

Effect of Technological Collaboration on the Growth of Selected Retail Chains in Kenya

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Abstract

Technological collaboration is increasingly central to inter-organizational coordination and sustained growth within contemporary retailing. However, empirical evidence remains limited on how collaborative deployment of digital systems and technology-enabled capabilities influences the growth of retail chains in Kenya. The study examined the effect of technological collaboration on the growth of selected retail chains in Kenya. Specifically, it investigated whether shared information and communication technology (ICT) systems, collaborative e-commerce development and supply-chain technology integration contributed to retail-chain growth. The study adopted a positivist philosophy and an explanatory-correlational cross-sectional research design. The study focused on Naivas Limited, Quickmart Limited and Carrefour Kenya and included external suppliers involved in strategic and operational relationships with the selected retail chains. Primary data were collected using structured questionnaires administered through physical and electronic modes. Of the 263 questionnaires targeted, 215 usable responses were obtained, representing an 81.7% response rate. Data was analyzed using descriptive statistics and Partial Least Squares Structural Equation Modelling (PLS-SEM), with bootstrapping employed to test the significance of the hypothesized relationship. The findings established a positive and statistically significant relationship between technological collaboration and the growth of selected retail chains in Kenya ($\beta = .166$, $t = 2.283$, $p = .022$). The result indicates that stronger technological collaboration is associated with higher retail growth, although the magnitude of the relationship is relatively modest. The findings suggest that shared ICT systems, collaborative e-commerce development and supply-chain technology integration can strengthen information visibility, operational coordination, responsiveness and organizational scalability. The study concluded that technological collaboration constitutes a strategically relevant capability for retail-chain growth. Its value, however, does not arise from the adoption of technology in isolation but from the ability of retailers and strategic partners to integrate technological resources and coordinate interdependent activities across organizational boundaries. The study recommends that retail-chain managers should shift from fragmented, firm-centered technology adoption towards strategically governed technological collaboration with suppliers and other ecosystem partners. Priority should be given to interoperable ICT systems, collaborative forecasting, real-time inventory visibility, electronic ordering, integrated e-commerce platforms and technology-enabled supply-chain coordination.

Keywords: *Technological collaboration; strategic alliance; strategic partnership capabilities; retail growth; ICT integration; e-commerce; supply-chain integration.*

1.1 Introduction

The competitive architecture of contemporary retailing is increasingly shaped by digital technologies, interconnected supply chains and inter-organizational collaboration. Retail competitiveness is no longer determined solely by physical store locations, product assortment, pricing and purchasing power. Moreover, retailers must coordinate information, integrate supply-chain processes, develop digital channels and collaborate with external partners to respond rapidly to changing market conditions. Technology has consequently evolved from being primarily an internal efficiency mechanism to an important infrastructure for inter-organizational coordination and value creation.

The strategic importance of technological collaboration is particularly evident in retailing because critical activities are distributed across multiple organizations. Product availability, procurement, inventory management, demand forecasting, replenishment, logistics, promotions, payments and customer fulfilment frequently depend on interactions among retailers, suppliers, logistics providers, technology firms and other ecosystem actors. The ability of a retail chain to grow therefore depends not only on resources under its direct control but also on its capacity to coordinate complementary resources and capabilities across organizational boundaries.

The relational perspective of Dyer and Singh (1998) provides an important explanation for this phenomenon by proposing that competitive advantage may arise from resources and routines embedded within inter-organizational relationships. Relation-specific assets, knowledge-sharing routines, complementary resources and effective governance can generate value that may not be available to either organization independently. Similarly, Strategic Alliance Theory explains how organizations combine resources, capabilities, knowledge and technologies through collaborative relationships to achieve strategic objectives that may be difficult to accomplish independently (Gulati, 1998; Das & Teng, 2000).

Within this context, technological collaboration refers to the deliberate sharing, integration and joint utilization of technological resources and digitally enabled capabilities among organizations pursuing interdependent objectives. It differs from conventional technology adoption because it emphasizes on inter-organizational integration rather than the ownership or use of technology by a single firm. In this study, technological collaboration is conceptualized as comprising three dimensions: shared ICT systems, collaborative e-commerce development and supply-chain technology integration.

