To determine influence of resource optimization on sustained competitive advantage of private healthcare providers Kenya.
2. To examine moderating effect of organizational culture on resource optimization and sustained competitive advantage of private healthcare providers in Kenya.

### **Study Hypotheses**

*H<sub>01</sub>*: Resource optimization has no influence on sustained competitive advantage of private healthcare providers in Kenya

*H<sub>02</sub>*: Organizational culture has no moderating effect on resource optimization and sustained competitive advantage of private healthcare providers in Kenya.

## **LITERATURE REVIEW**

### **Theoretical Review**

#### **Resource-Based Theory**

The Resource-based theory (RBT) was first put forward by Edith Penrose in 1959. It holds that firms that have superior resources protected by some isolating mechanisms that safeguard against diffusion in the market can realize supernatural profits in relation to industry rivals. Further explaining that valuable firm specific human resource practices such as talent attraction, training, motivating, empowering and retention of employees lead to improved firm performance as sources

of competitive advantage for the organization. This view was further developed by Barney (1991) who opines that ability of firms to effectively compete and sustain competitive advantage depends on internal resources that are valuable, rare, inimitable and non-substitutable in nature (VRIN). Valuable resources are those that enable a firm to establish and execute specific business strategies that enhance performance efficiency and effectiveness so as to create and maintain competitive edge for a long period. Rare resources provide firm specific competitive edge and are not found in competing firms; they are unique to the firm differentiating it from industry rivals. Resources must be imperfectly imitable with no perfect substitutes. Firm specific resource must not be readily transferrable to other competing firms (Barney, 1991). This theory emphasizes that human resource is the most valuable resource that provides key intangible competitive advantage while managing other firm resources. This sentiment echoes Leroy (2018) who explains that training human capital represents investment that people make in themselves which enhance their economic productivity. Modern economist seems to concur that education and healthcare are key to improving human capital and ultimately increasing the economic outputs of a nation (Becker, 1993; Leroy, 2018). Investment in human resources through training, mentorship and promotions improve employee motivation, retention and productivity leading to competitive advantage in a firm.

This theory explains why organizations operating in a similar business environment exhibit variations in ROI, market share and customer satisfaction. It supports the focus on resource optimization as the first research hypothesis.

*H<sub>01</sub>: Resource optimization does not influence the sustained competitive advantage of private healthcare providers in Kenya*

### **Expectancy Value Theory**

Kurt Lewin (1890-1947) established the concept of aspiration level based on an individual's expectation or goals of his /her own future achievement in completing a specific task. He assessed motivation levels in multiple children using a ring toss game to understand individual child's aspiration to complete the task of tossing a ring onto a peg. This experimentation became the foundation for the development of expectancy-value theory. John Atkinson (1960s) further extended Kurt Lewin's work by initiating an achievement motivation theory that integrated needs, expectancy and values into a single framework. In the 1980s the theory was further developed by Jacquelynne Eccles who argued that expected success and subjective task values influence individual level of motivation. Therefore, people choose a specific behaviour based on what they expect as the results of chosen behaviour.

Organizational culture cultivates values which interact to predict team engagement, interests, achievements and overall success of an organization. Specific reward systems motivate individual/

group aspiration towards organizational success. This theory provides generalized ideology that individuals make decisions based on set expectations and values.

It is envisaged that organizational culture of a given private health organization will play a moderating role in enhancing its growth, development and sustained competitive advantage. The number of clients served by individual private healthcare provider will depend on customer satisfaction and the public's perception of its brand image notwithstanding the presence of physical infrastructure, modern diagnostics and interventional technology installed. This theory aligns with the second research hypothesis of the study.

*H<sub>02</sub>: Organizational culture has no moderating effect on the relationship between resource optimization and sustained competitive advantage of private healthcare providers in Kenya*

## **Empirical review**

### **Resource Optimization**

Resource optimization refers to the systematic alignment and efficient utilization of human, financial, technological, and physical resources to improve performance while controlling costs (Moradi et al., 2021; Madsen et al., 2020). In healthcare, evidence-based structures that prioritize resource allocation lead to improved service delivery, patient outcomes, and long-term competitiveness (Murphy et al., 2019). The construct is commonly examined through three dimensions.

