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LEVERAGING STRATEGIC AGILITY AS A MEDIATING INFLUENCE BETWEEN RESEARCH AND ENTERPRISE TOWARDS COMPETITIVE ADVANTAGE: EVIDENCE FROM SELECTED AFRICAN ENTERPRISES

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LEVERAGING STRATEGIC AGILITY AS A MEDIATING INFLUENCE BETWEEN RESEARCH AND ENTERPRISE TOWARDS COMPETITIVE ADVANTAGE: EVIDENCE FROM SELECTED AFRICAN ENTERPRISES

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Abstract

Africa has experienced sustained growth in academic research output; however, the translation of research into enterprise-level value creation remains limited. This study examined strategic agility conceptualized through strategic sensitivity, leadership unity, and resource fluidity as a mediating influence between research outputs and enterprise application toward competitive advantage within selected African enterprises. Anchored in Dynamic Capabilities Theory, the Resource-Based View, and the Knowledge-Based View, the study adopted a qualitative, multiple case-study design based on desk-based secondary data analysis. Evidence was drawn from three illustrative enterprises operating in different sectors: Safaricom (Kenya), Flutterwave (Nigeria), and Twiga Foods (Kenya). Data sources included company reports, industry publications, academic case studies, and verified media analyses. Thematic content analysis and cross-case pattern matching were employed to examine how strategic agility mediated the relationship between research outputs and enterprise-level competitive advantage through the commercialization of research-informed innovation. The findings revealed that strategic sensitivity enabled firms to identify research-driven market opportunities, leadership unity facilitated coherent and timely strategic decision-making, and resource fluidity supported the rapid redeployment of organizational assets to scale innovation. Collectively, these dimensions functioned as a mediating mechanism through which research-based knowledge was transformed into improved market positioning, revenue growth, scalability, and sustained competitive advantage. The study concludes that research commercialization in African contexts depends less on the volume of research produced and more on firm-level and institutional capabilities that support knowledge absorption, adaptation, and execution. It recommends that enterprises institutionalize agile leadership and flexible resource systems, universities strengthen industry-oriented commercialization pathways, and policymakers design supportive frameworks for effective research-to-market translation. The study is limited by its reliance on secondary data and a small number of cases, highlighting the need for future longitudinal and mixed-method research across broader African contexts.

Keywords: strategic agility; mediating influence; research–enterprise linkage; competitive advantage; innovation commercialization; African enterprises

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Introduction

Africa's research ecosystem has experienced notable growth over the past decade, particularly in terms of scholarly and scientific outputs. In 2022, Sub-Saharan Africa produced approximately 48,576 scientific and technical journal articles, representing a 17 percent increase from previous years; however, this expansion in research productivity has translated into comparatively limited innovation and commercialization outcomes (World Bank, 2022). Despite increased knowledge production, patenting activity across the region remains low, with resident patent applications per million people in many African countries falling significantly below global averages, reflecting persistent challenges in converting research into protected and marketable innovations (Our World in Data, 2025). In Kenya, for example, although the country ranks among Africa's leading producers of academic research, less than 10 percent of university-generated research is actively commercialized, underscoring a persistent disconnect between research production and enterprise application (Mbego, 2025).

At the institutional level, universities and public research organizations have made deliberate efforts to strengthen innovation outputs, yet commercialization outcomes remain uneven. Jomo Kenyatta University of Agriculture and Technology (JKUAT), in collaboration with the Kenya National Innovation Agency, has developed an expanding portfolio of intellectual property assets; nevertheless, the majority of these outputs have not progressed beyond the research or patenting stage into scalable enterprise solutions (JKUAT & KeNIA, 2025). In contrast, where effective research–enterprise linkages have emerged, the developmental impact has been more pronounced. In Uganda, banana-fibre innovations derived from academic research have been successfully transformed into marketable products, supporting rural livelihoods while converting agricultural waste into commercially valuable inputs (Onen and Muhumuza, 2023; UNDP Uganda, 2024). These contrasting experiences suggest that the presence of research capacity alone is insufficient; rather, outcomes depend on the organizational and institutional mechanisms through which research knowledge is translated into enterprise-level value.

