

Dynamic Capabilities, Business Model Innovation, and Customer Retention in the Nigerian Telecommunications Industry (2015-2025): A Desk Review

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Abstract

This study examines how dynamic capabilities influence customer retention in the Nigerian telecommunications industry, with business model innovation (BMI) as a mediating mechanism. Using a systematic desk-review methodology anchored in Dynamic Capabilities Theory (Teece et al., 1997; Teece, 2007, 2018), Business Model Innovation Theory (Foss & Saebi, 2017), and the Resource-Based View (Barney, 1991), the paper synthesizes peer-reviewed literature, industry reports, and operator-level case evidence spanning 2015 to 2025. The review finds that sensing, seizing, and reconfiguring capabilities collectively enable telecom operators to innovate their business models through fintech integration, infrastructure sharing, digital bundling, and ecosystem partnerships, which in turn strengthen customer loyalty and reduce subscriber churn. Operators with superior dynamic capabilities (MTN, Airtel) navigated regulatory shocks (notably the NIN–SIM linkage policy) and technological disruption more effectively than those without (Globacom, Visafone, Starcomms). The study contributes a theoretically integrated conceptual model linking dynamic capabilities → BMI → customer retention and offers practical recommendations for telecom managers and policymakers in Sub-Saharan Africa. Limitations and future research directions, including the need for large-scale quantitative testing are identified.

Keywords: *dynamic capabilities; business model innovation; customer retention; Nigerian telecommunications; emerging markets*

1. Introduction

Since the privatisation and liberalisation of Nigeria's telecommunications sector in 2001, the industry has evolved into one of the most dynamic and competitive markets in Sub-Saharan Africa. The deregulation process attracted major global and regional investors, resulting in operators such as MTN Nigeria, Globacom, Airtel Nigeria, 9mobile, and several CDMA and GSM firms, many of which eventually exited due to an inability to sustain competitive advantage in Nigeria's challenging operating environment (Adebiyi & Mojekwu, 2015). At its peak, the Nigerian market recorded over 204 million active telephone subscriptions (NCC, 2024), underscoring its sheer scale and strategic importance. However, this trajectory has been far from linear. Rapid technological transitions from 2G voice to 3G/4G data-centric services and nascent 5G deployments, intense price competition, infrastructural limitations, currency volatility, and evolving regulatory demands have created a volatile operating environment. Customer churn rates in comparable emerging-market telecom studies have been estimated at an average of approximately 26% annually (Oghojafor, Ladipo, Ighomereho, & Odunewu, 2014). Retention figures for major Nigerian operators, including 86.11% for MTN, 70.51% for Globacom, and approximately 67% for Airtel, reveal that a significant portion of subscribers remain susceptible to defection at any point in the customer lifecycle (Adebiyi & Mojekwu, 2015). Against this backdrop, the decade

from 2015 to 2025 witnessed a profound transformation in the strategic postures of surviving operators. MTN Nigeria's pivot to a "telco-to-techco" model anchored by the launch of its MoMo Payment Service Bank (PSB), Airtel's SmartCash fintech expansion, Globacom's submarine cable-backed data strategy, and 9mobile's national roaming agreement with MTN collectively illustrate how strategic agility, grounded in dynamic capabilities, has become a prerequisite for survival in this market. Understanding what differentiates thriving operators from those that exited requires an integrative theoretical framework that connects internal strategic capabilities, business model transformation, and customer value outcomes.

1.2 Problem Statement

Despite a growing body of literature on dynamic capabilities and business model innovation in isolation, there exists a notable gap in theoretically integrated, empirically grounded studies that simultaneously examine how these constructs interact to produce customer retention outcomes in the specific context of Nigerian telecommunications. Existing studies either focus narrowly on service quality as a retention antecedent (Oghojafor et al., 2014) or examine dynamic capabilities in broad organisational performance frameworks without disaggregating their effect on customer-level outcomes (Wilden, Gudergan, Nielsen, & Lings, 2016). Furthermore, the regulatory shocks experienced in the sector particularly the NIN-SIM linkage policy implemented between 2021 and 2024 have generated unprecedented subscriber realignment, creating a natural policy experiment whose strategic implications for retention have not been systematically analysed. The simultaneous occurrence of technological disruption, regulatory enforcement, and competitive market evolution during 2015-2025 provides a unique and theoretically rich context for examining the interplay among dynamic capabilities, BMI, and customer retention. This study seeks to address this gap through a comprehensive desk review and conceptual synthesis.

