



Sustainable Competitive Advantage in the Class C Hospital Industry: A Qualitative Study of Strategic Factors in the Tapal Kuda Region of East Java

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Abstract

Background: The healthcare industry is rapidly changing due to technological advancement, policy reform, rising patient expectations, and institutional competition. Class C hospitals in regional areas such as the Tapal Kuda region of East Java face challenges in sustaining competitiveness amid limited resources and dynamic healthcare demands. However, studies on sustainable competitive advantage in the Class C Hospital remain limited.

Objective: This study aims to analyze the strategic factors influencing sustainable competitive advantage in Class C hospitals in the Tapal Kuda region of East Java.

Methods: This study used a qualitative, descriptive-exploratory approach. Data were collected through semi-structured interviews with eight key informants from four Class C hospitals, including hospital directors, heads of medical services, nursing managers, and healthcare administrators. Field observations and institutional document reviews were also conducted. Informants were selected through purposive sampling, and data were analyzed thematically through data reduction, data display, interpretation, and conclusion drawing.

Results: The findings identified six strategic dimensions influencing sustainable competitive advantage: digital transformation, technological innovation, organizational resilience, adaptive leadership, human resource competence, and a patient-centered organizational culture. Electronic medical records and telemedicine were identified as important tools for improving service efficiency, while regional socioeconomic disparities, limited specialist availability, and infrastructure gaps constrained hospital competitiveness.

Conclusion: Sustainable competitive advantage in Class C hospitals is multidimensional and depends on organizational adaptability, innovation capability, strategic flexibility, and contextual responsiveness. Hospitals that integrate technology, develop competent human resources, and implement patient-centered services are more likely to achieve long-term sustainability and competitiveness.

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INTRODUCTION

The healthcare industry has undergone a significant transformation over the last decade, driven by technological disruption, demographic transition, regulatory reform, rising public expectations, and increasingly intense competition among healthcare providers (Popa, 2023). Hospitals are no longer viewed solely as social institutions that provide curative and preventive

services but also as strategic organizations required to maintain sustainability, operational efficiency, service quality, and organizational competitiveness in an increasingly dynamic healthcare market. In many countries, including Indonesia, hospitals are expected not only to fulfill social responsibilities but also to demonstrate organizational adaptability and strategic capability in responding to environmental uncertainty and market competition. This transformation has encouraged healthcare organizations to adopt strategic management approaches oriented toward long-term organizational sustainability and competitive positioning (Huebner & Flessa, 2022).

The emergence of competitive dynamics in the healthcare sector has shifted the orientation of hospital management from conventional administrative approaches toward strategic and performance-based governance. Hospitals increasingly operate within an environment characterized by complexity, uncertainty, and rapid institutional change (Risyani & Rahandri, 2022). Huebner and Flessa (2022) emphasized that strategic management in healthcare is becoming increasingly important because healthcare systems are currently operating in conditions of high complexity and uncertainty, requiring long-term systems thinking and strategic adaptability. This situation reflects the reality faced by hospitals in Indonesia, especially private and regional hospitals competing to maintain patient trust, financial sustainability, and service quality amid regulatory and market pressures (Huebner & Flessa, 2022).

Within the Indonesian healthcare system, the implementation of the National Health Insurance (*Jaminan Kesehatan Nasional/JKN*), changes in hospital classification regulations, accreditation demands, digital transformation, and increasing patient awareness have significantly intensified competition among hospitals. Hospitals are required to continuously improve service quality, operational efficiency, innovation capability, and organizational responsiveness to survive in the increasingly competitive healthcare ecosystem (Bulo et al., 2026; Lestari et al., 2021). These conditions become more challenging for Class C hospitals, which generally operate with more limited resources compared to large referral hospitals. According to data from the Indonesian Ministry of Health (2023), there are approximately 1,268 Class C hospitals operating across Indonesia, representing over 50% of all hospital classifications. In the Tapal Kuda region specifically, there are 23 Class C hospitals distributed across seven regencies, with an average bed occupancy rate (BOR) ranging from 55% to 68%, which remains below the national standard of 75%. The physician-to-population ratio in this region averages 1:4,500, significantly lower than the national average of 1:2,500, indicating substantial healthcare workforce disparities (Kementrian Kesehatan, 2023). Although Class C hospitals play an important role in providing secondary healthcare services at the regional level, many of them face strategic constraints related to infrastructure, human resources, technology adoption, financial capability, and market positioning (Sri et al., 2026).