Shared ICT systems can facilitate information exchange concerning orders, inventory, sales, deliveries, returns and supplier performance. Collaborative e-commerce development can integrate product information, inventory management, payment, order processing and fulfilment across multiple organizational actors. Supply-chain technology integration can facilitate electronic ordering, collaborative forecasting, automated replenishment and real-time inventory visibility. Collectively, these capabilities can reduce information fragmentation, improve coordination and support the scalability of retail operations.

The Kenyan retail sector provides a particularly relevant context for examining this relationship. The sector has experienced substantial competitive restructuring, technological transformation and changes in consumer purchasing behavior. The contraction and exit of major retailers such as

Nakumatt, Tuskys and Uchumi, alongside continued expansion by leading chains, demonstrate that physical scale alone does not guarantee sustainable organizational growth. The sector has simultaneously witnessed increasing digitalization and the adoption of technology-enabled supply-chain and retail practices.

Recent research has demonstrated the importance of technology in Kenyan supply chains and retail operations. Gitau (2023), for example, examined digital transformation and supply-chain performance among fast-moving consumer goods firms in Kenya, while Mwove and Kithandi (2026) investigated artificial-intelligence-enabled inventory management among large supermarkets in Nairobi. Such studies indicate the growing relevance of technology to retail and supply-chain performance. However, technology adoption and technological collaboration are conceptually distinct. A retailer may possess sophisticated internal information systems while maintaining weak technological connectivity with suppliers and other strategic partners. The strategic issue is therefore not simply whether retailers adopt technology, but whether they can orchestrate technological resources across organizational boundaries. This distinction provides the basis for examining technological collaboration as a strategic partnership capability and its relationship with retail growth.

1.2 Statement of the Problem

Kenya's retail sector has undergone considerable structural and technological change, yet the growth trajectories of major retail chains remain uneven. The contraction and exit of established chains have demonstrated the vulnerability of retail organizations despite the sector's continuing growth opportunities. At the same time, leading retailers have continued to expand their physical and digital operations, increasing the complexity of their supplier, logistics and information networks. Technological capabilities have increasingly become central to managing this complexity. Nevertheless, existing research in Kenya has predominantly examined technology from the perspective of digital transformation, electronic communication, e-procurement, inventory management and supply-chain performance. Such studies provide useful evidence on the operational value of technology but offer comparatively limited explanation of technology as an inter-organizational strategic capability and its contribution to broader organizational growth. This represents an important empirical gap.

The literature does not sufficiently establish whether shared ICT systems, collaborative e-commerce development and supply-chain technology integration influence indicators of retail growth such as branch expansion, market-share growth and employee growth. In addition, much of the existing research is geographically concentrated in Nairobi and employs direct-effect regression approaches, thereby providing limited evidence concerning technologically mediated strategic relationships across major retail chains operating within the Kenyan market. The central problem addressed by this study is therefore the limited empirical understanding of whether technological collaboration constitutes a strategic capability capable of contributing to the growth of selected retail chains in Kenya. The study accordingly examined the relationship between technological collaboration and retail-chain growth using PLS-SEM.

1.3 Research Objective

To determine the effect of technological collaboration on the growth of selected retail chains in Kenya.

1.4 Research Hypothesis

H₀₁: Technological collaboration has no statistically significant effect on the growth of selected retail chains in Kenya.

2.0 Literature Review

The literature review is discussed in sections:

2.1 Theoretical Review

This section reviews the theories underpinning the study and explains their relevance to the study variables.

2.1.1 Strategic Alliance Theory

Strategic Alliance Theory provides the principal theoretical foundation for the study. The theory explains how independent organizations combine selected resources, capabilities, knowledge and technologies through inter-organizational relationships to achieve strategic objectives (Gulati, 1998; Das & Teng, 2000). Its relevance to technological collaboration is especially strong because contemporary retail operations depend increasingly on inter-organizational systems connecting retailers with suppliers, logistics providers and technology partners. Strategic alliances can enable organizations to access complementary resources without necessarily developing or owning every capability internally. In retailing, suppliers may possess specialized product information and forecasting capabilities, logistics providers may possess distribution technologies, and retailers may contribute market access, customer information and physical infrastructure. Technological integration can connect these complementary resources and create a platform for joint value creation.