1.3 Objectives of the Study

The general objective of this study is to examine, through a systematic desk review of secondary literature, how dynamic capabilities influence value capture, operationalised through customer

retention within the Nigerian telecommunications industry, with business model innovation serving as the mediating mechanism. Specifically, the study aims to:

1. Synthesise academic and industry evidence on how telecom operators develop and deploy sensing, seizing, and reconfiguring capabilities to navigate Nigeria's volatile competitive environment.
2. Review existing scholarly insights on the patterns and determinants of customer retention in the Nigerian telecommunications sector between 2015 and 2025.
3. Explore how business model innovations including fintech integration, digital service bundling, infrastructure sharing, and ecosystem partnerships translate strategic capabilities into improved subscriber loyalty and reduced churn.
4. Develop a theoretically grounded conceptual model that links dynamic capabilities to BMI and, ultimately, to customer retention and long-term value capture.
5. Identify theoretical contributions, research limitations, and directions for future empirical inquiry.

2. Methodology

This study adopts a desk-review approach, utilising exclusively secondary data sources to provide a comprehensive and analytically grounded understanding of the research problem. A desk review is epistemologically appropriate because the study's purpose is to synthesise existing empirical findings, theoretical perspectives, industry reports, and documented cases, not to collect primary field data to derive an integrative conceptual understanding of the phenomenon under investigation (Foss & Saebi, 2018). Methodologically, the study employs an integrative research design, enabling the consolidation of findings from multiple scholarly and industry sources to generate a holistic conceptual perspective suitable for theory building rather than hypothesis testing.

2.1 Search Strategy

A systematic search conducted across major academic databases, including ScienceDirect, Emerald Insight, JSTOR, Web of Science, and Google Scholar, as well as grey literature repositories. Search terms constructed using

Boolean operators combining the following keywords: dynamic capabilities; business model innovation; customer retention; value capture; telecommunications; Nigeria, and emerging markets. Additional operator-level evidence sourced from Nigerian Communications Commission (NCC) industry statistics, GSMA intelligence reports, Mordor Intelligence sector analyses, and reputable Nigerian financial and technology news platforms. Backward and forward reference-tracking techniques were used to identify additional influential works not captured in the initial database search.

2.2 Inclusion and Exclusion Criteria

Peer-reviewed journal articles, doctoral theses, edited book chapters, and substantive industry reports published between 2015 and 2025 were prioritised to ensure contextual relevance to the study period. Seminal theoretical works predating 2015 (e.g., Teece et al., 1997; Barney, 1991; Wernerfelt, 1984) were included where they provided foundational theoretical grounding. Studies were included if they addressed at least one of the three core constructs; dynamic capabilities, business model innovation, or customer retention with particular preference given to works that examined these constructs in the telecommunications sector or in emerging-market contexts. Studies excluded if they addressed unrelated industries without theoretical applicability to telecoms, were not published in English, or lacked methodological transparency. A final pool of over 40 sources informed this review, comprising peer-reviewed articles, theoretical frameworks, operator case narratives, and multiple industry datasets.

2.3 Theoretical Foundation

This study is anchored in three complementary theoretical lenses that are hierarchically integrated to explain the research phenomenon:

Dynamic Capabilities Theory (DCT) introduced by Teece, Pisano, and Shuen (1997) and refined by Teece (2007, 2018) provides the primary explanatory framework, decomposing strategic agility into sensing, seizing, and reconfiguring capabilities that enable firms to sustain competitive advantage in turbulent environments.

Business Model Innovation Theory (BMI Theory) conceptualised by Foss and Saebi (2017) and

Osterwalder and Pigneur (2010) serves as the mediating mechanism linking dynamic capabilities to customer retention outcomes through transformation of value creation, delivery, and capture architectures.