The Tapal Kuda region of East Java presents a particularly interesting and strategically important context for examining sustainable competitive advantage in healthcare organizations. The region, which includes areas such as Probolinggo, Situbondo, Bondowoso, Jember, Banyuwangi, Lumajang, and Pasuruan, demonstrates rapid growth in healthcare demand due to population increase, regional economic development, and expanding public awareness regarding healthcare quality. At the same time, healthcare disparities, uneven distribution of medical specialists, infrastructure limitations, and varying socio-economic conditions create unique strategic challenges for hospitals operating within the region. Consequently, Class C hospitals in the Tapal Kuda area are required to formulate adaptive and sustainable strategies in order to maintain competitiveness while continuing to fulfill their social healthcare functions (Puspaningtyas, 2024). Recent empirical evidence from the BPS Jawa Timur (2024) indicates that healthcare service performance in the Tapal Kuda region remains below the provincial average. Maternal mortality rates in several districts of the region exceed 120 per 100,000 live births, compared to the provincial average of 85 per 100,000. Furthermore, patient referral rates from primary healthcare facilities to hospitals have increased by approximately 18% over the past three years, placing additional pressure on Class C hospitals that serve as the primary referral destinations in the region.

The concept of Sustainable Competitive Advantage (SCA) has become increasingly

relevant in understanding how organizations can maintain superior performance over time despite environmental turbulence and competitive pressure. Porter argued that competitive advantage derives from an organization's ability to create value through either differentiation or cost leadership strategies, enabling organizations to outperform competitors within the same industry ([Hidayatinnisa et al., 2024](#)). In the healthcare sector, sustainable competitive advantage extends beyond profitability and includes dimensions such as service quality, patient satisfaction, innovation capability, operational efficiency, reputation, and organizational resilience. Hospitals that are able to consistently deliver superior healthcare outcomes, patient-centered services, technological innovation, and efficient resource utilization are more likely to achieve long-term competitiveness and sustainability ([Mesut, 2026](#); [O'Shannassy, 2008](#)).

Previous studies have demonstrated that sustainable competitive advantage in healthcare organizations is influenced by multiple strategic dimensions. Stefan et al. identified several critical determinants of competitive advantage in hospitals, including efficiency, service quality, innovation, intellectual capital, human resource capability, customer satisfaction, and strategic differentiation ([Bumiayu, 2026](#)). Similarly, studies on healthcare strategic orientation revealed that hospitals tend to pursue differentiation-based strategies rather than pure cost leadership due to the critical importance of service quality and patient trust in healthcare delivery. Other scholars emphasized that healthcare organizations capable of integrating strategic management with long-term systems thinking are better positioned to respond to uncertainty and institutional change ([Kyambade & Namatovu, 2026](#); [Santri et al., 2021](#)). Despite the growing body of literature on competitive advantage and healthcare strategy, several important research gaps remain insufficiently explored. First, most previous studies on sustainable competitive advantage in healthcare focus predominantly on large hospitals, private healthcare corporations, or national healthcare systems, while limited attention has been given to regional Class C hospitals operating in semi-urban and developing areas ([Junaid et al., 2022](#)). This creates an empirical gap concerning how medium-scale hospitals in peripheral regions formulate and sustain competitive strategies under resource constraints and environmental uncertainty.

Second, many prior studies emphasize financial performance, operational efficiency, or service quality independently, rather than integrating multiple strategic dimensions into a comprehensive framework of sustainable competitive advantage. Hospital competitiveness is multidimensional and cannot be explained solely through financial indicators. Strategic capability in healthcare organizations involves the interaction of organizational culture, innovation, service differentiation, leadership, intellectual capital, technological adaptation, and stakeholder trust. Therefore, a more integrated strategic perspective is required to understand how sustainable competitive advantage is developed and maintained within hospitals ([Souza et al., 2024](#)). Third, although studies discussing Porter's generic strategies and strategic orientation in healthcare organizations have increased, empirical investigations focusing specifically on Indonesian regional hospitals remain relatively limited ([Du et al., 2025](#)). Existing Indonesian studies primarily discuss hospital policy transformation, service management, or healthcare reform without comprehensively examining sustainable competitive advantage from a strategic management perspective. Consequently, there remains insufficient understanding regarding how Indonesian hospitals, particularly Class C hospitals, strategically respond to increasing healthcare competition and institutional transformation ([Susilowati, 2025](#)). Fourth, the contextual characteristics of the Tapal Kuda region have rarely been positioned as an important analytical setting in healthcare strategic studies. Most healthcare management studies in Indonesia are concentrated in metropolitan regions such as Jakarta, Surabaya, or other large urban centers. Meanwhile, hospitals operating in regional growth areas such as Tapal Kuda face unique challenges associated with geographical disparities, unequal healthcare access, regional socio-economic diversity, and limitations in healthcare infrastructure. These contextual conditions potentially influence organizational strategy, competitive positioning, and sustainability mechanisms differently from hospitals located in major urban regions ([Puspaningtyas, 2024](#)).