Capability optimization focuses on aligning skills, leadership, and processes to enhance innovation, service effectiveness, and performance (Gupta, 2020; Thomas et al., 2018). Cost optimization emphasizes minimizing operational expenses through lean systems, process efficiency, and value-based care without compromising service quality, thereby improving financial sustainability (Lim et al., 2018; Smith et al., 2019). Technology optimization involves strategic use and continuous improvement of digital systems such as EHRs, telehealth, and clinical decision support to enhance workflow efficiency, data accuracy, patient safety, and service differentiation (Wang et al., 2020; Ramsetty & Adams, 2020; Topol, 2019). Together, these dimensions improve operational efficiency, reduce wastage, and strengthen sustained competitive advantage in healthcare organizations (Joshi et al., 2020).

### **Organizational Culture**

Organizational culture influences how members coordinate behavior and deploy resources toward strategic goals. Cultures that emphasize patient care quality, employee engagement, and continuous improvement enhance competitive advantage by shaping effective resource use

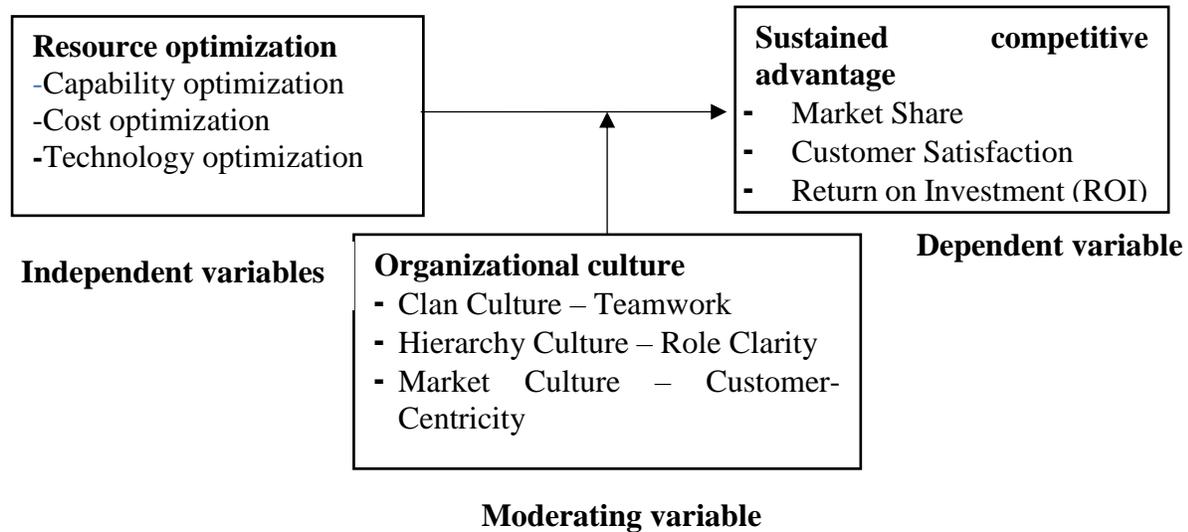
(Brown et al., 2020). This study conceptualizes culture using the Competing Values Framework and operationalizes it through three orientations relevant to private healthcare.

Teamwork, reflecting clan culture, promotes collaboration, trust, and collective problem-solving, enabling knowledge sharing, innovation, and adaptability in multidisciplinary care environments (Cameron & Quinn, 2011; Salas et al., 2020; Johnson et al., 2023). Role clarity, aligned with hierarchy culture, emphasizes structure, defined responsibilities, and standardized procedures, reducing ambiguity and improving accountability and operational efficiency in compliance-driven healthcare settings (Cameron & Quinn, 2011; Shahidul, 2023). Customer-centricity, representing market culture, focuses on competitiveness, responsiveness, and performance outcomes, encouraging superior patient experiences, service differentiation, and stronger financial and reputational performance (Cameron & Quinn, 2011; Alessandro et al., 2020; Gallarza et al., 2015).

Together, these cultural orientations shape internal coordination and external responsiveness, strengthening the link between leadership practices and sustained competitive advantage.

### **Conceptual Framework**

This is a group of broad ideas and principles derived from relevant fields of inquiry used to structure a subsequent diagrammatic presentation (Reichel & Ramey, 1987; Kihara, 2019). It provides a pictorial representation of independent variables clearly indicating their relationships that predict an outcome (dependent variable) of study. Particularly the conceptual framework in this study depicts a link between resource optimization (independent variable), organizational culture (moderating variable) and sustained competitive advantage (dependent variable) of private healthcare providers in Kenya.