Resource-Based View (RBV) originally formulated by Wernerfelt (1984) and advanced by Barney (1991) provides the baseline for explaining initial resource heterogeneity among Nigerian operators, establishing the precondition upon which dynamic capabilities operate.

Together, these three frameworks constitute a sequential mediation model: RBV explains the resource base → DCT explains how capabilities are built and deployed → BMI Theory explains how capabilities convert to innovative models → customer retention captures the value-capture outcome.

3. Literature Review

Understanding customer retention in the Nigerian telecommunications industry requires an integrative evaluation of three interconnected theoretical domains: dynamic capabilities, business model innovation, and value capture operationalised through customer retention. This section reviews the conceptual content of each construct, examines the empirical evidence, and presents the integrated conceptual framework.

3.1 Conceptual Review of Key Constructs

3.1.1 Customer Retention and Value Capture

Value capture refers to the mechanisms through which firms appropriate economic, strategic, and behavioural benefits from the value created and delivered to customers (Teece, 2010). In the Nigerian telecommunications sector, characterised by declining average revenue per user (ARPU), intense competition, infrastructural volatility, and significant price sensitivity, customer retention has emerged as the central indicator of value capture. Reinartz and Kumar (2003) argue that retaining customers is significantly more cost-efficient than acquiring new ones, particularly in saturated markets where switching costs are low and consumer information is abundant. For Nigerian operators facing multi-SIM behaviour and mobile number portability, retaining subscribers has become a strategic necessity for achieving stable revenue streams and long-term profitability. Customer retention in Nigeria is shaped by a

complex interplay of service quality, customer satisfaction, digital experience, personalisation, emotional loyalty, and macro-regulatory conditions. Oghojafor et al. (2014) found that service quality dimensions; network coverage, call clarity, data speed, and low service disruption remain the strongest predictors of retention. Contemporary retention literature also indicates that satisfaction alone does not guarantee loyalty in commoditised markets (Heskett, 1994). Instead, multidimensional drivers influence retention: trust, switching barriers, emotional attachment, and perceived fairness of pricing (Zeithaml, 1988). Increasingly, Nigerian operators rely on digital ecosystems, self-service apps, entertainment platforms, mobile money solutions, and loyalty programmes to enhance perceived value and increase switching costs (Kim & Son, 2009). A particularly significant regulatory dimension is the NIN–SIM linkage policy, which fundamentally reshaped subscriber figures across operators. The policy required every mobile line to be linked to a valid National Identification Number (NIN), triggering widespread deactivation of non-compliant SIMs. Between December 2020 and September 2024, total industry subscribers declined from approximately 204.1 million to 154.6 million, 24.3% contraction. The differential impact on operators (MTN and Airtel experienced minimal decline of approximately 3.3-3.4%, while 9Mobile and Globacom suffered contractions of

72% and 65.1% respectively) reflects not market-driven churn but regulatory-driven database sanitisation, exposing the degree to which weaker KYC compliance and poor subscriber data management had inflated subscriber counts (NCC, 2024). Table 1 summarises these dynamics.

Table 1: Impact of NIN–SIM Policy on Nigerian Telecom Subscriber Numbers (Dec 2020 – Sep 2024)

Operator	Dec 2020	Sep 2024	Net Change	% Change
MTN Nigeria	80,764,128	78,097,681	–2,666,447	–3.3%
Airtel Nigeria	55,642,209	53,748,688	–1,893,521	–3.4%
Globacom	54,840,129	19,152,907	–35,687,222	–65.1%
9Mobile (T2)	12,982,149	3,635,160	–9,346,989	–72.0%
INDUSTRY TOTAL	204,149,436	154,634,436	–49,515,000	–24.3%

Source: Nigerian Communications Commission (NCC) Industry Statistics, 2024.