Gulati (1998) further emphasizes that organizations are embedded in networks of relationships through which alliances are formed, governed and developed. The implication is that organizational performance can be influenced by the quality of relationships surrounding the focal firm. Technological collaboration represents one mechanism through which such relationships can become strategically embedded. The limitation of Strategic Alliance Theory is that it provides less detailed explanation of how the resources accessed through alliances become strategically valuable at the firm level. The Resource-Based View therefore provides complementary explanatory logic.

2.1.2 Resource-Based View

The Resource-Based View (RBV) explains competitive advantage in terms of valuable, rare, difficult-to-imitate and non-substitutable resources and capabilities (Barney, 1991; Peteraf, 1993; Wernerfelt, 1984). In the context of technology, the RBV suggests that organizations can gain strategic value from technological resources and capabilities when these resources enable superior organizational processes and outcomes. However, a conventional firm-centered interpretation of the RBV is insufficient where strategically valuable capabilities are distributed across multiple organizations. Dyer and Singh (1998) and Lavie (2006) demonstrate that resources and capabilities can extend beyond firm boundaries and become sources of relational advantage.

Technological collaboration provides a mechanism through which retailers can access and combine complementary technological resources held by suppliers, logistics providers and technology partners. The strategic value therefore arises not simply from ownership of technology but from the ability to integrate and deploy complementary resources effectively. The RBV thus complements Strategic Alliance Theory by explaining why technological collaboration can create strategic value, while Strategic Alliance Theory explains the inter-organizational relationships through which such resources are accessed and combined.

2.2 Empirical Literature

Raman et al. (2026) examined emerging digital technologies, including digital twins and blockchain, and their contribution to collaborative and resilient supply-chain performance. The study demonstrated the importance of digital integration, real-time information sharing and technology-enabled coordination. However, its focus was primarily on supply-chain performance rather than organizational growth and its technological context differs from that of emerging-market retailing. The present study therefore extends the literature by examining technological collaboration as a multidimensional strategic capability and its relationship with retail growth in Kenya.

Ammar et al. (2024) reviewed the application of digital twins in supply chains and found that digitally enabled integration can improve visibility, coordination, responsiveness and decision-making. Although the study demonstrated that strategic potential of integrated technologies, its focus on digital-twin applications did not establish whether broader technological collaboration contributes to organizational growth. The present study addresses this gap by examining shared ICT systems, collaborative E-Commerce development and supply-chain technology integration within the Kenyan retail sector.

Alsmadi et al. (2023) examined big-data analytics and innovation in e-commerce and highlighted the increasing strategic importance of data-intensive digital capabilities. The study supported the broader argument that digital technologies can transform organizational processes and business models. However, its focus on analytics and e-commerce did not directly conceptualize technological collaboration as an inter-organizational capability. The present study therefore extends this literature by examining technological collaboration across organizational boundaries.

Song et al. (2021) examined digital collaboration within an emerging e-commerce environment and reported positive associations between digital collaboration, operational efficiency, customer engagement and supply-chain coordination. The study provided useful evidence from an African emerging-market context. Nevertheless, its focus on digital infrastructure and operational outcomes leaves unanswered whether technological collaboration contributes to broader organizational growth. The present study extends this line of inquiry to major Kenyan retail chains.

