

Strategic Quality Management System and Sustainable Competitive Advantage in Kenya's Aviation Companies

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Abstract

This study examined the influence of Strategic Quality Management Systems (SQMS) on Sustainable Competitive Advantage (SCA) in Kenya's aviation industry. Anchored on Stakeholder and Total Quality Management theories, the study adopted a positivist philosophy and a mixed-methods approach research design. Quantitative and qualitative data was collected from 360 managerial staff across all 60 Kenya Civil Aviation Authority (KCAA)-licensed aviation firms. Regression analysis revealed that SQMS in terms of quality planning, safety assurance, continuous improvement, corrective and preventive action systems, and quality audits is a strong predictor of sustainable comparative advantage in terms of organizational efficiency, customer trust, operational reliability, and market positioning in the aviation companies accounting for 41.3% of the variance ($R^2 = 0.413$, $p < 0.001$) in. This was significantly influenced. Qualitative results supplemented these findings by showing that firms with well-integrated quality systems exhibited stronger safety culture, lower operational risk, and improved stakeholder confidence. The study concluded that SQMS is an operational tool and a strategic asset that enhances competitive differentiation in a highly regulated aviation environment. Enhancing quality assurance mechanisms through more frequent audits, real-time compliance tracking, and automated monitoring tools, investment in advanced safety assurance frameworks as well as continuous improvement of SMS by integrating industry best practices, leveraging emerging technologies, and fostering a culture of safety accountability among employees are recommended.

Keywords: Aviation Safety, Strategic Quality Management System, Sustainable Competitive Advantage

Introduction

Business organizations today operate in a highly dynamic and competitive environment characterized by rapid technological change, digital innovation, increased customer expectations, and heightened global competition (Möller et al., 2020). Within the aviation sector where the core business revolves around flight operations, passenger services, and cargo transport organizational performance is heavily dependent on reliability, service quality, and customer satisfaction (Abate

et al., 2020). As a result, airlines and aviation service providers are increasingly shifting from traditional operational models to strategic quality-driven approaches aimed at strengthening efficiency, safety, and long-term competitiveness (Molchanova et al., 2020; Pereira et al., 2021).

Globally, the aviation industry has experienced significant growth, with passenger traffic surpassing 9 billion in 2024 (Airports Council International [ACI] World, 2025). This growth has however intensified pressure on operators to maintain exceptional quality and safety standards amid rising operational risks, increased regulatory scrutiny, and escalating customer expectations (IATA, 2025). In this context, quality management has evolved from a compliance necessity to a strategic variable that directly influences operational reliability, reputation, and competitive positioning. Many states including Kenya have strengthened their oversight frameworks to align with global standards such as ICAO Annexes, thereby requiring aviation organizations to implement structured quality management practices (KCAA, 2024).

Strategic Quality Management Systems (SQMS) have therefore become essential in ensuring consistent service delivery, robust documentation, effective corrective and preventive action (CAPA) mechanisms, internal quality audits, and continuous improvement. These systems leverage modern technologies such as predictive analytics, real-time monitoring, automated incident reporting, and performance dashboards to enhance transparency, reduce downtime, improve decision-making, and strengthen operational reliability. By institutionalizing SQMS, airlines can reduce the frequency of service disruptions, minimize regulatory findings, enhance customer trust, and sustain long-term performance (Thendu, 2023). For instance, in the Middle East, Emirates Airlines and Etihad Airways have continued to adopt advanced Quality Management Systems (QMS) as part of Strategic Management Systems (SMS). These are aimed at enhancing customer satisfaction, operational efficiency, and safety, thereby securing a competitive edge in the international market (Nasaj & Al-Marri, 2022). Additionally, Etihad Airways has also made additional significant strides in QMS implementation, achieving ISO 9001 certification, which underscores its dedication to quality and continuous improvement (Emil, 2021). The investment has contributed towards enhanced operational efficiency and customer satisfaction by streamlining its operations, resulting in more efficient scheduling, reduced delays, and improved resource management. This has partly contributed to the multiple accolades that Etihad continue to receive in terms of service quality through Skytrax awards and the World Travel Awards (Kucsera, 2021). The success of these airlines underlines the strategic importance of QMS in achieving and maintaining a sustainable competitive advantage.