3.1.2 Dynamic Capabilities

Dynamic capabilities constitute a critical theoretical lens for understanding how Nigerian telecom operators respond to environmental

turbulence. Defined as the firm's ability to integrate, build, and reconfigure competencies to address changing environments (Teece, 2007), dynamic capabilities are particularly relevant in digital, high-velocity industries. Teece (2018) disaggregates dynamic capabilities into three micro-foundational clusters: sensing, seizing, and reconfiguring/transforming: Sensing capabilities involve identifying emerging market needs, technological shifts, and customer behavioural changes. Empirically, sensing capabilities is been shown to predict churn- prevention effectiveness in Nigeria. Adebisi et al. (2022) provided evidence that data-driven customer behaviour analysis significantly improves retention efforts by enabling early detection of churn tendencies. Globally, sensing capabilities enable telecom operators to collect real-time insights from usage data, social interactions, and digital footprints (Gyemang & Emeagwali, 2020). Seizing capabilities encompass mobilising resources to exploit identified opportunities. Nigerian telecom operators deploy product bundling, digital financial services, mobile money operations, and loyalty programmes as strategic mechanisms for seizing market opportunities (Omoju, 2021). These initiatives allow operators to translate sensed opportunities into customer-valued offerings, strengthening competitiveness in saturated markets. Reconfiguring capabilities involve restructuring organisational processes, assets, and routines to sustain performance. In the Nigerian context, empirical findings indicate that reconfiguring capabilities significantly influence agility and innovation performance (Gyemang & Emeagwali, 2020). Operators that continuously upgrade network infrastructure, redesign service delivery processes, and restructure pricing mechanisms are better positioned to offer consistent service experiences and reduce churn.

3.1.3 Business Model Innovation (BMI)

Schumpeter (1934) differentiated among five types of innovation products, production methods, supply sources, market exploitation, and business organisation a taxonomy that scholars have subsequently synthesised into the concept of business model innovation. Business model innovation is defined as "a novel way to create, deliver, and capture value" (Osterwalder & Pigneur, 2010; Foss & Saebi, 2017) and, more

dynamically, as the discovery of a fundamentally different business model in an existing business (Markides, 2006). Despite growing scholarly attention, no single unifying definition has been finalised (Zott, Amit, & Massa, 2011), with varying interpretations ranging from how a firm generates revenue (Stewart & Zhao, 2000) to novel commercialisation of underlying assets (Gambardella & McGahan, 2010). Recent conceptualisations emphasise BMI as a dynamic capability in itself (Mezger, 2014; Saebi et al., 2017) or as a mediator between dynamic capabilities and performance (Hu et al., 2017; Anwar & Shah, 2021). In telecom markets, BMI involves reimagining pricing logics, service bundling structures, customer engagement architectures, and digital ecosystem partnerships (Björkdahl, 2020). Global research highlights a shift toward platform-based and service-oriented business models. Nigerian telecom operators MTN, Airtel, and Globacom have embraced BMI by expanding into fintech, entertainment ecosystems, SME digital support, IoT solutions, and developer-oriented APIs. Empirical studies reinforce BMI's mediating role. Foss and Saebi (2017) found that dynamic capabilities exert their performance effects mainly through BMI, meaning firms that sense and seize opportunities effectively can convert these capabilities into innovative business models that strengthen competitiveness. (Claus, et al., 2021) further noted that reconfiguring capabilities are particularly crucial in service industries, where continuous restructuring is necessary to support innovative offerings. In the Nigerian context, Omoju (2021) demonstrated that mobile financial service innovations emerged primarily through BMI processes rather than isolated product innovations.

3.1.4 Theoretical Frameworks Underpinning the Study

Dynamic Capabilities Theory (DCT): DCT effectively overcomes RBV's static limitation by focusing on the firm's ability to integrate, build, and reconfigure competences in rapidly changing environments. The framework is highly suitable for analysing the Nigerian telecom industry between 2015 and 2025, which faced data explosion, fintech convergence, currency devaluation, and regulatory shocks (Dixon et al., 2014; Agyei & Osei, 2023). DCT explicitly links capability renewal to business model innovation and value capture (Teece, 2010;

Mezger, 2014). Nevertheless, DCT continues to suffer from conceptual ambiguity and measurement challenges, with scholars still disagreeing on whether dynamic capabilities are observable routines or emergent processes (Schilke et al., 2018; Laaksonen & Peltoniemi, 2018), and it carries a persistent risk of tautology (Arend & Bromiley, 2009).