Across the continent, broader structural and organizational constraints continue to inhibit the effective conversion of research into competitive enterprise growth. Key sectors such as agribusiness, renewable energy, and digital services operate in increasingly dynamic and competitive markets that demand rapid adaptation and innovation; yet many African enterprises lack the organizational capabilities required to absorb, adapt, and commercialize research effectively (Global Innovation Index, 2022). Beyond East Africa, similar commercialization challenges have been documented in other regions. In North Africa, countries such as Egypt and Tunisia have achieved improvements in university research productivity but continue to experience weak technology-transfer systems and limited start-up absorption capacity (UNESCO, 2024). In Francophone West Africa, innovation hubs have emerged in countries such as Côte d'Ivoire and Senegal; however, the proportion of academic research and development translated into scalable ventures remains below an estimated five percent, reflecting persistent institutional and enterprise-level bottlenecks (African Development Bank, 2023).

Collectively, these patterns indicate that the research enterprise gap is not confined to

individual countries but recurs across diverse African contexts. While policy and institutional reforms remain important, growing evidence suggests that firm-level organizational capabilities play a critical role in mediating the translation of research outputs into competitive enterprise outcomes. This underscores the need to examine how internal mechanisms within enterprises particularly strategic agility shape the ability of firms to convert research-based knowledge into sustained competitive advantage within Africa's evolving innovation ecosystems.

Research Problem

Despite substantial growth in academic research output across Africa, enterprises and research institutions continue to face persistent challenges in translating knowledge creation into sustained commercial value, a shortfall that undermines innovation-led growth and competitive advantage. In Kenya, for instance, less than 10 percent of university-generated research is successfully commercialized, highlighting a systemic disconnect between academic research and enterprise application (Mbego, 2025). Similar structural constraints, such as underfunded commercialization pathways, weak technology transfer offices, and ineffective intellectual property governance, have been documented across African innovation systems, limiting the absorption of research into productive enterprise activity (Wekesa et al., 2024).

While institutional and policy-related barriers are widely acknowledged in the literature, emerging evidence increasingly suggests that firm-level organizational capabilities play a critical role in determining whether research outputs are successfully converted into market-ready innovations. In particular, strategic agility, comprising strategic sensitivity, leadership unity, and resource fluidity, has been associated with superior adaptability and competitive performance in dynamic and uncertain environments (Christofi et al., 2021; Teece, 2016). Strategic sensitivity enables firms to identify and interpret emerging opportunities, leadership unity facilitates coherent and timely strategic decision-making, and resource fluidity allows for the flexible redeployment of organizational assets in response to changing conditions.

However, existing empirical studies within African contexts have predominantly examined strategic agility in relation to general organizational performance, operational efficiency, or competitive positioning, with limited attention to its role in explaining how research-based knowledge is transformed into commercial outcomes (Kiilu et al., 2024; Karoney et al., 2024). Consequently, the mechanisms through which strategic agility links research outputs to enterprise-level competitive advantage remain insufficiently theorized and empirically explored, particularly within emerging African innovation ecosystems characterized by institutional constraints and market volatility.

This gap has important practical implications. Without a clearer understanding of how strategic agility mediates the relationship between research production and enterprise competitiveness, policymakers lack evidence-based guidance for designing effective commercialization frameworks, universities struggle to align research outputs with enterprise demand, and firms remain ill-equipped to operationalize research knowledge for sustained competitive advantage. Accordingly, this study addresses the following research question: How does strategic agility mediate the relationship

between research outputs and enterprise-level competitive advantage within selected African enterprises?

Research Objectives

The main objective of this study is to examine the mediating influence of strategic agility in the relationship between research outputs and enterprise-level competitive advantage within selected African enterprises. Specifically, the study seeks to:

i. To examine how the dimensions of strategic agility strategic sensitivity, leadership unity, and resource fluidity mediate the translation of research outputs into enterprise application within selected African enterprises.

ii. To explore, through qualitative case studies of Safaricom (Kenya), Flutterwave (Nigeria), and Twiga Foods (Kenya), how strategic agility shapes the conversion of research-based knowledge into sustainable competitive advantage.

iii. To develop a conceptual framework and derive policy and managerial recommendations that strengthen research–enterprise integration and enhance sustainable competitive advantage within African innovation ecosystems.