Theoretically, Total Quality Management (TQM) philosophy offers a strong conceptual lens for understanding the strategic contribution of SQMS. The theory emphasizes continuous improvement, customer satisfaction, process optimization, employee involvement, and data-driven decision-making as foundations for organizational excellence. When TQM principles are embedded within SQMS through structured audits, continuous improvement cycles, documentation integrity, and proactive quality assurance organizations are better positioned to enhance service reliability, strengthen customer trust, and maintain competitive advantage in dynamic environments.

In Kenya, the aviation sector contributes approximately 3.1% to national GDP (USD 3.3 billion) and supports nearly 460,000 jobs, underscoring its economic importance (IATA, 2025). Despite this, Kenyan aviation firms face rising competition, operational cost pressures, and increasingly stringent quality expectations from customers, regulators, and international partners. The Civil

Aviation (Safety Management) Regulations, 2018 mandate the implementation of structured safety and quality systems across all licensed aviation organizations to strengthen operational capability, audit performance, and organizational resilience (Kenya Law, 2018). While local and international evidence confirms the benefits of quality and safety systems for performance outcomes, there remains limited empirical research on how Strategic Quality Management Systems specifically contribute to sustainable competitive advantage within the Kenyan aviation context.

Despite the centrality of quality in aviation operations, empirical literature in Kenya has primarily focused on safety management, regulatory compliance, or operational performance, with little attention given to the strategic value of SQMS in shaping competitive outcomes. Variations in audit performance, documentation quality, corrective action implementation, and continuous improvement practices among Kenyan aviation operators further underscore the need for empirical investigation. This study therefore examines the influence of Strategic Quality Management Systems on sustainable competitive advantage among licensed aviation organizations in Kenya. By isolating the contribution of SQMS, the study provides insights for policymakers, regulators, and aviation managers on how quality systems can be leveraged not only for compliance but as strategic enablers of long-term competitiveness.

Statement of the Problem

Worldwide, the implementation of SQMS is increasingly recognized as a fundamental driver of sustainable competitive advantage (SCA) in the aviation sector (El-Souri, Gao & Simmonds, 2019). By enhancing service reliability, reducing operational errors, strengthening documentation and audit processes, and fostering a customer-centric quality culture, SQMS enables airlines to improve their brand reputation, operational consistency, and long-term competitiveness. Industry reports, further emphasize that well-structured quality assurance and continuous improvement frameworks minimize service disruptions and operational inconsistencies, thereby supporting strategic differentiation in a highly competitive global market (IATA, 2018). Consequently, SQMS is widely acknowledged as a strategic resource that contributes substantially to organizational resilience, market positioning, and operational excellence.

Despite these global insights, Kenya's aviation industry continues to experience quality-related challenges, including fragmented documentation practices, inconsistent follow-up of quality audit findings, and limited institutionalization of continuous improvement processes (Stolzer, Halford & Goglia, 2021).

Although all 60 KCAA-licensed aviation organizations operate under quality and safety guidelines informed by ICAO standards, there remains considerable variation in the ability of these firms to translate SQMS investments into tangible competitive outcomes. Existing Kenyan studies have largely examined safety management, regulatory compliance, operational risk, and service quality (Njeru, 2019; Mwikya, Sabina & Mwaura, 2018; Thendu, 2023), yet none has isolated SQMS as a distinct influencer of sustainable competitive advantage.