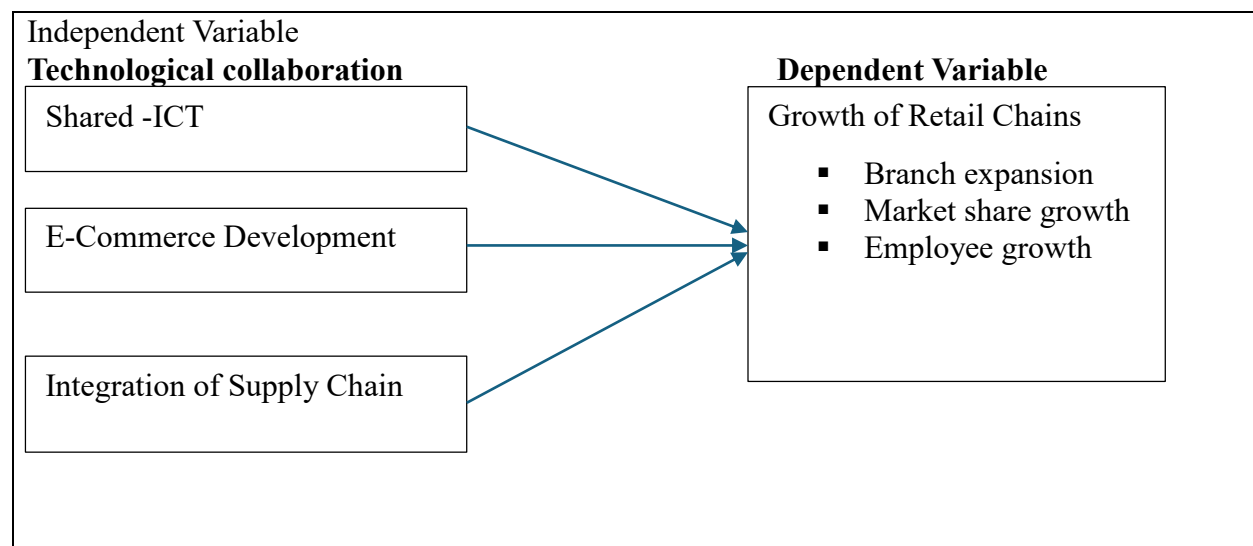
Mkonu and Gichana (2019) examined inventory-management policies and supply-chain performance among supermarkets in Nairobi City County and found that information technology and stakeholder-management capabilities were associated with improved supply-chain performance. Although the findings supported the importance of technological integration, the study largely conceptualized technology as a supply-chain management mechanism rather than as a multidimensional strategic partnership capability. Its Nairobi-specific focus also limits the generalization of the findings across Kenya.

Thuo and Osoro (2022) examined supplier relationship management and performance among retail chain stores in Nairobi and reported that stronger supplier relationships were associated with improved organizational performance. Their findings supported the relational argument that inter-organizational relationships can generate performance-enhancing resources. However, the study did not specifically examine technological collaboration through shared ICT, e-commerce development and supply-chain technology integration.

The reviewed literature therefore demonstrates a consistent association between digital integration, inter-organizational collaboration and operational performance. Nevertheless, the research gaps remain. First, technological collaboration has received less attention as a strategic partnership capability distinct from general technology adoption. Second, existing studies have focused more heavily on operational and supply-chain performance than on retail growth. Third, there remains limited empirical evidence from Kenya concerning the relationship between technological collaboration and growth among major retail chains. The present study addresses these gaps by testing the hypothesized relationship using PLS-SEM.

2.3 Conceptual Framework

The conceptual framework proposes that technological collaboration constitutes the independent variable while growth of selected retail chains represents the dependent variable. It presents the presumed relationships between Technological Collaboration and the Growth of Selected Retail Chains (GRC) in Kenya. Technological collaborations are conceptualized as a Higher-Order Construct (HOC) comprising three Lower-Order Constructs (LOCs), namely. Shared ICT, E-Commerce Development and Integration of Supply chain. The framework assumes that stronger technological collaboration enhances information sharing, coordination, visibility, and responsiveness, thereby contributing to retail-chain growth.



Source: Researcher (2026)

Figure 1: Conceptual Framework

3.0 Research Methodology

Research methodology refers to the systematic and coherent approach used to design, conduct, analyze, and interpret a study in addressing its research objectives. It encompasses philosophical

assumptions, research design, sampling, data collection, measurement, and data analysis procedures that ensure methodological rigor and credible findings (Saunders et al., 2023). In this study, the research methodology is presented in the following sections.

3.1 Research Philosophy and Design

The study adopted a positivist philosophy because it sought to objectively test a theoretically derived relationship using measurable constructs and statistical procedures. An explanatory-correlational cross-sectional research design was employed. The explanatory orientation enabled testing of the hypothesized relationship, while the correlational component permitted assessment of its direction and statistical strength. Data were collected at one point in time. Although the study used the term effect in the hypothesis and structural model, the cross-sectional design does not establish temporal causality to the same extent as experimental or longitudinal research. The findings are therefore interpreted as evidence of a statistically significant structural relationship rather than definitive causal proof.