Theoretical Foundation

This study is anchored in four complementary theoretical perspectives: Dynamic Capabilities Theory, the Resource-Based View (RBV), the Knowledge-Based View (KBV), and the Triple Helix Model. Collectively, these frameworks provide an integrated explanation of how strategic agility operates as a mediating influence between research outputs and enterprise-level competitive advantage within dynamic and institutionally constrained environments, such as those characterizing many African innovation ecosystems. Dynamic Capabilities Theory conceptualizes strategic agility as a firm's capacity to integrate, build, and reconfigure internal and external competencies in response to rapidly changing environments (Teece, 2016).

Strategic agility is operationalized through three interrelated dimensions within this perspective,: strategic sensitivity, reflecting a firm's ability to sense and anticipate emerging opportunities and threats; leadership unity, denoting cohesive and timely strategic decision-making among top management; and resource fluidity, referring to the firm's ability to redeploy human, financial, and technological resources swiftly across strategic priorities (Doz & Kosonen, 2010; Christofi et al., 2021). Together, these dimensions explain how organizations adapt to market turbulence, reconfigure innovation pathways, and align research-driven initiatives with evolving competitive conditions (Teece, 2016; Helfat & Peteraf, 2015).

Complementing the dynamic capabilities perspective, the Resource-Based View posits that sustainable competitive advantage arises from firm-specific resources that are valuable, rare, inimitable, and non-substitutable (Barney, 1991). From this standpoint, research outputs, intellectual property, and organizational know-how constitute strategic resources whose contribution to competitive advantage depends on the firm's ability to deploy and recombine them effectively. Strategic agility thus functions as a higher-order capability that activates and orchestrates these resources, enabling firms to convert latent research assets into market-relevant innovations rather than allowing them

to remain underutilized within organizational or institutional silos (Teece, 2016).

The Knowledge-Based View further extends this explanation by identifying knowledge as the most strategically significant resource of the firm (Grant, 1996). Under this view, competitive advantage is derived not merely from the possession of knowledge, but from the firm's capacity to integrate, apply, and commercialize knowledge across organizational boundaries. Research outputs and intellectual capital therefore represent intangible assets that generate value only when absorbed and operationalized through coordinated organizational processes (Grant & Phene, 2022). Strategic agility mediates this process by enabling firms to sense relevant knowledge, align decision-making around its application, and fluidly reallocate resources to support commercialization efforts (Grant, 2021; Grant & Phene, 2022).

At the institutional level, the Triple Helix Model provides a complementary lens by explaining innovation as an outcome of interaction among universities, industry, and government (Etzkowitz & Leydesdorff, 2000; Etzkowitz & Zhou, 2017). Within this triadic system, universities generate knowledge, industry transforms knowledge into commercial value, and government provides regulatory and policy support. Strategic agility enables firms to navigate and align these institutional relationships dynamically, allowing enterprises to respond to regulatory shifts, leverage academic research, and exploit policy incentives in a timely manner. This perspective is particularly relevant in African contexts, where weak coordination among innovation actors and fragmented institutional frameworks often constrain research commercialization (Etzkowitz & Zhou, 2017; World Bank, 2020).

By integrating these four theoretical perspectives, the study posits that strategic agility operates as a mediating mechanism through which research-based knowledge is translated into sustainable competitive advantage. Dynamic Capabilities Theory explains how firms adapt and reconfigure competencies; the Resource-Based View highlights the strategic value of firm-specific resources; the Knowledge-Based View positions knowledge as the central driver of innovation; and the Triple Helix Model situates these processes within broader institutional ecosystems. Taken together, this integrated theoretical foundation provides a robust framework for explaining how strategically agile enterprises in Africa bridge the persistent gap between research productivity and enterprise competitiveness.

Empirical Review

Empirical studies across African contexts increasingly demonstrate the relevance of strategic agility in enhancing organizational performance, adaptability, and competitiveness. Within the higher education sector, a study of 78 accredited universities in Kenya found that strategic agility, operationalized through strategic sensitivity, leadership unity (collective commitment), resource fluidity, and partnership orientation, had a significant positive influence on organizational performance across customer satisfaction, resource mobilization, internal processes, learning and growth, and social impact dimensions (Kiilu et al., 2024). Similarly, research on private universities in Nairobi indicates that agility in human resources, information technology infrastructure, research and development, and marketing functions is positively associated with institutional performance in dynamic and competitive environments (Ndirangu, 2024).