**Figure 2. 1: Conceptual framework**

**Resource Optimization**

Moradi et al (2021) describes resource optimization as systematic process aimed at maximizing efficient utilization of organization resources to enhance performance while controlling cost of production. Murphy et al (2019) submit that healthcare systems need to employ strategies and structures that enhance resource optimization based on evidence-based approaches to achieve best patient outcomes. Resource optimization in healthcare involves identification and prioritization of organizational needs, allocation and maximization of human capital resources, financial resources, technological resources, physical resources such as equipment/plants to improve operational efficiency, enhance healthcare service delivery, patient outcomes and to realize sustained competitive advantage (Madsen et al, 2020). In this study, resource optimization was evaluated based on; capability optimization, cost optimization and technology optimization.

Capability optimization is a strategic process of resource alignment and leveraging of organizational resources, skills and competencies aimed at enhancing healthcare performance, service delivery and patient best outcomes (Gupta, 2020). Capability optimization in an organization includes; talent management, leadership and process improvement which if well managed will amount to process effectiveness, enhanced innovation and competitive advantage in healthcare industry (Thomas et al, 2018).

Cost optimization encompasses establishment of cost-saving strategies that optimize resource utilization while maintaining quality services/products (Lim et al (2018). Hence, the scholars define cost optimization as a process of minimizing operational expenses, enhancing production

efficiency maximization and effective resource allocation to realize desired outcome at the lowest cost. Furthermore, cost optimization leads to cost reduction, reduced resource wastage, improved resource allocation, enhanced operational efficiency and subsequently financial sustainability which are all key factors for sustained competitive advantage (Lim et al, 2018).

Healthcare providers may improve cost optimization strategies by embracing lean management, process improvement and value-based care as an approach in sustaining competitive advantage (Smith et al, 2019). Technology optimization involves strategic management of information technology resources and applications to enhance operational efficiency and improve patient outcomes in healthcare, thereby improving competitive advantage (Wang et al, 2020). Tulu et al (2019) opine that technology optimization encompasses continuous improvement and healthcare technological enhancement in terms of hardware, software and networks for performance, security, scalability and usability in organizations. Technology utilization in healthcare organizations reduces time wastage searching for patient information, adoption of computerized provider order entry (CPOE) system reduces drug errors while telehealth system improves patient satisfaction (Ramsetty & Adams, 2020; Adler & Jha, 2019).

Healthcare players use technology to differentiate their services through innovative services which enhance client experiences as a driver to competitive advantage (Topol, 2019). Studies reveal that optimized technology systems enhance organization workflows, minimizes administrative burden while still aiding healthcare providers to effectively and efficiently deliver products and services as a means to sustained competitive advantage (Joshi et al, 2020). These systems and processes include; electronic health records, telehealth and clinical decision support systems which increase data accuracy, reduces operational errors, enhances client safety, and increases productivity

### **Organizational Culture**

Organizational culture shapes how members of an organization think, behave, and coordinate their efforts in pursuit of strategic goals. Cultures that prioritize quality patient care, client satisfaction, employee engagement, and continuous improvement are more likely to sustain competitive advantage because they influence how effectively resources and capabilities are deployed (Brown et al., 2020). For culture to contribute meaningfully to strategic outcomes, it must align with organizational structure and long-term objectives. In this study, organizational culture is conceptualized using orientations consistent with the Competing Values Framework, and operationalized through teamwork, role clarity, and customer-centricity, which represent distinct culture orientations relevant to private healthcare organizations.

Teamwork, reflecting a clan culture orientation, emphasizes collaboration, shared responsibility, and mutual support among employees. Clan cultures are characterized by internal focus and

flexibility, fostering trust, cohesion, and collective problem-solving (Cameron & Quinn, 2011). Teamwork enables healthcare staff to share knowledge, coordinate care processes, and respond collectively to service challenges, thereby enhancing innovation and adaptability (Salas et al., 2020; Johnson et al., 2023). In multidisciplinary healthcare environments, such collaborative cultures strengthen internal integration and facilitate the effective implementation of strategic initiatives.