3.2 Population, Unit of Analysis and Sampling

The study focused on Naivas Limited, Quickmart Limited and Carrefour Kenya and included external suppliers involved in strategic and operational relationships with the selected retail chains. The unit of analysis was the selected retail-chain organization, while the unit of observation consisted of knowledgeable respondents capable of assessing technological collaboration and organizational growth. Routine frontline employees whose responsibilities did not involve partnership, technological, supply-chain or organizational decision-making were excluded because they were unlikely to possess sufficient information to provide valid assessments of the constructs. The study employed the inverse square-root method proposed by Kock and Hadaya (2018) for PLS-SEM sample-size estimation. Assuming a minimum anticipated path coefficient of approximately .16 produced an estimated minimum sample size of 242 respondents. A target of 263 questionnaires was therefore established to allow for non-response and data-quality concerns. Of the 263 questionnaires targeted, 215 usable responses were obtained, representing an 81.7% response rate. Although the response rate was high, the achieved sample was below the initially calculated threshold of 242. The study therefore does not make a post-hoc claim that the final sample definitively satisfies the original minimum requirement. This limitation is considered when interpreting the statistical results and the generalizability of the findings.

3.3 Data Collection and Measurement

Primary data were collected using structured questionnaires administered in person and electronically. Technological collaboration was measured using indicators reflecting shared ICT systems, collaborative e-commerce development and supply-chain technology integration. Retail growth was measured through indicators of branch expansion, market-share growth and employee growth. Content validity was enhanced through expert assessment involving specialists in strategic management, supply-chain management and research methodology. The instrument was also pretested before the main data collection to establish the clarity, relevance and appropriateness of the measurement items.

3.4 Data Analysis

Data were analyzed using descriptive statistics and Partial Least Squares Structural Equation Modelling (PLS-SEM). The measurement model was assessed before evaluating the structural model. Bootstrapping was used to obtain inferential statistics for hypothesis testing. The principal structural parameters considered were the path coefficient (β), t -statistic and p -value.

3.5 Ethical Considerations

The researcher obtained informed consent from all participants before data collection. Participants, comprising top executives, departmental heads, regional managers, store managers and selected external stakeholders, were adequately informed of the study's purpose, procedures, potential risks and benefits, confidentiality safeguards, and their right to decline or withdraw from participation at any stage without penalty. Participation was strictly voluntary, with consent documented through approved information sheets and consent forms. Confidentiality and anonymity were further safeguarded through unique identifiers and the exclusion of personal or organizationally identifiable information from analysis and reporting. All data were securely managed, accessed only for authorized research purposes, and processed in accordance with applicable data-protection and ethical requirements. The researcher-maintained objectivity, integrity, and transparency in data analysis and reporting, avoiding fabrication, manipulation, or misrepresentation of findings. Ethical approval was obtained from the Daystar University Institutional Scientific and Ethical Review Committee (DU-ISERC) and the National Commission for Science, Technology and Innovation (NACOSTI) before commencement of fieldwork, thereby ensuring full compliance with institutional, national, and established research-ethics standards (Bryman, 2016; Saunders et al., 2019).

4.0 Results and Discussion

This chapter presents the results and discussion in sections aligned with the study objective.

4.1 Response Rate

The study targeted 263 respondents and obtained 215 usable responses, representing an 81.7% response rate. The response rate provided substantial coverage of the targeted respondents. However, because the achieved sample remained below the initially estimated minimum of 242, the findings should be interpreted with appropriate caution with regard to statistical power and generalizability.

4.2 Effect of Technological Collaboration on Retail Growth

Hypothesis H₁: Technological Collaboration and the Growth of Selected Retail Chains

The first hypothesis sought to determine whether technological collaboration significantly affects the growth of selected retail chains in Kenya.

The null hypothesis was stated as follows:

H₀₁: Technological Collaboration does not have a statistically significant effect on the growth of selected retail chains in Kenya.

The results showed that technological collaboration had a positive and statistically significant effect on growth of selected retail chains ($\beta = .166$, $t = 2.283$, $p = .022$). The 95% confidence interval ranged from 0.033 to 0.316 and did not include zero.

Table 1: Hypothesis H₁ Testing

Hypothesis	Structural Relationship	B	T	p	95% CI	Decision
H ₀₁	TC → GRC	0.166	2.283	0.022	[0.033, 0.316]	Reject H ₀₁

Source: SmartPLS output, 2026.

The positive coefficient indicates that higher levels of technological collaboration were associated with higher levels of growth of selected retail chains. The result suggests that technological collaboration among retail supply-chain partners contributes positively to retail chain-growth. Since the *p* value of 0.022 was less than 0.05 and the confidence interval did not include zero, the null hypothesis was rejected. Therefore, the study establishes that technological collaboration has a statistically significant positive effect on the growth of selected retail chains in Kenya.