While these studies confirm the performance-enhancing role of strategic agility within knowledge-intensive institutions, they exhibit two notable limitations. First, they focus primarily on institutional performance outcomes, rather than examining how agility facilitates the translation of academic research into enterprise-level commercialization. Second, although research outputs are implicit within university contexts, the reviewed studies do not empirically interrogate the mechanisms through which strategic agility mediates the movement of knowledge from research production to market application, leaving a critical gap in understanding the research–enterprise interface.

Beyond universities, empirical research within African private-sector organizations further reinforces the positive association between strategic agility and competitive outcomes. For example, a study of licensed television stations in Kenya established that top management team characteristics such as diversity of experience, educational background, and tenure mediate the relationship between strategic agility and sustainable competitive advantage, underscoring the importance of leadership alignment in translating agility into superior outcomes (Karoney et al., 2024). Similarly, research on construction firms in Nairobi revealed that organizational, people, and technological agility significantly enhance firm performance, although certain dimensions, such as planning agility, were found to be context-dependent and less influential in highly regulated environments (Mahamed, 2024).

Despite their contributions, these private-sector studies remain largely performance-centric. They examine strategic agility as a direct antecedent of competitive advantage or firm performance, without explicitly situating agility within the research commercialization process. Moreover, while leadership and resource deployment are acknowledged, the studies do not explore how this agility dimensions mediate the transformation of research-based or externally generated knowledge into marketable innovations. As such, the role of strategic agility in bridging research inputs and enterprise outcomes remains empirically under-specified.

Emerging evidence from other African regions points to similar patterns, albeit with limited attention to research commercialization. In Nigeria, studies on innovation-driven firms indicate that agile decision-making and flexible resource deployment enhance firm responsiveness and innovation performance, particularly within technology and financial services sectors (Olayinka & Akinwale, 2023). In South Africa, research on innovation ecosystems highlights the importance of dynamic capabilities in enabling firms to adapt research outputs to market needs; however, commercialization outcomes remain uneven due to institutional fragmentation and weak coordination among innovation actors (Urban & Wood, 2017). In North Africa, empirical work from Egypt suggests that despite increasing research productivity, weak university–industry linkages and limited absorptive capacity constrain the translation of academic knowledge into scalable enterprise solutions (Attalla, 2018).

While these regional studies acknowledge institutional and capability-related constraints, they stop short of empirically examining strategic agility as a mediating mechanism linking research outputs to enterprise competitiveness. In particular, they do not disaggregate how strategic sensitivity, leadership unity, and resource fluidity jointly operate to absorb, adapt, and commercialize

research knowledge within firm-level decision processes. Additionally, few studies explicitly integrate the Knowledge-Based View or the Triple Helix Model to explain how organizational agility interacts with institutional arrangements in shaping commercialization outcomes.

In light of these gaps, the existing empirical literature provides limited insight into how strategic agility mediates the relationship between research production and competitive advantage within African enterprises. This study addresses this gap by examining cross-sectoral case studies of Safaricom (telecommunications and financial services), Flutterwave (fintech), and Twiga Foods (agritech). Using a qualitative, theory-informed case approach, the study moves beyond performance-centric analyses to empirically illuminate how strategically agile African enterprises convert research-based knowledge into sustainable competitive advantage through coordinated sensing, decision-making, and resource redeployment processes.

Methodology

This section outlines the research design, case selection rationale, and data collection procedures employed to examine the mediating influence of strategic agility in bridging academic research outputs and enterprise-level competitive advantage within selected African enterprises. The methodological approach was designed to ensure analytical rigor, transparency, and alignment with the study's exploratory and theory-building objectives, while remaining consistent with established qualitative research standards.

Research Design

The study adopted a qualitative, multiple case study research design to examine how strategic agility mediates the relationship between academic research outputs and commercial application for competitive advantage within African enterprise contexts. A qualitative case-based approach was considered appropriate because the study seeks to address "how" and "why" questions related to complex organizational processes, including strategic decision-making, knowledge integration, and resource reconfiguration, which unfold within real-life settings. Case study methodology allows for in-depth, contextualized analysis of such processes, which are not readily observable through purely quantitative methods (Yin, 2018).