Role clarity, aligned with hierarchy culture orientation, emphasizes structure, formal procedures, and clearly defined responsibilities. Hierarchy cultures prioritize stability and control, ensuring that processes are standardized and predictable (Cameron & Quinn, 2011). Clear role definitions reduce ambiguity, improve accountability, and enhance task performance by guiding employees on expectations and performance standards (Shahidul, 2023; Rukiya, 2023). In healthcare settings where compliance, coordination, and procedural consistency are critical, role clarity supports efficient service delivery and minimizes operational errors.

Customer-centricity, representing a market culture orientation, reflects an external focus on competitiveness, productivity, and achievement of service targets. Market-oriented cultures emphasize responsiveness to customer needs and performance outcomes (Cameron & Quinn, 2011). In private healthcare organizations, customer-centricity encourages staff to deliver superior patient experiences, respond promptly to feedback, and align services with patient expectations, thereby differentiating the organization in competitive markets (Alessandro et al., 2020; Gallarza et al., 2015; Gilberto, 2022). Such cultures reinforce performance discipline and strengthen reputation, loyalty, and financial outcomes.

### **Sustained Competitive Advantage**

Sustained Competitive Advantage (SCA) refers to an organization's ability to maintain superior performance and profitability over time by leveraging unique, valuable, and hard-to-replicate resources (Barney, 1991; Prahalad & Hamel, 1990). Guided by the Resource-Based View (RBV), this study focuses on how effective resource optimization, through maximizing human, financial, and technological assets, enhances SCA of private healthcare providers in Kenya. Healthcare organizations that invest in capability development, cost management, and technology adoption create barriers that protect them from competitive threats while improving operational efficiencies.

Key performance indicators such as market share, customer satisfaction, and Return on Investment (ROI) are used to evaluate SCA. High market share signifies strong brand positioning and profitability (Armstrong & Green, 2021), while superior customer satisfaction, measured through feedback systems, fosters loyalty and repeat business (Guido, 2015; Kitilu, 2023). ROI quantifies the financial gains from resource investments, offering insights into profitability and strategic

efficiency (Corporate Finance Institute, 2022). Optimizing resources enables private healthcare providers to reduce costs, improve service quality, and sustain market leadership in an increasingly competitive environment.

## **METHODOLOGY**

This study employed a descriptive cross-sectional survey design with a quantitative approach, suitable for examining the relationship between resource optimization and sustained competitive advantage in private healthcare providers. Grounded in positivist philosophy, the study focused on collecting objective, measurable data from a large population to test hypotheses and generalize findings. The target population comprised 958 registered private healthcare providers (Level 3 to Level 6) operating in the Nairobi Metropolitan region (KMFL, 2023). These facilities were selected due to their exposure to competitive pressures requiring resource optimization strategies. Stratified random sampling ensured representation across facility levels, while purposive sampling identified senior managers as key respondents, given their knowledge of organizational resources.

Using Yamane's formula (1967), the sample size was calculated at 282 healthcare organizations, distributed proportionally: 214 Level 3, 59 Level 4, 7 Level 5, and 2 Level 6 facilities. Data collection was done through structured questionnaires incorporating Likert-scale items to capture perspectives on human, financial, and technological resource optimization. A pilot test covering 10% of the sample ensured tool clarity and reliability, with Cronbach's alpha coefficients exceeding 0.7, confirming internal consistency. Descriptive statistics summarized the data, while correlation and multiple regression analyses tested the predictive power of resource optimization. SPSS Version 28 facilitated data analysis, and findings were presented in tables and graphs. Ethical approval was secured, and respondents' confidentiality was assured throughout the study.

## **RESEARCH FINDINGS AND DISCUSSIONS**

### **Response Rate**

A total of 254 questionnaires were distributed to the senior managers in private healthcare providers within the Nairobi Metropolitan region. Out of these, 219 questionnaires were completed and returned, yielding a response rate of 86.2%. The high response rate is indicative of the respondents' engagement with the research topic and their willingness to provide the necessary information. This response rate surpasses the commonly accepted threshold of 70% for survey research, as suggested by Mugenda and Mugenda (2019), which further strengthens the credibility of the data collected.

## Descriptive Analysis

### Resource Optimization

The first objective of the study was to determine influence of resource optimization on sustained competitive advantage of private healthcare providers in Kenya. On a scale of 1 to 5 whereby 1=strongly disagree and 5 =strongly agree, respondents were asked to indicate their opinion on various statements. Table 1 presents the mean and standard deviation for the Likert-scale questions related to resource optimization.