Theoretically, TQM and the Resource-Based View (RBV) underscore that when quality practices are deeply embedded within organizational processes, they evolve from compliance routines into strategic capabilities that yield durable competitive value (Barney, 1991; IATA, 2018). Lack of empirical evidence on the strategic contribution of SQMS within the Kenyan aviation context presents both a conceptual and practical gap. Without clear understanding of the extent to which SQMS influences sustainable competitive advantage, aviation managers face uncertainty regarding whether investments in quality systems such as documentation upgrades, audit

capability strengthening, or enhanced continuous improvement processes yield meaningful strategic returns which have implications on their pursuit of sustainable competitive advantage.

This study addresses these gaps by empirically examining the influence of Strategic Quality Management Systems on sustainable competitive advantage among licensed aviation organizations in Kenya. Through this investigation, the study provides evidence-based insights to inform aviation operators, policymakers, and quality managers on how SQMS could be leveraged not merely for compliance, but as a strategic mechanism for long-term competitiveness.

Literature Review

Emani (2024) conducted a study on Flying Towards Sustainability, by assessing the role of leadership in Airline Operations in the Aviation industry in the Caribbean Islands. The survey explored how leadership is essential to promoting environmental stewardship in airline operations management. The study was carried out for a period of two years, targeting six airlines within the Caribbean islands. To obtain accurate results, the secondary data was gathered and utilized for gap identification, goal formulation, validation of findings, and primary data interpretation. Both quantitative and qualitative analyses were performed on the gathered data. Multiple regression models were used to provide the relationship between the study variables. The study found out that effective flight operations management boosts operational effectiveness and reduces costs, which directly affects Caribbean airline's ability to compete.

An investigation by Abdi and Càmara (2022) explored the impact of sustainability Environmental, Social and Governance (ESG) disclosure on firm value and financial performance (FP) in airline industry in the United Kingdom. The study went ahead to assess the impacts of strategic flight operations management on attainment of sustainability in the airline industry in the United Kingdom. Drawing from data gathered from 13 airlines operating in the United Kingdom between 2019 and 2022, the study found that innovation in technology and processes, such as the adoption of advanced aircraft navigation systems and data analytics for predictive maintenance, are key factors in maintaining a competitive edge in the U. K's highly dynamic aviation industry. In the USA, Johnson and Parker (2020) examined how flight operations management contributes to the attainment of sustainable competitive advantage for aviation enterprises utilizing quantitative methodology targeting flight operation managers from several airlines. Regression analysis demonstrated that the implementation of advanced flight operations management practices, such as optimized flight scheduling, fuel economy measures, and real-time data analytics, resulted in enhanced operational performance and cost reductions. Consequently, this strengthened the competitive standing of aviation enterprises.

In China, Liu et al. (2020) sought to examine the impact of flight operations management on the sustainable competitive advantage of aviation enterprises by gathering data via surveys administered to 100 flight operation managers. Regression analysis revealed that optimization of flight operations management, encompassing effective scheduling and live monitoring, has a direct impact on reducing costs and enhancing operational efficiency, thereby offering a long-lasting sustainable competitive advantage. Researching on Flight Operation Management and Flight Safety in South African Airways (Merkert & Swidan, 2019) to determine whether strategic flight operations management is a useful tactic for boosting operational profitability. The results showed that improved flight operations management which includes on-time performance, high-quality in-

flight amenities, and efficient communication improves customer satisfaction and loyalty, which are essential for gaining a sustainable competitive advantage.

Echwa and Murigi (2019) examined the strategic leadership in flight operations management and performance of domestic airline firms in Kenya. A survey research design that focused on domestic airline companies was adopted applying a semi-structured self-administered questionnaire and interviews from 141 respondents drawn from top management teams of airline companies. A combination of descriptive and inferential statistics indicated that the performance of Kenya's domestic airline companies and strategic leadership have a statistically significant and substantially beneficial link and that leadership, integrated safety management, continuous improvement, technological advancement, and adherence to best practices are pivotal elements contributing to the effectiveness of strategic safety management systems (SSMS). The study recommended that future research should explore the evolving role of digital transformation in safety management and how emerging risks associated with cybersecurity and unmanned aircraft systems can be integrated into SSMS frameworks.