The study employed a desk-based research design relying exclusively on secondary qualitative data. This approach is well established in organizational, innovation, and management research, particularly where access to primary respondents is constrained and where the objective is to synthesize and interpret evidence across documented cases to generate theory-informed insights (Johnston, 2020; Largan & Morris, 2019). In integrating multiple credible secondary sources, the design supports analytical depth while maintaining methodological transparency and replicability).

Case Selection and Justification

Three enterprises were purposively selected for analysis: Safaricom PLC (Kenya), Flutterwave (Nigeria), and Twiga Foods (Kenya). Case selection followed a theoretical replication logic rather than statistical generalization, consistent with qualitative case study methodology. Each case represents a distinct sector telecommunications and financial services, fintech, and agritech thereby enabling cross-sectoral comparison of how strategic agility

operates under varying technological, regulatory, and market conditions.

The cases were selected based on documented engagement with research-driven or knowledge-based innovation, demonstrable evidence of market scaling and commercialization outcomes, and the availability of credible secondary data from multiple independent sources. Although the study does not claim continental representativeness, the selected cases span different African innovation ecosystems and institutional environments, enabling analytical generalization to theory rather than population-level inference (Yin, 2018). In line with qualitative research standards, the emphasis is placed on theoretical relevance and explanatory depth rather than numerical case breadth. Accordingly, the cases serve as theoretically informative illustrations of how strategic agility mediates research commercialization within diverse African enterprise contexts.

Data Collection

Data were collected exclusively from secondary sources through systematic desk-based research. Sources included peer-reviewed journal articles, institutional and industry reports, company sustainability and annual reports, reputable media publications, policy briefs, and publicly available interview transcripts. To ensure relevance and quality, documents were selected based on predefined inclusion criteria, including publication between 2010 and 2025, direct relevance to strategic agility, innovation, or research commercialization, and verifiable authorship from credible institutions or outlets.

To enhance methodological rigor, the study applied a multi-stage validation and triangulation protocol. Substantive claims and empirical observations were corroborated across at least two independent source types, such as cross-checking company reports against academic case studies or reputable financial and industry analyses. Documents were further assessed for credibility, recency, and internal consistency prior to inclusion. An audit trail was maintained to document data sources, search strategies, selection decisions, and analytical notes, thereby strengthening transparency, dependability, and internal validity (Johnston, 2020; Largan & Morris, 2019). Table 1 presents a summary of the primary data sources used for each case. We present the profile of the companies reviewed as well as the period during which the companies were reviewed. We also provide details of the sources of the data for the enterprises that were reviewed.

Table 1:Data sources summary

Case	Primary Data Sources	Period Covered	Type of Data
Safaricom (Kenya)	African Economic Research Consortium (AERC) M-Pesa case study; Safaricom PLC sustainability and annual reports; Reuters industry and financial analyses	2018–2025	Corporate reports; academic case studies; industry and financial analysis
Flutterwave (Nigeria)	McKinsey & Company executive interview; TechCrunch coverage; Marketing Analytics Africa fintech reports	2019–2025	Executive interviews (secondary); industry reports; media and market analysis
Twiga Foods (Kenya)	CGIAR–SHiFT agribusiness case studies; UNDP Uganda innovation case notes; regional business and development news features	2020–2025	Development case studies; policy and institutional reports; sectoral media analysis

Data Analysis

Data analysis followed a thematic content analysis approach aimed at identifying and interpreting patterns relevant to the mediating influence of strategic agility in translating research outputs into competitive advantage. Textual data drawn from the selected secondary sources were systematically examined to capture recurring themes associated with the three dimensions of strategic agility: strategic sensitivity, leadership unity, and resource fluidity. Analysis began with familiarization with the data, followed by theory-informed coding, inductive theme development, and cross-case pattern matching to compare mechanisms and outcomes across the cases.

Coding followed a hybrid deductive–inductive logic. Deductive codes were informed by the study's theoretical foundation, namely Dynamic Capabilities Theory, the Resource-Based View, and the Knowledge-Based View, which guided the identification of agility-related mechanisms and competitive outcomes. Inductive coding was then applied to capture context-specific practices, decision processes, and commercialization outcomes that emerged from the data but were not predetermined by theory. This dual approach enhanced analytical rigor by balancing theoretical structure with empirical openness.