4.3 Discussion of the findings

The positive and statistically significant finding supports the proposition that technological collaboration constitutes a strategically relevant inter-organizational capability. When retailers and strategic partners integrate technological systems and share information, they can improve visibility, coordination and responsiveness. These capabilities can become especially important as retail organizations expand because growth increases the volume and complexity of transactions, suppliers, stores and logistical activities. The finding is consistent with Dyer and Singh's (1998) relational perspective, which proposes that competitive advantage may arise from resources and routines embedded within inter-organizational relationships. Technological collaboration can create such relational value by establishing shared information systems, knowledge-sharing routines and complementary technological capabilities.

The finding also supports Strategic Alliance Theory. Strategic alliances enable firms to access and combine complementary resources without necessarily developing all capabilities internally. In the retail sector, technological collaboration can transform conventional buyer-supplier relationships into more integrated strategic relationships through which information, systems and capabilities are jointly coordinated. The result further complements the RBV. The traditional resource-based logic emphasizes resources controlled by the focal organization, whereas technological collaboration shows that strategically valuable capabilities may also be accessed and leveraged through external relationships. A retailer does not necessarily need to own every technological capability required for growth if it can effectively integrate complementary capabilities provided by suppliers, logistics partners and technology providers.

Shared ICT Systems and Retail Growth

Shared ICT systems provide a foundational mechanism through which technological collaboration can support retail growth. Retailers manage substantial volumes of information relating to products, orders, inventory, sales, deliveries, returns and supplier performance. When this information is fragmented, decision-making can be delayed and coordination costs can increase. Shared ICT systems can establish common information flows across organizational boundaries, improving visibility and supporting coordinated decision-making. This becomes increasingly important as retailers expand because organizational complexity increases with the number of outlets and partners. Technological collaboration can therefore support growth by strengthening the information infrastructure required to manage organizational scale.

Collaborative E-Commerce Development and Retail Growth

The findings also highlight the strategic relevance of collaborative e-commerce development. Digital retailing depends on coordinated interaction among retailers, suppliers, payment providers, technology platforms and logistics partners. An e-commerce platform may generate limited strategic value if product information, inventory, payment and fulfilment systems remain disconnected. Collaborative e-commerce development can therefore increase market reach while also improving the integration of activities required to fulfil digital orders. It offers retailers an opportunity to complement physical expansion with digitally enabled market access. This is particularly relevant in an environment where consumer purchasing behaviour increasingly incorporates digital channels.

Supply-Chain Technology Integration and Retail Growth

Supply-chain technology integration represents another important pathway through which technological collaboration can contribute to retail growth. Expansion increases the complexity of procurement, distribution, inventory management and replenishment. Electronic ordering, collaborative forecasting, real-time inventory visibility and automated replenishment can reduce information delays and strengthen coordination. The implication is that sustainable retail expansion requires more than establishing additional physical outlets. It also requires the development of technological and organizational infrastructure capable of coordinating the complexity that growth generates. Technological collaboration can provide part of this infrastructure by connecting retailers with their suppliers and logistics partners.

5.1 Conclusion

The study examined the effect of technological collaboration on the growth of selected retail chains in Kenya. The empirical findings established a positive and statistically significant relationship between technological collaboration and retail growth ($\beta = .166$, $t = 2.283$, $p = .022$). The null hypothesis was therefore rejected. The finding demonstrates that technological collaboration is strategically relevant to retail growth. Shared ICT systems, collaborative e-commerce development and supply-chain technology integration can improve information visibility, coordination, responsiveness and scalability across organizational boundaries. Nevertheless, the relatively modest path coefficient indicates that technological collaboration should not be regarded as a sufficient or deterministic condition for retail growth. Rather, it represents one component of a broader strategic capability architecture that involves logistics, governance, leadership, financial resources, competitive strategy and environmental conditions.