Methodology

The study adopted a positivist philosophical paradigm and a sequential mixed method research design. The quantitative phase was designed specifically to test whether the strength of the relationship between SSMS implementation and SCA is contingent upon the level of regulatory compliance, while the subsequent qualitative phase sought to triangulate the qualitative results.

All managerial employees working in Kenya's aviation industry who are directly involved in, or significantly influenced by, the implementation of Strategic Quality Management Systems was targeted. The aviation sector in Kenya comprised 60 organizations licensed by the Kenya Civil Aviation Authority (KCAA) as of December 2024, including airlines, maintenance and repair organizations (MROs), flight training institutions, and air service operators. These firms were selected because SQMS adoption, quality audits, documentation procedures, and continuous improvement initiatives are core operational requirements across all categories of licensed aviation entities. A census approach was employed in terms of the unit of analysis. Within each company, stratified sampling was applied to ensure proportional representation of key departments including safety, flight operations, maintenance, quality assurance, human resource, and senior executive cadres, yielding 360 respondents as unit of observation. For the qualitative component, twenty managers who regularly lead or participate in KCAA compliance audits were purposively selected to provide in-depth explanatory insights.

The Strategic Quality Management System (SQMS) was measured as a multidimensional construct comprising six key dimensions: quality planning, documentation and records management, continuous improvement systems, corrective and preventive action (CAPA) mechanisms, internal quality audits, and safety assurance and monitoring. These dimensions were assessed using a 24-item scale adapted from established aviation quality and safety frameworks. The dependent variable, sustainable competitive advantage, was measured using an eight-item scale capturing cost efficiency, market positioning, operational reliability, customer trust, and organizational resilience. All items were rated on a five-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree), and reliability tests produced Cronbach's alpha values between 0.89 and 0.92, indicating strong internal consistency of the measurement instruments.

Data analysis followed a structured quantitative approach supported by diagnostic validation to ensure robustness of results. Simple linear regression was used to examine the direct influence of Strategic Quality Management Systems (SQMS) on sustainable competitive advantage, given that the study focused exclusively on the predictive power of SQMS. Prior to analysis, all continuous variables were mean-centered to enhance interpretability and reduce potential multicollinearity among indicators derived from the multidimensional SQMS construct. Assumption testing confirmed the suitability of regression analysis: residuals were normally distributed ($p > 0.05$), the Breusch–Pagan test indicated no significant heteroscedasticity ($p > 0.05$), and all variance inflation factor (VIF) values were well below 2.5, demonstrating the absence of multicollinearity concerns. The regression model was executed to determine the variance in sustainable competitive advantage explained by SQMS and to assess the significance of the regression coefficients. Complementing the quantitative analysis, qualitative data were transcribed verbatim and analyzed using NVivo 14 through open, axial, and selective coding cycles. This captured managerial insights on how SQMS practices translate into operational reliability, customer trust, and improved organizational performance. The integration of regression analysis and thematic interpretation provided a comprehensive and methodologically rigorous necessary in understanding of the strategic influence of SQMS in enhancing sustainable competitive advantage within Kenya’s aviation industry.

Results

Descriptive Statistics

Table 1

Descriptive Statistics for Strategic Quality Management and SCA

Aspects of Measurement	Mean	Std. Dev
Quality Assurance on Competitive Advantage	4.25	0.53
Continuous SMS Improvement on Long-Term Competitiveness	4.26	0.55
Safety Assurance on Sustainable Market Positioning	4.24	0.56
Aggregate	4.25	0.55

Results presented in Table 1 show that quality assurance had a high mean score of 4.25 and standard deviation of 0.53 plausible indication that quality assurance is pivotal in ensuring compliance with international aviation safety standards, enhancing operational efficiency, and facilitating brand loyalty and eventually airlines' competitive advantage. It could be argued that regular quality audits and continuous monitoring of compliance processes help airlines maintain a high standard of service, thereby promoting customer loyalty and operational reliability. The findings also show that safety assurance contributes to sustainable competitive advantage, as shown by a mean score of 4.26 and a standard deviation of 0.55. Additionally, continuous enhancement of the safety management system in sustaining a competitive edge with a mean score of 4.26 and standard deviation of 0.56. Airlines that regularly update their safety assurance and improvements that would reflect industry best practices aimed maintain superior operational

efficiency and comply with evolving safety standards reported a mean score of 4.24 and standard deviation of 0.55. Low variability as reflected in the standard deviation show minimal differences in the implementation of strategic quality management systems in the industry.