**Table 1: Descriptive Statistics on Resource Optimization Indicators**

Statement	Mean	Std. Dev.
Employee training opportunities are available to all cadres on organizational mission and vision	4.247	0.664
We attract and retain competent healthcare professionals for competitive advantage	4.247	0.657
This organization has cost-saving measures employed without compromising quality of services	4.247	0.652
Cost optimization strategies have enabled us to offer competitive pricing for quality patient care	4.233	0.659
Resource optimization strategies have led to improved employee satisfaction, positive customer experience, and high financial performance	4.266	0.653
<b>Aggregate Score</b>	<b>4.247</b>	<b>0.657</b>

The high mean scores (all above 4.0) indicate a strong agreement among respondents on the positive influence of resource optimization on various organizational aspects. The mean scores suggest that providing employee training opportunities (mean = 4.247, SD = 0.664), attracting and retaining competent healthcare professionals (mean = 4.247, SD = 0.657), and employing cost-saving measures without compromising service quality (mean = 4.247, SD = 0.652) are critical for maintaining competitive advantage. Cost optimization strategies (mean = 4.233, SD = 0.659) enabling competitive pricing for quality patient care and resource optimization strategies (mean = 4.266, SD = 0.653) leading to improved employee satisfaction, positive customer experience, and high financial performance are also crucial. These findings support the literature by Lim et al. (2018) and Wang et al. (2020), who emphasize the importance of cost and technology optimization in enhancing organizational efficiency and sustaining competitive advantage. Overall, the high aggregate score (mean = 4.247, SD = 0.657) underscores the critical role of resource optimization in enhancing the sustained competitive advantage of private healthcare providers in Kenya. By

optimizing resources effectively, healthcare providers can achieve better performance, reduce costs, and improve the quality of care, thereby securing a strong competitive position in the market.

### Organizational Culture

The second objective of the study was to examine the moderating influence of organizational culture on resource optimization and sustained competitive advantage of private healthcare providers in Kenya. On a scale of 1 to 5 whereby 1=strongly disagree and 5 =strongly agree, respondents were asked to indicate their opinion on various statements. Table 2 presents the mean and standard deviation for the Likert-scale questions related to organizational culture.

**Table 2: Descriptive Statistics on Organizational Culture Indicators**

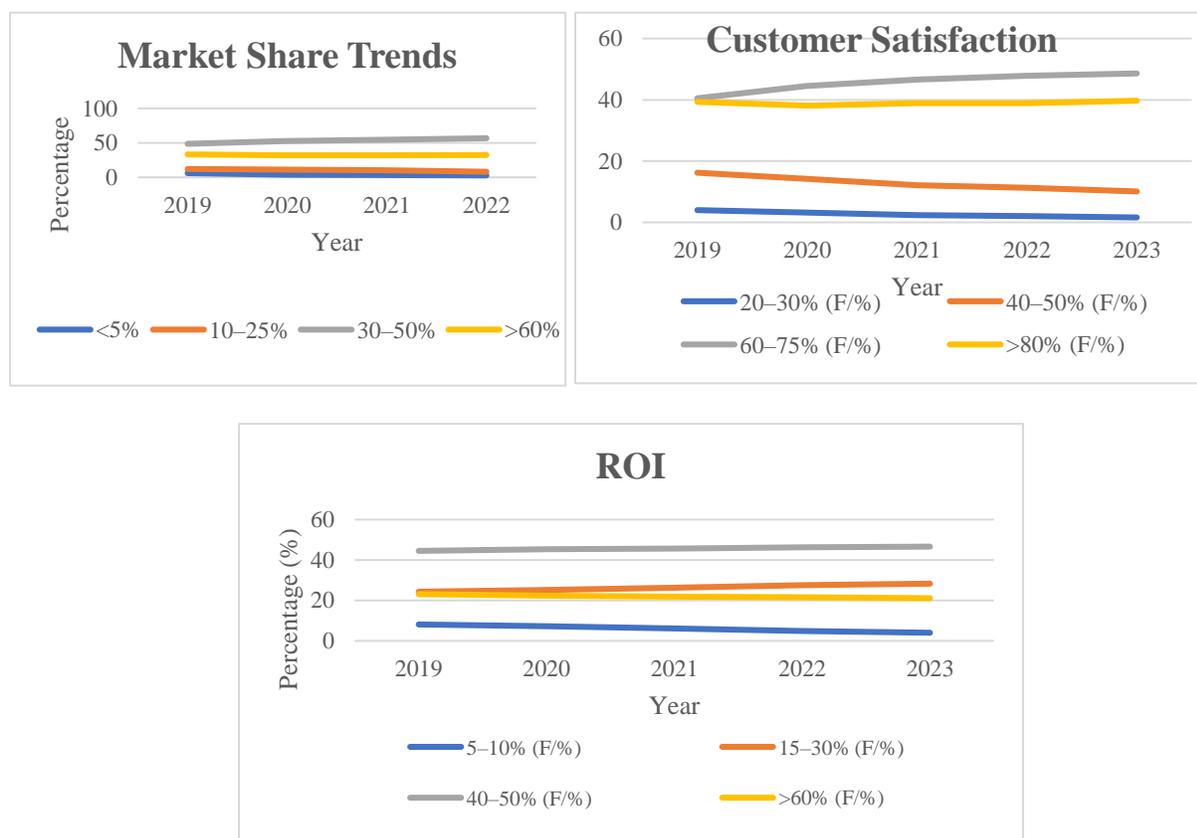
Statement	Mean	Std. Dev.
Our OC fosters positive synergy amongst teams towards a common goal	4.174	0.687
Our organization has a culture of providing clear guidance to avoid role ambiguity	4.170	0.693
Our OC emphasizes customer centricity and patient satisfaction in service delivery	4.201	0.672
OC in this organization provides for amicable problem resolution with an emphasis on improving an individual and building a strong team for competitive advantage	4.210	0.649
All employees are committed to providing a positive customer experience and consultation is encouraged horizontally and vertically at all times	4.201	0.652
<b>Aggregate Score</b>	<b>4.192</b>	<b>0.671</b>