Business Model Innovation Theory: BMI theory is particularly powerful because it moves beyond resource possession to the architectural and activity-system choices that determine how value is appropriated. It explicitly incorporates customer value propositions and revenue mechanisms directly relevant to retention, enjoys growing empirical support for BMI's mediating role (Hu et al., 2017; Anwar & Shah, 2021; Karimi & Walter, 2021), and proves especially pertinent in emerging markets where incumbents must self-disrupt to survive (Habtay & Holmén, 2022). However, the field remains theoretically fragmented and faces endogeneity concerns regarding causality direction (Demil & Lecocq, 2010).

Resource-Based View (RBV): RBV posits that sustained competitive advantage derives from a firm's ownership or control of valuable, rare, inimitable, and non-substitutable (VRIN) resources and capabilities (Barney, 1991). In the Nigerian context, RBV explains the initial resource heterogeneity; spectrum holdings, subscriber base, physical network infrastructure that gave MTN and Globacom early market dominance. However, its predominantly static orientation renders it inadequate for explaining advantage renewal in high-velocity environments, and it has been criticised for tautological reasoning and limited actionable guidance on resource reconfiguration (Priem & Butler, 2001; Kraaijenbrink et al., 2010).

3.2 Empirical Review

Empirical studies across multiple contexts consistently support the hypothesised relationships between the constructs examined in this study. At the level of dynamic capabilities and firm performance, a study of Nigerian telecom firms by Ezenwakwelu (2021) found a positive and significant relationship between dynamic capabilities and service innovation. Similarly, Esator (2025) demonstrated that dynamic capabilities explained approximately 54% of variance in organisational performance among

Nigerian MSMEs when sensing, seizing, and reconfiguration capabilities are simultaneously considered. Oluwatobi, Efobi, Olurinola, & Alege, (2023) established a positive relationship between dynamic capabilities and digital transformation outcomes among Nigerian telecom operators. At the level of BMI and performance, Anwar & Shah (2021) found that BMI positively mediates the relationship between dynamic capabilities and SME performance, even when competitive intensity moderates the relationship. Karimi & Walter (2021) empirically demonstrated that dynamic capabilities exert their influence on firm survival in the newspaper industry primarily through BMI. Khan, S. Z., Yang, Q., & Waheed, A. (2023) further confirmed that BMI mediates the relationship between intangible resource investments and new venture growth. In the Nigerian context specifically, Diete-Spiff & Lucky (2024) found positive associations between corporate entrepreneurship and BMI in the Bayelsa telecommunications sector. At the level of customer retention, Oghojafor et al. (2014) found that service quality, network reliability, and pricing structures strongly predict retention among Nigerian telecom subscribers. Adebisi et al. (2022), using churn modelling techniques, established that customer usage patterns, complaint histories, and service bundle characteristics are significant predictors of churn. Predictive analytics-based interventions consistently reduce churn by enabling proactive retention strategies, supporting the value of sensing and seizing capabilities in retention management. At the macro level, the evolution of Nigerian telecom business models from 2015 to 2025 provides compelling case-level evidence. MTN Nigeria's fintech revenue grew from negligible levels to over ₦131.6 billion in the first nine months of 2025, representing more than 20% of total service revenue (Nairametrics, 2025). Airtel Nigeria achieved a 49% year-on-year revenue increase with average monthly data usage rising to 6.9 GB per subscriber (Business Day Nigeria, 2025), while its capital expenditure nearly doubled to approximately US\$900 million in 2025 (Tech Africa News, 2025). Meanwhile, operators that failed to develop commensurate dynamic capabilities; Visafone, Starcomms, Multi-Links, and ZoomMobile ultimately exited the market, providing a natural control group for understanding the capability-performance relationship.

3.3 Conceptual Framework

Drawing on the theoretical and empirical evidence reviewed, this study proposes an integrated conceptual framework that links dynamic capabilities to customer retention through business model innovation. Figure 1 presents the conceptual model diagrammatically.