Statistical Test

Linearity Test

The scatter plot shows a positive trend with a strong association between more excellent Strategic Quality Management System scores and SCA. The relationship indicates that there is a strong linear trend with data points which is a good alignment.

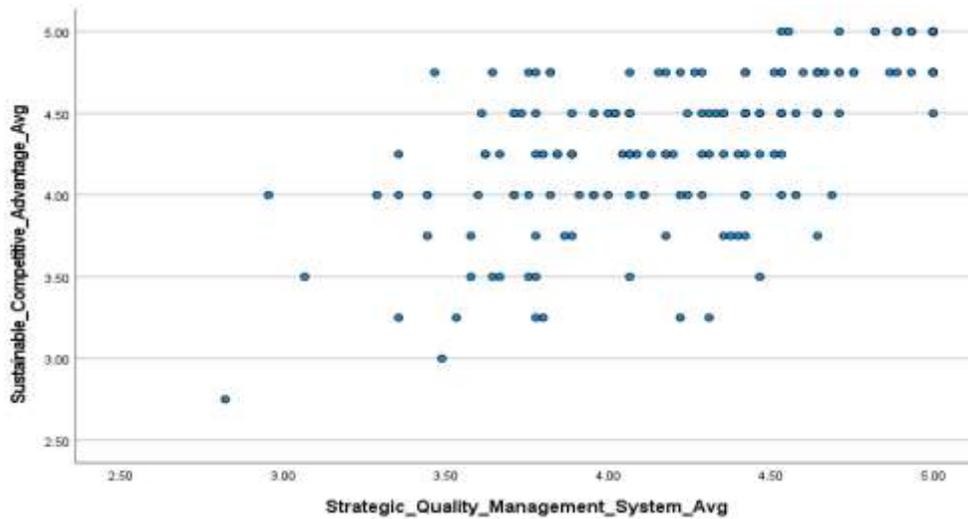


Figure 1

Linear Relationship between Strategic Quality Management System and SCA

Normality

Table 2

Test of Normality for the Strategic Quality Management System

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Strategic Quality Management System	.064	171	.083	.969	171	.001

a. Lilliefors Significance Correction

Kolmogorov-Smirnov test results in Table 2 show a statistic of 0.064 with a p-value of 0.083, which exceeds the 0.05, suggesting that the data do not significantly deviate from normality under this test. Conversely, the Shapiro-Wilk test yielded a statistic of 0.969 and a p-value of 0.001, indicate a statistically significant departure from normality. These mixed results highlight the importance of supplementing statistical tests with visual inspection for a more comprehensive assessment of distributional assumptions. This was undertaken using Q-Q plot.



Figure 2
Normal Q-Q plot for Strategic Quality Management System

The Q-Q plot results as shown in Figure 2 reveal a close alignment of the data points with the diagonal reference line, indicating a consistent linear pattern. This result suggests that the data follow a normal distribution, despite conflicting results from formal statistical tests. This paved way for regression analysis and hypothesis testing.

Multicollinearity Test for Strategic Quality Management System

Table 3
Multicollinearity Test for the Strategic Quality Management System

		Coefficients^a					Collinearity Statistics	
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Tolerance	VIF
		B	Std. Error	Beta				
1	(Constant)	1.636	.250		6.532	.000		
	Strategic Quality Management System	.639	.059	.643	10.909	.000	1.000	1.000

a. Dependent Variable: Sustainable Competitive Advantage

Multicollinearity diagnostics produced a Tolerance value of 1.000 and a Variance Inflation Factor (VIF) of 1.000. These values as summarized in Table 3 confirm that the variable is not linearly associated with other predictors in the model. The absence of multicollinearity ensures that the inclusion of this variable does not distort the regression estimates, thereby affirming the stability and reliability of its effect in the model.