The principal contribution of the study is the positioning of technological collaboration as an inter-organizational strategic capability rather than simply as a technological or operational function. The findings suggest that the strategic value of technology increasingly depends on the ability of organizations to connect, integrate and orchestrate resources across organizational boundaries. For Kenyan retail chains, sustainable growth therefore requires more than acquiring advanced technologies. It requires developing technologically interconnected relationships through which retailers and strategic partners can jointly coordinate information, supply-chain processes and digital market activities. The strategic challenge is consequently shifting from technology ownership to technology orchestration.

6.1 Recommendations

The study recommends that retail chains institutionalize interoperable technological architectures with strategically important suppliers and other partners. Attention should be given to electronic ordering, collaborative forecasting, automated replenishment and real-time inventory visibility. These capabilities can strengthen supply-chain coordination and provide the information infrastructure required to manage organizational expansion. Retailers should also develop collaborative e-commerce ecosystems that integrate suppliers, payment platforms, logistics providers and technology partners. E-commerce investment should therefore be evaluated in terms of its ability to improve both market reach and inter-organizational coordination rather than solely on the basis of the existence of a digital sales platform. Senior management should establish formal governance mechanisms for technological collaboration. These mechanisms should define data ownership, access rights, cybersecurity obligations, interoperability standards, investment responsibilities and accountability. Periodic assessments should be undertaken to determine whether technological partnerships are generating measurable improvements in organizational growth and scalability. Retail chains should also support the technological upgrading of strategically important suppliers, particularly smaller suppliers whose technological limitations may constrain supply-chain integration. Supplier onboarding, digital-skills development and technical support can strengthen the technological compatibility of the wider retail ecosystem.

REFERENCES

- Alsmadi, A. A., Alrawashdeh, N., & others. (2023). Big data analytics and innovation in e-commerce
- Ammar, A., et al. (2024). Digital twins in supply chains: A systematic review. [*Journal details should be verified against the original publication before submission*].
- Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99–120. <https://doi.org/10.1177/014920639101700108>
- Das, T. K., & Teng, B.-S. (2000). A resource-based theory of strategic alliances. *Journal of Management*, 26(1), 31–61. <https://doi.org/10.1177/014920630002600105>
- Dyer, J. H., & Singh, H. (1998). The relational view: Cooperative strategy and sources of interorganizational competitive advantage. *Academy of Management Review*, 23(4), 660–679. <https://doi.org/10.5465/AMR.1998.1255632>
- Gitau, M. W. (2023). *Digital transformation and supply chain performance of fast-moving consumer goods manufacturing firms in Kenya*. University of Nairobi Repository.
- Gulati, R. (1998). Alliances and networks. *Strategic Management Journal*, 19(4), 293–317. [https://doi.org/10.1002/\(SICI\)1097-0266\(199804\)19:4<293::AID-SMJ982>3.0.CO;2-M](https://doi.org/10.1002/(SICI)1097-0266(199804)19:4<293::AID-SMJ982>3.0.CO;2-M)
- Hamann-Lohmer, J., Bendig, M., & Lasch, R. (2023). Investigating the impact of digital transformation on relationship and collaboration dynamics in supply chains and manufacturing networks: A multi-case study. *International Journal of Production Economics*, 262, 108932. <https://doi.org/10.1016/j.ijpe.2023.108932>

- Kock, N., & Hadaya, P. (2018). Minimum sample size estimation in PLS-SEM: The inverse square root and gamma-exponential methods. *Information Systems Journal*, 28(1), 227–261. <https://doi.org/10.1111/isj.12131>
- Lavie, D. (2006). The competitive advantage of interconnected firms: An extension of the resource-based view. *Academy of Management Review*, 31(3), 638–658.
- Mwove, R. M., & Kithandi, C. K. (2026). Effect of AI-inventory management on supply chain performance of large supermarkets in Nairobi City County, Kenya. *African Journal of Commercial Studies*, 7(1), 136–143. <https://doi.org/10.59413/ajocs/v7.i1.16>
- Peteraf, M. A. (1993). The cornerstones of competitive advantage: A resource-based view. *Strategic Management Journal*, 14(3), 179–191.
- Wernerfelt, B. (1984). A resource-based view of the firm. *Strategic Management Journal*, 5(2), 171–180.
- Zhou, J., Xu, T., Chiao, Y., & Fang, Y. (2023). Interorganizational systems and supply chain agility in uncertain environments: The mediation role of supply chain collaboration. *Information Systems Research*, 35(1), 184–202. <https://doi.org/10.1287/isre.2023.1210>