4. Discussion and Synthesis

4.1 Interpretation of the Findings

The evidence synthesised in this review consistently supports the central argument that dynamic capabilities → BMI → customer retention constitutes the operative strategic logic distinguishing thriving from failing Nigerian telecom operators during 2015-2025. Operators that developed robust dynamic capabilities particularly the ability to sense technological and market shifts, seize digital opportunities through fintech and ecosystem partnerships, and reconfigure organisational assets through infrastructure sharing and IT modernisation were able to innovate their business models in ways that enhanced customer value propositions, deepened digital engagement, and raised effective switching costs. The case evidence is instructive. MTN Nigeria exemplifies the complete dynamic capabilities chain: sensing the convergence of telecoms and financial services, seizing this opportunity through PSB licensing and the MoMo platform, and reconfiguring its network through

1.1 Conceptual Framework

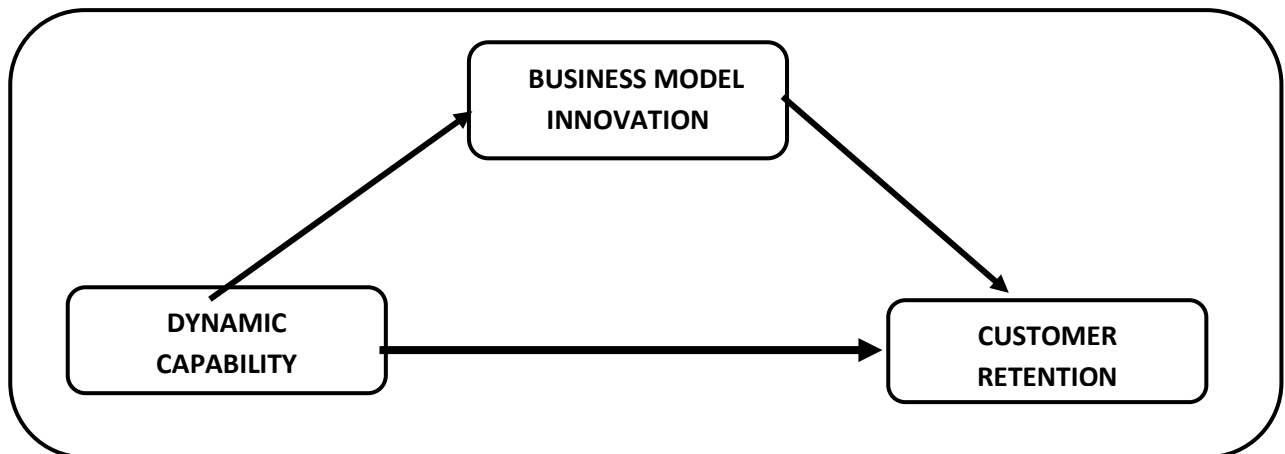


Figure 1: Conceptual Framework – Dynamic Capabilities, Business Model Innovation, and Customer Retention

The framework proposes three core hypothetical relationships. First (H1), dynamic capabilities comprising sensing, seizing, and reconfiguring positively and significantly predict business model innovation. Second (H2), business model innovation positively and significantly predicts customer retention. Third (H3), business model innovation mediates the relationship between dynamic capabilities and customer retention.

RAN sharing with Airtel and MVNO onboarding. The result was a diversified revenue model with fintech contributing over 20% of service revenue by 2025 and relatively stable subscriber numbers despite industry-wide contraction (Nairametrics, 2025; Daba Finance, 2025). Airtel Nigeria's parallel trajectory, SmartCash PSB integration, aggressive 4G/5G capital expenditure, and device-financing bundling produced a 49% year-on-year revenue increase, confirming that BMI-driven value propositions directly influence retention-related revenue outcomes (BusinessDay Nigeria, 2025). In contrast, operators exhibiting weak dynamic capabilities suffered disproportionate