Test for Autocorrelation

Table 4

Test for Autocorrelation in the Regression Residuals of Strategic Quality Management System and SCA

Model Summary^b					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.643 ^a	.413	.410	.37648	1.819

a. Predictors: Strategic Quality Management System

b. Dependent Variable: Sustainable Competitive Advantage

As shown in Table 4, the strategic quality management system variable reported a Durbin-Watson statistic of 1.819. This value lies within the recommended threshold of 1.5 - 2.5, which indicate absence of autocorrelation among the residuals. The independence of errors confirms the statistical validity of the model and supports the appropriateness of the regression analysis.

Heteroscedasticity

Table 5

Breusch-Pagan Test for Heteroscedasticity in the Strategic Quality Management

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.471	1	.471	11.752	.001 ^b
	Residual	6.768	169	.040		
	Total	7.239	170			

a. Dependent Variable: RES_SQ

b. Predictors: (Constant), Strategic Quality Management System

Regression Analysis for Quality Management System and SCA

Table 6

Regression Model for Strategic Quality Management System (X3) on Y

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	Change Statistics			
						F Change	df1	df2	Sig. F Change
1	.643 ^a	.413	.410	.37648	.413	119.014	1	169	.000

a. Predictors: (Constant), Strategic Quality Management System

Regression Output Model

The R-value of 0.643 suggests a strong relationship positive relationship between the Strategic Quality Management System and Sustainable Competitive Advantage. The R-Square value of 0.413 indicates that the Strategic Quality Management System explains 41.3% of the variability in Sustainable Competitive Advantage with the adjusted R-Square value of 0.410 suggesting that the model remains strong even with the remaining percentage accounted for by other predictors. The Standard Error of the Estimate (0.37648) indicates that the model predicts changes in Sustainable Competitive Advantage with minimal error. The unstandardized coefficient (B = 0.639, p < 0.001) indicates that with a one-unit increase in the Strategic Quality Management System, Sustainable Competitive Advantage would increase by 0.639 units, *ceteris paribus*. The standardized beta coefficient ($\beta = 0.643$) confirms the strong positive effect of the Strategic Quality Management System on Sustainable Competitive Advantage. Additionally, the 95% confidence interval for B (0.523, 0.754) does not include zero, supporting the statistical significance of this effect.

Regression Coefficients

Table 7

Regression Results between Quality Management System and Sustainable Competitive Advantage

Model		Coefficients ^a		Standardized Coefficients Beta	t	Sig.
		Unstandardized Coefficients B	Std. Error			
1	(Constant)	1.636	.250		6.532	.000
	Quality Management System	.639	.059	.643	10.909	.000

a. Dependent Variable: Sustainable Competitive Advantage

The regression results in Table 7 provide clear statistical evidence that the Quality Management System (QMS) has a significant positive effect on sustainable competitive advantage in airlines. The QMS coefficient is positive and statistically significant ($\beta = 0.639$, $t = 10.909$, $p = 0.000$), indicating that improvements in quality assurance, adherence to international safety standards, and continuous process improvement significantly enhance competitiveness, customer trust, and long-term market position. The standardized beta value ($\beta = 0.643$) further demonstrates that QMS is a strong predictor of sustainable competitive advantage. These findings imply that effective implementation and continuous enhancement of quality management systems are critical strategic drivers in the airline industry. By strengthening safety audits, compliance mechanisms, and Safety Management Systems (SMS), airlines can reduce operational risks, foster stakeholder confidence, encourage innovation, and maintain a strong competitive position within a highly regulated operating environment.