Qualitative data management was conducted using NVivo qualitative analysis software to support systematic coding, organization, and traceability of themes across data sources. Manual verification and iterative review of coded segments were undertaken to ensure consistency, reduce interpretive bias, and maintain analytical transparency. Cross-case synthesis was achieved by comparing how each enterprise deployed strategic agility mechanisms to mediate the transformation of research-based knowledge into commercial outcomes. This comparative strategy

strengthened theoretical explanation by identifying both shared patterns and sector-specific variations, consistent with best practices in qualitative multiple case study research (Yin, 2018).

Ethical Considerations and Methodological Limitations

Ethical considerations were addressed by relying exclusively on publicly available data and ensuring accurate citation, attribution, and faithful representation of all sources used in the analysis. No confidential, proprietary, or sensitive organizational information was accessed, and all materials were obtained from credible and verifiable public domains. Methodologically, the exclusive reliance on secondary data limited access to internal decision-making processes, tacit managerial knowledge, and real-time organizational dynamics.

While the application of triangulation, audit trails, and systematic coding procedures mitigated potential bias and enhanced credibility, the absence of primary data constrained the depth of interpretive insight. Accordingly, the study positions its findings as exploratory and theory-generating rather than confirmatory. The results provide a foundation for future research employing primary methods, such as interviews, surveys, or longitudinal designs, to validate and extend the conceptual relationships identified.

Findings & Discussion

This section presents and discusses findings from the desk-based multiple case analysis of Safaricom, Flutterwave, and Twiga Foods. The discussion focuses on how strategic agility, expressed through strategic sensitivity, leadership unity, and resource fluidity, mediates the translation of research-driven innovation into sustainable competitive advantage, the study's dependent variable. Drawing on triangulated evidence from corporate reports, industry analyses, and academic case documentation, the findings are interpreted in relation to observable competitive outcomes, including revenue growth, market leadership, scalability, operational efficiency, and innovation diffusion across sectors.

Safaricom: Strategic Agility and Competitive Advantage in Mobile Money

Safaricom's M-Pesa platform provides a compelling illustration of how strategic agility mediates the transformation of research-informed innovation into sustained competitive advantage. Since its launch in 2007, M-Pesa scaled rapidly, reaching over 17 million users in Kenya by 2011 and accounting for transactions equivalent to approximately half of the country's gross domestic product (Safaricom PLC, 2019; World Bank, 2021). This scale was not merely a function of first-mover advantage, but rather the outcome of continuous strategic sensitivity, through which Safaricom's leadership consistently identified unmet financial inclusion needs and evolving consumer behaviors. Applied research collaborations and sustained regulatory engagement informed iterative product development, including M-Shwari savings and credit services and, more recently, the M-Pesa–Visa virtual card launched in 2022, which enabled international digital payments. These innovations reflect resource fluidity, as Safaricom dynamically redeployed its core mobile infrastructure, data capabilities, and intellectual property across new financial products and services. In this way, strategic agility mediated the conversion of research insights and technological capabilities into scalable commercial offerings. Financial

performance indicators reinforce the competitive outcomes of this process. M-Pesa revenues grew by 8.8 percent, contributing to a 13.4 percent increase in service revenue and over 20 percent growth in earnings before interest and taxes (EBIT) (Reuters, 2024). From a competitive advantage perspective, Safaricom's strategic agility resulted in durable market dominance, high customer lock-in, and the creation of entry barriers that competitors found difficult to overcome. These outcomes align with the Resource-Based View's emphasis on inimitable capabilities (Barney, 1991) and with Dynamic Capabilities Theory, which posits that sustained advantage arises from continuous reconfiguration rather than static asset ownership (Teece, 2016).