retention losses. Globacom's 65.1% subscriber decline and 9mobile's 72.0% contraction during the NIN–SIM policy period reflect not merely a regulatory shock but the systemic vulnerability of operators that had historically under-invested in KYC infrastructure, data analytics, and proactive compliance capabilities. The regulatory environment, in this sense, functioned as a competitive filter that amplified existing capability differentials, rewarding operators with strong sensing and reconfiguring capabilities and penalising those without. The mediating role of BMI is evident in how different capability configurations produced different retention-relevant innovations. Infrastructure-owning operators like Globacom leveraged their Glo-1 submarine cable asset (an RBV-level advantage) to offer competitively priced data bundles but struggled to translate this into broader BMI encompassing fintech or ecosystem partnerships. This partial capability development may explain Globacom's intermediate performance relative to market leaders. 9mobile's national roaming agreement with MTN represents an asset-light BMI response to capability constraints a form of co-competitive reconfiguration that stabilised its subscriber base at approximately 3.2 million (PM News Nigeria, 2025). These cases collectively validate the sequential model: RBV resource base → DCT capability deployment → BMI transformation → customer retention outcomes.

4.2 Theoretical Contributions

This study makes several theoretical contributions to the strategic management and telecommunications management literatures. First, it provides a theoretically integrated conceptual model that explicitly connects dynamic capabilities, BMI, and customer retention within a single framework, advancing beyond prior studies that have typically examined these constructs in isolation or in bilateral relationships (Wilden et al., 2016; Anwar & Shah, 2021). By positioning BMI as the operative mediating mechanism through which dynamic capabilities achieve customer-level outcomes, the model offers greater analytical precision than aggregate performance measures. Second, the study extends the application of DCT and BMI Theory to an African telecommunications context characterised by regulatory turbulence, infrastructural constraints, and financial inclusion

imperatives contexts that remain underrepresented in the mainstream strategic management literature (Habtay & Holmén, 2022; Fainshmidt et al., 2019). The Nigerian case demonstrates that dynamic capabilities and BMI operate differently under conditions of regulatory shock than they do in developed-market contexts, enriching the theoretical understanding of how institutional environments can moderate the capabilities-performance relationship. Third, the study contributes to the customer retention literature by demonstrating that retention is not solely a function of service quality or satisfaction but is fundamentally shaped by the strategic architecture of the firm, its capability profile and business model design. This reframes retention as a strategic, dynamic, and capability-dependent construct rather than a purely operational or marketing outcome, with implications for both theory and managerial practice.

4.3 Limitations of the Study

This study acknowledges several limitations that qualify its conclusions and shape the agenda for future research. First, as a desk review relying exclusively on secondary data, the study cannot establish causal relationships among the constructs or quantitatively estimate the magnitude of the mediating effect of BMI. The conceptual model proposed requires empirical validation through primary data collection using large-sample survey or archival methods. Second, the review is subject to publication bias, as studies confirming positive relationships between dynamic capabilities and performance are more likely to be published than null or negative findings, potentially overstating the strength of the proposed relationships. Third, the study focuses on the Nigerian telecommunications sector as its primary empirical context, which, while theoretically rich, may limit the generalisability of findings to other African markets or to sectors with different competitive structures and regulatory regimes. Fourth, the measurement of dynamic capabilities remains contested in the literature (Schilke et al., 2018; Laaksonen & Peltoniemi, 2018), and the absence of agreed-upon operationalisation makes cross-study comparisons challenging. Future empirical work will need to adopt validated, context-specific scales for sensing, seizing, and reconfiguring capabilities in the Nigerian telecom context. Fifth, the NIN–SIM period represents an extraordinary regulatory

event whose long-term implications for subscriber behaviour and operator strategy have not yet fully crystallised, limiting the comprehensiveness of the findings for this sub-period.