The high mean scores (all above 4.0) indicate a strong agreement among respondents on the positive influence of organizational culture on various organizational aspects. The mean scores suggest that fostering positive synergy among teams (mean = 4.174, SD = 0.687), providing clear guidance to avoid role ambiguity (mean = 4.170, SD = 0.693), and emphasizing customer centricity and patient satisfaction (mean = 4.201, SD = 0.672) are critical for maintaining competitive advantage. The emphasis on amicable problem resolution and team building (mean = 4.210, SD = 0.649) and the commitment of employees to providing a positive customer experience (mean = 4.201, SD = 0.652) further highlight the importance of a strong organizational culture. These findings support the literature by Brown et al. (2020) and Salas et al. (2020), who emphasize the role of a positive organizational culture in enhancing team performance, customer satisfaction, and overall organizational effectiveness. Overall, the high aggregate score (mean = 4.192, SD = 0.671) underscores the critical role of organizational culture in moderating the relationship

between resource optimization and sustained competitive advantage, ensuring alignment with organizational goals, and fostering a supportive and collaborative work environment.

### Sustained Competitive Advantage

The primary objective of this study was to evaluate the influence of resource optimization on the sustained competitive advantage of private healthcare providers in Kenya as captured by three critical performance indicators: market share, customer satisfaction, and return on investment (ROI). The results, presented in Figure 1, indicate a clear trend.



**Figure 1: Trends in Market Share, Customer Satisfaction, and ROI Among Private Healthcare Providers (2019–2023)**

Figure 1 indicates a consistent upward trend across all three indicators of sustained competitive advantage between 2019 and 2023. The proportion of providers in the 30–50% market share category increased from 42.0% to 53.4%, while those below 25% steadily declined, suggesting sector consolidation and improved competitive positioning among mid-sized providers. Customer satisfaction also improved, with institutions reporting satisfaction levels above 60% increasing over the study period, while low satisfaction categories decreased, reflecting sector-wide service

quality improvements. ROI performance remained stable and strong, with the 40–50% return category consistently representing the largest group and low-return cases declining from 9.1% to 4.6%, indicating enhanced capital efficiency.

The simultaneous improvement in market share, service perception, and financial returns suggests stronger alignment between internal capabilities and external demands. These findings support the Resource-Based View, which posits that organizations leveraging valuable and inimitable resources achieve superior long-term performance (Barney, 1991). They also align with healthcare studies linking service quality and resource deployment to competitive strength and organizational sustainability (Mani et al., 2021; Alahmar & Benlamri, 2020). The parallel upward trends therefore indicate that private healthcare providers are increasingly translating strategic resource use into both financial and non-financial competitive outcomes.