This study therefore seeks to address these gaps by examining sustainable competitive advantage within the context of Class C hospitals in the Tapal Kuda region of East Java through a strategic management perspective. The novelty of this research lies not only in its regional and

organizational focus but also in its effort to integrate various strategic dimensions influencing hospital competitiveness into a more comprehensive analytical framework. Unlike previous literature reviews that merely summarize prior findings, this study positions the literature critically to identify strategic patterns, conceptual inconsistencies, and contextual opportunities relevant to regional healthcare institutions ([Anggraeni et al., 2025](#)). Furthermore, this research emphasizes the importance of contextualizing strategic management theories within the realities of Indonesian healthcare organizations operating under decentralization, regulatory transition, and increasing market competition.

From a theoretical perspective, this study contributes to the development of strategic management discourse in healthcare by integrating concepts of sustainable competitive advantage, strategic orientation, healthcare competitiveness, and organizational adaptability within regional hospital settings. The study also reinforces the relevance of Porter's competitive strategy framework and resource-based perspectives in understanding how hospitals create strategic value and organizational sustainability. In addition, the research contributes to expanding healthcare management literature in emerging economies, particularly within developing regional healthcare systems characterized by institutional complexity and resource limitations ([Popa, 2023](#)). Practically, this research is expected to provide strategic insights for hospital managers, healthcare policymakers, and regional governments in designing sustainable healthcare strategies. Understanding the strategic factors that influence hospital competitiveness can help healthcare institutions improve service quality, strengthen organizational capability, optimize resource allocation, and formulate adaptive strategies in response to healthcare transformation. For policymakers, the findings may contribute to the formulation of more context-sensitive healthcare policies that support the sustainability of regional hospitals while ensuring equitable healthcare access for communities ([Huebner & Flessa, 2022](#)).

The urgency of this study becomes increasingly relevant considering the accelerating transformation of the healthcare sector in the post-pandemic era. Healthcare organizations are now required to simultaneously maintain operational resilience, digital adaptability, patient-centered service quality, and financial sustainability. Hospitals that fail to develop sustainable strategic capabilities risk losing competitiveness, patient trust, and long-term organizational viability. Therefore, examining sustainable competitive advantage within the context of Class C hospitals is not merely academically important but also socially and institutionally necessary. Based on these considerations, this research aims to explore and critically analyze the strategic factors shaping sustainable competitive advantage in Class C hospitals across the Tapal Kuda region of East Java. The study seeks to position hospital competitiveness not solely as an economic objective but as a multidimensional organizational capability essential for ensuring healthcare quality, institutional sustainability, and long-term public trust within an increasingly competitive healthcare environment.

METHOD

This study employed a qualitative research method using a descriptive-exploratory approach to analyze the strategic factors influencing sustainable competitive advantage in Class C hospitals within the Tapal Kuda region of East Java. A qualitative approach was considered appropriate because this study aimed to gain an in-depth understanding of strategic dynamics, organizational capabilities, institutional adaptation, and contextual challenges faced by hospitals in maintaining sustainable competitiveness amid increasingly complex and competitive healthcare environments. This approach enabled the researchers to interpret organizational phenomena comprehensively from the perspectives of strategic management and healthcare service management.

The object of this study was organizational strategies and the factors shaping sustainable competitive advantage in Class C hospitals, particularly those related to digital transformation, healthcare innovation, service quality, organizational culture, institutional resilience, and adaptive strategy. The Tapal Kuda region of East Java was selected as the research context because it possesses diverse socio-economic characteristics and healthcare challenges, including disparities in healthcare infrastructure, limited resources, and increasing regional healthcare

demands.

The sources of data in this study consisted of primary and secondary data. Primary data were obtained through in-depth interviews with informants who were directly related to hospital management and healthcare policy, including hospital managers, healthcare professionals, healthcare service administrators, and individuals with expertise in hospital organizational strategy. A total of eight informants were selected through purposive sampling based on the following criteria: (1) holding a managerial or strategic decision-making position in a Class C hospital, (2) having a minimum of three years of professional experience in hospital management, and (3) possessing direct involvement in organizational strategy formulation. The informants were drawn from four Class C hospitals located in Jember, Bondowoso, Situbondo, and Banyuwangi within the Tapal Kuda region. Each semi-structured interview lasted between 45 and 90 minutes and was conducted during the period of January to March 2026. All interviews were audio-recorded with informed consent and transcribed verbatim for analysis. This research received ethical clearance from the institutional ethics committee prior to data collection. Secondary data were collected from institutional documents, healthcare reports, government regulations, scientific publications, academic journals, and various literature related to hospital strategic management and sustainable competitive advantage.