5. Conclusion and Future Directions

5.1 Conclusion

This study set out to examine, through a systematic desk review, how dynamic capabilities influence customer retention in the Nigerian telecommunications industry and the extent to which business model innovation mediates this relationship. Drawing on Dynamic Capabilities Theory, Business Model Innovation Theory, and the Resource-Based View, and synthesising over a decade of academic, industry, and operator-level evidence (2015-2025), the review advances three core arguments. *First*, dynamic capabilities comprising sensing, seizing, and reconfiguring are fundamental drivers of strategic agility in the Nigerian telecom sector. Operators that effectively sensed technological shifts, seized digital opportunities, and reconfigured organisational resources were better equipped to maintain stable subscriber bases and protect revenue streams, while those that lacked these capabilities experienced significant churn or market exit. *Second*, business model innovation constitutes the operative mechanism through which dynamic capabilities produce customer retention outcomes. The period 2015-2025 witnessed a profound shift from voice-centric to fintech-integrated, data-centric, and ecosystem-based business models, exemplified by MTN's MoMo PSB, Airtel's SmartCash and device-financing ecosystem, Globacom's data-bundle strategy, and 9mobile's national roaming arrangement. These BMI initiatives deepened customer value propositions, expanded digital engagement, strengthened switching barriers, and enhanced loyalty. *Third*, regulatory interventions particularly the NIN-SIM linkage policy significantly shaped retention outcomes but did so through an interaction with capability differentials: operators with stronger dynamic capabilities absorbed regulatory shocks more effectively, confirming that regulatory context moderates the capabilities–BMI–retention pathway rather than substituting it.

5.2 Recommendations for Future Research

1. Future research should conduct large-scale survey or archival studies across Nigerian telecom operators to statistically test and quantify the mediation effect of BMI on the dynamic capabilities–customer retention relationship, using structural equation modelling or instrumental variable approaches to address endogeneity concerns.
2. Given the rapid technological and regulatory shifts observed in the sector, longitudinal data are needed to track how business models change over time and how these shifts affect retention trajectories, tracing the micro-processes through which sensing, seizing, and reconfiguring capabilities are converted into specific BMI initiatives.
3. Future research should extend the proposed framework to other Sub-Saharan African telecom markets (e.g., Ghana, Kenya, South Africa, Ethiopia) to assess the boundary conditions of the model and enrich understanding of how varying institutional environments shape the capabilities–BMI–retention nexus.
4. With operators increasingly deploying machine learning for churn prediction and customer analytics, future studies should examine how AI-augmented sensing capabilities alter the BMI–retention relationship and whether these technologies constitute a new form of dynamic capability in the telecom sector.
5. The NIN-SIM policy created an unprecedented natural experiment. Future quantitative studies can exploit this regulatory event to causally identify the moderating role of regulatory shocks on the capabilities–retention relationship using difference-in-differences or regression discontinuity designs.

5.3 Policy and Practical Implications

This study carries significant practical implications for both telecom operators and policymakers. For operators, the findings underscore the strategic imperative of institutionalising dynamic capabilities at the organisational level treating sensing, seizing, and reconfiguring not as ad-hoc executive decisions but as permanent organisational routines embedded in dedicated intelligence units, cross-functional innovation teams, and modular IT architectures. Operators should also embed BMI as a continuous process

rather than a periodic strategic event, establishing internal innovation laboratories and incentivising cross-functional ideation that targets measurable improvements in retention and customer experience. The evidence further supports accelerated adoption of asset-light and co-opetitive models infrastructure sharing (RAN, fibre, towers), national roaming agreements, tower sale-and-leaseback, and wholesale MVNO platforms, which free up capital for customer-facing innovations. MTN's RAN sharing with Airtel and the MTN, 9mobile national roaming agreement provide proven blueprints that other operators and markets should emulate. Investment in customer data integrity and robust KYC processes has moved from a compliance obligation to a strategic competitive advantage, as demonstrated by the differential impact of the NIN–SIM policy across operators. For policymakers and regulators, the study recommends fast-tracking the fintech-telecoms convergence by removing regulatory bottlenecks to PSB expansion, harmonising CBN and NCC regulatory frameworks, and creating enabling conditions for mobile micro-lending, insurance, and remittance services. Regulatory clarity and predictability particularly around infrastructure sharing, spectrum allocation, and KYC enforcement are crucial for sustaining operator investment in dynamic capabilities and BMI. Policymakers should also consider graduated compliance timelines for transformative regulatory reforms to minimise market disruption and enable operators to build the organisational capabilities required for effective compliance.

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