### Simple Regression Analysis

To test the study's null hypotheses, simple regression analyses were conducted to evaluate the influence of each independent variable on sustained competitive advantage. Each hypothesis was tested at a 95% confidence interval, and significance was determined at a p-value of less than 0.05.

The first specific objective of the study was to assess influence of resource optimization on sustained competitive advantage of private healthcare providers in Kenya. The associated null hypothesis was:  $H_{01}$ : Resource optimization has no influence on sustained competitive advantage of private healthcare providers in Kenya.

**Table 3: Regression Output for Resource Optimization and Sustained Competitive Advantage**

#### Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.610 <sup>a</sup>	.365	.361	.310

#### ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	21.533	1	21.533	128.173	0.000 <sup>b</sup>
Residual	36.384	217	0.168		
Total	57.917	218			

**Beta Coefficients**

Model	Unstandardized	Standardized Coefficients		t-value	Sig.
	Coefficients	Beta	Std. Error		
	B				
(Constant)	.703		.120	5.862	0.000
Resource Optimization	.610	.610	.082	7.391	0.000

a. Dependent Variable: Sustained Competitive Advantage

b. Predictors: (Constant), Resource Optimization

The regression results show that resource optimization explains a substantial proportion of variation in sustained competitive advantage. The adjusted  $R^2$  value of 0.365 indicates that 36.5% of the variance in sustained competitive advantage is accounted for by resource optimization, while 63.5% is attributable to other factors. The model was statistically significant,  $F(1,217) = 128.173$ ,  $p < 0.001$ , confirming the presence of a linear relationship between resource optimization and sustained competitive advantage.

The fitted regression equation was:  $Y = 0.703 + 0.610X$

Where Y represents sustained competitive advantage and X represents resource optimization. The beta coefficient ( $\beta = 0.610$ ,  $p < 0.001$ ) shows that a one-unit increase in resource optimization leads to a 0.610-unit increase in sustained competitive advantage. The constant value of 0.703 indicates the baseline level of competitive advantage when resource optimization is zero.

These findings demonstrate that resource optimization is a strong and statistically significant predictor of sustained competitive advantage, leading to rejection of  $H_{01}$ . The results are consistent with prior studies emphasizing the role of efficient utilization of human and technological resources in strengthening healthcare performance and competitive positioning (Moradi et al., 2021; Murphy et al., 2019; Wamalwa, 2021). Similar evidence from Alahmar and Benlamri (2020) and Rotaru, Turcu and Draghici (2019) further supports that optimized resource allocation enhances service efficiency, cost control, and operational effectiveness in healthcare environments.

**Hierarchical Regression Analysis**

The second specific objective of the study was to evaluate the moderating effect of organizational culture on the relationship between resource optimization and the sustained competitive advantage of private healthcare providers in Kenya. The associated null hypothesis was:

**H<sub>02</sub>:** Organizational culture has no moderating effect on the relationship between resource optimization and sustained competitive advantage of private healthcare providers in Kenya.

To test this hypothesis, a hierarchical regression analysis was performed in three steps:

1. Step 1: The independent variables resource optimization was regressed on the dependent variable (sustained competitive advantage).
2. Step 2: The moderator variable (organizational culture) was added to assess its main effect on sustained competitive advantage.
3. Step 3: Interaction terms between each independent variable and the moderator were introduced to evaluate the moderation effect of organizational culture on the relationship between resource optimization and sustained competitive advantage.

**Table 4: Coefficients for Moderation Effect of Organizational Culture**

Model	Unstandardized Coefficients	Std. Error	Standardized Coefficients	t-value	Sig.
(Constant)	0.742	0.221		3.358	0.001
Resource Optimization (X)	0.345	0.066	0.369	5.227	0.000
Organizational Culture (Z)	0.385	0.057	0.419	6.754	0.000
X * Z (Resource Optimization × Z)	0.172	0.053	0.188	3.245	0.002

The hierarchical regression results show that organizational culture has both a direct and a moderating influence on sustained competitive advantage. The positive coefficient for organizational culture ( $\beta = 0.385$ ) indicates that stronger cultural orientations independently improve sustained competitive advantage, even without considering interaction effects. This suggests that organizational culture itself functions as a strategic intangible asset that enhances competitiveness, supporting arguments that culture differentiates high-performing organizations from their competitors (O'Reilly et al., 2018).