Data collection techniques included interviews, observation, and documentation study. Semi-structured interviews were conducted to obtain in-depth information regarding organizational strategies, competitive challenges, technological adaptation, and efforts to improve healthcare service quality. Observations were conducted to examine the general organizational conditions and healthcare service implementation within Class C hospitals in the research area. Documentation studies were carried out by reviewing policy documents, institutional reports, and other supporting data relevant to the focus of the study.

Data analysis was conducted using an interactive analysis technique consisting of data reduction, data presentation, interpretation, and conclusion drawing. The collected data were categorized into strategic themes such as digital transformation, organizational innovation, service quality, human resource capability, organizational resilience, and adaptive strategy. Furthermore, the data were analyzed thematically to identify patterns and relationships among factors influencing sustainable competitive advantage in Class C hospitals.

The thematic coding process followed a systematic procedure: initial open coding was conducted independently by two researchers, followed by axial coding to establish relationships among categories, and finally selective coding to identify core themes. Inter-coder reliability was assessed and achieved a Cohen's Kappa coefficient of 0.82, indicating substantial agreement. The informant profiles are presented in Table 1.

Table 1. Informant Profile

Code	Position	Hospital Location	Experience (Yrs)	Interview Duration
I1	Hospital Director	Jember	12	85 min
I2	Head of Medical Services	Jember	8	70 min
I3	Hospital Director	Bondowoso	10	90 min
I4	Nursing Manager	Bondowoso	7	60 min
I5	Head of Medical Services	Situbondo	9	75 min
I6	Healthcare Administrator	Situbondo	5	55 min
I7	Hospital Director	Banyuwangi	15	80 min
I8	Healthcare Administrator	Banyuwangi	6	45 min

Source: Primary Data, 2026

To ensure data validity and credibility, this study applied source triangulation and method triangulation by comparing findings obtained from interviews, observations, and supporting documents collected throughout the research process. In addition, data interpretation was conducted critically by considering the social, economic, and institutional contexts of healthcare services within the Tapal Kuda region of East Java. Through this approach, the study is expected to provide a comprehensive understanding of sustainable competitiveness strategies among Class C hospitals in responding to healthcare system transformation and increasingly dynamic healthcare competition.

RESULTS AND DISCUSSION

Result

Digital Transformation as a Strategy for Enhancing Hospital Competitiveness

The findings of this study indicate that digital transformation has become one of the main strategies employed by Class C hospitals to improve competitiveness and maintain the sustainability of healthcare services. The implementation of digital systems such as electronic medical records, online registration, telemedicine, and integrated hospital information systems was considered capable of improving service efficiency while accelerating administrative processes and decision-making.

Digital transformation was also viewed as a form of hospital adaptation to technological advancement and changes in public behavior that increasingly prioritize fast and integrated healthcare services. Several informants stated that digitalization helps hospitals provide faster and more responsive services to meet patient needs. In addition to improving operational efficiency, digital transformation also strengthens the hospital's image as a healthcare institution that is adaptive to technological development.

One informant stated:

"Patients nowadays prefer hospitals with fast and integrated services. Digital systems help us accelerate administration, medical records, and even consultation services." (Informant 1)

Another informant also explained that the use of digital systems has become an essential requirement in facing increasingly intense hospital competition.

"If hospitals do not keep up with technological developments, they will be left behind. Digitalization is no longer an option, but a necessity." (Informant 3)

These findings indicate that digital transformation does not merely function as an administrative tool, but also serves as an organizational strategy for improving service quality and strengthening hospital competitiveness. The utilization of digital technology enables hospitals to provide more efficient, responsive, and integrated healthcare services, thereby increasing patient satisfaction and trust in healthcare institutions. Furthermore, the ability of hospitals to adopt digital transformation also reflects organizational readiness in responding to changes in the healthcare environment and increasingly competitive healthcare service markets.

Healthcare Service Innovation in Maintaining Competitive Advantage

The study found that technological innovation plays an important role in supporting the sustainability and competitiveness of Class C hospitals. The use of modern healthcare technology, the development of technology-based service systems, and innovation in patient management help hospitals improve the quality of healthcare services.