Flutterwave: Scaling Competitive Advantage through Agile Fintech Innovation

Flutterwave illustrates how strategic agility mediates the rapid scaling of competitive advantage in digitally intensive and volatile markets. Operating within Africa's fragmented payments ecosystem, the firm demonstrated strong strategic sensitivity by identifying unmet demand for seamless cross-border payment solutions among merchants and digital platforms. Leadership unity was evident in the coordinated pursuit of regulatory legitimacy, culminating in the acquisition of a payment switching license from the Central Bank of Nigeria in 2022, which significantly enhanced operational autonomy across the payments value chain. Although Flutterwave's early revenue growth between 2018 and 2020 preceded this licensing milestone, the expansion from approximately USD 5 million to USD 55 million was driven by agile platform development and accelerated merchant onboarding strategies. During the COVID-19 lockdown period, initiatives such as the "Keeping the Lights On" campaign enabled the firm to rapidly respond to shifting market conditions and onboard thousands of businesses (McKinsey & Company, 2022). These actions demonstrate how leadership unity and strategic sensitivity jointly supported rapid organizational adaptation. Following regulatory approval, Flutterwave leveraged resource fluidity by redeploying its technological infrastructure and regulatory capabilities across multiple African markets, strengthening scalability and regional reach. These agility-driven mechanisms translated into clear competitive outcomes, including market leadership in pan-African payments, a valuation exceeding USD 3 billion, and sustained growth in transaction volumes (TechCrunch, 2023). The case demonstrates that competitive advantage in fintech contexts is not derived from innovation speed alone, but from the mediating role of strategic agility in aligning regulatory knowledge, leadership coordination, and technological assets with commercial performance.

Twiga Foods: Competitive Advantage through Research-Informed Agritech Efficiency

Twiga Foods provides evidence that strategic agility can mediate the creation of competitive advantage even in traditionally low-margin and fragmented sectors such as agriculture. Founded in 2014, Twiga developed a business-to-business mobile platform linking smallholder farmers to urban retailers, drawing on research collaborations with institutions such as CGIAR to inform data-driven supply-chain optimization. Strategic sensitivity enabled the firm to identify persistent inefficiencies in informal agricultural markets, particularly post-harvest losses and price volatility. Leadership unity facilitated the alignment of technological,

logistical, and financial strategies, while resource fluidity allowed Twiga to rapidly deploy mobile payments, cold-chain logistics, and demand-forecasting tools across its network. Through these mechanisms, research-derived knowledge was absorbed and operationalized within the firm's commercial model rather than remaining external to enterprise activity. The resulting competitive outcomes were substantial. Twiga reduced post-harvest losses from an estimated 30–50 percent to below 5 percent and improved farmer incomes by between 20 and 40 percent (CGIAR, 2023). By mid-2023, the firm had served over 140,000 retailers, representing roughly one quarter of Kenya's fresh produce market. These outcomes reflect competitive advantage manifested through cost efficiency, supply reliability, and network scale advantages that competitors found difficult to replicate. Empirically, the Twiga case supports the Knowledge-Based View by demonstrating how research-derived knowledge, when mediated through strategic agility, becomes a strategic asset underpinning sustained enterprise performance in resource-constrained environments (Grant, 1996).

Table 2: Case Summary

Case	Strategic Sensitivity	Leadership Unity	Resource Fluidity	Competitive Advantage Outcome
Safaricom	Identified unmet digital finance and financial inclusion gaps	Integrated leadership coordination across telecom and financial services	Redeployed M-Pesa infrastructure and data assets across new financial products	Sustained market dominance; 13.4% service revenue growth; >20% EBIT growth
Flutterwave	Recognized demand for cross-border digital payments	Secured switching license through unified regulatory strategy	Leveraged technological platforms and regulatory approvals across markets	Rapid regional scalability; GMV growth exceeding 1100% (2018–2020)
Twiga Foods	Identified inefficiencies in informal agricultural supply chains	Coordinated technology, logistics, and financial strategies	Rapid deployment of B2B platform, logistics, and mobile payments	Cost efficiency and network scale; post-harvest losses reduced to <5%

Cross-Case Synthesis: Strategic Agility as a Driver of Competitive Advantage

Across the three cases, a consistent pattern emerges: strategic agility operates as a mediating influence through which research-based knowledge is transformed into sustainable competitive advantage. Strategic sensitivity enabled firms to identify context-specific opportunities arising from research insights and market signals, leadership unity ensured coordinated and timely strategic execution, and resource fluidity facilitated the rapid redeployment of assets toward commercialization pathways. Rather than acting independently, these dimensions functioned interactively to bridge research outputs and enterprise application.

The competitive outcomes observed across the cases demonstrate this mediating process in practice. Safaricom translated research-informed financial innovations into durable market dominance and customer lock-in, Flutterwave converted regulatory and technological knowledge into rapid regional scalability, and Twiga Foods operationalized agricultural research into cost efficiency and network scale advantages. In each case, competitive advantage did not arise directly from innovation or research alone, but from the firm's capacity to absorb, align, and redeploy knowledge through agile organizational processes.