The interaction term between resource optimization and organizational culture was also significant ( $\beta = 0.172$ ,  $p < 0.05$ ), confirming a moderating effect. This means that the positive influence of resource optimization on sustained competitive advantage becomes stronger when supported by a conducive organizational culture. In other words, culture enhances the effectiveness of resource optimization practices, enabling organizations to better convert operational efficiencies into competitive outcomes. These findings align with prior research emphasizing that strong organizational cultures improve firms' capacity to adapt, coordinate resources, and exploit opportunities in dynamic environments (Weber & Tarba, 2018; Brown et al., 2020).

Based on these results, the null hypothesis was rejected, confirming that organizational culture significantly moderates the relationship between resource optimization and sustained competitive advantage. The findings demonstrate that resource optimization alone is insufficient; its impact depends on the cultural environment that supports coordination, commitment, and strategic alignment within the organization.

### **Conclusions**

The study rejected H01 and established that resource optimization significantly influences sustained competitive advantage. Effective use of human, financial, and technological resources enabled private healthcare providers to improve operational efficiency, patient outcomes, and profitability, confirming resource optimization as a key driver of long-term competitiveness.

H02 was also rejected, as organizational culture was found to significantly moderate the relationship between resource optimization and sustained competitive advantage. Cultures emphasizing teamwork, role clarity, and customer-centricity strengthened the effectiveness of resource optimization. Organizational culture therefore functions as a strategic enabler that enhances leadership practices and supports sustainable competitive performance.

### **Recommendations for Policy and Practice**

#### **Resource Optimization**

Given that resource optimization emerged as a strong predictor of sustained competitive advantage, private healthcare providers must prioritize efficient management of human, financial, and technological resources. This includes developing capacity-building programs, investing in continuous professional development, and implementing effective succession planning to ensure leadership continuity. Cost optimization strategies such as lean management, process improvement, and elimination of waste should be institutionalized without compromising service quality. Furthermore, technological investments, like electronic health records, telemedicine platforms, and artificial intelligence in diagnostics, should be prioritized to enhance operational efficiency and patient outcomes. From a policy standpoint, the government should provide incentives, including tax relief and special funding, for healthcare providers investing in modern technologies, infrastructure, and staff development programs. Policies that promote resource optimization as a standard practice should be developed, particularly in resource-intensive departments like laboratories, imaging, and surgical units. This will not only enhance competitiveness but also contribute to the overall improvement of healthcare quality in the country.

## **Organizational Culture**

The study revealed that a positive organizational culture significantly strengthens the impact of resource optimization on competitive advantage. Therefore, it is recommended that private healthcare providers intentionally cultivate cultures that promote teamwork, role clarity, and customer-centricity. Organizations should invest in continuous leadership development, team-building activities, and structured onboarding programs to foster clarity of roles and collaborative work environments. Healthcare providers should embed patient-centered care into their cultural framework, ensuring that all staff understand the importance of providing quality healthcare services with empathy and professionalism. At the policy level, the Ministry of Health and healthcare regulatory bodies should develop guidelines that assess and promote positive organizational cultures within healthcare institutions. Cultural audits focusing on teamwork, customer centricity, and role clarity should be made part of the accreditation process. Patient-centric practices should be recognized and rewarded through national healthcare awards or incentive programs, reinforcing the importance of a strong organizational culture in achieving sustained healthcare delivery.

## **Recommendations for Further Studies**

While this study provides valuable insights into the influence of resource optimization on sustained competitive advantage of private healthcare providers in Kenya, several areas remain open for further investigation. Future researchers are encouraged to expand the geographical scope of this study beyond Nairobi Metropolitan to include other regions in Kenya and East Africa. This would enable comparative analysis to establish whether similar resource optimization dynamics influence competitive advantage across diverse healthcare markets and regulatory environments. Additionally, this study focused exclusively on private healthcare providers; future research could incorporate public healthcare institutions or conduct a comparative study between private and public healthcare providers. Such comparative studies would offer broader insights into how resource optimization practices differ across ownership models and the implications on sustained competitive advantage in the healthcare sector.

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