Hospitals that are able to adopt technological innovation more rapidly are considered to have better capabilities in meeting patient needs and improving service effectiveness. Innovation also serves as a form of service differentiation that distinguishes hospitals from other healthcare institutions.

One informant stated:

"Healthcare technology is developing very rapidly nowadays. Hospitals must keep up with these developments to ensure services remain optimal." (Informant 5)

Another informant explained:

"We try to implement several new systems to make services more effective and patients feel

more comfortable.” (Informant 2)

The findings of this study indicate that technological innovation has become one of the important strategies in building sustainable hospital competitive advantage. The ability of hospitals to develop and integrate healthcare technology enables organizations to improve service effectiveness, strengthen service differentiation, and create added value for patients. Furthermore, technological innovation also reflects organizational adaptability in responding to healthcare system developments and changing public demands for healthcare services that are increasingly fast, modern, and high-quality.

Organizational Resilience in Responding to Changes in the Healthcare Environment

The findings of this study indicate that organizational resilience plays an important role in maintaining hospital sustainability amid dynamic changes in the healthcare environment. Hospitals are required to adapt to regulatory changes, technological developments, healthcare service competition, and changes in public behavior in the post-pandemic era.

The organization’s ability to manage change is considered an important factor determining the sustainability of healthcare institutions. Hospitals with organizational flexibility and adaptive leadership are regarded as more capable of maintaining service quality under uncertain conditions.

One informant explained:

“The healthcare sector is changing rapidly nowadays. Hospitals must be prepared to adapt to new regulations and community needs.” (Informant 4)

Another informant added:

“After the pandemic, hospitals learned that the ability to adapt is extremely important for survival.” (Informant 6)

These findings indicate that organizational resilience is an essential component in building sustainable hospital competitiveness. The ability of organizations to face uncertainty, manage change, and maintain service stability enables hospitals to continue performing healthcare functions optimally amid dynamic external environments. Furthermore, organizational resilience also reflects hospital preparedness in responding to long-term challenges, thereby maintaining institutional sustainability and preserving public trust in the quality of healthcare services provided.

The Role of Human Resources and Organizational Culture

This study found that the quality of human resources and organizational culture are strategic factors influencing the sustainable competitive advantage of hospitals. The competence of healthcare personnel, organizational leadership, internal communication, and a collaborative work culture contribute significantly to the quality of healthcare services.

Hospitals with a positive organizational culture tend to be more capable of creating a work environment that supports service quality improvement and patient satisfaction. In addition, patient-centered service orientation also becomes an important value in building hospital reputation.

One informant stated:

“Hospital services are highly dependent on the quality of human resources. If healthcare workers are competent and communicative, patients will also feel more comfortable.” (Informant 7)

Another informant explained:

“A supportive work culture makes services more effective and coordination easier.” (Informant 1)

The findings of this study indicate that human resources and organizational culture are strategic assets that are difficult for competitors to imitate. The competence of healthcare personnel, leadership quality, and a collaborative work culture play important roles in creating consistent service quality and increasing patient trust in hospitals. Furthermore, a patient-oriented organizational culture also helps hospitals build institutional reputation and maintain long-term competitive sustainability.

Adaptive Strategies in Facing Hospital Competition

The findings of this study indicate that adaptive strategies have become an essential requirement for Class C hospitals in responding to increasingly competitive healthcare service markets. Hospitals are required to continuously adjust organizational strategies, service models, and managerial policies in accordance with changing community needs and dynamic external environments.

The ability of hospitals to develop flexible strategies is considered helpful in maintaining organizational relevance and the sustainability of healthcare services. Adaptive strategies also enable hospitals to respond more effectively to changes in government policies and developments in healthcare technology.

One informant stated:

"Hospitals cannot continue using the same strategy because community needs are always changing." (Informant 2)

Another informant explained:

"We must quickly adjust our services to existing conditions so that the hospital can remain competitive." (Informant 5)

These findings indicate that adaptive strategy is an important element in maintaining the sustainable competitive advantage of hospitals. The ability of hospitals to flexibly adjust organizational policies, service models, and managerial strategies enables institutions to remain relevant amid dynamic changes in the healthcare environment. Furthermore, adaptive strategies also help hospitals improve responsiveness to community needs, technological developments, and healthcare competition, thereby sustaining long-term organizational sustainability.

Socio-Economic Contextual Factors in the Tapal Kuda Region, East Java

The study found that socio-economic contextual factors in the Tapal Kuda region of East Java also influence the competitiveness of Class C hospitals. Geographical conditions, limited healthcare infrastructure, uneven distribution of medical personnel, and the economic conditions of the community represent challenges that affect healthcare accessibility and service quality.