Empirically, these findings align with Dynamic Capabilities Theory, which emphasizes adaptation and reconfiguration as foundations of sustained competitive advantage (Teece, 2016), while reinforcing the Resource-Based and Knowledge-Based Views that highlight the strategic value of intangible and difficult-to-imitate resources. In addition, the observed collaboration among enterprises, research institutions, and regulators reflects the Triple Helix logic, illustrating how institutional coordination enhances the translation of research into market advantage in African contexts (Etzkowitz & Zhou, 2017). Taken together, the evidence confirms that competitive advantage in African enterprises is mediated by strategic agility, positioning it as both an explanatory construct and a practical bridge between research production and enterprise competitiveness.

Conclusion and Recommendations

This study demonstrated that strategic agility exerts a mediating influence in bridging the persistent gap between academic research and enterprise competitiveness in Africa. Drawing on desk-based qualitative analysis of Safaricom, Flutterwave, and Twiga Foods, the findings confirmed that strategic sensitivity, leadership unity, and resource fluidity operate as interconnected mechanisms through which research insights are transformed into scalable innovations and sustained competitive advantage. Enterprises that consistently sensed emerging opportunities, aligned leadership around shared strategic priorities, and dynamically redeployed resources were better positioned to convert knowledge into market value.

From a theoretical standpoint, the findings reinforce the integrated explanatory power of Dynamic Capabilities Theory, the Resource-Based View, and the Knowledge-Based View. These frameworks collectively explain how firms mobilize internal knowledge assets through adaptive and reconfigurable processes to achieve superior competitive outcomes. At the institutional level, the Triple Helix Model further illuminates how collaboration among

universities, industry, and government accelerates knowledge exchange and innovation diffusion, strengthening enterprise competitiveness within constrained environments. Overall, the study underscores that research commercialization in Africa depends less on knowledge production alone and more on the organizational and institutional capacity to absorb, adapt, and operationalize research.

From a practical perspective, several recommendations emerge. For African enterprises, there is a need to institutionalize agile leadership cultures that emphasize experimentation, iterative learning, and rapid decision-making. Firms should invest in cross-functional innovation teams and flexible resource allocation systems that support swift responses to emerging opportunities and facilitate the translation of research outputs into viable business models. For universities and research institutions, stronger alignment with industry is essential through translational research partnerships, shared intellectual property frameworks, joint incubation initiatives, and commercialization training programs that equip researchers with market-oriented capabilities. For policymakers and development agencies, the findings highlight the importance of innovation policies that extend beyond basic research to include prototyping, validation, and scaling, alongside intellectual property regimes that balance protection with diffusion. Strengthening public–private partnerships and regional innovation ecosystems will further accelerate research commercialization across sectors.

Limitations and Future Research

This study relied exclusively on secondary data, limiting access to internal decision-making processes and tacit managerial insights within the selected enterprises. Although systematic triangulation across multiple data sources enhanced credibility, the absence of primary interviews and direct observation constrained the depth of interpretive analysis. Future research should therefore adopt longitudinal or mixed-method designs incorporating interviews, surveys, and firm-level primary data to validate and extend the conceptual relationships identified. In addition, cross-sector and cross-country comparisons, particularly involving North Africa and Francophone African economies, would enhance the generalizability of the findings and deepen understanding of institutional variation in research commercialization processes.

Theoretical and Practical Contribution

The study contributes theoretically by proposing a conceptual model in which strategic agility functions as a mediating mechanism linking research-based knowledge to enterprise competitive advantage within Africa's emerging innovation ecosystems. By integrating firm-level agility with institutional collaboration perspectives from the Triple Helix Model, the study advances understanding of how research–enterprise linkages can be operationalized in developing contexts. Practically, the findings offer a structured roadmap for enterprises, universities, and policymakers seeking to transform Africa's expanding research capacity into tangible market and developmental outcomes. Overall, strategic agility emerges not merely as an operational capability, but as a critical mediating force connecting knowledge creation to sustainable competitive performance in African enterprises.

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Conflicts of Interest

I declare there is no conflict of interests in the research.

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