ANOVA Between Quality Management System and SCA

The ANOVA results in Table 8 show that the model is statistically significant ($F = 119.014$, $p < 0.001$) indicating that Strategic Quality Management System contributes significantly to the variations in Sustainable Competitive Advantage. The regression sum of squares (16.869) is much larger than the residual sum (23.954), suggesting further that a significant portion of the variance in Sustainable Competitive Advantage is attributable to the Strategic Quality Management System.

Table 8

ANOVA for Strategic Quality Management System and SCA

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	16.869	1	16.869	119.014	.000 ^b
	Residual	23.954	169	.142		
	Total	40.822	170			

a. Dependent Variable: Sustainable Competitive Advantage

b. Predictors: (Constant), Quality Management System

Qualitative Findings

The qualitative phase provided deeper insight into how SQMS translate into sustainable competitive advantage within Kenyan aviation firms. Dominant themes emerged from the thematic analysis conducted using NVivo 14. First, respondents highlighted that structured quality assurance processes particularly regular internal audits, documentation reviews, and timely corrective and preventive actions serve as powerful mechanisms for identifying operational gaps that would otherwise persist.

As one quality manager explained,

when audit findings are followed up immediately, issues don't accumulate and that it keeps our operation clean and predictable, and that reliability is something customers notice (Personal Communication, Quality Manager).

Second, participants emphasized that strong SQMS practices cultivate an organizational environment of accountability, consistency, and professional discipline. This according to respondents supports managerial decision-making, strengthens stakeholder trust, and enhances customer perception of safety and reliability critical components of competitive positioning in the aviation industry. Third, respondents drew a clear distinction between reactive and proactive quality cultures.

In firms where SQMS is embedded strategically, continuous improvement mechanisms, staff feedback loops, and industry benchmarking drive innovation, minimize disruptions, and support long-term performance. Conversely, in organizations where SQMS is treated as a compliance formality, quality processes were perceived as superficial, yielding little strategic value. These findings complement the quantitative evidence by demonstrating that SQMS is not merely an operational necessity but a strategic resource that enhances reliability, customer confidence, and organizational resilience ultimately strengthening sustainable competitive advantage.

Discussion of Findings

The central focus of this section is to interpret how the Strategic Quality Management System (SQMS) contributes to sustainable competitive advantage (SCA) in Kenyan aviation companies, building on the empirical findings of the study. The results showed that SQMS is a strong and statistically significant predictor of SCA, indicating that quality-related practices are not merely technical or procedural requirements, but strategic levers that shape long-term performance. Quality assurance emerged as a particularly important driver by ensuring that services consistently meet defined standards, reducing errors and rework, and enhancing customer satisfaction, SQMS strengthens an airline's brand and market position. This finding is consistent with El-Souri, Gao and Simmonds (2019), who argue that effective quality assurance mechanisms such as regular audits and compliance monitoring improve airline competitiveness by reinforcing service reliability and passenger confidence. Similarly, IATA (2018) notes that robust quality assurance practices support brand positioning by minimizing safety incidents and operational disruptions, thereby enhancing stakeholder trust. At the same time, the present study acknowledges the more nuanced view advanced by Tong (2022), who suggested that in highly competitive markets, other strategic factors such as pricing, route networks, and partnerships may, at times, overshadow the visible impact of quality assurance on competitive outcomes.

Beyond quality assurance, the study also confirmed that safety assurance as a core component of SQMS is pivotal in maintaining high operational standards and in safeguarding long-term performance which in the process impacts on the competitiveness of the airlines. It may be argued

that a well-developed quality-based safety system ensures that airlines comply with international aviation regulations, reduces the likelihood of operational breakdowns, and reinforces a culture of continuous improvement. The findings align closely with Stolzer et al. (2021), who contended that when safety and quality management frameworks are executed strategically, they enable airlines to consistently meet rigorous global standards, such as those prescribed by ICAO and IATA. Adherence to safety assurance protocols was associated with performance stability, fewer legal and operational risks, and greater resilience in the face of regulatory scrutiny. This supports Doganis (2019), who linked robust safety and quality assurance practices to stronger financial performance through enhanced customer trust, more favorable treatment by regulators, and improved relationships with insurers. In essence, prioritizing safety assurance within SQMS enhances an airline's reputation and credibility, translating into higher customer loyalty, fewer disruptions, and a more defensible market position.