Hospitals in regional areas face different challenges compared to hospitals located in major urban centers. Therefore, hospital management strategies need to be adjusted to the social and economic conditions of local communities.

One informant stated:

"The Tapal Kuda region has its own challenges because healthcare access in several areas is still quite limited." (Informant 8)

Another informant explained:

"The economic conditions of the community also affect hospital services because not all patients have the same financial capacity." (Informant 3)

These findings indicate that the sustainable competitive advantage of hospitals is influenced not only by internal organizational factors, but also by the socio-economic conditions and regional characteristics in which hospitals operate. Limited healthcare infrastructure, geographical conditions, and differences in community economic levels in the Tapal Kuda region require hospitals to develop service strategies that are more contextual and responsive to local needs. Furthermore, the ability of hospitals to adjust healthcare services according to the social conditions of the community becomes an important factor in maintaining healthcare accessibility, increasing patient trust, and sustaining the long-term competitiveness of healthcare institutions.

Discussion

Digital Transformation in Enhancing Hospital Competitiveness

The findings of this study indicate that digital transformation is one of the strategic factors influencing the sustainable competitive advantage of Class C hospitals in the Tapal Kuda region of East Java. The implementation of digital systems such as electronic medical records, hospital information systems, telemedicine, and digital-based administrative services has been proven to improve operational efficiency and healthcare service quality. Digital transformation also enables hospitals to provide faster, more integrated, and more responsive services to meet patient needs.

These findings indicate that digitalization has shifted from functioning merely as an administrative tool to becoming a strategic organizational resource. In the context of increasingly competitive healthcare services, the ability of hospitals to integrate digital technology has become an important component in building long-term competitive advantage. Hospitals that are able to utilize technology optimally tend to have better capabilities in improving patient satisfaction and service effectiveness. However, unlike findings in metropolitan hospital studies where digital transformation is primarily driven by competitive positioning (Du X et al., 2025), the present study reveals that Class C hospitals in the Tapal Kuda region adopt digital technology primarily as a survival mechanism rather than a competitive differentiation strategy. This distinction is critical because it suggests that the motivational drivers for digital transformation differ significantly between urban and regional healthcare institutions. The limited digital infrastructure in the Tapal Kuda region, including inconsistent internet connectivity and insufficient IT personnel, creates unique implementation barriers not commonly addressed in existing literature.

The findings of this study are consistent with the study conducted by Du et al. (2025), which stated that digital transformation can enhance strategic responsiveness and organizational sustainability within healthcare organizations. In addition, Junaid et al. (2022) also explained that the implementation of modern healthcare technology contributes to improving hospital management efficiency and healthcare service quality.

In the context of Class C hospitals in the Tapal Kuda region, digital transformation also plays an important role in overcoming geographical limitations and healthcare access barriers. Telemedicine and digital healthcare service systems can help expand healthcare access for communities in areas with limited medical personnel and healthcare facilities. Therefore, digital transformation becomes an important strategy not only for strengthening competitiveness but also for improving the accessibility of regional healthcare services.

Technological Innovation as a Support for Competitive Advantage

This study found that technological innovation is an important factor in supporting the sustainable competitive advantage of hospitals. Innovation is implemented through the development of healthcare service systems, the utilization of medical technology, and the integration of technology-based healthcare services. Hospitals that are able to develop service innovation tend to have better capabilities in improving service effectiveness and establishing organizational differentiation.

Technological innovation enables hospitals to create added value in healthcare services. In the hospital industry, service differentiation has become an important factor because people increasingly consider service quality, comfort, and speed of healthcare access when choosing healthcare institutions. Therefore, technological innovation not only functions to improve organizational efficiency, but also serves as a strategy to strengthen institutional reputation and patient loyalty.

The findings of this study support the sustainable competitive advantage theory, which states that organizations are more capable of maintaining competitiveness when they possess resources and capabilities that are difficult for competitors to imitate. The ability of hospitals to develop technological innovation represents one form of strategic capability contributing to organizational sustainability.

The findings are also consistent with the study by Lestari et al. (2024), which explained that innovation and service differentiation are important strategies in improving hospital competitiveness in Indonesia (Bulo et al., 2026). Furthermore, the study by Anggraeni et al. (2026) showed that hospitals capable of integrating service innovation and patient-centered services tend to have stronger competitive positioning within the healthcare market.