Another key finding in the study is the role of continuous enhancement of SQMS in sustaining competitive advantage over time. The results suggest that airlines that regularly update their quality and safety protocols to reflect emerging industry best practices, new technologies, and lessons from internal audits are better positioned to maintain operational efficiency and regulatory compliance. Evidentially, incorporating employee feedback into safety and quality improvement initiatives fosters a proactive quality culture, where staff feel responsible for identifying and resolving risks before they escalate. This is consistent with Chebichii (2021), who showed that proactive updating of safety and quality protocols is associated with superior operational efficiency and regulatory adherence. Likewise, Yilmaz and Flouris (2019) argued that active employee engagement in safety and quality processes reinforces a culture of vigilance, learning, and accountability, and that such a culture ultimately strengthens an airline's ability to differentiate itself competitively.

The study recognizes that the relationship between SQMS and financial performance is not entirely linear or automatic. In support, Adeola and Adebisi (2020) contend that while safety and quality assurance undoubtedly improve operational efficiency and risk management, their immediate impact on profitability may be moderated by external factors such as volatile fuel prices, government policies, macroeconomic conditions, and market saturation. This nuance suggests that strategic quality management cannot be viewed in isolation, rather, it must be integrated with broader business strategies such as network design, revenue management, and alliance formation and supported by a stable and enabling policy environment to yield optimal results. In line with this broader perspective, the study resonates with the body of literature which advocates for a holistic, enterprise-wide approach to quality and safety, in which these functions are embedded across all operational domains, from engineering and ground handling to customer service and corporate planning. Wendel et al. (2024), for example, emphasized that airlines adopting advanced management architectures that integrate safety, quality, innovation, and digitalization are more likely to achieve scalable efficiency, organizational learning, and distinct market differentiation. Taken together, the findings of this study reinforce the view that SQMS in Kenyan aviation is not a peripheral operational tool, but a core strategic capability that, when fully integrated and continuously improved, underpins sustainable competitive advantage.

Conclusion

The study concluded that the strategic quality management system is a critical enabler of sustainable competitive advantage in aviation companies. This is partly due to quality assurance

practices, including regular audits and compliance monitoring, that ensure adherence to international safety standards, enhancing operational efficiency and customer trust have been emphasized. Results further demonstrated that safety assurance further reinforces operational reliability by minimizing risks and fostering continuous improvement through prompt corrective actions. Additionally, the continuous enhancement of SMS and active employee involvement in safety initiatives that strengthen regulatory compliance and industry best practices was reiterated. This inclusive and systematic approach to quality management not only enhances internal capabilities but also positions aviation companies to adapt effectively to changing regulatory environments and customer expectations. Collectively, these elements of a strategic QMS serve as a strong foundation for achieving and sustaining competitive advantage in a highly regulated and performance-sensitive industry.

Recommendations

The study recommends that aviation companies should consider strengthening their strategic quality management systems by enhancing quality assurance mechanisms through more frequent audits, real-time compliance tracking, and automated monitoring tools. Investment in advanced safety assurance frameworks that facilitate proactive risk identification and prompt corrective actions to minimize operational disruptions as well as continuous improvement of Safety Management Systems should be prioritized by integrating industry best practices, leveraging emerging technologies, and fostering a culture of safety accountability among employees. Additionally, encouraging active employee participation in safety initiatives through regular training, feedback mechanisms, and performance incentives can further enhance regulatory compliance and service excellence. By implementing these improvements, aviation companies can achieve higher operational efficiency, improved safety standards, and long-term competitive sustainability.

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