Organizational Resilience in Responding to Changes in the Healthcare Environment

The findings of this study indicate that organizational resilience is an important aspect in maintaining hospital sustainability amid dynamic changes in the healthcare environment. Hospitals face challenges in the form of regulatory changes, technological developments, changes in public behavior, and increasingly intense healthcare service competition. These conditions

require organizations to possess strong adaptability and strategic flexibility.

Organizational resilience is reflected in the hospital's ability to maintain service quality, preserve organizational stability, and respond quickly to change. Hospitals with adaptive leadership, effective internal coordination, and strong decision-making capabilities tend to be more capable of dealing with external environmental uncertainty.

These findings support the study conducted by Hidayatinnisa et al. (2024), which stated that entrepreneurial resilience plays a role in transforming environmental turbulence into sustainable competitive advantage. In addition, Huebner and Flessa (2022) explained that healthcare organizations require systems thinking and adaptive capabilities to maintain institutional sustainability amid the complexity of modern healthcare systems.

In the context of Class C hospitals in the Tapal Kuda region, organizational resilience becomes increasingly important because regional hospitals often face limitations in resources, infrastructure, and healthcare personnel. Therefore, the organizational ability to manage change becomes a crucial factor in maintaining service quality and the sustainability of healthcare institutions.

Human Resources and Organizational Culture

This study demonstrates that human resources and organizational culture are strategic factors influencing the sustainable competitive advantage of hospitals. The competence of healthcare personnel, leadership quality, collaborative work culture, and patient-oriented service become important aspects in building healthcare service quality.

Hospitals are service organizations that highly depend on the quality of human interaction. Therefore, healthcare service quality is determined not only by facilities and technology, but also by the ability of healthcare personnel to provide professional, communicative, and patient-oriented services. A positive organizational culture also helps create more effective work coordination and increases employee loyalty toward the organization.

The findings of this study are consistent with the study conducted by Susilowati (2025), which explained that workplace values and service culture influence hospital competitive advantage. In addition, the resource-based view theory explains that intangible resources such as organizational culture, institutional reputation, and the quality of human resources are strategic assets that are difficult for competitors to imitate.

In the context of Class C hospitals, strengthening human resource capacity becomes an important necessity to improve healthcare service quality and maintain organizational competitiveness. Hospitals that are able to establish a collaborative and service-oriented organizational culture tend to be more capable of increasing patient satisfaction and sustaining institutional sustainability. A notable finding that departs from previous research is the identification of a "brain drain" phenomenon specific to Class C hospitals in the Tapal Kuda region. Several informants (I1, I3, I7) reported that trained and competent healthcare personnel frequently migrate to larger hospitals in urban centers after acquiring sufficient experience, creating a persistent cycle of human capital loss. This finding extends beyond Susilowati's (2025) conceptualization of workplace values by highlighting that organizational culture alone is insufficient to retain healthcare talent in regional settings without complementary structural incentives such as career development pathways and competitive compensation frameworks.

Adaptive Strategies in Facing Hospital Competition

The findings of this study indicate that adaptive strategies have become an important necessity for hospitals in responding to environmental changes and healthcare service competition. Hospitals need to continuously adjust organizational policies, service models, and management strategies in accordance with the evolving needs of society and the dynamics of the healthcare system.

Organizational adaptability becomes a crucial factor in maintaining institutional relevance amid external changes. Hospitals that are able to adjust their strategies flexibly tend to be better prepared to face regulatory changes, technological developments, and changes in patient behavior. Adaptive strategies also enable hospitals to create service innovations that align with

community needs.

These findings are consistent with the study conducted by Popa (2023), which stated that the strategic orientation of healthcare organizations is strongly influenced by environmental conditions and institutional pressures. In addition, Wang et al. (2021) explained that an organization's ability to deal with environmental turbulence is an important factor in maintaining organizational sustainability (Karthikeyan et al., 2026).

In the context of Class C hospitals in the Tapal Kuda region, adaptive strategies are necessary because regional hospitals face highly diverse socio-economic conditions and community needs. Therefore, hospitals need to develop flexible and locally responsive strategies in order to maintain sustainable competitiveness.

Socio-Economic Factors in the Tapal Kuda Region, East Java

This study found that socio-economic factors in the Tapal Kuda region also influence the sustainable competitive advantage of Class C hospitals. Development disparities, limited healthcare infrastructure, uneven distribution of medical personnel, and the economic conditions of the community affect healthcare accessibility and service quality.

Hospitals in regional areas face different challenges compared to hospitals in major urban areas. In addition to maintaining service quality, hospitals also need to adjust organizational strategies to the social and economic conditions of local communities. Geographical factors and limited healthcare access require hospitals to possess greater adaptability in delivering healthcare services.

These findings support the study conducted by Puspaningtyas (2024), which explained that the Tapal Kuda region still faces challenges related to human development disparities, sanitation access, and socio-economic conditions of the community. These conditions indirectly affect the quality of healthcare services and the competitiveness of healthcare institutions in regional areas. What distinguishes Class C hospitals in the Tapal Kuda region from their urban counterparts is the dual mandate they must fulfill: serving as both secondary referral centers and de facto primary care providers in areas where primary healthcare facilities (puskesmas) are inadequately staffed. This dual function, identified through interviews with informants I3, I5, and I8, creates a unique operational complexity that does not exist in urban hospitals. Furthermore, the cultural characteristics of the Madurese-influenced communities in the Tapal Kuda region, including strong reliance on traditional medicine and kinship-based healthcare decision-making, require hospitals to develop culturally responsive service models that are not addressed in conventional strategic management frameworks.

Therefore, the sustainable competitive advantage of hospitals is influenced not only by internal organizational factors, but also by the socio-economic context and regional characteristics in which hospitals operate. Hospitals that are able to understand and align their strategies with local community needs tend to achieve better long-term organizational sustainability.

CONCLUSION

This study demonstrates that sustainable competitive advantage in Class C hospitals in the Tapal Kuda region of East Java is influenced by the interaction of various strategic dimensions, including digital transformation, technological innovation, organizational resilience, human resources and organizational culture, adaptive strategy, and regional socio-economic contextual factors. The findings indicate that hospital competitiveness is no longer determined solely by operational capability and physical infrastructure, but also by the organization's ability to adapt to dynamic healthcare environments, technological advancement, and increasing public expectations regarding healthcare service quality. Digital transformation and technological innovation were found to improve service efficiency and healthcare quality, while organizational resilience and adaptive strategy played important roles in maintaining institutional sustainability amid regulatory changes and increasing healthcare competition. In addition, human resource quality and patient-centered organizational culture contributed significantly to institutional reputation and patient loyalty. These findings strengthen the strategic management perspective

that sustainable competitive advantage in healthcare organizations is multidimensional and highly dependent on the organization's ability to integrate innovation, strategic flexibility, and responsiveness to social contexts. Based on the empirical findings, this study proposes the Regional Hospital Strategic Sustainability (RHSS) conceptual framework, which posits that sustainable competitive advantage in regional Class C hospitals emerges from the dynamic interaction of three core pillars: (1) technological-organizational capability, encompassing digital transformation and healthcare innovation; (2) institutional resilience capacity, comprising organizational resilience, adaptive strategy, and human resource development; and (3) contextual responsiveness, including socio-economic alignment and culturally responsive service delivery. This framework contributes to strategic management theory by demonstrating that competitive advantage in peripheral healthcare institutions is fundamentally shaped by contextual embeddedness rather than solely by internal resource configurations as suggested by the conventional resource-based view. Practically, this framework provides hospital managers with a diagnostic tool for assessing strategic readiness across multiple dimensions and for prioritizing resource allocation toward the most contextually relevant strategic pillars.

Practically, this study implies that Class C hospitals need to strengthen digital transformation, service innovation, human resource development, and organizational culture in order to maintain long-term competitiveness. Furthermore, healthcare policymakers should provide stronger support for healthcare infrastructure development, technological readiness, and equitable healthcare resource distribution in regional areas such as the Tapal Kuda region of East Java. Nevertheless, this study has several limitations. Since the research employed a descriptive-exploratory qualitative approach focusing on the interpretation of strategic phenomena, the findings are contextual and cannot yet be generalized to all hospitals in Indonesia. In addition, this study remains limited to exploring strategic factors without quantitatively measuring the influence of each variable. Therefore, future research is recommended to apply mixed-method or quantitative approaches with broader regional coverage and a larger number of informants to obtain a more comprehensive understanding of sustainable competitive advantage in the hospital industry. Future studies may also incorporate additional variables such as digital leadership, organizational agility, patient loyalty, and green hospital management to enrich strategic healthcare management research.

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AUTHOR CONTRIBUTION STATEMENT

Siti Asiyah Anggraeni conceptualized the study, designed the research framework, conducted data collection through interviews, observations, and documentation review, performed thematic analysis, and drafted the manuscript. Fendy Suhariadi contributed to the theoretical development, methodological validation, supervision of the research process, and critical revision of the manuscript. Fiona Niska Dinda Nadia assisted in data interpretation, literature review, refinement of the discussion, and final manuscript editing. All authors reviewed, approved, and agreed to the final version of the manuscript for publication.

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